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### *Inside*

Crop Conditions  
Weather  
Red Alert For Fruit Diseases  
European Red Mites  
Eastern Indiana Horticulture  
Society Honors Lowell Waid  
Yield Assessment and Adjustment  
in Grapes  
Herbicide Injury to Grapes  
Fruit Plant Care  
Calcium Nutrition on Apples  
Strawberry Renovation  
Tissue Analysis Grapes and Small  
Fruits  
EPA Conducts Public Meetings on  
WPS

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## ***Crop Conditions***

FFF 96-09  
June 19, 1996

Fruit crops are still about 10 to 14 days behind normal in development. The southern part of the state has gained a little, while the northern portion continues to lag behind. Strawberry harvest is mostly complete in the south and will be starting in the north over the next week. Fruit quality has been good where fruit rots were controlled, but frequent rains have kept pickers away. Blueberries are just through bloom (Jersey) in the north, but will be ready for harvest in two weeks in the south. Black raspberry and summer red raspberry harvest should begin soon in the south. Apples and peaches are in the sizing up very well with the ample moisture. Diseases are a major concern for all fruit crops. Heavy, frequent spring rains made control of primary infections nearly impossible, so diseases have become established and will be a problem throughout the rest of the growing season if weather conditions are conducive.

***Weather:*** (From Purdue Crop and Weather meeting Minutes, June 14) Precipitation has been 1-1/2 times normal in northern and central Indiana, and 2 times normal in southern Indiana over the past week. Temperature has averaged 3-4 degrees below normal. May 1996 was the 3rd wettest since 1895. Rainfall fell almost daily somewhere in the state during May.

***Weather Outlook:*** (From Purdue Crop and Weather Meeting minutes, June 14 - Tom Priddy, University of Kentucky) The 6 to 10 day outlook for Indiana for June 20 to 24 calls for above normal temperature and above normal precipitation. The 30 day outlook for July calls for near normal temperature and precipitation. The 90 day outlook for July, August, and September calls for above normal temperature and near normal precipitation.

***Red Alert For Fruit Diseases:*** The extremely cool, wet weather this spring/summer has resulted in severe infection from a number of fungal diseases. At this time of year (mid-June) be especially aware of secondary apple scab infection; sooty blotch and flyspeck; general apple fruit rots; brown rot of peaches, plums and cherries; strawberry leaf spots, and grape black rot. In short, stay alert and keep fruit and foliage covered with appropriate protectant fungicides; there's a lot of disease out there and if this turns into a wet summer things could get worse. In addition to maintaining a tight spray schedule... good sanitation in the planting is especially important during a bad disease year. Plant diseases do not just appear out of thin air, they have to come from somewhere, and that 'somewhere' is often dead limbs in trees, brush that you could not burn because of all the rain, prunings on the orchard floor, dead trees, wild crabapples, grapevines in fence rows, and the list goes on and on.

**European Red Mites:** We've had our first report of European red mite populations exceeding the economic threshold in apples. The report came from southern Indiana, which sometimes means that the problem may show up in more northern areas a little later. Growers need to be monitoring for mites every week or two at this point in the season. The threshold during June is an average of 2.5 mites/leaf, with the threshold increasing to 5.0 mites/leaf in July. Growers who are considering using Agrimek should note that the label recommends using the product before mite populations reach 5.0 mites/leaf within 6 weeks of petal fall and with 1.0 gallon/acre of paraffinic spray oil. Other choices that growers should consider are the horticultural oils such as Sunspray UFO and Saf-T-Side, soaps (M-Pede), and conventional miticides such as Vendex and dicofol. Remember that Omite is not legal to use on apples because the company has withdrawn the label.

**Insect Activity:** Growers should be advised that as temperatures increase (finally), insect activity and rates of growth and reproduction will dramatically increase. It has been a relatively mild year for insects so far, but if the weather stays hot and dry, insects and mites can quickly increase in severity. Growers should be checking their crops regularly to catch any insect outbreaks.

**June is Indiana Wine and Grape Month:** Governor Evan Bayh has declared June as Wine and Grape Month in Indiana. For information about activities contact the Indiana Wine Grape Council at 800-832-WINE.

