UNIT. STATES ENVIRONMENT...

6K

DATE: November 7, 1979

SUBJECT: EPA Reg. #524-308; Glyphosate; "Free-Standing" Summary of PP#9F2163; PP#9H5204
CASWELL#661A

w/ltr 11/7/79 WSW

FROM: William Dykstra
Toxicology Branch (TS-769)

TO: Richard Mountfort
Product Manager#25

& Residue Chemistry Branch
(TS-769)

Petitioner: Monsanto Agricultural Products, Inc.
800 N. Lindbergh Blvd.
St. Louis, Mo. 63166

Recommendations:

1) The requested tolerances can be toxicologically supported. The data considered in setting the tolerances are summarized below:

- Oral LD50 Rabbit: 3.8 gm/kg
- 90-Day Rat Feeding Study: NOEL = 2000 ppm
- 90-Day Dog Feeding Study: NOEL = 2000 ppm
- Teratology (2 studies) Rabbit: negative at 30 mg/kg (highest dose)
- 3-Generation Rat Reproduction: NOEL = 100 ppm
- 2-Year Dog Feeding: NOEL = 300 ppm
- 2-Year Rat Feeding: NOEL = 100 ppm
- Neurotoxicity (hen): negative at 7.5 gm/kg
- Host-Mediated Assay: negative

2) The data which are currently lacking and considered desirable:

(a) repeat of oncogenicity - 2 species

(b) teratology - rabbit at higher level and 2nd species for teratologic evaluation.

(c) repeat of mutagenicity data - multi-test evidence

3) The petitioner has been notified of toxicity deficiencies regarding glyphosate.

4) Tolerances for glyphosate have been established under 40 CFR 180.364.

5) The published tolerances utilize 6.93% of the ADI. Unpublished, TOX approved tolerances utilize the ADI to 10.93%. The current action utilizes the ADI to 19.01%. Therefore the current action utlized 8.08% of the ADI.

6) The ADI is based on the NOEL of 100 ppm (5 mg/kg/day) in a 2-year rat feeding study. This is the most sensitive species for which chronic data are available. A 100 fold safety factor was used to calculate the ADI.

$$\text{ADI} = \text{NOEL} \times \frac{1}{100}$$

$$\text{ADI} = 5 \text{ mg/kg/day} \times \frac{1}{100} = 0.05 \text{ mg/kg/day}$$

The MPI for a 60 kg person is 3 mg/day

7) No regulatory actions are pending against the pesticide and no RPAR criteria have been exceeded.

8) One of the deficiencies in the glyphosate data base is the lack of an adequate teratology study. It is however concluded that the studies at hand together with the reproduction study show that glyphosate has low potential for showing any teratologic effects. Additionally, the oncogenic potential of glyphosate is not fully elucidated. The life-time mouse and rat studies, however, provide adequate assurance that glyphosate has a relatively low onocgenic potential. A further assurance of low risk associated with glyphosate is found in the fact that on a theoretical basis the exposure via the diet is relatively low at present.

TOX/HED:th:RD Initial WWOODROW:11-7-79