



UNIVERSITY OF ILLINOIS EXTENSION

College of Agricultural, Consumer, and Environmental Sciences

Illinois Fruit and Vegetable News

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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, weinzierl@illinois.edu. The *Illinois Fruit and Vegetable News* is available on the web at: <http://www.ipm.illinois.edu/ifvn/index.html>. 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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University of Illinois Extension Specialists in Fruit & Vegetable Production & Pest Management

Upcoming Programs

- **Kankakee County Vegetable Growers School, February 25, 2011.** University of Illinois Kankakee County Extension Office, 1650 Commerce Drive Bourbonnais, IL. For more information, contact James Theuri at 815-933-8337 (jtheu50@illinois.edu) or see <http://web.extension.illinois.edu/kankakee/news/news19758.html>.
- **Sales and Aggregation Meeting, Whole Foods and FamilyFarmed.Org, March 1, 2011.** 2:00-5:00 p.m., Prairie Crossing Farm Bus. Development Center, 32400 N. Harris Road, Grayslake, IL. For reservations, call 708-763-9920 or email info@FamilyFarmed.org.
- **Illinois Small Fruit and Strawberry Schools, March 1-2, 2011.** Mt. Vernon, IL. For more information, contact Elizabeth Wahle at 618-692-9434 or wahle@illinois.edu or Jeff Kindhart at 618-695-2770 or jkindhar@illinois.edu.
- **Illinois Farmers Market Forums, March 1, March 3, and March 9, 2011.** March 1 at the Illinois State Fairgrounds; March 3 and Rend Lake College, and March 9 at the Dekalb County Farm Bureau Building. To register online, see <http://www.agr.state.il.us/marketing/reservations>. For more information, contact Pat Stieren, Illinois Farmers Market Network, 217-522-4274, pstieren@gmail.com. See details below under the local foods heading.
- **Good Agricultural Practices (GAP) Workshop, March 3, 2011.** Will County Extension Office. Phone: 815-727-9296. Register online at: <https://webs.extension.uiuc.edu/registration/?RegistrationID=5446>.
- **Managing Legal Risks in the Direct Farm Business, March 3, 2011.** 6:00 to 7:30 p.m. webinar follow-up to an initial session held on January 25. For a list of locations, see <https://webs.extension.uiuc.edu/registration/default.cfm?RegistrationID=5162>. For more information, contact Deborah Cavanaugh-Grant at cvnghgrn@illinois.edu or 217-968-5583.
- **Central Illinois Sustainable Farming Network Annual Meeting, March 5, 2011.** Station 220 New American Bistro, 220 East Front Street, Bloomington, IL. Registration \$35 per person and includes dinner prepared at Station 220 featuring locally grown food. To register, visit

<https://webs.extension.uiuc.edu/registration/default.cfm?RegistrationID=5359> or call Deborah Cavanaugh-Grant at 217-968-5512. See details below under the local foods heading.

- **Greenhouse Tomato Short Course, March 8-9, 2011.** Eagle Ridge Conference Center, Raymond, Mississippi (close to Jackson and Jackson-Evers International Airport, Code: JAN). For more information, see <http://greenhousetomatosc.com>. Conference registration fee is \$125.
- **Meet St. Louis Retail and Foodservice Buyers, March 11, 2011.** Randolph County Farm Bureau, 1403 Hillcrest Drive, Sparta, Illinois, 8:30 a.m. to 5:00 p.m., for Illinois fruit and vegetable growers. For reservations, contact the Randolph County Farm Bureau at 618-443-4511 by March 7, 2011. Free, lunch provided.
- **Good Agricultural Practices (GAP) Workshop, March 23, 2011.** Countryside Extension Center. Phone: 708-352-0109. Register online at: <http://web.extension.illinois.edu/countrysidecenter/>.
- **Good Agricultural Practices (GAP) Workshop, April 7, 2011.** Kankakee County Extension Office. Phone: 815-933-8337. Register online at: <https://webs.extension.uiuc.edu/registration/?RegistrationID=5408>.

Regional Updates

In southern and southwestern Illinois, the return of winter is in the forecast, but our recent taste of above-average temperatures lasted long enough to melt most of the snow and ice, though the Mississippi River still has abundant ice flows. No signs of spring otherwise, though the groundhog did predict an early spring. Pruning is ongoing in orchards and vineyards, but wet soil conditions have somewhat delayed horseradish harvest.

