

Illinois Fruit and Vegetable News

Vol. 19, No. 11, August 23, 2013

A newsletter for commercial growers of fruit and vegetable crops

"We are what we repeatedly do. Excellence, then, is not an act, but a habit." Aristotle

Address any questions or comments regarding this newsletter to the individual authors listed after each article or to its editor, Rick Weinzierl, 217-244-2126, weinzier@illinois.edu. The *Illinois Fruit and Vegetable News* is available on the web at: http://ipm.illinois.edu/ifvn/. To receive email notification of new postings of this newsletter, call or write Rick Weinzierl at the number or email address above.

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- Notes from Chris Doll (notes on the season, Retain, NAA, passings, personal transitions)
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Upcoming Programs

Correction: The correct dates for the 2014 Illinois Specialty Crops, Agritourism, and Organics Conference are January 8-10, 2014.

Check the Illinois SARE calendar for a full list of programs and links for registration.

http://illinoissare.org/ and http://illinoissare.org/calendar.php
Also see the University of Illinois Extension Local Food Systems and Small Farms Team's web site at:
http://web.extension.illinois.edu/smallfarm/ and their calendar of events at http://web.extension.illinois.edu/units/calendar.cfm?UnitID=629.

- FDA's Proposed Produce Safety Rules—An Interactive Discussion (webinar), August 28, 2013, 2:00 3:00 p.m. <u>Eastern Time</u>. This informative session is part of AMS' ongoing webinar series designed for fruit and vegetable growers, packers, shippers, processors, wholesalers, and retailers of all sizes. The webinar is free and available to anyone with Internet access. <u>Registration is required and space is limited</u>. Register at http://bit.ly/17TR8yu).
- **Growing Vegetables Year-around (webinar), August 30, 2013**, noon 1:30 p.m. To register, see: https://webs.extension.uiuc.edu/registration/?RegistrationID=8698.
- Woody Perennial Polyculture field day, September 5, 2013, 3:00 6:00 p.m., Urbana, IL. The WPP community studied at this research site is an example of a system that has the potential to become an ecologically sound, agriculturally productive, and economically viable *alternative* to the corn-soybean rotation. For more information and to register, see: http://wppresearch.org/2013/07/fall-field-day-at-wpp/.

- Western Illinois Pumpkin Day, September 6, 2013, 10:00 a.m. 2:00 p.m. (lunch provided). University of Illinois and Iowa State University Extension specialists, and educators, and grower Tim McVeigh will discuss pumpkin production, soil fertility, and plant disease, insect, and weed management. Seed and input suppliers will be available and discussing their products. Lunch will be provided. McVeigh Farm is located at 956 E. Co. Rd. 1800, Hamilton (Hancock County), IL. From the east edge of Hamilton, travel east on Rt. 136 for ½ mile to the Connable Road. Turn north and travel 4.5 miles to 1800 N, turn west and travel ½ mile to the farm. Please register at https://webs.extension.uiuc.edu/registration/?RegistrationID=8690.
- Good Agricultural Practices Webinar Series, September 9-30, 2013, 6:00 8:00 p.m. The registration fee is \$10 per participant. Pre-registration along with pre-payment is required by September 2, 2013. Each registered participant will be sent webinar instructions, handouts, and a GAPs manual prior to the first webinar. Register at https://webs.extension.uiuc.edu/registration/?RegistrationID=8729.
- Large Scale Composting Workshop, September 10, 2013, 8:30 a.m. 2:00 p.m. DeKalb Farm Bureau, 1350 W. Prairie Drive, Sycamore, IL. Advance registration is \$15 per person by September 3. On-site registration is \$20 and walk-ins are welcome, but lunch will not be guaranteed. Information and a registration form is available at http://web.extension.illinois.edu/bdo/localfoods.html. For more information, contact Ellen Phillips at 815-732-2191 or Bethany Macarus at 815-758-8194.
- Preparing for Extended Season Production, September 14, 2013, 9:30 a.m. 2:00 p.m. Sunset Trail Farms, 2046 E Gamble Road, Pembroke Township. Program covers hoop house / high tunnel planning and fall vegetable production. For more information and to register, see http://web.extension.illinois.edu/units/event.cfm?UnitID=629&EventID=61431.
- 2014 Illinois Specialty Crop, Agritourism, and Organics Conference, January 8-10, 2014, Crowne Plaza Hotel and Conference Center, Springfield, IL. Lots more details to come, but it's time to mark your calendars. The keynote speaker on January 9 will be Elliot Coleman, co-author of Four-Season Harvest: How to Harvest Fresh Organic Vegetables from Your Home Garden All Year Long, and author of other widely popular books on high tunnel production and organic production. In addition to concurrent tracks on fruits, vegetables, herbs, agritourism, and organics on January 9 and 10, pre-conference workshops on January 8 will feature (1) Pumpkin Production, Pest Management, and Marketing; (2) Season Extension and Year-Round Markets; (3) GAPS and Food Safety Guidelines for Growers who Sell at Farmers Markets; and (4) Optimizing Plasticulture and Drip Irrigation Practices (am) and Growing Unique Fruits and Vegetables (pm). In addition, training and testing for the Private Applicator License (pesticides) will also be offered on January 8.

