

FACTS FOR *Fancy Fruit*



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**Crop Conditions**

Scattered hail damage is showing up around the state. Fireblight has been quite a problem in many apple plantings.

**Hort. Society Summer Meeting**

Thanks to the Bill Engelbrecht and Billy Reid families for their hospitality during the summer meeting of the Indiana Horticultural Society. Although the attendance was down from previous years, those who made the journey south were treated to some fine examples of fruit growing and farm marketing.

**Seasonal weather update**

After a very warm spring, the season has settled down close to the long term averages. The graphs showing accumulated heat units really show the big differences between northern and southern parts of the state. See attached graphs.

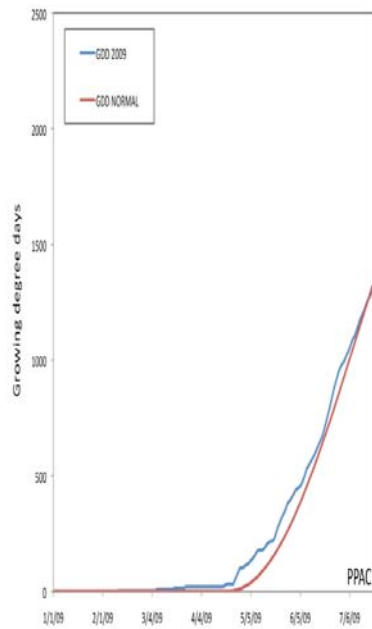


Figure 1. Temperature data from the Pinney Purdue weather station in Porter Co.

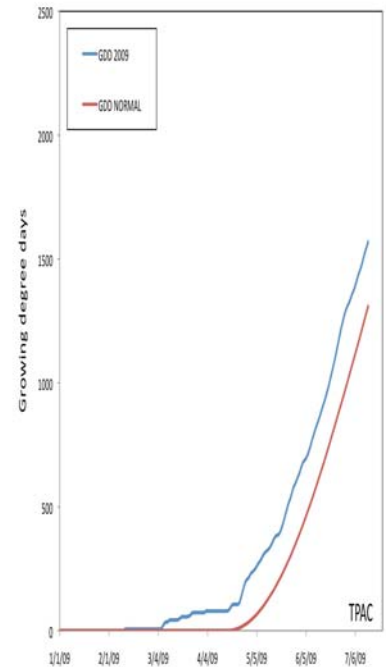


Figure 2. Temperature data from the Throckmorton Purdue weather station in Tippecanoe Co.

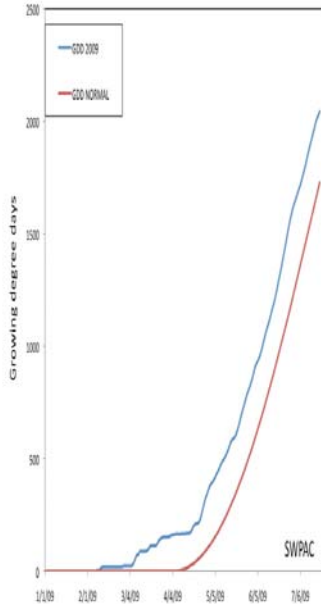


Figure 3. Temperature data from the Southwest Purdue Ag. Center in Vincennes (Knox Co.)

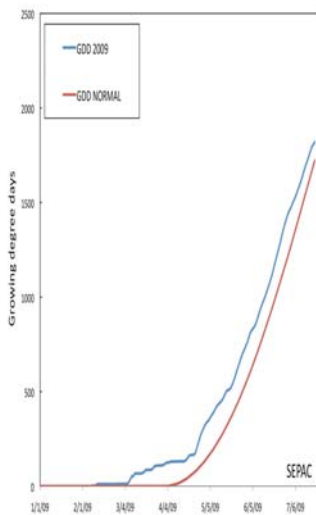


Figure 4. Temperature data from the SEPAC Purdue weather station in Jennings Co.

