



Inside

Crop Conditions
Weather
Program Ideas for the Winter Meetings
Grape Post-Harvest Disease Control
Apple Packaging
Apple Videos Available
Cider Sanitation
Soil Management and Cover Crops
Nursery Stock
Perennial Weed Control
Fall Herbicides for Fruit Crops
Revised Food Quality Protection Act Wins House Passage
International Apple Institute News
In Memorium
Coming Meetings/Events
Winegrape Production in the Midwest

Crop Conditions

FFF 96-12
September 18, 1996

Apple harvest is running about ten days to two weeks behind normal. Though the overall crop is down, some growers report very good yields. Wholesale demand is very high, and prices are expected to start high and remain strong. Grape harvest is about ten days to two weeks behind normal. Yields are better than average in most areas and fruit quality is excellent this year. Dry conditions over the past six weeks have reduced incidence of fruit rots, and warm sunny days combined with cool nights are providing excellent fruit chemistry. Development of fall bearing red raspberries has been delayed by dry, cool conditions and harvest is starting late, so yields may be reduced if there is an early frost.

Weather Outlook: The 6 to 10 day outlook for Indiana calls for above normal temperatures and below normal precipitation. The 90 day outlook for October, November, December calls for normal temperature and above normal precipitation.

Program ideas for the winter meetings:

Please send Dick Hayden and/or Bruce Bordelon your suggestions for topics or speakers for the program for the winter meetings. We have a number of good suggestions, but need additional ones. The dates of the meetings are January 28-29, 1997 so mark your calendar.

Grape post-harvest disease control: Growers often neglect to scout their vineyards once

harvest is complete which can be a costly mistake. Downy and powdery mildews are common diseases that often build to epidemic levels on susceptible cultivars in fall. Heavy dews which form on cool nights in late summer and fall provide sufficient moisture for sporulation and spread of these fungi. A severe downy mildew outbreak can cause early defoliation which reduces winter hardiness. Powdery mildew reduces photosynthesis and the plants ability to store adequate carbohydrates. Allowing either disease to become established greatly increases the amount of inoculum that will be in the vineyard next spring. Thus, it is important to maintain some protection against these diseases throughout the fall until leaves drop naturally.

There are a few options available for post harvest downy mildew control; captan, copper compounds, mancozeb, maneb, or Ziram. Ridomil formulations MZ 58 (Ridomil/mancozeb) and Ridomil Copper 70W are registered for use on grapes, however, it is not a good idea to apply ridomil to a well established infection because of the potential for development of fungicide resistance in the fungus. Captan and mancozeb both provide excellent protection against spread of downy mildew. Copper fungicides also provide good control, but can cause phytotoxicity on certain varieties and under certain climatic conditions. Fixed coppers plus lime are the least likely to cause phytotoxicity.

Powdery mildew may need to be controlled post harvest. Sulfur is effective against powdery mildew, but many cultivars are sensitive to sulfur, limiting its usefulness. Sulfur should not be applied if temperatures greater than 85F are expected. Some cultivars such as Chancellor, Foch, Concord, and Cynthiana may be damaged at any temperature. Sterol inhibitors such as Nova, Bayleton or Rubigan are available for powdery mildew control on sulfur sensitive varieties. However, development of fungicide resistance in the pathogen population is a real concern with these materials and their use on existing infections is not recommended. They should be used for prevention of disease rather than eradication. JMS stilet oil is one possible alternative, but our experience with it limited so it should be used with caution. Be sure to thoroughly read the label for possible interactions with other materials, especially sulfur and captan, before using JMS oil. Never use JMS oil within two weeks of a captan or sulfur application, and vice versa.

It may not be necessary to apply fungicides post harvest. Growers should scout their plantings for problems to determine if fungicides are necessary. Cultivars differ greatly in susceptibility to the common diseases. For example, Chancellor and most vinifera cultivars are highly susceptible to both powdery

and downy mildew and often require post-harvest disease control. Concord and Foch are only slightly susceptible to downy mildew and moderately susceptible to powdery mildew so seldom require post-harvest disease control. Other cultivars vary in relative susceptibility to diseases, and disease incidence and severity varies with the growing season. Apply fungicides only if necessary. Be sure to check for season limits on quantity of product allowed and read and follow all label recommendations. Refer to ID-169 for rates, comments, varietal susceptibility, and other valuable information.

Apple packing: The bagging operation in the packing line has been shown to cause the greatest amount of bruising in the entire operation. Any technique that will reduce the distance or rate of fall of the apples will reduce bruising. Growers are urged to check over your line for every point that can cause a bruise of any kind. Pad it, eliminate it, or otherwise fix it. Also, teach baggers and anyone who handles the bag and box after the bagging operation to handle like eggs.

Have you ever followed your fruit to the retail market to see what it looks like after it goes on display? Often you would be shocked to see the condition that your fruit is in when the consumer first sees it. You can help to fix that. Talk to your workers. Talk to the warehouse. Talk to the retail produce manager. Better communications should bring better cooperation and better fruit condition.