Regional Observations

In southern Illinois ... we are finally getting back to some more "typical" summer weather. Rainfall has varied, with some areas starting to get very dry while in the far southern counties there are reports of wet soil conditions after having caught some heavy rains over the past weekend.

Overall, most fruit and vegetable growers continue to be very pleased with the season, especially after last year. Local orchards are coming to the end of peach season, with 'Crest Haven' and 'Fayette' among the varieties still being harvested. Peach harvest will be coming to an end around Labor Day. Apple harvest is just starting, with initial harvests of 'Gala' soon to be followed by 'Golden Supreme' and 'Jonathan.' One orchard report has the first harvest of a few Jonathans as early as early next week. Unusually cool August nights with lows in the 50s and 60s have been great for the apple crop, promoting good color and flavor.

Pumpkins seem to be doing well and are benefitting from the warmer weather and sunshine of the last two weeks. Over the weekend, I did see just the start of a hint of orange on some of the first fruit set on 'Magic Lantern' and vines are still looking healthy. There are reports of powdery mildew, and fungicide applications need to continue to keep vines healthy. I have seen lots of cucumber beetles but not many squash bugs in my pumpkins so far

We have had a confirmed infestation of spotted wing Drosophila in Williamson County in blackberries within the last two weeks, so make sure if you have late season brambles to be monitoring for potential infestations.

Nathan Johanning (618)687-1727; njohann@illinois.edu)

In western Illinois ... the Quincy area is very short of moisture. From July 1through August 21, the Quincy Airport received 1.1" of rain. They actually recorded more rainfall during that time period in 2012 (the drought year) than this

(2.97" vs. 1.1"). Vegetable crops are responding as you would expect, and irrigation is paying huge dividends. Those without irrigation are not harvesting much. Some non-irrigated plants have perished, while others are hanging in there, but production has all but ceased. Spider mites have been found in several crops as have aphids.

Irrigation can pay dividends to small fruit growers at this time of year as well. Lack of water during fruit bud formation can be detrimental to next years' crop. Typically during late August, September, and into early October, matted row strawberry plants are initiating buds for next years' fruit. Adequate water during this critical time period allows for optimal fruit load next spring. Raspberry fruits for the fall crop are sizing now, and water is critical for that crop.

The cool nights of early August (temperatures in the lower 50s) compromised production of tomato and other heat loving crops. Production should bounce back soon with the expected temperatures over the next several days in the 90s. The excess rains this spring caused disruptions in planting schedules, which left many vegetable growers with gaps in production. With the excessive dryness occurring now, growers are frustrated with the weather problems.

Wildlife damage (by deer, raccoons, and birds) continues to create problems for some growers. One pumpkin grower reported (apparent) raccoon damage to his pumpkin crop. They punctured the top of the developing fruit to consume the seeds within. We've experienced problems in the past with deer and voles damaging pumpkins, but this is the first I've heard of raccoons.

