APPENDIX C. Estimated Exposures and Risk Quotients for Terrestrial Assessment

Field Corn T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	Field Corn
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	1
Length of Simulation	1 year

Endpoints

Avian	Bobwhite quail	LD50 (mg/kg-bw)	381.00
	Mallard duck)	LC50 (mg/kg-diet)	4894.00
	Mallard duck	NOAEL(mg/kg-bw)	0.00
	Bobwhite quail	NOAEC (mg/kg-diet)	0.00
Mammals		LD50 (mg/kg-bw)	59.00
		LC50 (mg/kg-diet)	0.00
		NOAEL (mg/kg-bw)	4.21
		NOAEC (mg/kg-diet)	84.20

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	12.00
Tall Grass	5.50
Broadleaf plants/sm Insects	6.75
Fruits/pods/seeds/lg insects	0.75

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

Avian Body Weight (g)	Adjusted LD50 (mg/kg-bw)
20	274.48
100	349.43
1000	493.59

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	13.67	7.79	3.49
Tall Grass	6.26	3.57	1.60
Broadleaf plants/sm Insects	7.69	4.38	1.96
Fruits/pods/seeds/lg insects	0.85	0.49	0.22

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.05	0.02	0.01
Tall Grass	0.02	0.01	0.00
Broadleaf plants/sm insects	0.03	0.01	0.00
Fruits/pods/seeds/lg insects	0.00	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.00	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

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	129.67	9.25
	35	104.92	7.49
	1000	45.38	3.24
Grainvores	15	129.67	9.25
	35	104.92	7.49
	1000	45.38	3.24

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	11.44	7.91	1.83			
Tall Grass	5.24	3.62	0.84			
Broadleaf plants/sm Insects	6.44	4.45	1.03			
Fruits/pods/seeds/lg insects	0.72	0.49	0.11	0.16	0.11	0.03

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.09	1.24	0.08	1.06	0.04	0.57
Tall Grass	0.04	0.57	0.03	0.48	0.02	0.26
Broadleaf plants/sm insects	0.05	0.70	0.04	0.59	0.02	0.32
Fruits/pods/lg insects	0.01	0.08	0.00	0.07	0.00	0.04
Seeds (granivore)	0.00	0.02	0.00	0.01	0.00	0.01

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.14
Tall Grass	#DIV/0!	0.07
Broadleaf plants/sm insects	#DIV/0!	0.08
Fruits/pods/seeds/lg insects	#DIV/0!	0.01

Radish T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	Radish
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	2
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	20.09
Tall Grass	9.21
Broadleaf plants/sm Insects	11.30
Fruits/pods/seeds/lg insects	1.26

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	22.88	13.05	5.84
Tall Grass	10.49	5.98	2.68
Broadleaf plants/sm Insects	12.87	7.34	3.29
Fruits/pods/seeds/lg insects	1.43	0.82	0.37

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.08	0.04	0.01
Tall Grass	0.04	0.02	0.01
Broadleaf plants/sm insects	0.05	0.02	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.00	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	19.15	13.24	3.07			
Tall Grass	8.78	6.07	1.41			
Broadleaf plants/sm Insects	10.77	7.45	1.73			
Fruits/pods/seeds/lg insects	1.20	0.83	0.19	0.27	0.18	0.04

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.15	2.07	0.13	1.77	0.07	0.95
Tall Grass	0.07	0.95	0.06	0.81	0.03	0.43
Broadleaf plants/sm insects	0.08	1.16	0.07	0.99	0.04	0.53
Fruits/pods/lg insects	0.01	0.13	0.01	0.11	0.00	0.06
Seeds (granivore)	0.00	0.03	0.00	0.02	0.00	0.01

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.24
Tall Grass	#DIV/0!	0.11
Broadleaf plants/sm insects	#DIV/0!	0.13
Fruits/pods/seeds/lg insects	#DIV/0!	0.01

Artichoke, Sugarbeet, Peanut T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	Artichoke, Sugarbeet, Peanuts
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	3
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	25.54
Tall Grass	11.71
Broadleaf plants/sm Insects	14.37
Fruits/pods/seeds/lg insects	1.60

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	29.09	16.59	7.43
Tall Grass	13.33	7.60	3.40
Broadleaf plants/sm Insects	16.36	9.33	4.18
Fruits/pods/seeds/lg insects	1.82	1.04	0.46

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.11	0.05	0.02
Tall Grass	0.05	0.02	0.01
Broadleaf plants/sm insects	0.06	0.03	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	24.35	16.83	3.90			
Tall Grass	11.16	7.71	1.79			
Broadleaf plants/sm Insects	13.70	9.47	2.19			
Fruits/pods/seeds/lg insects	1.52	1.05	0.24	0.34	0.23	0.05