Be thinking about dormant copper sprays for both apple and peaches, targeting apples at silvertip if fire blight was severe last year and anytime before bud swell in peaches. Do not use oil if temperatures below freezing are predicted within 24 hrs. It is best to remove brush before spraying. If grape anthracnose was a problem last year, a dormant application of lime sulfur solution or Sulforix is a must and should be targeted to just before bud swell. If you have blueberries, a dormant application of lime sulfur solution or Sulforix is recommended for control of Phomopsis and twig blight, targeting the application as buds begin to break.

Four to six weeks before bloom is the traditional timing for nitrogen fertilization in the orchard. As a general rule, young peach and apple trees may require 0.01 to 0.04 pounds of actual nitrogen per year of age up to 0.3 pound actual nitrogen per tree at maturity, adjusting up or down depending on pruning, size of crop, leaf analysis, etc. For peaches, a split application is recommended in case of crop failure. The first split application of nitrogen should be targeted three weeks pre-bloom followed by the second half at shuck split if a good crop is present. If your soil/leaf analysis shows any deficiency of P or K, a complete fertilizer should be used in the first split application. For most soil types, use something like 16-8-8 (2-1-1 ratio). Calcium nitrate would be preferred for the second split application.

The average date of the last spring occurrence of 32°F ranges from April 7 in far southwestern Illinois to April 28 in northern Illinois, meaning field planting of the very hardy vegetables will begin in the next week or so in the far southwest portion of the region if the soil can be worked.

Elizabeth Wahle (618-692-9434; wahle@illinois.edu)

In northern Illinois, temperatures in early February dropped to below zero F on five or more nights before a warm-up that started February 12. Temperatures last week reached the low 50s even in far northern Illinois. Warmer weather may allow pruning to move forward in orchards if soils are dry enough.

Northern Illinois growers should note the upcoming programs listed at the beginning of this issue. They include the Kankakee Vegetable Growers School on February 25 and workshops on Good Agricultural Practices (GAP) on March 3, 2011, at the Will County Extension Office, March 23, 2011, at the Countryside Extension Center, and April 7, 2011, at the Kankakee County Extension Office. Online registration links and phone numbers for more information about each program are listed above.

Maurice Ogutu (708-352-0109; ogutu@illinois.edu)

Notes from Chris Doll

What seemed like a long, cold and snowy winter was mostly true. Here in southwestern Illinois, it was not as bad as in other areas. But spring is just around the corner, with the official date only 30 days away. And for all the lovers of Daylight Savings Time, that change is on March 14, or only 23 days away. The warm-up during the past week that included a couple of 70-degree days and the return of some robins made it seem like spring. I cannot see any effects on fruit plants, but the grass has greened up in the lawn. Six years ago, brambles were showing green tip. The minimum temperature of the winter at my location was 2 degrees on January 21, and peach flower buds are alive. Pruning is ongoing in most orchards, with the usual caution of pruning older apple trees first, followed by the young ones and then the peaches. The record low for this area on February 19 (writing date) was -9 degrees F, and that could change a lot of plans if it happens again.

Soils are wet from the winter's precipitation, and with the frost leaving the ground, wet and soggy conditions exist. One grower reported that a hydroladder got stuck three times in one day. It is times like this when a good sod cover in the orchard is worth having, and the bare soil from cultivation or herbicide strips is a negative for both man and machines. So, in this area applying fertilizers and herbicides is best left for more solid footing, although both could be applied by the calendar. The herbicide options for this year are listed in the [2011 Midwest Tree Fruit Spray Guide](#).

Our winter meetings had great educational programs for fruit growers, and grower participation was good at all that I attended. Upcoming is the Illinois Small Fruit and Strawberry Schools at Mt. Vernon on March 1 and 2. I will be at these, and at the same time I will be dreaming about the International Fruit Tree Association (IFTA) in Pasco, Washington. Both of these events were high on my list during my career because of the great mix of educators and growers that participated. I could add the North American Strawberry Growers to that list too.