Apple videos available: Two VHS videos have been made available from Michigan State University. These are: VT 41, "Common Apple Picking Techniques", and VT 43, "Apple Packing House Operations." These are available in both English and Hispanic versions.

The first tape describes proper picking techniques, equipment usage and safety, bulk bin handling and transport, employee training and supervision, etc. The second tape explains

proper handling to avoid bruising, color and defect sorting, packing systems, sanitation, safety and other topics. They may be purchased for \$15. each from: MSU Bulletin Office, 10-B Agriculture Hall, Michigan State University, East Lansing, MI 48824-1039 Make checks payable to Michigan State University, and be sure to specify language choice. The Purdue Hort. Dept. Extension office has copies of all four tapes and will be glad to loan one or more for you to evaluate their use in your operation. Call 317/494-1296.

Cider Sanitation: This topic has been discussed considerably in recent years. It is as important now as ever. For the full set of suggestions, contact Colleen and ask for a copy of the Cider Sanitation Suggestions.

Soil management and cover crops: Fall is a good time for cultivating fields, adding lime and fertilizer, and planting cover crops in fruit plantings. Cover crops can be an integral part of the overall orchard floor management plan. Growers planning on establishing new orchards or vineyards next year should consider a pre-plant soil management program which includes deep subsoiling, soil pH adjustment and addition of fertilizer, especially P and K, according to soil test recommendations, and planting cover crops. Cover cropping a site the year before planting is an excellent way to improve soil organic matter content and control weeds. Several cover crops are available for fall planting, and mid to late September is the time to plant in most areas of the state. A favorite among growers is winter rye because it performs very well under Indiana conditions. Rye not only adds large amounts of organic matter to the soil, but also suppresses the development of many annual and perennial weeds. It should be grown until it begins to head-out in the spring then treated with post emergent herbicides or incorporated into the soil mechanically. When the cover crop is killed with post emergent herbicides, the residue can be left on the surface to provide a mulch layer which will

suppress weeds, help conserve moisture, increase organic matter, and improve soil structure. Dormant fruit plants can be set directly into the mulch. There are several other cover crops for fall and spring planting and choices depend on the grower's specific preferences and needs.

Nursery Stock: If you plan to plant a fruit planting next spring, the time is running short to order plants from nurseries. Most nurseries take orders in winter or spring for the following season, giving them a year to propagate the needed plants. At this time nurseries will only have available plants that they have not already committed to another grower. Make your orders soon for planting next spring.

Perennial weed control: Late summer and fall is an excellent time to control troublesome perennial weeds by spot spraying with suitable herbicides. Perennial weeds tend to become established within the rows in fruit plantings because they are not fully controlled by the normal weed control program. Once established, these plants can be difficult to eliminate. Fall is a particularly good time to control perennial weeds with glyphosate. As perennial plants begin to slow growth and harden off for winter, carbohydrates are transported to the roots for storage. Fall applied systemic herbicides will be similarly transported to the root system which leads to excellent control. Fall application works equally well on hard to control herbaceous perennial weeds such as thistle, dock, smartweed, and morning glory, as well as woody perennials such as poison ivy, Virginia creeper, multiflora rose, mulberry, blackberry and so on. The plants do not have to be actively growing for good results but should have sufficient active leaf area to take up the herbicide. Check the manufacturers product label for specific recommendations. NOTE: Desirable crop plants are also translocating carbohydrates to the roots and can be severely injured by fall applied systemic herbicides. Be extra careful when spot treating

to AVOID ANY CONTACT with desirable plants. Read and follow all label recommendations.

Fall herbicides for fruit crops: There are several advantages to fall applications of pre-emergent herbicides in fruit crops. Dry soil conditions in the fall allow for equipment travel without compaction, weather conditions are more stable giving the grower greater flexibility in application times, and there is less likelihood of heavy rains to cause runoff. Fall applications provide control of winter annual weeds which can eliminate the need for a post emergent herbicide application the following spring. Though weed control from fall applications can last shorter into the following growing season than spring applications, a split application can help eliminate this problem. Several herbicides registered for use on fruit crops have a recommendation for fall or fall/spring split applications. Materials such as Surflan, Devrinol, Princep, Karmex and Kerb perform well in fall or fall/spring split applications. See ID-168 and ID-169 for complete weed control recommendations.

Revised Food Quality Protection Act Wins House Passage: The House has unanimously approved a change in the Food Quality Protection Act which replaces the Delaney Clause and allows pesticide residues with "less than a one-in-a-million lifetime risk of cancer" to be present in processed and raw foods. The bill provides additional protection for children and infants and requires endocrine disrupter screening. This bill is supported by the Clinton administration, EPA Administrator Carol Browner, the processing industry and growers. (Toxic News for the Net, OPPT Library)

International Apple Institute News: The IAI will officially change its name to the U.S. Apple Association later this year. IAI board members feel that this change will clarify to the public just who its members are. Apples

can now be labeled fat-free and high in fiber as a result of recent FDA approval of an IAI request to revise the official nutritional database for fresh apples. Apples can now be labeled as having 5 grams of fiber and called "high in" or an "excellent" source of fiber. IAI members can request camera-ready artwork for a "Nutrition Facts" box featuring the newly approved data by contacting IAI at 703/442-8850. The box can be used to label any variety of apple. (International Apple Institute Grower News, Vol.3, No.3.)