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.19	2.63	0.16	2.25	0.09	1.21
Tall Grass	0.09	1.21	0.07	1.03	0.04	0.55
Broadleaf plants/sm insects	0.11	1.48	0.09	1.26	0.05	0.68
Fruits/pods/lg insects	0.01	0.16	0.01	0.14	0.01	0.08
Seeds (granivore)	0.00	0.04	0.00	0.03	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.30
Tall Grass	#DIV/0!	0.14
Broadleaf plants/sm insects	#DIV/0!	0.17
Fruits/pods/seeds/lg insects	#DIV/0!	0.02

Collards, Mustard, Sunflower, Beans (Dried, Succulent), Lentils, Peas, Sugarcane T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	Mustard, Sunflower, Beans, Lentils, Peas, S
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	4
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	29.22
Tall Grass	13.39
Broadleaf plants/sm Insects	16.43
Fruits/pods/seeds/lg insects	1.83

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	33.27	18.97	8.49
Tall Grass	15.25	8.70	3.89
Broadleaf plants/sm Insects	18.72	10.67	4.78
Fruits/pods/seeds/lg insects	2.08	1.19	0.53

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.12	0.05	0.02
Tall Grass	0.06	0.02	0.01
Broadleaf plants/sm insects	0.07	0.03	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	27.85	19.25	4.46			
Tall Grass	12.77	8.82	2.05			
Broadleaf plants/sm Insects	15.67	10.83	2.51			
Fruits/pods/seeds/lg insects	1.74	1.20	0.28	0.39	0.27	0.06

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.21	3.01	0.18	2.57	0.10	1.38
Tall Grass	0.10	1.38	0.08	1.18	0.05	0.63
Broadleaf plants/sm insects	0.12	1.69	0.10	1.45	0.06	0.78
Fruits/pods/lg insects	0.01	0.19	0.01	0.16	0.01	0.09
Seeds (granivore)	0.00	0.04	0.00	0.04	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.35
Tall Grass	#DIV/0!	0.16
Broadleaf plants/sm insects	#DIV/0!	0.20
Fruits/pods/seeds/lg insects	#DIV/0!	0.02

Field Corn, Cucumber, Melons, Pumpkin, Squash, Turnip, Sugarbeet T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	cumber, Melons, Pumpkin, Squash, Turnip, S
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	5
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	31.69
Tall Grass	14.53
Broadleaf plants/sm Insects	17.83
Fruits/pods/seeds/lg insects	1.98

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	36.09	20.58	9.21
Tall Grass	16.54	9.43	4.22
Broadleaf plants/sm Insects	20.30	11.58	5.18
Fruits/pods/seeds/lg insects	2.26	1.29	0.58

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.13	0.06	0.02
Tall Grass	0.06	0.03	0.01
Broadleaf plants/sm insects	0.07	0.03	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	30.22	20.88	4.84			
Tall Grass	13.85	9.57	2.22			
Broadleaf plants/sm Insects	17.00	11.75	2.72			
Fruits/pods/seeds/lg insects	1.89	1.31	0.30	0.42	0.29	0.07

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.23	3.27	0.20	2.79	0.11	1.50
Tall Grass	0.11	1.50	0.09	1.28	0.05	0.69
Broadleaf plants/sm insects	0.13	1.84	0.11	1.57	0.06	0.84
Fruits/pods/lg insects	0.01	0.20	0.01	0.17	0.01	0.09
Seeds (granivore)	0.00	0.05	0.00	0.04	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.38
Tall Grass	#DIV/0!	0.17
Broadleaf plants/sm insects	#DIV/0!	0.21
Fruits/pods/seeds/lg insects	#DIV/0!	0.02

Kohlrabi, Eggplant, Potato, Pepper T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	Kohlrabi, Eggplant, Potato, Pepper
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	7
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	34.49
Tall Grass	15.81
Broadleaf plants/sm Insects	19.40
Fruits/pods/seeds/lg insects	2.16

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	39.28	22.40	10.03
Tall Grass	18.00	10.27	4.60
Broadleaf plants/sm Insects	22.09	12.60	5.64
Fruits/pods/seeds/lg insects	2.45	1.40	0.63

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.14	0.06	0.02
Tall Grass	0.07	0.03	0.01
Broadleaf plants/sm insects	0.08	0.04	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	32.88	22.72	5.27			
Tall Grass	15.07	10.42	2.41			
Broadleaf plants/sm Insects	18.50	12.78	2.96			
Fruits/pods/seeds/lg insects	2.06	1.42	0.33	0.46	0.32	0.07