Lastly, don't forget of the upcoming Pumpkin Field Day to be held in Hancock County on Friday, September 6. Preregistration is strongly encouraged for meal planning. There is no cost to attend. See https://webs.extension.uiuc.edu/registration/?RegistrationID=8690

Mike Roegge (217-223-8380; roeggem@illinois.edu)

Also in western Illinois ... growers in the Galesburg area were lucky enough to have two rain events recently that provided some much needed moisture. We would take more though. Potato, shallot, storage onion, and garlic harvests are nearing completion. It seemed overall to be a very productive year for each of these crops. Potatoes in this area were significantly infested with Colorado potato beetle, but this did not seem to cause serious issues with quality. Many of these types of crops are used by growers to extend the marketing season for their CSA clients and develop year-round marketing to their customers. In addition, extending the season with sales of many types of leafy greens helps provide local fresh products year-around.

Most growers employ a change in their marketing as we get to this time of year which is marked by the beginning of the school year. On-farm sales start to decrease somewhat, and some farmers' markets go to every other week events. CSA marketing remains the same, but with a change in product offerings. A shift to preparation for fall crops and events is on-going. Pumpkins and apples take center stage, along with on-farm festival type events.

Finally, another reminder to be very diligent about getting your fall crops planted and/or transplants started ... achieving adequate growth of these crops prior to the ground freezing is essential. It seems counter-intuitive to be worried about spinach in January as the days now are 85 degrees and sunny, but the fact remains that cold weather will be here soon.

Kyle Cecil (309-342-5108; cecil@illinois.edu)

Notes from Chris Doll

Summer has finally arrived, after having only two 90-degree days during the first 20 days of August. And with only one rainy day with 0.6 inches of volume, peach harvest has proceeded with pleasant conditions and without interruption unless it was slower ripening. The cooler temps have allowed for good coloration of apples, which are looking good. As like much of the area, the maturity season has been late all year, and continues to be so. My 48-year record for this site says it is one of the latest for peach and apple harvest, with 2008 and 1984 being comparative. Gala and Honeycrisp apples are getting near maturity for harvest, and the peach harvest is on the downhill slope. It should be a good year for Retain to work like the ads say. With the late season, it may not be as critical for delaying maturity but can still be beneficial for helping with drop control.

Luckily, we entered August with a subsoil with adequate moisture, and the cooler temps have ameliorated the water demands by ripening crops. The effects of the wet early summer have included more than normal brown rot problems on stone fruits and apple scab and bitter rot on apples. All the suggestions for sanitation and prevention for next year should begin this fall. A few reports of San Jose scale have been received, and its presence at harvest can help identify infested blocks for intensified control next spring.

Thornless blackberry harvest is finished after a successful year. Vine growth is excellent, and regular-trained plantings have shoots heading for the ground to make rooted plants. Prevention of rooting is usually easier than pulling out plants next spring. The same is true for black raspberry plantings and their thorny plants. There are not many red raspberry plantings in the area, but those present are in full harvest and benefiting from the lower daily temperatures. Adequate irrigation is the secret for continued production. Of course the spotted winged Drosophila is present, having started locally in the blackberries, but most have controlled it satisfactorily.

The calendar says that late August and early September can be the ideal time for seeding cover crops, or at least to begin to prepare the land for new plantings. It is also time to add nitrogen to matted row strawberry plantings, and for the plasticulture growers, it is almost planting time. Stop-drop controls for apples may be needed as we move into September with more maturity, heat and drought, so have the NAA ready.

Two sad notices for this week. Betty Edwards, a major partner from the beginning of the Edwards' Orchard, Poplar Grove, Illinois, died on August 6. She is survived by husband Bob, after 61 years of a loving and beautiful companionship and raising a great family. The surviving children are Barb (Ken) Hall, Robb (Becky), Mary (Larry) Smith, Mike (Lynn), and Suzi (Konrad) Parris, and 15 grandchildren and eight great grandchildren. Memorial services were held on August 12 at the Poplar Grove United Methodist Church. The Edwards Orchard started by Betty and Bob is now operated by Barb and Ken Hall, and Edwards Orchard II near Winnebago, is operated by Mike and Lynn and family.

Joseph M. Zellerman of the Edgewood Orchards, Quincy, Illinois died on July 21 at his home at the orchard. His wife Florence preceded him to death in 2006, and he is survived by sons Dennis, Gary, and Jim, and their families. Funeral services were held on July 26 at St. Anthony Catholic Church in Quincy. Joe and his brother Rome moved to the Edgewood orchards in 1930 (planted around 1900) and operated as partners until Rome passed away 20 years ago. Dennis and his brothers are continuing to operate the orchard and cider operation. The family members have been lifelong exhibitors in the Adams County Fair, with many awards for fine fruit.

