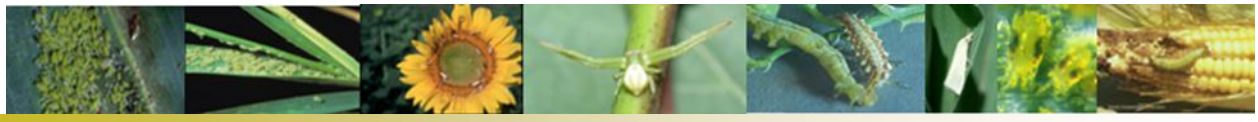

PANHANDLE PEST UPDATE

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Moths in Corn

There was large increase this past week in **Western Bean Cutworm** (WBC) moths in Dallam, Hartley, and Sherman counties (See WBC table and graph this page). There were small increases in WBC numbers in Deaf Smith and Hutchinson counties, but remained relatively the same in Moore County. These increases, particularly in Dallam, Hartley, and Sherman, suggest scouting fields for egg laying activity. I have talked with a few consultants about what they are seeing in the field (See consultant's corner section on page 3).

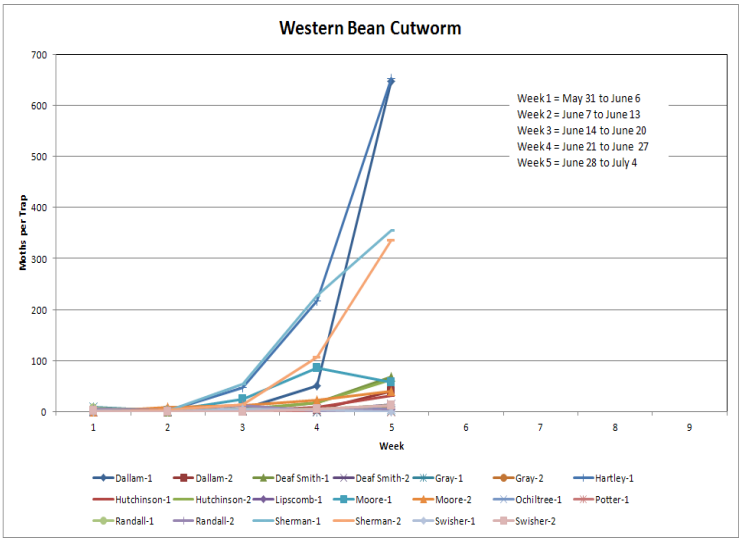
The female WBC moths are active at night and lay eggs in clusters on the top leaf surface in the upper third of the corn plant. Freshly laid eggs are pearly white and gradually darken to a purplish color when ready to hatch in five to seven days (See pictorial depiction of egg to larval stage development on page 2). Newly hatched larvae will either feed on pollen in the developing tassel within the flag leaf or move to the silks of ears if corn has tasseled. The ear ultimately becomes the primary feeding site with larvae eating developing kernels. The two tables on page three show the time frame for larval development and movement of larvae from the tassel to inside the ear. These tables show that by day 10 after hatching 89% of the larvae are 2nd instar and 73% of the larvae have moved to the silks. Therefore, there is approximately a 10 to 14 day window to control larvae before they move into the ear and still be fairly small for better control. Multiple larvae may infest an ear and larvae will move from plant to plant to infest multiple ears. When infestations average 1 larvae per ear, grain yield can be reduced

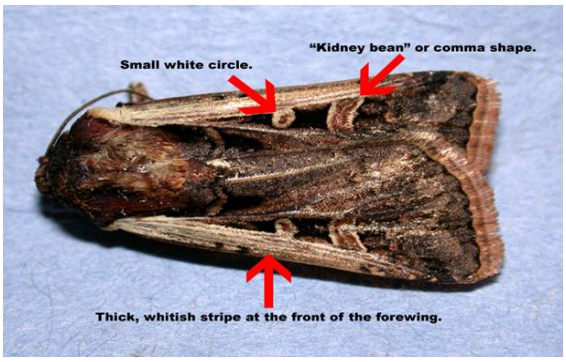
Corn Moths continued on page 3

Western Bean Cutworm Moth Trap Catches per Week

	Week				
Traps per County	**1**	**2**	**3**	**4**	**5**
Dallam-1	1	0	5	51	646
Dallam-2	0	0	0	3	40
Deaf Smith-1	0	0	3	18	68
Deaf Smith-2	0	0	1	1	14
Gray-1	8	2	2	0	2
Gray-2	6	4	3	6	8
Hartley-1	0	2	47	217	652
Hutchinson-1	0	0	2	9	31
Hutchinson-2	0	1	6	17	63
Lipscomb-1	0	1	1	6	3
Moore-1	0	2	24	86	58
Moore-2	0	8	12	23	40
Ochiltree-1	0	0	3	5	6
Potter-1	0	0	1	1	0
Randall-1	7	1	4	6	12
Randall-2	6	4	12	1	6
Sherman-1	1	1	55	228	355
Sherman-2	0	4	14	107	335
Swisher-1	0	0	6	4	0
Swisher-2	1	0	0	6	13

