



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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

PC #: 123009
DP Barcode: 314642

Date: March 18, 2005

MEMORANDUM

Subject: Topramezone (BAS 670H) Herbicide
CAS Name, [3-(4,5-Dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl) methanone
CAS Registry Number, 210631-68-8
Tier II Drinking Water Assessment

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Thru: *for* Daniel Rieder, Branch Chief
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Topramezone is a new selective, systemic, post-emergence herbicide proposed to control broadleaf and grass weeds on corn (field seed, popcorn, and sweet corn). The anticipated, major use areas would be on the corn belt. However, given the widespread corn growing areas in the United States, use of topramezone may not be limited to the corn belt region alone. For example, sweet corn is extensively grown in Florida.

Topramezone belongs to the phenyl pyrazolyl ketone chemical family of herbicides¹. Its mode of herbicidal action is inhibition of carotenoid biosynthesis. This mode of action is shared with isoxaflutole (cyclopropylisoxazole family) and mesotrione (a triketone belonging to the benzoylcyclohexanedione family)².

Topramezone is a low application rate herbicide. The maximum proposed application rate per season is 0.022 lbs a.i./acre (25 g/ha). It can be used as a single application or two split applications 7 days apart. The proposed methods of application are aerial and ground. Topramezone is formulated as a soluble concentrate containing 29.7% topramezone. The company code for this end-use product is "BAS 670 336SC Post-emergent Corn Herbicide". The product is to be applied in conjunction with a liquid nitrogen fertilizer and a crop or petroleum oil concentrate.

Exposure Concentrations in Drinking Water

Exposure concentrations of topramezone in drinking water were estimated using the PRZM Version 3.12 (May 24, 2001) and EXAMS Tier II simulation models³ for surface water and SCI-GROW⁴ for ground water. For surface water, estimates were made for ground and aerial applications. Five different corn scenarios were selected to estimate exposure in surface water.

Application rates were taken from the proposed label. Appropriate input parameters were selected from the physical and chemical properties (intrinsic properties) and from environmental fate studies⁵ submitted in support of registration for this chemical. Selection of physical chemical properties and environmental fate input parameters were in accordance with the recommendations given in *Guidance for Selecting Input Parameters in Modeling the Environmental Fate and Transport of Pesticides*, Version II, February 28, 2002

Table 1 summarizes the estimated exposure concentrations (corrected for PCA) of topramezone in surface water as a result of aerial or ground single application at the maximum proposed rate of 0.022 lb ai/acre (25 g/ha). Note that the highest estimated concentrations were

¹<http://www.plantprotection.org/HRAC/MOA.html>

² http://www.hclrss.demon.co.uk/class_pesticides.html

³ See <http://www.epa.gov/oppefed1/models/water/index.htm> for detail description of the simulation models and guidelines for selecting input parameters

⁴ SCI-GROW (Screening Concentration In GROund Water) is a regression model based on ground-water monitoring studies which were conducted by applying pesticides at maximum allowed rates and frequency to vulnerable sites (i.e., shallow aquifers, sandy, permeable soils, and substantial rainfall and/or irrigation to maximize leaching).

⁵ Unlike the intrinsic, physical and chemical properties, environmental fate parameters are extrinsic properties that are specific to the test media and conditions of the studies (e.g., type of soil, temperature, moisture)

②

for the Florida sweet corn scenario. The remaining scenarios are given in Appendix 1. Therefore, the EFED recommends that the exposure concentrations for the Florida scenario be used in the assessment of human health effects of topramezone. The topramezone concentrations represent, the 1-in-10-year annual exceedence probability for peak, yearly mean, and the overall mean for the Florida scenario. The PCA for corn is 0.46 (USEPA, 1999)¹. The topramezone EDWCs (estimated drinking water concentrations) corrected for the PCA are 0.77 μgL^{-1} (peak), 0.14 μgL^{-1} (yearly), and 0.07 μgL^{-1} (overall average) for the Florida sweet corn scenario. Note also that there are no significant differences in exposure concentrations between aerial and ground applications. This suggests that exposure in surface water is the result of runoff rather than by spray drift from application.

Table 1. EDWCs for topramezone applied in a 0.022 lb ai/acre rate to sweet corn in Florida corrected for PCA¹.

WATER BODY	1-in-10-year concentration (μgL^{-1}) for peak, yearly mean, and the overall mean for Florida sweet corn scenario		
	Peak	Annual Mean	30-year Mean
Index Reservoir	0.77	0.14	0.07

¹ Applying a Percent Crop Area Adjustment to Tier 2 Surface Water Model Estimates for Pesticide Drinking Water Exposure Assessments. 12-07-99

The estimated concentrations of topramezone in ground water are presented in Table 2. The simulation model SCI-GROW is not scenario specific (i.e., it uses a generic scenario). Because topramezone is a weak acid, sorption may be influenced by pH and mineralogy of the soil. However, due to the limited range of soil pHs used by the registrant, a significant relationship was not observed.

Table 2. SCI-GROW estimates of topramezone in ground water from a 0.022 lb ai/acre annual application

Water Body	Acute and Chronic
Ground	0.0671 μgL^{-1}

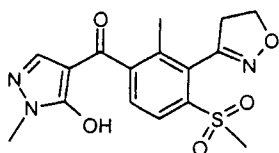
Input parameters used in estimating exposure concentrations of topramezone in surface and ground water are included in Attachment 1. Simulation outputs appear in Attachment 2. Daily are in Attachment 3.

Behavior of Topramezone in the Environment

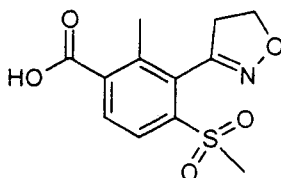
The solubility of topramezone in water is high ($15,000 \text{ mgL}^{-1}$ at pH 7 and 20°C) and it is pH-dependent. Topramezone is a weak acid (pK_a 4.06) and, as the pH increases the concentration of the anionic form increases. The higher the concentration of the anionic form, the higher the mobility of topramezone in soils.

The vapor pressure and Henry's Law Constant of topramezone are low and, therefore, topramezone has a low potential to volatilize from soil or water. It has a very low $\text{Log } K_{ow}$, suggesting that it has a low potential to bioaccumulate in aquatic organisms.

