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Table S1. Studies included in our meta-analysis of neonicotinoid seed treatment effects on natural enemies (full references at end).

Crop	Study abbrev.	Peer review	A.I.(s)	Alt. insect.	Functional group(s)	Habitat	Arth. class	Early samp. (%)	N plots	Plot size (m^2)
Barley	SoteloCardona2010		THX		M, Pr, Pa	F	A, I	25	16	112
Canola	Echegaray2009		IMI	OP, OC, PYR	O, Pr	S	I	20	3 - 4	100 - 752
Cotton/ Sorghum	Krauter2001		IMI		Pr	F	A, I	0	3	110000
Maize	Ahmad20052006	X	CLO	PYR	M, O, Pr	F, S	A, I	0 - 33	4	232
	Albajes2003	X	IMI		M, Pr	F, S	A, I	20	4	7000
	AlDeeb2003	X	IMI, CLO	OP, PYR	M, O, Pr	F, S	A, I	0 - 33	4	23 - 28
	Babendreier2015	X	CLO	BIO, PYR	M, Pr	S	A, I	0	7 - 61	1
	Bhatti2005	X	IMI	Bt, PYR	M, O, Pr, Pa	F, S	A, Ch, I	20 - 33	4	335
	delaPoza2005 Farinos2008	X	IMI	Bt	M, Pr	F, S	A, Ch, I	0 - 20	3 - 4	1833 - 5500
	Harmon2006		CLO		M, O, Pr, Pa	F, S	A, Ch, I	66 - 100	4	729 - 1080
Soybean	Douglas2015	X	THX		M, O, Pr, Pa	S	A, I	25	6	1080
	Hallett2014	X	IMI, THX		Pr, Pa	F	A, I	20 - 25	3	111
	HeidelBaker2012 Carter2013		THX	PYR	Pr, Pa	F	I	0 - 10	4	1003
	Ohnesorg2009	X	IMI, THX	PYR, TRI	M, Pr, Pa	F	A, I	14	6	150
	Seagraves2012	X	IMI, THX			F	A, I	13	4	41
	Spigler2013		THX		Pr	F	I	65	4	409
	Tinsley2012	X	THX		Pr	F	I	0	4	70
Sugar beet	Baker2002		IMI, CLO, THX	PYR	M	S	A, I	33	4	108
Sunflower	Charlet et al. 2007	X	THX	CARB	Pa	F	I	0	4	24
Wheat	Schmidt et al. 2002		IMI		M	S	I	0	4	10000

Key to abbreviations: A.I. = active ingredient, Alt. insect. = alternative insecticide compared to neonicotinoid seed treatment, Early samp. (%) = the percentage of samples taken during the first 40 days of crop growth, IMI = imidacloprid, CLO = clothianidin, THX = thiamethoxam, BIO = biopesticide, Bt = transgenic Bt crop, CARB = carbamate, OC = organochlorines, OP = organophosphate, PYR = pyrethroid, M = mixed, O = omnivore, Pr = predator, Pa = parasitoid, F = foliar/aboveground, S = soil/belowground, I = insect, A = arachnid, Ch = chilopod

