



# 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, 217-333-6651, [weinzier@uiuc.edu](mailto:weinzier@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 email address above.

**For your calendar ... Grape Harvest Workshop** at Bay Creek Vineyard, Saturday, August 12; **2006 Midwest Apple Improvement Association Annual Meeting** at the St. Claire County Farm Bureau Building, October 4 ... see Elizabeth Wahle's notes in the southern Illinois update below for details on these programs. **NAFEX**, the North America Fruit Explorers Association, in Lexington, KY, August 30 through September 1 ... see Chris Doll's notes below for details. **Illinois Pumpkin Field Day** on September 8 at the University of Illinois Vegetable Research Farm near Champaign, IL.

### *In this issue ...*

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**Degree-day Accumulations**

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

### *Regional Updates*

**In southern and southwestern Illinois ...** It looks like the only way for the southern region to get any rain is if it comes with 50+ mile-per-hour winds, and sometimes not even then. A good chunk of the region, from Springfield down to Mt. Vernon, experienced damaging thunderstorms on the 19<sup>th</sup> and 21<sup>st</sup> of July. Although hail was reported by several growers, high winds caused the most significant damage. In addition to observations from several other areas, I witnessed severe tree, home, and power line damage in southern Calhoun and throughout Madison County. There were miles of hail-ravaged corn fields just north of Lebanon. Although southern Calhoun got hit hard, peach harvest continues around cleanup of storm-damaged trees. Although I saw some storm-damaged fruit, there was still a significant crop that survived.

The heat is still on, with temperatures still hovering around the 100 degree F mark for the last two weeks. I had to laugh when the weather forecast predicted a "cold front" later this week—instead of 100 degrees F, we'll only have temperatures in the upper 80's and lower 90's! Severe weather is predicted for the southern region again, so hopefully I will be reporting significant rain and not damaging storms in the next IFVN issue. Signs of drought can be seen everywhere I travel, so rain is definitely needed. Reports of scorch/sunburn have ballooned since the last newsletter, especially in tomatoes, peppers, apples, grapes, raspberries, and blackberries. Lots of corn fields look more like pineapple fields -- still green though, so all we need is some rain. Harvest is in full swing for most crops. Early variety grapes such Foch are well colored and growers will begin testing for harvest readiness.

A grape harvest workshop will be held at Bay Creek Vineyard, Saturday, August 12, 2006 at 9:00 am. There are three factors, sugar, acid, and pH, which can be tracked weekly after véraison that will reach optimum levels when the grapes are ready to harvest for winemaking. Accurately and quickly measuring these three factors is a skill needed by both grape growers and winemakers alike, in order to produce top quality wines. This workshop, sponsored by the Illinois Department of Agriculture, the Illinois Grape Growers and Vintners Association, and University of Illinois Extension, is designed to give

participants hands on experience working with special equipment used in measuring and determining grape ripeness. In addition to vineyard sampling of differing grape varieties, winemakers are also invited to bring wine samples for analysis as well. All participants will meet at Bay Creek Vineyard, located three miles south of I-72 (Exit 31) on County Hwy 3 at 9:00am. Bay Creek Vineyard is located on the west side of the road at 26909 County Hwy 3, Pittsfield, IL 62363. Don't forget to dress for the weather, since most of the workshop time will be spent in the vineyard. This is a hands on workshop, and participants are encouraged to bring their personal gear, including gloves and work boots. Grape publications will also be available for sale at the workshop, including the 2006 Small Fruit & Grape Spray Guide for \$9.00 and The Midwest Grape Production Guide for \$15.00. For further information and in order to plan space for the meeting, please contact Elizabeth Wahle at (618) 692-9434 or by email at [wahle@uiuc.edu](mailto:wahle@uiuc.edu).