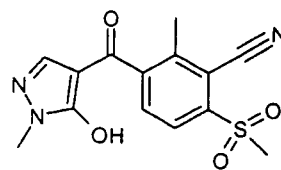
Abiotic hydrolysis and direct photolysis in water are not important transformation pathways for topramezone in the environment, but biotransformation is. However, extensive variability in persistence of topramezone, as well as type and relative ratio of biotransformation products, were found in 6 aerobically incubated soils. The half-life of topramezone in any of these soils were higher than 125 days. The major soil metabolite in some soils was "M670H05" (BAS 670 Acid), but at less than 15% maximum of the applied radioactivity at the conclusion of a 1-year study. Some mineralization of topramezone (as evidenced by $^{14}\text{CO}_2$ formation) was observed in some of the aerobic soils. In other soils, "M670H05" was only a minor metabolite. Only in one soil (Idaho loam), the metabolite "M670H01" was observed above 15%, but at less than 10% in most soils. Like topramezone, "M670H05" is a weak acid and its persistence was high (> 350 days).



Topramezone



"M670H05"
Soil Only



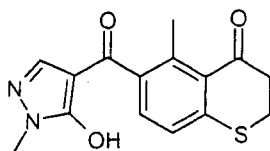
"M670H01"
1-soil; 1 water-sediment system

Water-sediments

Like in aerobic soils, the persistence of topramezone in two aerobic aquatic systems was variable, as suggested by the half-life. In one system (river water) the half-life in the aqueous column was 11 days and 44- 77 days in the sediment, The major metabolite was "M670H01" (10.2%). This metabolite was predominantly associated with the sediment. In another system (pond water), the half-life was > 120 days in water and sediment and no major metabolites were observed. However, there were major differences in physical and chemical composition of the river water-sediment and the pond water-sediment, but it is not clear which property might be responsible for the observed differences in topramezone persistence.

In water-sediments incubated under anaerobic conditions, topramezone degraded slightly faster than under aerobic conditions (11 days in water, 7-15 days in sediment, and 13 days in total

system). The major degradate was "M670H 10", at 16% in water, 26 -34% in sediment. This degradate was only found water-sediment under anaerobic conditions.



"M670H 10"

In all of the biotransformation studies involving soil and sediments, bound radioactivity in the soil or sediment increased with time. The nature of these bound residues is not known

Comments on Metabolite Formation

The degradate "M670H05" was the only cleavage (-C (pyrazol)-C(keto)- bridge) product found in soils (note the benzoic acid moiety). "M670H01" was the only isoxazol ring-opening product found in any of the environmental fate studies conducted with soils. Note that the cyano (nitrile) group has the potential to form an amide and a carboxylic acid, but none of these products were observed. Note that metabolite "M670H 10", found only in anaerobic water-sediment systems, also involves opening of the isoxazolyl group and cyclization.

Mobility

Based on batch-equilibrium adsorption-desorption studies, topramezone mobility varied from very mobile to moderately mobile, "M670H05" can be highly mobile, and "M670H10" has low mobility, which explains its predominant partitioning onto the sediment. Like in the biotransformation studies, marked variability in sorption behavior was observed among the study soils (the soils were the same ones used in the aerobic soil metabolism studies). However, there is some indication that adsorption may correlate with organic carbon content of the soils. Although topramezone mobility is expected to increase with pH, the pH range of soils was too narrow to allow correlating adsorption with pH.

Attachment 1

A. Input Parameters Used for PRZM and EXAMS Simulations

The input parameters used in this assessment were selected from the environmental fate data submitted by the registrant in support of registration of topramezone. They were selected in accordance with USEPA-OPP EFED water model parameter selection guidelines, *Guidance for Selecting Input Parameters in Modeling the Environmental Fate and Transport of Pesticides*, Version II, February 28, 2002. The general input values used in the model runs are presented in Table A-1 for PRZM and EXAMS and Table A-2 for SCI-GROW.

Table A. 1. Input Parameters for PRZM and EXAMS

Parameter	Value/Selection criteria	Source
Maximum Application Rate per Season, lb ai/acre (g/ha)	0.022 lb topramezone/acre (25 g topramezone/ha) Can be applied in 2 sequential applications, 7 days apart, but not to exceed 0.022 lbs ai/acre per season	Proposed label of end-use product BAS 670 336SC
Application Method and Depth of Incorporation (cm)	Ground Aerial No incorporation (model default 4-cm)	Proposed label of end-use product BAS 670 336SC
Soil Partition Coefficient (K_{ads} ; mL/g)	mean K_{ads} = 2.8 (n = 6; 1.40, 2.30, 1.97, 4.87, 2.59, 3.69)	45902425
Aerobic Soil Metabolism Half-life (days) [Linear T _{1/2}]	241.28days (90 th percent upper bound of mean) (n=5; 181.3, 182.0, 301.5, 124.5, 195.9)	45902419; 45902421
Spray Drift Fraction (ground spray / aerial)	ECO: 0.01/ 0.05 Drinking Water: 0.064/0.16	Model
Application Efficiency (ground spray / aerial)	0.99 / 0.95	Model
Molecular Weight, Daltons	363.39	Physical and Chemical Property
Vapor Pressure	$7.5 * 10^{-13}$ torrs	Physical and Chemical Property
Henry's Law Constant	$2.39 * 10^{-17}$ atm-m ³ mol ⁻¹ @ 20°C	Estimated
Solubility in Water at 20°C Topramezone is a weak acid (pKa 4.6) The solubility of topramezone is pH dependent	15,000 mgL ⁻¹	Physical and Chemical Property
Aerobic Aquatic Metabolism Half-life (days)	0 ¹ - stable	45902422

Parameter	Value/Selection criteria	Source
Anaerobic Aquatic Metabolism Half-life (days)	30.52 days 90 th percent upper bound of mean total system (13.4 and 18.6 days)	45902423
Hydrolysis Half-life @ pH 7 (days)	Stable	45902416
Aquatic, Direct Photolysis Half-life @ pH 7	0	45902417

¹ Based upon the aerobic aquatic degradation from the Grand River. Aerobic aquatic metabolism was available for two water bodies (Grand River and Homestead Pond - both in Ohio). The half-life was > 120 days in a 120 day study (both rings and all systems: water, sediment, total) in Grand River Water and less than for 25 days (19.0 and 24.2 days for the two different labeled rings) for the total systems (sediment half-life was 49.2 to 77.7 days) in the Homestead Pond. The reason(s) for apparent differences in aerobic aquatic metabolism between water sources could not be determined. But the chemistry of the Homestead Pond water (high salinity - 10.65 mmhos/cm, high dissolved solids - 6,044 mg/L) and sediment acidity (pH < 5) does not appear to be representative of naturally occurring water body. More information concerning the water/sediment source is needed before this information would be considered in the assessment.