Those that attend the IFTA meeting in Washington will meet and hear Tom Auvil, one of that state's leaders, among many others. He is an astute observer, and in the February 15, 2011, Goodfruit Grower magazine summarized his current observations on apple rootstocks. He included MM111 in the discussion, but that trees on this rootstock do not crop annually, produce smaller fruit, that it is not adapted to replant situations. How many growers thought that the runting of Spur Delicious trees on this rootstock was due to a replant problem? In the 1970's and 1980's I saw lots of this.

Nearly every discussion of troublesome insects I heard this winter included the Japanese beetle, primarily because of its voracious feeding and the difficulty of controlling populations for an extended period of time. Most of us have noticed that this insect has preferences for certain species and varieties, just as we do. In the October 2010 issue of the *Journal of American Pomological Society*, a paper from the University of Arkansas gave the results of the preferential feeding habits of this pest on 66 apple cultivars, including some rootstock effects, plus on 13 crabapple, 20 blackberry, and 23 blueberry cultivars during 2003 and 2004. On apples, the percent of defoliation in the combined two years ranged from a high of 39.1 percent on Spur Law Rome to 6.2 percent on Starkcrimson Red Delicious. (Honeycrisp, the apparent favorite in the Back-40, was not included in the Arkansas report.) Of four cultivars in an M26 rootstock block, the defoliation percentages were 37.4 for Liberty, 21.7 for Red Delicious, 17.7 for Gala, and 9.7 for Fuji. The range of injury for crabapples was from 67 percent to 14.1 percent. Blackberry and blueberry cultivars were rated on a 5-point scale, with 5.0 being the most severe feeding.. For blackberries, the rating of 4.0 for Apache was the highest, and 0.6 for Prime-Jan was the lowest. For blueberries, Bluecrop had a rating of 3.1 and the lowest named cultivar was Ozarkblue at 1.6. This report might give the plant breeders some thoughts on insect resistance to go along with disease resistance.

A final statistical report as I have studied it ... In 1965 when I moved to Illinois as a horticulturist, the Illinois State Horticulture Society had 165 members. By 1994 when I retired, there were 148 members, and now there are 81. Another observation: the average age of grower members is much lower now than in 1965.

Chris Doll

Specialty Crops and Local Foods Issues

Notes on upcoming programs

A few details about some of the upcoming programs listed at the beginning of this issue. *Managing Legal Risks in the Direct Farm Business*, set for March 3, 2011, is a webinar to be hosted at several University of Illinois county Extension offices. It runs from 6:00 to 7:30 p.m. to address questions on issues that came up in the first webinar held on January 25 and provide an opportunity for participants to ask additional questions. A. Bryan Endres, Associate Professor of Agricultural Law at the University of Illinois, and attorney Nicholas R. Johnson have developed the webinar to clarify some of the unique legal issues pertaining to direct farm businesses and to guide direct farm business owners through the maze of laws. Visit <https://webs.extension.uiuc.edu/registration/default.cfm?RegistrationID=5162> for a complete list of locations and to register or contact Deborah Cavanaugh-Grant at cvnghgrn@illinois.edu or 217-968-5583 for more information.

On March 5 the *Central Illinois Sustainable Farming Network* (CISFN) will be holding its first annual meeting featuring small farms expert Lynn R. Miller. He has authored more than 14 books on topics related to animal power and alternative agriculture. Miller is the founder, publisher and editor of *The Small Farmer's Journal*, which has more than 40,000 subscribers worldwide. He has been actively engaged with issues relevant to small-scale, sustainable agriculture for more than 30 years. Registration for the annual meeting is \$35 per person, which includes dinner prepared at Station 220. To register, visit <https://webs.extension.uiuc.edu/registration/default.cfm?RegistrationID=5359> or call Deborah Cavanaugh-Grant at 217-968-5512. CISFN's mission is to promote the development of local food systems in Central Illinois through farmer support and training. Network members are committed to sustainable farming and are willing to share knowledge and participate in learning opportunities. Information about the Central Illinois Sustainable Farming Network, including how to join the network, is available at <http://central.illinoisfarmbeginnings.org>. Membership benefits include a directory of sustainable farms and producers and free admission to all workshops.

A series of *Illinois Farmers Market Forums* are scheduled for the Illinois State Fairgrounds, Rend Lake Community College, and the Dekalb County Farm Bureau Building on March 1, 3, and 9, respectively. Each covers EBT/SNAP/LINK programs, expanding marketing and outreach efforts, legislative updates, and strategies for fund raising and partnership building. The cost of each workshop is \$15 per person in advance (\$20 for onsite registration), lunch included. To register online, see <http://www.agr.state.il.us/marketing/reservations>. For more information, contact Pat Stieren, Illinois Farmers Market Network, 217-522-4274, pstieren@gmail.com.

