

FACTS FOR *Fancy Fruit*



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**2014 Season review**

**Weather**

**Winter:** Winter was colder than normal with higher than normal snowfall. December was 1.9 degrees colder than normal with 147% of normal precipitation. January temperature averaged 4.4 degrees below normal with 124% of normal precipitation. February temperatures were 8.7 degrees below normal with 121% of normal precipitation. That made the winter overall 5.7 degrees colder than normal with 124% of normal precipitation.

There were four events of sub-zero temperatures, the first in mid December, the second during the "Polar Vortex" in early January, the third in late January and the last one in late February. Each of these likely contributed to the extensive damage seen in fruit crops this year. However, the Polar Vortex event Jan 6-8 was likely the most damaging. Temperatures in Lafayette reached a low of -14°F and stayed below -10°F for more than 24 hours, and below zero for over 36 hours. Wind chills reached -47°F in many places. Temperatures were colder in February, with a low of -18°F recorded in Lafayette, but by then, most of the damage had been done.

**Spring:** March was cooler (7 degrees) and drier (59% of norm) than normal. April was slightly warmer and wetter than normal (149% overall, 200% of normal in the south). May was slightly warmer with near normal precipitation. Overall spring ended up slightly cooler and wetter than normal. Bud break for most crops was about a week late. There were a couple of close calls on frost in mid-April, but no significant damage.

**Summer:** June was warm and wet, 1.3°F above normal and 135% of normal rainfall. July was cooler than normal, though the third week was very hot and humid. July was unseasonably cool and drier than normal, 3° below normal with 83% of norm rainfall. Several tornados touched down across the state. August was near normal temperature and above normal rainfall. The end of the month saw very cool days with lows in the 40s and highs in the 70s.

**Fall:** September has been warm and dry, very good conditions for harvest of apples and grapes. Fall bearing raspberries have done well, despite SWD.

Weather details from the Indiana State Climate Office Weather Summaries. <http://www.iclimat.org>

**Tree fruit**

The cold winter resulted in 100% flower bud mortality in sensitive crops such as peaches. We did not expect to see apples affected, but in one study we did see significant damage to flower buds on GoldRush trees. Apart from the polar vortex, it was a pretty average year. A few assorted hails storms caused some cosmetic damage to crops, but this was isolated and not widespread.

Across Indiana, and much of the Midwest, we received numerous reports about older trees that are failing or have failed, most likely due to a combination of older trees, overcropping (after the 2012 drought) followed by the severe winter. Cultivars like Mutsu, Jonagold and Rome seem to be affected at a much higher rate than Golden Delicious, although we received reports of Golden Delicious failing in southern Indiana. In its most severe form, winter-damaged trees never broke bud. In other instances, trees bloomed and then began to leaf out in the spring, only to wilt, fail and die as temperatures begin to warm.

**Diseases**

**Apples:** (Janna Beckerman)

Cool wet weather made for an unusually bad apple scab year. Hail events, with 2-3" hail in May and June resulted in widespread loss to fire blight, particularly on 'Fuji', 'Gala' and 'Granny Smith'. Continued wet weather throughout the state resulted in a higher incidence of summer rots, including white rot, black rot and bitter rot. As usual, Honeycrisp was the hardest hit.

**Small Fruit:** (Bruce Bordelon)

**Grapes:** Phomopsis cane and leaf spot was very common, likely due to the cool, wet spring. There was also plenty of black rot. Downy mildew problems showed up early (July) on susceptible varieties and continue through September. Many vineyards are showing significant defoliation, despite continuous fungicide applications.

**Blackberries and raspberries:** Overall not many problems. Some Septoria leaf spot late summer on raspberries.

**Currants and gooseberries:** Complete defoliation due to leaf spot.

**Aronia:** Several growers have established plantings to supply an Iowa farm offering premium prices for organically produced Aronia berries. There were several reports of fruit splitting (physiological?), powdery mildew, and a yet to be determined leaf spot. Our small planting in Lafayette (Viking) has had only minor fruit splitting, but the leaf spot has been common the past few years and lead to significant defoliation this year.

**Insects:** (Rick Foster)

Overall, insect populations were relatively low in 2014 in fruit crops. The severe winter may have been a factor in overwintering survival of some pests. Spotted wing drosophila, which was devastating in 2013, was not nearly as bad in 2014. Again, part of the decrease in severity may have been due to winter survival, and some may be because growers were more prepared and starting spraying insecticides earlier than previously. Brown marmorated stink bugs continue to slowly increase in numbers but so far problems have not been severe. There was a substantial migration of potato leafhoppers into the state in May and moderately high populations were present on a number of crops throughout the summer. Most other insects were either at normal levels or below average.

