

## **Appendix B**

### **Terrestrial RQ Screen for Atrazine Degradates**

RQs were calculated for degradates assuming 18% formation from atrazine and the most sensitive available toxicity data across all degradates. Molar equivalents were calculated by multiplying the application rate by the ratio of the degradate (DEA) to atrazine. The analysis was only conducted for the highest use rate (Macadamia nuts; 4 lbs a.i./Acre, 2 applications, 30-day application interval). However, equivalent differences in potential risks relative to parent atrazine would occur for other uses.

The analysis was performed using T-REX (version 1.4.1) and the following endpoints:

- Application rate: 0.62 lbs a.i./Acre (4 lbs a.i./Acre x 18% x (MW atrazine: 187 / MW degradate: 217))
- Half-life: 35 days (EFED default, no data on the degradates are available)
- Application interval: 30 days
- No. of applications: 2

Avian LD50: 768 (bobwhite quail, DEA, MRID 46500009)

Avian NOAC: 225 mg/kg-food (atrazine data, no studies on the degradates were available)

Mammalian LD50: 1100 mg/kg-bw (DEA, MRID 46500009)

Mammalian NOAEC: 2.5 mg/kg-bw (DACT, MRID 41392402)

Resulting RQs are presented in Table 1 through Table 4. These RQs are considerably lower than those presented for atrazine in the risk assessment. Therefore, RQs presented in the risk assessment for atrazine are protective of potential risks from exposure to degradates.

**Table 1. Upper Bound Kenaga, Acute Avian Dose-Based Risk Quotients**

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Short Grass		Tall Grass		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Granivore	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
20	553.29	305.45	0.55	140.00	0.25	171.81	0.31	19.09	0.03	4.24	0.01
100	704.37	174.18	0.25	79.83	0.11	97.98	0.14	10.89	0.02	2.42	0.00
1000	994.94	77.98	0.08	35.74	0.04	43.86	0.04	4.87	0.00	1.08	0.00

**Table 2. Upper Bound Kenaga, Chronic Avian Dietary Based Risk Quotients**

NOAEC (ppm)	EECs and RQs							
	Short Grass		Tall Grass		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects	
	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
225	268.19	1.19	122.92	0.55	150.86	0.67	16.76	0.07

**Table 3. Upper Bound Kenaga, Acute Mammalian Dose-Based Risk Quotients**

Size Class (grams)	Adjusted LD50	EECs and RQs									
		Short Grass		Tall Grass		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Granivore	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
15	2417.61	255.70	0.11	117.20	0.05	143.83	0.06	15.98	0.01	3.55	0.00
35	1956.11	176.72	0.09	81.00	0.04	99.41	0.05	11.05	0.01	2.45	0.00
1000	846.08	40.97	0.05	18.78	0.02	23.05	0.03	2.56	0.00	0.57	0.00

**Table 4. Upper Bound Kenaga, Chronic Mammalian Dose-Based Risk Quotients**

Size Class (grams)	Adjusted NOAEL	EECs and RQs									
		Short Grass		Tall Grass		Broadleaf Plants/ Small Insects		Fruits/Pods/ Seeds/ Large Insects		Granivore	
		EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ	EEC	RQ
15	5.49	255.70	46.54	117.20	21.33	143.83	26.18	15.98	2.91	3.55	0.65
35	4.45	176.72	39.75	81.00	18.22	99.41	22.36	11.05	2.48	2.45	0.55
1000	1.92	40.97	21.31	18.78	9.77	23.05	11.99	2.56	1.33	0.57	0.30