Table A-2. Input Parameters Used for SCI-GROW

Parameter	Value/Selection criteria	Source
Maximum Application Rate per Season, lb ai/acre (g/ha)	0.022 lb topramezone/acre (25 g topramezone/ha) Can be applied in 2 sequential applications, 7 days apart, but not to exceed 0.022 lbs ai/acre per season	Proposed label of end-use product BAS 670 336SC
Aerobic Soil Metabolism Half-life (days) [Linear T _{1/2}]	197.04days mean (n=5; 181.3, 182.0, 301.5, 124.5, 195.9)	45902419; 45902421
Sorption Koc	105.5 median Koc (38, 284, 53, 120, 91, 303)	

B. Modeling and Scenarios

The EDWCs (estimated drinking water concentrations) and EECs (estimated environmental concentrations) for topramezone were generated with standard cropping [Table B-1, corn, sweet corn] scenarios (Leovey, 2002) using PRZM3 (vers. 3.12 beta compiled(05/24/01, Carsel, 1997) and EXAMS (vers. 2.98.04 compiled 07/18/04, Burns, 2002). PRZM simulates pesticide fate and transport as a result of leaching, direct spray drift, runoff and erosion from an agricultural field and EXAMS estimates environmental fate and transport of pesticides in surface water body for a 30-year period (1961-1990). The EECs and EDWCs assessment for surface water uses a single or multiple sites which typically represent a high-end exposure scenario from pesticide use on a particular crop or noncrop use site. PRZM and EXAMS were linked by the program (PE4-PL, vers. 01). Ground water concentrations were estimated using the Tier I screening model SCI-GROW (vers. 2.3, compile 08/08/03). Detailed description, documentation, and direct links for running these models can be found in: <http://www.epa.gov/oppefed1/models/water/index.htm>

The standard farm pond scenario is used to estimate EECs for ecological exposure. The farm pond scenario, represents a 10-ha corn (all cropped) field that is adjacent to a 1-ha pond that is 2 meters deep standard pond (10,000-m² pond, that has neither hydraulic inlets nor outlets (i.e., pesticide cannot leave by outflow). The Index Reservoir (IR) is intended as a drop-in replacement for the standard pond for use in drinking water exposure assessment. It is used in a manner similar to the standard pond, except that flow rates have been modified to reflect local weather conditions. Guidance for using the IR is located at:

<http://www.epa.gov/pesticides/trac/science/>. The index reservoir (IR) is approximately 82 m wide and 640 m long, with an area of 5.3 ha. (USEPA, 2000). The area of the entire watershed is 172.8 ha. Weather and agricultural practices are simulated for 30 years so that the 10-year exceedence probability at the site can be estimated. The simulation was generated using 30 years of meteorological data, encompassing the years from 1961 to 1990.

The Percent Crop Area (PCA) is a generic watershed-based adjustment factor that will be applied to pesticide concentrations estimated for the surface water component of the drinking water exposure assessment using PRZM/EXAMS with the index reservoir (IR). The output generated by the linked PRZM/EXAMS models is multiplied by the maximum percent of crop area (PCA) in any watershed (expressed as a decimal) generated for the crop or crops of interest. Currently, OPP will apply PCA adjustments for four major crops, one of which is corn. Guidance for using PCAs and a thorough discussion of this method and comparisons of monitoring and modeling results for selected pesticide/crop/site combinations is located at: <http://www.epa.gov/pesticides/trac/science/>. No PCA adjustment is required for SCI-GROW.

Table B-1 Corn Scenarios used to estimate concentrations of topramezone in standard farm pond and Index Reservoir.

Corn Scenario and Criteria for Selection	Met File
Florida Sweet Corn	w12844.dvf
Illinois Corn	w14923.dvf
Mississippi Corn	w13893.dvf
North Carolina East Corn	w13722.dvf
Texas Scenario	w13958.dvf

C. EECs and EDWCs for the five corn scenarios

The topramezone concentrations represent, the 1-in-10-year annual exceedence probability for peak, 96-hr, 21-day, 60-day, 90-day, yearly mean, and the overall mean for each scenarios.

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Table C- 1 Estimated Exposure Concentrations of Topramezone in Surface Water (Tier II) with aerial and ground spray applications.

EDWC with 1- application at 0.022 lb ai/acre per season uncorrected for PCA. Estimated concentrations are in $\mu\text{g/L}^{-1}$							
<i>Scenario</i>	<i>Peak</i>	<i>96-hr</i>	<i>21-day</i>	<i>60-day</i>	<i>90-day</i>	<i>Yearly</i>	<i>Overall</i>
1 -Aerial application							
Florida (Sweet)	1.665	1.61	1.48	1.15	0.95	0.30	0.14
Illinois	1.00	0.99	0.96	0.85	0.78	0.36	0.21
Mississippi	1.06	1.04	0.97	0.83	0.73	0.32	0.21
N. Carolina E	0.54	0.53	0.51	0.47	0.44	0.23	0.16
Texas	0.90	0.89	0.84	0.78	0.70	0.31	0.22
<i>Scenario</i>	<i>Peak</i>	<i>96-hr</i>	<i>21-day</i>	<i>60-day</i>	<i>90-day</i>	<i>Yearly</i>	<i>Overall</i>
1- Ground application							
Florida (Sweet)	1.66	1.61	1.48	1.14	0.94	0.30	0.14
Illinois	0.95	0.94	0.91	0.81	0.74	0.34	0.18
Mississippi	1.03	1.00	0.94	0.80	0.71	0.31	0.19
N. Carolina E	0.46	0.46	0.43	0.41	0.38	0.20	0.13
Texas	0.87	0.86	0.82	0.76	0.69	0.29	0.20

Attachment 2

- A. PRZM and EXAMS Outputs
- B. SCI-GROW Outputs

Attachment 3

(file only). 123009 D314642 DWA Attachment 3 Florida sweet corn EDWC.csv

Daily Concentrations (time series) Date (month/day/year, concentration (mg/L)

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Attachment 2 A. PRZM and EXAMS OUTPUT

