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Lesser Cornstalk Borer on Peanut

Elasmopalpus lignosellus (Zeller)

Description: The lesser cornstalk borer (LCB) larva (up to 3/4" in length) is bluish-green with brown or purple bands. When disturbed the larva thrashes wildly. Larvae build a distinctive sand-covered silken tube that is attached to the host plant. The adult female is a charcoal-colored moth (about ½" long) with the wings held straight back along the body at rest. The male moth is tan with charcoal wingtips.

Lesser cornstalk borer larva (M. Shepard)

Lesser cornstalk borer female moth. (M. Shepard)

Lesser cornstalk borer male moth. (J. Chapin)

Biology: LCB lives on or near the soil surface. Larvae attack the peanut stem at or just below the crown and also tunnel into lateral branches, pegs and pods. LCB is the most economically important peanut insect in S. C. Stem damage to the water-conducting xylem tissue on small plants can exacerbate drought stress throughout the growing season. Direct injury to pegs and pods may be so severe as to cause complete crop destruction under outbreak conditions. LCB also triggers aflatoxin contamination and southern stem rot ("white mold") infection by giving the causative fungi access to the peanut plant at larval feeding sites.

LCB overwinters in the soil as a larva or pupa. The female moth lays about 200 eggs at or near the soil surface. The life cycle can take only 3 weeks and multiple generations attack peanut under extended drought conditions. LCB thrives on hot, dry sandy soils because the larval cuticle or "skin" is able to retain body water much better than most insects.. As a result, the LCB can thrive when conditions are too extreme for the beneficial insects that normally control it.

Lesser cornstalk borer larval sand tubes. (J. Chapin)

Management: Reduced tillage systems have resulted in decreased LCB damage on corn, soybean and other crops. Surface residues reduce crop damage by providing an alternative feeding site for LCB. The previous crop or weed residues may also suppress LCB by harboring more beneficial insects and moderating soil temperatures. The economic significance of reduced tillage in controlling LCB has not been established on peanut however. Irrigation creates a much less favorable environment for the pest, and if a problem does develop, it can be treated effectively by immediately watering in the pesticide. Chemical control of LCB without irrigation is erratic because populations are highest under the dry soil conditions that make granular insecticides least effective. The ideal situation is to have rain immediately after treatment to move insecticide into the soil. Rain within 10 - 14 days of granular chlorpyrifos application will usually provide significant control.

To scout for LCB, uproot a plant or small plant clump in 10 locations in a field. Lift the plant laterals and gather them into a bunch as you carefully examine the soil surface for larvae. Gently uproot the plant, paying particular attention to the crown area for telltale sand

tubes. Tap the root firmly on the soil surface several times and watch for larvae to fall out. Thoroughly examine the laterals and the plant crown for larvae and sand tubes. If entry holes are visible, split the stem to look for larvae. Pull apart any sand tubes to check for larvae and pupae. Examine the hole where the plant was removed for larvae or tubes. Record the number of plants uprooted and larvae or pupae found. Treatment is recommended if live larvae or pupae are found on 10 % of plants. For chemical control recommendation details, see the current peanut insect control section of the Pest Management Handbook.

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