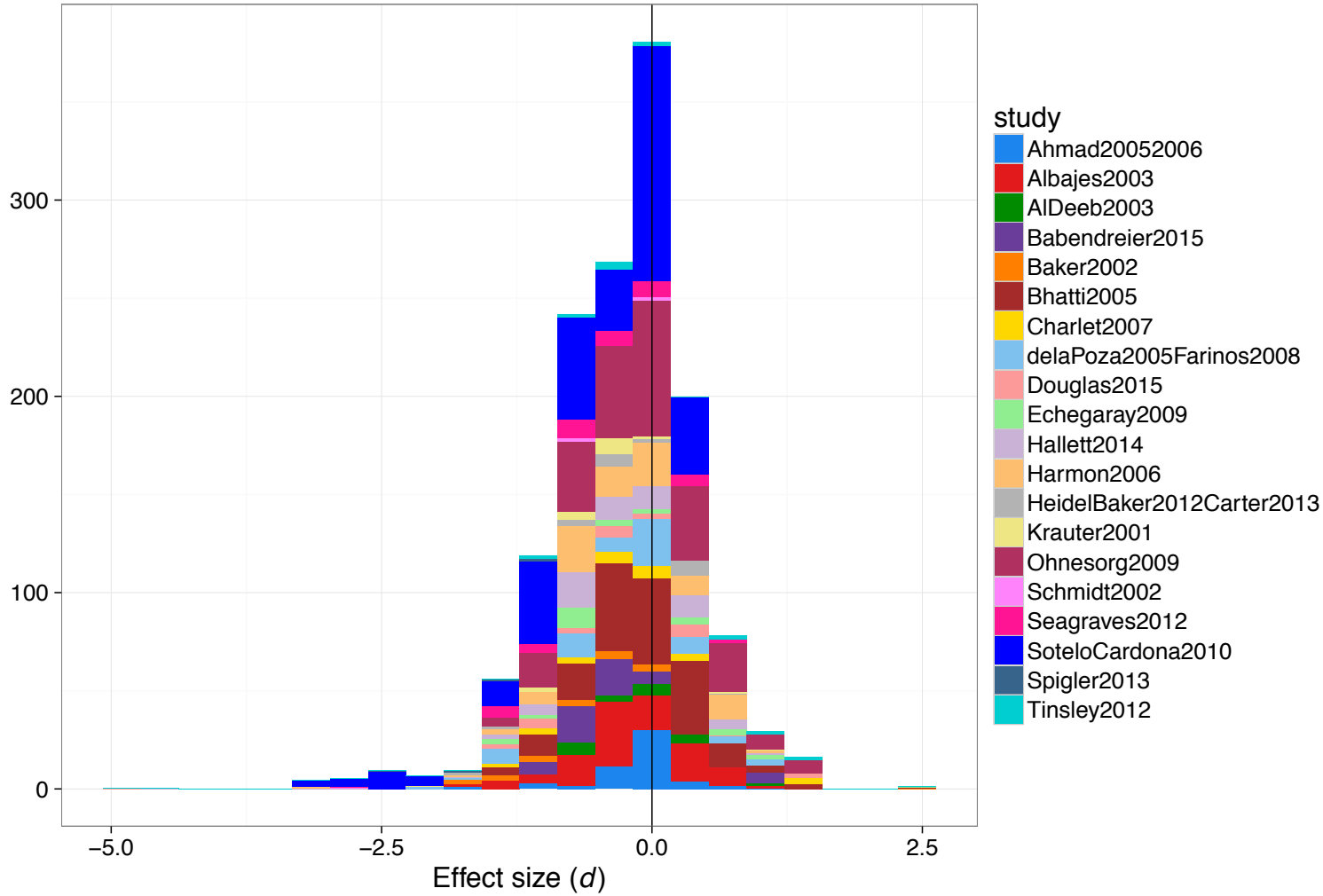

Figure S1. Weighted histogram for the effect of seed-applied neonicotinoids on natural enemies (relative to no-insecticide controls), color-coded by study (n = 607 observations from 56 site-years and 20 studies).

