

MECHANICAL BAIT APPLICATOR

Controls Gophers



in Citrus

Trials and field use have demonstrated the effectiveness of the mechanical bait applicator to control gophers in orchards. The machine is most useful in orchards having large numbers of gophers and a grass cover crop.

THE GOPHER-BAIT applicator developed by the University of California recently helped several San Diego County citrus and avocado growers control heavy gopher infestations. This tractor-drawn machine has also been used in other areas to control gophers in prune, apple, pear, peach and cherry orchards.

The bait applicator trials in San Diego County were in an orange grove with a high population of gophers and a thick bermudagrass sod. Gopher control in orchards with such cover crops is especially difficult with other control methods. However, results of this first test showed 89 per cent control. Of 37 fresh workings

only four remained active. These were hand-poisoned later by the grower. Another test produced 95 per cent control in a young orchard heavily infested with gophers. Thirty-four of 36 gophers were killed in the observed area.

The mechanical gopher-bait applicator has a burrowing device on a shank that makes an artificial "run" at a depth which intercepts the gopher's own tunnel—about 6 inches in the groves tested. The bait is delivered to the burrow through a tube built into the rear portion of the burrow-forming shank. The applicator is designed for mounting on a tractor with a conventional three-point hitch.

The machine was used once between each tree row. Since gopher runs extend throughout several hundred square feet, most of them were intercepted. The machine meters poisoned grain into the burrows. The gopher's aggressiveness and

natural curiosity causes him to investigate the new burrow.

Caution is necessary to see that the shank does not break irrigation pipe lines during the sub-soiling type operation. Since the machine was used in the centers between the rows, very few tree roots were disturbed.

The mechanical bait applicator has been field tested using several different mixtures of poisoned grain ranging from $\frac{3}{4}$ pound to over 4 pounds per 1,000 feet of the burrow. The usual rate has been about one pound per acre of wheat or hulled barley treated with 3 per cent strychnine. Bait cost is about one dollar per acre, and 5 to 10 acres per hour can be treated.

Donald O. Rosedale is Farm Advisor, San Diego County, and Maynard W. Cummings is Extension Vertebrate Pest Control Specialist, University of California, Davis.



Gopher-bait applicator as used in San Diego County orange orchard.



The artificial burrow, containing poisoned grain.

Slit visible is where shank of applicator has penetrated the grass cover crop.

