Supplemental Materials:

553 Table A: Mean and confidence intervals for parameters generated for the dose-response models
554 selected for each pesticide (the oral dosing models are presented here for phosmet and azinphos
555 methyl)

Pesticide	Model	Variable	Mean	95% CL	
Acetamiprid	Hill	intercept	214.1	163.8	264.4
		maximum change	-101.6	-168.9	-34.3
		power	1	--	--
		dose w/ half-max change	6.5	-8.2	21.2
Azinphos methyl	Exponential	background response	2.0	1.8	2.3
		slope	0.9	0.3	1.4
		asymptote parameter	0.1	-0.01	0.2
Emamectin benzoate	Quantal-linear	background	0	--	--
		slope	0.1	-0.2	0.4
Methoxyfenozide	Exponential	background response	6.5	6.3	6.8
		slope	0.02	-0.002	0.04
		asymptote parameter	0.8	0.8	0.9
Novaluron	Exponential	background response	7.5	7.3	7.7
		slope	0.1	-0.03	0.2
		asymptote parameter	0.9	0.8	1.0
Phosmet	Hill	intercept	3730.7	3624.0	3837.3
		maximum change	-2805.2	-2944.4	-2666.1
		power	18	--	--
		dose w/ half-max change	4.87	4.8	5.0
Spinetoram	Logistic	intercept	-2.72	-5.0	-0.4
		slope	0.16	0.01	0.3
Thiacloprid	Log-logistic	background	0	--	--
		intercept	-2.54	-3.5	-1.6
		slope	1	--	--

556 Supplemental Table B: Fit results and information for continuous endpoints

Compound	Model	Specified Effect	Risk Type	BMD	BMDL	p-value Test 1	p-value Test 2	p-value Test 3	p-value Test 4	AIC	Scaled residual for dose group nearest the BMD	Scaled residual for control group
Acetamiprid	Hill	0.1	Relative deviation	1.99	0.301	0.082	0.322	0.873	0.960	389.3	-0.129	0.008
	Exponential2			9.965	5.860	0.082	0.322	0.873	0.341	389.4	-0.724	0.786
	Exponential3			9.965	5.860	0.082	0.322	0.873	0.341	389.4	-0.724	0.786
	Exponential4			2.363	0.575	0.082	0.322	0.873	0.804	389.3	-0.260	0.102
	Exponential5			2.363	0.575	0.082	0.322	0.873	0.804	389.3	-0.260	0.102
	Linear			12.289	8.347	0.082	0.322	0.873	0.291	389.8	-0.786	0.871
	Polynomial			12.289	8.347	0.082	0.322	0.873	0.291	389.8	-0.786	0.871
	Power			12.289	8.347	0.082	0.322	0.873	0.291	389.8	-0.786	0.871
Azinphos methyl	Hill	0.2	Relative deviation	0.674537	0.273635	<.0001	0.4671	0.3746	NA	-53.6	-0.000423	1.17
	Exponential2			0.485982	0.38887	< 0.0001	0.4671	0.3746	0.8392	-60.4	-0.01687	0.3692
	Exponential3			59.2109		< 0.0001	0.4671	0.3746	< 0.0001	-11.1	-3.198	1.824
	Exponential4			0.468416	0.345456	< 0.0001	0.4671	0.3746	0.5882	-58.5	0.1456	0.2833
	Exponential5			0.468416	0.345456	< 0.0001	0.4671	0.3746	0.5882	-58.5	0.1456	0.2833
	Linear			0.926849	0.808682	<.0001	0.4671	0.3746	0.03643	-54.2	-1.74	1.4
	Polynomial			0.926849	0.808682	<.0001	0.4671	0.3746	0.03643	-54.2	-1.74	1.4
	Power			0.926849	0.808682	<.0001	0.4671	0.3746	0.03643	-54.2	-1.74	1.4
Methoxyfenozide	Hill	0.1	Relative deviation	87.819		0.001306	0.3105	0.1972	0.1378	-10.01	-0.0155	0.353
	Exponential2			796.353	442.99	0.001306	0.3105	0.1972	0.005095	-3.41	0.1533	1.024
	Exponential3			796.352	442.99	0.001306	0.3105	0.1972	0.005095	-3.41	0.1533	1.024
	Exponential4			28.9341	10.1306	0.001306	0.3105	0.1972	0.1649	-10.6	1.303	0.05501
	Exponential5			38.1091	10.1441	0.001306	0.3105	0.1972	0.1356	-9.98	0.7769	0.3532
	Linear			1005.03	658.856	0.001306	0.3105	0.1972	0.004971	-3.36	0.138	1.03
	Polynomial			1005.03	658.856	0.001306	0.3105	0.1972	0.004971	-3.36	0.138	1.03
	Power			1005.03	658.856	0.001306	0.3105	0.1972	0.004971	-3.36	0.138	1.03
Novaluron	Hill	0.1	Relative	44.2534		0.001483	0.3181	0.2707	0.4768	-41.88	-0.201	-0.107

