

**Supplementary Table 2.** Canola stand density by insecticide seed treatment and seeding date at four locations in northeastern Saskatchewan, 2014–2016. Early and Late seeding dates correspond to Table 1 of paper.

Location	Treatment	Year								
		2014			2015			2016		
		Number of plants per 6.1 m row			Number of plants per 6.1 m row			Number of plants per 6.1 m row		
	Early seeded	Late seeded	Mean	Early seeded	Late seeded	Mean	Early seeded	Late seeded	Mean	
Carrot River	Fungicide	123 ± 9	129 ± 2	126a <sup>1</sup>	92 ± 15	155 ± 13	124a	130 ± 17	107 ± 17	118a
	Fung. + cyantraniliprole	156 ± 11	143 ± 13	149b	71 ± 48	98 ± 14	84a	105 ± 70	135 ± 16	120ab
	Fung. + thiamethoxam	146 ± 16	140 ± 8	143b	103 ± 28	157 ± 15	130a	162 ± 13	151 ± 10	156b
	Fung. + cyan. + thiam.	144 ± 12	149 ± 8	146b	108 ± 12	108 ± 71	108a	144 ± 13	146 ± 41	145ab
Codette 1	Fungicide	73 ± 57	94 ± 33	84a	104 ± 15	122 ± 8	113a	---	149a ± 21	---
	Fung. + cyantraniliprole	96 ± 24	144 ± 11	120ab	130 ± 20	121 ± 37	126a	---	172ab ± 9	---
	Fung. + thiamethoxam	84 ± 57	121 ± 21	102ab	96 ± 20	124 ± 18	111a	---	169a ± 5	---
	Fung. + cyan. + thiam.	119 ± 24	145 ± 14	132b	97 ± 28	134 ± 18	115a	---	190b ± 7	---
Codette 2 <sup>2</sup>	Fungicide	86 ± 15	122 ± 13	104a	100 ± 31	107 ± 24	103a	82 ± 30	134 ± 8	108a
	Fung. + cyantraniliprole	114 ± 15	140 ± 18	126a	122 ± 11	122 ± 14	122a	104 ± 38	134 ± 13	119ab
	Fung. + thiamethoxam	105 ± 39	152 ± 15	129a	88 ± 31	144 ± 4	116a	137 ± 45	146 ± 28	141b
	Fung. + cyan. + thiam.	105 ± 15	155 ± 19	130a	110 ± 21	129 ± 10	120a	114 ± 18	144 ± 8	129ab
Ridgedale	Fungicide	113 ± 13	117 ± 49	115a	86 ± 16	154 ± 25	120a	161 ± 8	160 ± 17	160a
	Fung. + cyantraniliprole	123 ± 5	126 ± 7	125a	76 ± 55	172 ± 24	124a	171 ± 17	190 ± 20	180a
	Fung. + thiamethoxam	120 ± 20	118 ± 41	119a	112 ± 19	171 ± 17	142a	186 ± 12	184 ± 21	184a
	Fung. + cyan. + thiam.	104 ± 38	129 ± 27	116a	116 ± 43	166 ± 10	141a	182 ± 7	174 ± 28	178a
All locations	Fungicide	99a ± 34	115a ± 30	107a	95a ± 20	134 ± 27	115a	124a ± 39	137a ± 26	131a
	Fung. + cyantraniliprole	122a ± 26	138b ± 13	130a	100a ± 44	128 ± 35	114a	126a ± 54	158b ± 29	142a
	Fung. + thiamethoxam	114a ± 40	133ab ± 26	123a	100a ± 26	149 ± 22	125a	162b ± 33	162b ± 22	162a
	Fung. + cyan. + thiam.	118a ± 26	144b ± 19	131a	107a ± 25	134 ± 40	121a	147ab ± 32	163b ± 30	155a
All treatments	Carrot River	142 ± 16	140 ± 11	141	93a ± 30	130ab ± 43	115	135a ± 40	135a ± 28	135
	Codette 1	93 ± 42	125 ± 29	109	107a ± 24	125a ± 21	112	---	170b ± 18	---
	Codette 2/Codette Lake	102 ± 23	142 ± 20	122	105a ± 26	125a ± 19	116	109a ± 40	139a ± 16	124
	Ridgedale	115 ± 22	123 ± 31	119	97a ± 37	166b ± 19	131	175b ± 15	177b ± 23	176
All treatments	113 ± 33	133 ± 25		101 ± 30	137 ± 32		140 ± 33	155 ± 23		

<sup>1</sup> Means within columns and locations followed by the same letters do not differ significantly at  $P \leq 0.05$ , Tukey's honest significant difference test.

<sup>2</sup> In 2016 the Codette 2 site was near Codette Lake.

**Supplementary Table 3.** Mean flea beetle damage (% defoliation averaged over four youngest tissues) per plot by insecticide seed treatment, year and seeding date in canola seeded at four different locations in north eastern Saskatchewan. Early and Late seeding dates correspond to Table 1 of paper. Shaded cells – economic threshold exceeded.

