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Crop Conditions

FFF 97-11
August 13, 1997

Fruit crops are still about two weeks behind normal this season. The dry conditions over much of the state are becoming a concern to fruit growers. Fall apples seem to be sizing slowly and continued dry conditions may lead to small fruit size at harvest. We have experienced considerable bird damage on summer apples, a problem often associated with dry weather. The cool conditions of the past week should help improve fruit color and quality, but a good rain is needed in most areas. Peach and summer apple harvest is underway across the southern half of the state and will begin soon in central and northern areas. Blueberry harvest is in full swing and the northern portion of the state where most blueberries are grown. Adequate rainfall in those areas over the past couple of weeks has helped maintain berry quality and size. Summer bearing red raspberry harvest is ending and fall bearing types are flowering heavily. Grape harvest will begin very soon in the southern part of the state.

Yellowjackets: In August and September, yellowjacket populations will reach very high numbers and become especially troublesome in raspberries, grapes, and U-pick orchards. A few bits of information to remember ...Yellowjackets produce annual colonies, and the only members of the colony to over-winter are fertilized queens. These queens spend the winter in protected locations such as stumps and hollow logs. They emerge in the spring (April and May), select a nest site, and build a small paper nest in which they lay eggs. After the eggs hatch, the queen feeds the young larvae for 18 to 20 days, then the larvae pupate. In a few days, this brood emerges as small infertile females called workers. These workers then begin feeding the brood, and the queen rarely leaves the nest after that time. Colonies build rapidly through the summer, and by September a nest may contain 4,000 workers and 10,000 to 12,000 brood cells. In late summer and fall, new reproductive cells are produced, and the males and females that emerge from them mate. The males soon die, but the females (new queens) seek sheltered locations to overwinter. Nearly all of these new queens will die during the winter, but a few survivors manage to start the next season's colonies. In general, the species that are common in the Midwest nest in the ground, but one, the baldfaced hornet, constructs paper nests that hang from trees.

Yellowjackets are beneficial for their role as predators on other insects, but as populations build in late summer, their presence in orchards and the risk they pose because of their painful stings generally outweighs this benefit. What can be done? First, workers move into fruit plantings to feed on ripe and over-ripe fruit. Clean and early picking helps to reduce their

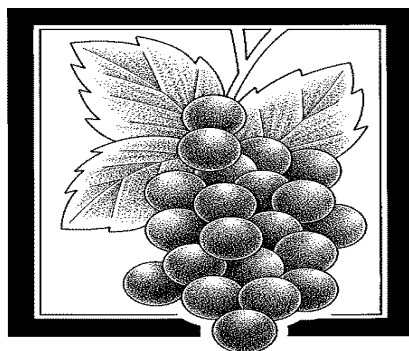
buildup. This option is less effective and less practical in especially sweet fruits and in U-pick operations, but it is an important start. Sprays applied directly to fruit as part of cover spray programs will do some good, but they will not work well to kill foraging wasps and prevent fruit damage and stings. Commercial yellowjacket traps will capture a large number of yellowjackets if they are set out early in the season, but they often have little effect on the numbers of foraging yellowjackets. Suspending a fish over a pan of soapy water is an alternative that does not rely on pesticides. Will these efforts really work? As noted above, results have not always been good, but a key point that is often overlooked is to start early to prevent the buildup of huge populations around your plantings. Nothing you do will eliminate extremely high numbers of yellowjackets if you start the effort in September. (Modified from Illinois Fruit and Vegetable News, Rick Weinzierl by Ric Bessin Univ. of Kentucky, and again at Purdue.)

Grape Harvest Parameters: As grape harvest nears growers should be sampling their vineyards and analyzing fruit composition (sugar, acidity, and pH) to determine harvest date. As fruit ripen sugar concentration increases, titratable acidity decreases, and pH increases. Grapes do not continue to ripen after they are harvested. The level of ripeness desired at harvest depends on the style of wine to be made. For light, fruity style wines, grapes are usually harvested before they are fully ripe. This is especially true with strong flavored American varieties such as Concord and Niagara. Sugar may have to be added to the must before fermentation, but the results are a lighter,

fruitier wine without an overpowering 'foxy' flavor. For heavier, full-bodied wines, fruit is usually allowed to fully ripen before harvest. When fully ripe grapes should have 20 to 24 % soluble solids (sugars), 7 to 9 grams/L titratable acidity, and a juice pH of 3.1 to 3.5. To accurately measure these parameters growers need a refractometer, pH meter, and burette.

