Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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Sunflower Moth and Seed Weevil

Sunflower head moth populations appear to be fairly low this year. Last week at Goodland I could only count 6 moths per 100 plants at 9:30 p.m. However, seed weevil appeared to be fairly abundant at some locations. Generally we don't worry too much about seed weevil in oil sunflowers because the treatment threshold was generally higher than average population levels. Plus, if spraying for head moth then you often help control the seed weevil. However with higher commodity prices one should probably pay more attention to seed weevils, especially when head moth populations are low and one is thinking about not spraying.

The following text is from the High Plains Sunflower Production Handbook and the table is from a revision to this handbook that is currently being drafted.

Steps for calculating a red sunflower seed weevil action threshold in oil type sunflower.

Step 1: Calculate a break-even threshold = Per acre cost of treatment per pound market value of crop. **Example:** $7.00 ÷ $0.09 = 77.8 pounds loss per acre to break even on an insecticide application when sunflower price is $0.09 per pound.

Step 2: Female weevils per acre required for this loss (0.00056 pound loss per female red seed weevil). **Example:** 77.8 pounds per acre ÷ 0.00056 = 138,930 female weevils.

Step 3: Weevils per plant to cause break-even loss = female weevils x 2 (to account for males) ÷ plant population. **Example:** (138,930 x 2) ÷ 20,000 = 13.9 weevils per plant. This is the number of red seed weevils per plant expected to be present per sunflower plant in order to cause the calculated break-even loss.

In this example, an action threshold of 13.9 (use 14 for simplicity) weevil adults per plant will justify treatment with a break-even return. This figure will go up or down depending on control costs and crop market value (refer to table). (Scouting and threshold information were taken from McBride, D.K., G.J. Brewer, and L.D. Charlet. 1992. Sunflower seed weevils. North Dakota State University Cooperative Extension, Bulletin E-817.)

Treatment Cost	price per pound	red seed weevils per plant needed to justify treatment 15,000 plants per acre	20,000 plants per acre	25,000 plants per acre
$5	$0.10	12	9	7
$5	$0.20	6	4	4
$5	$0.30	4	3	2
$7	$0.10	17	13	10
$7	$0.20	8	6	5
$7	$0.30	6	4	3
$9	$0.10	21	16	13
$9	$0.20	11	8	6
$9	$0.30	7	5	4
$11	$0.10	26	20	16
$11	$0.20	13	10	8
$11	$0.30	9	7	5

Insecticide applications are made to prevent adults from laying their eggs; therefore, treatments should be timed early in the flowering period when about 30 percent of the plants have reached the R-5.1 stage. Insecticide applications made against sunflower moth also may provide adequate control of seed weevils.

Phil Sloderbeck

Stink bugs

Significant numbers of green stink bugs were observed this week in southeast and south central Kansas. Adults, eggs and nymphs were common in some fields. Fields should be watched closely during pod fill. The common treatment threshold has been 1 bug per 3 ft of row. Higher bean prices would probably justify treatment at slightly lower numbers.

Phil Sloderbeck

Soybeans – Soybean Aphids

Soybean aphids continue migrating into the state and have started reproducing. Every soybean field we checked from northeast KS to south-central and north-central KS had soybean aphids. However, they were not really colonizing yet as there were just a few aphids (up to 100) scattered on about every plant. No honeydew production was noted in any of these fields, although Brian McCornack did detect field(s) in north-central KS with upwards of 200-400 aphids per plant that were producing honeydew. Soybean aphids colonizing and actively feeding will produce easily seen plants covered with this sticky, shiny substance. Later planted soybeans need to be especially monitored for soybean aphid impact.

Sorghum

1st instar corn earworm larvae were detected in sorghum heads in Saline Co. on 21 Aug. This is the ideal time to start sampling as these larvae obviously had just started feeding and had yet to cause any damage. Small larvae, either corn earworm or fall armyworm, blend in well (see photo) with the flowers and seeds. Thus, it is highly recommended to use a white bucket and vigorously shake the head into the bucket to dislodge the tiny worms from for counting. Expect about a 5% loss in yield per worm per head, if left untreated.

Jeff Whitworth Holly Davis

Weekly Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostician Laboratory from August 15th to August 21st.

August 15 2008: Clay County – Northern Mole Cricket
August 15 2008: Geary County – Insect feeding damage and possible spider mite damage to Golden Privet
August 15 2008: Sedgwick County – Midge larvae in home
August 15 2008: Norton County – Bostrichid beetle on Honeylocust tree
August 18 2008: Allen County – Northern mole cricket in home
August 18 2008: Sedgwick County –German cockroach in commercial building
August 18 2008: Sedgwick County – Possible pitch moth damage in Pine
August 19 2008: Rooks County – Oriental cockroach
August 20 2008: Thomas County – Oak flake galls, aphids on Bur oak
August 20 2008: Edwards County – Wood borer damage to Cottonwood
August 20 2008: Riley County – Polyphemus moth found on house by porch light
August 21 2008: Allen County – Pandora sphinx moth
August 21 2008: Clay County – Pseudoscorpion in home
August 21 2008: Sedgwick County – Small hive beetle in hive removed from home
August 21 2008: McPherson County – Furrow (orb weaver) spider in home

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician at (785) 532-4739 or GotBugs@ksu.edu.

Holly Davis

Sincerely,

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