Wireworms
AS PESTS FOR SUGARCANE

Blake Wilson, Assistant Professor
LSU AgCenter Sugar Research Station

Wireworms are larvae of click beetles (*Coleoptera: Elateridae*), which are sporadic pests of sugarcane in Louisiana and Florida. It is thought the primary pest species is *Melanotus communis*, but additional species may also be present. The larvae live in the soil for one to two years, feeding on whatever plant matter is available. The diet of wireworms is highly variable, and many species are omnivorous, feeding on plant material and other soil-dwelling insects. These larvae can survive for several months without food, allowing them to persist between crop cycles. This means the larvae are already in the soil and ready to begin damaging seed cane as soon as the rows are closed. Under severe infestations, more than 90 percent of eye buds can be destroyed before emergence from the soil, resulting in a near total loss of plant cane in affected areas of fields. Wireworm infestations are not typically distributed throughout a field but affect smaller areas and cause bare patches across several rows (Figure 1). Wireworm infestations should be confirmed by digging up mother stalks and examining eyes for damage (Figure 2) as well as sifting through the surrounding soil for the presence of larvae. The orange-colored wireworms (Figure 3) are fairly easy to spot, but you may have to dig out several feet of row before finding one.

Figure 1. A bare patch of poor plant cane establishment caused by a severe wireworm infestation.

Figure 2. Wireworm feeding injury to seed cane. Damaged eye bud (left) and tunneling in mother stalk (right).

Plant cane that emerges well in the fall is not thought to be susceptible to wireworm damage, but areas that did not come up may need to be replanted. If this is the case, apply an insecticide to control the wireworms, which are likely still present in affected areas. Two insecticides are currently labeled for wireworms in sugarcane, Thimet and Mocap. Both are granular organophosphate insecticides, which are highly hazardous to applicators. Follow all label instructions when applying these products. Avoid higher labeled rates of these products because these rates can kill beneficial insects, including fire ants, which are key predators of sugarcane borers. Applying 5 to 7 pounds per acre is recommended.

Research into wireworm management in sugarcane is scant because of the sporadic nature of infestations and the challenges of researching soil-dwelling pests. Much of the research that has been done in Louisiana is more than 50 years old, and the current pest status of wireworms in the sugarcane industry is not well understood. Recent survey results indicate approximately 70 to 80 percent of plant cane acreage in the state is not protected by insecticides. However, reports of damaging wireworm infestations remain rare. This suggests that damaging wireworm infestations are not widespread, and applications of insecticides will not benefit most fields. Fields in pastures or other grass crops prior to planting cane are thought to be at the highest risk of damaging infestations. Sampling fields prior to planting can help to identify fields that will benefit from insecticidal protection. Bait stations can be placed by burying a handful of deer corn pre-soaked in water overnight and marking the location with a flag. Dig the corn up after several days to one week and examine for wireworm larvae. If larvae are present, consider applying insecticides at planting.

Figure 3. Wireworm larvae in soil.

Author and photographer:
Blake Wilson, LSU AgCenter Sugar Research Station

William B. Richardson, LSU Vice President for Agriculture
Louisiana State University Agricultural Center
Louisiana Agricultural Experiment Station
Louisiana Cooperative Extension Service
LSU College of Agriculture

Pub. 3656 (online only) 11/18