

## ***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, 217-333-6651, [weinzierl@uiuc.edu](mailto:weinzierl@uiuc.edu). The *Illinois Fruit and Vegetable News* is available on the web at: <http://www.ipm.uiuc.edu/ifvn/index.html>. To receive email notification of new postings of this newsletter, call or write Rick Weinzierl at the number or address above.

*This issue's words of wisdom ... which usually means the jokes ... are at the end of newsletter ... check the last page.*

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**Fruit Production and Pest Management** (Looking ahead ... oils at delayed dormant, flea beetles and cutworms in grapes, and stink bugs in peaches)

**Vegetable Production and Pest Management** (Insect Monitoring Network, asparagus beetle and cutworms in asparagus, another note on corn earworm, Starane herbicide registered in sweet corn)

**University of Illinois Extension Specialists in Fruit & Vegetable Production & Pest Management**

### ***Crop and Regional Reports***

**In northern Illinois**, day temperatures have ranged in the 40s to 50s and night temperatures have varied from the 20s to the 40s during the first 10 days of March. Rainfall of about 1½ -inch was recorded in many areas, and snowfall of about 0.10 inch was recorded in northwest counties close to River Mississippi during the same period. Pruning of apple trees is ongoing in many orchards, but not much else is happening yet in northern Illinois fields or orchards.

*Maurice Ogutu (708-352-0109; [ogutu@uiuc.edu](mailto:ogutu@uiuc.edu))*

**In southern and southwestern Illinois**, mild weather continues, with the last several days topping out in the 50's and 60's. Even so, the weather forecasters are predicting some below-freezing temperatures yet to be had before winter is officially over. Plasticulture strawberry growers have pulled row covers and will have to be on the watch for those overnight drops in temperature. Early cool-season vegetable crops are going in, weather permitting. The first plantings of early sweet corn are just a few weeks away if we match last year. Most of the region received significant rainfall late last week, with scattered rain into early this week. Standing water can be seen in most low spots, making the continued pruning of grapes and peaches

a soggy process. The region has also suffered high winds with the coming of the rain, sometimes with gusts at 40+ mph. The entire area has greened up, and daffodils are up and getting ready to flower. None of my small fruits or tree fruits are showing any obvious signs of new growth, but I have seen quite a number of insects out and about. I saw my first brown stink bug of the season last Friday hanging out in my cherry tree. Maybe Rick will comment on whether this is a holdover from last season because of the mild winter, or if it's a harbinger of what's to come.

For those interested in grape production, workshops will be conducted in three locations around the state beginning April 3. Please see the write-up below for complete details and contact information. Looking to the future, a day of peach orchard tours is scheduled in the southern region for May 14. It is my understanding that Missouri and Illinois peach growers conducted similar tours in the past. This year, growers will meet in Illinois and will get a chance to tour Grammar Orchards, Rendleman Orchards, and Flamm's Orchards. As we get more details on the tour, they will be announced in this newsletter. I will be the contact for the tour schedule. The date and location has also been set for the Illinois State Horticulture Society Summer Orchard Day. Eckert's Country Store and Farms in Belleville will be our host this year on June 17.

*Elizabeth Wahle (618-692-9434; wahle@extension.uiuc.edu)*

### ***Notes from Chris Doll***

Fairly nice weather for fruit growers has continued. A check of the plantings in the Back 40 showed bud break in red raspberry and blackberry, slight bud swell in peach and lots more in apricot and some plums, and some visible growth of Braeburn apple. The Kiowa blackberry has ½ to ¾ inch leaves already, which is about the same as the lilac. These stages of growth are a little behind the averages but are not unusual for the date.

Ground conditions are generally wet, but some tree planting has started. Early planting is advantageous for good root development, but poor soil conditions can offset the planting date. An auger can seal the walls of holes when worked wet and this creates a 'well' situation. With a tree planter, wet soil does not fill in around the roots and growth can be inhibited. Depth of planting is another facet of proper care. With stone fruits, and especially peaches, the tree should be planted at or slightly below the depth in the nursery. Deep planting can mean poor standability and survival. I have seen enough dwarfed trees planted too deep also, which usually means scion rooting and loss of dwarfing.

