BOLL WEEVIL (BW)

Anthonomus grandis

Description:

Adults:

Adult size is variable, about 0.12-0.33 in (3-8.5 mm) long including the slightly curved, long, slender snout which is about half the length of its body. Color varies with age; new adults are straw color, changing to more reddish brown and then becomes a dark red-brown or mahogany in color. White scales give the body a gray or variable color.

Eggs:

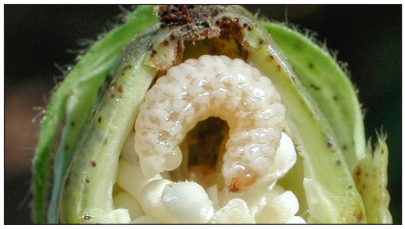
Eggs are pearly white and oval. Females can produce around 200 eggs during her lifespan.

Larvae:

Newly hatched larvae are only slightly bigger than the size of the egg. Legless with a wrinkled, curved body. As the larva matures, it is white in color with a brown mouthparts and head.

Pupae:

White and develop into a brown color.



Left: adult BW (source: NC State). Right: BW larva (Source: Mike Blanton, TAMU Extension).

Hosts:

Cotton is the primary host.

Damage:

- Most damage is caused from the female laying eggs and larval feeding on the square or boll tissue.
- In heavy infestations, nearly every square will receive an egg as soon as it is large enough to support development and virtually no fruit will be set.
- Infested cotton squares or bolls turn yellow and fall off the plant; larger infested bolls may not drop but cotton lint developing in these bolls is damaged causing a decrease in yield.

Phenology:

- Adults overwinter in a diapause stage under leaf litter on the edge of the cotton field and emerge in spring.
- Up to 10 generations per year.
- It takes about 2-3 weeks for eggs to develop into adults depending on temperature.

Left: BW egg laying and feeding punctures. Right: BW larva in square. Source: Clemson University – USDA Cooperative Extension.

Lure Type and Maintenance:

- PHEROCON® BW Lure.
- Replace PHEROCON® BW lures every 2 weeks.

Lure Storage:

- Store in unopened factory sealed packages in a cool place (< 74° F or 24° C maximum) for short periods or refrigerate longer term.
- Refrigerate or freeze unopened packages to carry over for annual storage.

Trap Design:

- PHEROCON® BW Trap.

Placement Time:

- Traps should be placed in early spring before adult emergence from diapause.
- Traps must be installed before peak bloom of cotton plants.

Placement Pattern:

- Place traps on a suitable 4 ft (1.2 m) pole, stake, or lath.
- Place along the edge of field borders avoiding corners of the field.
- Place traps as close to the crop as possible but not further than 10 ft (3 m) from the crop.
- Place traps in areas with the least potential for destruction by farming equipment.

Trap Density:

- Use a minimum of two traps per field.
- 1 trap every 160 acres (65 hectares).
- Use 1 trap approximately 528 ft (160 m) and two traps around areas of heavy leaf litter to trap emerging adults migrating into fields in spring.

Trap Maintenance:

- Service traps weekly and not longer than three weeks.

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Recommendations:

- Additional trapping may be appropriate if there is evidence that regular trapping densities are not sufficient at these locations. Traps are best placed at or near cotton fields in high-risk areas.
- Depending on program history or geographical setting, some sites may be viewed as high hazard or high-risk, i.e., seaports, railways, international borders, truck stops on highways connecting with infested areas

Source: Recommendations and certain other sections were sourced from University of Missouri Extension, Texas A&M AgriLife Extension, and MS State Technical Bulletin Field Guide to Boll Weevil Identification.

Note, always:

- Use only one lure per trap.
- Count and record captures as recommended.
- Change trap as needed.
- Discard lures in trash far from the area of use and remove trash afterwards.
- Follow recommendations.
- Contact local extension authorities and consultants for regional advice.

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