**June is Japanese Beetle Month:** Millions of hungry beetles have declared June the month of emergence. Be on the lookout for these pests. Though the adult beetles are easy to control with insecticides, treatment may not be necessary in all cases. Often the damage looks worse than it actually is, so be patient and assess the full extent of the damage before applying insecticides.

**Eastern Indiana Horticulture Society Honors Lowell Waid:** The Eastern Indiana Horticultural Society was founded in 1935 to facilitate assistance and sharing of information among commercial fruit growers and marketers. It has thrived since then, being the catalyst and primary audience for 3 Extension Service Fruit Programs each year. No charter member is still living, but Lowell Waid of Muncie served as Secretary-Treasurer from Feb. 29, 1940 until Feb. 29, 1996. He was honored with a special plaque at their fruit grower program, June 6. Lowell is the father of Jay County CFS Educator Alice Crouse.

A Directory of Commercial Growers and Sponsors has been compiled for each of the four most recent years. The 1996 Directory includes information on 17 Commercial Growers and three Sponsors. Limited numbers of copies are available through the Delaware County Extension Service, Room 202 County Building, Muncie, In. 47305. For more information, contact Harold Brown at 317-747-7732.

**Yield Assessment and Adjustment in Grapes:** Grapes require careful control of crop size to balance the amount of fruit to vegetative growth. An optimum balance leads to maximum yields of high quality fruit and adequate vine growth for consistent productivity. Excess fruit production leads to poor fruit quality and reduced vegetative growth, resulting in lower potential production in the future. Though crop control is generally accomplished through balanced pruning, many French hybrid cultivars tend to be overly productive and balanced pruning alone will not adequately control crop size. These cultivars will require careful crop load adjustment to prevent weakening of the vines. The period from just before bloom to 1-2 weeks post-bloom is a good time to assess the crop potential. The first step is to evaluate potential yield to determine if crop reduction is necessary. Potential yields are determined by the number of vines per acre (based on row and vine spacing), the number of clusters per

vine, and the weight of the mature clusters. At standard spacing (8' x 10') there are approximately 545 vines per acre. If each vine produced 20 lbs of fruit, the yield on a per acre basis would be 10,900 lbs, or about 5 1/2 tons. To determine how much fruit a vine will yield, count the number of clusters and estimate potential cluster weight based on cultivar and past performance of the vineyard. Multiply cluster size by number of clusters by number of vines to determine yields per acre. Refer to the table below for the approximate number of clusters per vine needed to produce various yields across a range of cluster sizes. Cluster size is largely determined by cultivar, but factors such as cluster thinning, fruit set and environment will also have an effect. Large clusters average about 3/4 to 1 lb each. Large clustered cultivars include: Seyval, Vidal, Chambourcin, Himrod, and Reliance. Cluster thinning is often necessary to obtain the maximum cluster size. Medium clusters average about 1/3 to 3/4 lb. Medium clustered cultivars include: Chelois, Concord, Catawba, and Mars. Small clusters average about 1/4 lb or less. Small clustered cultivars include: Foch, Leon Millot, Baco noir, Ventura, LaCrosse and Vignoles.

Number of clusters per vine at different yields per acre. (Based on 8 x 10 spacing, 545 vines/acre)

Cluster Size	4 tons/acre	6 tons/acre	8 tons/acre
Large (1 lb)	15	22	30
Medium (1/2 lb)	30	44	60
Small (1/4 lb)	60	88	90

Five to seven tons per acre is a reasonable yield range for most wine grape cultivars in moderately vigorous vineyards. Some cultivars and vineyards are capable of producing much higher yields while maintaining good fruit quality. Growers must know the relative

vigor of their vines (pruning weights) and past performance to determine the maximum yield potential of a vineyard. It is easy to overcrop grapes if careful attention is not paid to crop load. Set a target yield and adjust the crop to meet that target. Keep good records to determine the appropriate yields for each particular vineyard. To adjust the crop load first adjust shoot number. Adjust shoot density to approximately 6 shoots per foot of row (48 shoots/vine at 8 ft spacing). An excessive number of shoots can create a shading problem which reduces fruit quality and bud fruitfulness for next year. Remove secondary and non-count shoots before primary shoots. After shoots are thinned to the proper density, estimate the yield by counting the clusters on the remaining shoots. To further reduce the crop cluster thin to one or two clusters per shoot depending on cluster size and number per shoot. Leave the basal cluster as it is usually the largest. Shoot removal should be completed relatively early in the season to reduce vine stress, but cluster thinning can continue up until veraison if necessary.

