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Pest&Crop newsletter © Purdue University - extension.entm.purdue.edu/newsletters/pestandcrop
Editor: Tammy Luck | Department of Entomology, Purdue University, 901 W. State St., West Lafayette, IN 47907

Armyworm Moth Captures Varied

Authors: Christian Krupke and John Obermeyer

Over the past few weeks armyworm moths have been captured in abundance in some of the traps placed at Purdue Ag Research Centers (see accompanying “Armyworm Pheromone Trap Report”). This happens most years and doesn’t indicate an outbreak is pending, but it is a reminder to conduct timely scouting in high-risk fields when the larvae are actively feeding, mid to later May. The increased popularity of cereal rye as a cover crop presents new opportunities for egg-laying females to find attractive food sources. The timing of planting this year, where many cover-cropped or weedy fields may be “planted green” is not helpful to those trying to avoid hungry armyworms.

Like every year, some armyworm moths overwinter here, but most are blown here from states to the south and west. Once here, they mate and lay eggs on preferred plants, those being grasses. Highest risk crops for egg laying is where dense grassy vegetation, e.g., wheat, grass hay, grass cover crops exist. Ideally, grass cover crops, will be terminated 2-3 weeks before corn emergence to prevent the “green bridge.” With this spring’s wet and windy weather, spraying of cover crops has been delayed and the 2-3 week window hasn’t been possible.

Don’t be dependent on Bt traited-corn, as high armyworm infestations will still cause significant damage before the Bt-proteins suppress their feeding. An essential reference to understand which Bt-traited corn has efficacy against specific insects is the “Handy Bt Trait Table.” This table, produced by Chris DiFonzo, Field Crops Entomologist at Michigan State University, is worth a look. It can be downloaded HERE. Remember that seed-applied neonicotinoid insectides have zero efficacy against armyworm, so don’t expect any help there. But there are many effective options for control with foliar insecticide sprays. A reminder that with this insect, especially when they are “marching” in large numbers, scouting still wins the day.

Terminated cover crop fields awaiting corn planting.

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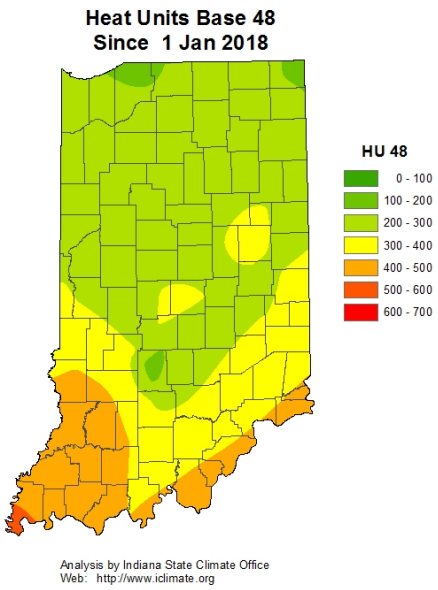
Alfalfa Weevil Management Guidelines

Authors: Christian Krupke and John Obermeyer

Pest managers should now be scouting their alfalfa for leaf feeding from weevil larvae. This pest is often overlooked during the early spring planting season.

Producers can manage this pest most effectively by utilizing heat unit accumulations data (base 48°F) to determine when sampling should begin and when an action should be taken, The management guidelines listed below should be used to determine when alfalfa weevil should be controlled in southern Indiana. Refer to the following map for alfalfa weevil development in your area.



Alfalfa Weevil Management Guidelines Southern Indiana

Heat Units	% Tip Feeding	Advisory
200		Begin sampling. South facing sandy soils should be monitored earlier.
300	25	Re-evaluate in 7-10 days using the appropriate HU or treat immediately with a residual insecticide if 3 or more larvae are noted per stem and % tip feeding is above 50%
400	50	Treat immediately with a residual insecticide.
500	75	Treat immediately.
600	75+	If cutting delayed more than 5 days, treat immediately.
750		If harvested or harvesting shortly, return to the field in 4-5 days after cutting and spray if 1) there is no regrowth and weevil larvae are present OR 2) feeding damage is apparent on 50% of the stubble and weevil larvae are present.

