UNIVERSITY OF ILLINOIS EXTENSION
College of Agricultural, Consumer, and Environmental Sciences

Illinois Fruit and Vegetable News

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Editors: Nathan Johanning & Bronwyn Aly

A newsletter to provide timely, research-based information that commercial fruit & vegetable growers can apply to benefit their farming operations.

Address any questions or comments regarding this newsletter to the individual authors listed after each article or to its editors, Nathan Johanning, 618-687-1727, njohann@illinois.edu or Bronwyn Aly 618-382-2662, baly@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, contact Nathan Johanning at the phone number or email address above.

In this issue…

Upcoming Programs

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 website** at:
http://web.extension.illinois.edu/smallfarm/ and the calendar of events at
http://web.extension.illinois.edu/units/calendar.cfm?UnitID=629.

- **2017 Summer Blackberry Production Workshop**, June 28, 2017 1 to 5 p.m. Jefferson College-Arnold 1687 Missouri State Road, Arnold MO for more information visit http://extension.missouri.edu/calendar/DisplaySingleEvent.aspx?E=308704&S=1 or contact Pat Byers at byerspl@missouri.edu or 417-859-2044.
  Small Berry School, Thursday, June 29, 2017, 1 to 4 PM. Cape Girardeau County Extension Center, 684 West Jackson Trail, Jackson, MO Address: Learn the basics of growing Strawberries, Blackberries, Raspberries, Blueberries, and a few specialty berries. Fee: $20 Pay at the Door and Pre-Registration Required by calling Donna at 573-238-2420 or aufdenbergd@missouri.edu.
  2017 Southern Illinois Summer Twilight Series. Join University of Illinois Extension as they team up with area farmers to provide four monthly evening meetings to highlight and demonstrate diverse farming enterprises across southern Illinois. Growers and extension educators will provide information on the following topics: u-pick lavender production, growing fruits and vegetables within city limits, fresh cut flower production, mushroom production, and utilizing farmers markets, roadside stands, and CSA's to market products. We will also explore the impacts and importance of buying local to our local farms as they help to support a stronger, more sustainable, regional economy. Meetings will begin at 6 p.m. at the following locations:

July 17, 2017	**Flower Ridge Farm, Herod, IL**
August 14, 2017	**Flyway Family Farm, Makanda, IL**

  There is no cost for these programs but pre-registration is appreciated. Please register online at http://web.extension.illinois.edu/ghhpsw/ or by phone 618-382-2662.

For more information please contact: Bronwyn Aly – 618-382-2662, baly@illinois.edu or Nathan Johanning – 618-687-1727, njohann@illinois.edu

- **Produce Safety Grower Training Course, Tuesday, August 1, 2017 8:00am to 5:00pm CST** Rend Lake College – Applied Science Center, 468 N. Ken Gray Parkway, Ina, Illinois 62846
  The PSA Grower Training Course is one way to satisfy the FSMA Produce Safety Rule requirement outlined in § 112.22(c) that requires '*At least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under standardized curriculum recognized as adequate by the Food and Drug Administration.*' To register and find more information visit: https://web.extension.illinois.edu/registration/?RegistrationID=16919 or contact Laurie George at (618) 242-0780. The deadline to register for this training opportunity is July 17, 2017 and space is limited.
- **Southern Illinois Fruit & Vegetable Field Day, Monday, August 7, 2017, 4 p.m.** Jackson County Extension Office, 402 Ava Rd. Murphysboro, IL 62966. Field Day topics and field trials include cover crops, pepper variety trials, ornamental corn variety trial, small fruit production, spotted wing drosophila management, high tunnel production and more. Registration information coming soon. For more information contact Nathan Johanning at njohann@illinois.edu or 618-687-1727.

Regional Reports

From northern Illinois… We've had a period of temperatures within the 90s last week followed by storms with heavy rain. Rain has been hit or miss in the region with some growers affected more than others. Strawberries are being harvested in the last week with some growers expecting a shorter season. Due to the timing of our strawberry plants, usually Spotted Wing Drosophilia is not a problem; however, it still remains a problem for other berries and brambles. I've got both a sour cherry tree and peach trees at one of the Extension offices that are producing great fruit. The sour cherry tree has matured in the last week with small peaches developing well. This summer is the first that I expect to have haskap berries produced. Growers are should still remain vigilant in management, especially with the last week of June, since we tend to enter either a short drought period or heavy rains each year.

