

Appendix M

Granular Risk Analysis Refinements for Mammals

Ornamental sod farm (turf)

INPUTS			Do not overwrite these numbers.
Application Rate:	0.0688	lbs / acre	
% A.I.:	100.00%		
Avian LD50 (20g):	2050.94	mg/kg bw	
(100g)	2610.95		
(1000g)	3688.06		
Mammalian LD50			
(15g):	123.08	mg/kg bw	
(35g)	99.58		
(1000g)	43.07		
Row Spacing:	0	inches	
Bandwidth:	0	inches	
Unincorporation:	100%		

Broadcast applications		
Granular		
Intermediate Calculations		
mg ai/ft2:	0.72	
LD50 ft- 2		
wgt class (grams)		
Avian	20	0.02
	100	0.00
	1000	0.00
Mammal	15	0.39
	35	0.21
	1000	0.02

General equations

Equation 1

$(RQ) \times (LD_{50}) = \text{amount of ai that needs to be consumed to reach the LOC}$

Equation 2

$(\text{ai needed to reach LOC}) \times (100g) / (\text{mg ai in product}) = \text{amount of product that needs to be consumed to reach the LOC}$

15 g mammal

Equation 1

$$(0.1) * (123.08 \text{ mg}) = 12.308 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(12.308 \text{ mg}) * (100\text{g}) / (45\text{mg}) = 27.35 \text{ g}$$

35 g mammal

Equation 1

$$(0.1) * (99.58 \text{ mg}) = 9.958 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(9.958 \text{ mg}) * (100\text{g}) / (45\text{mg}) = 22.13 \text{ g}$$

Airports/landing fields (soil broadcast)

INPUTS			Do not overwrite these numbers.
Application Rate:	0.08	lbs / acre	
% A.I.:	100.00%		
Avian LD50 (20g):	2050.94	mg/kg bw	
(100g)	2610.95		
(1000g)	3688.06		
Mammalian LD50			
(15g):	123.08	mg/kg bw	
(35g)	99.58		
(1000g)	43.07		
Row Spacing:	0	inches	
Bandwidth:	0	inches	
Unincorporation:	100%		

Broadcast applications		
Granular		
Intermediate Calculations		
mg ai/ft2:	0.83	
LD50 ft-2		
wgt class (grams)		
Avian	20	0.02
	100	0.00
	1000	0.00
Mammal	15	0.45
	35	0.24
	1000	0.02

15 g mammal

Equation 1

$$(0.1) * (123.08 \text{ mg}) = 12.308 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(12.308 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 30.77 \text{ g}$$

35 g mammal

Equation 1

$$(0.1) * (99.58 \text{ mg}) = 9.958 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(9.958 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 24.90 \text{ g}$$

Nonagricultural uncultivated areas/soils (band, broadcast, perimeter, spot treatments)

INPUTS			Do not overwrite these numbers.
Application Rate:	0.0792	lbs / acre	
% A.I.:	100.00%		
Avian LD50 (20g):	2050.94	mg/kg bw	
(100g)	2610.95		
(1000g)	3688.06		
Mammalian LD50			
(15g):	123.08	mg/kg bw	
(35g)	99.58		
(1000g)	43.07		
Row Spacing:	0	inches	
Bandwidth:	0	inches	
Unincorporation:	100%		

Broadcast applications		
Granular		
Intermediate Calculations		
mg ai/ft2:	0.82	
LD50 ft-2		
wgt class (grams)		
Avian	20	0.02
	100	0.00
	1000	0.00
Mammal	15	0.45
	35	0.24
	1000	0.02

15 g mammal

Equation 1

$$(0.1) * (123.08 \text{ mg}) = 12.308 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(12.308 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 30.77 \text{ g}$$

35 g mammal

Equation 1

$$(0.1) * (99.58 \text{ mg}) = 9.958 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(9.958 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 24.90 \text{ g}$$

Nonagricultural uncultivated areas/soils (mound treatment) AND grasses grown for seed (spot treatment)

INPUTS			Do not overwrite these numbers.
Application Rate:	0.06	lbs / acre	
% A.I.:	100.00%		
Avian LD50 (20g):	2050.94	mg/kg bw	
(100g)	2610.95		
(1000g)	3688.06		
Mammalian LD50			
(15g):	123.08	mg/kg bw	
(35g)	99.58		
(1000g)	43.07		
Row Spacing:	0	inches	
Bandwidth:	0	inches	
Unincorporation:	100%		

Broadcast applications		
Granular		
Intermediate Calculations		
mg ai/ft2:	0.62	
LD50 ft- 2		
wgt class (grams)		
Avian	20	0.02
	100	0.00
	1000	0.00
Mammal	15	0.34
	35	0.18
	1000	0.01

15 g mammal

Equation 1

$$(0.1) * (123.08 \text{ mg}) = 12.308 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(12.308 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 30.77 \text{ g}$$

35 g mammal

Equation 1

$$(0.1) * (99.58 \text{ mg}) = 9.958 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(9.958 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 24.90 \text{ g}$$

INPUTS			Do not overwrite these numbers.
Application Rate:	1.9	lbs / acre	
% A.I.:	100.00%		
Avian LD50 (20g):	2050.94	mg/kg bw	
(100g)	2610.95		
(1000g)	3688.06		
Mammalian LD50			
(15g):	123.08	mg/kg bw	
(35g)	99.58		
(1000g)	43.07		
Row Spacing:	0	inches	
Bandwidth:	0	inches	
Unincorporation:	100%		

Broadcast applications		
Granular		
Intermediate Calculations		
mg ai/ft2:	19.78	
LD50 ft- 2		
wgt class (grams)		
Avian	20	0.48
	100	0.08
	1000	0.01
Mammal	15	10.72
	35	5.68
	1000	0.46

15 g mammal

Equation 1

$$(0.1) * (123.08 \text{ mg}) = 12.308 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(12.308 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 30.77 \text{ g}$$

35 g mammal

Equation 1

$$(0.1) * (99.58 \text{ mg}) = 9.958 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(9.958 \text{ mg}) * (100\text{g}) / (40\text{mg}) = 24.90 \text{ g}$$

INPUTS			Do not overwrite these numbers.
Application Rate:	0.078	lbs / acre	
% A.I.:	100.00%		
Avian LD50 (20g):	2050.94	mg/kg bw	
(100g)	2610.95		
(1000g)	3688.06		
Mammalian LD50			
(15g):	123.08	mg/kg bw	
(35g)	99.58		
(1000g)	43.07		
Row Spacing:	0	inches	
Bandwidth:	0	inches	
Unincorporation:	100%		

Broadcast applications		
Granular		
Intermediate Calculations		
mg ai/ft2:	0.81	
LD50 ft- 2		
wgt class (grams)		
Avian	20	0.02
	100	0.00
	1000	0.00
Mammal	15	0.44
	35	0.23
	1000	0.02

15 g mammal

Equation 1

$$(0.1) * (123.08 \text{ mg}) = 12.308 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(12.308 \text{ mg}) * (100\text{g}) / (39\text{mg}) = 31.56 \text{ g}$$

35 g mammal

Equation 1

$$(0.1) * (99.58 \text{ mg}) = 9.958 \text{ mg of } \lambda\text{-cyhalothrin}$$

Equation2

$$(9.958 \text{ mg}) * (100\text{g}) / (39\text{mg}) = 25.53 \text{ g}$$