

Section VII.
Foliage & Seed Insects

CANADIAN/USA CANOLA EFFICACY TRIALS.

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Separate university Canola trials (Hyola 401) of 13 floral insecticide treatments plus untreated checks were seeded 1-mile N Farmington, WA, on 4-10-00 with a plot drill. 4-replicates of 8 x 20 feet per treatment were used. Precounts of all treatments were made at 10% bloom, with foliar applications made at full bloom. Counts of floral insects were made at 15-DAT. Counts of micro-braconidae parasitoids in surviving cabbage aphid (CA) colonies were made by either rearing wasps from mummies, or noting opercula made by emerging wasps post spray. All parasitoids collected were *Diaeretiella rapae*. Pre-counts were for Cabbage seedpod weevil (CSPW) adults, CA, Lygus, and other Canola floral pests. Only CSPW and CA were present in significant numbers. CSPW exit holes per 100 pods per replicate were counted prior to harvest. Some shatter from winds on CSPW infested pods occurred at harvest, which was made using a Hegi plot combine. In the USA trial, Lambda-Cyhalothrin at various rates was compared to a check and Bifenthrin (Capture 2E™) standard. Deltamethrin (Decis™) was used as the Canadian standard, compared to rates and formulations of Lambda-Cyhalothrin, and the check.

SD between treatments for CSPW, CA, and yield occurred in both trials. Parasitoid percentages and numbers of CA per colony also differed significantly in both trials. The potential is good for using low rates of insecticides to reduce CA populations below economic levels while allowing parasitoid activity against the surviving aphids. Is this good IPM or a setup for resistance?

See tables below analyzed by ANOVA, LSD t Test; $p=0.05$ for data:

Canadian Trial CSPW Exit Holes and Yields KG/HA

Treatment	Rate/Ha	%CSPW holes	Yield/KG
Warrior 1 E	10 grams	1.25a	1457a
Decis	10 grams	2.25a	1279b
Karate	10 grams	3.50a	1436a
Karate	5 grams	11.25c	1366a
Decis	5 grams	3.50a	1192b
Warrior 1E	5 grams	5.50b	1088c
Check	NT	22.50c	936d

USA Trial CSPW Exit Holes and Yields Lbs/Ac

Treatment	Rate/Ac	%CSPW holes	Yield/lbs
Capture 2E	0.04 lb aia	0.00a	1414a
Warrior CST	0.24 pt	1.25a	1318ab
Warrior CST	0.16 pt	4.00ab	1274b
Warrior CST	0.12 pt	6.25b	1187b
Warrior CST	0.08 pt	8.75c	1187b
Warrior CST	0.04 pt	16.25d	1255b
Check	NT	23.00e	937c

Canadian Trial CA Efficacy Data CA/M2

Treatment	Rate/Ha	PrCt	2-DAT	15-DAT
Warrior	10 grams	22.5a	1.50a	2.75b
Warrior	5 grams	22.8a	3.00b	2.00b
Karate	10 grams	23.0a	3.50b	1.00b
Decis	10 grams	23.2a	3.50b	2.25b
Decis	5 grams	22.9a	3.50b	5.00c
Karate	5 grams	22.5a	11.25d	2.75b
Check	NT	22.5a	23.00e	8.75d

USA Trial CA Efficacy Data CA/M2

Treatment	Rate/Ac	PrCt	2-DAT	15-DAT1
Capture 2E	0.04 lb aia	23.0a	0.00a	0.00a
Warrior CST	0.24 pt	23.1a	1.75a	0.75a
Warrior CST	0.16 pt	23.0a	4.00b	0.25a
Warrior CST	0.12 pt	23.1a	6.25c	1.00a
Warrior CST	0.08 pt	22.8a	8.75c	2.25b
Warrior CST	0.04 pt	23.0a	16.25e	2.75b
Check	NT	22.5a	23.00f	8.75d

Canadian Trial CA/Colony & Parasitism

Treatment	Rate/Ha	CA/Col	Dr/Col	% Para
Decis	5 grams	81.25d	7.27c	8.90
Warrior	10 grams	30.00c	2.75a	9.20
Warrior	5 grams	30.00c	5.50b	18.33
Karate	5 grams	25.00c	10.25d	41.00
Karate	10 grams	13.75b	6.00b	43.64
Decis	10 grams	10.50b	8.00c	76.20
Check	NT	275.00e	43.50e	15.82

USA Trial CA/Colony & Parasitism

Treatment	Rate/Ac	CA/Col	Dr/Col	% Para
Capture 2E	0.04 lb aia	0.00a	0.00a	0.00
Warrior CST	0.24 pt	5.00a	2.75b	55.00
Warrior CST	0.16 pt	2.50a	1.00a	40.00
Warrior CST	0.12 pt	5.00a	3.00a	60.00
Warrior CST	0.08 pt	10.25b	3.00a	29.27
Warrior CST	0.04 pt	10.50b	2.75b	26.19
Check	NT	275.00c	43.00c	15.63