

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: April 18, 1977

SUBJECT: Response to Camp memo of March 30, 1977
(Thiabendazole on Soybeans)

FROM: Environmental Chemistry Section
Efficacy & Ecological Effects Branch

TO: Acting Director
Registration Division

THRU: Pesticide Science Officer

In response to your subject memo:

1. Note that environmental chemistry data requirements were not requested for tolerance establishment but were requested in support of registration as outlined in the evaluation.
2. The statement regarding rotational crop data, deficiency #2 listed in RD letter of December 14, 1976 to Merck did not originate in the Environmental Chemistry Section.

We requested the 4 requirements listed in deficiency #1 of the December 14; letter. Those 4 requirements investigate:

- (1) aged leaching characteristics
- (2) field soil dissipation characteristics
- (3) photodecomposition
- (4) effects of microbes on pesticides, sterile vs. nonsterile.

Without the aged leaching and soil photodecomposition investigations, we do not know the mobility of degradation products or what photolysis products are formed (which may be unique to photolysis). Therefore, we cannot assess the hazards of these products with regard to accumulation in fish and rotational crops. (Even though fish accumulation and rotational crop data for thiabendazole show virtually no uptake, different results may occur for products formed in the photolysis investigation). Also, without investigations into field soil dissipation, effects of microbes on pesticides and soil photodecomposition, we cannot determine field persistence and mobility which are used to assess hazards to non-target organisms as fish and rotational crops.

As can be seen, the overall environmental chemistry study required for a particular use pattern is composed of various investigations which are interrelated and interdependent.

The results of each individual investigation permits a determination of the fate of the pesticide under limited conditions, but an assessment of the hazards of the pesticide in the environment can be made only when the results of the different investigations are pooled and analyzed together.

The subject concerns the use of thiabendazole on soybeans. The proposed use is considered a major use. This use may involve more acreage being treated with thiabendazole than is the case with any of the currently registered uses of thiabendazole. The environmental hazards associated with the proposed use cannot be assessed without addressing the outstanding data requirements.

Ronald E. Ney, Jr.

Ronald E. Ney, Jr.