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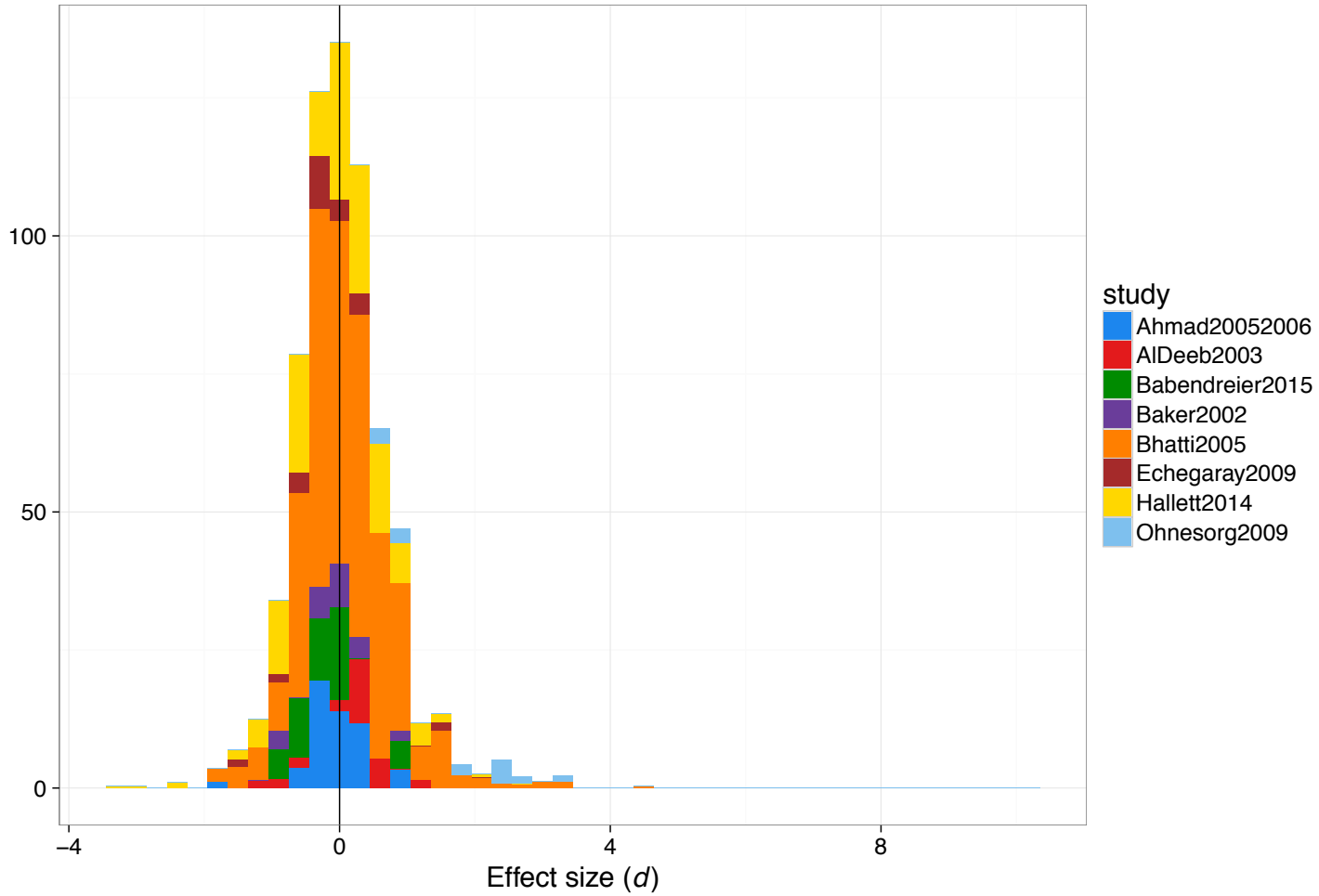

Figure S2. Weighted histogram for the effect of seed-applied neonicotinoids on natural enemies (relative to pyrethroid controls), color-coded by study (n = 384 observations from 15 site-years and 8 studies).

