GRASSHOPPERS Orthoptera: Acrididae

Migratory Grasshopper Melanoplus sanguinipes, Twostriped Grasshopper M. bivittatus Redlegged Grasshopper M. femurrubrum, Clearwinged Grasshopper Camnula pellucida Bigheaded Grasshopper Aulocara elliotti

DESCRIPTION

Adults of the migratory grasshopper are about 25 to 30 mm long and light brown with dark markings. Adults of the twostriped grasshopper are about 36 mm long, greenish-yellow or olive, with two light yellow stripes running from the back of the head to the wing tips. The yellow on the hind femur has a conspicuous black dorsal band. Adults of the redlegged grasshopper are about 20 to 25 mm long with a bright yellow ventral surface and the remainder of the body reddish-brown. This species has a red hind tibia. Adults of the clearwinged grasshopper are about 25 mm long, yellow or brown and marked with large, dark brown spots. Adults of the **bigheaded grasshopper** are about 25 mm long with a grayish-brown body and a deep blue hind tibia. The head appears large in relation to the body.

ECONOMIC IMPORTANCE

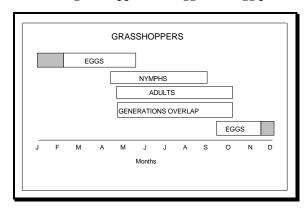
There are about 70 different species of grasshoppers that are common in the western United States. The greatest damage occurs in areas where the annual rainfall is low in areas east of the Cascade Mountains in the northwest. During outbreak years they can defoliate potatoes and transmit viruses, such as spindle tuber and unmottled curly dwarf.

DISTRIBUTION AND LIFE HISTORY

These species overwinter as eggs in the soil. Eggs are laid in pods in the soil during late summer and fall and nymphs begin emerging in April, May, and June. Nymphs feed on vegetation for 40 to 60 days before molting into adults. Adults disperse to suitable hosts during the summer and can do serious damage to crops. Adults mate in late summer and lay overwintering eggs. Some species have well-defined breeding and egg laying areas. In most areas, eggs are laid in waste areas, along roadsides, and around field margins. For example, an egg bed of the clearwinged grasshopper may contain as many as 3,000 to 100,000 eggs.



Adult grasshoppers and eggs from egg pod



MANAGEMENT AND CONTROL

Temperature and moisture are important factors in reducing grasshopper populations. Heavy mortality occurs in the spring when warm weather causes premature hatching of eggs. In late spring, short periods of hot weather increases the incidence of fungus and bacterial diseases. Grasshopper control should be initiated when the population reaches about 8 per square meter and while the grasshoppers are in the nymph stage (treatment depends on the host plant and its value). Insecticides are frequently used to control outbreaks, and cost sharing control programs on an area-wide basis may be coordinated among growers and Federal and State governments.

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