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.25	3.55	0.22	3.04	0.12	1.63
Tall Grass	0.12	1.63	0.10	1.39	0.05	0.75
Broadleaf plants/sm insects	0.14	2.00	0.12	1.71	0.07	0.92
Fruits/pods/lg insects	0.02	0.22	0.01	0.19	0.01	0.10
Seeds (granivore)	0.00	0.05	0.00	0.04	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.41
Tall Grass	#DIV/0!	0.19
Broadleaf plants/sm insects	#DIV/0!	0.23
Fruits/pods/seeds/lg insects	#DIV/0!	0.03

Broccoli, Chinese broccoli, Cauliflower, Cabbage, Chinese Cabbage T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	inese Broccoli, Cauliflower, Cabbage, Chine
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	8
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	35.25
Tall Grass	16.15
Broadleaf plants/sm Insects	19.83
Fruits/pods/seeds/lg insects	2.20

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	40.14	22.89	10.25
Tall Grass	18.40	10.49	4.70
Broadleaf plants/sm Insects	22.58	12.88	5.76
Fruits/pods/seeds/lg insects	2.51	1.43	0.64

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.15	0.07	0.02
Tall Grass	0.07	0.03	0.01
Broadleaf plants/sm insects	0.08	0.04	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	33.60	23.22	5.38			
Tall Grass	15.40	10.64	2.47			
Broadleaf plants/sm Insects	18.90	13.06	3.03			
Fruits/pods/seeds/lg insects	2.10	1.45	0.34	0.47	0.32	0.07

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.26	3.63	0.22	3.10	0.12	1.66
Tall Grass	0.12	1.66	0.10	1.42	0.05	0.76
Broadleaf plants/sm insects	0.15	2.04	0.12	1.74	0.07	0.94
Fruits/pods/lg insects	0.02	0.23	0.01	0.19	0.01	0.10
Seeds (granivore)	0.00	0.05	0.00	0.04	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.42
Tall Grass	#DIV/0!	0.19
Broadleaf plants/sm insects	#DIV/0!	0.24
Fruits/pods/seeds/lg insects	#DIV/0!	0.03

Corn, Pop Corn, Sweet Corn, Carrot, Cotton, Tomato, Non-cropland T-REX Output

Upper Bound Kenaga Residues For RQ Calculation

Chemical Name:	Esfenvalerate
Use	Corn, Sweet Corn, Carrot, Cotton, Tomato, Nc
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	10
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	36.10
Tall Grass	16.55
Broadleaf plants/sm Insects	20.31
Fruits/pods/seeds/lg insects	2.26

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	41.12	23.45	10.50
Tall Grass	18.84	10.75	4.81
Broadleaf plants/sm Insects	23.13	13.19	5.90
Fruits/pods/seeds/lg insects	2.57	1.47	0.66

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.15	0.07	0.02
Tall Grass	0.07	0.03	0.01
Broadleaf plants/sm insects	0.08	0.04	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	34.42	23.79	5.52			
Tall Grass	15.78	10.90	2.53			
Broadleaf plants/sm Insects	19.36	13.38	3.10			
Fruits/pods/seeds/lg insects	2.15	1.49	0.34	0.48	0.33	0.08

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.27	3.72	0.23	3.18	0.12	1.70
Tall Grass	0.12	1.70	0.10	1.46	0.06	0.78
Broadleaf plants/sm insects	0.15	2.09	0.13	1.79	0.07	0.96
Fruits/pods/lg insects	0.02	0.23	0.01	0.20	0.01	0.11
Seeds (granivore)	0.00	0.05	0.00	0.04	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.43
Tall Grass	#DIV/0!	0.20
Broadleaf plants/sm insects	#DIV/0!	0.24
Fruits/pods/seeds/lg insects	#DIV/0!	0.03

Forestry T-REX Output

Chemical Name:	Esfenvalerate
Use	Forestry
Formulation	0
Application Rate	0.05 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	25
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	36.81
Tall Grass	16.87
Broadleaf plants/sm Insects	20.71
Fruits/pods/seeds/lg insects	2.30

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	41.92	23.91	10.70
Tall Grass	19.22	10.96	4.91
Broadleaf plants/sm Insects	23.58	13.45	6.02
Fruits/pods/seeds/lg insects	2.62	1.49	0.67

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.15	0.07	0.02
Tall Grass	0.07	0.03	0.01
Broadleaf plants/sm insects	0.09	0.04	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	35.10	24.26	5.62			
Tall Grass	16.09	11.12	2.58			
Broadleaf plants/sm Insects	19.74	13.64	3.16			
Fruits/pods/seeds/lg insects	2.19	1.52	0.35	0.49	0.34	0.08

