



## Worm Identification and Control in Soybean

### Key Pests and Impact on Crop

- Soybean, especially in the South, can be subject to economic damage from a number of lepidopteran worm pests, such as:
  - corn earworm (CEW)
  - tobacco budworm (TBW)
  - soybean looper (SL)
  - velvetbean caterpillar (VBC)
  - beet armyworm (BAW)
  - fall armyworm (FAW)
  - green cloverworm (GCW)
  - cabbage looper (CL)
  - southern armyworm (SAW)
- For optimum control, apply an insecticide before larvae exceed economic thresholds and follow all label instructions. Your local or state extension office can provide economic thresholds, or you can refer to the article linked below:

The Mississippi Soybean Promotion Board has compiled economic thresholds for the key worm pests of soybeans from various university sources for several scouting methods:

<http://mssoy.org/blog/using-insect-thresholds-for-soybean-management-decisions>



TBW adult<sup>3</sup>



TBW larva

### Soybean Looper (SL)



SL adult



SL larva

### Velvetbean Caterpillar (VBC)



VBC adult



VBC larva

### Beet Armyworm (BAW)

- Apply an insecticide at first sign of significant larvae in or adjacent to field edges, or before the economic threshold is exceeded.



BAW adult<sup>4</sup>



BAW larva<sup>5</sup>

### Corn Earworm and Tobacco Budworm

- Similar looking species, singly laid eggs.



CEW adult



CEW larva

## Fall Armyworm (FAW)

- Apply an insecticide at first sign of significant larvae in or adjacent to field edges, or before the economic threshold is exceeded.



FAW adult



FAW larva

## Green Cloverworm (GCW)



GCW adult



GCW larva

## Cabbage Looper (CL)



CL adult<sup>1</sup>



CL larva<sup>2</sup>

## Southern Armyworm (SAW)



SAW adult



SAW larva<sup>6</sup>

## Distinguishing Armyworms and Earworms

### True armyworm (AWM)

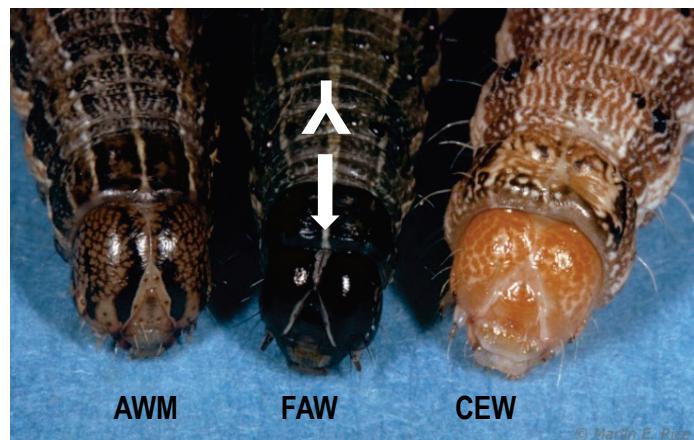
- Smooth cuticle; subdued colors.

### Fall armyworm (FAW)

- Brown/gray larva with distinct tubercles along body.
- Three thin, white stripes down the back.
- Distinct white inverted "Y" on head (see image below).
- Young larvae may be difficult to distinguish from corn earworm (CEW).

### Corn earworm (CEW)

- Bright, variable colors.
- Cuticle has "unshaven" look.



## Credits

<sup>1</sup>Joseph Berger, Bugwood.org

<sup>2</sup>Whitney Cranshaw, Bugwood.org

<sup>3</sup>J. Michael Moore, University of Georgia, Bugwood.org

<sup>4</sup>Merle Shepard, Gerald R. Carner, and P.A.C Ooi, Insects and their Natural Enemies Associated with Vegetables and Soybean in Southeast Asia, Bugwood.org

<sup>5</sup>Whitney Cranshaw, Colorado State University, Bugwood.org

<sup>6</sup>Eddie McGriff, University of Georgia, Bugwood.org

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A small change was made to these photos credited above: they were cropped to "zoom in" on the insect.

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