Haskap berries. Photo: Grant McCarty

Grant McCarty (815-235-4125; gmccarty@illinois.edu)

From north central Illinois… Some rain this past weekend, a little under a half inch, broke a near month-long spell of hot dry weather. Our last rain even was recorded on May 26, meaning the dry conditions allowed for some good fieldwork, but kept the irrigations systems going almost daily. While I received ½-inch of rain others fared better and got nearly four inches over the weekend. The rainfall amounts are variable for West-Central Illinois when I look over the recorded data.

Pests encountered just this past week include everyone's favorite squash bug and squash vine borer. I watched a squash vine borer adult female flying from vine to vine laying one egg each time. My attempts to capture her were futile. One attempt I did actually catch her, but thinking otherwise I opened my hand to watch her fly from my palm. Squash vine borer pheromone traps are available to monitor populations. The trap is baited with a female sex lure that captures males, but still leaves egg-bearing females to sow their 'seeds' of destruction, hence, the trap is not good for complete control.
Once you begin to capture the hapless male moths, begin with control regimes. You can find recommended insecticides for controlling squash vine borer, squash bug and other pests in the 2017 Midwest Vegetable Production Guide.

For organic growers research from South Carolina show effective biocontrol methods of squash vine borer using Bt (*Bacillus thuringiensis*) and Entomopathogenic nematodes when applied with similar timing as conventional insecticides.

Japanese beetles have begun their emergence. During my walks around the neighborhood, I've seen several decapitated Japanese beetle adults. I believe these headless beetles are from feeding done by various birds. Never would have thought a headless bug would have given me so much joy, but it does make me smile.

Chris Enroth (309-837-3939; cenroth@illinois.edu)

From western Illinois… There were smiles on everyone's' faces Thursday morning after several rain storms passed through the area Wednesday night and Thursday morning. We recorded 1.4" of rain, which was the first rainfall we had received in 18 days. We also caught another .45" on Thursday night/Friday morning. Totals for the area ranged from 1.25"-3" or more. More rain is expected Saturday as well. With the rains came some strong winds. On a trip from Quincy to Jerseyville to Jacksonville on Thursday afternoon, many corn fields had corn leaning due to the winds. Our first planted sweet corn is pollinating and the winds affected our corn as much of it was leaning, up to 45 degrees or more. It's been our experience that corn that is tasseled or later in maturity will not straighten itself out, so the pickers will have fun harvesting this crop. It's not a new experience, as it seems like we get a wind that affects one planting or another each year.

The rains were so welcome due to the fact that it had been over 2 ½ weeks since the last rainfall and that temperatures were so warm and the winds were so strong. The end result was that most folks that could irrigate were, as the crops were needing quite a bit of water to keep up with crop development.

Since we'd gone so long without rainfall, many preemergence herbicides that were applied several weeks ago may not provide much control. These products need to be incorporated, usually within 10-14 days, to be effective. Incorporation could include tillage or rainfall. Many producers apply these products immediately after planting and since we didn't receive rainfall within the time frame, expect poor control. Plan on utilizing row cultivation and/or post emerge products or hand weeding.

Cole crops are maturing nicely, with broccoli being harvested, heads forming on cabbage and cauliflower. The several insects that affect these crops have been apparent and treatment (sprays or row covers) have been applied. I know of one grower who has harvested their garlic and spread it out to dry. Onions are sizing nicely. Peas and greens are being harvested. I've been noticing on our high tunnel tomatoes some weird looking fruit. It appears to me like pollination was not complete. We did have some temperatures in the upper 40's about 4 weeks ago, so I'm wondering if that is the reason. Also, I have noted some two-spotted spider mites on the cucumbers in the high tunnel and will treat accordingly to manage them. Remember to refer to the 2017 Midwest Vegetable Production Guide for further recommendations on specific pest management recommendations.

Damage on tomato fruit from poor pollination during cold weather at bloom earlier this season. Photo: M. Roegge

We set up our corn ear worm trap earlier this week and have been catching quite a few moths each night, 70-80 per night and in the last few nights over 100. Needless to say, we've been diligent in spraying to prevent damage. We started using brigade last year because of concerns with pythreoid resistant earworm and not wanting to take the risk of finding out after the fact. It does cost several times more per application as opposed to generic pyrethoids, but to us it's like an insurance policy, we can sleep easier knowing we have control.