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.27	3.79	0.23	3.24	0.12	1.74
Tall Grass	0.12	1.74	0.11	1.49	0.06	0.80
Broadleaf plants/sm insects	0.15	2.13	0.13	1.82	0.07	0.98
Fruits/pods/lg insects	0.02	0.24	0.01	0.20	0.01	0.11
Seeds (granivore)	0.00	0.05	0.00	0.05	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.44
Tall Grass	#DIV/0!	0.20
Broadleaf plants/sm insects	#DIV/0!	0.25
Fruits/pods/seeds/lg insects	#DIV/0!	0.03

Pecan T-REX Output

Chemical Name:	Esfenvalerate
Use	Pecan
Formulation	0
Application Rate	0.075 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	4
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	43.82
Tall Grass	20.09
Broadleaf plants/sm Insects	24.65
Fruits/pods/seeds/lg insects	2.74

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	49.91	28.46	12.74
Tall Grass	22.88	13.04	5.84
Broadleaf plants/sm Insects	28.07	16.01	7.17
Fruits/pods/seeds/lg insects	3.12	1.78	0.80

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.18	0.08	0.03
Tall Grass	0.08	0.04	0.01
Broadleaf plants/sm insects	0.10	0.05	0.01
Fruits/pods/seeds/lg insects	0.01	0.01	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.01	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	41.78	28.88	6.70			
Tall Grass	19.15	13.24	3.07			
Broadleaf plants/sm Insects	23.50	16.24	3.77			
Fruits/pods/seeds/lg insects	2.61	1.80	0.42	0.58	0.40	0.09

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.32	4.52	0.28	3.86	0.15	2.07
Tall Grass	0.15	2.07	0.13	1.77	0.07	0.95
Broadleaf plants/sm insects	0.18	2.54	0.15	2.17	0.08	1.16
Fruits/pods/lg insects	0.02	0.28	0.02	0.24	0.01	0.13
Seeds (granivore)	0.00	0.06	0.00	0.05	0.00	0.03

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.52
Tall Grass	#DIV/0!	0.24
Broadleaf plants/sm insects	#DIV/0!	0.29
Fruits/pods/seeds/lg insects	#DIV/0!	0.03

Apple, Pear, Kiwi, Lettuce T-REX Output

Chemical Name:	Esfenvalerate
Use	Pecan
Formulation	0
Application Rate	0.075 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	7
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	51.73
Tall Grass	23.71
Broadleaf plants/sm Insects	29.10
Fruits/pods/seeds/lg insects	3.23

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	58.92	33.60	15.04
Tall Grass	27.00	15.40	6.89
Broadleaf plants/sm Insects	33.14	18.90	8.46
Fruits/pods/seeds/lg insects	3.68	2.10	0.94

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.21	0.10	0.03
Tall Grass	0.10	0.04	0.01
Broadleaf plants/sm insects	0.12	0.05	0.02
Fruits/pods/seeds/lg insects	0.01	0.01	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.01	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	49.32	34.09	7.90			
Tall Grass	22.61	15.62	3.62			
Broadleaf plants/sm Insects	27.74	19.17	4.45			
Fruits/pods/seeds/lg insects	3.08	2.13	0.49	0.69	0.47	0.11

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.38	5.33	0.32	4.55	0.17	2.44
Tall Grass	0.17	2.44	0.15	2.09	0.08	1.12
Broadleaf plants/sm insects	0.21	3.00	0.18	2.56	0.10	1.37
Fruits/pods/lg insects	0.02	0.33	0.02	0.28	0.01	0.15
Seeds (granivore)	0.01	0.07	0.00	0.06	0.00	0.03

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.61
Tall Grass	#DIV/0!	0.28
Broadleaf plants/sm insects	#DIV/0!	0.35
Fruits/pods/seeds/lg insects	#DIV/0!	0.04

Apricot, Cherry, Nectarine, Peach, Plum, Prune T-TEX Output

Chemical Name:	Esfenvalerate
Use	Apricot, Cherry, Nectarine, Peach, Plum, Prun
Formulation	0
Application Rate	0.075 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	9
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	53.63
Tall Grass	24.58
Broadleaf plants/sm Insects	30.17
Fruits/pods/seeds/lg insects	3.35

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	61.08	34.83	15.60
Tall Grass	28.00	15.97	7.15
Broadleaf plants/sm Insects	34.36	19.59	8.77
Fruits/pods/seeds/lg insects	3.82	2.18	0.97

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.22	0.10	0.03
Tall Grass	0.10	0.05	0.01
Broadleaf plants/sm insects	0.13	0.06	0.02
Fruits/pods/seeds/lg insects	0.01	0.01	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.01	#DIV/0!
Broadleaf plants/sm Insects	0.01	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	51.14	35.34	8.19			
Tall Grass	23.44	16.20	3.76			
Broadleaf plants/sm Insects	28.76	19.88	4.61			
Fruits/pods/seeds/lg insects	3.20	2.21	0.51	0.71	0.49	0.11

