UNIT[illegible] STATES ENVIRONMENTAL PROTE[illegible]ION AGENCY

#63

DATE: February 12, 1979

SUBJECT: Section 18 request for the use of Atrazine (2 chloro-4-ethylamine -6-isopropylamine-5-trizine) on proso millet for the control of grasses and broad leaf weeds in Nebraska.

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TO: Ms. Teri Galloway - E.R.S.

THRU: L.B. Dale, Acting Chief
Toxicology Branch
Hazard Evaluation Division (TS-769) Robert Taylor for LBD

Action Request: It is anticipated that 55,000 acres of proso millet will be grown in Nebraska this year. Data collected in Western Nebraska indicates that atrazine containing herbicides applied at the rate of 0.5 to 1.0 lb ai./Acre can be used on proso millet and at the same time control weeds. At that rate, it is estimated that between 27.5 and 55 thousand lbs. (a.i.) of atrazine herbicides could be used.

Method of Application

The atrazine herbicides should be applied prior to or immediately after planting. The planting of proso millet begins about May 10th in Western Nebraska. The atrazine herbicides should be applied at the rate of 0.5 to 1.0 lb. a.i./acre by either ground or aerial application.

It was suggested that a Residue concentration for proso millet be estimated at 0.25 ppm for the grain and 5 ppm for the straw.

Conclusion: See comments at end of review.

Toxicology Data

Several tolerances have been estimated for Atrazine on raw agricultural crops, ranging from 0.02 ppm to 15 ppm (on forage). The following data are extracted from Section 18 review (same action request 4/7/78) by Mr. W. Greear.

1. 2-Year Dog Feeding Study - NEL = 150 PPM
2. 2-Year Rat Feeding Study - NEL = 100 PPM ✓
3. 3-Generation Reproduction Study - NEL = 100 PPM

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Releasable

The data will support an allowable daily intake (ADI) of 0.0375 mg/kg/bw/day, based on the results of the 2-year dog feeding study. The tolerances in existance today account for approximately 3.42% of the ADI. The addition of a Residue concentration of 0.25 PPM on millet grain and 5 PPM on millet straw will add a maximum theoretical residue contribution (MTRC) of 0.0001125 mg/day of Atrazine to the 1.5 kg diet of a 60 kg human.

This represents approximately 0.005% of the ADI or approximately a 0.147% increase in residues of Atrazine contributed to the human daily diet - End of Extract.

Comments: Toxicology Branch can envision no undue hazard associated with the implementation of this action request.

Note: This reviewer can find no record of a Teratology Study performed with this compound. The reproductive effects of Atrazine are not completely unknown (3-Generation Reproduction Study NEL = 100 PPM) however, this gap in data should be addressed in future actions regarding this compound.

The following is from the Greear review 4/7/78: "In a memo from the Chief of the Fungicide-Herbicide Branch dated 2/23/78, it was indicated that Atrazine, manufactured by Ciba-Geigy is no longer in the hold category (due to possible nitrosamine contamination) and such products may be processed".

A copy of this memo has not been made available - the current status of Atrazine (regarding nitrosamine problem) is not known to this review.

TOX/HED:th:RD Initial WDYKSTRA:2-5-79