

College of Agricultural, Consumer, and Environmental Sciences

Illinois Fruit and Vegetable News

Vol. 19, No. 20, March 27, 2014 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, <u>weinzier@illinois.edu</u>. The *Illinois Fruit and Vegetable News* is available on the web at: <u>http://ipm.illinois.edu/ifvn/</u>. To receive email notification of new postings of this newsletter, call or write Rick Weinzierl at the number or email address above.

If you receive this newsletter by US Mail, this is the last issue of the 2013 subscription year. A subscription form for 2014 is included at the end of this issue. Please be sure to re-subscribe if you want to continue to receive printed copies of the newsletter by US Mail. Email notifications will be continued without any need for additional subscription renewal. If you are reading this issue online and would like to receive printed copies by US Mail, please email Rick Weinzierl at weinzier@illinois.edu to request a subscription form.

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Upcoming Programs

Check the Illinois SARE calendar for a full list of programs and links for registration. <u>http://illinoissare.org/</u> and <u>http://illinoissare.org/calendar.php</u> Also see the University of Illinois Extension Local Food Systems and Small Farms Team's web site at: <u>http://web.extension.illinois.edu/smallfarm/</u> and their calendar of events at <u>http://web.extension.illinois.edu/units/calendar.cfm?UnitID=629</u>.

- GAPs (Good Agricultural Practices) webinars, April and June, 2014. See http://web.extension.illinois.edu/smallfarm/gaps/fs1377.html for more information on webinar dates and registration, or contact a Local Food Systems and Small Farms educator in your area (see the staff list and contact info at the end of this newsletter). Webinar series will be held in April and June.
- **"Putting Small Acres to Work" Workshops, multiple locations, continuing through April 5, 2014**. The University of Illinois Extension Local Food Systems and Small Farms Team is coordinating a series of workshops on topics that help people learn ways to put a few acres to use. Remaining locations include Kankakee Community College on March 29; Lincoln Land Community College (Litchfield) on April 5. See http://web.extension.illinois.edu/state/calendar_event.cfm?ID=64513).

- Cover Crop Field Tour for Fruit and Vegetable Production, April 3, 2014. Beginning at Rendleman Orchards, 9680 Illinois Rt. 127, Alto Pass, IL. Sponsored by Jackson and Union County SWD and University of Illinois Extension. To register (free), call the Union County SWD at 618-833-5666, ext. 3, or the Jackson County SWD at 618-684-3064, ext. 3, by March 28.
- University of Illinois Short Course Bees and Beekeeping, April 5, 2014. 9:00 a.m. to 6:00 p.m., Urbana, IL. See http://www.life.illinois.edu/entomology/bee-course.html or call 217-265-7614 to register (\$100). Registration is limited to 50 ... register early.
- MarketReady: Learning to Connect with Commercial Markets, April 7, 2014. 9:00 am to 3:00 p.m., University of Illinois Extension, Cook County, 2205 Enterprise Dr., Suite 501, Westchester, IL. To register (\$15.00), see <u>https://webs.extension.uiuc.edu/registration/?RegistrationID=9769</u>; for more information call or email Ellen Phillips at <u>ephillps@illinois.edu</u> or 708-449-4320.
- Living on The Land: seven-week course beginning April 8, Tuesdays 6pm 9 pm at Matteson. Register at http://web.extension.illinois.edu/cook/ or contact Ellen Phillips, ephillps@illinois.edu 708-449-4320.
- GAPs (Good Agricultural Practices) Workshop, April 15, 2014, Gary Comer Youth Center, Chicago, IL. See http://web.extension.illinois.edu/cook/localfoods.html or contact Ellen Phillips at ephillps@illinois.edu or 708-449-4320.
- Fruit Tree Grafting Workshops, April 19 (Woodford County) and 26 (Livingston County), 2014. See http://web.extension.illinois.edu/registration/?RegistrationID=9119 or contact Bill Davison at 309-663-8306 or wdavison@illinois.edu/registration/?RegistrationID=9119 or contact Bill Davison at 309-663-8306 or wdavison@illinois.edu/registration/?RegistrationID=9119 or contact Bill Davison at 309-663-8306 or wdavison@illinois.edu for information. Registration fee is \$10.00.
- Elderberry Mentoring Workshop, April 23, 2014. 9:00 a.m. 4:00 p.m., Tory Frees Farm, 6343 MM Road, Redbud, IL. Pre-register (\$40.00) by April 18. For information and to register, see: https://webs.extension.uiuc.edu/registration/?RegistrationID=9825registration/?9825 or contact Sonja Lallemand at 618-687-1727 or lalleman@illinois.edu.
- GAPs (Good Agricultural Practices) Workshop, April 29, 2014, Arturo Velasquez Institute, Chicago, IL. See http://web.extension.illinois.edu/cook/localfoods.html or contact Ellen Phillips at ephillps@illinois.edu or 708-449-4320.

