



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

MAY 20 1987

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

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

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

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 7.9×10^{-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) ⁻¹ (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]	100% (2)xQ ₁ *	57% [(2)xQ ₁ *]x .57
<u>Turf/Grain</u>				
Mixer/Loader	1.52	0.002082	1.6×10^{-4}	9.4×10^{-5}
Ground Boom Applicator	0.60	0.000822	6.5×10^{-5}	3.7×10^{-5}
Combined Mixer/Loader and Ground Boom	2.12	0.002904	2.3×10^{-4}	1.3×10^{-4}
<u>Rice</u>				
Mixer/Loader	0.56	0.000767	6.1×10^{-5}	3.5×10^{-5}
Pilot	0.17	0.000233	1.8×10^{-5}	1.0×10^{-5}
Flagger	0.96	0.001315	1.0×10^{-4}	5.9×10^{-5}
<u>Pecans</u>				
Mixer/Loader	0.73	0.001000	7.9×10^{-5}	4.5×10^{-5}
Application	6.70	0.009178	7.2×10^{-4}	4.1×10^{-4}
Combined Mixer/Loader & Application	7.43	0.010178	7.3×10^{-4}	4.6×10^{-4}