## Herbicide drift injury to grapes and other sensitive crops

Anytime we have a cool, wet spring and delay in planting corn and beans in the state, we have the potential for herbicide drift injury in grapes and other sensitive crops. With all the rain we had in May and June, the 2009 season will probably go in the record books for number of drift complaints handled by the Indiana State Chemist Office and Purdue Plant and Pest Diagnostic Lab. Growth regulator herbicides such as 2,4-D (LV 4, Weed Master, etc) and dicamba (Banvel, Clarity, etc.) are widely used on no-till crops and for post emergence broadleaf weed control in corn. These herbicides are very volatile and the vapor can drift long distances. When they are applied in early spring before vine growth starts or sensitive annual crops are planted, no damage occurs, but when they are applied later in the season after the commencement of growth of sensitive crops, significant damage can occur. Drift prior to bloom can cause a significant reduction in fruit set and reduction in yield in tomatoes and grapes. Drift after fruit set can cause significant reduction in leaf area, stunting and reduced shoot growth and delay in fruit maturity. See the pictures below.



It is difficult to find a commercial vineyard in the state that does not have significant herbicide injury this year. We even have significant damage in our research plots near Vincennes, which have not had significant damage in the past 16 years. Our plots in Tippecanoe county got damaged severely during the first week of June. In this heavily farmed county, we see damage every year, and experience severe injury about once every 4 years.

There is nothing that can be done now to mitigate the damage. Growers may want to point out the damage symptoms to their farming neighbors and pesticide applicators to try to avoid problems in the future. If you want to file an official complaint, contact the Indiana State Chemist Office (<http://www.isco.purdue.edu/>) follow the Pesticide link and click on "I want to file a Pesticide Complaint." Or call 800-893-6637.

This gives me an opportunity to promote the new Driftwatch web site for registering sensitive crops. We spoke about this project (originally called "Be Aware") at our winter meetings at the Indiana Horticultural Congress, and web site coordinator Leighanne






Facts for Fancy Fruit is a newsletter for commercial and advanced amateur fruit growers. It provides timely information on pest control, production practices, and other topics likely to be of interest to fruit growers. All growers and interested persons are welcome to subscribe.

Subscriptions are \$15 per year. Subscribers will receive 12-15 issues biweekly during the growing season and monthly otherwise.

To subscribe, send your name, mailing address, and check for \$15 (payable to Purdue University) to:

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This newsletter can be accessed free at [www.hort.purdue.edu/fff/](http://www.hort.purdue.edu/fff/).

<i>Current bud stages West Lafayette, IN</i>		
Apple	Grape	Blackberry
		

Hahn was on-hand in the tradeshow to help growers register their farms. Over 500 Indiana specialty crop farms and pesticide-sensitive sites are now registered. If you have not done so, I urge you to check out the website and register. It's free, easy, and may save you the frustration and economic loss from herbicide drift in the future. Visit <http://www.drift-watch.org/> Register today! (Bordelon)

### Grape Disease and Insect Management

Grapes are in reaching bunch closure across the state. It is now time to switch to a more relaxed mid-season spray program. Berries are now essentially resistant to infection by black rot and powdery mildew, but leaves are still susceptible. Scout regularly for the development of these diseases and spray accordingly. Spray interval may be extended out to 14-21 days if the weather cooperates and no leaf diseases are present. Japanese beetles are just beginning to emerge across the state. Control is usually warranted, especially on younger vines. Larger growers may be able to get by with perimeter sprays as the beetles tend to move into the vineyard from the edges. The Midwest Commercial Small Fruit and Grape Spray Guide gives a complete recommendation on pest management in grapes. (Bordelon)

### Shoot Positioning and Canopy Management

Growers should have finished shoot thinning and crop load adjustment by now. Now that shoots have toughened-up, it's time to get serious about shoot positioning. Varieties differ in their need for shoot position due to their growth habit and vigor. Some varieties such as Vignoles tend to have a semi-upright growth habit and relatively short shoots that stand up well on their own, so shoot positioning is seldom needed. Other varieties such as Traminette, Chambourcin 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. 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.