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.39	5.53	0.34	4.72	0.18	2.53
Tall Grass	0.18	2.53	0.15	2.16	0.08	1.16
Broadleaf plants/sm insects	0.22	3.11	0.19	2.66	0.10	1.42
Fruits/pods/lg insects	0.02	0.35	0.02	0.30	0.01	0.16
Seeds (granivore)	0.01	0.08	0.00	0.07	0.00	0.04

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.64
Tall Grass	#DIV/0!	0.29
Broadleaf plants/sm insects	#DIV/0!	0.36
Fruits/pods/seeds/lg insects	#DIV/0!	0.04

Kennels and Housing Areas T-REX Output

Chemical Name:	Esfenvalerate
Use	Kennels and Housing Areas
Formulation	0
Application Rate	0.1 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	1
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	24.00
Tall Grass	11.00
Broadleaf plants/sm Insects	13.50
Fruits/pods/seeds/lg insects	1.50

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	27.33	15.59	6.98
Tall Grass	12.53	7.14	3.20
Broadleaf plants/sm Insects	15.38	8.77	3.93
Fruits/pods/seeds/lg insects	1.71	0.97	0.44

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.10	0.04	0.01
Tall Grass	0.05	0.02	0.01
Broadleaf plants/sm insects	0.06	0.03	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.00	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	22.88	15.81	3.67			
Tall Grass	10.49	7.25	1.68			
Broadleaf plants/sm Insects	12.87	8.90	2.06			
Fruits/pods/seeds/lg insects	1.43	0.99	0.23	0.32	0.22	0.05

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.18	2.47	0.15	2.11	0.08	1.13
Tall Grass	0.08	1.13	0.07	0.97	0.04	0.52
Broadleaf plants/sm insects	0.10	1.39	0.08	1.19	0.05	0.64
Fruits/pods/lg insects	0.01	0.15	0.01	0.13	0.01	0.07
Seeds (granivore)	0.00	0.03	0.00	0.03	0.00	0.02

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.29
Tall Grass	#DIV/0!	0.13
Broadleaf plants/sm insects	#DIV/0!	0.16
Fruits/pods/seeds/lg insects	#DIV/0!	0.02

Almond, Filbert, Walnut T-REX Output

Chemical Name:	Esfenvalerate
Use	Almond, Filbert, Walnut
Formulation	0
Application Rate	0.1 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	2
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	40.18
Tall Grass	18.41
Broadleaf plants/sm Insects	22.60
Fruits/pods/seeds/lg insects	2.51

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	45.76	26.09	11.68
Tall Grass	20.97	11.96	5.35
Broadleaf plants/sm Insects	25.74	14.68	6.57
Fruits/pods/seeds/lg insects	2.86	1.63	0.73

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.17	0.07	0.02
Tall Grass	0.08	0.03	0.01
Broadleaf plants/sm insects	0.09	0.04	0.01
Fruits/pods/seeds/lg insects	0.01	0.00	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.00	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	38.31	26.47	6.14			
Tall Grass	17.56	12.13	2.81			
Broadleaf plants/sm Insects	21.55	14.89	3.45			
Fruits/pods/seeds/lg insects	2.39	1.65	0.38	0.53	0.37	0.09

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.30	4.14	0.25	3.54	0.14	1.90
Tall Grass	0.14	1.90	0.12	1.62	0.06	0.87
Broadleaf plants/sm insects	0.17	2.33	0.14	1.99	0.08	1.07
Fruits/pods/lg insects	0.02	0.26	0.02	0.22	0.01	0.12
Seeds (granivore)	0.00	0.06	0.00	0.05	0.00	0.03

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.48
Tall Grass	#DIV/0!	0.22
Broadleaf plants/sm insects	#DIV/0!	0.27
Fruits/pods/seeds/lg insects	#DIV/0!	0.03

Buildings, Lawns and turf grass, Mosquito breeding areas T-REX Output

Chemical Name:	Esfenvalerate
Use	dings, Lawns and Turf, Mosquito Breeding A
Formulation	0
Application Rate	0.2 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	1
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	48.00
Tall Grass	22.00
Broadleaf plants/sm Insects	27.00
Fruits/pods/seeds/lg insects	3.00

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	54.67	31.17	13.96
Tall Grass	25.06	14.29	6.40
Broadleaf plants/sm Insects	30.75	17.54	7.85
Fruits/pods/seeds/lg insects	3.42	1.95	0.87

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.20	0.09	0.03
Tall Grass	0.09	0.04	0.01
Broadleaf plants/sm insects	0.11	0.05	0.02
Fruits/pods/seeds/lg insects	0.01	0.01	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.01	#DIV/0!
Tall Grass	0.00	#DIV/0!
Broadleaf plants/sm Insects	0.01	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	45.76	31.63	7.33			
Tall Grass	20.98	14.50	3.36			
Broadleaf plants/sm Insects	25.74	17.79	4.13			
Fruits/pods/seeds/lg insects	2.86	1.98	0.46	0.64	0.44	0.10

