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

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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Tilt/Banner (Propiconazole) Risk Characterization  
*as well 323EE*

FROM: Bernice Fisher, Biostatistician  
Scientific Mission Support Staff  
Toxicology Branch/HED (TS-769) *Bernice Fisher 5/20/87*

TO: Lois Rossi, Product Manager #21  
Fungicide/Herbicide Branch  
Registration Division (TS-767)

THRU: Richard Levy, M.P.H., Leader-Biostatistics Team  
Scientific Mission Support Staff  
Toxicology Branch/HED (TS-769) *Richard Levy 5-20-87*

THRU: Reto Engler, Chief  
Scientific Mission Support Staff  
Toxicology Branch/HED (TS-769) *Reto Engler*

The estimated environmental risk of Tilt/Banner is  $10^{-3}$  to  $10^{-4}$  (assuming 57% for dermal absorption).

The result is based upon the combined factors of a potency estimate of  $7.9 \times 10^{-2}$  (mg/kg/day) $^{-1}$  in human equivalent (memorandum on Update of Quantitative Risk Assessment for Banner/Tilt, H. Lacayo, 2/9/87) and the environmental data estimated and presented by Curt Lunchick, Chemist (EAB) on 5/18/87.

The environmental risk was derived from exposure in workers for 100% and 57% absorptions rates as suggested by Alan Katz, Toxicologist (Toxicology Branch), since respiratory exposure is negligible when compared to the dermal one.

The calculations of risk, based upon workers employed in four different agricultural environments (turf, grains, rice and pecans) are as follows:

Agricultural Product	Dermal Absorption		Upper 95% Bound on Risk $Q_1^* = 7.9 \times 10^{-2}$ (mg/kg/day) <sup>-1</sup> (in human Equivalents) <u>Dermal Absorption</u>	
	(1) Average Annual (mg/kg/day)	(2) Daily Lifetime (mg/kg/day) [[ (1) x 1 x 35 ] [ 365 70 ]	<u>100%</u> (2)x $Q_1^*$	<u>57%</u> [(2)x $Q_1^*$ ] x .57
	<u>Turf/Grain</u>			
Mixer/Loader	1.52	0.002082	$1.6 \times 10^{-4}$	$9.4 \times 10^{-5}$
Ground Boom Applicator	0.60	0.000822	$6.5 \times 10^{-5}$	$3.7 \times 10^{-5}$
Combined Mixer/Loader and Ground Boom	2.12	0.002904	$2.3 \times 10^{-4}$	$1.3 \times 10^{-4}$
<u>Rice</u>				
Mixer/Loader	0.56	0.000767	$6.1 \times 10^{-5}$	$3.5 \times 10^{-5}$
Pilot	0.17	0.000233	$1.8 \times 10^{-5}$	$1.0 \times 10^{-5}$
Flagger	0.96	0.001315	$1.0 \times 10^{-4}$	$5.9 \times 10^{-5}$
<u>Pecans</u>				
Mixer/Loader	0.73	0.001000	$7.9 \times 10^{-5}$	$4.5 \times 10^{-5}$
Application	6.70	0.009178	$7.2 \times 10^{-4}$	$4.1 \times 10^{-4}$
Combined Mixer/Loader & Application	7.43	0.010178	$7.3 \times 10^{-4}$	$4.6 \times 10^{-4}$