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Black Cutworm Adult Pheromone Trap Report

		BCW Trapped						
		Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7
County	Cooperator	3/29/18-4/4/18	4/5/18-4/11/18	4/12/18-4/18/18	4/19/18-4/25/18	4/26/18-5/2/18	5/3/18-5/9/18	5/9/18-5/16/18
Adams	Mrs. Anderson's/2nd Grade Wyneken Lutheran School/Decatur		0	0	4	1	1	
Adams	Roe/Mercer Landmark	0	0	0	0	0	0	
Allen	Anderson/Syngenta	0	0	0	0	0	0	
Allen	Gynn/Southwind Farms	0	0	0	0	0	0	
Allen	Kneubuhler/G&K Concepts	0	0	0	1	0	1	
Bartholomew	Bush/Pioneer Hybrids	0	1	2	2	2	7	
Clay	Bower/Ceres Solutions/Clay City	0	0	0	0	0	0	
Clay	Bower/Ceres Solutions/Bowling Green	0	0	0	0	0	0	
Clay	Bower/Ceres Solutions/Brazil	0	0	4	2	0	0	
Clinton	Emanuel/Boone Co. CES	0	0	6	0	0	2	
Clinton	Foster/Rossville	0	0	0	0	0	0	
Daviess	Venard/Venard Agri-Consulting/Washington	1	2	2	0	0	0	
Daviess	Venard/Venard Agri-Consulting/Elnora	0	0	2	1	0	1	
DeKalb	Hoffman/ATA Solutions		0	0		0	0	
Dubois	Eck/Dubois Co. CES	0	0	0	3	4	0	
Elkhart	Kauffman/Crop Tech Inc.	0	0	0	1	1	1	
Fayette	Schelle/Falmouth Farm Supply Inc.	0	0	5	17	4	2	
Fountain	Mroczkiewicz/Syngenta	0	0	0	7	13	16	
Fulton	Ranstead/Ceres Solutions/Rochester		0	0	0	0	3	
Fulton	Jenkins/Ceres Solutions/Talma	0	0	0	0	2	6	
Greene	Venard/Venard Agri-Consulting/Newberry	1	4	5	0	0	1	
Hamilton	Campbell/Beck's Hybrids	0	0	0	4	2	5	
Hendricks	Nicholson/Nicholson Consulting	0	0	0	0	1	1	
Jasper	Overstreet/Jasper Co. CES	0	0	0	0	2	2	
Jasper	Ritter/Brodbeck Seeds	0	0	0	3	17		
Jay	Boyer/Davis PAC	0	0	0	0	3	1	
Jay	Shrack/Ran-Del Agri Services	0	0	4	2	5	8	
Jay	Temple/Jay Co. CES/Redkey	0	0	3	1	14	10	
Jay	Temple/Jay Co. CES/Pennville	0	0	3	1	7	10	
Jennings	Bauerle/SEPAC	0	1	0	3	2	1	
Knox	Bower/Ceres Solutions/Freelandville	0	0	0	0	0	0	
Knox	Bower/Ceres Solutions/Vincennes	0	0	0	0	2	4	
Kosciusko	Klotz/Etna Green	0	0	0	0	0		
Lake	Kleine	0	0	2	3	12	25*	
Lake	Moyer/Dekalb Hybrids/Shelby	0	0	0	0	0	1	
Lake	Moyer/Dekalb Hybrids/Scheider	0	0	4	0	1	0	
LaPorte	Rocke/Agri-Mgmt. Solutions/Wanatah	0	0	0	1	1	5	
Marshall	Harrell/Harrell Ag Services/Trap 1	0	0	0	0	0		
Marshall	Harrell/Harrell Ag Services/Trap 2	0	0	0	0	0		
Marshall	Klotz/SR 10 & SR 331		0	0	0	2	2	
Marshall	Miller/Ceres Solutions/Plymouth		0	0	8	0		
Miami	Early/Pioneer Hybrids	0	0	0	1	0	2	
Montgomery	Delp/Nicholson Consulting	0	0	0	2	2	2	
Newton	Moyer/Dekalb Hybrids/Lake Village	0	0	2	0	2	1	
Porter	Leman/PPAC	0	0		0	0	1	
Posey	Schmitz/Posey Co. CES/Cynthiana	0	0	0	0	0		
Posey	Schmitz/Posey Co. CES/St. Phillips W.	0	0	0	0			
Pulaski	Capouch/M&R Ag Services				0	0	2	
Pulaski	Leman/Ceres Solutions	0	0	0	3	13	22*	
Putnam	Nicholson/Nicholson Consulting	0	0	1	8	6	6	
Randolph	Boyer/DPAC	0	0	0	4	1	1	
Rush	Schelle/Falmouth Farm Supply Inc.	1	0	3	2	0	0	
Shelby	Fisher/Shelby County Co-op	0	0	0	0	1	0	
Shelby	Simpson/Simpson Farms				2	1	13	
Starke	Capouch/M&R Ag Services			0	0	1		
St. Joseph	Barry/Helena				0	0	3	
St. Joseph	Carbiener	0	0	0	0	0		
Sullivan	Bower/Ceres Solutions/Farmersburg	0	0	0	0	0	3	
Sullivan	Bower/Ceres Solutions/Sullivan	0	2	4	2	4	7	
Tippecanoe	Bower/Ceres Solutions/Lafayette	0	0	0	1	3	0	
Tippecanoe	Nagel/Ceres Solutions	0	0	3	17	24*	75*	
Tippecanoe	Obermeyer/Purdue Entomology	0	0	0	1	1	0	
Tippecanoe	Westerfeld/Monsanto Research Farm	0	0	0	3	2		
Tipton	Campbell/Beck's Hybrids	0	3	0	1	0	2	
Vermillion	Bower/Ceres Solutions/Clinton	0	0	0	0	0	1	
Wabash	Enyeart/Ceres Solutions	0	0	0	1	1		
Whitley	Boyer, Richards/NEPAC/Schrader Farm	–	0	0	2	2	8	
Whitley	Boyer, Richards/NEPAC/Kyler Farm	–	0	1	0	1	0	