Soluble solids is the easiest parameter to measure, but is not the best indicator of optimum fruit ripeness. Instead, a balance of soluble solids, titratable acidity, and juice pH should be considered. Of the three parameters, juice pH is perhaps the most important. High juice pH can be a problem in warm growing seasons and with certain varieties and causes many problems for the winemaker. Several wine quality attributes are adversely affected by high pH including color, protein and tartrate stability, oxidative rate, metal complexing, ability to clarify, biological stability, and sensory attributes. Since pH cannot be adjusted in the winery as easily as titratable acidity or sugar content, it is best to harvest fruit within the desired pH range. Most winemakers prefer white winegrapes with a juice pH of about 3.1-3.2 with a maximum of 3.4, and red winegrapes with a pH of 3.3-3.4 with a maximum of 3.5.

Grape harvest appears to be 10-14 days behind normal this season, but that should not be a problem for vineyards in the southern half of the state that have plenty of growing season left. In central and northern areas late maturing varieties may not fully ripen before the first frost. If cool temperatures continue this season, fruit should ripen slowly, titratable acidity should remain relatively high, and juice pH should remain low as sugars increase, leading to excellent quality in southern areas. Acidity will likely be high in central and northern areas. As harvest nears, sampling should be done at least twice weekly to track the progress of fruit ripening. If you plan to sell to a winery, keep them updated on fruit composition and let them help make harvest decisions based on their needs. During harvest, protect fruit quality by picking early in the day while the fruit is cool, keeping the fruit cool, and handling the fruit carefully to avoid cracked berries, juice leakage, and potential spoilage. Minimize the time between harvest and crush as much as possible.



Abound Fungicide Phytotoxic to Apples: Abound, a new fungicide for grapes and peaches, has shown extreme phytotoxicity to some apple varieties. Bill Shane and Mark Longstroth of Southwest Michigan Research and Extension Center reported that several growers had experienced problems when using the same equipment to apply Abound to grapes and other sprays to apples. Most severely affected were McIntosh and McIntosh-related varieties including Cortland, Empire, Jonamac, Mollies Delicious, Spartan, Gala, and others. Red and Golden Delicious, Jonathan and Rome were unaffected. Phytotoxicity appears as brown spots, flecks, and patches on leaves and fruit. Older leaves show symptoms more than young leaves. Affected leaves may drop from the tree and fruits may have ooze droplets, somewhat like fireblight. Washing the equipment seems to reduce the symptoms but unwashed sprayers can cause damage for several tank loads. Abound should not be applied near apple orchards where there is a possibility of drift onto susceptible varieties. Sprayers used to apply Abound to grapes or peaches should not be used to spray apples until more information is available on the effectiveness of tank cleaners. For more information contact Zeneca Ag Products at 800-759-2500.

Ohio Valley Harvest Festival: Growers and producers hardly need to be told that the role of farmers is directly linked to good nutritional health and sound local economics. But a group of farmers, chefs, and other concerned citizens in the Ohio Valley region is taking a unique marketing approach to make this fact a reality for more consumers. The Ohio Valley Harvest Festival will be held on the Belvedere Plaza in Louisville, Kentucky, from 12:00 noon until 6:00 p.m. on Sunday, September 14. Growers and chefs work together at the event to promote their products. The chef will purchase the grower's produce and prepare a farm-fresh dish for tasting. The grower and chef will sell side-by-side to the public, farmers' market style. Arrangements and pairings with chefs is taking place now, so call soon if you are interested. There is no charge to the grower. Chefs, caterers and bed and breakfast operators from Louisville, Lexington, and smaller surrounding communities are being invited to participate with Kentucky and Indiana growers. Over 10,000 consumers attended last year's festival and larger crowds are expected this year. This festival gives you a chance to promote your produce, develop working relationships with chefs and to sell directly to the public. The project is sponsored by the UK Kentucky Leadership for Agricultural & Environmental Sustainability (KLAES) project; Farm Aid, the City of Louisville, and Mothers and Others for a Livable Planet. To participate in the Ohio Valley Harvest Festival, contact Dawn M. Ripley, Jefferson County Extension Office, Louisville, KY, phone 502/425-4482 or Roy Ballard, Floyd County Extension Agent for Agriculture, New Albany, IN, phone 812/948-5470.

Pesticide Container Recycling: The schedule for the 1997 Pesticide Container Recycling Project has been set. Farmers, agricultural chemical dealers and other pesticide users will again be given an alternative to landfilling their empty pesticide containers. The containers must be 2 1/2 gallons or less in size and must

be free of all excess liquid and pesticide residues. Thirty gallon plastic containers will be accepted if the disposal is pre-arranged with the local Extension educator and if rinsed and cut in half lengthwise. Clean empty containers may be delivered to the sites listed below between 8:30 am and 3:00 pm. Containers not meeting the standards outlined above will be rejected and returned to the deliverer. The program is sponsored by the Office of the Indiana State Chemist, Indiana Plant Food & Agrichemical Association, and the Indiana Farm Bureau Inc. The Solid Waste Management Districts and Purdue University Cooperative Extension Service are working to provide sites and personnel at the sites.

