

## Insecticide Treatment Options for Corn Rootworm Larvae in Field Corn

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See <https://www.greenbook.net> or other resources for additional registrations.

\*Consult product label for specific information and restrictions.

### IRAC Mode of Action Classification:

- Group 1 = Acetylcholine esterase inhibitors; 1A = Carbamates, 1B = Organophosphates
- Group 3 = Sodium channel modulators
- Group 4 = Nicotinic acetylcholine receptor agonists/antagonists; 4A = Neonicotinoids

R = Restricted-Use Product

### SEED TREATMENTS:

Mode Of Action	Product Name	Common Name	Rate (Formulation)	Restrictions/Comments
4A	Cruiser 5FS	thiamethoxam	1.125 mg ai/kernel	Recommended for use against low to moderate CRW populations. Treated seed must be planted into the soil at a depth greater than 1 inch. Do not make any soil or foliar application of products containing thiamethoxam to crops grown from seed treated with Cruiser 5FS.
4A	Poncho 600	clothianidin	1.25 mg ai/kernel	A systemic insecticide seed treatment for control of listed insect pests. Recommended for use against low to moderate CRW populations.
4A	Gaucho 600, Macho, Senator	imidacloprid	1.34 mg ai/kernel	Recommended for use against low to moderate CRW populations. Treated seed must be adequately covered with soil at planting.

## PLANTING TIME TREATMENTS:

Mode Of Action	Product Name	Common Name	Rate (Formulation)	Restrictions/Comments
1B, 3 R	Aztec 2.1G	tebupirimphos and cyfluthrin	6.7 oz/1000 row ft	Apply in-furrow, band or T-band. For use in field corn, seed corn, popcorn, and corn grown for silage.
1B, 3 R	Aztec HC	tebupirimphos and cyfluthrin	1.5 oz/1000 row ft	T-band or in-furrow application. Apply with SmartBox system.
1B, 3 R	Aztec 4.67G via SmartBox Systems	tebupirimphos and cyfluthrin	3 oz/1000 row ft	May be applied as a band, T-band, or in-furrow application. Granular insecticide for use in SmartBox system only. For use on field corn, popcorn, corn grown for seed or silage.
3 R	Ballista LFC	lambda-cyhalothrin	11.5 fl oz/acre 0.66 fl oz/1000 row ft	May be applied as a T-band, or in-furrow application.
3R	Brigade 2EC, Fanfare 2EC, Bifenture EC, Discipline 2EC, Sniper, Tundra EC	bifenthrin	0.30 fl oz/1000 row ft	PHI 30 days. Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment. Apply as a 5-7 inch t-band treatment over an open seed furrow. Do not apply to soil where there is greater than 30% cover of crop residue remaining.
3 R	Capture 3RIVE 3D	bifenthrin	8-16 fl oz/acre	Liquid insecticide for use in a 3RIVE 3D system only.
3 R	Capture LFR	bifenthrin	0.39-0.98 fl oz/1000 row ft	Capture LFR insecticide is for mixing directly with liquid fertilizer to control soil insect pests. Do not apply to soil where there is greater than 30% cover of crop residue remaining.
3 R	Cobalt	chlorpyrifos and gamma-cyhalothrin	38-42 fl oz	Apply at cultivation by directing the spray to both sides of the row at the base of the plants just ahead of the cultivator shovels. For chemigation applications, apply with enough water to wet the root zone to the depth control is needed. PHI 21 days for grain, ears, forage or fodder.
3 R	Cobalt Advanced	chlorpyrifos and gamma-cyhalothrin	32-42 fl oz	Apply at cultivation by directing the spray to both sides of the row at the base of the plants just ahead of the cultivator shovels. For chemigation applications, apply with enough water to wet the root zone to the depth control is needed. PHI 21 days for grain, ears, forage or fodder.
1B R	Counter 15G	terbufos	6-8 oz/1000 row ft	Apply in-furrow, T-band, or band. If application is made at