Not sure if this is a sad event too, but the Back-40 will be relegated to someone else in the near future. My wife and I plan to become city dwellers sometime this fall, and as a result, the trees will become old friends, and the library is being thinned. Anyone interested in THE APPLES OF NEW YORK, THE PLUMS OF NEW YORK, or THE SMALL FRUITS OF NEW YORK, editions of the Illinois Horticulture Society Transactions from 1965-2012, or the Proceedings of the Illinois Small Fruit and Strawberry Schools from 1990-2010 can contact me at edwdollx2@aol.com.

Chris Doll

Fruit Production and Pest Management

Updates on Spotted Wing Drosophila (SWD)

A bit of a re-run ... Reports of SWD flies in traps and larvae infesting fruit (now mostly blackberries and raspberries) continue to increase in number. Traps at Urbana are catching more flies in the last two weeks, and I expect the trend to continue. Again ... See the insecticide listings in the <u>June 7, 2013 issue of this newsletter</u> for products that can be used to control this insect.

Rick Weinzierl (217-244-2126; weinzier@illinois.edu)

Vegetable Production and Pest management

Another Round of Quick Updates on Insects ... check previous issues of this newsletter for more management recommendations.

- As was the case two weeks ago, corn earworm moth counts in traps in most of the state remain low for this time of year. That said, one of my traps at Urbana is catching 30-50 moths per night. With silking now over in most of the field corn around the state, sweet corn and tomatoes will be the preferred hosts for egg-laying females. After field corn has finished silking, if traps are catching more than a moth or two per night, insecticides are needed to prevent excessive contamination of ears by earworm larvae.
- Aphids and mites in cucurbits and tomatoes are becoming common problems. The aphids most commonly found on pumpkins are cotton-melon aphid; on tomatoes there may be a few species at different times. The pink form of potato aphid has been common on tomatoes at several locations. Twospotted spider mites are infesting cucumbers, melons, tomatoes, and peppers in dry areas and in high tunnels. In general, insecticides used for Lepidopteran larvae, cucumber beetles, squash bugs, stink bugs, and other primary targets of earlier sprays are not very effective against aphids or mites. (You know this is true if these pests are building on plants treated repeatedly to control other insects.) There are several good aphicides (Actara, Admire, Assail, Fulfill, and more) labeled on vegetables, but they are not all labeled for all vegetable crops. Similarly, there are several good miticides (Acramite, Agri-mek, Oberon, Portal, Zeal, and others) labeled on vegetables, but they are not labeled for all vegetable crops. See the specific crop listings in the 2013 Midwest Vegetable Production Guide for listings of products for aphid and mite control on specific crops. For organic growers, neem, summer oils, and insecticidal soaps are moderately effective against aphids; summer oils and soaps provide some suppression of mites.



Left: Cotton-melon aphid, Aphis gossypii (Univ. of Tennessee). Right: Twospotted spider mite.

Rick Weinzierl (217-244-2126; weinzier@illinois.edu)

A Report of Vegetable Diseases in Illinois

Downy mildew of basil, caused by the oomycete pathogen *Peronospora belbahrii*, has been occurring in Illinois since 2009. This disease develops very rapidly and can cause 100% corps losses in a short period of time. In 2013, downy mildew of basil has been observed in northern and eastern Illinois. The major symptom of this disease is yellowing on the upper leaf surfaces, which resembles nutritional deficiency. The downy-appearing sporulation of the pathogen develops on the lower leaf surfaces. The pathogen can be observed using a hand lens or a microscope. Downy mildew of basil is effectively controlled by application of fungicides. Azoxystrobin (Quadris), cyazofamid (Ranman), and potassium phosphite (ProPhyt) have been labeled for use on basil. We also have received a section 18 permit (CAS Reg. No. 374726-62-2) for the use of mandipropamid (Revus) for control of downy mildew of basil in Illinois is 2013.