**Bottom line for Indiana fruit crops in 2014:**

**Peaches:** Very light crop in the south, no crop in the north

**Apples:** About normal crop

**Strawberries:** Very good crop. Long season with normal start and mild temps through June

**Blueberries:** Moderate crop going into the season, several growers experience collapsing bushes during harvest due to winter injury.

**Brambles:** Summer (floricane) blackberries had a very light crop in the south, no crop

central and north due to winter injury. Red raspberries had a nice summer and very nice fall crop. Primocane fruiting blackberries (APF) have had a great crop in Lafayette. These are proving to be an excellent option for central and northern growers.

**Grapes:** Very light crop central and north except on very hardy varieties. Many vines killed to the ground and being retrained. Southern areas had a good to excellent crop with good quality.

**Aronia:** Moderate to large crop, fruit cracking, leaf spot, powdery mildew.

**Pawpaw:** Light crop, large fruit, late ripening. (Bruce Bordelon, Peter Hirst, Rick Foster, Janna Beckerman)

**Hort Congress Jan. 20-22, 2015 Wyndham Hotel West, Indianapolis**

We hope you're planning to join us again this year for the Indiana Horticultural Congress. Last year the Congress was attended by about 800 people and the Trade Show was again sold out. We are expecting the same for the upcoming Congress.

As many of you know, the Congress includes educational sessions on fruit, fresh vegetables, processing vegetables, organics, winegrapes, farm marketing, and agritourism.

We have constructed the fruit program to be both interesting and informative to growers. A couple of highlights are:

**Dr Greg Lang**, Michigan State University will speak on the potential of sweet cherries as a

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.

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

crop for direct farm marketers. As one of the worlds leading authorities on sweet cherry production, Dr Lang will explain how small plantings can be of value to Indiana growers in his presentation “Small-Scale Cherry Production, Big Time Market Opportunities.”

**Dr Hazel Wetzstein** was appointed head of the Department of Horticulture and Landscape Architecture at Purdue University on Aug. 1. Prior to her appointment at Purdue, Dr Wetzstein was on the faculty at the University of Georgia where her research emphasis was in plant growth and development, reproductive biology, conservation and tissue culture, and medicinal plants. In recent years she has worked on pomegranate production in close cooperation with the Californian industry, showing she is well versed in applying plant physiology to solve real world problems.

**Fruit Program:**

*Tuesday, Jan. 20*

Food Safety Workshop

9:30 am Federal food safety regulations for farm and packinghouses: where we are. Manpreet Singh, Purdue Univ.

10:00 am What’s new with the Indiana State produce safety initiative. Jennifer Coleman, Indiana State Department of Health

10:30 am Coffee break

10:45 am New and remodeled packinghouses for food safety: how did we did it. Mike Garwood, Garwood Orchard; William Harriman, Harriman Farms; Scott Monroe, Purdue Univ.

11:30 am Fresh produce safety research in the NC tomato production environment. Chris Gunter, NC State Univ.

12:15 pm Lunch break

1:30 pm Spray Guide Update 2015. Janna Beckerman, Purdue Univ.

2:00 pm Less is more: utilizing adjuvants to manage common apple diseases. Chelsi Abbott, Purdue Univ.

2:30 pm USDA Non-insurable Crop Disaster Assistance Program Changes. Jacob Maxwell, FSA, USDA

3:00 pm Coffee break

3:30 pm Purdue International fruit tours

A review and panel discussion of New Zealand 2014. David Doud and Thomas Roney

A preview of South Africa 2016. Peter Hirst

5:00 pm Exhibitor spotlight in the Trade Show

*Wednesday, Jan. 21*

8:30 am Pruning made simple. Jacob Franzen, Purdue Univ.

9:00 am Regular bearing of Honeycrisp depends on spur management. Mokhles Elsyssy, Purdue Univ.

9:30 am Flower formation across different apple cultivars in Indiana. Peter Hirst, Purdue Univ.

10:00 am Coffee break

10:30 am Joint session with vegetables and organics: Talking with consumers about modern farming practices: GMO crops, organic farming, and more. Beth Forbes, Purdue Univ.