stored as FLSCRN0a.out
 Chemical: Topramezone
 PRZM environment: FLSweetcornC.txt modified Satday, 12 October 2002 at 16:43:14
 EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 14:34:12
 Metfile: w12844.dvf modified Wedday, 3 July 2002 at 09:04:30
 Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	0.164	0.1602	0.1453	0.125	0.1179	0.04174
1962	0.5563	0.5383	0.4703	0.3594	0.2985	0.1017
1963	1.666	1.615	1.429	1.08	0.8896	0.2881
1964	1.199	1.167	1.065	0.8791	0.7337	0.2442
1965	0.3197	0.3094	0.2871	0.2247	0.1866	0.07852
1966	0.2145	0.2081	0.2008	0.163	0.1479	0.05654
1967	0.2951	0.2859	0.2685	0.2157	0.1805	0.07147
1968	0.2978	0.2904	0.2729	0.2285	0.1963	0.0712
1969	0.9367	0.9065	0.8189	0.6331	0.523	0.1725
1970	0.6268	0.6097	0.5673	0.447	0.3702	0.1306
1971	0.9024	0.8805	0.7753	0.597	0.4938	0.173
1972	1.424	1.378	1.228	1.026	0.8612	0.2811
1973	0.4216	0.4081	0.375	0.3418	0.2939	0.1078
1974	0.1463	0.1416	0.129	0.1209	0.1106	0.04069
1975	0.2131	0.2063	0.1842	0.1504	0.1394	0.05152
1976	0.3743	0.3645	0.3456	0.2811	0.238	0.08302
1977	1.653	1.6	1.487	1.212	1.009	0.3292
1978	0.2989	0.2893	0.2544	0.2255	0.2008	0.07564
1979	2.735	2.647	2.323	1.763	1.452	0.464
1980	0.5301	0.513	0.475	0.3748	0.3462	0.1287
1981	0.3622	0.3506	0.3168	0.2574	0.223	0.08408
1982	1.736	1.704	1.518	1.153	0.9515	0.3062
1983	0.3017	0.2921	0.2711	0.2079	0.1731	0.0713
1984	0.9003	0.8747	0.7703	0.6005	0.5017	0.1711
1985	0.4049	0.3946	0.3608	0.3098	0.2668	0.09799
1986	0.1788	0.1731	0.1664	0.1373	0.1305	0.05211
1987	0.7466	0.7225	0.6416	0.5031	0.423	0.1438
1988	1.266	1.234	1.088	0.8737	0.7302	0.2406
1989	0.4519	0.4383	0.385	0.2953	0.2493	0.08601
1990	0.381	0.3689	0.3249	0.2528	0.2289	0.08457

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	2.735	2.647	2.323	1.763	1.452	0.464
0.0645161290322581	1.736	1.704	1.518	1.212	1.009	0.3292
0.0967741935483871	1.666	1.615	1.487	1.153	0.9515	0.3062
0.129032258064516	1.653	1.6	1.429	1.08	0.8896	0.2881
0.161290322580645	1.424	1.378	1.228	1.026	0.8612	0.2811
0.193548387096774	1.266	1.234	1.088	0.8791	0.7337	0.2442
0.225806451612903	1.199	1.167	1.065	0.8737	0.7302	0.2406
0.258064516129032	0.9367	0.9065	0.8189	0.6331	0.523	0.173
0.290322580645161	0.9024	0.8805	0.7753	0.6005	0.5017	0.1725
0.32258064516129	0.9003	0.8747	0.7703	0.597	0.4938	0.1711
0.354838709677419	0.7466	0.7225	0.6416	0.5031	0.423	0.1438
0.387096774193548	0.6268	0.6097	0.5673	0.447	0.3702	0.1306
0.419354838709677	0.5563	0.5383	0.475	0.3748	0.3462	0.1287
0.451612903225806	0.5301	0.513	0.4703	0.3594	0.2985	0.1078
0.483870967741936	0.4519	0.4383	0.385	0.3418	0.2939	0.1017
0.516129032258065	0.4216	0.4081	0.375	0.3098	0.2668	0.09799
0.548387096774194	0.4049	0.3946	0.3608	0.2953	0.2493	0.08601
0.580645161290323	0.381	0.3689	0.3456	0.2811	0.238	0.08457
0.612903225806452	0.3743	0.3645	0.3249	0.2574	0.2289	0.08408
0.645161290322581	0.3622	0.3506	0.3168	0.2528	0.223	0.08302
0.67741935483871	0.3197	0.3094	0.2871	0.2285	0.2008	0.07852
0.709677419354839	0.3017	0.2921	0.2729	0.2255	0.1963	0.07564
0.741935483870968	0.2989	0.2904	0.2711	0.2247	0.1866	0.07147
0.774193548387097	0.2978	0.2893	0.2685	0.2157	0.1805	0.0713
0.806451612903226	0.2951	0.2859	0.2544	0.2079	0.1731	0.0712
0.838709677419355	0.2145	0.2081	0.2008	0.163	0.1479	0.05654
0.870967741935484	0.2131	0.2063	0.1842	0.1504	0.1394	0.05211
0.903225806451613	0.1788	0.1731	0.1664	0.1373	0.1305	0.05152



0.935483870967742 0.164 0.1602 0.1453 0.125 0.1179 0.04174
0.967741935483871 0.1463 0.1416 0.129 0.1209 0.1106 0.04069

0.1 1.6647 1.6135 1.4812 1.1457 0.94531 0.30439
Average of yearly averages: 0.1443

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:

Output File: FLSCRNOa

Metfile: w12844.dvf

PRZM scenario: FLsweetcornC.txt

EXAMS environment file: ir298.exv

Chemical Name: Topramezone

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	363.69	g/mol	
Henry's Law Const.	henry		atm-m ³ /mol	
Vapor Pressure	vapr	7.5e-13	torr	
Solubility	sol	15000	mg/L	
Kd	Kd	2.8	mg/L	
Koc	Koc		mg/L	
Photolysis half-life	kdp	0	days	Half-life
Aerobic Aquatic Metabolism	kbacw	0	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	30.52	days	Halfife
Aerobic Soil Metabolism	asm	241.28	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method:	CAM	1	integer	See PRZM manual
Incorporation Depth:	DEPI	4	cm	
Application Rate:	TAPP	0.0246	kg/ha	
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	0.16	fraction of application rate applied to pond	
Application Date	Date	16-04	dd/mm or dd/mm/yy or dd-mm or dd-mmm	

Record 17: FILTRA

IPSCND

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR IR

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

stored as ILCorn0.out

Chemical: Topramezone

PRZM environment: ILCornC.txt modified Satday, 12 October 2002 at 17:01:38

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 14:34:12

Metfile: w14923.dvf modified Wedday, 3 July 2002 at 09:04:40

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	0.2481	0.2445	0.2303	0.2206	0.2034	0.1029
1962	0.7549	0.7442	0.7097	0.6547	0.6011	0.2805
1963	0.343	0.3381	0.3188	0.2884	0.2892	0.1791
1964	0.3557	0.3506	0.338	0.3019	0.2953	0.1626
1965	0.2869	0.2828	0.2756	0.2576	0.243	0.1309
1966	1.034	1.019	0.984	0.8886	0.815	0.3688
1967	0.964	0.9534	0.9079	0.7998	0.7267	0.3636
1968	0.2436	0.2402	0.2291	0.2208	0.2087	0.1471
1969	0.2198	0.2167	0.2048	0.193	0.1841	0.09728
1970	1.001	0.9898	0.9638	0.8597	0.7824	0.3501
1971	0.3749	0.3695	0.3486	0.3274	0.3178	0.2011
1972	0.6727	0.663	0.6401	0.5891	0.5454	0.2634
1973	0.4294	0.4233	0.4064	0.3693	0.3402	0.1899
1974	1.044	1.031	0.9829	0.8804	0.8054	0.3752
1975	0.2703	0.2665	0.2578	0.2522	0.241	0.1598
1976	0.4243	0.4183	0.3972	0.369	0.3427	0.1677
1977	0.448	0.4416	0.4253	0.3819	0.3725	0.2013