**Herbicide Injury to Grapes:** Wet soil conditions and cool soil temperatures have delayed field work in most parts of the state and corn and soybean planting is far behind schedule. Weeds have become well established, especially in no-till fields so farmers will use 2,4-D or other volatile herbicides in the burn-down spray to increase its effectiveness. Application of these volatile herbicides after grapes and other fruit crops have begun development can lead to serious herbicide injury from drift or re-volatilization. Grapes are the most susceptible fruit crop to 2,4-D and related compounds, but raspberries can also be seriously injured. Both grapes and raspberries are most susceptible during the early stages of growth when new shoots are developing rapidly. Exposure to volatile herbicides later in the season may cause minor damage, but exposure during the first few weeks of growth can cause serious injury that may last for years. In some cases

vines never fully recover. We have experienced serious 2,4-D injury to grape research plots near West Lafayette during the past 2 weeks. Grape growers should contact their farming neighbors and remind them of the potential hazards of 2,4-D and related herbicides. Though it may be uncomfortable to approach a neighbor and suggest they be careful in their farming practices, it is a lot less uncomfortable to approach them before injury occurs than afterwards. If you have questions about herbicide drift, state laws governing injury to crops, or other pesticide related issues, contact your County Cooperative Extension Office, the Office of the Indiana State Chemist (317-494-1594) or Purdue Pesticides Program (317-494-4566).

***Fruit Plant Care:*** The most valuable time that a grower can spend is in training those one, two, and three year old trees. Here in mid-June we are in the middle of the period when the training of young trees is most effective, and we would urge that you spend some time among those youngsters helping them to grow right. Breaking up multiple leaders on new apple trees that were tipped at planting time will help to concentrate growth in one leader. Clothespins on newly set trees may still be useful on late-set trees.

In most of Indiana the weather is wet, so watering of young plants should not be necessary, but the weather may change. If it does dry up, then those young trees that have not grown deep root systems will need to be checked for water.

In any case good weed control to prevent competition between weeds and trees is of vital importance in maximizing growth potential of the trees.

***Summer Tipping of Peaches:*** Summer tipping of young peach trees should continue, especially where trees are to be trained to the vase shaped tree. Early tipping of undesired shoots

will help to direct growth into the desired scaffold shoots. Do not tip those shoots that are to become major scaffold branches. This will develop a larger tree more quickly and result in larger crops in the first bearing years. Tipping of upright growing shoots will prevent them from becoming “bull” shoots that will shade out desired scaffold branches. Where trees are to be trained to the flat fan system, continued tipping of shoots growing into the row middles will help to develop better fan shape. Care should be taken to control the oriental fruit moth so that undesirable tipping of scaffold branches is avoided.

***Calcium Nutrition on Apples:*** This year many growers have light or spotty crops of Red Delicious. With good conditions for vegetative growth a problem with bitter pit and cork spot would be expected. Braeburn is also especially prone to cork spot. These physiological disorders are the result of calcium deficiency. If shoot growth is excessive, as it often is on trees with light crops, the shoots will get the available calcium at the expense of the fruit.

Fruit size on such trees will likely be larger than normal. Large fruit tend to have low concentrations of flesh calcium, which leads to the development of bitter pit, cork spot, and soft fruit flesh with poor storage potential. The only way to improve flesh calcium concentrations is with calcium sprays. On young trees and trees with light crops, the higher rates of calcium (10 to 40 lbs. of calcium chloride/acre/season or 35 to 50 pounds of calcium chloride/acre/season) would be advisable. Apply calcium in each cover spray. Below is a table providing various amounts of calcium when using calcium chloride flakes (28% calcium). Other calcium-containing products are effective, but no more effective than calcium chloride. If using other materials, be sure to use enough product to get the desired amount of calcium per acre.

