

Are You Eating My Crops? 4: Sunn pest

The sunn pest (*Eurygaster integriceps*) is one of the most devastating pests of wheat in the Middle East, and is the fourth 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 sunn pest, sometimes called the cereal bug or wheat shield bug, is a semi-elongated oval shaped bug, about 10-12mm long and 6.1- 7.1 mm wide, with a shield shaped pronotum. The upper surface is slightly concave with a large scutellum that covers almost the entire abdomen. The coloration is highly variable and has no taxonomic value, ranging from gray to creamy brown, to reddish or black. The sunn pest has five instars or nymph stages that are all spherical in shape, but variable in size. The first instar is small, 1.5mm in diameter, and light in color. It becomes black as the exoskeleton hardens. Nymphs are colored similarly to the adults except with 2-3 paired black dots midway between the lateral margin and midline of the abdomen. The eggs are spherical and about 1mm in diameter. They start out as a light green color and nearly translucent, but become dark as the embryo develops, eventually becoming pink with an orange, anchor-shaped mark.

One generation occurs per year. Inactive adults spend the winter and summer months in leaf litter and dense low growing vegetation. The lifecycle begins when overwintering females migrate small grain fields to feed and oviposit. Eggs hatch during the spring and first instar nymphs remain clustered around the eggs. Once the second instar emerge, the nymphs become more active, feeding on the leaves of the plant. Young adults will feed on the developing host plant until they are ready for migration and hibernation.

Wheat is damaged most by the sunn pest, but barley and other cereal and small grains are known to be damaged by pest activity. Nymphs prefer to feed on young leaves, while adults prefer to feed on kernels and ears, which stunts growth and plant development. Damage can be at its worst when overwintering adult's feet on young wheat plants. In some areas, crop loss can be as much as 25-100% depending on the severity of the outbreak and if there is an absence of control measures. Chemical control is difficult and not environmentally sustainable.

If you have question or concerns regarding the headliners, OR you believe you have identified a sunn pest infestation, contact invasives@shsu.edu for further instructions.



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Sunn pest (*Eurygaster integriceps*). Credit: Natasha Wright, Braman Termite and Pest Elimination.



Top- sunn pest eggs, Bottom- nymph hatching from eggs, note darkening of eggs and anchor-shaped mark. Credit: ICARDA CC 3.0