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Crop conditions: Apple harvest is progressing well. Cooler conditions have resulted in excellent fruit color. Some growers are experiencing problems with fruit cracking due to the wet weather, and higher than normal preharvest drop on Red Delicious and McIntosh. Grape harvest is winding down in southern areas and continues in central and northern areas. Cooler temps are keeping acids high, and providing good flavors. So far no multicolored Asian lady beetle infestations have been reported.

Comparing apples with...spinach? If we ever needed a reminder of the importance of food safety on our farms, we sure got it in the last couple of weeks with the outbreak of foodborne illness attributed to spinach. In the past we have talked most about food safety in connection with apple cider, but we also need to think carefully about how we handle fresh fruit. Fruit that has come in contact with soil should never be sold for consumption, either fresh or in cider. Make sure that picking containers are kept clean, and that fruit is stored in a clean environment. The plight of the spinach industry should be a wake up call to us all to do better in terms of cleanliness, sanitation and food safety. To help get us up to speed on these issues, Jennifer Dennis is

planning a food safety workshop at the Indiana Horticultural Congress in January. (Hirst)

Fruit Susceptibility, Decay and Postharvest Rots: Previously, we discussed those necessary, but incredibly obvious studies that link fruit bruising and punctures to increasing fruit susceptibility to decay. What will us scientists come up with next? How about that fruit firmness is linked to maturity, and that apples stored for longer periods of time are more susceptible to decay and rot?

One more statement of the incredibly obvious: Preharvest applications of fungicides reduce post-harvest decay in fruit. But exactly what are the fungi that cause postharvest decay?

One of the main fungal pathogens encountered is *Alternaria*, which commonly invades the apple core of cultivars having open calyces such as Delicious and Fuji. Key symptoms are mold growth in the seed cavity or core. Several other fungi (See below) can infect these open calyces, but unfortunately, there are no effective control measures. *Alternaria* can also cause a superficial rot, in addition to moldy core. Symptoms of *Alternaria* rot include round, dark brown to black, shallow lesions around skin breaks. In the beginning, these lesions are dry and firm, but become spongy. This is a fairly rare problem.

Blue mold, caused by various species of *Penicillium*, is also referred to as soft rot or wet rot. Characteristics of this decay include a color change to light tan that eventually results in completely mushy tissue. This tissue becomes covered in blue-green spores that serve as an infection source for other fruit. In addition to wounds, lenticels can become infected in over-mature fruit.

Penicillium infection by certain species of *Penicillium* can result in the production of patulin, a known carcinogen. Fuji, Akane, and Jonagold have been reported to be more susceptible to infection by *Penicillium expansum*, whereas Royal Gala was reported to be more resistant.

A mold of a different color is gray mold, caused by members of the genus *Botrytis*. Infection usually occurs through bruises and breaks in the skin, but can invade through the cut stem on rare occasion. As the fungus infects, the fruit turns spongy, and eventually has the odor of cider. Prolific gray spores develop on the surface of infected fruit, and serve to

spread to adjacent apples, creating pockets of rot during storage. This fungus can be confused with Mucor rot. Unlike Mucor rot, this fungus produces flat black fungal flakes called sclerotia, that can persist in storage bins for years.

To reduce postharvest rots, fruit should be harvested at maturity, quickly shipping out over-mature fruit. To minimize the postharvest rots, implement procedures that minimize bruising and wounding, and remove infected fruit and dispose of it by scouting packing and storage houses as often as possible, even daily. Be sure to move harvested fruit into cold storage quickly. Disinfect contaminated bins and storage walls before reuse by steam, or with a solution of 10% bleach and 1% detergent, or commercial disinfectant (like Zerotel). The addition of detergent is necessary for the bleach to actually kill these thick walled overwintering structures. Due to issues of benzimidazole resistance in *Penicillium* species, registration for postharvest use on fruit crops have been withdrawn for many fungicides. Fludioxonil (Scholar) and pyrimethanil (Penbotec) are both labeled for apple postharvest rots, and can be used as dips, drenches, or line. Biological control agent BioSave 110 (*Pseudomonas syringae*) used with either above fungicide helps control blue mold from infection of wounds. Postharvest calcium treatments can aid in helping the fruit become more resistant to decay. Ultimately, like every other complicated problem, the solution involves an integrated approach, that combines proper harvest times, careful handling of fruit, and strict sanitation in the orchard, storage and packing house to minimize these postharvest problems. (Beckerman)

Human Resource Managers' Forum Will Feature Job Description and At-Will Employment Guidance: Mid American Ag and Hort

Services (MAAHS) is pleased to announce the fifth Ohio Ag and Hort Human Resource Managers' Forum for fostering professional development and advancing effective human resource practices for human resource managers in agricultural and horticultural businesses. The Forum will be held Wednesday, November 8 at the Franklin County Farm Bureau office in Hilliard, Ohio from 10:00 a.m. to 2:30 p.m.

