

TREX MODEL INPUTS

These values will be used in the calculation of exposure estimates for foliar, granular, liquid and/or seed applications of pesticides

Chemical Identity and Application Information

Chemical Name:	Metolachlor
Use:	Corn
Product name and form:	
% A.I. (leading zero must be entered for formulations <1% a.i.):	100.00%
Application Rate (lbs/A):	4
Half-life (days):	35
Application Interval (days):	30
Number of Applications:	2

Assessed Species Inputs (optional, use defaults for RQs for national level assessments)

What body weight range is assessed (grams)?	Birds	Mammals
Small	20	15
Medium	100	35
Large	1000	1000

Note: Sources of wildlife diet are assumed to be available for less than one year for this model.

Endpoints

Avian			
Endpoint	Toxicity value	Indicate test species below	
LD50 (mg/kg-bw)	2194.00	Bobwhite quail	▼
LC50 (mg/kg-diet)	4912.00	Bobwhite quail	▼
NOAEL (mg/kg-bw)		Bobwhite quail	▼
NOAEC (mg/kg-diet)	1000.00	Bobwhite quail	▼
Enter the Mineau et al. Scaling Factor		1.15	

Optional Test Organism Body weight (g)	Optional Test Species Name	Toxicity Value Reference (MRID)

Mammalian			
	Acute Study	Chronic Study	
Size (g) of mammal used in toxicity study Default rat body weight is 350 grams	350	350	
Endpoint	Toxicity value	Reference (MRID)	
LD50 (mg/kg-bw)	2780.00		
LC50 (mg/kg-diet)			
Reported Chronic Endpoint	24.00	mg/kg-bw	▼
Is dietary concentration (mg/kg-diet) reported from the available chronic mammal study? (yes or no)	yes		
Enter dietary concentration (mg/kg-diet)	300.00		

LD50 ft-2

Application Type:	Broadcast ▼	Enter data below:
	Liquid ▼	
Is application rate given in lbs a.i./Acre?	yes	
Application rate, lbs a.i./Acre, from B10		
Do not use this input		
Do not use this input		
Do not use this input		
% incorporated		

TREX MODEL INPUTS

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Metolachlor

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Metolachlor
Use	Corn
Formulation	0
Application Rate	4 lbs a.i./acre
Half-life	35 days
Application Interval	30 days
Maximum # Apps./Year	2
Length of Simulation	1 year

Acute and Chronic RQs are based on the Upper Bound Kenaga Residues.

The maximum single day residue estimation is used for both the acute and reproduction RQs.

RQs reported as "0.00" in the RQ tables below should be noted as <0.01 in your assessment. This is due to rounding and significant figure issues in Excel.

Endpoints			
Avian	Bobwhite quail	LD50 (mg/kg-bw)	2194.00
	Bobwhite quail	LC50 (mg/kg-diet)	4912.00
	Bobwhite quail	NOAEL(mg/kg-bw)	0.00
	Bobwhite quail	NOAEC (mg/kg-diet)	1000.00
Mammals		LD50 (mg/kg-bw)	2780.00
		LC50 (mg/kg-diet)	0.00
		NOAEL (mg/kg-bw)	24.00
		NOAEC (mg/kg-diet)	300.00
Dietary-based EECs (ppm)		Kenaga Values	
Short Grass		1489.96	
Tall Grass		682.90	
Broadleaf plants/sm Insects		838.10	
Fruits/pods/seeds/lg insects		93.12	

Avian Results

Avian Class	Body Weight (g)	Ingestion (Fdry) (g bw/day)	Ingestion (Fwet) (g/day)	% body wgt consumed	FI (kg-diet/day)
Small	20	5	23	114	2.28E-02
Mid	100	13	65	65	6.49E-02
Large	1000	58	291	29	2.91E-01
Granivores	20	5	5	25	5.06E-03
	100	13	14	14	1.44E-02
	1000	58	65	6	6.46E-02

Avian Body Weight (g)	Adjusted LD50 (mg/kg-bw)
20	1580.62
100	2012.21
1000	2842.32

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights (grams)					
	small 20	mid 100	large 1000	Granivores(grams)		
				20	100	1000
Short Grass	1696.92	967.65	433.23			
Tall Grass	777.75	443.51	198.56			
Broadleaf plants/sm Insects	954.52	544.31	243.69			
Fruits/pods/seeds/lg insects	106.06	60.48	27.08	23.57	13.44	6.02