The 2006 Midwest Apple Improvement Association Annual Meeting will be held Wednesday, October 4<sup>th</sup>. Registration at the door is \$10.00 (includes lunch) and begins at 7:30 am at the St. Clair Farm Bureau. The afternoon program will move to Eckert's Country Store & Farms in Belleville for a tour of seedling blocks. Invited speakers for the morning program include Jim Eckert (MAIA President), Peter Hirst (Purdue University), Diane Miller (The Ohio State University), Wally and Wanda Heuser (Summit Sales), Mitch Lynd (Lynd Fruit Farm), and Chris Doll (University of Illinois Extension, retired). A complete program will be posted in the near future at <http://web.extension.uiuc.edu/regions/hort/>. For further details, contact Elizabeth Wahle at [wahle@uiuc.edu](mailto:wahle@uiuc.edu) or 618-692-9434.

A new internet site, set up by the University of Missouri Extension, has been launched in an effort to bring producers and chefs together. The Illinois-Missouri Food Circle Networking is an outgrowth of the bi-state "To Market, To Market" directory which lists farmers markets, roadside stands and u-pick farms in the immediate St. Louis area. "This effort is designed to connect locally produced meat, herbs, fruits, vegetables and other produce with chefs who would like to feature local fresh foods," says Carol Schlitt, University of Illinois Nutrition and Wellness educator and one of the collaborators of the directory. Producers, who would like to let chefs know what they have for sale, simply need to go to <http://extension.missouri.edu/jefferson> and click on the button "Food Circle Networking." "Then simply click on the "Producer's Check In" button, fill out the form with information on the foods you have available and viola – you're now in the system to communicate directly with St. Louis area chefs," adds Schlitt. The website is designed to be viewed by both chefs and producers as a way to cultivate relationships and keep each other informed without the hassle of making many phone calls. For further details, Contact Elizabeth Wahle at [wahle@uiuc.edu](mailto:wahle@uiuc.edu) or 618-692-9434.

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**In northern Illinois**, sunny, humid days with highs in the upper 70s to low 90s (and higher July 30 through August 1) and lows in the 60s to 70s have been the norm over the last 2 weeks. Between July 21 and August 2, rainfall of less than 1 inch was recorded in many areas in the region. Some areas in the region such as counties close to the Mississippi River in the northwest region received more than 1\_ inches of rainfall during the same period. Soil moisture is low in many areas, and irrigation equipment is turned on in many vegetable farms and orchards.

Orchardists are continuing with summer spray programs. Apple fruit is sizing well and calcium sprays are going on. Harvesting of early varieties of peaches is going on in many orchards. Picking of summer-bearing raspberries and blueberries is still going on in some farms. Grapes are sizing well, and Japanese beetles are common on grape leaves. Pears and earliest-maturing apple cultivars will be ready for picking late next week in some farms. Harvesting of cucumbers, cabbage, squash, sweet corn, peppers, and other vegetables is ongoing on in most farms, and corn earworm moth counts are increasing. Sunscald has been a problem this year on pepper, tomato, and cucumber fruits, and blossom end rot has been a problem in tomato and pepper fruits as well. Western corn rootworm beetles and cucumber beetles were observed on cucurbits, as well as aphids on okra leaves and other vegetables, squash bugs on pumpkins and squash, Japanese beetles on okra leaves, and leaf hoppers on other vegetables. Phytophthora problems have been reported on peppers and tomatoes, and fruit rots on cucumbers and squash.