With spring around the corner, there might be time to get a peach leaf curl spray applied before bud break. Grapes will probably start bleeding when pruned, but this has not proved to be detrimental. It is a good time to try to induce bud break on vigorous apple shoots by the notching technique. That is, before bud break, use a sharp knife to cut into the xylem just above the bud and cause a bud to become a shoot or spur. On a lengthy shoot, multiple buds can be notched.

The 2004 New Jersey Commercial Tree Fruit Production Guide includes a list of peach and nectarine varieties for that area (page 61 if you go online). Jerry Frecon is responsible for most of the evaluations, and since New Jersey is somewhat comparable to I-70 latitude in Illinois, I will list the "Best Peach Varieties" in that publication in ripening order and in the seasonal grouping, beginning with PF 5B and Harrow Diamond; Sentry, Glenglo and Summer Serenade; Flavorcrest and Sentinel; Early Loring, PF 15A, Late Sunhaven and Red Haven; Belleaire, Jim Dandee, John Boy and Salem; PF 17A, Harrow Beauty, Bounty, Loring, PF 23 and PF 24-007; Cresthaven, PF 27A and Ruston Red; Fayette, Jerseyglo and Jerseyqueen; Autumn glo, Encore, Lauro and Flameprince; and lastly Parade. Not all of these would be recommended for southern Illinois, however.

"King" apple is taking a back seat to some other fruits based on interest at the Illinois Grape Growers and Vintners Association meeting in Springfield and the Illinois Small Fruit and Strawberry School in Mt. Vernon. The apple remains as the number one crop in acreage and volume, but grape growers will soon outnumber the producers as the interest in wines increases. The small fruit interest seemed to be evenly divided between blueberries, raspberries and blackberries. Plasticulture strawberry production is increasing slowly.

***Chris Doll***

## ***Spring Viticulture Workshops***

Three viticulture workshops are scheduled for April at three locations. The dates and places:

April 3, 2004, at Carbondale (register by March 26)

April 16, 2004, at Oakford (register by April 9)

April 17, 2004, at Galena (register by April 9)

For additional information or to register, contact Dr. Dianna Reusch in the SIUC Division of Continuing Education at (618) 536-7751 or <http://www.dce.siu.edu>.

Registration is required, and fees are \$22 per person (\$32 per person after the registration deadlines listed above). The fee covers lunch and educational materials. Programs begin with registration at 8:00 a.m. and end at 4:00 p.m.

The Carbondale workshop will feature Dr. Keith Striegler, viticulture specialist and Associate Director of Viticulture Research at the Mid-America Viticulture and Enology Center located at Southwest Missouri State University, Mountain Grove. Dr. Striegler will cover vineyard mechanization, mineral nutrition and training, and pruning techniques. Five in-state specialists will also address spring management of diseases, insect pests, and weeds, as well as vine pruning, training, and fruit cluster thinning. Demonstrations will also be provided on setup of trellises, sprayers, and mechanized pruners. An exciting new variety, Traminette, will be featured in a grower panel discussion aimed at uncovering techniques of attaining the variety's potential to produce a fresh tasting wine with prominent floral and fruit aromas. Key IGGVA leaders will also be available to discuss crucial industry issues.

## ***Fruit Production and Pest Management***

### ***Early season updates and reminders on fruit insects***

#### ***Delayed dormant sprays on apples and peaches (and grapes and blueberries)***

Just a reminder that applying superior oil at 2 percent by volume (2 gal per 100 gal) between green tip and pink is a key step in controlling European red mite and San Jose scale on apples and peaches and rosy apple aphid on apples. As the days pass and development approaches green tip, reducing the oil concentration to 1 percent by volume may be wise to insure against plant injury. Where San Jose scale has been a particularly bad problem, adding Esteem (or Diazinon or Lorsban) to the delayed dormant spray may increase control. Likewise, where rosy apple aphid has been especially troublesome, adding Lorsban (or

Supracide or Diazinon) at pink can increase the control provided by oil. Delayed dormant applications of superior oils suffocate the eggs of red mites and aphids and nymphs of San Jose scale (beneath their scale-like covering). Thorough coverage is essential ... where several days pass between green tip and pink, making a second application of oil may provide as much benefit as adding other insecticides to a single application. Check the 2004 Illinois Commercial Tree Fruit Spray Guide for rates and restrictions.