Effective control of basil downy mildew can be achieved by application of Revus (8.00 fl oz/A) + ProPhyt (3-4 pt/A), alternated with Quadris (15.4 fl oz/A) + ProPhyt (3-4 pt/A) or Ranman (2.75 fl oz/A) + ProPhyt (3-4 pt/A). For label information of Revus, Ranman, Quadris, and ProPhyt fungicides, refer to the following links: http://www.cdms.net/LDat/ld8FU004.pdf, http://www.cdms.net/LDat/ld5QN012.pdf, and http://www.cdms.net/LDat/ld5QN012.pdf, and http://www.cdms.net/LDat/ld5KK008.pdf.



Downy mildew of cucurbits, caused by the oomycete *Pseudoperonospora cubensis*, is a very destructive disease of cucurbits. The pathogen that causes downy mildew of cucurbits does not overwinter in Illinois. It is blown into Illinois or brought in on plant material such as transplants. Downy mildew did not develop in Illinois in 2012. So far, this disease has been reported in the East Coast states, Michigan, Ohio, Kentucky, and southern Indiana. The disease has not been observed in Illinois yet; however, there is a possibility of moving downy mildew from Kentucky and or Indiana to cucurbit fields in Illinois, as still more than four weeks of the cucurbit growing season is left. Thus, control of cucurbit downy mildew in Illinois should seriously be considered. Downy mildew is favored by cool temperatures (59 to 68 F) and leaf wetness.

Downy mildew affects leaves only. The first symptom is usually the appearance of indistinct, pale green areas on the upper leaf surface. The pale green areas soon become yellow in color and angular to irregular in shape, bounded by the leaf veins. As the disease progresses the lesions may remain yellow or become brown and necrotic. During moist weather the corresponding lower leaf surface is covered with a downy, pale gray to purple mildew. Often an upward leaf curling will occur (see photos).

Several fungicides have been labeled for control of downy mildew of cucurbits, including products with the active ingredient phosphorus acid (Agri-Fos, Phostrol, and ProPhyt), Curzate, Forum, Gavel, Presidio, Previcur Flex, Ranman, Revus, Tanos, and Zampro. In the experimental plots in Illinois, spray application of Revus + Bravo Weather Stik (BWS) alternated with Tanos + BWS, Gavel + BWS, Ranman + BWS, or Zampro + BWS have been effective for control of downy mildew.

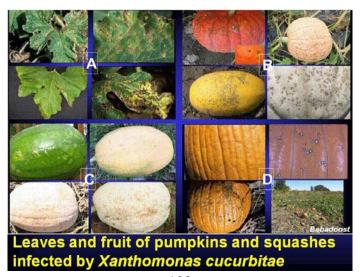


Phytophthora blight of cucurbits, caused by *Phytophthora capsici*, is the most important disease of cucurbits in Illinois. The disease causes seedling death, crown infection, vine lesions, and fruit rot (see the photos). Phytophthora blight has already been observed in commercial pumpkin fields causing foliar blight and fruit rot.

Phytophthora blight of cucurbits can be managed by the following practices: (i) when symptoms are localized in a small area of the field (usually low areas of the field), disk the area; (ii) discard infected fruit, but not in the field; (iii) do not irrigate from a pond that contains water drained from an infested field; (iv) apply effective fungicides. Our field trials in Illinois have shown that the following fungicides are effective against Phytophthora blight of cucurbits: Forum, Gavel, Presidio, Ranman, Revus, Tanos, and Zampro. Weekly applications of Revus + a copper compound (e.g., Kocide-3000), alternated with Ranman + copper, Tanos + copper, or Zampro + copper suppress development and spread of Phytophthora blight.

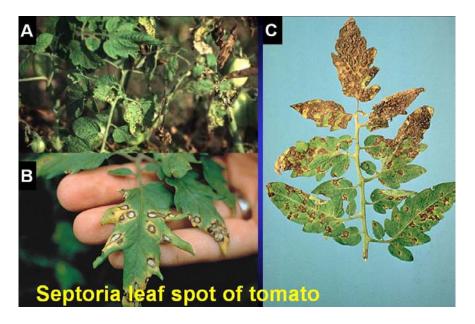


Bacterial spot of cucurbits, caused by *Xanthomonas cucurbitae*, has become more common in pumpkins and winter squashes in Illinois. The disease has been observed this season in pumpkin fields in Illinois. The pathogen infects leaves and fruit; small, dark lesions develop on leaves, which may coalesce to form larger necrotic areas (see the photos below). The most readily identifiable symptoms occur on fruit. Initial lesions are small, slightly sunken, circular spots, with a beige center and a dark-brown halo. On mature fruit, saprophytic fungi often colonize the dead, tan tissue at the center of the lesion. The most effective method for control of the disease is planting pathogen-free seed, crop rotation with noncucurbit plants, and application of copper compounds during early formation and expansion of fruit. Copper spray, however, is ineffective once an epidemic is underway.