We placed our shade cloths over our high tunnels on June 10th, after several days of 90 degree temperatures and the predication for the next weeks temperatures to remain at 90. I know other growers who use the "whitewash" paint to reduce sunlight and temperatures. This has to be reapplied each year as the effects will diminish with time and rains. Our shade cloth is a 40% shade, which seems to work well.

We've been fertigating the tomatoes twice a week to keep up with demand. All the literature I've read indicates that tomatoes prefer a 2:1 ratio of potassium to nitrogen, so we've always used potassium nitrate as our main fertilizer source.

Mike Roegge, Retired Extension Educator & Mill Creek Farms (roeggem@illinois.edu)

From southern Illinois… We have been in a very summer-like, hot and humid pattern over the last few weeks. Temperatures have been in the upper 80s to 90s with a few fronts that have dropped humidity for a few days, but then it's back again as usual. Overall we have been fairly dry. At Murphysboro we did get 1" of rain late last week that kept things looking good, but given the temperature and sun that was gone fairly soon and some areas did not get hardly anything from that system. We are forecasted to get some rain the end of this week and then a break from the heat and humidity with a few days of temperatures back around 80˚.

Out in the field, it isn't just too hard to find some early peaches out at many markets with more varieties ripening with every day that passes. Blackberries are coming in as we have started harvesting our 'Kiowa' at my office. On blueberries, the earliest varieties are mostly and now we are into the 'Bluecrop', 'Chandler' and some 'Elliott'. Weekly sprays have been effective against spotted wing drosophila, and necessary with larva found in untreated fruit. See the note later in this issue for details on SWD management. The earliest of field tomatoes and peppers are getting ripe along with green beans. We will probably make our first harvest on our pepper varieties trials next week. We have had Japanese beetles out on brambles, asparagus ferns, blueberries...and well most anything they find a taste for. At home pumpkin transplanting will be coming soon as some of the first seeded transplants are ready to go but first I have to get some burndown and preemergence herbicides out on the field. Many direct seeded pumpkin fields are up and starting to put on that first true leaf.

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

Fruit & Vegetable Production & Pest Management

Modified Growing Degree Days (Base 50^0 F, January 1 through June 19)

Station Location	Actual Total	Historical Average (11 year)	One- Week Projection	Two-Week Projection
Freeport	970	785	1127	1282
St. Charles	942	742	1091	1240
DeKalb	1000	845	1162	1319
Monmouth	1247	916	1407	1566
Peoria	1390	967	1556	1725
Champaign	1251	1001	1423	1596
Springfield	1548	1091	1726	1908
Perry	1511	1024	1674	1841
Brownstown	1615	1180	1796	1981
Belleville	1632	1211	1807	1990
Rend Lake	1773	1313	1919	2111
Carbondale	1635	1249	1809	1987
Dixon Springs	1775	1330	1952	2134

Insect development is temperature dependent. We can use degree days to help predict insect emergence and activity. Degree day accumulations calculated using the Illinois IPM Degree-Day Calculator (a project by the Department of Crop Sciences at the University of Illinois and the Illinois Water Survey).

Insect updates from statewide trapping surveys.

Japanese beetle emergence is in full swing. Reports are filtering in from around the state. Most of the activity seems to be from I74 south, but there have been a few reports up to I 80. I expect activity statewide by the weekend.

European corn borer moths have been caught in traps in western Illinois. I don't have much information

Corn Earworm moth flights have been increasing in Central Illinois with numbers increasing to >20 per night this last week.

Spotted Wing Drosophila traps are out and functioning as part of our orchard surveys. Samples processed through June 15 did not have any SWD adults present, though we have picked up **brown marmorated stink bug** adults present in traps in both central and northern Illinois.

Kelly Estes (217-333-1005; kcook8@illinois.edu)

Insect Updates for 2017 Summer Horticulture Day

References you should have:

- ***2017 Midwest Vegetable Production Guide.*** Available free online at https://ag.purdue.edu/btny/midwest-vegetable- guide/PublishingImages/2016PDFs/ID-56.pdf.
- ***2017 Midwest Fruit Pest Management Guide.*** Combines previous tree fruit and small fruit spray guides. Available free online at https://ag.purdue.edu/hla/Hort/Documents/ID-465.pdf.

(Each of these guides is available in print from U of I Pubs Plus … call 1-800-345-6087 or 217-333-2007.)