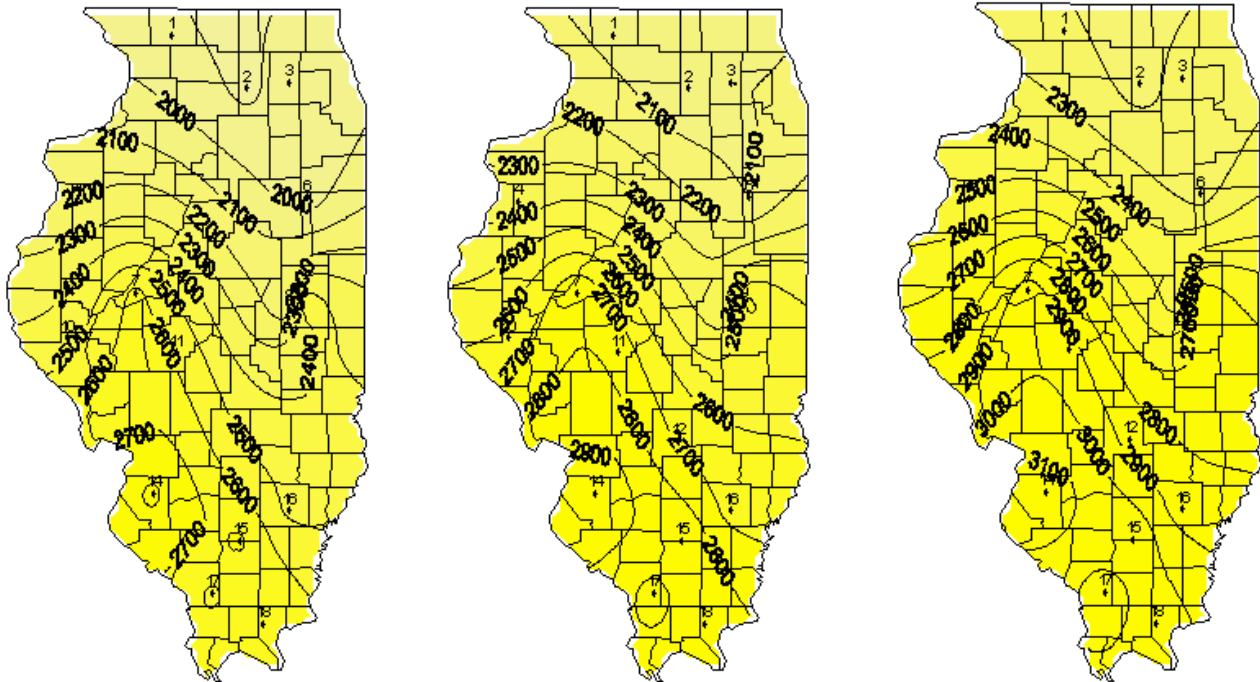
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## ***Degree-Days***

Degree-day accumulations listed below for weather stations in the Illinois State Water Survey WARM data base have been summarized by using the Degree-Day Calculator site on the University of Illinois IPM site (<http://www.ipm.uiuc.edu/degreedays/index.html>). The list below includes only degree-day accumulations and projections based on a 50-degree F developmental threshold and a January 1 starting date, but other options that use different thresholds and specific biofix dates are available on the Degree-Day Calculator. The degree-day calculator is available as a result of a joint effort of extension entomologists (primarily Kelly Cook) and Bob Scott of the Illinois State Water Survey. If you have questions about how to use the site, contact me or Bob Scott ([rwscott1@uiuc.edu](mailto:rwscott1@uiuc.edu)).

Degree-day accumulations, base 50 degrees F, starting January 1.

Station	County	Base 50F DD Jan 1 – Aug 3 Historic Average	Base 50F DD Jan 1 – Aug 3 2006	Base 50F DD Jan 1 – Aug 10 (Projected)	Base 50F DD Jan 1 – Aug 17 (Projected)
1. Freeport	Stephenson	1859	1920	2071	2219
2. Dekalb	Dekalb	1909	1872	2015	2157
3. St. Charles	Kane	1805	1960	2100	2241
4. Monmouth	Warren	2029	2191	2342	2493
5. Peoria	Peoria	2132	Missing	Missing	Missing
6. Stelle	Ford	2005	1942	2098	2254
7. Kilbourne	Mason	2235	2626	2787	2950
8. Bondville	Champaign	2140	2145	2298	2453
9. Champaign	Champaign	2197	2471	2637	2806
10. Perry	Pike	2171	2449	2614	2782
11. Springfield	Sangamon	2322	2587	2763	2940
12. Brownstown	Fayette	2425	2500	2679	2859
13. Olney	Richland	2404	Missing	Missing	Missing
14. Belleville	St. Claire	2492	2817	2995	3174
15. Rend Lake	Jefferson	2592	2718	2903	3089
16. Fairfield	Wayne	2539	2478	2660	2844
17. Carbondale	Jackson	2506	2578	2755	2934
18. Dixon Springs	Pope	2564	2687	2868	3049



Degree days, base 50 degrees F, since January 1, 2006.