Leaf removal is another important component of canopy management. While most commonly associated with mid-wire cordon vertically shoot positioned training systems, it can be used on high cordon trained vines as well. Removal of 2-3 basal leaves in the cluster zone anytime prior to veraison can significantly improve fruit quality by decreasing fruit rot potential, and improving sunlight exposure of clusters. We generally recommend removal of leaves mainly on the east side of the rows. Our work with Traminette has shown a significant increase in important flavor and aroma compounds (monoterpenes) and wine quality scores when fruit gets partial sun exposure. (Bordelon)

### Poor Fruit Set in Traminette

I have seen a number of vineyards with very poor fruit set in Traminette. While we have seen similar problems occasionally on Traminette in the past, it seems extremely bad this year. During bloom, clusters show brown necrosis of the side branches, or in some cases, the ends of the clusters. Some clusters are completely necrotic. Affected clusters may set half the normal number of berries. See the picture on the next page.



It appears to be a problem confined to Traminette. The good folks at the Purdue Plant and Pest Diagnostic Lab are looking into the problem to see if it's pathogenic. Hopefully we'll know something soon and will be able to make recommendations before next year. If you've noticed this in your vineyard, I'd like to hear from you. (Bordelon)

## Late Season Monitoring of scab and summer diseases:

This extremely wet weather has resulted in a lot more foliar problems than previous years. However, higher incidence of foliar disease isn't due to rain alone: Lower rates of mancozeb (3 lb/acre) are not as effective for control of these diseases.

In addition to regular heavy rain falls, there have been constant light rainfalls as well, resulting in fungicide wash-out, prevention of re-application due to muddy conditions, and even a failure of fungicides like mancozeb to redistribute due to constant misting conditions! As more and more growers use protectant spray programs, it is important to remember that higher rates, when possible, are the best approach to prevent disease, as many of these older fungicides are not as effective as the SI, or strobilurin classes of fungicides (when resistance isn't an issue). Another important point to recall is that mancozeb has better "stick" or residual activity through heavy rains than does Captan, but Captan redistributes more effectively than mancozeb fungicides under misty rain and

drizzle. In the future, should rains like this be predicted, combining mancozeb and captan in the same tank should ensure protection against both extremes for growers using a protectant program. During these types of conditions, growers should also consider using Flint, Sovran, or Pristine, which has better retention/redistribution than mancozeb or captan. This fungicide redistribution is key to better disease control when newly developing leaves are protected by the redistribution of fungicide residues from older leaves and even bark.

When scouting, a small hand counter-clicker is useful to keep track of the number of shoots and clusters checked. When you find a leaf with one or more lesions, put it in your pocket. Monitoring for each problem should be done separately to avoid both counting errors and confusion.

### Scab Monitoring

When the clicker reaches 100, stop and count the number of scabby leaves you have collected. Inspecting a block for scab requires looking at a lot of leaves. Don't study each leaf, but glance over clusters of 15 leaves at a time. You have to look at each cluster twice, once for the upper leaf surface and again for the underside. By looking at about 15 leaves per cluster/shoot on 100 clusters/shoots, you will be checking about 1500 leaves. Minimum: check 100 fruit clusters or vegetative shoots per block. Select the cluster/shoots from tree at least 10 trees per block. Your sample of fruit clusters and vegetative shoots should come from at least 10 trees per block (i.e. no more than 10 per tree). Checking 5 clusters/shoots per tree on 20 trees is even better. Randomly select clusters and shoots from all areas of the canopy. Problems due to improper spray distribution can be limited to one section of the tree.

### Interpretation

A threshold of 0.5% of leaves infested (i.e. 8 infested leaves out of 1500 leaves checked)

has been suggested by pathologists as a reasonable guess at a threshold for suppression treatments.

If you find less than 5 scab-infested leaves per 100 fruit clusters & vegetative shoots, this suggests that protection during primary (ascospore) scab infection periods was adequate.

Conversely, if you find 18 or more scab-infested leaves per 100 clusters and shoots, the evidence suggests that lesion suppression is needed.