1978	0.4854	0.4784	0.4502	0.3959	0.3606	0.1872
1979	0.2502	0.2467	0.2333	0.2149	0.2089	0.121
1980	0.6373	0.6286	0.6031	0.5498	0.5078	0.2374
1981	0.2294	0.2261	0.2175	0.2027	0.1988	0.1291
1982	0.4536	0.447	0.4263	0.3913	0.3594	0.1761
1983	0.5162	0.5108	0.4893	0.4297	0.3901	0.2022
1984	0.6034	0.5948	0.5697	0.5255	0.4827	0.2457
1985	0.5359	0.5284	0.4977	0.4387	0.4025	0.2098
1986	0.7146	0.7042	0.6851	0.6148	0.5616	0.269
1987	0.8303	0.8188	0.7723	0.6841	0.6281	0.3164
1988	0.3483	0.3433	0.3234	0.2889	0.2701	0.1675
1989	0.2674	0.2635	0.2481	0.2299	0.2158	0.1209
1990	0.425	0.419	0.398	0.369	0.3474	0.1717

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly		
0.032258064516129			1.044	1.031	0.984	0.8886	0.815	0.3752
0.0645161290322581			1.034	1.019	0.9829	0.8753	0.8054	0.3688
0.0967741935483871			1.001	0.9898	0.9638	0.8597	0.7824	0.3636
0.129032258064516			0.964	0.9534	0.9079	0.7998	0.7267	0.3501
0.161290322580645			0.8303	0.8188	0.7723	0.6841	0.6281	0.3164
0.193548387096774			0.7549	0.7442	0.7097	0.6547	0.6011	0.2805
0.225806451612903			0.7146	0.7042	0.6851	0.6148	0.5616	0.269
0.258064516129032			0.6727	0.663	0.6401	0.5891	0.5454	0.2634
0.290322580645161			0.6373	0.6286	0.6031	0.5498	0.5078	0.2457
0.32258064516129			0.6034	0.5948	0.5697	0.5255	0.4827	0.2374
0.354838709677419			0.5359	0.5284	0.4977	0.4387	0.4025	0.2098
0.387096774193548			0.5162	0.5108	0.4893	0.4297	0.3901	0.2022
0.419354838709677			0.4854	0.4784	0.4502	0.3959	0.3725	0.2013
0.451612903225806			0.4536	0.447	0.4263	0.3913	0.3606	0.2011
0.483870967741936			0.448	0.4416	0.4253	0.3819	0.3594	0.1899
0.516129032258065			0.4294	0.4233	0.4064	0.3693	0.3474	0.1872
0.548387096774194			0.425	0.419	0.398	0.369	0.3427	0.1791
0.580645161290323			0.4243	0.4183	0.3972	0.369	0.3402	0.1761
0.612903225806452			0.3749	0.3695	0.3486	0.3274	0.3178	0.1717
0.645161290322581			0.3557	0.3506	0.338	0.3019	0.2953	0.1677
0.67741935483871			0.3483	0.3433	0.3234	0.2889	0.2892	0.1675
0.709677419354839			0.343	0.3381	0.3188	0.2884	0.2701	0.1626
0.741935483870968			0.2869	0.2828	0.2756	0.2576	0.243	0.1598
0.774193548387097			0.2703	0.2665	0.2578	0.2522	0.241	0.1471
0.806451612903226			0.2674	0.2635	0.2481	0.2299	0.2158	0.1309
0.838709677419355			0.2502	0.2467	0.2333	0.2208	0.2089	0.1291
0.870967741935484			0.2481	0.2445	0.2303	0.2206	0.2087	0.121
0.903225806451613			0.2436	0.2402	0.2291	0.2149	0.2034	0.1209
0.935483870967742			0.2294	0.2261	0.2175	0.2027	0.1988	0.1029
0.967741935483871			0.2198	0.2167	0.2048	0.193	0.1841	0.09728

0.1 0.9973 0.98616 0.95821 0.85371 0.77683 0.36225
Average of yearly averages: 0.209842666666667

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:

Output File: ILCorn0

Metfile: w14923.dvf

PRZM scenario: ILCornC.txt

EXAMS environment file: ir298.exv

Chemical Name: Topramezone

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	363.39	g/mol	
Henry's Law Const.	henry		atm-m ³ /mol	
Vapor Pressure vapr		7.5e-13	torr	
Solubility	sol	15000	mg/L	
Kd	Kd	2.8	mg/L	
Koc	Koc		mg/L	
Photolysis half-life	kdp	0	days	Half-life
Aerobic Aquatic Metabolism	kbacw	0	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	30.52	days	Halfife
Aerobic Soil Metabolism	asm	241.28	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method:	CAM	1	integer	See PRZM manual
Incorporation Depth:	DEPI	4	cm	

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Application Rate: TAPP 0.0246 kg/ha
 Application Efficiency: APPEFF 0.95 fraction
 Spray Drift DRFT 0.16 fraction of application rate applied to pond
 Application Date Date 05-05 dd/mm or dd/mmm or dd-mm or dd-mmm
 Record 17: FILTRA
 IPSCND
 UPTKF
 Record 18: PLVKRT