Left: January 1 – August 3; center: January 1 – August 10 (projected); and right: January 1 – August 17 (projected).

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**Notes from Chris Doll**

It is peach picking time and time for high temperatures too. So far, the high temperature has been 102, but several days of triple digits makes it rough on both the workers and the fruit. Locally, the rainfall has been very short, with only 1.1 inches for the month of July. It has seemed hot and dry, but for comparison, go back to 2002 when it was drier and hotter, at least in Edwardsville.

Most fruit maturity is way ahead of 2002, and several days ahead of last year. Loring peaches have ripened in a hurry, and Cresthaven are moving into the final swell too. Gala apples are about ready to pick, as are Gingergold. Fruit size of apples was quite good for the end of July, but color is basically absent or brown from sunburn. The amount of sunburn has increased since the last letter.

The dry weather makes most disease control efforts easy. Last week, the data logger showed zero wetting for 112 continuous hours, and a total of 14 hours out of 216. Our Midwest weather variations make prevention of brown rot in stone fruits and the summer diseases of apples a continuing threat and spur continued use of the sprayer. Insect problems have been minor, and the DD accumulation since codling moth biofix is now 2252.

Some Retain has been used on apples and peaches in the area to delay maturity. The last Michigan State University Fruit Alert indicates that high temperatures may reduce effectiveness of the material, and that may be why I have not seen great success in this area of the state. But if used, the timing for apples is 30 days before harvest, and for peaches the label says 7 to 14 days before harvest. And the harvest time means maturity rather than early picking for the market.

Time for collecting leaves for analysis typically ends around August 15. With the low amount of rainfall this summer, it might be good to wipe or wash off all the accumulated spray and dust before drying.

NAFEX, the North America Fruit Explorers Association, will be meeting in Lexington, KY. from August 30 through September 1. Dr. John Strang and Ed Fackler have put together an attractive program on fruits for the hobbyist and small growers that includes a day of talks and a day of field trips. The latter will include a tour of Terry Boyd's orchard and restaurant at Versailles. For information on this meeting, contact Dr. Strang at 859-257-5685 or [jstrang@uky.edu](mailto:jstrang@uky.edu)

*Chris Doll*

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

### ***Updates on Codling Moth Phenology***

Based on data provided by Bronwyn Aly at Dixon Springs, Gary Grammer near Murphysboro, Sissy Erbacher of Eckert's Orchard at Belleville, Chris Doll at Edwardsville, Kenny Horn from the University of Illinois orchard at Urbana, Curt Christ near Elmwood, and Ken Hall near Poplar Grove, biofix dates for codling moth are listed for six locations in the table below, along with degree-day accumulations and projections for the weather station sites nearest each orchard. (Note that there is no reporting weather station near Edwardsville, so I've used the Springfield station as the best option.)

Orchard Location	Weather Station	Codling Moth Biofix Date	DD <sub>50</sub> through Aug 3, 2006	DD <sub>50</sub> projected through Aug 10	DD <sub>50</sub> projected through Aug 17
Dixon Springs / Murphysboro	Dixon Springs	April 17	2264	2444	2626
Belleville	Belleville	April 20	2405	2583	2762
Edwardsville	Springfield	April 23	2247	2423	2600
Urbana	Champaign	May 1	2122	2288	2455
Elmwood	Peoria	May 6	1865	2028	2190
Poplar Grove	Freeport	May 10	1656	1806	1953

Codling moth development:

First moths of second generation emerge	~900 DD <sub>50</sub> after biofix
Beginning of second generation egg hatch	~1120 DD <sub>50</sub> after biofix
50 percent of second generation moths emerged	~1349 DD <sub>50</sub> after biofix
50 percent of second generation eggs hatched	~1580 DD <sub>50</sub> after biofix
First moths of third generation emerge	~1920 DD <sub>50</sub> after biofix
99 percent of second generation eggs hatched	~2100 DD <sub>50</sub> after biofix
Beginning of third generation egg hatch	~2160 DD <sub>50</sub> after biofix
*First moths of fourth generation emerge	~2900-3000 DD <sub>50</sub> after biofix
*Beginning of fourth generation egg hatch	~3200 DD <sub>50</sub> after biofix

(Table based on ***Orchard Pest Management*** by Beers et al., published by Good Fruit Grower, Yakima, WA.)