Pounds of calcium chloride/acre/spray	Number of applications	Total calcium chloride/acre/season (lbs)	Total calcium/acre/season (lbs)
1.8	8	14.4	4
3.6	8	28.8	8
4.4	8	35.2	10
5.4	8	43.2	12

See the 1996 ID 168 for additional suggestions and cautions. Do not reapply calcium sprays if rain has not washed the previous spray residue from the foliage. Buildup of residue could cause foliage damage.

There are other products available that supply calcium. Many of these formulations are recommended at rates that supply lower amounts of calcium. These products may be beneficial when only small amounts of calcium are needed to correct the deficiency. To effectively evaluate the materials growers should compare the cost per pound of actual calcium at the amount of formulation needed to achieve the 4.0 to 12.0 pounds of actual calcium per acre per season needed to control problems. Dr. Mosbah Kushad of Illinois has presented evidence that the newer formulations are no more effective than calcium chloride. The table below contains important information.

Product name	% Calcium	Pounds of calcium/gal or lb	Labeled rate product/acre/spray min-max	No. of applications	Total product/acre/season min-max	Total Calcium/acre/season (lbs) min-max
Calcium chloride (77-80% CaCl <sub>2</sub> flakes)	27.8	0.28	1.8-6.2 lbs.	8	14.3-50 lbs.	4.0-14.0
Calcium chloride (35% CaCl <sub>2</sub> liquid)	12.6	1.42	0.35-1.24 gal.	8	2.8-9.9 gal.	4.0-14.0
Nutri-CAL 8%	8.0	0.89	1 - 2 qts.	3-8	0.75-4.0 gal.	0.67-3.6
Nutri-Phos 12	11.0	0.11	3 - 10 qts.	2-6	20-40 lbs.	2.2-4.4
Sorba-Spray Ca	8.0	0.86	1 - 4 qts.	4-5	1-5 gal.	-0.9-4.3
Stopit Calcium	12.0	1.28	2 - 4 qts.	8-11	4-11 gal.	5.1-14.1

Some, but not all, of these formulations have been compared to calcium chloride. The results generally indicate that the various calcium materials will reduce bitter pit and corking equally well when used at rates that provide an equivalent amount of calcium per acre per season. Some materials are labeled at rates that provide only about a third of the

calcium recommended per acre per season. When deciding which calcium source to use, consider the following: 1) cost of the material; 2) effectiveness of the material, and 3) cost to thoroughly wash the tractor and sprayer and rinse out the sprayer if calcium chloride is used.

(Adapted from the Ohio ICM Newsletter)

**Strawberry Renovation:** For best results, renovation should be started immediately after the harvest is completed to promote early runner formation which leads to high yield potential for next year. Renovation should be completed by mid-July for best results. The following steps describe renovation of commercial strawberry fields.

1. Weed control: Annual broadleaf weeds can be controlled with 2,4-D alkanolamine salts (4 lbs./gal.) at 2 to 3 pts/acre in 25-50 gallons of water applied immediately after harvest. Be extremely careful to avoid drift when applying 2,4-D. If grasses are a problem, sethoxydim (Poast) will control annual and some perennial grasses. See ID 169 and the product label for rates and especially for precautions. Do not tank mix Poast and 2,4-D.
2. Fertilize the planting. A soil test will help determine phosphorus and potassium needs, but foliar analysis is a more reliable measure of plant nutrition. (See related article) Nitrogen should be applied at 25-60 lbs/acre, depending on vigor. It is more efficient to apply nitrogen in small increments at regular intervals through the season, rather than all at once.
3. Mow the old leaves off 3-5 days after 2,4-D application just above the crowns. Do not mow so low as to damage the crowns.
4. Subsoil: Where picker traffic has been heavy on wet soils, compaction may be severe. Subsoiling between rows will help to 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 width of rows to a manageable width based on your row spacing, the aisle width desired, and the earliness of renovation. 12-18 inches is a desirable row width to attain at the end of the season. This means that rows can be narrowed to as little as 6 inches during renovation. Use a roto-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. Thin plants: For best production, plants should not be too dense within the row. An final density of 5 plants per square foot is optimum for most cultivars. Thus, cultivars that runner freely should be thinned so plants are about 5-6" apart.
7. Cultivate: Work in straw between rows and throw a small amount of soil over row by cultivation. Strawberry crowns continue development at the top, and new roots are initiated above old roots on the crown, so additional soil should be added to facilitate rooting. 1/2 - 1" of soil is sufficient. This also helps to cover straw in the row and provide a good rooting medium for the new runner plants.
8. Weed control: Pre-emergence weed control should begin immediately. Sinbar or Devrinol are suggested materials. See ID-169. Check the product labels carefully. Devrinol must be incorporated through irrigation 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.
9. Irrigate: Water is needed for both activation of herbicides and for plant growth. Do not let plants go into stress. Ideally see that planting receives 1 to 1.5 inches of water per week from either rain or irrigation.
10. Cultivate to sweep runners into the row until plant stand is sufficient. Thereafter, or in any case after September, any runner plant not yet rooted is a weed and should be removed. Coulter wheels and/or cultivators will help to remove these excess plants in the aisles.