stored as MSCorn.out
 Chemical: Topramezone
 PRZM environment: MSCornC.txt modified Satday, 12 October 2002 at 17:06:02
 EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 14:34:12
 Metfile: wl3893.dvf modified Wedday, 3 July 2002 at 09:06:20
 Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	0.9339	0.916	0.8454	0.7142	0.6292	0.2664
1962	0.21	0.206	0.196	0.1763	0.1572	0.1211
1963	0.4659	0.4569	0.4215	0.3552	0.3134	0.1709
1964	1.119	1.097	1.017	0.8655	0.7645	0.3247
1965	0.4794	0.4702	0.4405	0.3747	0.3314	0.1856
1966	0.7191	0.7054	0.6543	0.5506	0.4896	0.2432
1967	0.3586	0.3518	0.3247	0.2857	0.2555	0.1415
1968	0.5373	0.5269	0.4909	0.435	0.3885	0.1623
1969	0.3273	0.3212	0.2966	0.2507	0.2218	0.1326
1970	0.6863	0.6731	0.6303	0.5373	0.48	0.2132
1971	0.228	0.2236	0.2064	0.1782	0.1591	0.08697
1972	0.3145	0.3085	0.2847	0.2391	0.2137	0.1264
1973	1.494	1.465	1.365	1.174	1.039	0.4343
1974	0.859	0.8426	0.7774	0.7116	0.6815	0.3212
1975	0.3061	0.3003	0.2783	0.2465	0.2235	0.1341
1976	0.9149	0.8973	0.8275	0.7058	0.6365	0.2402
1977	0.4426	0.4342	0.4009	0.3395	0.3045	0.2333
1978	1.018	1.003	0.9297	0.7816	0.6891	0.306
1979	0.6321	0.6203	0.5823	0.5145	0.4576	0.2074
1980	0.4637	0.4548	0.4206	0.3802	0.3506	0.1465
1981	0.2802	0.2749	0.2538	0.2211	0.1978	0.1504
1982	0.7455	0.7312	0.6829	0.5766	0.5095	0.2466
1983	0.7794	0.7645	0.7053	0.6013	0.5353	0.2453
1984	1.063	1.043	0.9724	0.8342	0.7377	0.317
1985	1.001	0.9816	0.9057	0.7603	0.67	0.306
1986	0.3606	0.3563	0.3307	0.2938	0.2408	0.1344
1987	0.3215	0.3154	0.296	0.2614	0.2342	0.1598
1988	0.3715	0.3645	0.3365	0.2831	0.2507	0.1677
1989	0.2376	0.233	0.223	0.202	0.1822	0.1091
1990	0.4678	0.4589	0.4279	0.3698	0.3317	0.1864

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129			1.494	1.465	1.365	1.174 1.039 0.4343
0.0645161290322581			1.119	1.097	1.017	0.8655 0.7645 0.3247
0.0967741935483871			1.063	1.043	0.9724	0.8342 0.7377 0.3212
0.129032258064516			1.018	1.003	0.9297	0.7816 0.6891 0.317
0.161290322580645			1.001	0.9816	0.9057	0.7603 0.6815 0.306
0.193548387096774			0.9339	0.916	0.8454	0.7142 0.67 0.306
0.225806451612903			0.9149	0.8973	0.8275	0.7116 0.6365 0.2664
0.258064516129032			0.859	0.8426	0.7774	0.7058 0.6292 0.2466
0.290322580645161			0.7794	0.7645	0.7053	0.6013 0.5353 0.2453
0.32258064516129			0.7455	0.7312	0.6829	0.5766 0.5095 0.2432
0.354838709677419			0.7191	0.7054	0.6543	0.5506 0.4896 0.2402

0.387096774193548	0.6863	0.6731	0.6303	0.5373	0.48	0.2333
0.419354838709677	0.6321	0.6203	0.5823	0.5145	0.4576	0.2132
0.451612903225806	0.5373	0.5269	0.4909	0.435	0.3885	0.2074
0.483870967741936	0.4794	0.4702	0.4405	0.3802	0.3506	0.1864
0.516129032258065	0.4678	0.4589	0.4279	0.3747	0.3317	0.1856
0.548387096774194	0.4659	0.4569	0.4215	0.3698	0.3314	0.1709
0.580645161290323	0.4637	0.4548	0.4206	0.3552	0.3134	0.1677
0.612903225806452	0.4426	0.4342	0.4009	0.3395	0.3045	0.1623
0.645161290322581	0.3715	0.3645	0.3365	0.2938	0.2555	0.1598
0.67741935483871	0.3606	0.3563	0.3307	0.2857	0.2507	0.1504
0.709677419354839	0.3586	0.3518	0.3247	0.2831	0.2408	0.1465
0.741935483870968	0.3273	0.3212	0.2966	0.2614	0.2342	0.1415
0.774193548387097	0.3215	0.3154	0.296	0.2507	0.2235	0.1344
0.806451612903226	0.3145	0.3085	0.2847	0.2465	0.2218	0.1341
0.838709677419355	0.3061	0.3003	0.2783	0.2391	0.2137	0.1326
0.870967741935484	0.2802	0.2749	0.2538	0.2211	0.1978	0.1264
0.903225806451613	0.2376	0.233	0.223	0.202	0.1822	0.1211
0.935483870967742	0.228	0.2236	0.2064	0.1782	0.1591	0.1091
0.967741935483871	0.21	0.206	0.196	0.1763	0.1572	0.08697

0.1 1.0585 1.039 0.96813 0.82894 0.73284 0.32078
Average of yearly averages: 0.207352333333333

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:

Output File: MSCorn

Metfile: w13893.dvf

PRZM scenario: MSCornC.txt

EXAMS environment file: ir298.exv

Chemical Name: Topramezone

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	363.69	g/mol	
Henry's Law Const.	henry		atm-m ³ /mol	
Vapor Pressure vapr		7.5e-13	torr	
Solubility	sol	15000	mg/L	
Kd	Kd	2.8	mg/L	
Koc	Koc		mg/L	
Photolysis half-life	kdp	0	days	Half-life
Aerobic Aquatic Metabolism	kbacw	0	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	30.52	days	Halfife
Aerobic Soil Metabolism	asm	241.28	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method:	CAM	1	integer	See PRZM manual
Incorporation Depth:	DEPI	4	cm	
Application Rate:	TAPP	0.0246	kg/ha	
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	0.16	fraction of application rate applied to pond	
Application Date	Date	15-04	dd/mm or dd/mm or dd-mm or dd-mm	

stored as NCCornE.out

Chemical: Topramezone

PRZM environment: NCCornEC.txt modified Satday, 12 October 2002 at 17:10:28

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 14:34:12

Metfile: w13722.dvf modified Wedday, 3 Jul, 2002 at 09:05:50

Water segment concentrations (ppb)