If the number of scab-infested leaves per 100 clusters/shoots is between 5 and 18, you can either increase the sample to see if a clear result comes out, or quit sampling and identify the degree of scab infestation as intermediate.

### Sooty blotch/Flyspeck and Bitter Rot

[http://www.caf.wvu.edu/Kearneysville/disease\\_descriptions/omsoty.html](http://www.caf.wvu.edu/Kearneysville/disease_descriptions/omsoty.html)

At midseason, observe 25 fruit in the interior canopy of sample trees. Symptoms are more likely to be found in poorly pruned trees in the wetter, foggy, slow-drying areas of the orchard. Expect first symptom expression by early to mid-July. Continue to observe 25 fruit in the interior canopy of sample trees. Fungicides should be applied to fresh fruit showing any infections. Presence of these diseases is a good indicator that fungicide surface residues are lacking or very low, and signals potential need for treatment to control these diseases or the decay producing fungal pathogens. The most disease is likely to be found in low areas of the orchard where drying may be slower.

### Black Rot and White Rot

Observe 25 fruit and leaves on each sample tree from mid-season through the preharvest period, looking for the presence of frog-eye leaf spots (caused by the black rot fungus). Scout

the most susceptible varieties: 'Rome', 'Jonathan', 'Stayman', and 'McIntosh'. Sports of 'Golden Delicious' and 'Delicious' are not as susceptible to black rot, but are more susceptible to white rot. If leaf spots are observed it may be possible to locate mummies, dead wood, or cankers higher in the tree; these should be removed if possible. Although there are some differences in fruit susceptibility among the varieties, all are susceptible. Record the location of trees with an abundance of dead wood and cankers so

these can be scheduled for intensive pruning during the dormant period.

### Homeland Security backs E-Verify system

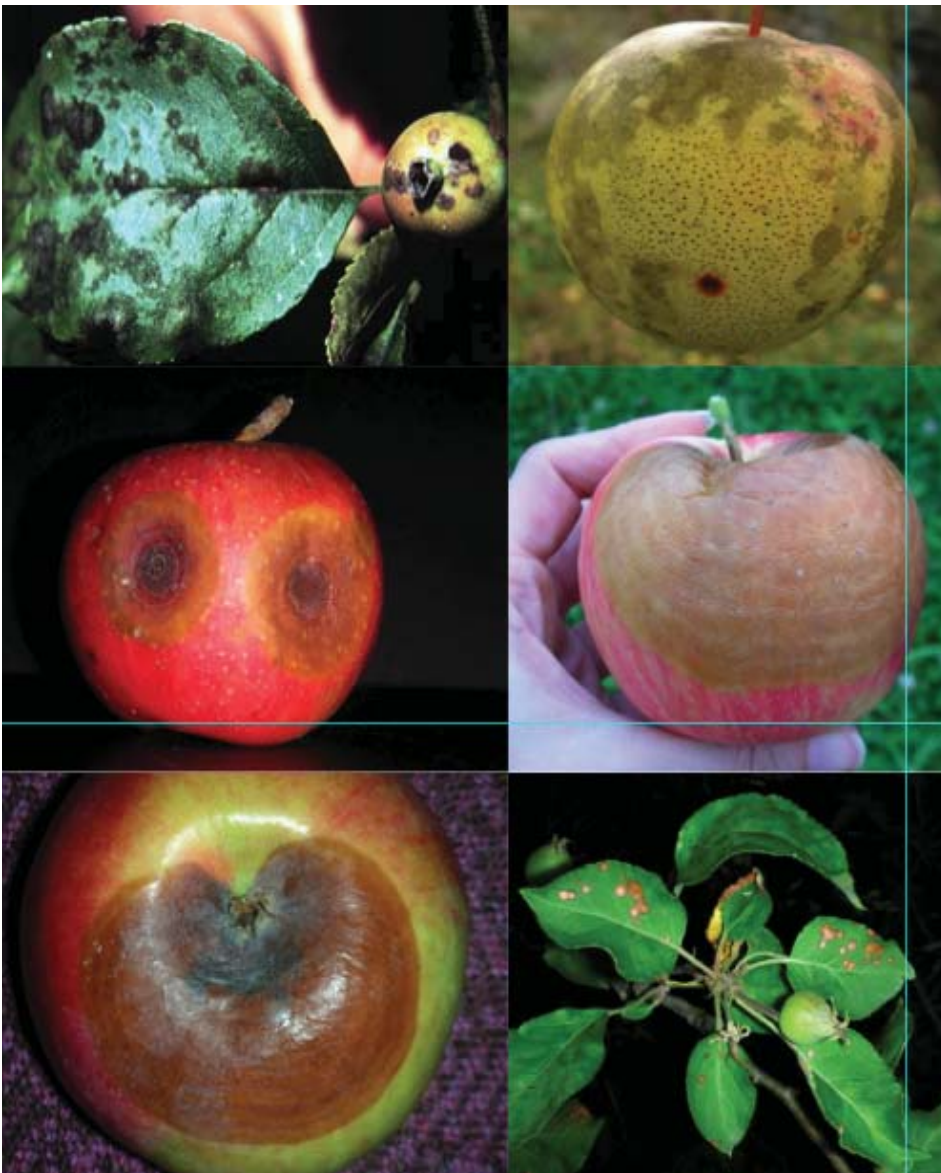
The Department of Homeland Security has come out in favor of the E-Verify system to check on the legal status of potential employees and hopes to rescind the Social Security Administration's No-Match Rule, according to a news release. E-Verify, which compares information from the Employment Eligibility