11. 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.

***Tissue Analysis Grapes and Small Fruits:***

Tissue analysis is the most reliable means of determining plant nutritional status. It is important to supply the crop with sufficient nutrients for maximum growth and productivity. Nitrogen is the most commonly needed nutrient for most fruit crops, however, potassium is often deficient as well, especially in grapes. Soil analysis can also be useful when used in conjunction with tissue analysis. However, soil analysis alone is not considered a reliable indicator of plant nutritional status. Soil samples can be taken at any time of the year and gives good indications of the amounts of specific nutrients in the soil. 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 (primocanes) between August 1 and 20. For blueberries sample leaves during the first week of harvest, usually mid-July. For grapes, samples should be taken about 70 days after full bloom, usually early to mid August. Nitrogen status is most difficult to determine by foliar analysis, because levels can vary significantly within a relatively short time frame. Samples taken specifically for nitrogen status of grapes should be collected at full bloom. Growers often rely on subjective estimates of relative growth and vigor to determine the nitrogen status of crops. There are several private companies and universities that provide tissue analysis. Your county extension office has a list of the ACP Certified plant and soil analysis labs in Indiana.

***EPA Conducts Public Meetings on WPS:***

EPA is conducting public meetings across the U.S. to assess the first full year of implementation of the Worker Protection Standards (WPS) The public meetings are designed to provide an opportunity for workers and employers to relay actual experiences and lessons learned in the course of WPS implementation. The information will be used by EPA and cooperating state officials and organizations to improve WPS administration. Topics to be covered include:

- Available assistance from regulatory partners and others involved with the WPS;
- Usefulness of available assistance;
- Understanding WPS requirements;
- Success in implementing the requirements; Difficulties in implementing the requirements; and
- Suggestions to improve implementation

Persons who wish to speak at the meetings may register on site beginning at 5:00 p.m. EPA will open the meetings at 7:00 p.m. Persons who cannot attend the public meeting but wish to comment may do so by submitting written comments to: Jeanne Heying, Office of Pesticide Programs (75067C), U.S. EPA, 401 M Street, SW, Washington, D.C. 20460. Telephone: 703-305-7164; fax 703-308-2962.

Meeting locations, dates and contacts for the meetings are:

- June 19, Pasco, WA, Allan Welch, (206) 553-1980.
- June 26, Biglerville, PA, Magda Rodriguez-Hunt, (215) 597-0442.
- July 23, Fresno, CA, Mary Grisier, (415) 744-1095.
- July 25, Monterey, CA, Mary Grisier, (415) 744-1095.
- August 7, Portageville, MO, Glen Yager, (913) 551-7296.
- August 21, Tipton, IN, Don Baumgartner, (312) 886-7835

Any input members offer to EPA, please send copies to NCAE's offices. This information will be helpful in planning for WPS workshops later this year.

***Pesticide Container Recycling:*** The schedule for the 1996 pesticide container recycling project includes 19 conveniently located sites. The program, which is sponsored by the Indiana Farm Bureau, Inc., the Indiana Plant Food and Ag Chemical Association, and the Office of the Indiana State Chemist, successfully diverted more than 120,000 pesticide containers from Indiana landfills in 1995. The Solid Waste Management Districts and Purdue Cooperative Extension Service are again cooperating to provide sites and personnel at times. Dates begin August 5 and run through September 12. Exact dates and locations for recycling can be obtained from the Office of the Indiana State Chemist, Purdue University, 1154 Biochemistry Bldg., West Lafayette, IN 47907-1154, or county Purdue Cooperative Extension Service offices.

