The European corn borer is a significant pest of field corn, popcorn, and sweet corn. In recent years, however, it has also become a serious pest for other crops, including cotton. In Alabama, damage to cotton is heaviest in the southwestern counties, especially Baldwin, Mobile, Escambia, and Monroe.

The European corn borer is usually a problem only in areas where corn is grown. As corn is harvested, the European corn borer moves into cotton. It is a serious pest in cotton because it is difficult to control. Egg masses are extremely hard to find, and by the time larvae are discovered, insecticides are usually ineffective.

The European corn borer was introduced into North America in the early 1900s, possibly in shipments of broom corn from Europe. Its presence was first recorded in Massachusetts in 1917. Since then it has spread to practically all the major cornproducing areas of the United States and Canada.

Identification

The European corn borer goes through four stages during its lifetime: egg, larva, pupa, and adult. Adult female moths are pale yellowish brown or buff colored with irregular darker bands running in wavy lines across the wings (Figure 1). Male moths are smaller and darker with wings marked in olive brown. The wing span is about 1 inch.

Mature larvae are about 1 inch long and vary from pink slate gray to pale brown with a dark gray middorsal line on the abdominal segments. They are marked with brown spots (Figure 2). The brown pupae are usually found inside the stalk, on leaf axils, or on other plant parts (Figure 3).

Life Cycle

Eggs hatch in about a week, depending on the temperature. The small larvae feed for 2 to 3 weeks and then pupate. After pupation, which lasts only a few days, moths emerge and begin laying eggs.

European corn borers overwinter as full-grown larvae. The surviving borers become active in April or May and begin development. There may be four generations per year in corn with the latter two also occurring in cotton.

Damage

European corn borer larvae damage cotton by feeding on the large bolls from early August through late September. This damage can be quite significant in late season cotton. Although these pests do not feed as extensively within the bolls as bollworms do, most bolls are destroyed (Figure 4).

Earlier but less serious damage occurs in mid-July through late August. The terminal or branches above the feeding site become yellow, wilt, and even-
tually die. Although this damage looks severe, it usually causes little economic loss.

The early, immature larvae cause damage at this time by boring or tunneling into stalks. Frass can be seen where the borers have tunneled in the stalks (Figure 5). Frass near these entrance holes resembles sawdust. Larvae will also bore into bolls. There, the frass does not look like sawdust but is sticky and clumped together (Figure 6).

Management and Control

Control of the European corn borer is extremely difficult and poses an unusual problem. Egg masses are almost impossible to find even by trained scouts searching in heavily infested fields. Even if egg masses are discovered, there is little time, usually less than 24 hours, to apply effective treatment. Because larvae bore into the plant at such an early stage and enter at the base rather than the top of the boll, they are difficult to spot. By the time larvae are found feeding, insecticides are usually ineffective. As a result, there is no control threshold for European corn borers. However, some larvae are killed by insecticides applied for other pests such as bollworms, budworms, and fall armyworms.

Even though scouting for borers does little to benefit the grower, fields should be scouted anyway to detect the caterpillars. This scouting can be done in conjunction with scouting for budworms. Cotton bolls must be cut open at the base with a knife to reveal the tunneling larvae. Sometimes the pupae may be found. If many larvae are found or many bolls are damaged, it could indicate that late, rank cotton crops should be avoided in the future.

![Figure 4. Boll rot caused by earlier European corn borer feeding.](image4)

![Figure 5. European corn borer frass at entrance hole on stem](image5)

![Figure 6. European corn borer frass on green boll](image6)