

CANOLA INSECT CONTROL

David Buntin, Research/Extension Entomologist

PEST	INSECTICIDE	MOA	FORMULATION AMOUNT PER ACRE	LB ACTIVE INGREDIENT PER ACRE	REI/PHI (Hours or Days)	WHEN TO TREAT/ REMARKS AND PRECAUTIONS
Aphids	<b>SEED TREATMENT</b>					<p>Combination of turnip aphid, cabbage aphid, and green peach aphid. Gaucho seed treatment may control aphids for 3–4 weeks after planting. Treat seedling and rosette stage plants if populations exceed 5 aphids per leaf or 15% infested plants. Treat bud and early bloom stage if infestation exceeds 15% infested stalks (racemes). Do not treat late flower and pod stage. During bloom apply insecticides early in morning before sunrise or late in the day to minimize spray effect on bees.</p> <p><b>NOTE:</b> Poncho 600 also is labeled as a seed treatment for flea beetle control on seedling plants. Gaucho 600 is a better choice for aphid control.</p> <p><b>NOTE:</b> Apply Beleaf when aphids first appear and are increasing. It may take several days to see a reduction in aphid numbers.</p> <p><b>NOTE:</b> DO NOT apply Transform until after petal fall and bloom is complete.</p>
	<i>imidacloprid</i> Gaucho 600, other brands	4A	10–20 fl oz/ 100 lb of seed	—	12 H/ —	
	<b>FOLIAR TREATMENTS</b>					
	<i>bifenthrin</i> Brigade, Capture, Discipline, Fanfare, other brands 2EC	3A	2.1–2.6 fl oz	0.033–0.04	12 H/ 35 D	
	<i>flonicamid</i> Beleaf 0.5	9C	2.8 fl oz	0.089	12 H/ 7 D	
	<i>gamma cyhalothrin</i> Declare 1.25 Proaxis 0.5	3A	1.54 fl oz 3.84 fl oz	0.015 0.015	24 H/ 7 D	
<i>lambda cyhalothrin</i> Warrior II Zeon 2.08 Silencer, Lambda, other brands	3A	1.92 fl oz 3.84 fl oz	0.03 0.03	24 H/ 7 D		
<i>sulfoxaflor</i> Transform WG	4C	0.5–0.75 oz	0.016–0.023	14 H / 14 D		
Cabbage seedpod weevil	<i>bifenthrin</i> Brigade, Capture, Discipline, Fanfare, other brands 2EC	3A	2.1–2.6 fl oz	0.033–0.04	12 H/ 35 D	<p>Apply when at 70% bloom (before full bloom) when 2 or more weevils per plant. Repeat application 7–10 days later if 1 or more weevils per plant are present.</p> <p><b>NOTE:</b> Do not apply <i>bifenthrin</i> (2EC) less than 14 days apart</p> <p><b>NOTE:</b> The products listed may be toxic to pollinating bees.</p> <p>When applying insecticides during flowering, apply very early in the day or late in the day when bees are less active. Notify beekeepers with hives near the field(s) to be treated. Review the product label for any additional pollinator protection precautions.</p>
	<i>deltamethrin</i> Delta Gold 1.5EC	3A	0.8 fl oz	0.09	12 H/ 7 D	
	<i>gamma cyhalothrin</i> Declare 1.25 Proaxis 0.5	3A	1.28–1.54 fl oz 3.2–3.84 fl oz	0.0125–0.015 0.0125–0.015	24 H/ 7 D	
	<i>lambda cyhalothrin</i> Warrior II Zeon 2.08 Silencer, Lambda, other brands	3A	1.6–1.92 fl oz 3.2–3.84 fl oz	0.025–0.03 0.025–0.03	24 H/ 7 D	
	<i>zeta-cypermethrin</i> Mustang Maxx, Respect 0.8EC	3A	4 fl oz	0.025	12 H/ 7 D	
Diamondback moth and other caterpillars	<i>bifenthrin</i> Brigade, Capture, Discipline, Fanfare, other brands 2EC	3A	2.1–2.6 fl oz	0.033–0.04	12 H/ 35 D	<p>Apply when defoliation becomes severe and larvae are present. Diamondback moth larvae are resistant to most classes of insecticides and may be difficult to control; use highest rate.</p>
	<i>chlorantraniliprole</i> Coragen 1.67SC Prevathon 0.43 Vantacor	28	3.5–5 fl oz 14–20 fl oz 1.2–2.5 fl oz	0.045–0.065 0.047–0.067 0.047–0.098	4 H/ 21 D	
	<i>cyantraniliprole</i> Exirel 0.83	28	7–13.5 fl oz	0.045–0.088	12 H/ 7 D	