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs Size Class (grams)		
	20	100	1000
Short Grass	1.07	0.48	0.15
Tall Grass	0.49	0.22	0.07
Broadleaf plants/sm insects	0.60	0.27	0.09
Fruits/pods/seeds/lg insects	0.07	0.03	0.01
Seeds (granivore)	0.01	0.01	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.30	1.49
Tall Grass	0.14	0.68
Broadleaf plants/sm Insects	0.17	0.84
Fruits/pods/seeds/lg insects	0.02	0.09

Note: To provide risk management with the maximum possible information, it is recommended that both the dose-based and concentration-based RQs be calculated when data are available

Metolachlor

Corn

Upper bound Kenaga Residues

Mammalian Results

Mammalian Class	Body Weight	Ingestion (Fdry) (g bwt/day)	Ingestion (Fwet) (g/day)	% body wgt consumed	FI (kg-diet/day)
Herbivores/ Insectivores	15	3	14	95	1.43E-02
	35	5	23	66	2.31E-02
	1000	31	153	15	1.53E-01
Grainvores	15	3	3	21	3.18E-03
	35	5	5	15	5.13E-03
	1000	31	34	3	3.40E-02

Mammalian Class	Body Weight	Adjusted LD50	Adjusted NOAEL
Herbivores/ Insectivores	15	6109.97	52.75
	35	4943.62	42.68
	1000	2138.27	18.46
Grainvores	15	6109.97	52.75
	35	4943.62	42.68
	1000	2138.27	18.46

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores (grams)			Granivores(grams)		
	15	35	1000	15	35	1000
Short Grass	1420.57	981.80	227.63			
Tall Grass	651.09	449.99	104.33			
Broadleaf plants/sm Insects	799.07	552.26	128.04			
Fruits/pods/seeds/lg insects	88.79	61.36	14.23	19.73	13.64	3.16

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	Small mammal 15 grams		Medium mammal 35 grams		Large mammal 1000 grams	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.23	26.93	0.20	23.00	0.11	12.33
Tall Grass	0.11	12.34	0.09	10.54	0.05	5.65
Broadleaf plants/sm insects	0.13	15.15	0.11	12.94	0.06	6.94
Fruits/pods/lg insects	0.01	1.68	0.01	1.44	0.01	0.77
Seeds (granivore)	0.00	0.37	0.00	0.32	0.00	0.17

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	4.97
Tall Grass	#DIV/0!	2.28
Broadleaf plants/sm insects	#DIV/0!	2.79
Fruits/pods/seeds/lg insects	#DIV/0!	0.31

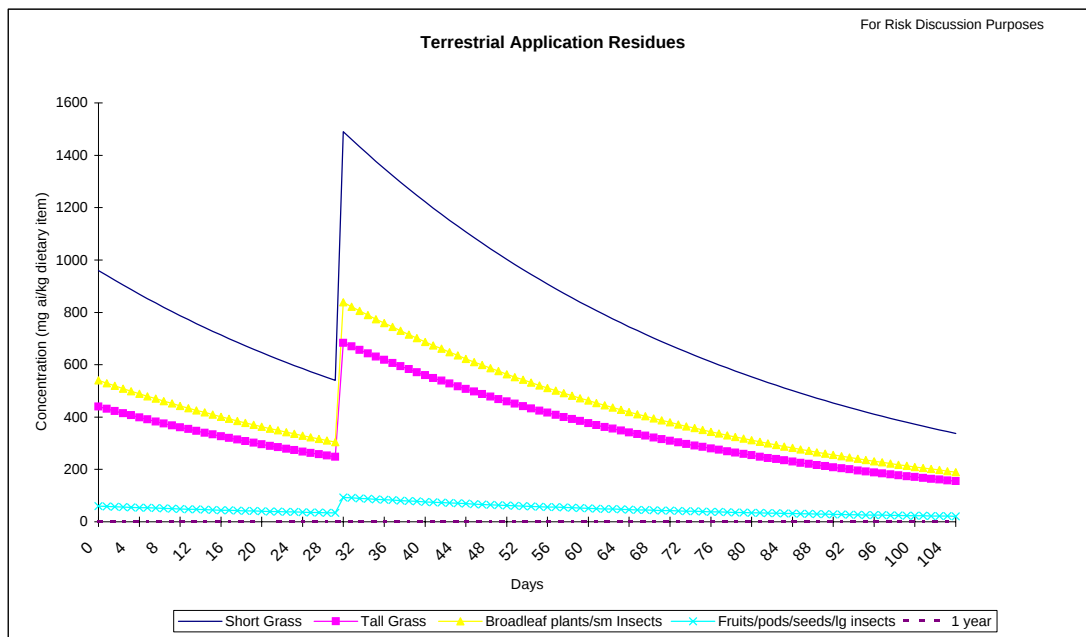
Note: To provide risk management with the maximum possible information, it is recommended that both the dose-based and concentration-based RQs be calculated when data are available

