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

January 3, 1990

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MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: 89-CA-26 Amendment of Section 18 Quarantine exemption for the use of Malathion to eradicate fruit flies on Numerous Raw Agricultural Commodities. [No MRID No., HED No. 0-0277, DEB No. 6059]

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TO: Susan Stanton/R. Cool, PM#41
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California requests an amendment to their recently approved quarantine exemption for the use of malathion to eradicate fruit flies. The recently approved Section 18 quarantine exemption (89-CA-26) was identical to an earlier exemption reviewed by RCB (87-CA-02, M. Metzger, 10/30/86). The amendment is requested to incorporate current treatment standards, and to format the Section 18 to be compatible with the requirements listed in the companion 24(C) registration CA-830012, since both are used simultaneously. The PM should note that DEB has no record of having reviewed CA-830012. RCB did review earlier 24(c) requests for the use of malathion for control of the Mediterranean fruit fly on various commodities (CA-820062 and CA-82-0063, E. Zager, 10/21/82). The earlier 24(c)'s (CA-820062 and CA-82-0063) involved the use of higher application rates than did CA-83-0012. RCB had no objections to the 1982 24(c)'s.

This amended Section 18 quarantine exemption will allow the use of eight (increased from five) malathion formulations statewide in California to control numerous types of fruit flies on the following raw agricultural commodities: allspice, bananas, chapote, chayote, cherimoya, custard apples, eugenia fruits (edible), kiwi, litchi, logan fruit, loquats, mulberry, olives, opuntia (cactus fruit), persimmons, pineapple, guava, sapodilla, sapote, star apples, tomatillos, tree tomatoes, and pummelos. The eight malathion formulations are:

	EPA Registration Number
Malathion 25 Spray	279-739
Prokil Malathion 25-WP	10163-61
Prokil Malathion 8E	10163-21
Clean Crop Malathion 8-E	34704-50005
Clean Crop Malathion 55 Premium Grade	34704-3
Clean Crop Malathion ULV	34704-18
Cythion	241-208
Malathion ULV Concentrate	241-110

NOTE TO PM: 34704-5005 is an intrastate registration which should be subject to Section 3 Registration. (See Malathion Registration Standard.)

Tolerances have been established for residues of malathion in or on approximately 120 raw and processed agricultural commodities ranging from 0.1 ppm in flax seed to 135 ppm in alfalfa, clover, hays and straws (40 CFR 180.111). Most tolerances on fruits and vegetables were set at 8 ppm in PP#19 and PP#89. The Residue Chemistry Chapter for the Malathion Registration Standard was completed 7/31/87, and the Malathion Registration Standard was issued 2/88. According to the Malathion Registration Standard, most of the malathion tolerances are not adequately supported. Additional metabolism and storage stability studies were required, along with residue data for virtually all registered uses. The due date for these data was 10/89. DEB has no record of having received any of these required data for review. We note that the Malathion Reregistration Task Force requested clarification of the data requirements for plant metabolism and storage stability in their letters of 10/2/89 and 10/3/89 (D. Edwards, 10/27/89, DEB No. 5902). The Task Force also submitted a protocol for livestock metabolism studies (M. Bradley, 10/26/89, DEB No. 5759).

Proposed Use

The State of California requests changes to the Section 18 label to make it compatible with their 24(c) label, CA-830012.

Apply 2.8 oz ai of malathion mixed with approximately 9.6 fl. oz. of protein bait hydrolase (or similar substance) per acre. Add water (pH 7) as needed to give the required coverage per acre. The amount in fl. oz. is given for each formulation to achieve 2.8 oz ai/A. Treatment may be by ground or aerial application at 6-14 day intervals, continuing as needed. At the onset of an infestation, ground applications on selected sites may be followed within 24-96 hours with a comprehensive aerial application. This combined treatment will occur only once, after which regular application scheduling will follow. If application

other factors, the entire zone may be retreated in order to maintain the scheduled sequence. Do not treat when there is a 50% or more chance of significant rainfall occurring within the next 24 hours. The PHI is after the pesticide spray dries, which need not exceed 24 hours.

Current 24(c) use under CA-83001

Same as the above proposed use, except that the PHI is 24 hours for grapes, grapefruits, lemons, limes, oranges, tangerines, peaches, and nectarines; or when the spray dries or according to product labeling, whichever is longer.

Previous Section 18 use

Apply a maximum of 2.8 oz ai of malathion mixed with a maximum of 9.6 fl. oz. of protein bait hydrolase (or similar substance cleared for use on food crops) per acre. Apply with up to 39.9 gal water/A by ground or a maximum of 2.9 gal water/A by aerial. Treatment may be by ground or aerial application at a minimum of 7 day intervals. The PHI is 3 days. Residue data will be taken upon treatment of a specified crop under this quarantine exemption. Any treated commodities with residues of malathion in excess of 8 ppm will be withheld from the channels of trade and EPA notified by phone. Residue data should be submitted to the Agency with the required reports.

Previous Section 24(c) Use (CA-820062, CA-820063)

Multiple applications at 0.75 ob ai/A with 1 lb yeast hydrolysate in sufficient water for adequate coverage. 3 day PHI.

Nature of the Residue

The nature of the residue of malathion in plants and livestock is not adequately understood. Additional plant and livestock metabolism studies were required by the Malathion Registration Standard, and were due 8/89. For the purpose of this Section 18 request only, the residue of concern will be considered to be malathion, per se.

Analytical method

Malathion can be analyzed by the multiresidue methods in PAM I. Additional analytical methods may be found in PAM II. These methods are suitable for enforcement. Malathion analytical standards are available at the EPA Pesticide Repository.

Residue data

No residue data were submitted with this Section 18 request. No residue data are available for the commodities listed in this Section 18. Residue data were submitted with PP#19 and PP#89 for a variety of fruit and vegetable crops. These data were determined to be inadequate to support the continued registration of malathion (See Registration Standard). However, for the purpose of this section 18 only, we will extrapolate from these data to the crops in this section 18. We do not expect residues to exceed 8 ppm in any of the subject commodities as a result of this proposed use.

Meat, Milk, Poultry, and Eggs

None of the subject commodities are major animal feed items. Therefore, secondary residues of malathion are not likely to be found in livestock commodities as a result of the proposed use.

CONCLUSIONS

For the purpose of this Section 18, the residue of concern will be considered to be malathion, per se.

Analytical methods suitable for enforcement are available in PAM I and PAM II. Analytical standards of malathion are available from the EPA Repository.

Residues of malathion are not likely to exceed 8 ppm in the subject commodities as a result of the proposed use.

RECOMMENDATION

DEB has no objections to this Section 18, provided the bait used is cleared for use on food crops. An agreement should be made with FDA regarding the legal status of the commodities in commerce.

cc:R.F., circu, S. Hummel, S.F., Section 18 S.F., PMSD/ISB
RDI:FBS:01/03/90:EZ:01/03/90
H7509C:DEB:SVH:svh:RM:810:CM#2:01/03/90