



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 28 1991

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

SUBJECT: QUALITATIVE ASSESSMENT OF THE INCREMENTAL EXPOSURE TO HUMANS RESULTING FROM THE PROPOSED USES OF MALATHION AND DIAZINON UNDER THE APHIS SECTION 18 FOR FRUIT FLY ERADICATION (HED PROJECT NO.s 1-0635 and 1-0635A)

TO: Susan Stanton, PM 41
Registration Support Branch
Registration Division (H7505C)

FROM: Curt Lunchick, Acting Section Head
Special Review and Registration Section
Occupational and Residential Exposure Branch
Health Effects Division (H7509C)

THRU: Charles L. Trichilo, Ph.D, Chief
Occupational and Residential Exposure Branch
Health Effects Division (H7509C)

The Occupational and Residential Exposure Branch has reviewed the USDA APHIS request for a FIFRA Section 18 permitting the use of malathion and diazinon to eradicate exotic fruit flies (October 3, 1990). Malathion will be applied by air or ground equipment within the quarantined areas. Diazinon will be applied on the ground within the drip line of host trees or to soil around host nursery stock in the quarantined areas. Malathion would be applied with a protein hydrolyzate bait at 0.15 lbs ai per acre. Diazinon would be applied at 1.8 ounces ai per 1000 square feet.

Both insecticides are common insecticides used by homeowners or professionally applied indoors. The products are readily available over the counter in hardware stores, lawn and garden shops, drug stores, and grocery stores. A review of poisoning incidences for both products indicate that agricultural use does not produce large numbers of poisonings. Most poisonings occur among homeowners misusing the materials or doing other incredibly stupid things. OREB has sufficient information to quantify exposure to malathion for mixer/loaders and pilots. As you noted in the bean sheet, OREB is currently working with APHIS and Dr. Nigg to develop a protocol to monitor human exposure to individuals in the spray areas. Because these materials are often used by homeowners, the increased exposure from the proposed Section 18 is expected to



be minimal. The application rates are lower than most agricultural and residential rates. In addition, the diazinon application is a ground directed soil drenching, a technique that minimizes exposure. Although incremental exposure from the use of malathion by air is expected to be small, one must understand that the aerial application over residential areas will increase the overall numbers of individuals exposed to malathion.

In conclusion, OREB believes the exposure resulting from the proposed uses of malathion and diazinon will be low. The increase to individuals already exposed from personal use of these products will likely be minimal. The aerial application of malathion would greatly increase the number of individuals exposed to malathion, although at low exposure levels.

cc: K. Baetke
Malathion file
Diazinon file
Correspondence file
Curt Lunchick