**Indiana Horticultural Society Summer Meeting:** June 21-22, 1996. Garwood Orchards and Sunacre Orchards, LaPorte Co. IN. The schedule for the meeting was included in the last newsletter.

Garwood's Orchards are fast growing with many young plantings that are coming into good production. They have planted several of the new varieties and have some experience with growing them. They have a good crop on most blocks, including the peaches.

Arthur and Frances Schuck's Sunacre Orchard consists of mature blocks of trees of good varieties. Of special interest is the old block of Goldens that has produced consistently heavy crops for many years.

We hope that you can join us for a good meeting. This meeting is co-sponsored by Purdue Cooperative Extension and all fruit growers are invited to attend.

To get to Schuck's Sunacre Orchards

for the Friday afternoon program, from US 20, east of LaPorte, go north 4 miles on CR 300 East to the orchard at 8711N 300W.

To get to Garwood Orchards, from SR 2, west of LaPorte, go north on CR 500 West about 1/2 mile to CR 50 S in Pinola. Go west to Forester Rd. The orchard headquarters is on the northwest corner, at 5911W 50S. A map will be included in the IHS newsletter. The usual pink signs should be in place.

***IDFTA Summer Tour:*** June 23-25 in Grand Rapids. The International Dwarf Fruit Tree Association summer tour will be held in Grand Rapids, Michigan from Sunday to Tuesday, June 23-25. The tour will convene Sunday evening at the Amway Plaza Hotel in Grand Rapids with an opportunity to get acquainted with friends and have a short presentation on Michigan fruit growing. Monday's tour will begin at Klackle Orchards and will feature the V-system and snaking. The next stop will be Kropf Orchards, featuring many varieties trained to the vertical axis on M9, M26 and Mark rootstocks. Apples with low and high irrigation, frost fans, in plantings of Red Delicious and sweet cherries will be seen at the Tom Rasch orchard. The Michigan State University Clarksville Experiment Station will be the mid-afternoon stop and feature the NC-140 orchard systems trial with Empire and Jonagold, trials with new rootstocks, thinning trials and sprayer demonstrations. There will be an optional concurrent session on cherries featuring training for mechanical harvesting, hedging, cherry cracking research and tart cherry breeding and new selections. On Tuesday, the first stop will be the Klenk orchard to see T-bar and super spindle systems with Gala, Braeburn, Ginger Gold and Fuji. At the Bruce and Joe Rasch Kenowa orchard, tour members will see the double-row leaning T-bar, vertical axis and V-systems with Golden Delicious, Jonagold, Braeburn, Fuji, Empire, Gala and Sunrise. Six-year-old vertical axis plantings will be seen at the Dietrich orchard and the Don Armock River Ridge Farm will

feature two-year-old spindles and T-bar systems with Braeburn, Fuji and Gala. Red Delicious on M26 will be featured on Harold Thome's orchard. A stop at Phil Brown Welding will feature new equipment for dwarf orchards. A spouses' tour will feature the Frederik Meijer Botanical Gardens, the Grand Rapids and Ford Museums, the Rockford Squire Street Square and the Heritage Hill home tour of Grand Rapids. For more information call the IDFTA at (717) 837-1551.

***Indiana Winegrowers Guild Summer Meeting and Grape Workshop:***

The Indiana Winegrowers Guild will hold their summer meeting in conjunction with a Purdue Grape & Wine Workshop on June 24 at Huber Orchard & Winery in Starlight, Indiana. Note: Clark, Floyd, and Harrison counties are on FAST TIME (EDT). The Guild Business meeting will begin at 1:30 p.m. (12:30 Indianapolis time). The vineyard workshop will begin at 3:00 p.m., followed by the barbecue cookout / potluck dinner at 5:30 p.m. A small fee will be charged to cover the cost of the barbecue dinner. Each family is asked to bring a covered dish to share, and perhaps a bottle or two of wine. The vineyard workshop will focus on canopy management for improved fruitfulness, fruit quality, and disease control. Watch for a flyer in the mail. Contact Bruce Bordelon (317-494-1301), Steve Thomas (800-948-8466), or Dave Gahimer (812-877-8227).