	via Lock'n Load and SmartBox Systems			planting, do not make postemergence or cultivation time treatments of Counter 15G. Do not graze or cut for forage within 30 days of treatment. ALS-inhibiting herbicides should not be used if Counter 15G has been applied to corn at the time of planting. Counter 15G may be applied 7 days after application of ALS-inhibiting herbicides.
1B R	Counter 20G via SmartBox Systems	terbufos	4.5-6.0 oz/1000 row ft	Apply in-furrow, T-band, or band. If application is made at planting, do not make postemergence or cultivation time treatments of Counter 20G. Do not graze or cut for forage within 30 days of treatment. ALS-inhibiting herbicides should not be used if Counter 20G has been applied to corn at the time of planting. Counter 20G may be applied 7 days after application of ALS-inhibiting herbicides.
3 R	Declare	gamma-cyhalothrin	0.26 fl oz/1000 row ft	PHI 21 days for grain, livestock grazing or silage harvest.
1B, 3 R	Defcon 2.1G	phosphorothionate and cyfluthrin	6.7 oz/1000 row ft	Apply in a band, T-band or in-furrow application. Defcon 2.1G is not systemic and will not interact with corn herbicides. For field, sweet, seed, silage and popcorn.
3 R	Ethos 3D	bifenthrin	0.52-1.05 fl oz/1000 row ft	Liquid insecticide/fungicide for use in a 3RIVE 3D system only.
3 R	Ethos XB	bifenthrin	6.8-17.0 fl oz/acre	For mixing directly with liquid fertilizer to control listed soil pests. Contains a fungicide, <i>Bacillus amyloliquefaciens</i> strain D747 for suppression of seedling diseases.
3 R	Force 3G via Conventional and SmartBox Systems	tefluthrin	4-5 oz/1000 row ft	Field corn, popcorn and seed corn. Banded, T-band, or in-furrow placement at planting. Banded granules must be incorporated into the top one inch of soil using tines, press wheels, closing wheels or other suitable equipment. Use Force 3G only one per crop season.
3 R	Force 6.5G	tefluthrin	1.8-2.3 oz/1000 row ft	Field corn, popcorn and seed corn. Banded, T-band, or in-furrow placement at planting. Banded granules must be incorporated into the top one inch of soil using tines, press wheels, closing wheels or other suitable equipment.
3 R	Force 10G HL SmartBox Systems	tefluthrin	1.25-1.5 oz/1000 row ft	Field corn, popcorn and seed corn. Banded, T-band, or in-furrow placement at planting. Banded granules must be incorporated into the top one inch of soil using tines, press wheels, closing wheels or other suitable equipment.

3 R	Force CS, Force EVO	tefluthrin	0.46-0.57 fl oz/1000 row ft	Field corn, popcorn, sweet corn and seed corn. T-band or in-furrow placement at planting. T-band applications need to be followed by an incorporation of 1 inch into the soil either by using tines, press wheels, closing wheels, or other suitable equipment which are either attached to the planter or part of the planter system.
1B R	Fortress 5G via SmartBox System	chlorethoxyfos	3.0-4.5 oz/1000 row ft	For use only with SmartBox closed handling application system. Field corn, popcorn, seed corn. Apply infurrow at planting for optimum control. May also be applied as a t-band with incorporation into the top one-inch of soil. Do not apply as a surface band behind the press wheel. Increase the rate to control higher rootworm populations.
1B, 3 R	Index	bifenthrin and chlorethoxyfos	0.65-0.72 fl oz/1000 row ft	Field corn, popcorn, sweet corn and seed corn. Apply as an in-furrow application only at planting.
1B R	Lorsban 15G via Conventional and SmartBox Systems, Chlorpyrifos 15G	chlorpyrifos	8 oz/1000 row ft	Apply in-furrow, T-band or band at planting time. At cultivation time, apply by directing the granules at the base of the plant on both sides of the row just ahead of the cultivation shovels and cover the granules with soil. PHI 35 days for grain. Do not allow meat or dairy animals to graze in treated areas or harvest treated corn silage as feed for meat or dairy animals within 14 days after last treatment. Do not feed treated corn fodder to meat or dairy animals within 35 days after last treatment.
1B R	Lorsban Advanced, Lorsban 4E, Govern 4E, Hatchet, Nufos 4E, Warhawk, Yuma 4E	chlorpyrifos	2.4 fl oz/1000 row ft	PHI 21 days before harvest of grain, ears, forage or fodder. Apply in a T-band with a minimum spray volume of 5 GPA.
3 R, and 11 (fungicide)	Manticor LFR	bifenthrin and pyraclostrobin	At Planting: 0.49-1.09 fl oz/1000 row ft	For soil insect pests and soilborne/seedling disease control and plant health in corn by mixing directly with liquid fertilizer using at-plant (t-band or in-furrow) applications.
4A	Poncho 600	clothianidin	1.25 mg ai/K	Pre-treated seed. A systemic insecticide seed treatment for control of listed insect pests.
3 R	Proaxis	gamma-cyhalothrin	0.66 fl oz/1000 row ft	Apply in a 5 to 7 inch t-band or in-furrow in a minimum spray volume of 3 GPA.