average, 1,000 employers sign up for E-Verify each week, the release said. The government plans to implement the program for contractors and subcontractors Sept. 8. "E-Verify is a smart, simple and effective tool that reflects our continued commitment to working with employers to maintain a legal workforce," Janet Napolitano, Homeland Security secretary, said in the release. The No-Match system, which was established by the Bush Administration in 2007 but immediately enjoined by a U.S. District Court, was intended to address employers' obligations if they received notice that Social Security numbers submitted by employees did not match up with Social Security Administration records. The program generally was opposed by the produce industry. "This rule would have been devastating to the California and Arizona fresh fruit, vegetable and tree-nut industries and would have caused massive layoffs of employment-authorized workers and U.S. citizens, while dragging the economy deeper into recession," Tom Nassif, president and chief executive officer of Irvine, Calif.-based Western Growers, said in a separate release. (Red Book Marketing, <http://www.rbc.com>)

### ACRE/DCP Program Enrollment Deadline Rapidly Approaching

Don Hunton, Acting Executive Director of USDA's Farm Service Agency in Indiana reminds producers of the importance of timely electing and enrolling in the new Average Crop Revenue Election (ACRE) program or the traditional Direct and Counter-Cyclical Program (DCP). It is critical for producers to begin the enrollment process as soon as possible. The deadline to enroll in ACRE or DCP for 2009 is August 14, 2009.

Hunton explained, "The Average Crop Revenue Election program is an innovative alternative to the traditional farm safety net. With this new program also comes a complex signup process. It is important producers contact their local office to set up appointments well



Top row: Scab, flyspeck/sooty blotch,  
Middle Row: bitter rot, white rot  
Bottom row, black rot/ frog-eye leaf spot

Verification Form (I-9) against federal government databases to verify workers' employment eligibility, is a free Web-based system operated by DHS in partnership with the Social Security Administration. On

before the August 14, 2009 deadline.”

Late-filed applications for ACRE or DCP will not be accepted. ACRE elections on the CCC-509ACRE will not be approved until all producers, including owners, on a farm have signed the CCC-509ACRE for election and the CCC-509 for enrollment into the ACRE program. For crop year 2009, a CCC-509ACRE and CCC-509 not having all requisite signatures of producers on a farm by the election/enrollment deadline of August 14, 2009 will not be considered submitted for the purpose of election/enrollment and will not be acted on or approved. If producers do not elect ACRE, they have the option of completing the CCC-509 contract for enrollment into the DCP program by August 14, 2009. Both ACRE and DCP require all signatures be obtained by the deadline.

