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MEMORANDUM

SUBJECT: Review of EEB Request for Residue Monitoring of Simazine when used on Noncrop Areas

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On September 8, 1987, Henry Craven, Ray Matheny and Daniel Rieder of EEB met with Tom Parshley and Dr. Richard Ross of CIBA-GEIGY to discuss EEB's request for residue monitoring. In a November 19, 1986 letter to CIBA-GEIGY, the request for residue monitoring of avian food items was made. The concern was that residues immediately following application at higher dosage rates may present significant risks to birds. This is based on the fact that Simazine is expected to be extremely persistent on plant surfaces and birds would be exposed to chronic residues exceeding avian reproductive NOEL.

The purpose of the meeting, requested by CIBA-GEIGY, was to clarify the typical use of Simazine when it is applied to noncrop areas. They explained that Simazine was applied by ground equipment to unvegetated areas. It was further explained that Simazine would not be effective if applied to emerged weeds. Based on this CIBA-GEIGY contends that residues of Simazine would rarely reach ^{CONCURRENCES} avian habitat. Further, any that did (via drift) would be in a small strip adjacent to the

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unvegetated area and chronic exposure would be unlikely since birds move around and would not feed in that strip continuously. They did not address the aerial application of Princep 80W. CIBA-GEIGY also asked that additional modifications to the noncrop use they could make to reduce our concern for chronic exposure is birds.

The EEB has reviewed the request for monitoring in light of the additional information provided. Several issues require discussion.

1. The granular formulation is not considered to constitute a chronic hazard because the granules are likely to breakdown long before chronic exposure could occur. Therefore, with no monitoring of Princep 80W is required. Incidentally, the acute toxicity of Simazine (Mallard LD50 >4640 mg/kg) is such that the acute hazard from birds ingesting granules is minimal.

2. In the Princep 80W label under nonselective weed control on noncrop land there is discussion of applying the product to areas where weeds have grown and then removed (presumably by mechanical means). This is clearly a different situation, ecologically than application to bare ground. Stubble which could presumably remain for weeks, and cut vegetation, may provide various sites upon which Simazine could reside and result in chronic exposure to bird species. This exposure would primarily result from ingestion of seeds. Seeds and seed pods typically, would be expected to have 54 ppm (18 lb ai/acre X 3 ppm = 54 ppm). CIBA-GEIGY also presented information in that meeting suggesting Simazine on vegetation exhibited a half life of 10 days, however, the data were not validated. It is likely, however, based on its solubility (3.5ppm), that it would wash off readily. Therefore, residue levels would not be expected to exceed the reproductive NOEL long enough to be hazardous. Other vegetation would have higher residues but would not likely be palatable to birds after a few days. Chronic exposure at or above the chronic NOEL is not expected from direct application to vegetated areas.

3. The Princep label also describes aerial application. It is difficult to conceive of applying a product to tank yards, road and railroad rights-of-way with aircraft, so presumably it could be applied to larger areas. Aerial application could result in exposure via drift to, and overspray on, adjacent habitat. This is estimated to be 5% of the maximum application rate. The maximum rate is 18 lb ai/acre X 5% equals 0.9 lb ai/acre. Since Simazine does not tend to be effective on emerged vegetation exposure due to drift would continue until it dissipated since the plants would not die.

If 0.9 lb ai/acre is applied, the following typical residues (ppm) would occur.

Short Grass	Long Grass	Leafy Crops	Insects Forage	Seed Pods	Fruit
113	83	32	30	3	1

Again, it is unlikely that these residues would remain long enough to be a chronic hazard.

Conclusions

Therefore, based on the available information, it is unlikely that the use of Simazine on noncrop areas would result in chronic hazard to birds. The request for residue monitoring is withdrawn.