Deborah Cavanaugh-Grant (217-968-5512; cvnghgrn@illinois.edu)

MarketMaker News

MarketMaker is one of the largest online food industry marketing resources in the country. With an ever-growing list of states, *MarketMaker* connects farmers and fishermen with food retailers, grocery stores, processors, caterers, chefs, and consumers. It represents a national network of states dedicated to bringing healthier, fresher, and more flavorful food to the average consumer.

Interest in local foods has increased dramatically in the past few years. This demand for locally grown foods creates the need to connect consumers with their local producers. *MarketMaker* is the perfect tool for making those connections. Part of the recently signed federal Healthy, Hunger-Free Kids Act of 2010 “helps communities establish local farm-to-school networks, create school gardens, and ensure that more local foods are used in the school setting (http://www.whitehouse.gov/sites/default/files/Child_Nutrition_Fact_Sheet_12_10_10.pdf). Along with that, Illinois House Bill 3990 requires that more foods grown and processed in Illinois be purchased by the state's public institutions (<http://www.illinoisagconnection.com/story-state.php?Id=706&yr=2009>).

MarketMaker allows buyers to select the exact specifications they require. The data base of farms and businesses registered on *MarketMaker* may be searched by business type (farmer, agritourism, buyer, processor, etc.), product types (fruit and nuts, grains, vegetables, specialty products, etc.), product attributes (natural, pesticide free, organic, kosher, etc.), product forms (bottled, canned, fresh, frozen, pickled, etc.), and methods of sale (delivery, farmers market, on farm sales, pick your own, wholesale, etc.). It assists farmers markets in finding vendors, connects farmers

and other food-related enterprises with members of the food supply chain, and it helps consumers find you – the producer. Best of all, there’s no cost to register or use *MarketMaker*.

In addition, to a searchable database of markets and growers, *MarketMaker* also contains a wealth of demographic and business data that can be summarized in a map-based format. Both business and demographic searches may be conducted statewide or be narrowed to a specific county or city.

Log on to Illinois *MarketMaker* at: <http://www.marketmaker.uiuc.edu> and see what *MarketMaker* has to offer. For more information, email marketmaker@extension.uiuc.edu or call 309-792-2577.

