



## The Ohio State University Extension Vegetable Crops

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### **Insect news** by C. Welty 7/16/2012

**European corn borer:** With the recent long stretch of hot weather, we are accumulating a lot of heat units, so it is not surprising that we are already seeing an early start of the second generation of European corn borer. We have not yet heard reports of borer egg masses or larvae being found, but borer moths have been detected in traps at several Ohio locations in the past week. Once egg hatch begins, peppers and silking sweet corn can be protected from borer infestation by a preventive schedule of insecticide. Peppers are best protected by a 7-day schedule during the second generation of European corn borer. Insecticide choices for borer control on peppers are Orthene, pyrethroids (Mustang Max, Warrior, Brigade, Baythroid, Permethrin), Radiant, Coragen, or insect growth regulators (Intrepid, Confirm). Coragen applied via drip irrigation is an effective new option. Orthene is excellent but allowed only twice so should be reserved for use at the time of peak moth flight, which is usually about 2 weeks after the start of moth flight. Borer moth counts in pheromone traps at 10 Ohio locations are posted on the internet ([http://bugs.osu.edu/welty/veg\\_traps1/2012\\_data/ECBTrap2012.htm](http://bugs.osu.edu/welty/veg_traps1/2012_data/ECBTrap2012.htm)), as are counts in blacklight traps at two locations ([http://bugs.osu.edu/welty/veg\\_traps1/2012\\_data/ECBblacklight2012.htm](http://bugs.osu.edu/welty/veg_traps1/2012_data/ECBblacklight2012.htm))

**Corn earworm:** Earworm moth activity has been highly variable at Ohio locations over the past few weeks. Pheromone traps in late June detected a spike of moth activity in north central Ohio but most traps in central and southern Ohio have low to moderate moth activity. Earworm moth counts in pheromone traps at 12 Ohio locations are posted on the internet ([http://bugs.osu.edu/welty/veg\\_traps1/2012\\_data/CEW2012.htm](http://bugs.osu.edu/welty/veg_traps1/2012_data/CEW2012.htm)). Sweet corn spray schedules: Under the current conditions of high temperature, rapid corn growth, presence of new moths of European corn borer, and low levels of corn earworm, corn that is starting to silk should be treated on a 5-day spray schedule. This should be intensified to a 4-day or 3-day schedule once earworm moth activity increases, as it typically does by late August. Full guidelines for spray schedules relative to trap catch and temperature are found in the Ohio Veg Production Guide (page 261) or on the internet (<http://bugs.osu.edu/welty/pdf/ComTrapInstructions2009.pdf>)

**Miscellaneous caterpillars:** Sweet corn growers in northwest Ohio should be on the lookout for larvae of western bean cutworm because traps are showing increased catch of the adult moths; this is a new pest that is invading Ohio from the west. Yellow-striped

armyworm is showing up in a variety of crops from tomato to cabbage to onion. Beet armyworm moths are being detected at some Ohio sites but at low density.

**Cucumber beetles, squash bugs, and squash vine borer:** Vine crops have been under attack by all of the usual pests this summer. The number of striped cucumber beetles has been about normal but the number of spotted cucumber beetles has been higher than normal. This has been challenging because spotted cucumber beetle is more damaging and harder to control than striped cucumber beetle. Many growers had success with systemic seed treatment for early-summer control of cucumber beetles. Squash bug is currently abundant; many egg masses are present and eggs are starting to hatch. Squash vine borer started emerging in early June, a few weeks earlier than normal, and is starting to taper off after a peak in late June. Squash vine borer moth counts in pheromone traps at two Ohio locations are posted on the internet ([http://bugs.osu.edu/welty/veg\\_traps1/2012\\_data/SVB2012.htm](http://bugs.osu.edu/welty/veg_traps1/2012_data/SVB2012.htm)).