Metolachlor

Corn

Upper bound Kenaga Residues

Terrestrial Residues Graph



Mean Kenaga Residues

Chemical Name:	Metolachlor
Use	Corn
Formulation	0
Application Rate	4 lbs a.i./acre
Half-life	35 days
Application Interval	30 days
Maximum # Apps./Year	2
Length of Simulation	1 year

For Risk Description Purposes

Note that the ratio of exposure and effects endpoints are termed "RQs" in this output. Caution should be exercised in relating these values to the Agency Levels of Concern

Toxicity Endpoints			
Avian	Bobwhite quail	LD50 (mg/kg-bw)	2194.00
	Bobwhite quail	LC50 (mg/kg-diet)	4912.00
	Bobwhite quail)	NOAEL (mg/kg-bw)	0.00
	Bobwhite quail	NOAEC (mg/kg-diet)	1000.00
Mammals		LD50 (mg/kg-bw)	2780.00
		LC50 (mg/kg-diet)	0.00
		NOAEL (mg/kg-bw)	24.00
		NOAEC (mg/kg-diet)	300.00

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	527.70
Tall Grass	223.49
Broadleaf plants/sm Insects	279.37
Fruits/pods/seeds/lg insects	43.46

Avian Results

Avian Class	Body Weight	% body wgt consumed	Adjusted LD50
Small	20	114	1580.62
Mid	100	65	2012.21
Large	1000	29	2842.32
Grainvores	20	25	1581
	100	14	2012
	1000	6	2842

Dose-based EEC (mg/kg-bw)	Avian Classes and Body Weights (grams)					
	small 20	mid 100	large 1000	Granivores(grams)		
Short Grass	600.99	342.71	153.44			
Tall Grass	254.54	145.15	64.98			
Broadleaf plants/sm Insects	318.17	181.44	81.23			
Fruits/pods/lg insects	49.49	28.22	12.64	11.00	6.27	2.81

Dose-based RQs (Dose-based EEC/LD50)	Avian Acute "RQs" Size class (grams)		
	20	100	1000
Short Grass	0.38	0.17	0.05
Tall Grass	0.16	0.07	0.02
Broadleaf plants/sm insects	0.20	0.09	0.03
Fruits/pods/lg insects	0.03	0.01	0.00
Seeds (granivore)	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	"RQs"	
	Acute	Chronic
Short Grass	0.11	0.53
Tall Grass	0.05	0.22
Broadleaf plants/sm Insects	0.06	0.28
Fruits/pods/lg insects	0.01	0.04

Metolachlor

Corn

Mean Kenaga Residues

Mammalian Results

Mammalian Class	Body Weight	% body wgt consumed	Adjusted LD50	Adjusted NOAEL
Herbivores/ insectivores	15	95	6109.97	52.75
	35	66	4943.62	42.68
	1000	15	2138.27	18.46
Grainvores	15	21	6109.97	52.75
	35	15	4943.62	42.68
	1000	3	2138.27	18.46

Dose-based EEC (mg/kg-bw)	Mammalian Classes and Body weight (grams)					
	Herbivores/ insectivores			Granivores		
	15	35	1000	15	35	1000
Short Grass	503.12	347.72	80.62			
Tall Grass	213.08	147.27	34.15			
Broadleaf plants/sm Insects	266.36	184.09	42.68			
Fruits/pods/seeds/lg insects	41.43	28.64	6.64	9.21	6.36	1.48

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	Small mammal		Medium mammal		Large mammal	
	15 grams		35 grams		1000 grams	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.08	9.54	0.07	8.15	0.04	4.37
Tall Grass	0.03	4.04	0.03	3.45	0.02	1.85
Broadleaf plants/sm insects	0.04	5.05	0.04	4.31	0.02	2.31
Fruits/pods/lg insects	0.01	0.79	0.01	0.67	0.00	0.36
Seeds (granivore)	0.00	0.17	0.00	0.15	0.00	0.08

Dietary-based "RQs" (EEC/LC50 or NOAEC)	Mammal "RQs"	
	Acute	Chronic
Short Grass	#DIV/0!	1.76
Tall Grass	#DIV/0!	0.74
Broadleaf plants/sm insects	#DIV/0!	0.93
Fruits/pods/seeds/lg insects	#DIV/0!	0.14

Terrestrial Residues Graph