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.35	4.95	0.30	4.22	0.16	2.26
Tall Grass	0.16	2.27	0.14	1.94	0.07	1.04
Broadleaf plants/sm insects	0.20	2.78	0.17	2.38	0.09	1.27
Fruits/pods/lg insects	0.02	0.31	0.02	0.26	0.01	0.14
Seeds (granivore)	0.00	0.07	0.00	0.06	0.00	0.03

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	0.57
Tall Grass	#DIV/0!	0.26
Broadleaf plants/sm insects	#DIV/0!	0.32
Fruits/pods/seeds/lg insects	#DIV/0!	0.04

General Outdoor Surfaces T-REX Output

Chemical Name:	Esfenvalerate
Use	General Outdoor Surfaces
Formulation	0
Application Rate	0.51 lbs a.i./acre
Half-life	12.3 days
Application Interval	7 days
Maximum # Apps./Year	1
Length of Simulation	1 year

Dietary-based EECs (ppm)	Kenaga Values
Short Grass	122.40
Tall Grass	56.10
Broadleaf plants/sm Insects	68.85
Fruits/pods/seeds/lg insects	7.65

Avian Results

Dose-based EECs (mg/kg-bw)	Avian Classes and Body Weights		
	small 20 g	mid 100 g	large 1000 g
Short Grass	139.40	79.49	35.59
Tall Grass	63.89	36.43	16.31
Broadleaf plants/sm Insects	78.41	44.71	20.02
Fruits/pods/seeds/lg insects	8.71	4.97	2.22

Dose-based RQs (Dose-based EEC/adjusted LD50)	Avian Acute RQs		
	20 g	100 g	1000 g
Short Grass	0.51	0.23	0.07
Tall Grass	0.23	0.10	0.03
Broadleaf plants/sm insects	0.29	0.13	0.04
Fruits/pods/seeds/lg insects	0.03	0.01	0.00

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	RQs	
	Acute	Chronic
Short Grass	0.03	#DIV/0!
Tall Grass	0.01	#DIV/0!
Broadleaf plants/sm Insects	0.01	#DIV/0!
Fruits/pods/seeds/lg insects	0.00	#DIV/0!

Mammalian Results

Dose-Based EECs (mg/kg-bw)	Mammalian Classes and Body weight					
	Herbivores/ insectivores			Granivores		
	15 g	35 g	1000 g	15 g	35 g	1000 g
Short Grass	116.70	80.65	18.70			
Tall Grass	53.49	36.97	8.57			
Broadleaf plants/sm Insects	65.64	45.37	10.52			
Fruits/pods/seeds/lg insects	7.29	5.04	1.17	1.62	1.12	0.26

Dose-based RQs (Dose-based EEC/LD50 or NOAEL)	15 g mammal		35 g mammal		1000 g mammal	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Short Grass	0.90	12.61	0.77	10.77	0.41	5.77
Tall Grass	0.41	5.78	0.35	4.94	0.19	2.65
Broadleaf plants/sm insects	0.51	7.09	0.43	6.06	0.23	3.25
Fruits/pods/lg insects	0.06	0.79	0.05	0.67	0.03	0.36
Seeds (granivore)	0.01	0.18	0.01	0.15	0.01	0.08

Dietary-based RQs (Dietary-based EEC/LC50 or NOAEC)	Mammal RQs	
	Acute	Chronic
Short Grass	#DIV/0!	1.45
Tall Grass	#DIV/0!	0.67
Broadleaf plants/sm insects	#DIV/0!	0.82
Fruits/pods/seeds/lg insects	#DIV/0!	0.09

Refinement of RQ for CRLF terrestrial phase (T-HERPS analysis)

Birds are currently used as surrogates for reptiles and terrestrial-phase amphibians. However, reptiles and amphibians are poikilotherms (body temperature varies with environmental temperature) while birds are homeotherms (temperature is regulated, constant, and largely independent of environmental temperatures). Therefore, reptiles and amphibians (collectively referred to as herptiles hereafter) tend to have much lower metabolic rates and lower caloric intake requirements than birds or mammals. As a consequence, birds are likely to consume more food than amphibians or reptiles on a daily dietary intake basis, assuming similar caloric content of the food items. This can be seen when comparing the estimated caloric requirements for free living iguanid lizards (Iguanidae) (**EQ 1**) to passerines (song birds) (**EQ 2**) (U.S. EPA, 1993):

$$\textbf{iguanid FMR (kcal/day)} = 0.0535 * (\textbf{bw in g})^{0.799} \qquad \textbf{(EQ 1)}$$

$$\textbf{passerine FMR (kcal/day)} = 2.123 * (\textbf{bw in g})^{0.749} \qquad \textbf{(EQ 2)}$$

With relatively comparable exponents (slopes) to the allometric functions, one can see that, given a comparable body weight, the free living metabolic rate of birds can be 40 times higher than reptiles, though the requirement differences narrow with high body weights. Consequently, use of avian food intake allometric equation as a surrogate to herptiles is likely to result in an over-estimation of exposure for reptiles and terrestrial-phase amphibians.

