



Appendix E-Analysis Summary

Aquatic RQ Calculations for methyl parathion (CRLF)
(PDD 01/2208 original calcs)

means NOAEC from chronic study
red means exceedence of LOC
ND means no data located

Multiple Applications IAW label

FW Fish (From 4-nitrophenol RED (USEPA 1998)

Estimate	Peak EEC	LC50	RQ	(All units in µg/L)	
				60-day EEC	NOAEC
Alfalfa-ground	8.23	4,000	0.00	3.76	ND
Alfalfa-aerial	14.27	4,000	0.00	7.07	ND
Cereals-ground	119.58	4,000	0.03	45.90	ND
Cereals-aerial	5.44	4,000	0.00	2.40	ND
Corn-ground	1.53	4,000	0.00	0.64	ND
Corn-aerial	4.38	4,000	0.00	2.41	ND
Cotton-ground	23.64	4,000	0.01	7.31	ND
Cotton-aerial	66.79	4,000	0.02	25.67	ND
Grass-ground	30.38	4,000	0.01	12.47	ND
Grass-aerial	9.42	4,000	0.00	4.62	ND
Legumes-ground	2.73	4,000	0.00	1.34	ND
Legumes-aerial	13.67	4,000	0.00	6.70	ND
Onions-ground	6.50	4,000	0.00	2.34	ND
Onions Aerial	15.33	4,000	0.00	7.69	ND
Potatoes-ground	3.53	4,000	0.00	1.29	ND
Potatoes-aerial	5.19	4,000	0.00	2.16	ND
Rice (from rice model)	2997.00	4,000	0.75	ND	ND
Seeds-ground	0.97	4,000	0.00	0.33	ND
Seeds-aerial	4.87	4,000	0.00	1.56	ND
Walnuts-ground	4.22	4,000	0.00	2.00	ND
Walnuts-aerial	9.54	4,000	0.00	4.75	ND

FW Aquatic Invertebrates (From 4-nitrophenol RED, USEPA 1998)

Estimate	Peak EEC	LC50	RQ	(All units in µg/L)	
				21-day EEC	NOAEC
Alfalfa-ground	8.23	5,000	0.00	5.90	ND
Alfalfa-aerial	14.27	5,000	0.00	10.63	ND
Cereals-ground	119.58	5,000	0.02	80.28	ND
Cereals-aerial	5.44	5,000	0.00	3.96	ND
Corn-ground	1.53	5,000	0.00	0.99	ND
Corn-aerial	4.38	5,000	0.00	2.96	ND
Cotton-ground	23.64	5,000	0.00	13.35	ND
Cotton-aerial	66.79	5,000	0.01	42.23	ND
Grass-ground	30.38	5,000	0.01	21.28	ND
Grass-aerial	9.42	5,000	0.00	7.18	ND
Legumes-ground	2.73	5,000	0.00	2.05	ND
Legumes-aerial	13.67	5,000	0.00	10.23	ND
Onions-ground	6.50	5,000	0.00	4.42	ND
Onions Aerial	15.33	5,000	0.00	11.55	ND
Potatoes-ground	3.53	5,000	0.00	2.42	ND
Potatoes-aerial	5.19	5,000	0.00	3.79	ND
Rice (from rice model)	2997.00	5,000	0.60	ND	ND
Seeds-ground	0.97	5,000	0.00	0.59	ND
Seeds-aerial	4.87	5,000	0.00	2.97	ND
Walnuts-ground	4.22	5,000	0.00	2.88	ND
Walnuts-aerial	9.54	5,000	0.00	5.75	ND