1B, 3 R	SmartChoice 5G SmartBox System	chlorethoxyfos and bifenthrin	3-5 oz/1000 row ft	Do not make more than one application per year.
1B, 3 R	SmartChoice HC SmartBox System	chlorethoxyfos and bifenthrin	1.5-1.67 oz/1000 row ft	Field corn, popcorn, sweet corn and seed corn. Apply as an in-furrow application only at planting. Do not make more than one application per year.
3 R	Temitry LFR	bifenthrin	8.5-19 fl oz/acre	For soil insect pests and soilborne/seedling disease control and plant health in corn by mixing with liquid fertilizer using t-band or in-furrow applications.
1B R	Thimet 20G via Lock'n Load and SmartBox Systems	phorate	4.5-6.0 oz/1000 row ft	Apply as band or T-band. Granules must be incorporated into the soil.
1B, 3 R	Tundra Supreme	chlorpyrifos and bifenthrin	0.8 fl oz/1000 row ft	PHI 30 days for grain and silage.
3 R	Warrior w/ Zeon Technology, Silencer	lambda-cyhalothrin	0.66 fl oz/1000 row ft	Apply in-furrow, or T-band. Recommended for light to moderate infestations. PHI 21 days for harvest, grazing or cutting treated crops for feed.
3 R	Warrior II w/ Zeon Technology, Lamcap II	lambda-cyhalothrin	0.33 fl oz/1000 row ft	Apply in-furrow, or T-band. Recommended for light to moderate infestations. PHI 21 days for harvest, grazing or cutting treated crops for feed.
3 R	Xpedient Plus V	bifenthrin	0.30-0.74 fl oz/1000 row ft	Apply as a 5 to 7 inch t-band over the open furrow, or in-furrow with the seed.

### POST-PLANT OR RESCUE TREATMENTS:

Mode Of Action	Product Name	Common Name	Rate (Formulation)	Restrictions/Comments
1B, 3 R	Cobalt	chlorpyrifos and gamma cyhalothrin	38-42 fl oz/acre	Application timing should coincide with 2nd instar larvae.
1B R	Counter 15G via Lock'n Load and SmartBox Systems	terbufos	8 oz/1000 row ft	For field corn and popcorn. If application is made at planting, do not make postemergence or cultivation time treatments of Counter 15G. Do not graze or cut for forage within 30 days of treatment. ALS-inhibiting herbicides should not be used if Counter 15G has been applied to corn at the time of planting. Counter 15G may be applied 7 days after applicaton of ALS-inhibiting herbicides.
1B R	Counter 20G	terbufos	6 oz/1000 row ft	For field corn and popcorn. If application is made at

	via SmartBox Systems			planting, do not make postemergence or cultivation time treatments of Counter 20G. Do not graze or cut for forage within 30 days of treatment. ALS-inhibiting herbicides should not be used if Counter 20G has been applied to corn at the time of planting. Counter 20G may be applied 7 days after application of ALS-inhibiting herbicides.
3 R	Force 3G via Conventional and SmartBox Systems	tefluthrin	4-5 oz/1000 row ft	Field corn, popcorn and seed corn. Place granules at the base of the plant on both sides of the row and cover with 2-3 inches of soil by making the application ahead of cultivation equipment. Use Force 3G only once per crop season.
1B R	Lorsban 4E, Govern 4E, Hatchet, Warhawk, Yuma 4E	chlorpyrifos	2-3 pts/acre	May apply at cultivation by directing the spray to both sides of the row at the base of the plants just ahead of the cultivator shovels. Cover the insecticide with soil around the brace roots. A cultivation application of Lorsban 4E may be made in addition to an at-planting application of Lorsban 15G. <b>OR</b> Apply through sprinkler irrigation systems with enough water to wet the root zone to the depth that root protection is needed. Timing should coincide with appearance of second instar larvae. PHI 21 days before harvest of grain, ears, forage or fodder.
1B	Lorsban 15G via Conventional and SmartBox Systems	chlorpyrifos	8 oz/1000 row ft	Field corn, popcorn, and corn grown for seed. Apply by directing the granules at the base of the plant on both sides of the row just ahead of the cultivation shovels and cover the granules with soil. PHI 35 days for grain. Do not allow meat or dairy animals to graze in treated areas or harvest treated corn silage as feed for meat or dairy animals within 14 days after last treatment. Do not feed treated corn fodder to meat or dairy animals within 35 days after last treatment.
1B R	Thimet 20G via Lock'n Load and SmartBox Systems	phorate	4.5-6.0 oz/1000 row ft	Apply granules to base of plants just ahead of cultivation shovels so as to cover granules with soil. PHI 30 days for harvest, graze, or forage.
3 R	Xpedient Plus V	bifenthrin	5.12-12.80 fl oz/acre OR 0.30-0.74 fl oz/1000 row ft	Apply as a 5 to 7 inch t-band over the open furrow, or in-furrow with the seed.