

003266

Memorandum

Date: 23 September 1983

Subject: BRODIFACOUM RODENTICIDE; HUMAN EXPOSURE IN INDONESIA

Identifying No. 16-502

Caswell #114AAA

In 8-31-83; Record No. 104155; Acc. 251299

From: B. T. Backus
IRB/TSS

To: Mr. William Miller
Product Manager 16

Registrant: ICI Americas Inc.
Agricultural Chemicals Division
Wilmington, DE 19897

Background:

This is a report of a mass human poisoning incident in Indonesia involving Brodifacoum-treated rice intended and labeled for use as a rodenticide.

Poisonings occurred in two somewhat isolated villages in southern Sumatra. A drought this past year had resulted in lack of a rice harvest. Villagers are reported to have been starving. There was a considerable amount (several hundred kg) of Brodifacoum-treated rice, colored blue-green as a warning. Attempts were made to render it non-toxic by washing it 3-6 times; when there were no symptoms 1-2 days after the first individuals had eaten the washed rice other villagers began eating it. Villagers may have been able to wash the color out of the bait formulation.

Symptoms (nose bleeding) began appearing 10 days after ingestion, and mortalities began occurring 5 days later. Of 71 individuals known to have ingested the product, at least 20 were known to have died by early January, 1983, while 24 were or had been under medical treatment. ICI arranged for shipment of vitamin K₁ and prothrombin monitoring, and ICI personnel arrived in Sumatra on 18 January. There were problems with officials of the Indonesian government, which has a policy of encouraging families from overpopulated Java to settle on Sumatra, and which apparently does not wish to publicize the difficulties that settlers are encountering.

It is reported that it took 15-21 days after initial ingestion for death to occur. Treatment consisted of injections of vitamin K₁ for individuals with symptoms or whose prothrombin times indicated a problem existed. Others who had ingested small amounts of bait were given vitamin K₁ tablets.

Urgent consideration is being given to changing the bait formulation to a wax block type of product to reduce the risk of further incidents.

003266

Comments and Recommendations:

1. There are a number of considerations which would make it unlikely that an incident of this nature could occur in this country. One of these is that apparently considerable quantities of Brodifacoum-treated rice were available to these individuals. An additional factor is that these individuals were apparently starving and desperate.
2. It is not known whether the blue-green coloration could be washed from this bait. If it could, then perhaps the villagers considered its disappearance as evidence that the bait was no longer poisonous.
3. One possible change in precautionary labeling would be to add a statement that bleeding might not appear until ten or more days following ingestion. However, there are uncertainties in the information received (i.e., the initial dosages may not have been toxicologically significant). It also may have been that there was some success (but obviously not complete) in removing Brodifacoum from the bait.
4. IRB/TSS recommends that this report be accessioned. Given the product uses and anticipated potential exposure, no revisions in precautionary and/or first aid statements appear to be necessary for Brodifacoum-containing rodenticides registered for use within this country.

Byron T Backus 09/23/83

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2