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| August 14 | Owen Co. Hwy Garage, Terre Haute Rd. 2 mi N of Spencer |
| August 19 | Davies Co Landfill, C.R. 650 E. North of Montgomery |
| August 20 | Dubois Co. SWMD Recycling Facility, 1103 S. 350 W., Jasper |
| August 21 | BFI Laubscher Meadows Sanitary Landfill, St. Joseph Ave & Laubscher Rd., Evansville |
| August 27 | Laughery Valley Co-op, 3994 US 421 S. Versailles |
| August 28 | Scott Co. Fairgrounds, Hwy 31 1/2 mi S of 31 & 56 jct, Scottsburg |
| August 29 | Bartholomew Co. Recycling, 720 S. Mapleton, Columbus |
| September 3 | Wabash Co. Fairgrounds, Gillen Ave. W of SR 13, Wabash |
| September 4 | Cargill Inc.-Aylesworth Elevator, SR 8 @ 250 W., Hebron |
| September 5 | Benton Co. Fairgrounds, SR 352 & 41, Boswell |
| September 9 | Cropmate, 335 S. East St., Charlottesville |
| September 10 | Randolph Co. Fairgrounds, 2 1/2 mi S of Winchester on US 27 |
| September 11 | Adams Co. Fairgrounds, 1/8 mi N of 124 on Polk, Monroe |

For more information contact the Office of the Indiana State Chemist at 765-494-6271 or your county Purdue Cooperative Extension Office.

Farm Stewardship Field Day: Kentucky State University and University of Kentucky are sponsoring a field day at the KSU farm on September 18. The theme will be Farm Stewardship and will emphasize sustainable farming systems for the small and part time farmer. This will be a large statewide event that will provide the opportunity for demonstrations, interactivity with the presenters, farm tours, networking with farmers and researchers from across the state and beyond, exhibitors, and more! Contact the KSU Research Farm at 502-564-5871 or 5869.

Coming Meetings/Events:

August 21 — Mid Season Peach and Early Season Apple Showcase at Southwest Michigan Research and Extension Center. Self-guided tours any time 3:00 - 6:00 pm, group discussion 6:30 pm. Contact Bill Shane (616-944-1477 x 205)

August 21— Grapevine Training and Canopy Management Workshop featuring Dr. Richard Smart. Southwest Michigan Research and Extension Center. Contact Dr. Tom Zabadal (616-944-1477 x 206). Space is limited and pre-registration is required.

August 21-22 — Apple Crop Outlook and Marketing Conference, US Apple Association, Chicago. Starts 2:00 pm on August 21 with regional break-out discussions of the USDA's 1997 apple crop forecast. An updated forecast will be presented to attendees starting at 8:00 am on August 22. Registration required. Contact: US Apple Association, 800-781-4443.

August 23-24 — A Beekeeping Workshop will be offered on the University of Illinois campus. Contact David Schultz at 217-333-6843 for details. The cost of the workshop is \$55.00.

September 14 — Ohio Valley Harvest Festival, Belvedere Plaza, Louisville, KY. Noon to 6:00 pm. Contact Roy Ballard, Floyd Co. Cooperative Extension. (812-948-5470). See story above.

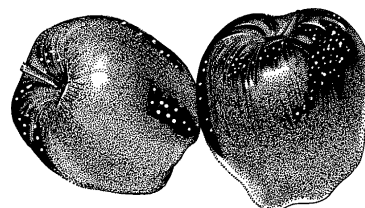
September 18 — Late Season Peach and Mid Season Apple Showcase at Southwest Michigan Research and Extension Center. Self-guided tours any time 3:00 - 6:00 PM, group discussion 6:30 PM. Contact Bill Shane (616-944-1477 x 205)

September 18 — Kentucky State University / University of Kentucky field day on Farm Stewardship. Contact the KSU Research Farm at 502-564-5871 or 5869. See story above.

September 28 — Central Kentucky Harvest Festival, Red Mile Race Track, Lexington KY. This festival is organized by WUKY and is set up like the Ohio Valley Harvest Festival. Contact Gail Bennett 606/257-7049 if you would like to participate and sell locally grown produce.

October 25 — Kentucky Vineyard Society Fall Meeting, Sullivan College, Louisville, KY. Contact Butch Meyer 606/573-5642.

November 5 — Late Season Apple Showcase at Clarksville Horticultural Research Station. Contact Clarksville Station (616-693-2193)



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