

M e m o r a n d u m

[HSM no assigned after original issuance of memo]

To: Barry Cortez, Acting Chief
Pesticide Registration Branch

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Sacramento

phone: 645-0455

From: Department of Food and Agriculture - Michael H. Dong, Staff Toxicologist
Worker Health and Safety Branch
[original signed by Michael H. Dong]

Subject: Exposure Assessment for Use of Tomahawk Insecticide Ear Tags on Beef and Non-Lactating Cattle

This is in response to the request that the exposure potential be reevaluated for continued use of the above product (EPA Reg. No. 59-218) on beef and non-lactating cattle. This insecticide contains the new active ingredient pirimiphos-methyl, which has demonstrated adverse chronic effects and is an organophosphorothioate compound with moderate acute toxicity.

A careful review of the data [1] at hand indicated again that no significant human exposure would occur from handling this subject product. WH&S further supports the contention that additional data/information are not required at this time in order to permit continued use of the product, since its registered use apparently precludes any significant exposure to wildlife, fish, or the users.

According to the product label, the user must wear nonpermeable protective gloves when applying or removing the ear tags. The label also calls for first dipping (male/pin type) tag buttons into disinfectant solution and then applying the tags onto the animal's ears with a clipper. These use directions ensure little or no dermal contact by the applicator. No individuals or other animals are expected to come into contact with the treated ears or the clipped ear tags for any significant duration.

Although pirimiphos-methyl is a semi-volatile compound, inhalation exposure would be negligible in that the application is to take place in an open area. This expectation is also based upon the consideration that an applicator is not likely to be enclosed by more than a handful of treated animals at any given moment. Clinical toxicity was not observed in any of the treated animals in a subchronic study conducted by the registrant [1]. Dietary exposure also does not seem to be a concern here, while it is well recognized that this is primarily a determination to be made by the Medical Toxicology Branch. For there was no bioaccumulation of pirimiphos-methyl found beyond day 3 of daily dosing in any of the treated animals (rats) in which this metabolic process was followed [2] (despite the fact that the metabolism study *per se* was considered unacceptable because of inadequate numbers of animals tested).

References

1. Coopers Animal Health, Inc. (1988). Tomahawk® Insecticide Ear Tag for Cattle - Application for Pesticide Registration. California Department of Pesticide Regulation Registration No. 409-011.
2. ICI Americas. (1975). Pirimiphos-Methyl: Metabolism in Rats and Dogs. California Department of Pesticide Regulation Registration No. 409-004.

cc: John Ross
Wayne Stringer