**Spider mites:** Spider mite infestations in vegetables do not usually show up until August but they are already showing up during the recent droughty conditions in Ohio. Because mites are tiny, they are often overlooked or misdiagnosed as a disease. Infested leaves have fine webbing on the leaf undersides. Tomato leaves damaged by spider mites usually have yellow blotches, while bean leaves show white stipples or pin-prick markings from mite feeding. Pumpkins can tolerate moderate levels of mites, but watermelons are more sensitive to injury from mite feeding. They can be noticeable on sweet corn on the flag leaf. In many crops, the mite infestation is worst on a field edge by a dusty road, and effects can be suppressed by overhead irrigation. Mites have many natural enemies that kill them, such as specialized predatory mites or generalist lacewings, ladybugs, and pirate bugs, but these helpful predators are often killed by pesticides. Chemical intervention can be needed to keep the crop alive if spider mites are abundant. Mite infestations are sometimes limited to field edges; infested fields should be scouted, and miticide applied as a spot treatment if the infestation is isolated. Mite control is better when higher volumes of water are used; 25 gallons of water per acre is better than 10 gal/A. Several pesticides are registered for spider mite control; some are restricted use and some are for general use (Table 1). Most of these are allowed on field and high-tunnel vegetable crops, but Oberon is prohibited from use in high tunnels and greenhouses. Dimethoate is prohibited from use on ornamental crops in high tunnels and greenhouses but is not prohibited from vegetable crops in high tunnels and greenhouses. At some locations, organophosphates are still effective for mite control, with Dimethoate being the best bet and MSR as another choice. Dimethoate is an option for melons but is not allowed on squash or cucumbers; it has been the preferred product for mite control on soybeans. Where organophosphates are not effective, Agri-Mek is generally the most effective product for mite control, while Acramite and Oberon are nearly as good. Although Brigade (bifenthrin) and Danitol (fenpropathrin) are labeled for spider mite control when used at the high end of the rate range, they are generally not very effective for mite control. Dicofol is an old miticide that is still effective at some sites, but does not perform well at sites where resistant populations have developed. Vydate is registered for use on eggplant for mite control, but on cucurbits it is registered only for aphid control. On organic farms, insecticidal soap can be used for mite control but good coverage of the undersides of leaves is needed for good control.

Table 1. Products for spider mite control on specified vegetable crops.

Product name (common name)	Use	Pre-harvest interval, by crop							
		Beans	Melons	Cucum- bers	Squash, pumpkin	Tomato	Pepper	Egg- plant	Sweet corn
Acramite 50WS or 4SC (bifenazate)	general	3 days	3 days	3 days	3 days	3 days	3 days	3 days	not registered
Agri-Mek 0.7 SC or 0.15EC (abamectin)	restricted	not registered	7 days	7 days	7 days	7 days	7 days	7 days	not registered
Dimethoate 4EC (dimethoate)	general	0 days	3 days	not registered	not registered	7 days	0 days	not registered	not registered
Dicofol 4E (dicofol)	general	21 days	not registered	2 days	2 days	2 days	2 days	not registered	not registered
MSR or Metasystox-R 2EC (oxydemeton-methyl)	restricted	not registered	14 days	14 days	14 days	not registered	not registered	not registered	not registered
Oberon 2SC (spiromesifen)	general	not registered	7 days	7 days	7 days	1 day	1 day	1 day	5 days
Portal 0.4EC or Fujimite 5EC (fenpyroximate)	general	not registered	3 days	not registered	not registered	1 day	1 day	1 day	not registered
Vydate L 2WSL (oxamyl)	restricted	not registered	1 day	1 day	1 day	3 days	7 days	1 day	not registered
Zeal 72WP (etoxazole)	general	not registered	7 days	7 days	not registered	not registered	not registered	not registered	not registered