Labels differ for various superior oils, but most are labeled for blueberries and grapes in addition to tree fruits. Oils applied before buds open and foliage emerges will control San Jose scale in these crops as well.

#### ***Flea beetles and cutworms in grapes***

Still a few days away, but time to think ahead ... flea beetles and climbing cutworms feed on grape buds from bud swell through bud break. Few Illinois grape growers have reported problems with these insects, so it is not necessary to treat every vineyard without scouting to know that they are present. Examine buds beginning at bud swell and treat only if necessary; Sevin and Danitol are labeled on grapes and effective against cutworms and flea beetles.



Grape flea beetle

Photo from the University of Kentucky

<http://www.ca.uky.edu/agripedia/classes/ent320/fruit3.htm>

### ***Stink bugs in peaches***

Elizabeth Wahle mentioned seeing brown stink bugs ... these insects overwinter as adults and move to a variety of crops, including peaches, apples, brambles, and even field corn to feed and lay eggs beginning in April. In apples and peaches, their feeding causes deep dimpling and “cat-facing”. Keeping plantings free of flowering weeds helps to avoid drawing these insects into fruit crops before the crops themselves bloom. Remember, however, that if you mow blooming weeds after stink bugs have come to them to feed and lay eggs, the bugs will move up into the trees if blooms or fruit are present. If blooming weeds in drive rows are mowed during tree bloom or when fruits are small, it often is wise to spray fruit to kill the stink bugs that move to it ... pyrethroids and Thiodan (endosulfan) are among the insecticides most effective against stink bugs.



Brown stink bug

Photo from the University of Kentucky

<http://www.uky.edu/Agriculture/CritterFiles/casefile/insects/bugs/stinkbugs/brown.jpg>

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## ***Vegetable Production and Pest Management***

### ***Insect Monitoring Network***

The University of Illinois Insect Monitoring Network (<http://www.ipm.uiuc.edu/fieldcrops/imm/index.html>) provides a database of up-to-date information on numbers of black cutworm, corn earworm, and European corn borers caught in pheromone traps. The link listed in the preceding sentence still presents data from 2003, but soon it will be updated to provide 2004 information. Counts from traps that are monitored daily or twice weekly are submitted at least weekly by extension educators and cooperators located throughout the state. The website also offers links to additional sources of information that provide current information on the status of insects in Illinois.

We would like to thank the cooperators that worked with us in 2003 and have already signed on for another season. Your support is greatly appreciated! We are continually seeking additional volunteers to become part of our network of cooperators. If you are interested in providing trap counts of moths of black cutworm, corn earworm, or European corn borer, please contact me.

Kelly Cook (217-333-6652; [kcook8@uiuc.edu](mailto:kcook8@uiuc.edu))

## ***Early season updates and reminders on vegetable insects***

### ***Cutworms and asparagus beetles in asparagus***

Among the first of the creatures that attack the first of the season's vegetable crops are cutworms and asparagus beetles in asparagus. Asparagus beetle adults overwinter and lay eggs on spears. Larvae that hatch from these eggs feed on spears and distort their growth and later injure ferns and reduce plant growth and vigor. Another problem is the "contaminant" effect of eggs glued onto spears. Cutworm feeding generally causes a "crooking" of growing spears, though they also can prevent spear growth entirely. Treat spears during the harvest season if asparagus beetle eggs are present on more than 2 percent of the spears or if there is an average of more than 1 cutworm larva per 10 crowns. Several insecticides, including Sevin, Lorsban, Pounce, and SpinTor / Entrust are effective against these pests; see the 2004 Midwest Vegetable Production Guide or the 2004 Illinois Agricultural Pest Management Handbook for details.