***Internet Mailing Groups:*** One of the most valuable aspects of computer access to the internet is being part of a mailing group for discussion of current events, crop conditions and so on. Growers, crop consultants, marketing specialists, researchers and others can benefit from the interchange of ideas. Some mailing groups that should be of interest to fruit growers in Indiana are Smallfruit -mg, Apple-crop, Fireblight-mg, Peach-mg, Viticulture-mg, and Enology-mg. These mailing groups are maintained by different people at different locations, so subscription addresses differ for each mailgroup. To

subscribe to a mailing group, send a one-line message 'subscribe <name of mailing group> <your name>' to the appropriate subscription address. There are a few minor differences in the subscription procedure, so if you have trouble send a one-line message that says 'help'. Remember, there is no person receiving the message, just a computer, so any extraneous verbage is simply ignored. For Smallfruit-mg, send a message to almanac@es USDA.gov. To subscribe to Apple-crop send a message to apple-crop@orchard.uvm.edu. To subscribe to Fireblight-mg, the address is almanac@ecn.purdue.edu. For peach-mg the address is listproc@hubcap.clemson.edu. For Viticulture-mg and Enology-mg the address is majordomo@oes.orst.edu.

***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/hort/hort.html>, 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 listserv 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 bb@hort.purdue and I'll try to help.

***Coming Meetings/Events:***

***June 20*** — Southwest Purdue Agricultural Center Field Day. 5:00 p.m. to 8:00 p.m. Contact Lissa Crowley (812-886-0198)

***June 20*** — Southwest Missouri State Fruit Experiment Station Viticulture Field Day. Mt. Grove, MO. Contact (417-926-4105)

***June 21-22*** — Indiana Horticultural Society Summer Meeting. Friday June 21, from 3:00 p.m. - 5:00 p.m. Tour of Sunacre Orchard, New Carlisle. Saturday June 22, all day meeting at Garwood Orchards, LaPorte. Additional program details in this issue. Contact Dick Hayden (317-494-1301).

***June 23-25*** — International Dwarf Fruit Tree Association Summer Tour. Central MI. Contact Dick Hayden (317-494-1301).

***June 24*** — Indiana Winegrowers Guild Summer Meeting. Huber Orchard & Winery. Starlight, Ind. Begins at 1:30 p.m. FAST TIME (EDT). Contact Bruce Bordelon (317-494-1301), Steve Thomas (800-948-8466) or Dave Gahimer (812-877-8227)

***June 26*** — Ohio Fruit Growers Society Summer Tour. Bachman's Sunny Hill Fruit Farm, 20 miles south of Columbus, Ohio. Contact OFGS (614-249-2424)

***June 27***— Illinois Horticultural Society Summer Horticulture Field Day. University of Illinois South Farm, Champaign-Urbana. Contact Don Naylor (309-828-8929) or e-mail [dhnaylor@heartland.bradley.edu](mailto:dhnaylor@heartland.bradley.edu).

***June 27*** — Mechanical Raspberry Harvester Demonstration. Dale Stokes Berry Farm near Wilmington, Ohio. Contact Tom Wall (614-289-2071) or Dick Funt (614-292-8327).

***July 16-20*** — 4th International Symposium on Cool Climate Viticulture & Enology, Rochester Riverside Convention Center, Rochester NY. Contact William Edinger, Dept. of Food Science & Technology, NYS Agricultural Experiment Station, Geneva, New York 14456-0462, Phone: 315-787-2277 Fax: 315-787-2397 E-Mail: [TH12@cornell.edu](mailto:TH12@cornell.edu) Check us out on the WEB: <http://www.nysaes.cornell.edu/fst/asev/cool-climate/>

***July 18*** — UKREC Extension & Research Field Day, Research and Education Center, Princeton, KY Contact Don Hershman (502-365-7541 ext. 215)

***July 31*** — Viticulture Field Day, Southwest Michigan Research and Extension Center, Benton Harbor, Mich. Contact Tom Zabadal (616-944-1477)

***September 15, 1996*** — Ohio Valley Harvest Festival. Louisville, KY. Contact Roy Ballard (812-948-5470).

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