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Diamondback moth and other caterpillars (continued)	<i>gamma cyhalothrin</i> Declare 1.25 Proaxis 0.5	3A	1.54 fl oz 3.84 fl oz	0.015 0.015	24 H/ 7 D	Apply when defoliation becomes severe and larvae are present. Diamondback moth larvae are resistant to most classes of insecticides and may be difficult to control; use highest rate.
	<i>lambda cyhalothrin</i> Warrior II Zeon 2.08 Silencer, Lambda, other brands	3A	1.92 fl oz 3.84 fl oz	0.03 0.03	24 H/ 7 D	
Lygus bugs	<i>bifenthrin</i> Brigade, Capture, Discipline, Fanfare, other brands 2EC	3A	2.1–2.6 fl oz	0.032–0.04	12 H/ 35 D	Treat during bloom if populations exceed 2 bugs/ sweep.
	<i>deltamethrin</i> Delta Gold 1.5EC	3A	0.8 fl oz	0.09	12 H/ 7 D	
	<i>gamma cyhalothrin</i> Declare 1.25 Proaxis 0.5	3A	0.77–1.54 fl oz 2.56–3.84 fl oz	0.0075–0.015 0.01–0.015	24 H/ 7 D	
	<i>lambda cyhalothrin</i> Warrior II Zeon 2.08 Silencer, Lambda, other brands	3A	1.28–1.92 fl oz 2.56–3.84 fl oz	0.02–0.03 0.02–0.03	24 H/ 7 D	
	<i>zeta-cypermethrin</i> Mustang Maxx, Respect 0.8EC	3A	4 fl oz	0.025	12 H/ 7 D	
Flea beetles	<i>bifenthrin</i> Brigade, Capture, Discipline, Fanfare, other brands 2EC	3A	2.1–2.6 fl oz	0.033–0.04	12 H/ 35 D	Rarely a problem in winter canola in Georgia. Treat seedlings if beetles are present and damaging more than 15% of seedling plants. Treat during bloom- stage in spring if beetles are numerous and defoliation exceeds 10%. <b>NOTE:</b> Poncho 600 (Prosper) is also labeled as a seed treatment for flea beetle control on seedling plants.
	<i>deltamethrin</i> Delta Gold 1.5EC	3A	0.8 fl oz	0.09	12 H/ 7 D	
	<i>gamma cyhalothrin</i> Declare 1.25 Proaxis 0.5	3A	0.77– 1.54 fl oz 2.56–3.84 fl oz	0.0075 –0.015 0.01–0.015	24 H/ 7 D	
	<i>lambda cyhalothrin</i> Warrior II Zeon 2.08 Silencer, Lambda, other brands	3A	1.28–1.92 fl oz 2.56–3.84 fl oz	0.02–0.03 0.02–0.03	24 H/ 7 D	
	<i>zeta-cypermethrin</i> Mustang Maxx, Respect 0.8EC	3A	4 fl oz	0.025	12 H/ 7 D	

**PREMIXED OR CO-PACKED INSECTICIDES:**

Products listed are available as premixes or co-packages of two insecticide active ingredients.

User should check mixture labels for active ingredient, specific use rates, target pests, and precautions.

BRAND NAME (active ingredients)	RANGE OF FORMULATION RATES
Besiege ( <i>lambda cyhalothrin</i> , <i>chlorantraniliprole</i> )	5–10 fl oz/A
Hero ( <i>zeta-cypermethrin</i> , <i>bifenthrin</i> )	2.6–5.5 fl oz/A
Steed ( <i>zeta-cypermethrin</i> , <i>bifenthrin</i> )	2.5–4.7 fl oz/A

