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Crop Conditions:

Harvest of major apple cultivars has started, with Gala color looking good. Grape harvest is underway in the southern half of the state. Fruit quality is good, with the recent cooler weather helping improve flavors and aroma.

Be on the Lookout for Multicolored Asian Lady Beetles: The Multicolored Asian Lady Beetles or “Lady Bugs” as most of us know them have become an indirect pest of grapes. Armed with a smelly defense chemical, these beetles have the capability of ruining vast amounts of wine. In the past few years, we have found them congregating on grapes at or near harvest. So far this year we have not seen any beetles on grapes. However, the problem seems to be worse in central and northern Indiana, the Great Lakes region, etc. and we have not yet started harvest in this region. As the season progresses we

may experience the “invasion”. We need growers and winemakers to help us monitor this pest. We would like to know if and when you notice significant numbers of multicolored Asian lady beetles showing up in your vineyards, what varieties they seem most attracted to, and at harvest, if they are present in harvested clusters. (Bordelon)

Fruit Russet: Remember that cold snap back in April? Growers are finding some russet on apples due to cold damage to the flowers or young developing fruit back in April. Keep in mind that cool, wet

weather and/or frost are but two of the reasons for russeting. Other reasons include cultivar susceptibility (apples like 'Roxbury Russet, or 'Golden Russet' are called "russets" or 'leathercoats' for a reason!), pesticides, fungi and bacteria. Golden apples are more susceptible to russeting than red apples, as are d'Anjou pears.

Russeting results when the epidermal cells are damaged within 30 to 40 days after petal fall, and form a brown layer of suberized (corky) cells in the lower epidermal region. These developing corky cells push outward and become exposed to the surface as the fruit matures. If you looked at this skin with a hand lens or microscope, you would notice its porous features. These "pores" increase surface area, meaning that there is greater exchange of gases. For this reason, russets require more humid storage conditions to prevent shriveling. Under the proper storage conditions, most russets are regarded as outstanding winter keepers compared to their smooth complexioned peers.

With respect to pesticides, products containing copper, zinc, or calcium are especially prone to cause russeting if uneven distribution of product occurs. To make sure this isn't happening, check worn nozzles, and look for potential patterns of uneven spray distribution. Powdery mildew, and a pair of yeast have also been demonstrated to cause russeting. Keep in mind that powdery mildew sensitive cultivars like 'Jonathan' and 'McIntosh' are more prone to this type of russeting. Fuji apples have a newly described but unknown cause of russeting, which has been

called flecking, but occurs infrequently. Interestingly, fungi are not responsible for russeting in pear. In this case, several different kinds of bacteria including *Erwinia herbicola* and *Pseudomonas sp.* have been implicated in russeting when inoculated onto pear fruit.

Russets remind me of that line "Beauty is only skin deep; Besides, s/he has a great personality! Don't judge solely on looks!" One often sees a reference to the "true russet flavor," meaning a spicy, hearty, flavored apple, and the French have their own varieties, like 'Fenouillet-Gris,' meaning gray fennel apple. After you get past the texture, they simply have an outstanding taste. This may be one of those instances where you wish to invoke Martha Stewart to curry favor with your customers. And yes, Martha often says these are the best tasting apples! (Beckerman)

Pinpoint Scab, Flyspeck and Sooty

Blotch: Wet weather during the apple harvest period can lead to the development of pinpoint, sooty blotch and fly speck, but the symptoms don't develop until the fruit have been stored for several months. Not only that, but late season apple scab (and all our other diseases) build up on leaves after harvest, setting the stage for the development of primary scab spores the following season! Forewarned is forearmed! Prevent these problems by maintaining scab fungicides in late cover sprays--Do not stop cover sprays too early. Check the label for days-to-harvest restrictions before making the final application. (Beckerman)

Don't Put Those Sprayers Away Yet: As early apple varieties mature, it's easy for growers to get caught up in the harvest and marketing process and start to let some other important activities slip a little. Growers need to remember that the later maturing varieties are still subject to attack by several insect pests, most notably apple maggot and codling moth. At this point we don't worry much about pests that feed on the foliage, such as mites, leafminers, and the remaining Japanese beetles, but the insects that feed on the fruit can still adversely effect the quality of your crop. Every year, I have several reports from growers who had significant codling moth injury in their later varieties and usually they had stopped their regular spray schedule too early. This damage may have come from the tail end of the second generation or from a partial third generation. I recommend that you continue to monitor codling moths at least until mid September so that you can detect any third generation activity. This is especially important for growers in the southern part of the state. Since the temperatures have been hotter than normal this year, there is an increased likelihood of significant third generation codling moth. I realize that life gets very hectic once you start harvesting, but don't neglect the apples that are still on the tree. As always, remember to observe pre-harvest intervals for any late season pesticide applications. (Foster)

U.S. Apple and Peach Crop: Based on input from apple growers, processors, and marketers from across the country, this

year's apple crop is forecast at 221 million bushels, which would be down 6% from last year's crop and 1% below the five-year average crop size. Comparably, USDA's National Agricultural Statistics Service is calling for a crop of 229 million bushels, down 2% from last year.