12:00 pm Lunch break

1:30 pm Small-Scale Cherry Production, Big Time Market Opportunities. Greg Lang, Michigan State Univ.

2:15 pm Update from Purdue horticulture. Hazel Wetzstein, Purdue Univ.

3:00 pm Coffee break

3:30 pm Managing growth to maximize flowering. Fatemeh Sheibani, Purdue Univ.

4:00 pm What makes an effective orchard website? Doug Smith, Woodhaven Group.

4:30 pm Private Applicator Recertification program (PARP)

5:30 pm Hort Congress Social Hour in the Trade Show

*Thursday, Jan. 22*

High tunnel workshop

8:30 am Winter environments in high tunnels. Liz Maynard, Purdue Univ.

9:00 am Cultural practices used to manage tomato disease. Dan Egel, Purdue Univ.

9:30 am Insect management. Rick Foster, Purdue Univ.

10:00 am Coffee break

10:30 am Experiences with biological control in high tunnels. Laura Ingwell

11:00 am Introduction to high tunnels: site selection. Shubin Saha, Univ. Kentucky

12:00 pm Hort Congress luncheon and awards ceremony, including presentations of winners of the cider contest

1:30 pm Indiana Horticultural Society business meeting. President Sarah Brown presiding

2:30 pm 3D trees – not just for the movies. Biying Shi, Purdue Univ.

3:00 pm Pollination - one of the keys to successful orchard design. Khalil Jahed, Purdue Univ.

3:30 pm Adjourn

**Registration**

Please view the Hort Congress website for all details about the Hort Congress including registration, lodging and program updates: <http://inhortcongress.org>

For your convenience, online registration is available and payment by credit card accepted. Just look on the left side of the homepage and click on "Click here to register".

If you have questions about registration or the program, please contact:  
Lori Jolly-Brown: email [ljollybr@purdue.edu](mailto:ljollybr@purdue.edu) or phone 765-494-1296.

### **Cider Contest**

Once again this year, a cider contest will be held in conjunction with the Hort Congress. Entry is open to all cider makers and there is no fee for entering a cider in the contest. Two gallons of cider should be checked in at the Congress registration desk on Tuesday and judging will take place Wednesday afternoon. Plaques will be presented to the makers of the three top ciders at the Hort Congress luncheon on Thursday.

### **Exhibitor Spotlight**

In previous years at the Hort Congress, the Indiana Vineyard and Winery Association have held an Indiana Wine reception in the Trade Show on Tuesday evening. This has been open to all Congress attendees and many of us have enjoyed tasting Indiana wines. Also many exhibitors have enjoyed the additional exposure to conference attendees. This year the IVWA are celebrating their 40th anniversary and have changed their program. Therefore there will not be an open wine reception as in the past. To provide a venue for increased networking among attendees and exhibitors in a social setting, this year we are trying something new. On Tuesday evening we have scheduled an Exhibitor Spotlight in the trade show starting at 5:00pm. Each exhibitor will have the opportunity to give a brief (1 minute) introduction of themselves and their products at the podium. A cash bar will be available.

### **Return Bloom Fund**

We'd like to encourage growers and others to make end of year contributions to the Return

Bloom Fund. These contributions help our programs at Purdue tremendously. In many cases we are able to leverage these funds to free up resources from university and other sources. No overheads or salaries are deducted from the Return Bloom Fund so each dollar contributed makes a real difference. Remember that funds contributed to Purdue qualify for a 50% tax rebate on state taxes (up to \$400 if married filing jointly) and is also a deduction on federal and state taxes. Depending on the tax rate, by the time all is said and done, that \$400 probably costs less than \$100 out of pocket. We appreciate all the support we have received in the past. Contributions may be mailed to:  
Return Bloom Fund  
Department of Horticulture and Landscape Architecture  
625 Agricultural Mall Drive  
West Lafayette, IN 47907

Contributors will be recognized by a red apple on their name badge at the upcoming Indiana Hort Congress.

### **USDA Provides Greater Protection for Fruit, Vegetable and Other Specialty Crop Growers**

Agriculture Secretary Tom Vilsack today (Dec. 12) announced that greater protection is now available from the Noninsured Crop Disaster Assistance Program for crops that traditionally have been ineligible for federal crop insurance. The new options, created by the 2014 Farm Bill, provide greater coverage for losses when natural disasters affect specialty crops such as vegetables, fruits, mushrooms, floriculture, ornamental nursery, aquaculture, turf grass, ginseng, honey, syrup, and energy crops.