Because of the need to evaluate dietary exposure to the CRLF, the T-REX model (version 1.3.1.) has been altered to allow for an estimation of food intake for herptiles T-HERPS using the same basic procedure that T-REX uses to estimate avian food intake. This tool is thus used to make a refined estimate of exposure and risk based on body weights, food items, and daily food intake rates that are more appropriate for the CRLF. Output from the T-HERPS model runs used in the assessment are provided below.

Output for uses with 0.075 lb ai/acre rate applied 4 times with a 7-day interval is provided below, as well as output for uses with this rate applied 9 times. These outputs provide a range of RQs that result from this application rate. Uses covered by these include: pecan, apple, pear, kiwi, lettuce, apricot, cherry, nectarine, peach, plum, and prune.

0.075 lbs ai/acre applied 4 times

Table X. Upper Bound Kenaga, Acute Terrestrial Herpetofauna Dose-Based Risk Quotients

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammal		Small Amphibians	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
1.4	381.00	0.96	0.00	0.11	0.00	N/A	N/A	N/A	N/A	N/A	N/A
37	381.00	0.94	0.00	0.10	0.00	27.32	0.07	1.71	0.00	0.03	0.00
238	381.00	0.62	0.00	0.07	0.00	4.25	0.01	0.27	0.00	0.02	0.00

Table X. Upper Bound Kenaga, Subacute Terrestrial Herpetofauna Dietary Based Risk Quotients

LC50 (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
4894	24.65	0.01	2.74	0.00	28.88	0.01	1.80	0.00	0.86	0.00

Size class not used for dietary risk quotients

Table X. Upper Bound Kenaga, Chronic Terrestrial Herpetofauna Dietary Based Risk Quotients

NOAEC (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
25	24.65	0.99	2.74	0.11	28.88	1.16	1.80	0.07	0.86	0.03

Size class not used for dietary risk quotients

0.075 lbs ai/acre applied 9 times

Table X. Upper Bound Kenaga, Acute Terrestrial Herpetofauna Dose-Based Risk Quotients

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammal		Small Amphibians	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
1.4	381.00	1.17	0.00	0.13	0.00	N/A	N/A	N/A	N/A	N/A	N/A
37	381.00	1.15	0.00	0.13	0.00	33.43	0.09	2.09	0.01	0.04	0.00
238	381.00	0.75	0.00	0.08	0.00	5.20	0.01	0.32	0.00	0.03	0.00

Table X. Upper Bound Kenaga, Subacute Terrestrial Herpetofauna Dietary Based Risk Quotients

LC50 (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
4894	30.17	0.01	3.35	0.00	35.34	0.01	2.21	0.00	1.05	0.00

Size class not used for dietary risk quotients

Table X. Upper Bound Kenaga, Chronic Terrestrial Herpetofauna Dietary Based Risk Quotients

NOAEC (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
25	30.17	1.21	3.35	0.13	35.34	1.41	2.21	0.09	1.05	0.04

Size class not used for dietary risk quotients

Application at 1.0 lbs ai/acre applied once

Table X. Upper Bound Kenaga, Acute Terrestrial Herpetofauna Dose-Based Risk Quotients											
Size Class (grams)	Adjusted LD50	EECs and RQs									
		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammal		Small Amphibians	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
1.4	381.00	0.52	0.00	0.06	0.00	N/A	N/A	N/A	N/A	N/A	N/A
37	381.00	0.52	0.00	0.06	0.00	14.96	0.04	0.93	0.00	0.02	0.00
238	381.00	0.34	0.00	0.04	0.00	2.33	0.01	0.15	0.00	0.01	0.00

Table X. Upper Bound Kenaga, Subacute Terrestrial Herpetofauna Dietary Based Risk Quotients										
LC50 (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
4894	13.50	0.00	1.50	0.00	15.81	0.00	0.99	0.00	0.47	0.00

Size class not used for dietary risk quotients

Table X. Upper Bound Kenaga, Chronic Terrestrial Herpetofauna Dietary Based Risk Quotients										
NOAEC (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
25	13.50	0.54	1.50	0.06	15.81	0.63	0.99	0.04	0.47	0.02

