

European corn borer management
C. Welty

The second generation of European corn borer larvae is about to start up, based on an increase in the number of European corn borer moths caught in traps in the past week in central and southern Ohio. This is the expected time for this pest to appear. The first flight of borer moths was unusually prolonged in June, so we should expect the second generation to be more prolonged than usual. The moths that are flying now will be mating and laying eggs on sweet corn and pepper leaves. Corn borer eggs take about 4 days to hatch in hot weather or up to 7 days to hatch in cooler weather.

Sweet corn in the early silking stage is most vulnerable to infestation by European corn borer larvae. Eggs are laid on a leaf near the ear. Young larvae quickly find the ear and usually enter via the silk end but sometimes enter through husk leaves. Insecticide sprays directed to the ear zone every 5-7 days during silking will control this pest if it is the only pest species active. If corn earworm moths are also active and laying eggs directly on silks, then the spray schedule needs to be intensified to every 3-5 days to keep up with the faster-developing earworms. Many insecticides are available for control. If only European corn borer is present, then PennCap-M can be used. If corn earworm or fall armyworm are also present, then pyrethroids such as Pounce, Baythroid, Warrior, or the carbamate Larvin will control all three pest species. SpinTor is a newer product that kills all 3 caterpillar species and is less harmful to beneficial insects than the other products.

Peppers with young fruit are vulnerable to infestation by European corn borer larvae. Eggs are laid on leaves but larvae quickly find the fruit and bore in under the cap. A preventive insecticide program is effective if started soon after the new generation of moths begins emerging. Insecticide should be applied at 5- to 10-day intervals during the 4 to 6 weeks that moths are active, or longer if a third generation develops. Use a sprayer with hollow cone nozzles and at least 60 psi pressure to get thorough coverage of the pepper canopy. Nine insecticides are available for control as shown in Table 1.

Table 1. Insecticides for control of European corn borer on bell peppers.

Name	Trade name	Efficacy	PHI
acephate	Orthene	excellent	7
cyfluthrin	Baythroid (RUP)	good	7
bifenthrin	Capture (RUP)	good	7

permethrin	Pounce (RUP)	good	3
tebufenozide	Confirm	good	7
spinosad	SpinTor	good	1
carbaryl	Sevin	fair	3
esfenvalerate	Asana (RUP)	fair	7
B.t.	DiPel, Javelin	fair	0

RUP = restricted use pesticide
 PHI = preharvest interval (days)

As of the year 2000, Orthene is limited to two applications per year on peppers. Orthene is best used during the time of peak egg hatch, which can be estimated by the time of peak moth catch. In late July or early August, a final plan needs to be made about when to use Orthene. If summer temperatures have been average or lower than average (which seems to be the case in 2001), then both applications should be directed at second generation larvae. If temperatures have been higher than average so that there is a good chance of a third generation developing in September, then one application of Orthene should be directed at second generation larvae, and the second application of Orthene can be saved for the third generation. After Orthene is used on peppers at the time of peak egg hatch, later hatching corn borer larvae can be targeted by Baythroid, Capture, Pounce, Confirm, or SpinTor. Orthene, Baythroid, Capture, Pounce, or Confirm should be applied at 7-day intervals during peak moth activity, or at 10-day intervals once moth activity begins to decline. SpinTor should be applied at 5-day intervals during peak moth activity, or at 7-day intervals once moth activity begins to decline. The microbial insecticide B.t. (DiPel, Javelin, MVP, and others) can give effective control when applied twice per week. Applications must be scheduled to allow for a preharvest interval (PHI) of 7 days for Orthene, Baythroid, Capture, and Confirm; 3 days for Pounce; 1 day for SpinTor; and 0 days for B.t.

Crop Reports

Hal Kneen

SOUTHEAST

Vegetable crops Report from Southeast Ohio (Meigs County) for the week of July 23, 2001

Tomato crop is coming off the vine very strongly. Majority of fruit are extra large and jumbo size. Some back up at the terminal markets on Monday and Tuesday but looking better for the end of the week. Wholesale prices for the best fruit holding at \$5-6 dollars for ten pound basket poorer quality large and medium fruit in \$4 range. Lots of pressure to reduce wholesale prices however retail price is not going down. Lots of grower concern that the only people making money are the retailers. Some yellow tomatoes available.

Peppers are being harvested. Nice large, extra large and jumbo fruit being picked. Yellow hot banana peppers also being picked.

Sweet corn has been fantastic this year. Yields from 1200- 1500 dozen per acre. Excellent quality as insect populations have been down until early this week. Corn having to be irrigated. Have trapped Monday and Tuesday night- 3 corn earworm and 6 European corn borer moths in helio traps the most so far this year. Expect numbers to rise rapidly.
Generally weather have been hot 90's during the day and warm night temperatures in mid to high 60's. Very humid, however no precipitation since the evening of 7/17.