	Exponential2		deviation	36.6296	26.3435	0.001483	0.3181	0.2707	0.4619	-43.81	0.5171	0.7673
	Exponential3			36.6296	26.3435	0.001483	0.3181	0.2707	0.4619	-43.81	0.5171	0.7673
	Exponential4			44.9443	17.1943	0.001483	0.3181	0.2707	0.7553	-43.82	-0.1604	-0.1007
	Exponential5			44.9443	15.7542	0.001483	0.3181	0.2707	0.7553	-43.82	-0.1604	-0.1007
	Linear			36.8442	26.9298	0.001483	0.3181	0.2707	0.4315	-43.63	0.514	0.82
	Polynomial			36.8442	26.9298	0.001483	0.3181	0.2707	0.4315	-43.63	0.514	0.82
	Power			36.8442	26.9298	0.001483	0.3181	0.2707	0.4315	-43.63	0.514	0.82
Phosmet	Hill	0.2	Relative deviation	4.59891	4.52582	<.0001	<.0001	<.0001	0.5139	1544.7	-0.23	-0.451
	Exponential2			3.9221	3.58418	< 0.0001	< 0.0001	< 0.0001	< 0.0001	1599.0	0.6277	-3.787
	Exponential3			6.67631	5.60923	< 0.0001	< 0.0001	< 0.0001	< 0.0001	1569.7	-2.38	-1.046
	Exponential4			3.9221	3.58418	< 0.0001	< 0.0001	< 0.0001	< 0.0001	1599.0	0.6277	-3.787
	Exponential5			4.5755	4.51643	< 0.0001	< 0.0001	< 0.0001	N/A	1553.0	-0.0005	-0.6
	Linear			5.92562	5.77355	<.0001	<.0001	<.0001	<.0001	1561.5	-1.49	-1.98
	Polynomial			7.76135	5.86397	<.0001	<.0001	<.0001	<.0001	1561.2	-2.46	-0.86
	Power			7.60666	6.04661	<.0001	<.0001	<.0001	<.0001	1560.2	-2.48	-0.733
Phosmet (dermal)	Hill	0.2	Relative deviation	37.3124		0.1147	0.7014	0.7162	NA	-68.08	0.0294	-0.106
	Exponential2			57.1192	35.7982	0.1147	0.7014	0.7162	0.5937	-71.03	0.2606	0.3879
	Exponential3			57.1193	35.7982	0.1147	0.7014	0.7162	0.5937	-71.03	0.2606	0.3879
	Exponential4			45.5845	15.4466	0.1147	0.7014	0.7162	0.6557	-69.88	-0.04784	-0.1582
	Exponential5			32.769	16.0394	0.1147	0.7014	0.7162	N/A	-68.08	0.02941	-0.1061
	Linear			58.7912	39.1498	0.1147	0.7014	0.7162	0.5409	-70.8534	0.242	0.478
	Polynomial			58.7913	39.1498	0.1147	0.7014	0.7162	0.5409	-70.8534	0.242	0.478
	Power			58.7913	39.1498	0.1147	0.7014	0.7162	0.5409	-70.8534	0.242	0.478

557 Supplemental Table C: Fit results and information for quantal endpoints

Compound	Model	Specified Effect	Risk Type	Chi-square	DF	Specified Effect	Risk Type	BMD	BMDL	P-value	AIC	Scaled residual for dose group nearest the BMD	Scaled residual for control group
Emamectin benzoate	Gamma	0.1	Relative deviation	0.47	3	0.1	Extra risk	0.815361	0.185655	0.925	9.89146	-0.094	0
	Logistic			0.73	3	0.1	Extra risk	0.464364	0.236773	0.8653	10.0738	-0.077	-0.204
	LogLogistic			0.47	3	0.1	Extra risk	0.834977	0.184284	0.9255	9.89084	-0.093	0
	LogProbit			0.92	3	0.1	Extra risk	0.536346	0.179528	0.82	10.1647	-0.113	-0.238
	Probit			0.72	3	0.1	Extra risk	0.488477	0.225902	0.868	10.0581	-0.091	-0.193
	Weibull			0.47	3	0.1	Extra risk	0.818901	0.186618	0.9253	9.89166	-0.092	0
	Quantal-Linear			0.45	4	0.1	Extra risk	0.911319	0.188685	0.978	7.89297	-0.071	0
Spinetoram	Gamma	0.1	Relative deviation	6.91	3	0.1	Extra risk	2.99629	1.84813	0.0747	33.9807	-0.499	0
	Logistic			9.86	2	0.1	Extra risk	10.7616	6.68818	0.0072	41.164	2.564	-1.255
	LogLogistic			2.34	3	0.1	Extra risk	1.40433	0.638499	0.5048	30.8165	-0.744	0
	LogProbit			9.49	3	0.1	Extra risk	3.66405	2.2077	0.0235	34.9573	1.883	0
	Probit			9.83	2	0.1	Extra risk	10.1096	6.6502	0.0073	40.9651	2.588	-1.221

	Weibull			6.91	3	0.1	Extra risk	2.99629	1.84813	0.0747	33.9807	-0.499	0
	Quantal-Linear			6.91	3	0.1	Extra risk	2.99629	1.84813	0.0747	33.9807	-0.499	0
Thiacloprid	Gamma	0.1	Relative deviation	6.91	3	0.1	Extra risk	2.99629	1.84813	0.0747	33.9807	-0.499	0
	Logistic			9.86	2	0.1	Extra risk	10.7616	6.68818	0.0072	41.164	2.564	-1.255
	LogLogistic			2.34	3	0.1	Extra risk	1.40433	0.638499	0.5048	30.8165	-0.744	0
	LogProbit			9.49	3	0.1	Extra risk	3.66405	2.2077	0.0235	34.9573	1.883	0
	Probit			9.83	2	0.1	Extra risk	10.1096	6.6502	0.0073	40.9651	2.588	-1.221
	Weibull			6.91	3	0.1	Extra risk	2.99629	1.84813	0.0747	33.9807	-0.499	0
	Quantal-Linear			6.91	3	0.1	Extra risk	2.99629	1.84813	0.0747	33.9807	-0.499	0

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