Size class not used for dietary risk quotients

0.1 lbs ai/acre applied twice

Table X. Upper Bound Kenaga, Acute Terrestrial Herpetofauna Dose-Based Risk Quotients

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammal		Small Amphibians	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
1.4	381.00	0.88	0.00	0.10	0.00	N/A	N/A	N/A	N/A	N/A	N/A
37	381.00	0.86	0.00	0.10	0.00	25.04	0.07	1.57	0.00	0.03	0.00
238	381.00	0.57	0.00	0.06	0.00	3.89	0.01	0.24	0.00	0.02	0.00

Table X. Upper Bound Kenaga, Subacute Terrestrial Herpetofauna Dietary Based Risk Quotients

LC50 (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
4894	22.60	0.00	2.51	0.00	26.47	0.01	1.65	0.00	0.78	0.00

Size class not used for dietary risk quotients

Table X. Upper Bound Kenaga, Chronic Terrestrial Herpetofauna Dietary Based Risk Quotients

NOAEC (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
25	22.60	0.90	2.51	0.10	26.47	1.06	1.65	0.07	0.78	0.03

Size class not used for dietary risk quotients

0.2 lbs ai/acre applied once

Table X. Upper Bound Kenaga, Acute Terrestrial Herpetofauna Dose-Based Risk Quotients

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammal		Small Amphibians	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
1.4	381.00	1.05	0.00	0.12	0.00	N/A	N/A	N/A	N/A	N/A	N/A
37	381.00	1.03	0.00	0.11	0.00	29.92	0.08	1.87	0.00	0.04	0.00
238	381.00	0.68	0.00	0.08	0.00	4.65	0.01	0.29	0.00	0.02	0.00

Table X. Upper Bound Kenaga, Subacute Terrestrial Herpetofauna Dietary Based Risk Quotients

LC50 (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
4894	27.00	0.01	3.00	0.00	31.63	0.01	1.98	0.00	0.94	0.00

Size class not used for dietary risk quotients

Table X. Upper Bound Kenaga, Chronic Terrestrial Herpetofauna Dietary Based Risk Quotients

NOAEC (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
25	27.00	1.08	3.00	0.12	31.63	1.27	1.98	0.08	0.94	0.04

Size class not used for dietary risk quotients

0.51 lbs ai/acre applied once

Table X. Upper Bound Kenaga, Acute Terrestrial Herpetofauna Dose-Based Risk Quotients

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammal		Small Amphibians	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
1.4	381.00	2.67	0.01	0.30	0.00	N/A	N/A	N/A	N/A	N/A	N/A
37	381.00	2.63	0.01	0.29	0.00	76.29	0.20	4.77	0.01	0.09	0.00
238	381.00	1.72	0.00	0.19	0.00	11.86	0.03	0.74	0.00	0.06	0.00

Table X. Upper Bound Kenaga, Subacute Terrestrial Herpetofauna Dietary Based Risk Quotients

LC50 (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
4894	68.85	0.01	7.65	0.00	80.65	0.02	5.04	0.00	2.39	0.00

Size class not used for dietary risk quotients

Table X. Upper Bound Kenaga, Chronic Terrestrial Herpetofauna Dietary Based Risk Quotients

NOAEC (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
25	68.85	2.75	7.65	0.31	80.65	3.23	5.04	0.20	2.39	0.10

Size class not used for dietary risk quotients

For reference, T-HERPS output is provided for the application of 0.05 lbs ai/acre applied 25 times, which is the highest frequency of application at this rate. RQs do not exceed any LOCs at this rate, and thus would not exceed if applied fewer times.

Table X. Upper Bound Kenaga, Acute Terrestrial Herpetofauna Dose-Based Risk Quotients

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammal		Small Amphibians	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
1.4	381.00	0.80	0.00	0.09	0.00	N/A	N/A	N/A	N/A	N/A	N/A
37	381.00	0.79	0.00	0.09	0.00	22.95	0.06	1.43	0.00	0.03	0.00
238	381.00	0.52	0.00	0.06	0.00	3.57	0.01	0.22	0.00	0.02	0.00

Table X. Upper Bound Kenaga, Subacute Terrestrial Herpetofauna Dietary Based Risk Quotients

LC50 (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
4894	20.71	0.00	2.30	0.00	24.26	0.00	1.52	0.00	0.72	0.00

Size class not used for dietary risk quotients

Table X. Upper Bound Kenaga, Chronic Terrestrial Herpetofauna Dietary Based Risk Quotients

NOAEC (ppm)	EECs and RQs									
	Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Small Herbivore Mammals		Small Insectivore Mammals		Small Amphibians	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
25	20.71	0.83	2.30	0.09	24.26	0.97	1.52	0.06	0.72	0.03

Size class not used for dietary risk quotients