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

JUN 10 1981

OFFICE OF
PESTICIDES AND TOXIC SUBSTANC

MEMORANDUM

DATE: June 10, 1981

SUBJECT: PP#0F2413/0H5275; Thiodicarb (Larvin) in/on Cotton and Soybeans
CASWELL#900AA

FROM: William Dykstra, Toxicologist
Toxicology Branch, HED (TS-769) WHD for LDC 6/10/81

TO: Jay Ellenberger (12)
Registration Division (TS-767)
and
Residue Chemistry Branch
Hazard Evaluation Division (TS-769) ok for WB

THRU: Chris Chaisson, Acting Chief
Toxicology Branch, HED (TS-769)

Recommendations:

The journal article entitled "Prevention by Arginine Glutamate of the Carcinogenicity of Acetamide in Rats", Weisburger et al. Toxicol. Appl. Pharmacol. 14, 163-175 (1969), has been reviewed and used for an oncogenic one-hit risk assessment as shown below:

Dietary levels of 2.5% acetamide to male Wistar rats for periods up to 15 months produced the following results for liver tumors:

Dose - 0 mg/kg/day	1250 mg/kg/day
Response - 0/11	12/24
Incidence - 0	0.5

Abbott's Correction

$P = \frac{0.5-0}{1-0} = 0.5$

$B = \frac{1}{1250 \text{ mg/kg/day}} \times 7^{*} \times \ln\left(\frac{1}{(1-0.5)}\right)$

*Rat to Human Conversion Factor

$B = .00388 \text{ mg/kg/day}^{-1}$

Dietary Exposure

$\text{TMRC} = .002 \text{ mg/kg} \times 1.5 \frac{\text{kg}}{\text{day}} \times \frac{45.25}{100} = .001357 \text{ mg/day}$

For a 60 kg person, dietary exposure to acetamide is 2.263×10^{-5} mg/kg/day

Risk

Risk = B x Dietary exposure

Risk = 3.88×10^{-3} mg/kg/day^{-1} x 2.263×10^{-5} mg/kg/day

Risk = 8.78×10^{-8}

Toxicology Branch considers the calculated risk of 8.78×10^{-8} to be within the limits of acceptability and recommends that the residues of acetamide in the commodities found not require further regulation or inclusion in the tolerances for Thiodicarb.

TS-769:th:TOX/HED:WDyksrta:6-10-81:#2

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