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Methyl parthion (PDD 02/15/08)									
T-HERPS Analysis Based on Upper Bound Kenaga					NC=not calculated, organism too small for diet item				
Bobwhite acute endpoint, corrected Mineau									
1) Diet of Small Insects					RQs				
					Acute				
	Application Rate	Interval	Max Apps		Small (1.4 g)	Medium (37g)	Large (100g)		
Crop	(lb ai/A)	(days)	(per year)		Dose	Dose	Dose	Diet	Chronic
Cotton-multiple-2.3 day	3	5	5		4.7	2.7	1.26	18.4	82.5
Onion-multiple-2.3 day	0.5	5	6		0.8	0.4	0.2	3.1	13.8
Walnut-multiple-2.3 day	2	21	4		2.2	1.3	0.7	9.6	42.9
Grass-multiple-2.3 day	0.75	5	6		1.1	0.6	0.3	4.6	20.6
2) Diet of Large Insects					RQs				
					Acute				
	Application Rate	Interval	Max Apps		Small (1.4 g)	Medium (37g)	Large (100g)		
Crop	(lb ai/A)	(days)	(per year)		Dose	Dose	Dose	Diet	Chronic
Cotton-multiple-2.3 day	3	5	5		0.5	0.3	0.1	2.1	9.2
Onion-multiple-2.3 day	0.5	5	6		0.1	0.1	0.0	0.3	1.5
Walnut-multiple-2.3 day	2	21	4		0.3	0.2	0.1	1.1	4.8
Grass-multiple-2.3 day	0.75	5	6		0.1	0.1	0.0	0.5	2.3
3) Diet of Herbivore Mammals					RQs				
					Acute				
	Application Rate	Interval	Max Apps		Small (1.4 g)	Medium (37g)	Large (100g)		
Crop	(lb ai/A)	(days)	(per year)		Dose	Dose	Dose	Diet	Chronic
Cotton-multiple-2.3 day	3	5	5		NC	76.8	8.7	21.6	96.7
Onion-multiple-2.3 day	0.5	5	6		NC	12.8	1.5	3.6	16.1
Walnut-multiple-2.3 day	2	21	4		NC	38.7	4.6	11.2	50.2
Grass-multiple-2.3 day	0.75	5	6		NC	18.6	2.2	5.4	24.2
4) Diet of Insectivore Mammals					RQs				
					Acute				
	Application Rate	Interval	Max Apps		Small (1.4 g)	Medium (37g)	Large (100g)		
Crop	(lb ai/A)	(days)	(per year)		Dose	Dose	Dose	Diet	Chronic
Cotton-multiple-2.3 day	3	5	5		NC	4.8	0.5	1.4	6.0
Onion-multiple-2.3 day	0.5	5	6		NC	0.8	0.1	0.2	1.0
Walnut-multiple-2.3 day	2	21	4		NC	2.4	0.3	0.7	3.1
Grass-multiple-2.3 day	0.75	5	6		NC	1.2	0.1	0.3	1.5
5) Diet of Small Amphibians					RQs				
					Acute				
	Application Rate	Interval	Max Apps		Small (1.4 g)	Medium (37g)	Large (100g)		
Crop	(lb ai/A)	(days)	(per year)		Dose	Dose	Dose	Diet	Chronic
Cotton-multiple-2.3 day	3	5	5		NC	0.7	0.5	0.6	2.9
Onion-multiple-2.3 day	0.5	5	6		NC	0.0	0.0	0.1	0.5
Walnut-multiple-2.3 day	2	21	4		NC	0.1	0.0	0.3	1.5
Grass-multiple-2.3 day	0.75	5	6		NC	0.0	0.0	0.2	0.7

Methyl parathion-analysis of deposition on plants
PDD 2/15/08

Clearance for monocots NOAEL 0.202 lb ai/A E89091

Clearance for dicots NOAEL 0.455 lb ai/A E91430

Presumed "no detrimental effect on plants" 0.75 lb ai/A based on application to grass (monocots more sensitive)

Tier I - AgDrift Aerial Application

Application rate (lb ai/A) 3 cotton

Red indicates >0.5, next distance is clearance distance

Distance (ft)	Fraction of applied	Monocot clearance lb ai/A deposited	Dicot clearance lb ai/A deposited	0.75 lb clearance lb ai/A deposited
0	0.549	1.65	1.65	1.65
10	0.3365	1.01	1.01	1.01
20	0.2511	0.75	0.75	0.75
30	0.2043	0.61	0.61	0.61
40	0.1832	0.55	0.55	0.55
50	0.1712	0.51	0.51	0.51
60	0.1547	0.46	0.46	0.46
70	0.1339	0.40	0.40	0.40
80	0.1186	0.36	0.36	0.36
90	0.1087	0.33	0.33	0.33
100	0.09	0.27	0.27	0.27
140	0.0682	0.20	0.20	0.20
150	0.0638	0.19	0.19	0.19
200	0.047	0.14	0.14	0.14
300	0.0312	0.09	0.09	0.09
400	0.0234	0.07	0.07	0.07
500	0.0192	0.06	0.06	0.06
600	0.0164	0.05	0.05	0.05
700	0.0146	0.04	0.04	0.04
800	0.0133	0.04	0.04	0.04
900	0.0124	0.04	0.04	0.04