* = Intensive Capture...this occurs when 9 or more moths are caught over a 2-night period

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Armyworm Pheromone Trap Report

County/Cooperator	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Dubois/SIPAC Ag Center	0	0	11	3	136	19		
Jennings/SEPAC Ag Center	0	0	2	5	8	1		
Knox/SWPAC Ag Center	0	27	44	45	25			
LaPorte/Pinney Ag Center	0	0	3	3	14	9		
Lawrence/Feldun Ag Center	0	28	89	144	74	43		
Randolph/Davis Ag Center	0	0	273	80	340	68		
Tippecanoe/Meigs	0	0	1	5	5	23		
Whitley/NEPAC Ag Center		0	22	22	86	94		

Wk 1 = 3/29/18-4/4/18; Wk 2 = 4/5/18-4/10/18; Wk 3 = 4/11/18-4/18/18; Wk 4 = 4/19/19-4/25/18; Wk 5 = 4/26/18-5/2/18; Wk 6 = 5/3/18-5/9/18

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Water Up and Irrigate In

Author: Lyndon Kelley, MSU Extension Irrigation Educator

Deck: Over the wide variety of planting and soil-applied herbicide situations, most irrigated producers will gain from an early season irrigation application somewhere in the operation most years. The limiting factor is often whether the irrigation system is ready to go.

Aggressive cover crop growth and sometimes the lack of timely spring rain may leave fields lacking moisture for optimum planting or seedling germination. Achieving the maximum uniform germination and emergence can often be improved through proper early season water management. Irrigating fields prior to or just after planting can keep the planter moving and still meet the "plant into moisture" requirement if rainfall is lacking in your area.

Late spring tillage and the delays in killing cover crops are two reasons we see drier than normal planting conditions in some fields. Late spring planting of some seed and vegetable crops may result in a greater need for early season irrigation for developing crops as we enter into the typical drier weather of summer.

Irrigation water applied at 0.5 to 0.75 inch will moisten dry soil down to 6 inches to replace water lost to tillage or a cover crop. An inch of irrigation will often be needed in a field that has not received rainfall since the cover crop was destroyed. Heavier soil will take a slightly larger application to wet soil down to the 6 inch level. Monitoring newly emerged crops that were "irrigated up" is essential. It is important to water enough to keep roots growing down into the moisture. In most years, rainfall is plentiful enough to replenish water lost to tillage or a cover crop, but a dry layer 6 to 8 inches deep can greatly hinder crop development and needs to be replenished by rain or irrigation.