MOTH TRAP REPORTS (~7/17 to 7/24)

C. Welty

corn earworm, pheromone trap

Meigs County (Racine): 7 (up from 3 last week)

Highland County (Hillsboro): 0 (down from 2 last week)

Miami County (Troy): 2 (up from 0 last week)

Franklin County (Columbus): 0 (same as last week)

Medina County: 0 (same as last week)

Summit County: 0 (same as last week)

Huron County (Celeryville): 0 (same as last week)

Sandusky County (Fremont-South): 3 (same as last week)

Sandusky County (Fremont-West): 1 (up from 0 last week)

Wood County (Hoytville): 0 (same as last week)

European corn borer, pheromone trap

Meigs County (Racine): 7 (up from 0 last week)

Highland County (Hillsboro): 4 (up from 3 last week)

Miami County (Troy): 11 (up from 2 last week)

Franklin County (Columbus): 17 (up from 7 last week)

Medina County: 1 (up from 0 last week)

Summit County: 1 (up from 0 last week)

Huron County (Celeryville): 0 (same as last week)

Sandusky County (Fremont-South): 0 (down from 2 last week)

Sandusky County (Fremont-West): 0 (down from 2 last week)

Wood County (Hoytville): 0 (same as last week)

European corn borer, blacklight trap

Franklin County (Columbus): 11 (up from 3 last week)

Sandusky County (Fremont-South): 2 (up from 1 last week)

fall armyworm, pheromone trap

Franklin County (Columbus): 1 (down from 2 last week)

Wood County (Hoytville): 0 (same as last week)

squash vine borer, pheromone trap

Highland County (Hillsboro): 8 (down from 21 last week)

Clark County (S. Charleston; mean of 2 traps): 0.0 (same as last week)

Franklin County (Columbus; mean of 3 traps): 7.7 (up from 2.3 last week)

variegated cutworm, pheromone trap

Franklin County (Columbus): 35 (down from 282 last week)

Huron County (Celeryville): 30 (down from 68 last week)

Wood County (Hoytville): 47 (down from 102 last week)

black cutworm, pheromone trap

Huron County (Celeryville): 5 (down from 9 last week)

Wood County (Hoytville): 15 (down from 19 last week)

true armyworm, pheromone trap

Wood County (Hoytville): 3 (down from 68 last week)

Note: full season trap records are posted at: <http://www.ag.ohio-state.edu/~ipm/traps/traps.htm> A link is provided from the VegNet homepage, just click on the Vegetable IPM button.

New Publications

R. Precheur

Cultural Practices in Vegetable Crops - Weed Management Programs

This for sale 9 page color publication, by Douglas Doohan, John Cardina and Matthew Kleinhenz, includes topics on prevention, eradication, crop rotation, planting date selection, crop competition, cultivation, flaming and mulches. The bulletin also includes two grower experiences with cultural practices in weed management. Ask for Bulletin 888. The price is \$1.75. Contact your local extension office or Janis Cripe at the Bulletin Distribution Center, 614-292- 1607

Carrots and Related Vegetable - Umbelliferae (Review by: E. C. Wittmeyer)

Vegetable growers, processors, county agents and others involved in production and marketing of carrots and related crops will find this new book helpful. This 294 page manual was written by V. E. Rubatzky and C. F. Quiros, well known vegetable experts from the University of California, Davis and P. w. Simon, USDA-ARS, Madison, Wisconsin

In addition to a discussion on carrots, the authors have covered many other vegetables in this important botanical group - cilantro, celery, dill, parsnips and many others. The authors have assembled much useful background scientific information on growth and handling of these important crops. The manual does not contain specific recommendations on cultural practices, but the basic information supplements practices recommended by various Extension Services and others. For example, the 49 pages in the chapter on crop production contains excellent information on effect of environmental conditions in crop growth, soil considerations, seed bed preparation and other aspects of production. The authors have done an effective job in summarizing the various pest and disorders affecting these important crops.

The book is being published by Oxford University Press, 2001 vans Rd., Cary, NC 27513. To order a copy of the book, or for other information, Call 1-80451-7556.