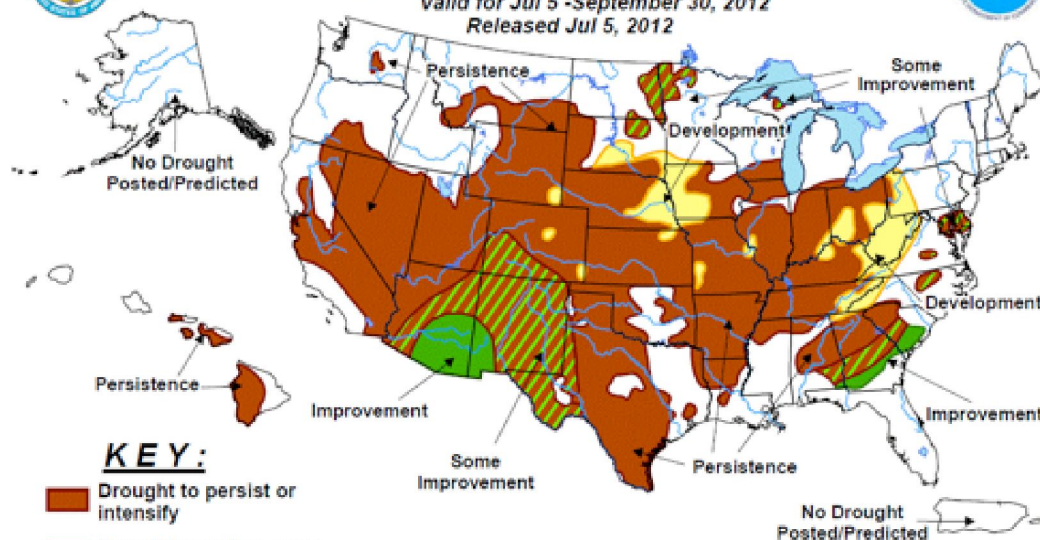


# U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for Jul 5 - September 30, 2012

Released Jul 5, 2012



## KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

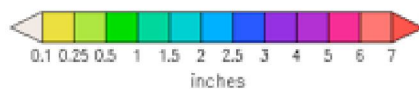
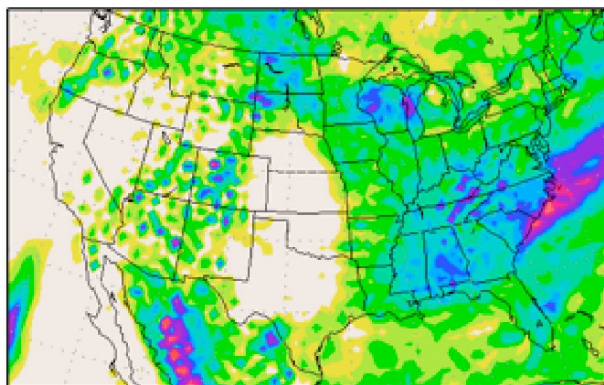
## Precipitation Forecast

Precipitation (inches)  
during the period:

Tue, 17 JUL 2012 at 00Z

—to—

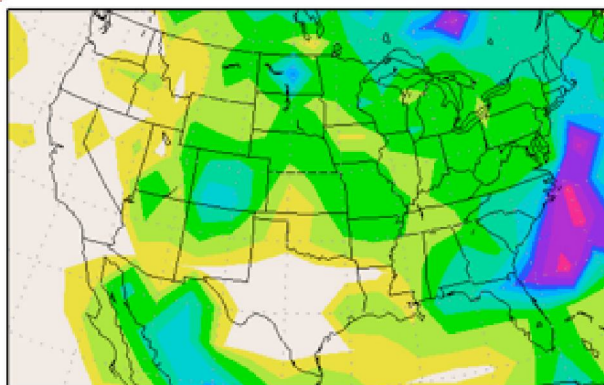
Tue, 24 JUL 2012 at 12Z



Wed, 25 JUL 2012 at 00Z

—to—

Thu, 02 AUG 2012 at 00Z

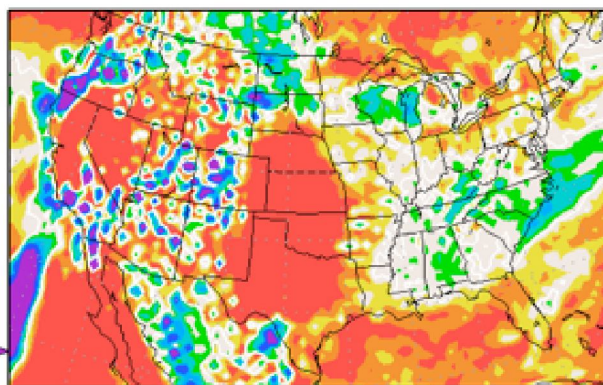
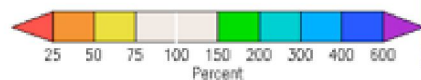


Precipitation (percent of normal)  
during the first 7.5-day period:

Tue, 17 JUL 2012 at 00Z

—to—

Tue, 24 JUL 2012 at 12Z



Precipitation forecasts from the National Centers for Environmental Prediction.  
Normal rainfall derived from Xie-Arkin (CMAP) Monthly Climatology for 1979–2003.  
Forecast Initialization Time: 00Z17JUL2012

GRADS: COLA/IGES