Septoria leaf spot of tomato, caused by the fungus *Septoria lycopersici*, is one of the most common and destructive diseases of tomato in Illinois. This disease has been observed in several tomato fields in Illinois. Symptoms usually appear on the lower leaves after the first fruit sets. Lesions also develop on stems, petioles, and the calyx. They appear as small, water-soaked spots that soon become circular, about 3 mm in diameter, with dark brown margins and tan to gray centers (see the photos below). The light-colored centers of the spots are the most distinctive symptom of Septoria leaf spot. When conditions are favorable, fungal fruiting bodies appear as tiny black specks in the centers of the spots. If the leaf lesions are numerous, infected leaves may wither.

To manage Septoria leaf spot, a combination of cultural practices and fungicide use is necessary, including: (i) plant pathogen-free seed and disease-free seedlings; (ii) consider sufficient space between the plants for rapid drying; (iii) stake plants to improve air circulation and reduce the contact between foliage and soil; (iv) water the plants at the base, and in the morning; (v) avoid working with plants when foliage is wet; (vi) remove plant debris in the fall and plow under the remaining plant residue; (vii) rotate tomato with nonhost crops every three or four years; and (viii) spray plants with effective fungicides. See the 2013 Midwest Vegetable Production Guide for fungicides labeled for control of Septoria leaf spot of tomato. (http://www.btny.purdue.edu/pubs/id/id-56/111 FruitingVeg.pdf). Weekly applications of Quadris alternated with chlorothalonil (e.g., Bravo) effectively control Septoria leaf spot, early blight, and anthracnose of tomatoes in Illinois.



Bacterial spot of tomato, caused by *Xanthomonas campestris* pv. *vesicatoria* (Xcv), is the most common bacterial disease of tomatoes in Illinois. This year I have observed bacterial spot in more 20 tomato fields that I have visited throughout the state. Also, bacterial speck (*Pseudomonas syringae* pv. *tomato*) and bacterial canker (*Clavibacter michiganensis*) have been observed in some tomato fields.

Xcv affects all aboveground plant parts. Brown, circular spots develop on leaves, stems, and fruit spurs (see photos below). The spots are water-soaked during rainy periods or when dew is present. Lesions are about 3 mm in diameter. A general yellowing may occur on leaflets with many lesions. Blighting of the foliage occurs with the coalescing of lesions, and the plants become huddled in appearance because of severe epinasty. Often, the dead foliage remains on the plant, giving it a scorched appearance. Fruit lesions begin as minute, slightly raised blisters. As a spot increases in size, it becomes brown, scab-like, and slightly raised. A developing lesion may have a faint to prominent halo, which eventually disappears. Bacterial canker, bacterial speck, and bacterial spot of tomato can be diagnosed from each other on the base of fruit infection (see photos).

Bacterial spot of tomato can be managed by: (i) crop rotation for 3 years with non-host crops; (ii) using pathogen-free seed and disease-free transplants; (iii) seed treatment; (iv) eliminating volunteer plants; (v) avoiding cull piles near greenhouse or field operations; (vi) watering plants early in the day to reduce the amount of time foliage is wet; (vii)

avoiding handling plants when they are wet; (viii) applying bactericides; and (ix) cleaning plant debris after harvest. Actigard, Agrimycin, copper products, Serenade Max, and Tanos may be used for control of bacterial spot and bacterial speck (http://www.btny.purdue.edu/pubs/id/id-56/111_FruitingVeg.pdf). At this time of the growing season, weekly applications of a copper product (e.g., Kocide-3000) + mancozeb would be an effective control method in Illinois.