These new protections will help ensure that farm families growing crops for food, fiber or livestock consumption will be better able to withstand losses due to natural disasters," said Vilsack. "For years, commodity crop farmers have had the ability to purchase insurance to keep their crops protected, and

it only makes sense that fruit and vegetable, and other specialty crop growers, should be able to purchase similar levels of protection. Ensuring these farmers can adequately protect themselves from factors beyond their control is also critical for consumers who enjoy these products and for communities whose economies depend on them."

Previously, the program offered coverage at 55 percent of the average market price for crop losses that exceed 50 percent of expected production. Producers can now choose higher levels of coverage, up to 65 percent of their expected production at 100 percent of the average market price.

The expanded protection will be especially helpful to beginning and traditionally underserved producers, as well as farmers with limited resources, who will receive fee waivers and premium reductions for expanded coverage. More crops are now eligible for the program, including expanded aquaculture production practices, and sweet and biomass sorghum. For the first time, a range of crops used to produce bioenergy will be eligible as well.

"If America is to remain food secure and continue exporting food to the world, we need to do everything we can to help new farmers get started and succeed in agriculture," Vilsack said. "This program will help new and socially disadvantaged farmers affordably manage risk, making farming a much more attractive business proposition."

To help producers learn more about the Noninsured Crop Disaster Assistance Program and how it can help them, USDA, in partnership with Michigan State University and the University of Illinois, created an online resource. The Web tool, available at [www.fsa.usda.gov/nap](http://www.fsa.usda.gov/nap), allows producers to determine whether their crops are eligible for coverage. It also gives them an opportunity to explore a variety of options and levels to determine the best protection level for their operation.

If the application deadline for an eligible crop has already passed, producers will have until Jan. 14, 2015, to choose expanded coverage through the Noninsured Crop Disaster Assistance Program. To learn more, visit the Farm Service Agency (FSA) website at [www.fsa.usda.gov/nap](http://www.fsa.usda.gov/nap) or contact your local FSA office at [offices.usda.gov](http://offices.usda.gov). The Farm Service Agency (FSA), which administers the program, also wants to hear from producers and other interested stakeholders who may have suggestions or recommendations on the program. Written comments will be accepted until Feb. 13, 2015 and can be submitted through [www.regulations.gov](http://www.regulations.gov).

These new provisions under the Noninsured Crop Disaster Assistance Program were made possible through the 2014 Farm Bill, which builds on historic economic gains in rural America over the past five years, while achieving meaningful reform and billions of dollars in savings for the taxpayer. Since enactment, USDA has made significant progress to implement each provision of this critical legislation, including providing disaster relief to farmers and ranchers; strengthening risk management tools; expanding access to rural credit; funding critical research; establishing innovative public-private conservation partnerships; developing new markets for rural-made products; and investing in infrastructure, housing and community facilities to help improve quality of life in rural America. For more information, visit [www.usda.gov/farmbill](http://www.usda.gov/farmbill). (Source, USDA)

We also have Jacob Maxwell, program specialist with FSA, explaining this program to us at Hort Congress. Unfortunately the timing of Hort Congress is a couple of weeks too late the help with the deadlines listed above.

### **USApple Files Comments on FDA Revised Produce Food Safety Rule Proposals**

USApple has filed a comment letter with the FDA on the Agency's proposed revisions to the Produce Food Safety Rule. In late September, the FDA issued a revised set of proposed produce food safety regulations in an attempt to address concerns over the original proposals issued in January 2013. The revised proposals deal chiefly with concerns expressed by USApple and industry allies over the rules covering use of agricultural water.

In the revised proposals, the Agency has significantly changed the original standards and testing requirements for agricultural water. The new proposal eliminates the original requirement of weekly or monthly testing of water throughout growing season and replaces it with a tiered approach based on the EPA "recreational water" standard, and includes an option to utilize microbial "die off" rates to determine the interval in days between the last use of water and commencement of harvest. The revision calls for growers to establish a "baseline" for microbial presence in agricultural water using water samples gathered over a 2 year period.

The deadline for filing comments was December 15. The FDA is under a federal district court settlement that calls for the final produce rules to be issued by October 31, 2015. Growers would have 2 years from the effective date of the final rule (or up to 4 years for the smallest operations) in which to implement the agricultural water rules.



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