The featured topic at the Forum will be "The Value and Common Sense of Job Descriptions," presented by Bernie Erven of Erven HR Services LLC. Erven has 35 years of experience in teaching, extension and research focusing on employee management and family business relations.

In the afternoon, Cheryl Basinger with Competitive Edge HR will present "Employment-At-Will Issues." Basinger has a 25-year track record of success in diverse assignments in human resources, sales and marketing.

The program will include opportunities for open discussion and networking for those with human resource responsibilities in ag and hort businesses.

The registration fee of \$50 for MAAHS members and \$70 for non-MAAHS members includes lunch and materials. Participation in the Forum is limited to the first 40 registrants and reservations are requested by November 1. Contact MAAHS at 614-246-8286, maahs@ofbf.org or visit www.midamservices.org for more information.

DHS Highlights Best Practices for Maintaining Legal Workforces: Department of Homeland Security (DHS) announced in July

a new initiative and best business practices to help employers ensure they are building a legal workforce through voluntary partnerships with the government. Mid American Ag and Hort Services (MAAHS) is providing this information from DHS to keep agricultural and horticultural employers informed of continued DHS efforts to address legal workforce issues.

Called the ICE Mutual Agreement between Government and Employers (IMAGE), the program is designed to build cooperative relationships between government and businesses to strengthen hiring practices and reduce the unlawful employment of illegal aliens. The initiative also seeks to accomplish greater industry compliance and corporate due diligence through enhanced federal training and education of employers.

Under this program, ICE will partner with companies representing a broad cross section of industries in order that these firms may serve as charter members of IMAGE and liaisons to the larger business community. As part of this program, businesses must also adhere to a series of best practices including the use of the Basic Pilot Employment Verification Program, administered by U.S. Citizenship and Immigration Services (USCIS). To date more than 10,000 employers across the United States are using the Basic Pilot Employment Verification to check the work authorization of their newly hired employees.

What benefit does IMAGE hold for employers?

ICE will provide training and education to IMAGE partners on proper hiring procedures, fraudulent document detection and anti-discrimination laws. ICE will also

share data with employers on the latest illegal schemes used to circumvent legal hiring processes. Furthermore, ICE will review the hiring and employment practices of IMAGE partners and work collaboratively with them to correct isolated, minor compliance issues that are detected.

Those companies that comply with the terms of IMAGE will become “IMAGE certified,” a distinction that ICE believes will become an industry standard. Participation in IMAGE will help companies reduce unauthorized employment and minimize identity theft. An IMAGE participant can better protect the integrity of its workforce by helping ensure that employees are who they represent themselves to be.

What is expected from companies that seek to participate in IMAGE?

As a first step, companies must agree to a Form I-9 audit by ICE. They must also use the Basic Pilot Employment Verification program when hiring employees. This Internet-based system, which is free to employers and available in all 50 states, provides an automated link to federal databases to help employers determine the eligibility of new hires. For more information on this program and other USCIS verification programs, visit the USCIS web site.

In order to become IMAGE-certified, partners must also adhere to a series of best practices. These include the creation of internal training programs for completing employment verification forms and detecting fraudulent documents. IMAGE partners must also arrange for audits by neutral parties and establish protocols for responding to no-match letters from

the Social Security Administration. ICE is also asking employers to establish a tip line for employees to report violations and mechanisms for companies to self-report violations to ICE. DHS strongly encourages employers to review IMAGE program materials available at <http://www.ice.gov/partners/opaimage/index.htm>.

The Indiana Horticultural Society is a sponsor member of MAAHS, a unique non-profit consortium of associations, organizations and employers organized to create widespread human resource management strengths in Mid American agricultural and horticultural businesses. One of the methods is to serve as a resource for a wide array of human resource issues through newsletters, manuals, a web site, phone consultation and workshops. Contact MAAHS at 614-246-8286, labor@ofbf.org or www.midamservices.org to become an employer member. You may subscribe to MAAHS’ free e-newsletter by visiting www.midamservices.org and clicking the “Join Our FREE Email List” button. (John Wargowsky, Executive Director - Mid American Ag and Hort

Services)

Coming Meetings:

Oct. 24. Introduction to Starting a Specialty Food Business in Indiana – workshop. See the last issue of FFF for more details.

Oct. 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 or visit: http://www.hort.purdue.edu/hort/ext/hortcongress/beginning_apple.html

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

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