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Local Foods Issues

Importance & Uses of Farm Records for Food Safety

Records are written statements or collections of facts and figures on a subject for a specific purpose. The records arise from the day-to-day transactions made by the grower and should be accurate. They are used to identify strengths and weaknesses in the operation of the farm, and assist in improving the management of the farm. Key decisions on the future of the farm are made based on past records.

There are different types of records on the farm. From simple pen-and-paper records to Excel spreadsheets, a grower should choose the most convenient or appropriate system for his or her operation. For food safety purposes, record-keeping requirements are mentioned during presentations at Good Agricultural Practices (GAPs) Workshops. A farmer who keeps good farm records complies with GAPs protocols.

In the event of a foodborne illness outbreak, records serve an important role in tracing the origin of contamination of the infectious food type, so that further production, distribution and consumption of the produce can be halted as fast as possible, without disrupting entire economies. For mitigation purposes, recordkeeping aids growers to establish that they executed due diligence in their production in the event that an outbreak is traced to their farm. For the authorities, if an activity was not recorded, it is assumed to have not been done.

Recordkeeping is also a valuable business tool. Many fresh produce retailers and wholesalers are requesting their suppliers to be audited, and good records facilitate ease of auditing. If actions are not documented, there is no way of verifying that they were done. For GAPs, records should include movement of produce (where from, and where to, date and amount), use of pesticides and chemical disinfectants, toilet facility cleanup, worker training, mock or actual recall(s) of suspect or contaminated produce, wildlife management, soil amendments and water quality tests.

James Theuri (815-933-8337; jtheu50@illinois.edu)

MarketMaker

New berries added to MarketMaker fruits. Food MarketMaker is constantly on the lookout for new foods to add to the ever-growing list of foods on the website. Prompted by Midwest businesses, MarketMaker has recently added *autumn berries* and *aronia berries* to that list.

Dustin Kelly of Autumn Berry Inspired brought autumn berries to the attention of the MarketMaker Team. These berries, from the autumn olive tree, are packed with vitamins and nutrients and are exceptionally high in the antioxidant, lycopene. Thanks to Kelly, autumn berries can now be found under "Fruit" on the MarketMaker site. He registered on MarketMaker as a buyer and processor to find customers for his products and to find landowners with at least two acres of autumn olive trees who wish to harvest their fruit to sell. Kelly is ready to show landowners how to renovate their weedy grove, prune their trees, harvest, and process the fruit.

Aronia berries have also been added to the website under "Fruits". The Midwest has been very influential in bringing aronia berries to national attention. Learn more about these berries by attending an Aronia Berry Field Day at Coldbrook Farm - the largest producer of frozen and dried aronia berries in the state. Join them on Wednesday, August 28, from 9:30 to noon at the farm: 16952 E. 6000 North Rd., Momence. Co-sponsors include University of Illinois Extension, Trickl-Eez Co., headquartered in St. Joseph, MI; McKibben Manufacturing Inc., Grand Junction, MI; and HH Wild Plums Inc., Clarkson, NE. Blueberry harvesters from Michigan and Indiana will pick the aronia and a drawing will be held for aronia plants.

Aronia berries are also featured in this month's MarketMaker newsletter. Read more at: http://national.marketmaker.uiuc.edu/uploads/2ff6f7918e4d7d36d8cfd32f63ce41c8.pdf.

MarketMaker's mission includes supplying users with the most complete list of food industry data possible. It is our goal to expand and help connect producers and consumers. Please register and/or update your information on www.foodmarketmaker.com.

Lori Dalfonso (309-792-2577; dalfonso@illinois.edu)

USDA Announces Funding to Provide Safe Housing for Farm Laborers

Under a new Farm Labor Housing Program, loans and grants are now available to farmers, farmers associations, family farm corporations, Indian tribes, nonprofit organizations, public agencies, and farmworkers associations to develop or improve multi-family housing facilities for farmworkers and their families. Applications for Farm Labor Housing assistance are due September 13, 2013. More information about how to apply is available in the August 14, 2013 Federal Register www.gpo.gov/fdsys/pkg/FR-2013-08-14/html/2013-19774.htm, or by contacting any USDA Rural Development state office.

Ellen Phillips (815-732-2191; ephillps@illinois.edu)

University of Illinois Extension Educators and Specialists in Fruit and Vegetable Production and Pest Management

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