\* Extrapolated from the model presented by Beers et al.

## Oriental Fruit Moth Phenology

We do not have a broadly representative monitoring program for oriental fruit moth (less so than for codling moth), but biofix dates for first generation flight were approximately April 7 in the Belleville area and April 10 for lower Calhoun County. Based on a 45-degree F developmental threshold and an upper cut-off of 90 degrees F, degree-day accumulations for the Belleville area and Springfield (best available data site for Calhoun Co.) are listed in the table below. Each generation takes approximately 950 DD base 45 F to develop.

Orchard Location	Weather Station	OFM Biofix Date	DD <sub>45</sub> through Aug 3, 2006	DD <sub>45</sub> projected through Aug 10	DD <sub>45</sub> projected through Aug 17
Belleville	Belleville	April 7	3179	3392	3606
Southern Calhoun County	Springfield	April 10	3021	3232	3444

Oriental fruit moth development (beginning with occurrences that are pertinent at this time):

Peak egg-laying for third generation	~2500 DD <sub>45</sub> after biofix
First moths of fourth generation	~2850 DD <sub>45</sub> after biofix
Peak egg-laying for fourth generation	~3500 DD <sub>45</sub> after biofix

(Table adapted from data from *Common Tree Fruit Pests* by Howitt., published as NCR 63 by Michigan State University, East Lansing, MI, 1993.)

## Addition to the Listing of Pre-harvest Intervals for Insecticides and Miticides for Tree Fruits and Small Fruits

In the previous issue of this newsletter I included a table of pre-harvest intervals for selected insecticides and miticides labeled for use on selected small fruits and tree fruits. I accidentally omitted Assail, a fairly important product for apple growers, so I'm presenting the table again in this issue, this time with the numbers for Assail on apples and grapes. More complete lists (more pesticides and more fruit crops) are available in the [2006 Midwest Commercial Small Fruit and Grape Spray Guide](#) and the [2006 Midwest Commercial Tree Fruit Spray Guide](#).

Insecticide / Miticide	Minimum Preharvest Interval (days)			
	Apple	Peach	Brambles	Grapes
Acramite	7	3	NR	14
Apollo	45	21	NR	NR
Asana	21	14	7	NR
Assail	7	NR	NR	7
Avaunt	14	NR	NR	NR
Calypso	30	NR	NR	NR
Capture	NR	NR	3	30
Clutch	7	NR	NR	NR
Danitol	14	NR	NR	21
Diazinon	21	21	NR	28
Endosulfan	21-30	21-30	NR	7
Entrust / SpinTor	7	14	1	7
Esteem	45	14	NR	NR
Fujimite	14	NR	NR	14
Guthion	14-21	21	14	21
Imidan	7	14	NR	14
Intrepid	14	7	NR	30
Lannate	14	4	NR	1-14
Malathion	NR	7	1	3
Nexter	25	7	NR	7
Pounce	NR	14	NR	NR
Provado	7	10	NR	0
Pyganic	0	0	0	0
Rimon	14	NR	NR	NR
Savey	28	28	3	NR
Sevin	3	3	7	7
Warrior	21	14	NR	NR
Zeal	14	NR	NR	14



## *Notes on Multicolored Asian Lady Beetle in Grapes*



Multicolored Asian lady beetle in grapes (E.C. Burkness, University of Minnesota).

In preparation for the late August and September time period during which multicolored Asian lady beetle (MALB), *Harmonia axyridis*, congregates on grapes and poses a threat as a contaminant in clusters at harvest, now is a good time to review recent findings that may help in understanding and managing this pest. Dr. Bill Hutchison and the graduate students and research associates in his program in the Department of Entomology at the University of Minnesota have conducted research on this insect over the past few years, and their results include several useful findings.