In Memorium: Mrs. C.L. Burkholder passed away last month at the age of 103. A memorial service will be held October 12 here in West Lafayette. The family has asked that in lieu of flowers, contributions might be made to the C.L. Burkholder Memorial Scholarship fund which was set up at the time of his death in the late 50s. Burk was a real friend of the Indiana fruit industry for many years. Contributions can be sent to: Purdue Alumni Foundation, Purdue University, West Lafayette, IN 47907, Attention: Greg Howe. Specify that your contribution is for the Burkholder Scholarship.

Facts for Fancy Fruit Available Electronically: All 1996 issues of Facts for Fancy Fruit issues are available through the Horticulture and Plant & Pest Diagnostic Clinic worldwide web homepages. To locate the newsletters on the web, go to the Horticulture home page at: <http://www.hort.purdue.edu>, select Extension/Outreach, then Extension Bulletins and Newsletters. Or you can go directly to the Facts for Fancy Fruit Index at <http://www.hort.purdue.edu/fff/fff.html>. To access the newsletters from the Virtual Plant Disease Diagnostic Lab homepage at <http://www.aes.purdue.edu/ppdl/p&pdlwww.html>, select Newsletters, then Facts for Fancy Fruit.

In addition, a list server is set up so you can subscribe and unsubscribe to the email version. To subscribe send a message to

"almanac@ecn.purdue.edu". Your message should consist of this single one-line message: "subscribe FFF_L <your name>" without the quote marks. To unsubscribe follow the same procedure: "unsubscribe FFF_L <your name>". Do not include anything else in the message. Note that the address to subscribe and unsubscribe is not the same as the return address for FFF_L. If you have any problems contact me at bordelon@hort.purdue.edu and I'll try to help.

Coming Meetings/Events:

September 20 — Public Markets Conference, Building Local Economies, Radisson Hotel, Lexington, KY. For more information call 606-233-7845.

September 22 — Indiana Nutgrowers Association fall meeting. Bernie VanderKleed's place in Shadeland. Contact Bernie at 317-538-3528.

October 5 — Midwest Nut Producers Council Special Workshop. Michigan State University Horticulture Farm, East Lansing, MI. Tree shaker demonstration for harvesting chestnuts. Contact Dennis Fulbright (517-353-4506) or Mario Mmandujano (517-353-2040).

October 6-10 — 93rd American Society for Horticultural Science Annual Meeting. Lexington Convention Center, Lexington, KY. Contact the Department of Horticulture, Purdue University (317-494-1301).

October 10 — Orchard Meeting and Apple Cultivar Showcase. Dana and Trudie Reed's Townsend Valley Orchard. 1-5 p.m. Contact Jerry Brown (502/365-7541 ext. 204).

October 19 — Annual Meeting of the Kentucky Vineyard Society. Contact Ken Harmet (502-269-2411).

January 14-15 — Midwest Grape School. Southwest Michigan Research and Extension Center, Benton Harbor, MI. Contact Bruce Bordelon (317-494-1301)

Winegrape Production in the Midwest: An intensive grape school will be offered for grape growers in the Midwest and Great Lakes Region January 14-15, 1997 at the Southwest Michigan Research and Extension Center, Benton Harbor, MI. The program is sponsored by the Heartland Grape and Wine Coalition, an association of Ohio State, Michigan State and Purdue Universities. An excellent group of speakers from the three universities will present over 10 hours of seminars. There will ample opportunity for questions and discussion. The school is aimed primarily at beginner and novice grape growers, and Extension personnel wanting to increase their knowledge of commercial grape production. Experienced growers should also find the information helpful as a refresher or for planning new vineyards. The school will cover the basics of site selection, variety selection, vineyard establishment, wine grape production, economics, and integrated pest management. All registrants will receive a notebook of reference materials.

January 14, 1997

1:00 Registration

I. Starting a New Vineyard

The economics of Midwestern grape production

Site selection for vineyards

Winegrape varieties for the Midwest

Site preparation

Soil modification

Soil nutrient management

Steps in the establishment of a vineyard

Building a modern vineyard trellis

Midwest Wine Tasting

Dinner

January 15, 1997

II. Managing the Mature Vineyard

Principles of vine function - vine leaf area, crop load and their interaction

Training systems for improved yield and quality - mature vines

Vineyard floor management in established vineyards

Nutrient management in established vineyards

Harvest parameters for optimum wine quality

III. Integrated Crop Management of Grapevines

Identification of grape diseases

Chemical and cultural practices to control grape diseases

Identification of grape insect pests

Chemical and cultural control of grape insect pests

Control of vertebrates predators (birds, deer, etc.)

IV. Current & Future Wine Industry Trends

Representatives of the Ohio Grape Industries Program, Indiana Wine Grape Council, and Michigan Grape & Wine Council.

Summary and Feedback

Reception

Dinner

If you would like to receive a brochure on the school, contact Bruce Bordelon (317-494-1301).

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