Week 1 = May 31 to June 6, Week 2 = June 7 to June 13, Week 3 = June 14 to June 20, Week 4 = June 21 to June 27, Week 5 = June 28 to July 4





Western bean cutworm Egg and Early Larval Development

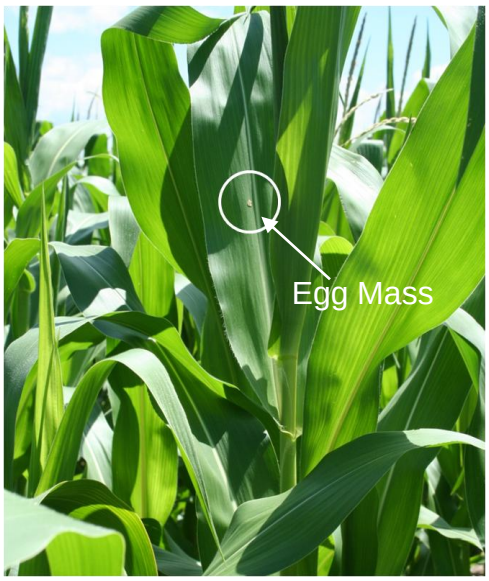


Photo credits: Dr. Chris DiFonzo, Michigan State University

Corn Moths from page 1

by four bushels per acre. Yield loss of 30% to 40% can occur when there are several larvae per ear. Timing insecticide treatments should be economical when at least 8% of the plants have egg masses or small larvae. If most eggs are hatched, treat when the crop is at least 95% tasseled and before the larvae have started to feed on the silks. If most eggs have not hatched and the crop is completely tasseled, then treat when most eggs have reached the purple stage. (WBC information taken from Dr. Frank Peairs, extension entomologist at Colorado State University, publication at http://www.ext.colostate.edu/pubs/insect/05538.html.) Another source for a quick pictorial guide to WBC size and location on the corn plant is available by Dr. Chris DiFonzo- Michigan State University at http://msuent.com/assets/pdf/21WBCCornDamage.pdf.

Consultant's Corner

Jim Elzner – Not seeing many WBC eggs, yet.

Allen Pfannstiel –WBC egg lay heaviest around Texline and Dalhart with one non-Bt field with 10% plants having eggs. Also, has seen larvae hatching but they have not started moving down the plant.

Brian Taylor – Also, starting to find WBC eggs, mostly around Texline and south. Estimating 2%-3% of plants with eggs. Commented that spider mites infestations are building now that thrips numbers have declined.

John Quillin – Starting to pickup more WBC eggs and commented about spider mites infestations starting to take-off.

These are summary statements of my conversations with the consultants and do not reflect their statements word for word.

If anyone has something to report please call me at (806) 677-5600 or send an e-mail to ebynum@ag.tamu.edu.

Western Bean Cutworm Larval Development

Instar*	1 DAH	5 DAH	10 DAH	14 DAH	21 DAH	28 DAH
1st	100%	33%				
2nd		67%	89%	14%		
3rd			11%	29%	3%	
4th				57%	39%	
5th					58%	64%
6th						36%