Before summarizing results of the research done in recent years in Minnesota, a quick overview of the biology and pest status of the MALB may be useful. This insect, native to Asia as its common name implies, is a predator of aphids, and as such, it was a candidate for importation to the U.S. to control aphid pests that had been introduced accidentally on imported plant materials. Efforts to release the MALB and establish populations in North America for biological control of aphids date back to 1916. The first detection of an established population in North America dates back to the late 1980s, and since then the species has spread rapidly across the continent. It is one of approximately 475 species of lady beetles in North America north of Mexico. Larvae and adults feed on aphids, and fall population densities in at least some portions of Illinois seem to be related to summer densities of the soybean aphid; when soybean aphid infestations are heavy in mid summer, they provide abundant food for the MALB, and consequently MALB populations increase. Adults are the overwintering stage, and two behaviors common among the adult beetles cause them to be viewed as pests: (1) they aggregate and feed on certain fruits, including grapes, raspberries, and apples, and (2) they invade homes in large numbers in search of overwintering sites. Their direct feeding damage to grapes is usually not cause for concern, as they infest clusters already damaged by fungal diseases or other insects. Instead, they pose a problem to wine makers when they remain in fruit clusters at harvest and are crushed with the berries; alkaloids in their body fluids taint the wine, giving it an “off” flavor and smell. For more details on the background information presented here, see the paper referenced below by Koch (2003) (available at [http://insectscience.org/3.32/Koch\\_JIS\\_3\\_32\\_2003.pdf](http://insectscience.org/3.32/Koch_JIS_3_32_2003.pdf)).

Grape growers in Illinois annually face questions about whether or not MALB populations in a given vineyard warrant control and what to do or what to spray to try to achieve control. Researchers in Minnesota have reported the following findings and recommendations:

- MALB infestations are highly correlated with previous damage – splitting, fungal disease, or grape berry moth feeding damage. Preventing these problems reduces the attractiveness and suitability of grape clusters to MALB.
- Early detection of movement of populations into vineyards can be accomplished by using 6-inch by 6-inch square yellow stick traps, beginning about 4 weeks before harvest is anticipated. A new University of Minnesota fact sheet recommends using 2 to 6 cards per acre, and I would add that placing at least some the

cards near the edges of vineyards is a good idea. Sticky cards catch beetles before visual inspection of clusters provides evidence of their presence. Yellow sticky cards are available from Great Lakes IPM, Vestaburg, MI (<http://www.greatlakesipm.com/>), or from Olsen Products, Medina, OH (<http://www.olsonproducts.com/index2.html>).

- To determine the need for insecticide application, examining 25-30 clusters per block or variety is recommended. Early assessments of research data from Minnesota suggest that control clearly is warranted if 2 to 5 percent of the clusters are infested with 1 or more beetles per cluster.
- Insecticides that provide some degree of effective control of MALB include Danitol, Sevin, Baythroid, Malathion, and Provado. Danitol, a pyrethroid, may be used until 21 days before harvest, but not later, so its role is limited to early reductions in beetle numbers. Sevin may be used until 7 days before harvest, and Minnesota researchers have found it to be effective as well. Baythroid, also a pyrethroid, recently was labeled for use in grapes with a 3-day pre-harvest interval (PHI), and although data on its performance are sparse so far, related data suggest that it will work very well. Baythroid is a Restricted-Use pesticide; a Pesticide Applicator's license is required for its purchase and use. Malathion also has a 3-day PHI in grapes, but it provides less residual effectiveness. Provado may be used on grapes up to the day of harvest (but with a 12-hour re-entry interval for pickers); it "knocks down" MALB, resulting in the beetles dropping from the clusters. Many may recover and not die, but it effectively reduces contamination of clusters at harvest. None of these insecticides is labeled specifically for control of multicolored Asian lady beetle, but their labels for use on grapes allow application against this insect in Illinois (though not in all states). For growers who do not possess a Pesticide Applicator's license, using Sevin at 7 days before harvest and Provado 1 day before harvest is a good management plan. For growers who are licensed to apply Restricted-Use pesticides, applying Baythroid 3 days before harvest should be effective.

Much of the information for this article was provided by Dr. Bill Hutchison and his students and research associates in the Department of Entomology at the University of Minnesota.