Some producers fear irrigation water may contribute to **imbibitional chilling injury**, a condition that may happen when seeds are exposed to cold soil and water temperatures during the initial 24 hours for soybeans to 36 hours for corn as seedlings begin the germination process when the seeds imbibe water and potentially rupture during the swelling process.

Most agronomists believe that soil temperatures at seed depth below 50 degrees may result in **imbibitional chilling injury.** Since most irrigation water is within a few degrees of 50 degrees, producers need to consider soil temperature and weather forecasts before making irrigation applications at germination. Soil temperature in the mid 50's or higher, should temper a 0.5 inch irrigation application resulting in minimal risk. For more information about cold injury and seedling germination see:
https://www.agry.purdue.edu/ext/corn/news/articles.12/EarlyCornColdWthr-0412.html

Early season irrigation can be both the cause and solution to soil crusting and emergence problems. Depending on soil type, crop residue, and irrigation application equipment, early season irrigation can create some soil crusting which can be accelerated by rapid surface drying. Small applications of water 0.2 to 0.3 inch may help to allow emergence of seed through the crust.

Planting after harvested forage like wheat hay or cereal rye silage has the double crop advantage but rainfall or irrigation is required to replace the depleted soil moisture. Newly emerged corn and soybeans use less than 0.5 inch water per week, but many annuals like wheat and rye will dry the soil to depth of 2-3 ft. leaving the crop dependent on timely rain or irrigation. Unless the forecast promises a significant chance of rain, 1 to 1.5 inches of irrigation is needed to create the moist soil crops need to successfully develop.

Many herbicide options can be assisted by a timely rain or irrigation. Applications of 0.3 to 0.5 inch of water will move activated soil applied herbicides if rainfall does not occur within two days after herbicide application. Many soil applied herbicide labels contain information on improving effectiveness by timely rains or irrigation.

Irrigating to activate herbicides can also create the problem of different levels of weed control between the dry corners and the irrigated portion of the field. Timely and directed scouting for weeds in dry corners will be needed later in the season.

Early season irrigation can be more accurately scheduled from monitoring soil moisture in the root zone rather than using a checkbook irrigation scheduling system for newly emerged crops. Later in the season, checkbook irrigation scheduling will show its advantages over scheduling by soil moisture in the root zone alone. To learn more about checkbook irrigation scheduling go to the following link;
http://msue.anr.msu.edu/uploads/235/67987/resources/SoilWaterBalanceSheet.03.05.15.pdf or
http://www.canr.msu.edu/uploads/235/67987/factsheets/3_IrrigationSchedulingToolsJune2016.pdf

Delayed planting and slow root growth may increase the need for monitoring soil moisture and early season irrigation. Soil probing below the developing root is a good indication of the need for early season irrigation. Soil below the roots should still be able to form and hold a ball when squeezed if adequate moisture is present. The USDA offers an easy to use guide on hand feel method of soil moisture monitoring.
http://msue.anr.msu.edu/uploads/235/67987/lyndon/FeelSoil.pdf

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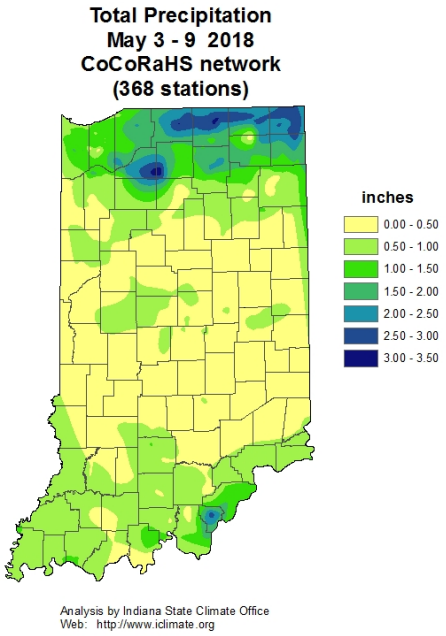
Total Precipitation May 3-9, 2018



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Average Temperature Departure from Mean May 2-8, 2018