



Atrazine / Review #51 / 6.1.83 / 3 pages
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



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MEMORANDUM

JUN - 1 1983

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

TO: Robert Taylor, PM #15
Herbicide Branch/RD (TS-767)

THRU: R. Bruce Jaeger, Section Head *MB 5/13/83*
Review Section #1
Toxicology Branch/HED (TS-769)

SUBJECT: Atrazine use on sugarcane
Addendum: Tolerance request 3F2772/FAP 3H5371 of
1.5 ppm in Molasses. CASWELL No. 63

Conclusions:

1. Toxicology Branch has no objection to the requested 1.5 ppm tolerance for molasses.
2. Toxicology Branch considers the tolerance to be toxicologically supportable.
 - a. The 1.5 ppm tolerance results in an increase of 0.0006 mg/day in the T.M.R.C.
 - b. Toxicological rationale in support of the request:
 - (1) Even though there are data gaps noted in the toxicity data base, both acute and chronic toxicity do not appear to pose significant hazard.
 - (2) Residue tolerances already exist on sugarcane (PP 7F0620). Incrementally, no further increase in exposure would exist if the growers have been producing molasses by-products from sugarcane sugar production.
 - (3) Very little exposure to molasses occurs in the daily diet (<0.03%). It is highly likely that much less than the 0.0006 mg/day increase to the TMRC of 0.0776 mg/day occurs. In either case no more than a 0.77% incremental increase would occur.

c. A reproduction study in rats was considered to be of only supplementary value and was therefore a data gap.

d. A metabolism study is present showing only the excretion aspect of the chemical and is considered supplementary.

e. Additional mutagenicity studies other than Ames studies are required under Reg. requirements 158.135 and are considered data gaps.

Tolerance Reassessment:

Tolerances have been established for Atrazine on a number of different food and forage crops. The acceptable daily intake (ADI) was originally established using a two-year dog no-observed-effect-level (NOEL) of 150 ppm (3.75 mg/kg). A 100 fold safety factor was used and the current percentage of ADI utilized is 3.42. The Agency has since reevaluated the ADI based on the dog chronic feeding study and has determined that too few animals were examined, effects were noted at the lowest dosage and therefore a NOEL can not be determined for the study. At present there are no adequate long term feeding studies for establishing an ADI.

Data which were evaluated and determined to be adequate did not demonstrate adverse acute toxicity or teratogenicity. There are insufficient data however to determine reproductive effects, mutagenicity and oncogenicity potentials, and long-term chronic effects. These data are pivotal and necessary for determination of an ADI.

For reasons stated in 2. above TB recommends for the request tolerance based on insignificant incremental exposure.

Henry W. Spencer, Ph.D. *HWS* 5/13/83
Review Section #1
Toxicology Branch/HED (TS-769)
WJB 5/27/83

TS-769:SPENCER:s11:X73710:5/11/83 card 5

File last updated 4/26/83

002862

ACCEPTABLE DAILY INTAKE DATA

NOEL change
not recorded per

Dog	NOEL	S.F.	ADI	MPI
mg/kg	ppm		mg/kg/day	mg/day (60kg)
\$\$\$\$\$\$\$\$	\$\$\$\$\$\$\$\$	\$\$\$	\$\$\$\$\$\$\$\$	\$\$\$\$\$\$\$\$

Published Tolerances

CROP	Tolerance	Food Factor	mg/day (1.5kg)
Corn, all types (38)	0.250	2.51	0.00941
Macadamia nuts (87)	0.250	0.03	0.00011
Pineapple (123)	0.250	0.30	0.00111
Sorghum (147)	0.250	0.03	0.00011
Sugar, cane&beet (154)	0.250	3.64	0.01364
Wheat (170)	0.250	10.36	0.03886
Eggs (54)	0.020	2.77	0.00083
Milk&Dairy Products (93)	0.020	28.62	0.00858
Meat, inc poultry (89)	0.020	13.85	0.00415
Millet (94)	0.250	0.03	0.00011
Guava (184)	0.050	0.03	0.00002

MPI	TMRC	% ADI
\$\$\$\$\$\$\$\$ mg/day (60kg)	0.0770 mg/day (1.5kg)	0.00

Current Action 3F2772/3H5371

CROP	Tolerance	Food Factor	mg/day (1.5kg)
Molasses (96)	1.500	0.03	0.00069

MPI	TMRC	% ADI
\$\$\$\$\$\$\$\$ mg/day (60kg)	0.0776 mg/day (1.5kg)	0.00

DRAFT