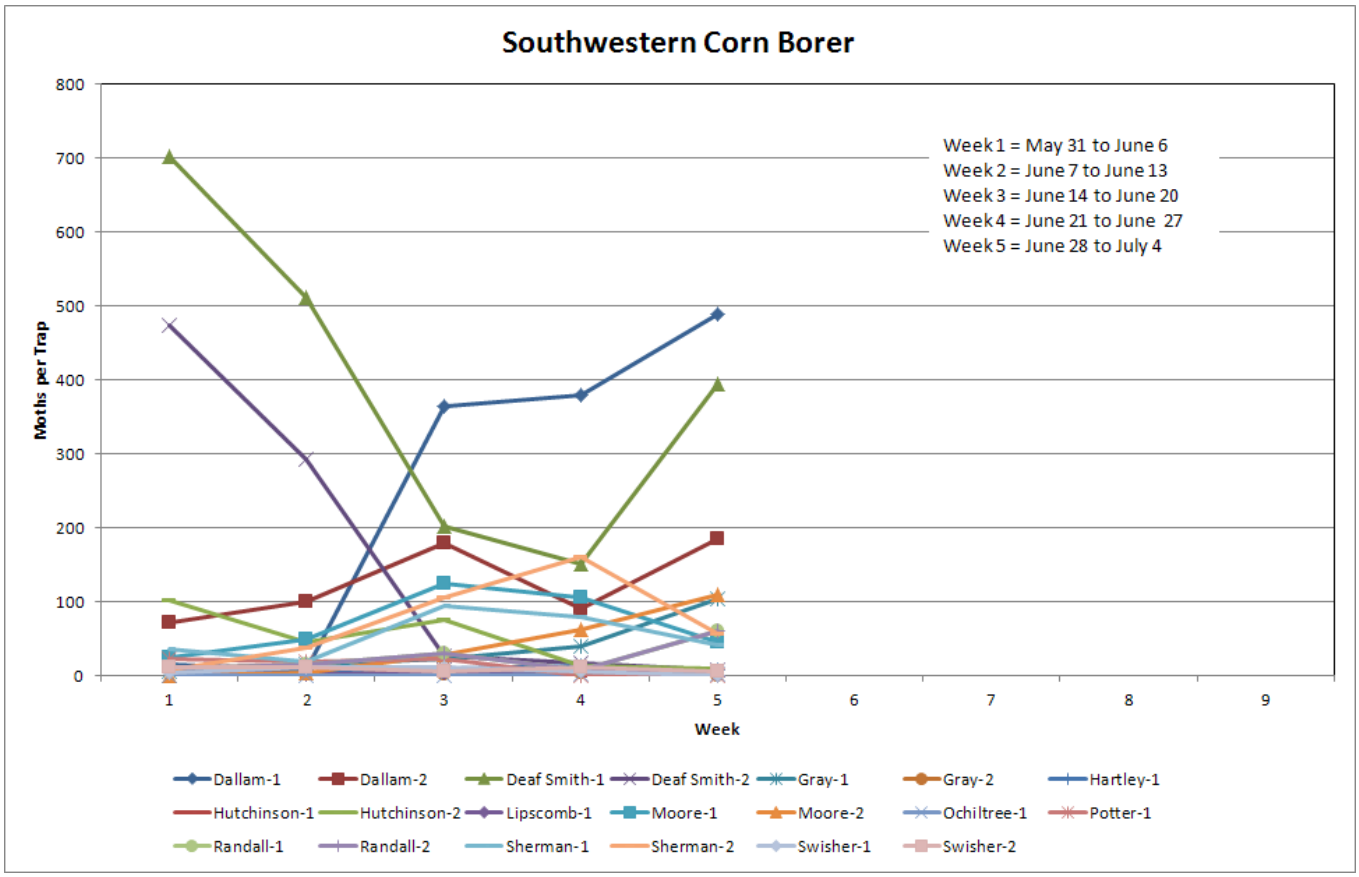
* Based on Antonelli, 1974. PhD thesis, University of Idaho

Western Bean Cutworm Larval Movement Over Time

Location	1 DAH	5 DAH	10 DAH	14 DAH	21 DAH	28 DAH
Tassel/ Tassel leaf	57%	47%	1%			
Leaf axils	26%	41%	19%			
Silks	17%	12%	73%	34%		
Between ear/ stalk			7%	33%	33%	
Ear tip				33%	67%	54%
Ear side						46%

Dr. Chris DiFonzo—Michigan State University, WBC Biology Study - 2009
DAH = Days after Hatching

Southwestern Corn Borer Moth Trap Catches per Week					
	Week				
Traps per County	1	2	3	4	5
Dallam-1	15	8	363	379	488
Dallam-2	71	100	179	91	184
Deaf Smith-1	701	510	202	151	394
Deaf Smith-2	473	293	26	17	7
Gray-1	6	16	23	40	104
Gray-2	10	2	2	4	0
Hartley-1	7	3	10	13	8
Hutchinson-1	11	13	3		
Hutchinson-2	102	45	75	13	9
Lipscomb-1	6	2	4	7	0
Moore-1	25	49	124	106	46
Moore-2	0	3	28	63	110
Ochiltree-1	0	0	0	1	1
Potter-1	22	18	23	0	0
Randall-1	9	15	31	8	60
Sherman-1	35	18	94	80	41
Sherman-2	8	37	105	160	57
Swisher-1	3	12	11	5	0
Swisher-2	11	11	5	12	6
Week 1 = May 31 to June 6, Week 2 = June 7 to June 13, Week 3 = June 14 to June 20, Week 4 = June 21 to June 27, Week 5 = June 28 to July 4					



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