

Test Results Reveal

USDA Loses 'the Thing' on Grubs

A new systemic insecticide for control of cattle grubs, cause of heavy annual losses to livestock producers, has shown promise and versatility in experimental use by entomologists.

The new chemical is an organophosphorus compound known chemically as (0-(4-tert-butyl-2-chlorophenyl) O-methyl methylphosphorodithioate). It can be administered either orally or as a spray.

Used orally, the chemical at the highest test dosages used provided control amounting to 94 to 100 per cent. Used as a spray, it provided 99 to 100 per cent control. The chemical is not yet available to cattlemen.

Test results were reported Nov. 26, to members of the Entomological Society of America holding their sixth annual meeting at Salt Lake City, Utah.

Adolph R. Roth and James W. Eddy, entomologists of USDA's Agricultural Research Service, conducted the

tests at Corvallis, Ore., during the 1957-58 grub season.

Discussing findings of the test, Mr. Roth said that one previously tested chemical had only proved effective as an oral treatment while another was effective only as a spray. The new chemical, he said, gave excellent results, used in either manner.

Experimental treatments, Mr. Roth explained, were most effective when the dosage administered in bolus or capsule forms amounted to 20 or 25 milligrams of the new chemical to each kilogram (about 2.2 pounds) of body weight of the test animals. Results were fair, however, when oral dosages of only 4 to 15 milligrams per kilogram of body weight were given.

The researchers obtained nearly perfect control results when 4 quarts of spray were used per animal, but a 2-quart application provided about 70 to 80 percent control. The spray formulation included a wettable powder containing 0.75 percent active material. Sprays were applied under an operating pressure of 250 to 300 pounds. Hereford yearlings weigh-

ing 400 to 500 pounds were used in the experiments.

They were treated in the fall of 1957 and examined for grubs last February, March, April and May. The grubs, *Hyponderma lineatum*, normally appear largely in March. Those appearing in April were mainly of the *H. boris* species.

The test animals were selected at random and ear-tagged. They were not separated from the animals used as controls.

In addition to the Hereford yearlings used in the last test, all of which were treated before the grubs appeared, a single grub-infested yearling Guernsey steer was treated orally with the 25-milligram dosage after grubs were visible on the animal's back. The animal was infested with 22 encysted second and third-instar larvae, all of which were dead 14 days after treatment.

Philosophy triumphs easily over past and over future, evils but present evils triumph over philosophy.—La Rochefoucauld

Public Farm Enemy No. 1

Records show more than 1,100 fatalities in the United States each year are caused by tractor accidents. Assistant Chester County Agent Frank E. Bortz says many of them can be avoided by just being careful and taking your time. He suggests these points to remember when operating tractors and other farm machinery.

A child's safety is a parent's responsibility. Teach children the importance of safety and point out dangers involved in the use of machinery. Emphasize that operating a tractor is a job for a mature person.

The tractor is the Number One farm killer. Tractors are involved in 35 per cent of all accidents. Forty per cent of all tractor accidents are fatal to the operator.

Chances of an upset increase four times when speed is doubled. If possible lock brake pedals together when driving on the open highway. Use brakes cautiously and

keep them evenly adjusted. Throttle down before making turns.

A tractor has only so much weight. Do not carry extra riders either the tractor or the implements.

Avoid climbing steep banks with the tractor. Overturns are one of the chief causes of tractor accidents. Be careful where you work. Often ditches, stumps and tall grass or brush and tractor may overturn with little warning.

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