Year Peak 96 hr 21 Day 60 Day 90 Day Yearly

1961	0.212	0.2093	0.1992	0.1792	0.166	0.08282
1962	0.2281	0.2252	0.218	0.199	0.1867	0.1111
1963	0.3838	0.379	0.3592	0.3278	0.3022	0.1623
1964	0.1962	0.1937	0.1836	0.1667	0.1677	0.1136
1965	0.2811	0.2782	0.2684	0.2414	0.2239	0.1301
1966	0.3258	0.3217	0.3067	0.2955	0.2767	0.1511
1967	0.4133	0.408	0.3892	0.3637	0.341	0.1788
1968	0.1984	0.1959	0.1864	0.1789	0.1737	0.1058
1969	0.225	0.2222	0.2154	0.2031	0.1892	0.109
1970	0.2418	0.2387	0.2305	0.2088	0.1981	0.1156
1971	0.2885	0.2848	0.2787	0.2557	0.237	0.1327
1972	0.4299	0.4244	0.4054	0.3801	0.3542	0.1852
1973	0.6134	0.6055	0.5736	0.5211	0.4821	0.2487
1974	0.4272	0.4218	0.4056	0.3673	0.3422	0.1946
1975	0.2433	0.2402	0.2299	0.2061	0.197	0.1242
1976	0.3126	0.3086	0.3016	0.2771	0.2554	0.1398
1977	0.2381	0.2353	0.2231	0.1986	0.1893	0.1145
1978	0.9307	0.9186	0.8833	0.7902	0.7248	0.3462
1979	0.2858	0.2823	0.2743	0.2596	0.2488	0.1632
1980	0.3575	0.353	0.3347	0.2973	0.2916	0.1666
1981	0.286	0.2823	0.2714	0.2472	0.2308	0.1421
1982	0.2453	0.2422	0.2295	0.218	0.2063	0.1149
1983	0.2292	0.2263	0.2172	0.1948	0.1831	0.1048
1984	0.4136	0.4086	0.3874	0.3715	0.3564	0.1859
1985	0.3592	0.3546	0.3423	0.3194	0.2982	0.1679
1986	0.3527	0.3482	0.33	0.2971	0.2753	0.1562
1987	0.5211	0.5145	0.494	0.446	0.418	0.2193
1988	0.5425	0.5356	0.5077	0.4734	0.4408	0.232
1989	0.4011	0.3959	0.3816	0.3442	0.3171	0.1776
1990	0.3908	0.3858	0.3716	0.3441	0.318	0.1712

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly		
0.032258064516129			0.9307	0.9186	0.8833	0.7902	0.7248	0.3462
0.0645161290322581			0.6134	0.6055	0.5736	0.5211	0.4821	0.2487
0.0967741935483871			0.5425	0.5356	0.5077	0.4734	0.4408	0.232
0.129032258064516			0.5211	0.5145	0.494	0.446	0.418	0.2193
0.161290322580645			0.4299	0.4244	0.4056	0.3801	0.3564	0.1946
0.193548387096774			0.4272	0.4218	0.4054	0.3715	0.3542	0.1859
0.225806451612903			0.4136	0.4086	0.3892	0.3673	0.3422	0.1852
0.258064516129032			0.4133	0.408	0.3874	0.3637	0.341	0.1788
0.290322580645161			0.4011	0.3959	0.3816	0.3442	0.318	0.1776
0.32258064516129			0.3908	0.3858	0.3716	0.3441	0.3171	0.1712
0.354838709677419			0.3838	0.379	0.3592	0.3278	0.3022	0.1679
0.387096774193548			0.3592	0.3546	0.3423	0.3194	0.2982	0.1666
0.419354838709677			0.3575	0.353	0.3347	0.2973	0.2916	0.1632
0.451612903225806			0.3527	0.3482	0.33	0.2971	0.2767	0.1623
0.483870967741936			0.3258	0.3217	0.3067	0.2955	0.2753	0.1562
0.516129032258065			0.3126	0.3086	0.3016	0.2771	0.2554	0.1511
0.548387096774194			0.2885	0.2848	0.2787	0.2596	0.2488	0.1421
0.580645161290323			0.286	0.2823	0.2743	0.2557	0.237	0.1398
0.612903225806452			0.2858	0.2823	0.2714	0.2472	0.2308	0.1327
0.645161290322581			0.2811	0.2782	0.2684	0.2414	0.2239	0.1301
0.67741935483871			0.2453	0.2422	0.2305	0.218	0.2063	0.1242
0.709677419354839			0.2433	0.2402	0.2299	0.2088	0.1981	0.1156
0.741935483870968			0.2418	0.2387	0.2295	0.2061	0.197	0.1149
0.774193548387097			0.2381	0.2353	0.2231	0.2031	0.1893	0.1145
0.806451612903226			0.2292	0.2263	0.218	0.199	0.1892	0.1136
0.838709677419355			0.2281	0.2252	0.2172	0.1986	0.1867	0.1111
0.870967741935484			0.225	0.2222	0.2154	0.1948	0.1831	0.109
0.903225806451613			0.212	0.2093	0.1992	0.1792	0.1737	0.1058
0.935483870967742			0.1984	0.1959	0.1864	0.1789	0.1677	0.1048
0.967741935483871			0.1962	0.1937	0.1836	0.1667	0.166	0.08282

0.1 0.54036 0.53349 0.50633 0.47066 0.43852 0.23073
Average of yearly averages: 0.1582606666666667

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:
Output File: NCCornE
Metfile: w13722.dvf



PRZM scenario: NCcornEC.txt
EXAMS environment file: ir298.exv
Chemical Name: Topramezone

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	363.69	g/mol	
Henry's Law Const.	henry		atm-m ³ /mol	
Vapor Pressure	vapr	7.5e-13	torr	
Solubility	sol	15000	mg/L	
Kd	Kd	2.8	mg/L	
Koc	Koc		mg/L	
Photolysis half-life	kdp	0	days	Half-life
Aerobic Aquatic Metabolism	kbacw	0	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	30.52	days	Halfife
Aerobic Soil Metabolism	asm	241.28	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method:	CAM	1	integer	See PRZM manual
Incorporation Depth:	DEPI	4	cm	
Application Rate:	TAPP	0.0246	kg/ha	
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	0.16	fraction of application rate applied to pond	
Application Date	Date	16-04	dd/mm or dd/mmm or dd-mm or dd-mmm	

Record 17: FILTRA
IPSCND
UPTKF

Record 18: PLVKRT
PLDKRT
FEXTRC 0.5

Flag for Index Res. Run IR IR
Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