Supplemental Results

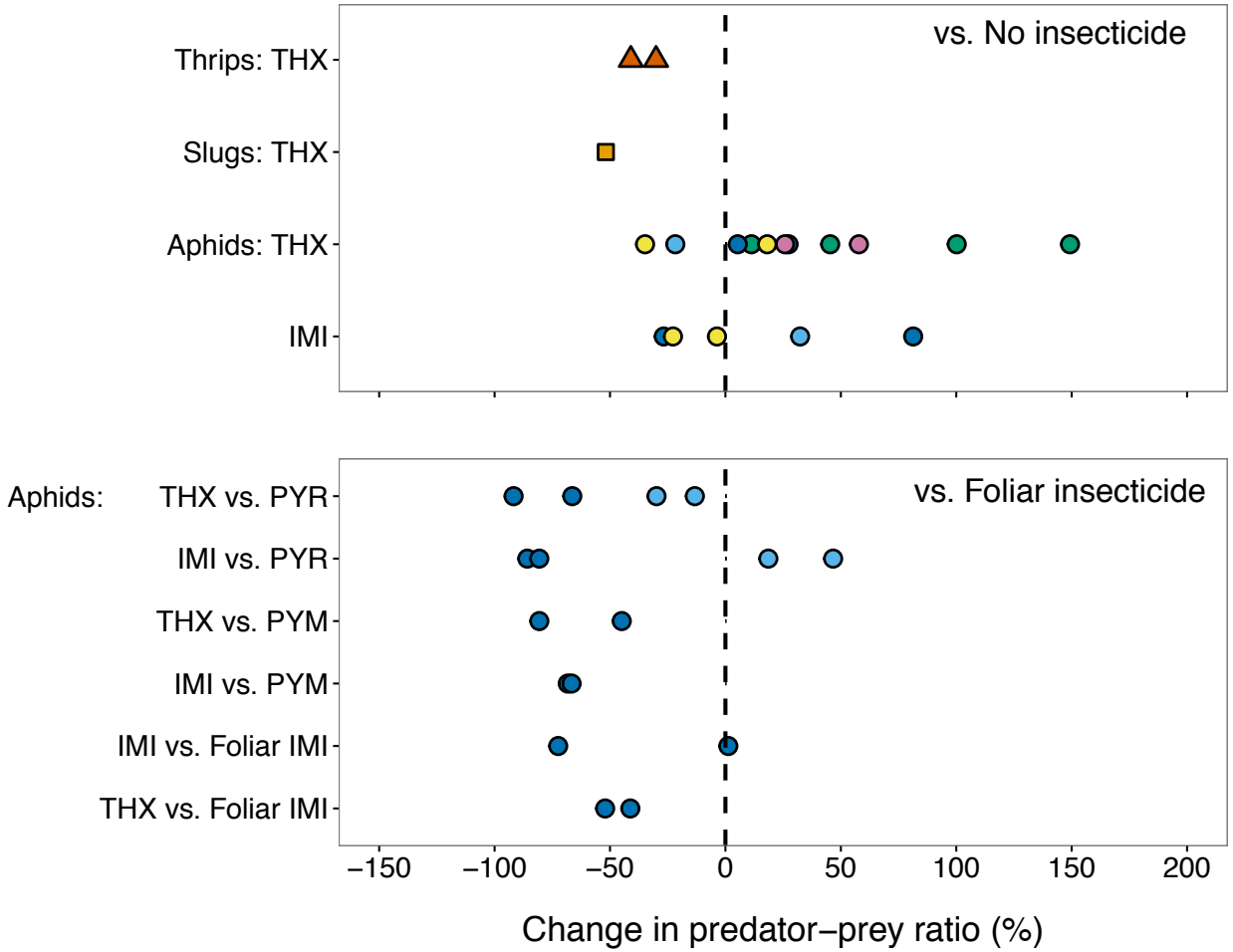

Figure S3. Change in predator-prey ratio (PP) as a result of seed-applied neonicotinoids, relative to control plots treated with either no insecticide or a foliar insecticide (calculated as 100% X (PP_{Neonic} - $PP_{Control}$)/$PP_{Control}$)). Each point represents a treatment comparison within a given study; negative values indicate that predator-prey ratios were lower in the neonicotinoid-treated plots versus controls, while positive values indicate the opposite. Points with the same color were derived from the same study. PYR = pyrethroid, PYM = pymetrozine, IMI = imidacloprid, and THX = thiamethoxam.

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