Regional Reports

From western Illinois – In the Quincy area, the frost finally disappeared just after St. Patrick's Day, and we remained frost free until the first of this week. However, the past few mornings we recorded low enough temperatures to freeze the top few inches of soil. Frost depth as reported from several in the area ranged from 18-24" deep this winter, which we haven't witnessed for some time. Those producers who are in the fields applying anhydrous to corn fields are reporting excellent soil conditions, which would be expected due to the deep freeze mellowing the soil. Most soils are dry enough that tillage is/or could be occurring.

Winter wheat is beginning to green up. There was quite a bit of leaf desiccation due to the winds over the winter, but most wheat looks as though it survived. Soils are quite dry. Those who have been digging trenches and basements have reported adequate moisture down to a depth of 12-30 inches, depending upon location and cover. Below that depth, the soil is very dry. Field tiles have not run yet.

Winter injury to peach buds is variable, and although many suspected we would witness some internal branch injury (we had lows of negative 13 degrees) very little is apparent at this time. The same is true for blackberries. The thorny Arkansas blackberries have some internal injury, but not much, and Triple Crown canes look healthy.

Most have delayed their high tunnel plantings at least a week due to the weather, and I've heard of no one who has planted any crop outside yet. Soil temperature on March 25, at a 4" depth on bare soil at the Orr Research Center, was 35.5 degrees.

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

From the south – Despite the cold temperatures (down to around 20 Wednesday morning) the past couple of days, things are starting to green-up and some activity is occurring out in the field. I've heard reports that some growers have started lettuce, spinach, and other cool season crops. As of today (March 26) the soil is relatively dry and in many areas works and tills very well. However, rain is in the forecast for Thursday and Friday. Many high tunnel growers are

getting ready to put out their first tomatoes for the season, and I am sure with some cooperative weather many will start on early plantings of many summer crops in the field very soon.

Local orchards have most of their pruning done in apples and are partially done with peaches. From my observations, buds on some varieties of apples and peaches are just starting to show a little bit of activity but not to the point of bud swell. Despite the cold winter temperatures, all reports from local peach growers in Jackson/Union Co. suggests that a few flowers were lost due to the cold, but growers still expect a good peach crop, depending of course what the weather brings us in the next month or so. Many are being conservative with peach pruning until they have a better idea of the buds lost on specific varieties.

Cover crops are starting to perk up, but as with everything else they are waiting for some warm temperatures. I am happy to report that the frost seeding I reported on last time was reasonably successful as last weekend when walking fields I could find many cotyledon-stage clover plants starting to take off. In my own garden I had left a few leeks from last year that I had not covered or dug, and they are starting to regrow. I actually harvested one this morning to use.

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

Fruit Production and Pest Management

The usual spring recommendations for using traps to monitor key insect pests in fruits ...

For apple, peach, and grape growers who have not already done so, NOW is the time to order pheromone traps for key insects. Traps are available and useful for monitoring many insects of fruit crops, and the ones listed in the table that follows are probably the most important for most Illinois fruit growers. Other fruit pests that may be worth monitoring with traps include dogwood borer, spotted tentiform leafminer, redbanded leafroller, and obliquebanded leafroller in apples. Contact me if you want more information on these insects.

What kind of traps work best?

