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

DEC 4 1989

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

**MEMORANDUM**

**SUBJECT:** Review of Preliminary Residue Study Results,  
Diazinon DCI. ID No. 100-524. Record No. 254306.  
DEB No. 5970.

**FROM:** Stephen R. Funk, Chemist  
Special Registration Section I  
Dietary Exposure Branch  
Health Effects Division (H7509C) *S.R. Funk*

**THRU:** Andrew Rathman, Section Head  
Special Registration Section I  
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Health Effects Division (H7509C) *ARR*

**TO:** George LaRocca, PM No. 15  
Registration Division (H7505C)

Introduction

Ciba-Geigy Corporation, Agricultural Division, Greensboro, North Carolina has conducted Diazinon residue chemistry studies on leafy vegetables, pome fruits, and stone fruits as required by a May 1, 1987 diazinon data call-in (DCI). Diazinon, or phosphorothioic acid, O,O-diethyl-O-(6-methyl-2-(1-methylethyl)-4-pyrimidinyl) ester, is a non-systemic insecticide. The analysis of the residue data has not been completed by the registrant, and a complete report is anticipated in December 1989. In compliance with FIFRA 6(a)(2), Ciba-Geigy has summarized results that exceeded established tolerances in a letter dated October 20, 1989. The findings are as follows:

TOTAL NO. SITES	CROP	SITE	PHI (d)	RANGE (ppm)	TOLERANCE (ppm) 40CFR180.153
13	Cabbage	NC	7	0.36 - 1.8	0.7
	Cabbage	CA	7	0.17 - 2.4	0.7
19	Cherry	OR	10	0.28 - 0.80	0.75
	Plum	MI	10	0.39 - 0.92	0.5
13	Apple	WA	14	0.21 - 0.79	0.5
	Apple	MI	14	0.64 - 1.9	0.5
	Apple	NY	14	0.39 - 1.1	0.5
	Pear	MI	14	0.42 - 0.68	0.5

Samples from a total of 8 of 45 tests (18%) exceeded the established tolerances. The registrant provided only a range of results and no indication of the distribution or mean. The formulation, application method, and other pertinent details were not provided. The PHI's did reflect those on the approved pesticide labels.

#### Conclusion

No conclusions can be drawn until the complete report, detailing all test site results and methods, is supplied. Given the apparent geographical and crop diversity of the over-tolerance values of samples, a problem does exist, and potential solutions are either raising the tolerance levels or altering the use pattern to lower the residues below the current tolerances.

#### Recommendation

DEB will take no action pending the timely receipt of a complete report from Ciba-Geigy Corporation. DEB defers to TOX and SACB to perform a dietary exposure/risk assessment (DRES) and ascertain the significance of the exceeded tolerances. Ultimately, either usage pattern (a.i./acre, PHI) or tolerance values will require adjustment, if the full report substantiates the summary data submitted.

cc: TOX, SACB (Tomerlin), Diazinon Registration Standard File, S.F., R.F., Circu., R. Schmitt (Branch Chief), Funk, Eldredge (ISB, PMSD)

RDI:A. Rathman:11/30/89:E. Zager:12/01/89:

H7509C:DEB:S.Funk:557-1439:CM#2:Rm803-A:SF(Diazi.1):11/30/89.