

FULLER ROSE BEETLE A PEST OF AVOCADOS

Calvin C. Delphey

Farm Advisor and Director of Agricultural Extension in Ventura County

Considerable damage has resulted from the attacks of Fuller rose beetle on young avocado trees. This beetle is a common pest of a great many different trees and shrubs and if not controlled, will cause severe damage. Young plantings of avocados in the Ventura and Montalvo areas have been severely damaged and in some instances young trees have been completely killed by these pests.

The Fuller rose beetle, scientifically known as *Pantomorus godmani*, is a gray-brown snout beetle about one-third of an inch long. The snout is rather short and square, and there are two whitish marks on either side of the body. These marks distinguish the snout beetle from others of similar nature which have also been found attacking avocados and other trees.

As the name implies, it is a severe pest on roses and also has caused considerable damage to citrus trees, particularly young trees. It also attacks a great number of weeds and crop plants. Since this insect is a chewing insect, severe damage is done by the adults chewing the leaves, and damage to the roots by the larvae under ground. One of the characteristics of the damage to leaves by this insect is a gouging of the edges of leaves. It no doubt causes more damage to the trees or plants than is recognized on the surface.

According to Dr. R. C. Dickson in a University of California bulletin #718, no males are produced. All females are known as parthenogenetic, that is, they produce fertile eggs without mating. The eggs are laid in the late summer or fall in crevices of the bark of trees, at the base of plants or other trees. The individual eggs are pale yellow, slender, and about one-sixteenth of an inch long. Eggs are laid in masses of three to thirty or more, and are covered by a white spongy material. The eggs hatch in about three weeks, and the newly emerged larvae fall or jump to the ground. The larvae are legless and enter the ground through cracks or openings in the soil.

Considerable damage to roots is done by the growing larvae in the soil and many times the roots have been found to be completely girdled by the eating habits of the larvae of this insect.

When the larvae stop eating they pupate in the soil and form earthen cells in which they transform to pupae and later to adult beetles. The beetles remain in the cells until they are fairly well hardened and then force their way to the surface. The flightless beetles are rather long-lived, feeding and laying eggs for several months unless eaten by birds or spiders.

Severe damage by these adult beetles was noted in the Ventura-Montalvo areas.

Young avocado trees growing in protectors were found to be severely damaged by these pests. Some trees were almost defoliated and others were severely damaged by removal of bark. In some instances the trees had completely collapsed and died and had to be replaced.

Control measures are important. The mature beetle is wingless and moves about only by crawling. Banding of larger trees by the use of cotton or other materials has many times prevented the beetles from crawling up into the trees. The use of 50 per cent cryolite dust applied in the summer or early fall has given good results in the control of this pest. Many of the newer type of insecticides have been used. Five to ten per cent DDT dust has proved to be very effective in the controlling of the Fuller's rose beetle. Young trees growing in protectors may easily be treated by forcing dust down into the container around the tree.

A suggestion to growers — the Fuller's rose beetle can cause much damage in a very short time. Be on the lookout for leaves that have been chewed, particularly around the edges of the leaf. Investigate thoroughly to see if any beetles are present on the plant or trees. Usually the beetles work only at night or in the shade. In the daytime they hide in the crevices of the soil around the base of the tree. By pulling back the soil to a depth of half an inch or so you will find these beetles hiding in the soil. As many as twenty beetles have been found under one single young avocado tree.

Treat your trees as many times as necessary to prevent damage by this pest. As this beetle has been found in almost all avocado growing areas of the county, it is necessary to be on the lookout for this pest at all times.

Reference: Bulletin 718 entitled "Fuller Rose Beetle - A Pest of Citrus" by Dr. R. C. Dickson, University of California Agricultural Experiment Station, Berkeley.