Insects to watch:

POTATO LEAFHOPPER migrates into Illinois from the south in May and June and damages apples, redbuds, maples, green beans, potatoes, and alfalfa (as well as some other plants) by injecting a salivary toxin through its feeding stylet as it sucks fluids from leaves. I have been finding it in southwestern IL and near Urbana for a couple of weeks. See the May 19, 2016, issue (https://ipm.illinois.edu/ifvn/contents.php?id=80) of the *Illinois Fruit and Vegetable News* for photos and details. The production and pest management guides above list effective insecticides for potato leafhopper control. For apple growers, potato leafhoppers occur most often in two situations: (1) in nonbearing young trees that are not sprayed on a regular basis, and (2) in productive orchards where selective insecticides are used for control of codling moth … Altacor, Belt, Delegate, and Rimon do not control potato leafhopper. Look for potato leafhopper on leaves at and near the tips of shoots … immature stages move sideways instead of forward or backward when disturbed. Don't wait for leaf curling and browning … by the time you see this "hopper burn", this season's shoot growth in apples and yield in potatoes and beans have already been reduced when symptoms are widespread.

EASTERN FLOWER THRIPS also migrate into Illinois every spring and summer, sometimes simultaneously with immigration of potato leafhopper. Sample for thrips by tapping flowers onto a white or very dark plate or saucer, and look for the slender yellow thrips. Alternatively, flower blossoms can be placed into a zip lock bag and shaken to dislodge thrips and allow counting. Control is recommended if populations exceed 2-10 thrips per blossom until all berries that will be harvested have reached d8ime size. Entrust (1) and Radiant (1) are labeled for thrips control in strawberries. Danitol (2) and Brigade (0) are not labeled specifically for thrips control in strawberries but have been effective in field use at rates listed for clipper or spittlebug and tarnished plant bug; numbers in parentheses indicate the minimum preharvest interval (PHI) that must elapse between the last application of each insecticide and the harvest of fruit.

CODLING MOTH CONTROL IN APPLES … Biofix dates for the spring's first moth flights are very useful for timing early sprays against first-generation larvae, and they can be used to understand and estimate second and third generation development and spray timing as well. Even so, continued monitoring of pheromone traps provides the best information for determining if and when continued sprays for codling moth control are needed as the season progresses. Whenever traps are catching male codling moths, growers should assume that mating and egg-laying also are occurring. The first larvae that will hatch from those eggs will hatch about 220-240 degree days (base 50) later. Egg-laying continues for a few days after traps cease catching moths, and those eggs will also hatch after 220-240 degree-days. Whenever pheromone traps catch more than 3 to 5 male codling moths per trap per week, insecticide residues need to be on fruit 240 through about 350 degree-days later. So … use traps, check them at least twice weekly, and constantly look back at records of moth counts, insecticide applications, and rainfall to determine when another spray is needed. Altacor, Assail, Delegate, and Rimon are among the most effective insecticides for codling moth control … see the ***2017 Midwest Fruit Pest Management Guide*** for rates and restrictions.

SPOTTED WING DROSOPHILA will begin infesting ripening thin-skinned fruits (raspberries, blackberries, blueberries, day- neutral strawberries) by late June or early July. Key things to do:

- See the May 4, 2016, *Illinois Fruit and Vegetable News* (https://ipm.illinois.edu/ifvn/contents.php?id=79) for illustrations, background information, and details.
- Monitor for adult flies. Use 1-quart containers with lures and soapy water. You can make traps or buy them from Great Lakes IPM (http://www.greatlakesipm.com/2016%20Catalog%20Web.pdf). See the May 4, 2016 newsletter link above for instructions for making traps, including buying and using yellow cards inside the traps, making holes in plastic containers to allow fly entry, and using soapy water as a drowning agent (make by adding 1 teaspoon of borax plus one drop of unscented dish detergent to a quart of water). Contact Great Lakes IPM (800-235-0285) to order lures. Hang traps in the shade about waist-high in areas where ripening fruit is present. Traps reflect SWD population levels but do NOT necessarily provide advance warning of the need for your first spray … infested fruit samples have been collected before SWD adults have been trapped in small fruit plantings. Placing a few traps in adjacent woods may increase the chance of earlier detection, but initiation of sprays or other practices should begin at fruit coloring even if traps have not yet caught SWD adults.
    - To determine whether or not fruit is infested, immerse a sample of harvested fruit in a sugar-water solution – 1 cup granulated white sugar per 1 quart water. Within ½ hour (usually sooner) larvae will float to the surface. Assessing infestations in fruit does two things … one is to determine how effective your control programs have been, and the second is to detect infestation before you sell fruit to customers who did not want to see maggots squirming in it a day later.
    - If SWD was present in past years, start management with first signs of fruit coloring in susceptible crops in 2016 … do not wait to catch SWD adults in traps.
    - Clean picking and frequent picking (and removing damaged fruit) slows population buildups. Exclusion by use of screening or fine-mesh netting has been shown to reduce infestations ProtekNet netting from Dubois Agrinovation (http://www.duboisag.com/) is one available product (1-800-463-9999).
    - Post-harvest chilling is also important. Refrigeration will prevent larval growth and slow fruit breakdown.
    - Insecticides for control of SWD should be applied to blueberries, raspberries, blackberries, and similar small fruit crops beginning at the onset of fruit coloring and ripening. Preharvest intervals (PHIs) and recommended application intervals for several insecticides are listed in the table below. Two cautions: (1) Rotate among insecticide modes of action to avoid maximum selection for insecticide resistance. (2) All of these insecticides are at least moderately toxic to bees, and in brambles and strawberries control may be necessary on ripening fruit while later blossoms are still attractive to bees. Where sprays must be applied, use liquid formulations and spray at night when bees are not foraging.

Selected insecticides for SWD control in blueberries, brambles, strawberries, and peaches.

Insecticide	**PHI (days) in Blueberries**	**PHI (days) in Brambles**	**PHI (days) in Strawberries**	**PHI (days) in Peaches**	**Recommended Application Interval (days)** 1,2
Brigade (bifenthrin)	1	3	0	Not labelled	5-7
Danitol (fenpropathrin)	3	3	2	3	5-7
Delegate, Radiant (spinetoram)	3	1	1	14	5-7
Entrust (OMRI) (spinosad)	3	1	1	14	3-5
Imidan (phosmet)	3	Not labeled	Not labeled	14	7
Malathion (malathion)	1	1	3	7	3-5
Mustang Max (zeta-cypermethrin)	1	1	Not labeled	14	5-7
Pyganic (OMRI) (pyrethrins)	(12 hours, REI)	(12 hours, REI)	(12 hours, REI)	(12 hours, REI)	1-2

[1] Interval based in part on estimates of residual activity from work done by Rufus Isaacs and in part from observations of effectiveness of spray programs in IL in 2013 through 2015.
[2] Reapplication of insecticides on shorter intervals is recommended following significant rainfall.

CORN EARWORM … I do not have any traps in place; contact me if you want to report your counts as part of a network so that you can share information. Remember that moth counts (and egg-laying) typically increase markedly by sometime in August, and the best insecticides (or Bt traits) are needed for control then. See the March 8, 2017, issue of the *Illinois Fruit and Vegetable News* (http://ipm.illinois.edu/ifvn/contents.php?id=95) for comments on monitoring, insecticides, and Bt traits.

LEPS (WORMS) IN CABBAGE … Remember to rely as much as practical on Bt products such as Agree, Biobit, Dipel, Javelin, Lepinox, XenTari, and others (or at least insecticides with some degree of selectivity such as Avaunt, Coragen, Entrust, Intrepid, Proclaim, Radiant, and Rimon) for control of imported cabbage worm, diamondback moth, and cabbage looper early in crop development, saving pyrethroids until later to avoid resistance buildup. See the May 19, 2016, issue of the *Illinois Fruit and Vegetable News* (https://ipm.illinois.edu/ifvn/contents.php?id=80).

Rick Weinzierl, Weinzierl Fruit and Consulting (raweinzierl@gmail.com; 217-621-4957)

High Tunnel Updates: Insect Netting for Insect Pest Exclusion and Beneficial Insect Retention

By the time of this publication most high tunnel growers will have most of their high value warm season crops into their protected culture structures (high tunnels and heated greenhouses). The many benefits of growing in protected culture outweigh the additional capital expense and labor needed to manage these systems. One of the drawbacks to these systems is that pests, particularly insect pressure is still a problem, and in some contexts can become even more exasperated than insect pressure in the field. Overwintered aphid build up is a classic example of this. While the confined space of protected culture limits our ability to use specifically labeled insecticides (both conventional and organic), it does provide the opportunity to utilize biological and physical controls more effectively than in a large field setting. The use of augmentative biological control, such as the release of mass reared lady beetles into a high tunnel, becomes a more effective and focused approach than in a field setting. One of the issues with the scheduled and periodic release of lady beetles in a high tunnel is that they easily escape via the end wall vents and roll up sides. A solution to both keep in released beneficial insect predators and exclude other insect pests from entrance is the use of insect netting.