Hunton emphasized, “In all cases, it is the responsibility of the operator and owners of a farm to obtain and submit all necessary signatures on the CCC-509ACRE election form and the CCC-509 for ACRE or DCP program enrollment by the August 14, 2009 deadline”.

To elect ACRE for a farm, producers must complete Form CCC-509ACRE, which irrevocably elects ACRE for the farm through crop year 2012. Form CCC-509, the contract to participate in ACRE, must then be completed each year the producer intends to participate and receive benefits.

For more information about the ACRE program please visit your local Farm Service Agency (FSA) county office or visit <http://www.fsa.usda.gov>.

## FSA Programs Open To Socially Disadvantaged Producers

Don Hunton, Acting Executive Director for USDA’s Farm Service Agency in Indiana says FSA is reaching out to women, ethnic and minority farmers in the state in an effort to get more of them involved in its programs.

“FSA programs are available to all producers but we would like to increase participation by traditionally underrepresented groups in all program areas,” said Hunton.

FSA defines a socially disadvantaged (SDA) farmer, rancher, or agricultural producer as one of a group whose members have been subjected to racial, ethnic, or gender prejudice because of his or her identity as a member of the group without regard to his or her individual qualities. SDA groups are women, African Americans, American Indians, Alaskan Natives, Hispanics, Asian Americans and Pacific Islanders.

According to Hunton, FSA also reserves a portion of its direct and guaranteed loan funds each year for SDA loans for eligible participants. These loan programs are designed to help farmers purchase and operate family farms.

“With these loan programs, FSA hopes to help reverse the declining number of farmers and ranchers across the United States and especially here in Indiana,” said Hunton.

“These loans help to encourage and assist them in owning and operating their own farms and ranches, participate in agricultural programs, and become integral parts of the agricultural community.”

Applicants must meet the eligibility requirements for a given program before FSA can extend program benefits. For more information on these programs and other programs available through FSA, contact the Farm Service Agency at the county USDA Service Center. (USDA)

## Upcoming meetings

Aug. 2-5

IFTA Annual Orchard Short Tour, Nova Scotia, Canada. For more information [www.ifruittree.org](http://www.ifruittree.org)

Aug. 6-9

46th Annual National Blueberry Festival, South Haven, MI. For more information [www.blueberryfestival.com](http://www.blueberryfestival.com)

Aug. 11-12

NASGA 2009 Summer Strawberry Tour. Chicago, IL. For more information contact Kevin Schooley, 613-258-4587, or [www.nasga.org](http://www.nasga.org).

August 20-21

Apple Crop Outlook and Marketing Conference. US Apple Association. Ritz Carlton Hotel, Chicago. For details, visit [www.usapple.org](http://www.usapple.org)

Dec. 8-10

Great Lakes Fruit Vegetable and Farm Market Expo. DeVos Place Convention Center, Grand Rapids, MI. For more information: [www.glexpo.com/index.php](http://www.glexpo.com/index.php)

## 2010

Jan. 4-5, 2010

Kentucky Fruit and Vegetable Conference and Trade Show. Embassy Suites Hotel, Lexington, KY. Contact John Strang 859-257-5685.

Jan 6-8

Illinois Specialty Crops and Agritourism Conference. Crowne Plaza Hotel and Convention Center, Springfield, Ill. For more information contact Diane Handley 309-557-2107, or [handley@ilbf.org](mailto:handley@ilbf.org).

Jan18-20

OPGMA Congress, The Nia Center at the Kalahari Resort, Sandusky, OH. For more information: [www.opgma.org](http://www.opgma.org)

Jan. 19-21

Indiana Horticultural Congress, Adam's Mark Hotel, Indianapolis. More information: [www.inhortcongress.org](http://www.inhortcongress.org)

Feb 5-12

NAFDMA's 25th Anniversary Convention, Lancaster PA. More information: [www.nafdma.com/](http://www.nafdma.com/)



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