stored as TXcorn.out
Chemical: Topramezone
PRZM environment: TXcornC.txt modified Satday, 12 October 2002 at 17:28:20
EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 14:34:12
Metfile: wl3958.dvf modified Wedday, 3 July 2002 at 09:06:24
Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	0.3961	0.3891	0.3636	0.3166	0.2845	0.1345
1962	0.3869	0.3801	0.3532	0.3312	0.3223	0.1691
1963	1.307	1.284	1.192	1.016	0.909	0.3971
1964	0.4656	0.4587	0.4282	0.3884	0.3606	0.2164
1965	0.4571	0.4491	0.4232	0.3696	0.3317	0.1709
1966	0.5263	0.517	0.4973	0.4298	0.3841	0.1838
1967	0.4048	0.3977	0.3779	0.347	0.3153	0.1535
1968	0.3688	0.3624	0.3493	0.3035	0.2749	0.1411
1969	0.7969	0.7828	0.7342	0.6471	0.5805	0.2685
1970	0.5802	0.5699	0.5531	0.4858	0.4344	0.2106
1971	0.2718	0.267	0.2481	0.218	0.2143	0.1467
1972	0.8058	0.7962	0.7734	0.6735	0.6024	0.2711
1973	0.4302	0.4227	0.3928	0.3645	0.3368	0.1706
1974	0.426	0.4185	0.3889	0.3403	0.3265	0.1671
1975	0.8963	0.8854	0.8405	0.7796	0.707	0.3154
1976	0.898	0.8895	0.8355	0.7187	0.6507	0.3078
1977	0.842	0.8299	0.7888	0.6793	0.6058	0.2837
1978	0.637	0.6258	0.5931	0.5493	0.5046	0.2542
1979	0.4767	0.4683	0.4481	0.3986	0.3668	0.1759
1980	1.211	1.19	1.104	0.998	0.9106	0.3991
1981	0.6274	0.6164	0.5943	0.52	0.4645	0.2347
1982	0.5422	0.537	0.5055	0.4731	0.4279	0.2122
1983	0.8019	0.7878	0.7395	0.6594	0.626	0.298
1984	0.1924	0.189	0.1757	0.1497	0.1503	0.09806
1985	0.3906	0.3838	0.3586	0.3383	0.3146	0.1522
1986	0.8708	0.8607	0.8285	0.7338	0.6632	0.2948
1987	0.3225	0.3168	0.3053	0.2635	0.2359	0.149
1988	0.7105	0.698	0.6481	0.5703	0.5263	0.2398
1989	0.3352	0.3294	0.3136	0.3013	0.2875	0.1455

1990 0.6271 0.616 0.5731 0.5058 0.4581 0.2116

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly		
0.032258064516129			1.307	1.284	1.192	1.016	0.9106	0.3991
0.0645161290322581			1.211	1.19	1.104	0.998	0.909	0.3971
0.0967741935483871			0.898	0.8895	0.8405	0.7796	0.707	0.3154
0.129032258064516			0.8963	0.8854	0.8355	0.7338	0.6632	0.3078
0.161290322580645			0.8708	0.8607	0.8285	0.7187	0.6507	0.298
0.193548387096774			0.842	0.8299	0.7888	0.6793	0.626	0.2948
0.225806451612903			0.8058	0.7962	0.7734	0.6735	0.6058	0.2837
0.258064516129032			0.8019	0.7878	0.7395	0.6594	0.6024	0.2711
0.290322580645161			0.7969	0.7828	0.7342	0.6471	0.5805	0.2685
0.32258064516129			0.7105	0.698	0.6481	0.5703	0.5263	0.2542
0.354838709677419			0.637	0.6258	0.5943	0.5493	0.5046	0.2398
0.387096774193548			0.6274	0.6164	0.5931	0.52	0.4645	0.2347
0.419354838709677			0.6271	0.616	0.5731	0.5058	0.4581	0.2164
0.451612903225806			0.5802	0.5699	0.5531	0.4858	0.4344	0.2122
0.483870967741936			0.5422	0.537	0.5055	0.4731	0.4279	0.2116
0.516129032258065			0.5263	0.517	0.4973	0.4298	0.3841	0.2106
0.548387096774194			0.4767	0.4683	0.4481	0.3986	0.3668	0.1838
0.580645161290323			0.4656	0.4587	0.4282	0.3884	0.3606	0.1759
0.612903225806452			0.4571	0.4491	0.4232	0.3696	0.3368	0.1709
0.645161290322581			0.4302	0.4227	0.3928	0.3645	0.3317	0.1706
0.67741935483871			0.426	0.4185	0.3889	0.347	0.3265	0.1691
0.709677419354839			0.4048	0.3977	0.3779	0.3403	0.3223	0.1671
0.741935483870968			0.3961	0.3891	0.3636	0.3383	0.3153	0.1535
0.774193548387097			0.3906	0.3838	0.3586	0.3312	0.3146	0.1522
0.806451612903226			0.3869	0.3801	0.3532	0.3166	0.2875	0.149
0.838709677419355			0.3688	0.3624	0.3493	0.3035	0.2845	0.1467
0.870967741935484			0.3352	0.3294	0.3136	0.3013	0.2749	0.1455
0.903225806451613			0.3225	0.3168	0.3053	0.2635	0.2359	0.1411
0.935483870967742			0.2718	0.267	0.2481	0.218	0.2143	0.1345
0.967741935483871			0.1924	0.189	0.1757	0.1497	0.1503	0.09806

0.1 0.89783 0.88909 0.84 0.77502 0.70262 0.31464
Average of yearly averages: 0.219098666666667

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:

Output File: TXcorn

Metfile: wl3958.dvf

PRZM scenario: TXcornC.txt

EXAMS environment file: ir298.exv

Chemical Name: Topramezone

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	363.69	g/mol	
Henry's Law Const.	henry		atm-m ³ /mol	
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Solubility	sol	15000	mg/L	
Kd	Kd	2.8	mg/L	
Koc	Koc		mg/L	
Photolysis half-life	kdp	0	days	Half-life
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Anaerobic Aquatic Metabolism	kbacs	30.52	days	Halfife
Aerobic Soil Metabolism	asm	241.28	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method:	CAM	1	integer	See PRZM manual
Incorporation Depth:	DEPI	4	cm	
Application Rate:	TAPP	0.0246	kg/ha	
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Spray Drift	DRFT	0.16	fraction of application rate applied to pond	
Application Date	Date	16-03	dd/mm or dd/mm or dd-mm or dd-mmm	

Molecular weight

Henry's Law Const.

Vapor Pressure vapr

Solubility

Kd

Koc

Photolysis half-life

Aerobic Aquatic Metabolism

Anaerobic Aquatic Metabolism

Aerobic Soil Metabolism

Hydrolysis:

Method:

Incorporation Depth:

Application Rate:

Application Efficiency:

Spray Drift

Application Date

Record 17: FILTRA

IPSCND

UPTKF

Record 18: PLVKRT

PLDKR

FEXTRC 0.5

Flag for Index Res. Run

Flag for runoff calc. RUNOFF

IR

IR

total none, monthly or total(average of entire run)

B. SCI-GROW Outputs

SCIGROW
VERSION 2.3
ENVIRONMENTAL FATE AND EFFECTS DIVISION
OFFICE OF PESTICIDE PROGRAMS
U.S. ENVIRONMENTAL PROTECTION AGENCY
SCREENING MODEL
FOR AQUATIC PESTICIDE EXPOSURE

SciGrow version 2.3
chemical:Topramezone
time is 3/17/2005 9:40:22

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
0.022	1.0	0.022	1.06E+02	197.1

groundwater screening cond (ppb) = 6.71E-02