A few companies manufacture traps, and all have a similar range of designs. Trecé, Scentry, Suterra, Alpha Scents, and others are reliable providers. Over the last few years, the trap design that has become most widely used for fruit insects in general is the large plastic delta trap; Trecé sells it as the Pherocon VI trap, and Suterra and Scentry simply call it a large plastic delta trap (LPD). This trap is quick to set up and easy to maintain; the sticky trapping surface is provided by an exchangeable card that slides in and out quickly and easily. If you bring the trap "shell" indoors at the end of the season, you can expect to get at least 2 to 3 years use from each trap (while replacing lures and liners as needed).

How do traps work?

Most of the insects listed in the table below are moths in their adult stage. For all the moths typically monitored using sticky pheromone traps, the trap must be baited with a pheromone lure – usually a small piece of rubber or plastic containing a synthetic blend of chemicals that is very similar to compounds used by female moths to attract males. When traps capture male moths, that serves as an indication that females are also present, and mating and egg-laying are occurring. When you order pheromone traps, you also must order lures for the specific insect(s) you wish to monitor. (Sometimes you may order "kits" that contain enough traps, sticky liners, and lures to last the season.) Remember that although you may use the same type of trap to monitor different pests, you must use only a single lure per trap ... it does not work to put lures for codling moth and tufted apple bud moth in the same trap. Depending on the pest species, lures usually last 2 to 8 weeks (suppliers can tell you the effective life of the lures they sell), so you have to order enough lures to last through the whole season.

For apple growers in the northern half of Illinois, monitoring the flight of apple maggot flies also is necessary. Traps for apple maggot flies rely on appearance (especially the color and shape of a bright red apple) and the use of a food odor ("apple volatiles") instead of a pheromone, and they are designed to capture female apple maggot flies ready to lay eggs on fruit. All the major suppliers of insect traps carry these kinds of traps. Growers should order the red spheres, tubes or tubs of stick-um or tanglefoot, and the food lures recommended by the supplier. Apple maggot traps may be used without any food lures; counts are interpreted accordingly.



Left: A Pherocon VI trap (an example of a large plastic delta trap), with the sticky liner partially removed, showing a pheromone lure. Right: An apple maggot trap.

How many traps are needed for each pest species?

Guidelines often recommend at least 3 traps per pest species for any orchard up to 10 acres in size and 1more trap for every 3 to 5 acres above 10. To monitor 50 acres of trees in 3 or 4 separate blocks, use at least 3 traps per block and at least 9-12 traps total ... for each pest species. Always use at least 3 apple maggot traps (red spheres) per block of trees. See the table below regarding placement of traps. Remember that you should check these traps and record counts in each at least twice per week. An April issue of this newsletter will review the interpretation of insect counts from pheromone traps for key fruit insects.

If you have only one relatively small block of trees, you may want to order 3-trap "kits" that suppliers package for each of the major pests. Kits with "standard" lures will include 3 lures per trap, but because the lures for most will have to be replaced every 4 weeks, most Illinois growers will need yet another 2 extra lures per pest species per trap to get through the entire season. Suppliers also sell these extra lures and extra "liners" (the sticky trapping surface) for traps. If you operate an orchard larger than 10 to 15 acres, you'll need more traps, so don't "mess with" 3-trap kits; contact a supplier and make plans to order in bulk. "Long-life" lures are available for the codling moth and the Oriental fruit moth (and some other species) ... these lures last 8 weeks between changes and are the best choice for almost all Illinois growers.

For apple growers in southern Illinois, it has been a few years since we saw some problems with tufted apple bud moth in orchards that were treated pretty much exclusively with organophosphates. With greater reliance on alternative chemistries in recent years, this pest has faded from the scene in most orchards, but I'm including it in the following table for those who still encounter it.

Crop and pest	When should you use traps?	Where do you hang the traps?	
Apples all of Illinois Codling moth	Early bloom through harvest	At eye level or higher (<u>upper third of canopy is best</u>), spaced throughout the block, including one somewhere near the upwind edge and one near the downwind edge.	
Apples south of I-70 Tufted apple bud moth	April 15 through harvest	Same as above for codling moth.	
Apples north of Springfield Apple maggot	June 15 through harvest	In the outer portion of the canopy of trees on the edge of the block VERY visible to adults flying into the block (remove foliage around the sticky red spheres). Hang in border rows or end trees nearest any woods or brush outside the block	
Peaches Lesser peachtree borer	Bloom or petal fall through harvest	Similar to codling moth, but trap height should not exceed 5 to 6 feet.	

