

US EPA ARCHIVE DOCUMENT

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Attachment 7  
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

March 27, 1998

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Review of an Acute Probabilistic Assessment "Dietary Exposure and Risk Assessment for Terbufos Residues in/on Bananas, Coffee, Field Corn, Sweet Corn, Sugar Beets, Sorghum, and Drinking Water" in Support of the Reregistration of Terbufos (PC Code 105001, MRID 444070-01)

FROM: Elizabeth A. Doyle, Chief  
Chemistry and Exposure Branch I  
Health Effects Division (7509C)

TO: William Hazel, Chemist  
Reregistration Branch I  
Health Effects Division (7509C)

The subject study was reviewed for conformity with the OPP guidance on the conduct of acute dietary risk assessments and for relevance to the reregistration of terbufos. The study used the Continuing Survey for Food Intakes by Individuals (1989-1991) database, a consumption database acceptable to OPP. Percent crop treated data and residue data were applied in accordance with OPP guidance. The toxicological endpoint used in the assessment was an NOEL of 0.005 mg/kg BW/day in a one month oral dog study. The effect at the next dose (0.015 mg/kg BW/day) was plasma cholinesterase inhibition.

This report presented a dietary risk assessment with and without water included. The inclusion of water in a probabilistic assessment is not an acceptable practice at this time. Therefore, only the MOEs for the assessment without water were included for consideration in this report.

The assessment also included green coffee, a use that was not approved and therefore is not required to be included in a dietary risk assessment. The contribution from coffee to the risk assessment can not be directly subtracted from the probabilistic assessment. Therefore, it is impossible to tell what the contribution from coffee is to the final risk estimates. It should be noted, however, that the relative contribution from coffee in the chronic analysis was small compared to other commodities.

The results of the assessment are presented in the table below. At the time of this review, an MOE of 300 is required. An extra 3x safety factor was recommended for special sensitivity to

infants and children. The values in the table below reflect MOEs at the 99.9th percentile of exposure. In the assessment provided, no breakout for non-nursing infants was provided. The assessment for all infants includes the non-nursing subgroup, however, nursing and non-nursing infants have markedly different food consumption patterns. All subgroups had MOEs less than 300, and only the subgroup Women (13 years and older) had MOEs in excess of 100.

MOEs for Acute Dietary Risk from Terbufos*		
Population Subgroup	Exposure (mg/kg BW/day)	Margin of Exposure
Total US Population	0.000060	83
Children (1-6 years)	0.000115	43
Children (7-12 years)	0.000061	82
All Infants	0.000094	53
Women (13 years and older)	0.000033	151

\*Reflects exposure at the 99.9th percentile of exposure.