Tier I - AgDrift Aerial Application

Application rate (lb ai/A) 0.75 grass

Red indicates >0.5, next distance is clearance distance

Distance (ft)	Fraction of applied	Monocot clearance lb ai/A deposited	Dicot clearance lb ai/A deposited	0.75 lb clearance lb ai/A deposited
0	0.549	0.41	0.41	0.41
10	0.3365	0.25	0.25	0.25
20	0.2511	0.19	0.19	0.19
30	0.2043	0.15	0.15	0.15
40	0.1832	0.14	0.14	0.14
50	0.1712	0.13	0.13	0.13
60	0.1547	0.12	0.12	0.12
70	0.1339	0.10	0.10	0.10
80	0.1186	0.09	0.09	0.09
90	0.1087	0.08	0.08	0.08
100	0.09	0.07	0.07	0.07
200	0.047	0.04	0.04	0.04
300	0.0312	0.02	0.02	0.02
400	0.0234	0.02	0.02	0.02
500	0.0192	0.01	0.01	0.01
600	0.0164	0.01	0.01	0.01
700	0.0146	0.01	0.01	0.01
800	0.0133	0.01	0.01	0.01
900	0.0124	0.01	0.01	0.01

Tier I - AgDrift Aerial Application

Application rate (lb ai/A) 0.5 onions

Red indicates >0.5, next distance is clearance distance

Distance (ft)	Fraction of applied	Monocot clearance lb ai/A deposited	Dicot clearance lb ai/A deposited	0.75 lb clearance lb ai/A deposited
0	0.549	0.27	0.27	0.27
10	0.3365	0.17	0.08	0.17
20	0.2511	0.13	0.06	0.13
30	0.2043	0.10	0.05	0.10
40	0.1832	0.09	0.05	0.09
50	0.1712	0.09	0.04	0.09
60	0.1547	0.08	0.04	0.08
70	0.1339	0.07	0.03	0.07
80	0.1186	0.06	0.03	0.06
90	0.1087	0.05	0.03	0.05
100	0.09	0.05	0.02	0.05
200	0.047	0.02	0.01	0.02
300	0.0312	0.02	0.01	0.02
400	0.0234	0.01	0.01	0.01
500	0.0192	0.01	0.00	0.01
600	0.0164	0.01	0.00	0.01
700	0.0146	0.01	0.00	0.01
800	0.0133	0.01	0.00	0.01
900	0.0124	0.01	0.00	0.01

Tier I - AgDrift Aerial Application

Application rate (lb ai/A)

2 walnuts

Red indicates >0.5, next distance is clearance distance

Distance (ft)	Fraction of applied	Monocot clearance lb ai/A deposited	Dicot clearance lb ai/A deposited	0.75 lb clearance lb ai/A deposited
0	0.549	1.10	1.10	1.10
10	0.3365	0.67	0.67	0.67
20	0.2511	0.50	0.50	0.50
30	0.2043	0.41	0.41	0.41
40	0.1832	0.37	0.37	0.37
50	0.1712	0.34	0.34	0.34
60	0.1547	0.31	0.31	0.31
70	0.1339	0.27	0.27	0.27
80	0.1186	0.24	0.24	0.24
90	0.1087	0.22	0.22	0.22
100	0.09	0.18	0.18	0.18
200	0.047	0.09	0.09	0.09
300	0.0312	0.06	0.06	0.06
400	0.0234	0.05	0.05	0.05
500	0.0192	0.04	0.04	0.04
600	0.0164	0.03	0.03	0.03
700	0.0146	0.03	0.03	0.03
800	0.0133	0.03	0.03	0.03
900	0.0124	0.02	0.02	0.02