US peach production this year is forecast to be 2.12 billion pounds, down 11 percent from 2005 and 19 percent below 2 years ago, according to USDA's Fruit and Tree Nuts Outlook. Of the three major producing States, production declines are expected in California and South Carolina, but the Georgia crop is forecast up. The California forecast, if realized, will be the smallest state crop in 11 years.

The level of the national crop has less effect on many Indiana farms, who sell most of their crop direct to the consumer. These folks tend to be less affected by national production than those who operate in the wholesale trade. (Hirst)

Winegrape Fall Workshop at Purdue:
Thursday September 14, 2006. Purdue – Meigs Horticulture Research Farm. 9101 S 100 E. Lafayette, IN 47909
From vineyards and lab analysis, to greenhouses and wine evaluations...this workshop is designed for the winemaker who wants to broaden their knowledge. See website below for all the details of this fun and educational day at Purdue. Limited to the first 50 paid registrants, so send in your registration to hold your spot. (Registration Form found at the Website below.)

Hope to see you there!

Website <http://www.foodsci.purdue.edu/research/labs/enology>

Hort Congress Preview: When I started my job at Purdue over 18 years ago, I came from a row crops and vegetable background. Figuring rates for pesticides was fairly simple in those crops. All you had to do was compute the area you were going to spray, multiply that times the rate, and pour it in the tank. When I started working on fruit, things got a lot more complicated. People started talking about things like concentrated, dilute, 4X, 10X, and tree-row volume. Even some of the labels listed two options for a rate, per acre and per 100 gallons. Boy, was I confused. However, most of the growers seemed to talk about this stuff like they really knew what they were talking about. I just figured they were all smarter than me, so I didn't give it much more thought. In recent years, I talked about these issues with some of the "smart" growers and have found that in many cases, they are just as confused as me.

At the Hort Congress in Indianapolis in January, we have invited one of my colleagues, Dr. Celeste Welty from The Ohio State University, to speak about this topic. Celeste has written a very nice publication "Orchard Spray Rates: How to Determine the Amount of Pesticide and Water to Use in Your Orchard". If you are confused about spray rates (like me) or just want to make sure you are doing it right, make plans to come and hear Celeste speak. I am also going to try

to twist Peter's arm and get him to buy copies of the publication to hand out at the session. (OK, enough twisting, I'll have them there. Peter). Think about the potential consequences of spraying the incorrect rate. If you are putting on too little chemical, you may be putting your crop in jeopardy. If you are putting on too much, you are wasting money. This talk alone could save you enough money to pay for the entire meeting. I look forward to seeing all of you at the 2007 Hort. Congress. (Foster)

Beginning Apple Growing Workshop: To those who are new to the apple business, write down this date: January 29, 2007. This is the date of a one-day workshop on "Beginning Commercial Apple Production" to be held in conjunction with the Indiana Horticultural Congress in Indianapolis. We will cover all aspects of starting an apple orchard such as planning, site preparation, varieties, rootstocks, pest and disease control, harvesting and marketing. There is certainly a lot to learn, and we will cover as much of this as we can in one day. Hear presentations by Purdue experts and experienced growers. Attendees must register for the Horticultural Congress, but there is no additional fee for the workshop. Why not stay for the rest of the Congress (Jan 30-31) and meet with other growers and visit the trade show? For more information, look at: <http://www.hort.purdue.edu/hort/ext/hortcongress/ihc2007.html> or contact Peter Hirst. (Hirst)

Coming Meetings:

September 14 Fall Grape and Wine Workshop. Purdue West Lafayette campus. Contact Jill Blume 765-494-1749 or blume@purdue.edu Registration required. Information available at <<http://www.foodsci.purdue.edu/research/labs/enology/>>

October 24-26. Development and implementation of HACCP and prerequisite programs. University Inn, West Lafayette. Registration deadline Oct 1. For more information contact Kiya Smith, kiya@purdue.edu, Phone 765-496-3827

Dec. 5-7. Great Lakes Fruit and Vegetable Expo, Grand Rapids, MI.

Jan. 29. Beginning Commercial Apple Production workshop. Indianapolis. For more info contact Peter Hirst

Jan. 29-31. Indiana Horticultural Congress and Trade Show, Indianapolis. <http://www.hort.purdue.edu/hort/ext/hortcongress/ihc2007.html>

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