

US EPA ARCHIVE DOCUMENT

 Efficacy
DATA EVALUATION RECORD

TRICHLORFON

Acute Dermal Toxicity in Cattle

CITATION: Khan MA. 1971. Some factors involved in systemic insecticide toxicosis; esophageal lesions in heifers treated with coumaphos, crumfomate, and trichlorfon. Can. J. Anim. Sci. 51(2):411-417.

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- f. Cholinesterase in the brain and vertebral canal of the grubs collected from the slaughtered cattle was estimated by a histologic method.

RESULTS:

The treated heifers appeared clinically normal. Gross lesions were seen in the esophagi and vertebral canals of treated animals. One animal had kidney and liver inflammation. There was acute inflammation and hemorrhaging in the muscular layers of the esophagus. A thick layer of mucous covered the esophagus. In the two treated cattle, moribund larvae were found in the esophagus (2 and 6) and spinal canal (8 and 4). In heifer No. 1 live grubs (6) were found on the back. "Blood cholinesterase was not notably inhibited in the treated cattle." However, in grub larvae, cholinesterase activity was depressed in brain and ganglia (50 to 62 percent inhibition). Lesions in the esophagus were attributed to excessive amounts of proteolytic enzymes being released from the grubs after cholinesterase inhibition. There was no correlation between the number of larvae and the severity of esophageal lesions.

CONCLUSIONS:

Although trichlorfon kills cattle grubs in infested animals, there is an accompanying severe esophageal inflammation which the author attribute to the release of proteolytic enzymes from the grubs.

CORE CLASSIFICATION: Invalid.

The study is -Core Invalid since cholinesterase activity data for the heifers was not presented nor was proteolytic enzyme activity measured. The limited number of animals used and the limited data presented did not support the conclusions.