D-7925/LINURON V(3) SR

11-9-84

Shaugh. No. 035506

EAB Log Out Date NOV 9 1984

Init. CKO

To: Robert Taylor
Product Manager (25)
Registration Division (TS-767)

Releasable

From: Carolyn K. Offutt, Chief
Environmental Processes and Guidelines Section
Exposure Assessment Branch, HED (TS-769)

Attached please find the environmental fate review of:

Reg./File No.: 352-326

Chemical: Linuron

Type Product: Herbicide

Product name:

Company name: Du Pont

Submission Purposes: Registrant's request for a waiver from a Registration Standard data requirement

ZBB Code: other

Action Code 400

Data In: 10/12/84

EAB #: 5008

Date Completed:

TAIS (Level II) Days

Deferrals To:

___ Ecological Effects Branch

___ Residue Chemistry Branch

___ Toxicology Branch

1/3

potatoes in Maine. That task involves substantial, prolonged contact with soil that may have been treated with linuron.

Linuron residues are known to persist in the soil. For example, linuron residues in soil were found to be 0.728 ppm at 115 days and 0.211 ppm at 99 days after linuron application at 0.50 lbs AIA at two sites in a test conducted in Maine under the Agency's NPHAP program. Walkee and Thompson [Weed Res. 17:399 (1977)] estimated the half life of linuron to range from 22 to 86 days.

In a separate NPHAP study in Maine, it was found that harvester exposures to residues of another pesticide in soil averaged 6.83×10^{-6} g/person/day resulting from soil residue levels that averaged 951×10^{-9} g/g of soil. Using that data as a surrogate for linuron exposure data in combination with the residue data above, it is possible to estimate that linuron exposure would have been 1.52 ug/person/day in one case and 5.23 in the other.

4.0 CONCLUSIONS

It is obvious that there is a potential for fieldworker exposure to residues of linuron during the harvesting of potatoes where mechanical picking is not used or is not the sole means of harvest. That exposure may not be hazardous, but that remains to be shown. There is not sufficient information in the request for waiver to make that judgement.

5.0 RECOMMENDATIONS

The data waiver should be allowed for all of the presently registered crops except potatoes. That is, the data required under 40 CFR § 158.140 should be waived for linuron on all crops except potatoes.

The Registrant should proceed to measure the dissipation of linuron on soil and to monitor the exposure of potato pickers to linuron residues on soil after the application of the maximum currently allowed useage rate. Advice on these types of studies are contained in Subdivision K of the Pesticide Assessment Guidelines.

James D. Adams

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Chemist
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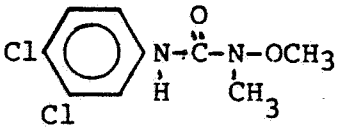
INTRODUCTION

The registrant requested a meeting to discuss the data requirements contained in the 6/29/84 Reregistration Guidance Package for linuron. At the meeting, held 9/19/84, Dr. Richard F. Holt of DuPont objected to the reentry data requirements on the basis that there is no fieldworker exposure to residues of linuron under current agricultural practice, and there is no need for assessment of fieldworker hazard under the Standard. He was told to submit a request for a waiver from the requirements with information to support the contention of no exposure.

This is a review of the resultant request for a waiver with respect to reentry data requirements.

PESTICIDE STRUCTURE/NOMENCLATURE

Linuron



3-(3,4-dichlorophenyl)-1-methoxy-1-methyl-urea

DISCUSSION

Reentry data are only required under 40 CFR § 158.140 if a pesticide fulfills certain criteria, and registrants are allowed under 40 CFR 158.45 to request a waiver from the data requirements and provide information to support their contention that their pesticide does not meet all of the criteria.

The information that the Registrant submits to support the request for a waiver is cursory, and would be inadequate if it were not for the information presented at the 9/19/84 meeting. At that meeting it was pointed out that linuron is applied pre-emergence or directed early post-emergence. That is, the pesticide is applied to soil rather than to plants. The usual fieldworker hazard from pesticide residues is through dermal contact with crop foliage and produce.

Under current practice, very little linuron would be deposited on the growing plants. During the growing season, the pesticide residues would dissipate through several chemical and physical processes and the residues remaining would be "diluted" by growth of the crop. That is, fieldworker exposure to linuron residues for crops such as cotton, sorghum, parsnips, wheat, carrots, and soybeans, and non-food plants is deemed to be inconsequential.

However, potatoes are still hand-harvested in some areas of the US. For example, juveniles are commonly employed to harvest