

## Are You Eating My Crops? 5: The old world bollworm

The old world bollworm (*Helicoverpa armigera*) is a major insect pest of both field and horticulture crops in many parts of the world, and is the fifth headliner in our 12-month series called 'Are you eating my crops?'. Individual pests chosen for this series have not yet been reported in Texas, but are on the 'Watch List' due to their high level of pest importance or risk due to host availability. During this series we will cover several different crop pests, what to look for, and what they look like.

The *Helicoverpa armigera* has been reported to cause serious losses throughout its range (Asia, Europe, Africa, South America, Australia) to tomatoes, corn, and cotton. It has also been known to cause damage to chickpea, peanut, pigeon pea, sorghum plants, and many other high value crops. The larvae prefer to feed on the reproductive parts of the host (flower and fruit) resulting in bore holes and feeding within the plant. Because of this, it is often necessary to cut open the plant to detect infestation. Larvae may also feed on the foliage. Secondary bacterial or fungal pathogens may develop due to the wounds on the plant. The old world bollworm has received pest status due to its broad host range, feeding preferences for reproductive stages of plants, its high mobility, high fecundity, and its ability to adapt to different climates.

The old world bollworm moth is 14 to 19 mm long as an adult with coloration that varies. Males are usually yellowish-brown, light yellow, or light brown, and females are orange-brown. The forewings have a black or dark brown kidney-shaped marking near the center, and the hind wings are creamy white with a dark brown or gray band on the outer margin. The pupae are dark tan to brown, 14 to 22 mm long by 4.5 to 6.4 mm wide, and are typically found in the soil. The larvae stage is made up of six instar stages, where the coloration of the caterpillar darkens with each molt and dietary content, ranging from blue green to brownish red. Freshly emerged larvae are translucent and yellowish-white with some dark-brown coloring near the front and end of the body. Larvae have a spotted appearance. Second instar are yellowish green with black thoracic legs. Five prolegs are present on at all larvae instar stages. The eggs are yellowish-white when first laid, and change to a dark brown. They are gumdrop shaped, 0.4-0.6 mm in diameter, with longitudinal ribs and a smooth top. The eggs change to a dark gray to gray black the day before they hatch.

*Helicoverpa armigera* adults are easily confused with many other species of moth. Final identification requires examination by a seasoned researcher.

If you have question or concerns regarding the headliners, OR you believe you have identified a old world bollworm infestation, contact [invasives@shsu.edu](mailto:invasives@shsu.edu) for further instructions.



Old world bollworm, adult (*Helicoverpa armigera*). Credit: Julieta Brambila. USDA APHIS PPQ



Old world bollworm larvae, representation of damage to tomato. Credit: Central Science Laboratory, Harpenden.



Old world bollworm larvae eating the developing grain inside a corn cob. Credit: Antoine Guyonnet