The 7 Day Outlook*

AKRON-CANTON

DAY DATE | SAT 28| SUN 29| MON 30| TUE 31| WED 01| THU 02|
TEMP
MIN/MAX | 59 79| 64 78| 63 84| 63 88| 67 91| 66 88|
WIND | 6 7| 7 9| 5 7| 5 6| 5 7| 5 7|
PREC.
PROB. 24 | 25 | 72 | 41 | 22 | 29 | 33 |

CLEVELAND

DAY DATE | SAT 28| SUN 29| MON 30| TUE 31| WED 01| THU 02|
TEMP
MIN/MAX | 59 76| 65 75| 62 83| 63 87| 66 88| 68 87|
WIND | 5 7| 7 8| 5 7| 4 7| 5 7| 5 8|
PREC.
PROB. 24 | 26 | 71 | 37 | 22 | 29 | 33 |

COLUMBUS

DAY DATE | SAT 28| SUN 29| MON 30| TUE 31| WED 01| THU 02|
TEMP
MIN/MAX | 61 84| 67 82| 65 86| 66 89| 70 94| 69 91|
WIND | 3 5| 4 6| 3 5| 2 5| 3 5| 3 5|
PREC.
PROB. 24 | 42 | 74 | 39 | 22 | 28 | 33 |

CINCINNATI

DAY DATE | SAT 28| SUN 29| MON 30| TUE 31| WED 01| THU 02|
TEMP
MIN/MAX | 65 82| 69 85| 69 89| 69 91| 72 92| 70 88|
WIND | 6 8| 7 8| 5 7| 5 7| 5 7| 5 8|
PREC.
PROB. 24 | 61 | 72 | 37 | 23 | 27 | 31 |

DAYTON

DAY DATE | SAT 28| SUN 29| MON 30| TUE 31| WED 01| THU 02|
TEMP
MIN/MAX | 60 82| 66 84| 66 87| 68 90| 71 93| 69 90|
WIND | 5 7| 6 8| 4 6| 4 6| 4 6| 4 6|
PREC.
PROB. 24 | 52 | 74 | 35 | 23 | 28 | 32 |

TOLEDO

DAY DATE | SAT 28| SUN 29| MON 30| TUE 31| WED 01| THU 02|
TEMP
MIN/MAX | 56 77| 64 78| 61 85| 63 88| 67 90| 66 86|
WIND | 5 8| 7 9| 4 7| 3 7| 3 7| 5 7|
PREC.
PROB. 24 | 36 | 72 | 29 | 23 | 28 | 32 |

YOUNGSTOWN

DAY DATE | SAT 28| SUN 29| MON 30| TUE 31| WED 01| THU 02|
TEMP
MIN/MAX | 52 77| 62 75| 61 83| 60 88| 62 90| 65 87|
WIND | 4 7| 5 8| 4 7| 4 6| 4 6| 4 7|
PREC.
PROB. 24 | 20 | 69 | 42 | 22 | 29 | 33 |

* LEGEND:

TEMP MIN/MAX - forecasted minimum and maximum temperature for time periods midnight to noon and noon to midnight.

WIND - MEAN WIND SPEED(KTS) FOR TIME PERIODS midnight to noon and noon to midnight.

PREC. PROB. 24 - probability of precipitation for the 24 hour period.

What's New At The VegNet Web Site

In "Problem of the Week", see....

Early Powdery Mildew symptoms on summer squash leaves.

Sunscald on slicing cucumbers.

Bacterial Wilt on summer squash from early symptoms until death.

Just click on the "Problem of the Week" button in the left hand menu.

Online Edition of the 2001 Ohio Vegetable Production Guide - Now Available

Sweet Corn Disease Resistance Ratings

The following are summarized lists of Dr. Pataky's work at the Univ. of IL on disease reactions of sweet corn. In these summaries, all experimental and processing varieties have been removed and only named varieties which were rated for common rust or MDM are included. The first list are those named varieties rated for common rust. The second list are only those named varieties rated for Maize Dwarf Mosaic virus (MDM). For a complete report, E-mail: Bob Precheur: precheur.1@osu.edu

Common Rust of Sweet Corn

MDM of Sweet Corn

Do You Know Us?

Find out what we've been up to. The OSU Vegetable Team Report is available in PDF file format for downloading from the VegNet homepage.

Sources of Pheromone Traps Used in Vegetable Pest Management.

Do you need to find traps, lures or suppliers, click on the Vegetable IPM button on the left side of the homepage, then click on the 'Sources' document in the Vegetable IPM section.

IR-4 News

Also in the Vegetable IPM section, you can link to the IR-4 website. Read the results of the 2000 food use workshop, monthly and quarterly newsletters. Find out the latest on pesticide registrations for minor crops. Learn about biopesticides plus much more. Click on the Vegetable IPM button on the VegNet homepage and then click on the IR4 link in the Vegetable IPM section.

[Return to Vegetable Crops Homepage | Ohio State University Extension](#)

We appreciate very much the financial support for this series of vegetable reports which we have received from the board of growers responsible for the Ohio Vegetable and Small Fruit research and Development Program. This is an example of use of Funds from the "Assessment Program".

Where trade names are used, no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely and accurate, the pesticide user bears the responsibility of consulting the pesticide label and adhering to those directions.

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