Pheromone trapping guidelines for major fruit insects

Peaches – "greater" peachtree borer	May 15 through harvest	Similar to codling moth, but trap height should be 3-4 feet above the ground.	
Peaches Oriental fruit moth (In southern IL, trapping for Oriental fruit moth in apples is also recommended.)	Green tip to pink through harvest	Similar to codling moth, but trap height need not exceed 6-8 feet.	
Grapes Grape berry moth	Bloom through harvest	Hang traps on the top trellis wire. Place traps in the outside rows and near ends of rows; concentrate traps on edges near wooded areas. (Note that where GBM populations carry over in wild grapes in woods near vineyards, mating may occur there, mated females may lay eggs in the vineyard, and traps may not capture many (or any) males in the vineyard itself.)	

Midwestern suppliers of pheromone traps include:

Supplier	Address	Phone & Fax
Great Lakes IPM	10220 Church Road Vestaburg, MI 48891-9746 email: glipm@greatlakesipm.com On the web at: http://www.greatlakesipm.com	989-268-5693 989-268-5911 800-235-0285 FAX: 989-268-5311
Gempler's	P.O. Box 44993 Madison, WI 53744-4993 On the web at: http://www.gemplers.com/pheromone-lures	1-800-382-8473 (U.S.A.) FAX 1-800-551-1128

Rick Weinzierl (217-244-2126; <u>weinzier@illinois.edu</u>)

Vegetable Production and Pest Management

Soil Temperatures and Spring Planting of Vegetables

Planting by the calendar is too risky when there are simple tools to help make more accurate decisions about soil temperature. Checking regional soil temperatures can be as simple as checking a website.

- Current Soil Temperatures for Illinois: <u>http://www.sws.uiuc.edu/warm/soiltemp.asp</u>
- Past week soil temperatures: http://www.isws.illinois.edu/warm/soiltemp/archive.asp
- Compare these with Long-term Soil Temperature Averages: <u>http://www.isws.illinois.edu/atmos/statecli/Soil-</u> Temperature/soil_temperature.htm
- Regional Soil Temperatures and Frost Depth: <u>http://www.crh.noaa.gov/ncrfc/content/soilTemp/soilTemp_gd.php?pe=TV&depth=02</u>

These websites give you the big picture of how the spring is warming up. To be more accurate, you should measure soil temperatures in your individual fields. Soil temperatures depend on numerous factors, including soil type, soil moisture, soil color, and tillage practices. Soil temperatures will also change over the depth of the soil profile. The surface soil fluctuates the most, with daily fluctuations of 10-20 F, while temperatures deeper in the soil remain more steady and take longer to change.

Knowing the soil temperature can be as simple as purchasing a refrigerator thermometer that has a probe. This low cost purchase can be a valuable tool in your toolbox. There are more sophisticated thermometers available as well that can download to your computer.

To determine the soil temperature, simply push the thermometer into the soil to the depth of planting. For transplants it is best to determine the soil temperature at 4 inches. If the soil is very dense, you can use a screwdriver to make an initial hole to the right depth so that the thermometer doesn't get bent when pushing it into the soil. It is best to do this in several locations throughout the field. Because soil temperatures are influenced by air temperatures and sunshine, take soil temperatures for several days and average the temperatures to determine the average soil temperature for the field. Soil temperatures tend to be coolest between 6 and 8 a.m. and should be used as a guide as to when to plant or when to look for germinating weeds. In the heat of summer you can check for the maximum soil temperatures between 3 and 5 p.m.

