

Insect Growth Regulators For Cattle Production

Insect growth-regulators, or hormone-mimicking compounds, may help rid cattle of flies that cause major losses in milk production as well as reduced gains in weight of beef animals, according to results of tests reported by A U.S. Department of Agriculture (USDA) scientist here recently. Control of flies is im-

portant from the standpoint of disease prevention as well as the pests' nuisance factor, which has been estimated to cause losses exceeding \$500 million annually in reduced production of milk and meat.

Experiments with synthetic mimics of natural juvenile hormones of flies were described in a talk at the Eastern Branch Meeting, Entomological Society of America, by Dr. Richard W. Miller, an animal scientist of USDA's Agricultural Research Service, Beltsville,

Md. He incorporated the compounds in cattle feed; they passed through the animals' digestive system, permeating the manure, a prime material for the flies' development. At critical periods, hormones are necessary for the continued development of fly larvae and pupae. When present at the wrong time, however, the hormone dooms the immature insect to remain at that stage of development until it dies. ARS chemist Meyer Schwarz synthesized one of the most promising

hormone mimics tested by Dr. Miller.

Horn flies and face flies are a problem in pastures rather than barns and thus are particularly good targets for growth-regulators. Moreover, it would be impractical to spray pastures to control these pests. Removal of the manure would be equally unfeasible.

"Integration of growth-regulators with sanitation and traditional insecticides offers the best potentials for control of flies," Dr. Miller said. "Our tests demonstrated that house flies and stable flies find alternate breeding places such as untreated wet straw bedding, and thus could remain a problem when growth regulators are used alone."

Dr. Miller also briefly described research with the sex attractant of the face fly.

Hormonal compounds of the type being tested by ARS have been shown to readily breakdown in the environment. The experimental growth-regulators tested by Dr. Miller are not registered for use as feed additives. Approval by the Food and Drug

Administration and by the Environmental Protection Agency will be needed before insect growth-regulators may be used as a feed additive.



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Mexican Beetle Infests Soybeans

Heavy infestations of Mexican Bean Beetles in soybeans have been reported on the Eastern Shore and Southern Maryland, says the Maryland Department of Agriculture.

The State agriculture agency here has received reports that some farmers are applying or hiring custom applicators to apply the chemical dimethoate, commonly known as Cygon or De-Fend, for the control of this insect on soybeans.

Ronald Johnson, Director of Plant Industries Division, says that this chemical is not registered for use on soybeans by the Environmental Protection

Agency and, thus, it is a violation of the law to use it on that crop. He warns both custom applicators and farmers that there may be serious consequences from illegally using this product. Applicators could lose their licenses if convicted of applying the material since it is not labeled for this use. Farmers would be subject to having their crop destroyed if illegal residues were found by the Food and Drug Administration.

Since the Mexican Bean Beetle will cause little damage to the soybeans, unless defoliation exceeds 25-30 percent, farmers are advised against spraying in many instances. If defoliation exceeds 25-30 percent, Johnson suggests spraying with carbaryl, commonly known as Sevin, or malathion. Both of these products are registered for this use by EPA and are recommended by the

University of Maryland Cooperative Extension Service. These materials would also be effective against the corn earworm and green clover worm, which may be attacking soybeans at this time.

Seek the advice of your County Agricultural Agent to determine if spraying is necessary, advises Mr. Johnson.

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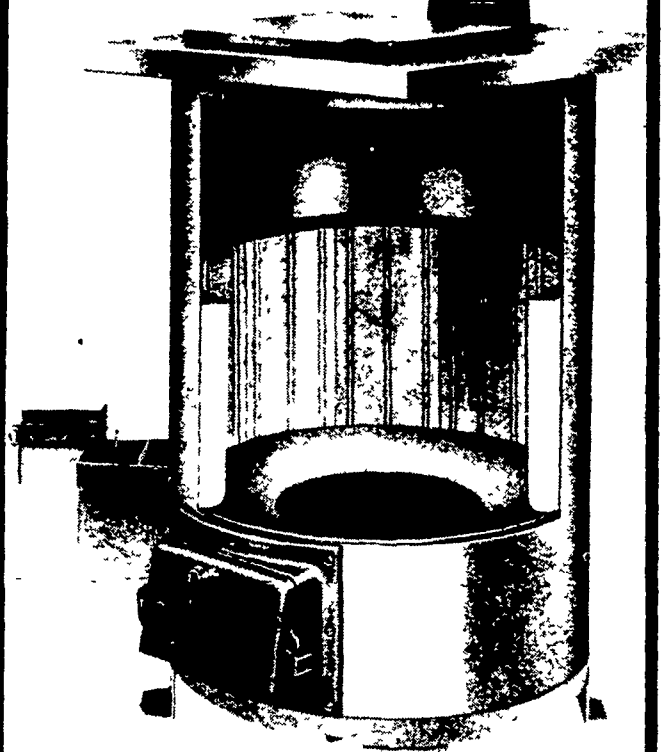
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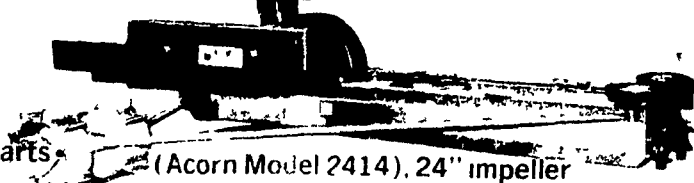
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