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By Michael J. Brewer, former assistant professor/specialist and Christopher Oswald II, graduate student
Department of Renewable Resources • University of Wyoming

Wireworms

Melanotus spp.

WIREWORM, *Melantus spp.*, larva and corn root injury, see color print, Fig. 15, on publication B-1013.

Order:	Coleoptera (beetles)
Family:	Elateridae (click beetles)
Metamorphosis:	Complete (egg-larva-pupa-adult)
Mouthparts:	Chewing in larvae and adults

Wireworms are found throughout the world in most kinds of soil. In the western region of the United States, they occasionally damage corn, potatoes, and cultivated grasses.

Body Form

Eggs: Wireworm eggs are pearly white in color and are usually extremely small. Often they are not visible in the soil.

Larvae: Larvae have prominent black or dark brown jaws and are long and cylindrical in shape. Their bodies are hardened and segmentation of the abdomen is clearly visible. Larvae are dark yellow to brown in color. Wireworm larvae are approximately ¼ inch to 1½ inches length. The length and size of the larvae tend to vary among the different species and are partly dependent upon the availability of food.

Pupae: The pupae are white or creamy white and soft bodied and are found in cracks and crevices of the soil.

Adults: Adults have very hardened bodies. They may be gray, brown, or black in color. The body of an adult tapers in both directions. The posterior edges of the pronotum (the "neck" region) are pointed back along the length of the body. The length of the adults may range in size (depending upon the species) from ¼ inch to 1½ inches. Adults are known as click beetles because of the clicking sound they emit when trying to flip and "right themselves."

Life History

Females will lay their eggs in soil 1 to 5 inches in depth during the early spring and summer months. In approximately two to four weeks, the larvae emerge and begin to search for an available food source. Wireworm larvae may live and feed in the soil for two to six years before pupation (the longer-lived species are usually associated with perennial plants). Pupation generally occurs late in the summer. Adult click beetles will usually not emerge from their puparia until the following season. Generally, wireworms overwinter as larvae; however, overwintering can occur in all stages of the life cycle.

Plant Injury

Wireworms feed on numerous hosts including corn and potatoes and a variety of cultivated grasses. Wireworm larvae feed and tunnel in seeds, underground stems, roots, and tubers in the soil. Young seedlings often appear stunted and weakened if heavy infestations are present. The plants may soon die after sprouting. Plant wounds caused by wireworm feeding or tunneling may provide an entry for various soil-borne pathogens, resulting in further plant decay.

Management

Crop rotation combined with regular irrigation and soil aeration can discourage and reduce wireworm infestations. The elimination of volunteer plants and weed hosts serves to regulate wireworm populations and destroy potential overwintering sites. Insecticides may be used to control severe populations. Soil-applied insecticides used to manage other more frequently occurring pest insects often reduce wireworm infestations.

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