Knowing the soil temperature can help guide planting to guarantee good germination. Planting into cold soil can encourage diseases and even stunt later crop growth. For recommendations on when to plant crops in Illinois, check The Midwest Vegetable Production Guide. <u>http://www.btny.purdue.edu/Pubs/ID/ID-56/</u>

Soil temperature can also be an indicator of when to begin scouting for spring weeds. The Weed Emergence poster can help guide you on what to scout for based on the weed germination time. See http://weeds.cropsci.illinois.edu/extension/Other/WeedEmergePoster.pdf

Ellen Phillips (708-449-4320; ephillps@illinois.edu)

Re-cap of the March 5 High Tunnel Soil Management/Steaming Workshop

The March 5th high tunnel program at the Jackson County Extension Office provided some first-hand observations for several new and established growers. Nathan Johanning discussed issues on how to prepare soil in a new high tunnel and gave some tips on high tunnel layout and raised bed construction. Participants also heard from Jeff Kindhart from the University of Illinois Dixon Springs Ag Center on soil steaming and high tunnel production. In addition, Jeff and colleague Julie Zakes brought up their steam unit and demonstrated steaming the soil in the high tunnel for plant pathogen and weed suppression.



Left: Nathan Johanning giving tips on how to build raised beds at the High Tunnel Workshop at the Jackson County Extension Office. Right: Jeff Kindhart discusses the benefits of soil steaming.

Local Food Systems Issues

August 2014 Deadline for Cost-Share Funds for GAPs Audits

Apply for your audit now to receive up to 75% of the cost of the food safety inspection. Time is running out. The Illinois Department of Agriculture's Food Safety Grant that assists farmers with a cost-share for GAPs audits will terminate in September 2014. There are still funds available for cost-sharing your audit expenses. Many growers have gone through Good Agricultural Practices (GAPs) Training and are awaiting to hear how the Food Safety

Modernization Act (FSMA) will impact farms, especially small farms. The implementation of new rules is scheduled for next year, this cost-share benefit will not be available then. We encourage you to apply to be audited this summer, and then request the cost-share from University of Illinois. Open this link for the application form: <u>http://web.extension.illinois.edu/smallfarm/downloads/50983.pdf</u>. If you know you will be seeking a cost-share please contact your Local food systems and small farm educator now.

Ellen Phillips (708-449-4320; ephillps@illinois.edu) and James Theuri (815-933-8337; jtheu50@illinois.edu)

Less seriously ...

The farmer's son was returning from the market with an unsold crate of chicken's his father had entrusted to him, when all of a sudden the box fell and broke open. Chickens scurried off in different directions, but the determined boy walked all over the neighborhood scooping up the wayward birds and returning them to the repaired crate. Hoping he had found them all, the boy reluctantly returned home, expecting the worst.

"Dad, the chickens got loose," the boy confessed sadly, "but I managed to find all twelve of them."

"Well, you did real good, son," the father beamed. "You left the market with seven."

Extension Educators – Local Food Systems and Small Farms					
BRONWYN ALY, Gallatin, Hamilton, Hardin, Pope, Saline, and White counties	618-382-2662	baly@illinois.edu			
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MOSPAH KUSHAD Ervit & Vagetable Production	217-333-1323	kushad@illinois.edu			
IOUN MASHINAS Wood Solonge	217-244-3091	magiunag@illinois.edu			
CULICY VOICE Vocatable Draduction (& harbo)	217 222 10(0				
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University of Illinois Extension Educators and Specialists in Fruit and Vegetable Production and Pest Management

2014 ILLINOIS FRUIT AND VEGETABLE NEWS

The *Illinois Fruit and Vegetable News*, a newsletter for commercial growers of fruit and vegetable crops, will be published on the web and in print in 2014 (April, 2014 – March, 2015). University of Illinois Extension specialists and educators, along with experts from other institutions and the private sector, will write 20 issues for the 2013 season. In general, from March through October, the newsletter is published every two weeks; one issue is published each month from November through February. The price for US Mail delivery of the printed "hard copy" is \$23.00 for 20 issues.

For those with internet access, the 2014 *Illinois Fruit and Vegetable News* issues will be posted on the web and available free of charge at: <u>http://ipm.illinois.edu/ifvn/.</u>

If you wish to subscribe to the email notification service, you will receive an email announcement on the date each new issue is posted on the web.

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If you have questions, call Rick Weinzierl at 217-244-2126 or email weinzier@illinois.edu.

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