

Appendix E. Example Output from T-REX and T-HERPS

(a) T-REX

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	PCNB
Use	Cole Crops
Formulation	0
Application Rate	22.5 lbs a.i./acre
Half-life	35 days
Application Interval	0 days
Maximum # Apps./Year	1
Length of Simulation	1 year
Variable application rates?	no

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)	2250.00
	Bobwhite quail	LC50 (mg/kg-diet)	0.00
	Mallard duck	NOAEL (mg/kg-bw)	0.00
	Bobwhite quail	NOAEC (mg/kg-diet)	600.00
Mammals		LD50 (mg/kg-bw)	2114.00
		LC50 (mg/kg-diet)	0.00
		NOAEL (mg/kg-bw)	1.20
		NOAEC (mg/kg-diet)	24.00
Dietary-based EECs (ppm)		Kenaga Values	
Short Grass		5400.00	
Tall Grass		2475.00	
Broadleaf plants		3037.50	
Fruits/pods/seeds		337.50	
Arthropods		2115.00	

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	55	55	5.49E-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	56	8	5.48E-02

Avian Body Weight (g)	Adjusted LD50 (mg/kg-bw)
20	1620.87
100	2063.57
1000	2914.87

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights (grams)		
	small 20	mid 100	large 1000
Short Grass	6150.06	3507.02	1570.14
Tall Grass	2518.78	1807.39	719.65
Broadleaf plants	3459.41	1972.70	863.20
Fruits/pods	384.36	219.19	96.13
Arthropods	2408.77	1373.68	614.97
Seeds	56.42	45.71	21.81

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs Size Class (grams)		
	20	100	1000
Short Grass	3.79	1.70	0.54
Tall Grass	1.74	0.78	0.26
Broadleaf plants	2.13	0.96	0.30
Fruits/pods	0.24	0.11	0.03
Arthropods	1.49	0.67	0.21
Seeds	0.05	0.02	0.01

Dietary-based RQs	RQs	
	Acute	Chronic
Short Grass	#DIV/0!	9.00
Tall Grass	#DIV/0!	4.13
Broadleaf plants	#DIV/0!	5.06
Fruits/pods/seeds	#DIV/0!	0.56
Arthropods	#DIV/0!	3.53

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.

(T-REX output continued)

PCNB

Cola Crops

Upper bound Kenaga Residues

Mammalian Results

Mammalian Class	Body Weight	Ingestion (Dry) (g bw/day)	Ingestion (Fwet) (g/day)	% body wt consumed	FI (kg-diet/day)
Herbivores/Insectivores	15	3	14	95	1.43E-02
	35	5	23	86	2.31E-02
	1000	31	153	15	1.53E-01
Grainivores	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	3982.88	2.84
	35	3222.58	2.13
	1000	1393.86	0.92
Grainivores	15	3982.88	2.84
	35	3222.58	2.13
	1000	1393.86	0.92

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight (grams)		
	15	35	1000
Short Grass	5148.49	3558.29	826.00
Tall Grass	2359.72	1630.88	378.13
Broadleaf plants	2898.02	2001.54	464.06
Fruits/pods	221.78	222.39	51.56
Arthropods	2016.49	1393.86	323.13
Seeds	71.51	49.42	11.46

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	1.29	1552.11	1.10	1667.48	0.59	893.63
Tall Grass	0.59	994.72	0.51	764.26	0.27	409.87
Broadleaf plants	0.73	1098.06	0.62	937.96	0.33	602.78
Fruits/pods	0.08	122.01	0.07	104.22	0.04	55.88
Arthropods	0.51	764.68	0.43	563.10	0.23	360.09
Seeds	0.02	27.11	0.02	22.19	0.01	12.41

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	225.00
Tall Grass	#DIV/0!	103.13
Broadleaf plants	#DIV/0!	126.66
Fruits/pods/seeds	#DIV/0!	14.06
Arthropods	#DIV/0!	88.13

(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.)

(b) T-HERPS (example output for SFGS)

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	PCNB
Use	Cole Crops
Formulation	0
Application Rate	22.5 lbs a.i./acre
Half-life	35 days
Application Interval	0 days
Maximum # Apps./Year	1
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)	2250.00
	Bobwhite quail	LC50 (mg/kg-diet)	0.00
	Bobwhite quail	NOAEL (mg/kg-bw)	0.00
	Bobwhite quail	NOAEC (mg/kg-diet)	600.00

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	5400.00
Tall Grass	2475.00
Broadleaf plants/sm insects	3037.50
Fruits/pods/seeds/lg insects	337.50
Small herbivore mammals	4120.53
Small insectivore mammals	257.53
Small terrestrial phase amphibians	95.08

Terrestrial Herpetofauna Results

Weight Class	Body Weight (g)	Ingestion (Fdry) (g bw/day)	Ingestion (Fwet) (g/day)	% body wgt consumed	FI (kg-diet/day)
Small	2	0.022	0.1	5.6	1.11E-04
Mid	20	0.192	0.7	3.3	6.88E-04
Large	200	0.781	3.9	2.0	3.90E-03

Body Weight (g)	Adjusted LD50 (mg/kg-bw)
2	2250.00
20	2250.00
200	2250.00

Dose-based EECs (mg/kg-bw)	Herpetofaunal Size Classes and Body Weights		
	small (g)	mid (g)	large (g)
	2	20	200
Short Grass	299.90	177.82	105.43
Tall Grass	137.45	81.50	48.32
Broadleaf plants/sm insects	168.59	100.02	59.31
Fruits/pods/seeds/lg insects	18.74	11.11	6.59
Small herbivore mammals	N/A	5150.67	515.07
Small insectivore mammals	N/A	321.92	32.19
Small terrestrial phase amphibian	N/A	3.13	1.86

Dose-based RQs (Dose-based EEC/adjusted LD50)	Amphibian/Reptile Acute RQs for Small, Medium, and Large Species (grams)		
	2	20	200
Short Grass	0.13	0.08	0.05
Tall Grass	0.06	0.04	0.02
Broadleaf plants/sm insects	0.07	0.04	0.03
Fruits/pods/seeds/lg insects	0.01	0.00	0.00
Small herbivore mammals	N/A	2.29	0.23
Small insectivore mammals	N/A	0.14	0.01
Small terrestrial phase amphibian	N/A	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or)	RQs	
	Acute	Chronic
Short Grass	#DIV/0!	9.00
Tall Grass	#DIV/0!	4.13
Broadleaf plants/sm insects	#DIV/0!	5.06
Fruits/pods/seeds/lg insects	#DIV/0!	0.66
Small herbivore mammals	#DIV/0!	6.87
Small insectivore mammals	#DIV/0!	0.43
Small terrestrial phase amphibian	#DIV/0!	0.16

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.