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

Vegetable Production and Pest Management

Some early season insect pests

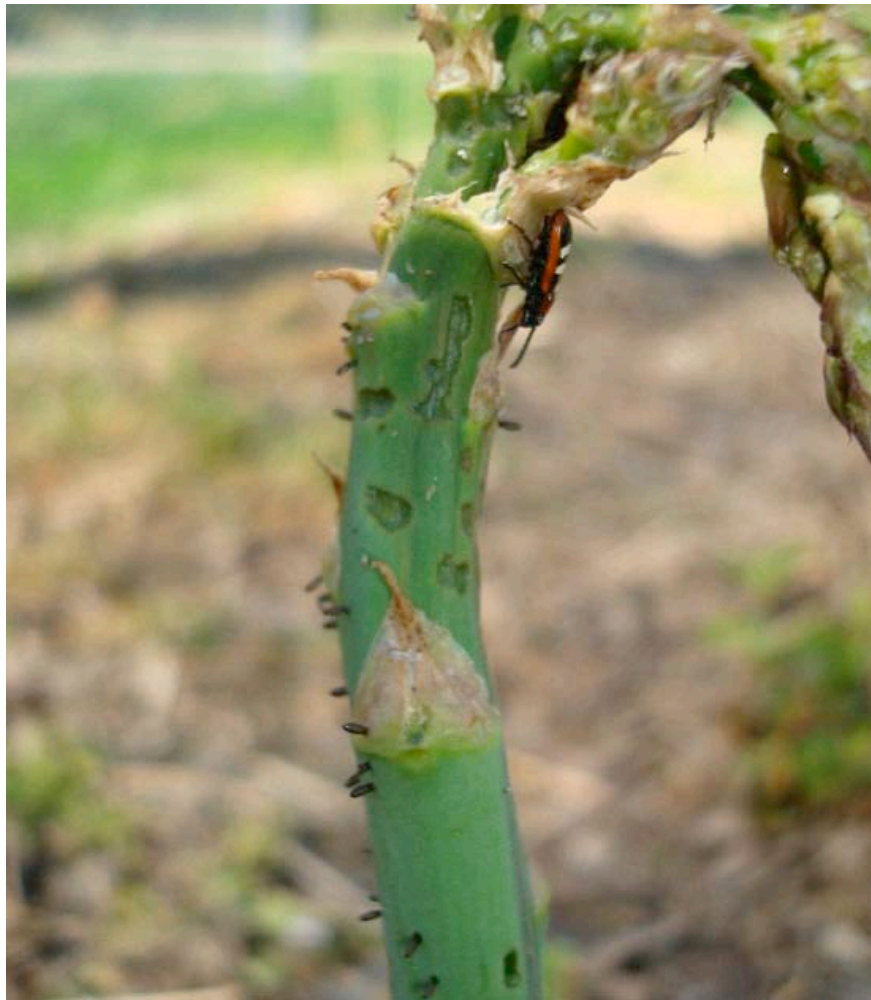
My usual late winter reminder ... and no, they are not active THIS early, but a few of the creatures you’ll want to look for as soon as seed goes into the ground and plants begin to come up include seed and root maggots in cool soils, asparagus beetle and cutworms on asparagus spears, Colorado potato beetle on potatoes and other nightshades, and several flea beetle species on a variety of vegetable crops. Background information on these insects is available by “googling” them on the web and in the book *Vegetable Insect Management*, edited by Rick Foster and Brian Flood (Meister Media, Willoughby, OH; <http://www.meisterpro.com/vim/>). Brief sampling and threshold information, along with listings of insecticides registered for the control of these insects, are presented in the *2011 Midwest Vegetable Production Guide*, available on-line at <http://bntny.purdue.edu/Pubs/ID/ID-56/>. Illustrations of a few of the insects mentioned above (and credits to their sources):



Left: Seedcorn maggot larva and damage (from E.A. Heinrichs et al., *Maize Insect Pests in North America*, at ipmworld.umn.edu/chapters/maize.htm); right: seedcorn maggot adult flies (photo by Jeff Hahn at www.extension.umn.edu/.../YGLN-June1502.html).



Left to right: asparagus beetle adult (Clemson Univ.), larvae, and damage to spear (Jeff Hahn, Univ. of Minnesota; <http://www.extension.umn.edu/distribution/horticulture/M1199.html>).



Close-up of asparagus beetle and eggs on spear. (Elizabeth Wahle, Univ. of Illinois)



Left to right: Colorado potato beetle adult (Ric Bessin, Univ. of Kentucky; <http://www.ca.uky.edu/entomology/entfacts/ef304.asp>), eggs (Univ. of Massachusetts; www.umassvegetable.org/soil_crop_pest_mgt/ins...), and larvae (Univ. of Idaho; <http://info.ag.uidaho.edu/keys/plates/plate36.htm>).

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

High Tunnel Production Systems

High tunnel growers who will be producing tomatoes have likely already started their transplants for the spring 2011 season. Remember that larger transplant size will correlate with earlier yields, so consider affording some extra space in the greenhouse for larger pots for high tunnel transplants. Four-inch clay or peat pots work well for this purpose. Try to spread plants out a bit as they grow larger to keep them from stretching. Spindly transplants seldom are as productive as well grown high quality ones.

Some growers have inquired as to support systems for tomato plants in the high tunnel. There are two commonly used systems. For determinate tomato varieties, growers commonly use a Florida weave system just as they would for their outdoor production fields with the only difference being plants are normally spaced more closely together in the high tunnel.



Determinate tomatoes supported by means of a Florida weave system.

Indeterminate tomato varieties can be supported in the high tunnel using a more elaborate trellis system. Several different plans or pictures can be found on the internet. Here at DSAC we constructed a trellis that has wires from which we hang stings to each individual plant. Plants are attached to the string with plastic clips designed for this purpose.



Indeterminate tomatoes supported on strings attached to an overhead trellis.

Jeff Kindhart (618-695-2770; jkindhar@illinois.edu)

Less seriously ...

... Dyslexics have more nuf.

Just two days from now tomorrow will be yesterday.

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