# CANOLA (RAPESEED) WEED CONTROL

Eric P. Prostko, Extension Agronomist—Weed Science

CANOLA

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT		
<b>PRE-PLANT INCORPORATED</b>					
<i>ethalfluralin</i> Sonalan HFP 3EC	3	24–40 oz	0.56–0.94	24 H/ —	Apply and incorporate before planting 2–3" deep within 48 hours of application. Use 24 oz/A on coarse soils, 32 oz/A on medium soils, and 40 oz/A on fine soils. Will provide control of some winter annual grasses, henbit, and chickweed. Will not control wild radish/mustard.
<i>trifluralin</i> Treflan, others 4EC	3	16 oz	0.5	12 H/ —	Uniformly apply in the fall prior to planting. Incorporate to a depth of 2–3" within 24 hours of application. Provides control of some winter annual grasses, henbit, and common chickweed. <i>Trifluralin</i> will not control wild radish or wild mustard.
<b>AT PLANTING</b>					
<i>glyphosate</i> (various trade names) 3 lb ae/gal 3.73 lb ae/gal 4 lb ae/gal 4.17 lb ae/gal 4.50 lb ae/gal 4.80 lb ae/gal 5 lb ae/gal	9	32–64 oz 26–52 oz 24–48 oz 23–46 oz 21–42 oz 20–40 oz 19–38 oz	0.75–1.50 lb ae	4 H/ —	For the control of emerged annual and perennial weeds. Apply before, during, or after planting, but prior to canola emergence. Not all formulations of <i>glyphosate</i> may be labeled for this use. Refer to specific product label.
<b>POSTEMERGENCE</b>					
<i>clethodim</i> Select, Arrow, others 2EC Select Max/Tapout 0.97EC	1	4–6 oz 9–12 oz	0.06–0.09	24 H/ 70 D	For the control of emerged annual and perennial grasses. Apply with a crop oil concentrate at 1% v/v (Select/Arrow). A NIS (0.25% v/v) should be used with Select Max. Do not apply after the crop has begun to bolt. Crop injury may occur when applied during the bloom period. Do not exceed 16 oz/A/season of Select/Arrow or 12 oz/A of Select Max/Tapout. <b>Rain-free period is 1 hour.</b>
<i>sethoxydim</i> Poast 1.5EC	1	16 oz	0.19	12 H/ 60 D	Apply for the control of Italian (annual) ryegrass up to 8" tall. Apply Poast with a crop oil concentrate at 1% v/v. Sequential applications, spaced 14 days apart may also be used. <b>DO NOT</b> apply more than a total of 5 pts Poast/A in 1 season. In 2010, a population of Poast-resistant ryegrass was confirmed in a canola field in Franklin County. Poast Plus is not registered for use in canola. <b>Rain-free period is 1 hour.</b>
<i>quizalofop</i> Assure II, Targa 0.88EC	1	10 oz	0.07	12 H/ 60 D	Apply for the control of Italian ryegrass. Add either nonionic surfactant at 0.25% v/v or crop oil concentrate at 1% v/v. <b>DO NOT</b> apply more than 18 fl oz Assure II/Targa per season. <b>DO NOT</b> apply after canola flowers. <b>Rain-free period is 1 hour.</b>

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT		
<b>POSTEMERGENCE</b>					
<i>imazamox</i> Beyond 1AS	2	4 oz	0.031	4 H/ —	<b>ONLY FOR USE ON CLEARFIELD CANOLA VARIETIES.</b> Do not use on conventional varieties or severe crop injury will occur. Apply in combination with a NIS at 0.25% v/v (1 qt/100 gal) and nitrogen fertilizer (2.5% v/v of 28% or 32% N; or 12–15lb/100 gal of AMS). Beyond is most effective when applied to weeds that are less than 3" tall. In UGA field trials, Beyond has provided good to excellent control of wild radish and shepherd's-purse when applied between 24–37 days after canola planting. Crop rotations restrictions for Beyond are as follows: barley, cabbage, cantaloupe, carrot, cotton, cucumber, grain sorghum, oats, onion, peanut, pepper, tobacco, tomato, turnip, and watermelon—9 months; field corn—8.5 months; rye—4 months; wheat—3 months; soybeans—anytime. <b>Rain-free period is 1 hour.</b>
<b>HARVEST AID</b>					
<i>diquat</i> Reglone 2SL	22	24–32 oz	0.375–0.50	24 H/ 7 D	Can be applied by ground or air. A maximum of 1 application per season is allowed. Harvest no later than 10 days after application. Use a NIS at 0.25% v/v. Apply when crop is in the 60–75% seed turn(green to brown) stage. <b>Rain-free period is 30 minutes.</b>

**Liberty-Link and Roundup Ready Canola varieties are available. However, Liberty and glyphosate are NOT currently registered for use on these varieties in Georgia.**

**NOTE:** At this time there is not a herbicide that will control wild radish and wild mustard in conventional varieties. Avoid planting conventional varieties in fields with severe infestations of these weeds.

**NOTE:** Rotational restrictions must be followed to avoid herbicide residue carryover problems to canola from crops such as corn, cotton, peanuts, and soybeans. Rotational restrictions of several row crop herbicides that have the potential to injure canola are:

- |                                 |  |   |
|---------------------------------|--|---|
| Atrazine—12 months              | Fluometuron (Cotoran, Others)—6 months | Staple—10 months*                               |
| Anthem—18 months                | Halex GT—10 months                     | Steadfast Q—10–18 months                        |
| Boundary—12 months              | Laudis—10 months                       | Strongarm—30 months*                            |
| Cadre—40 months                 | Leadoff—10 months                      | Squadron—18 months                              |
| Callisto—10 months              | Linuron (Lorox, others)—4 months       | Realm Q—10-18 months                            |
| Canopy—18 months                | Prefix—18 months                       | Revulin Q—10-18 months                          |
| Capreno—18 months               | PowerFlex—9 months                     | Tri-Scept—18 months                             |
| Classic—18 months               | Pursuit—40 months                      | Ultra Blazer—100 days                           |
| Cobra—1 month                   | Reflex—18 months                       | Valor—4 months (tillage), 8 months (no-tillage) |
| Diuron (Karmex, Others)—2 years | Scepter—18 months                      | Zidua—18 months                                 |
| Envive—18 months                | Sencor—12 months                       |   |

For additional information on rotational restrictions for canola, refer to the specific herbicide label.

\*A successful field bioassay must also be performed prior to planting.