#### References:

Galvan, T.L., E.C. Burkness, and W.D. Hutchison. 2006. Wine grapes in the Midwest: Reducing the risk of the multicolored Asian lady beetle. Integrated Pest Management Fact Sheet, Publ. 08232, University of Minnesota, St. Paul. 2pp. (In press, further information on access to this fact sheet will be provided in a future issue of this newsletter.)

Galvan, T.C., E.C. Burkness, and W.D. Hutchison. 2006. Influence of berry injury on infestations of the multicolored Asian lady beetle in wine grapes. Plant Health Progress, Plant Management Network: <http://plantmanagementnetwork.org/sub/php/brief/2006/wine/AsianLadyBeetle.pdf>.

Koch, R.L. 2003. The multicolored Asian lady beetle, *Harmonia axyridis*: A review of its biology, uses in biological control, and non-target impacts. Journal of Insect Science 3:32. 16 pp.

Koch, R.L., E.C. Burkness, S.J. Wold-Burkness, and W.D. Hutchison. 2004. Phytophagous preferences of the multicolored Asian lady beetle (Coleoptera: Coccinellidae) for autumn-ripening fruit. Journal of Economic Entomology 97: 539-544.

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

### ***Notes on Vegetable Insects***

**Updates on corn earworm:** Corn earworm moth counts jumped up significantly in many areas during the last 10 days. At Collinsville, the perennial hot spot for corn earworm in Illinois, Dan Fournie's trap captured over 500 moths on the night of July 30, and counts have exceeded 250 per night almost every night since July 25. Counts of 50 or more per night have been recorded at Manito, Kewanee, and Burlington, so the increase is not limited to southwestern Illinois. As of yet, we have not developed additional information on the question of pyrethroid resistance in the populations we are capturing, and the use of the most effective pyrethroids – Baythroid, Capture (or Discipline), Mustang Max, or Warrior (or Proaxis) at 2- to 3-day intervals is recommended where counts and temperatures remain high. Getting the first spray applied by no later than 2 days after the first silks emerge in a field is key to success, then good coverage of silks and the correct interval and rate are essential for continued control of the ongoing egg hatch that occurs at this time of year. If the pyrethroid insecticides listed

above fail to provide control and you suspect resistance, do not simply switch to another pyrethroid. Instead, switch to Larvin or SpinTor.

For growers who are using BC0805, a Bt sweet corn, note that corn earworm larvae may develop through one or more early stages on a few ears of Bt sweet corn before they are killed, and larvae and adults of sap beetles are not controlled by Bt sweet corn. Two applications of a pyrethroid insecticide, one 2 to 4 days after first silk and the second about a week later, are recommended for insect control in Bt sweet corn.

An article by Eric Burkness and Bill Hutchison of the University of Minnesota in a recent issue of [Veg Edge](#) provides more information and recommendations on corn earworm monitoring, resistance, and management.

### **Western bean cutworm**

Degree-day accumulations have reached totals that suggest that most if not all emergence of western bean cutworm moths is complete, even through the northern tier of counties. Sweet corn growers are encouraged to scout for egg masses on leaves and larval feeding in tassels and ears. Where aggressive control programs targeting corn earworm are underway, western bean cutworm will be controlled coincidentally. For more on the western bean cutworm, see the [July 28 issue](#) of the *Illinois Pest Management and Crop Production Bulletin*.

### **Onion thrips in green onions**

I visited onion fields in northeastern Illinois earlier this week and found a light injury and a few onion thrips in green onions there. Although thresholds based on varietal resistance and yield impacts have been estimated for dry bulb onions, thresholds for green bunching onions are determined by market demands and may differ according to location, time of season, and market demand. Where thrips control is necessary in green bunching onions, registered insecticides and their pre-harvest intervals (in days) are: Ammo (7), Mustang Max (7), Penncap-M (15), Diazinon (14 days), Lannate (7 days), and Malathion (3). Ammo and Mustang Max are pyrethroids, Lannate is a carbamate, and Penncap-M, Diazinon, and Malathion are organophosphates.

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