Location	Treatment	Year								
		2014			2015			2016		
		Mean damage (%)			Mean damage (%)			Mean damage (%)		
	Early seeded	Late seeded	Mean	Early seeded	Late seeded	Mean	Early seeded	Late seeded	Mean	
Carrot River	Fungicide	18.8 ± 4.4	20.5 ± 6.9	19.6a	15.2 ± 2.6	8.8 ± 5.5	12.0a	27.6 ± 5.0	18.0 ± 9.8	17.5a
	Fung. + cyantraniliprole	13.2 ± 1.1	16.0 ± 6.0	14.6a	11.6 ± 5.5	9.9 ± 3.6	10.7a	24.1 ± 9.6	15.2 ± 8.7	13.0a
	Fung. + thiamethoxam	17.7 ± 5.2	20.1 ± 4.5	18.9a	8.3 ± 3.9	8.9 ± 3.1	8.6a	23.9 ± 6.9	12.4 ± 5.5	9.8a
	Fung. + cyan. + thiam.	9.3 ± 2.8	18.2 ± 6.5	13.8a	9.9 ± 8.5	14.3 ± 8.1	12.0a	15.8 ± 3.1	10.8 ± 8.1	9.0a
Codette 1	Fungicide	10.8 ± 7.2	9.3 ± 3.0	10.0a	23.7 ± 5.8	20.0 ± 9.4	21.8a	NA	8.3 ± 10.4	NA
	Fung. + cyantraniliprole	13.4 ± 10.4	7.3 ± 2.2	10.3a	17.4 ± 9.6	12.2 ± 3.1	14.8ab	NA	5.7 ± 7.4	NA
	Fung. + thiamethoxam	10.7 ± 6.1	6.5 ± 2.5	8.6a	10.7 ± 6.5	8.8 ± 4.4	9.7b	NA	5.5 ± 4.5	NA
	Fung. + cyan. + thiam.	10.2 ± 8.8	3.9 ± 2.7	7.0a	8.9 ± 8.8	6.0 ± 2.7	7.5b	NA	4.8 ± 2.9	NA
Codette 2 <sup>2</sup>	Fungicide	15.7 ± 3.2	9.1 ± 5.1	12.4a	8.8 ± 6.3	12.6 ± 8.2	10.7a	18.8 ± 6.5	12.7 ± 9.1	17.1a
	Fung. + cyantraniliprole	19.3 ± 8.0	8.1 ± 2.7	13.7a	3.0 ± 2.3	16.2 ± 5.1	9.6a	8.8 ± 4.5	9.3 ± 6.1	12.0a
	Fung. + thiamethoxam	14.1 ± 3.3	8.1 ± 0.8	11.1a	3.6 ± 4.0	7.6 ± 5.1	5.6a	12.5 ± 4.9	7.8 ± 4.5	14.0a
	Fung. + cyan. + thiam.	11.8 ± 4.5	9.1 ± 2.0	10.5a	1.8 ± 1.9	11.6 ± 3.3	6.7a	11.8 ± 2.5	8.1 ± 6.2	7.8a
Ridgedale	Fungicide	19.0 ± 9.3	14.5 ± 4.2	16.8a	25.2 ± 6.9	17.8 ± 6.1	21.5a	8.7 ± 2.8	13.3 ± 3.9	10.0a
	Fung. + cyantraniliprole	13.3 ± 5.3	15.4 ± 4.7	14.3a	14.1 ± 6.2	18.6 ± 4.6	16.3ab	8.3 ± 2.5	4.9 ± 2.2	5.4b
	Fung. + thiamethoxam	9.6 ± 2.4	17.1 ± 7.4	13.4a	10.1 ± 5.3	14.1 ± 3.6	12.1b	5.7 ± 2.1	8.4 ± 4.1	4.8b
	Fung. + cyan. + thiam.	11.2 ± 4.1	12.9 ± 3.8	12.0a	9.6 ± 8.8	16.5 ± 7.5	13.1ab	4.4 ± 2.4	4.7 ± 2.4	3.4b
All locations	Fungicide	16.1 ± 6.7	13.4 ± 6.6	14.7a	18.2 ± 8.5	14.8 ± 8.1	16.5a	18.4 ± 9.3	13.1 ± 8.5	15.7a
	Fung. + cyantraniliprole	14.8 ± 6.8	11.7 ± 5.6	13.2a	11.5 ± 8.0	14.2 ± 5.1	12.9ab	12.8 ± 8.9	8.8 ± 7.2	10.8b
	Fung. + thiamethoxam	13.0 ± 5.2	12.9 ± 7.2	13.0a	8.2 ± 5.4	9.8 ± 4.5	9.8b	9.6 ± 10.4	8.5 ± 4.9	10.7b
	Fung. + cyan. + thiam.	10.6 ± 5.1	11.0 ± 6.6	10.8a	7.5 ± 7.6	12.1 ± 6.7	9.8b	10.7 ± 5.5	7.1 ± 4.9	8.1b
All treatments	Carrot River	14.8 ± 5.1	18.7 ± 5.7	16.7c	11.2b ± 5.6	10.5a ± 5.4	10.9	22.7b ± 8.5	14.1 ± 7.8	18.4
	Codette 1	11.3 ± 7.4	6.7 ± 3.1	9.0a	15.2b ± 9.3	11.7ab ± 7.2	13.4	---	6.1 ± 6.2	---
	Codette 2/Codette Lake	15.2 ± 5.4	8.6 ± 2.9	11.9ab	4.3a ± 4.5	12.0ab ± 6.0	8.1	13.0ab ± 5.7	9.5 ± 6.3	11.2
	Ridgedale	13.3 ± 6.4	15.0 ± 4.9	14.1bc	14.7b ± 9.0	16.7b ± 5.4	15.7	6.8a ± 2.9	7.9 ± 4.6	7.4
All treatments		13.6 ± 6.2	12.3 ± 6.4		11.4 ± 8.4	12.7 ± 6.4		14.2 ± 7.8	9.4 ± 4.0	

<sup>1</sup> Means within columns and locations followed by the same letters do not differ significantly at  $P \leq 0.05$ , Tukey's honest significant difference test.

<sup>2</sup> In 2016 the Codette 2 site was near Codette Lake.