Common asparagus beetle eggs  
[ Picture by Michigan State University ]

[http://www.entm.purdue.edu/entomology/vegisite/insect\\_ID\\_pics/CH12\\_Asparagus/beetle\\_eggs.jpg](http://www.entm.purdue.edu/entomology/vegisite/insect_ID_pics/CH12_Asparagus/beetle_eggs.jpg)



Asparagus beetle adult  
Photo from Purdue University

<http://www.hort.purdue.edu/rhodcv/hort410/8008a.jpg>



### ***Another Quick Note on Insecticide Resistance in the Corn Earworm***

In the previous issue of this newsletter I noted concerns about corn earworm resistance to Warrior and Capture. Research organized by Bill Hutchison of the University of Minnesota is examining the extent of possible resistance problems, and entomologists around the Midwest have contributed field-collected earworm larvae for bioassays to assess insecticide resistance. I mentioned that SpinTor and Mustang might be alternatives to Warrior and Capture. Recommending SpinTor made sense to most readers because it represents an entirely different chemical structure and mode of action from the pyrethroids. Mustang is a pyrethroid, however, and one would expect that if earworms are resistant to Warrior and Capture, then they would not be controlled by other pyrethroids either. The ONLY (and yes, I mean to emphasize “only”) reasons for my suggesting any value in using Mustang instead of Warrior and Capture were: (1) reports from an entomologist in southern Indiana indicated that in an area where control failures occurred in fields treated with Warrior and Capture, control was acceptable in nearby fields treated with Mustang. (2) One of the major processing companies in Illinois and Indiana used Mustang over most or all of its acreage in 2003 and did not experience any failures. Neither of these observations is based on controlled experiments that rule out other reasons for differences in apparent control ... they just suggest that Mustang might (key word is “might”) differ from Warrior and Capture.

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### ***Starane Herbicide Registered for Sweet Corn***

Dow AgroScience has registered Starane (fluroxypyr) for use on sweet corn. Starane can be used prior to planting for control of emerged broadleaf weeds in no- or minimum- till systems. It can also be used for postemergence broadleaf weed control in sweet corn from crop emergence to the V4 crop growth stage. Research we conducted during the early 1990's found that Starane can injure sweet corn at larger growth stages. There also may be some cultivars that are susceptible to Starane. Conduct a small evaluation of Starane on your sweet corn cultivars under your environmental conditions before widely using the herbicide. Injury from Starane appears as stem curvature, stunting, and brace root injury. Injury is more likely when the corn is stressed by drought or cold temperatures.

Starane will control cocklebur, common ragweed, jimsonweed, kochia, morningglory, puncturevine, and velvetleaf. It will control some perennial weeds including hemp dogbane and hedge bindweed and will suppress field bindweed. Weeds need to be actively growing when Starane is applied. Starane has a novel mode of action compared to many other sweet corn herbicides, thus making it a good tool for managing ALS or triazine resistant weeds.

Starane should be applied at 2/3 pint/ acre. An adjuvant is not recommended with Starane due to the potential for sweet corn injury. Starane can be combined with atrazine to broaden weed control. A 31day interval is required between Starane application and sweet corn harvest. Starane has an interval of 120 days between application and planting any other crop which provides some rotation flexibility compared to other sweet corn postemergent herbicides.

*John Masiunas ([masiunas@uiuc.edu](mailto:masiunas@uiuc.edu))*

### ***This issue's words of wisdom ...***

The US standard railroad gauge (distance between the rails) is 4 feet, 8.5 inches. That's an exceedingly odd number.

Why was that gauge used? Because that's the way they built them in England, and English expatriates built the US Railroads. Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used. Why did "they" use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing. Okay! Why did the wagons have that particular odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England, because that's the spacing of the wheel ruts. So who built those old rutted roads? Imperial Rome built the first long distance roads in Europe (including England) for their legions. The roads have been used ever since. So the next time you are handed a specification and wonder what horse's ass came up with it, you may be exactly right, because the Imperial Roman war chariots were made just wide enough to accommodate the back ends of two war horses.

Now the twist to the story... When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs. The SRBs are made by Thiokol at their factory in Utah. The engineers who designed the SRBs would have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line from the factory happens to run through a tunnel in the mountains. The SRBs had to fit through that tunnel. The tunnel is slightly wider than the railroad track, and the railroad track, as you now know, is about as wide as two horses' behinds.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's ass.....and you thought being a HORSE'S ASS wasn't important!

(Courtesy of Dr. Carl Jones, a former medical and veterinary entomologist in the College of Veterinary Medicine at the University of Illinois)

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