There are variety of mesh sizes for insect netting so be sure to match the mesh size with the appropriate insect pest to exclude or beneficial to retain. There are no thermal retention properties with insect netting versus their row cover counterpart. This makes insect netting a great substitute for row covers when insect exclusion may be needed during the warmer windows of the outdoor growing season.

Here is a picture of a mini-tunnel with both plastic covering and insect netting in place. The netting should be attached from the hip-board down to the baseboard/base of the tunnel and secured with wiggle wire. Small pieces of wiggle wire temporarily attach the netting until the plastic is pulled over and attached in the same channel. If you are using double channel lock for the hip-board you could use the bottom channel to lock in the insect netting. Photo: Z. Grant

In this photo, insect netting is being utilized as a structured barrier surrounding the end wall vent louvers to prevent pests from getting into the greenhouse. Considering there are a variety of mesh sizes for insect netting, which in turns allows different levels of air flow, a much a larger barrier needs to be covered. The general rule of thumb is to create a structured barrier covering 4 to 5 times the surface area of the vent to compensate for reduced airflow through the netting. For roll up sides, this might mean making the roll up sides higher than usual rather than building a structured barrier like the above picture. Photo: Z. Grant

Here is a greenhouse with insect netting outside of the roll up side mechanism. Here the plastic tubes push the netting away from the roll-up and also create more surface area, therefor increasing air flow through the netting. Photo: Z. Grant

Zachary Grant (708-679-6889; zgrant2@illinois.edu)

Hops Highlight: Getting Started

Within the last five years, hops have emerged as a new specialty crop within the state. Most of this is due to the rise in both microbreweries and home brewing groups that utilize the hop cones in the brewing process. If you are unfamiliar with hops, they are a perennial plant that sends up annual bines with cones on them. These tall bines need a trellising system to support them, usually upwards of 25 feet.

Two of the challenges with hops are establishment costs and marketing. Unlike some specialty crops, a hop yard can be an investment. Usually, this is around $10,000 per acre due to the cost of a trellising system and labor. Drip irrigation is also recommended. At less than 5 acres, you would still be harvesting most of these bines by hand as picker equipment is not economically justified. Most of the buyers for local hops are to craft breweries. If you live in an area with a number of microbreweries, you may find that it is easy to sell these. On the other hand, when a cone is picked, this is the whole, wet cone and some breweries only like to work with dry, pelletized cones. When a cone is pelletized, this is now a processed product that will require working with your local health department and determining food safety certification you might need.

In establishment year, hop plants are planted in the spring. Once bines are produced in May, you want to pick out 4-6 of the most vigorous ones to train on the trellis. Other bines not trained will be removed. In mid-June, the cones begin forming and adequate yields occur around year 3 as the first 2 years are focused on growing the rhizome. Cones will be ready to harvest when they have noticeable yellow powder, a “hoppy” smell, and squishy when you feel the cones. Once cones are picked, they can be used as fresh or dried. The bines are cut at the base of the rhizome and the top of the trellis to be harvested.

In the subsequent issues, I’ll go more into growing, variety selection, and disease/insect issues.

Grant McCarty (815-235-4125; gmccarty@illinois.edu)

Less seriously…

Life on the farm has its challenges and weather is one of them. Now that spring is officially over, our colleague Andy Larson had a very good synopsis of this past season that probably fits most of us…

“All the rain…then no rain…now spotty rain and violent wind. Spring is hard.”—A. Larson

The head pharmacist goes out to lunch leaving the assistant pharmacist in charge. When the head pharmacist returns from lunch he notices a man leaning against the wall. He asked the assistant what was wrong with the man leaning against the wall over there. The assistant pharmacist says, "Oh that guy .Oh yeah he came in a little while ago with a really bad cough so I sold him a laxative. He seems to be doing ok now..... I guess." The head pharmacist says, "Are you crazy?? You can't sell a laxative to someone who has a bad cough like that!?" The assistant pharmacist says "Well why not?? Look at him over there! Its working! He's too scared to cough now!!....."

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