



Control Options for Cabbage Maggot in Brassicas in New York, 2023

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Product	Active Ingredient	IRAC ¹ Group	Rate	Application Method ²	Crops Labeled	Relative Control of Cabbage Maggot ³	Other Insect Pests Controlled ⁴	PROS	CONS
Diazinon* AG500, 50W, AG600, WBC	Diazinon	1B	2-3 qt/A, 4-8 fl oz/50 gal TW (AG500)	PPI, TW	Broccoli, Brussels sprouts, cabbage, cauliflower. Broccoli and rutabagas (PPI only)	TW: Excellent; PPI: Poor	Cutworms, wireworms	Long residual control	High risk for worker exposure – extensive PPE required. ⁵ TW application can cause significant stunting. ⁶
Mustang Maxx*	Zeta-cypermethrin	3A	3.2-4 fl oz/A (max: 24 fl oz/A/crop)	DS	Radish, rutabaga, turnips. Head & Stem, Leafy (2ee)	Variable: 4 weekly apps led to 80% control in 2021 but FAIL in 2022. (Labeled as suppression)	Worms, thrips, flea beetles, aphids	Affordable (~\$16/A for 4 x 4 fl oz).	Multiple applications required for effective control. Coverage is critical.
Hero*	Zeta-cypermethrin + bifenthrin	3A + 3A	8.3-10.3 fl oz/A (max: 46.35 fl oz/A/crop)	DS	Head & Stem, Leafy & Root (2ee)	No data: Assume similar to Mustang Maxx.	Worms, thrips, flea beetles, aphids	--	Same as for Mustang Maxx.
Capture LRF* , Sniper LFR, Ruckus LFR	Bifenthrin	3A	3.4-6.8 fl oz/A	IF, PRE, PPI	Head & Stem brassicas only)	Failed in Cornell trials	Worms, thrips, flea beetles	--	--
Radiant SC	Spinetoram	5	5-10 fl oz/A	DS 100 gpa	Head & Stem brassicas only	Poor-Moderate (labeled as suppression only)	Worms, thrips	--	Expensive (~\$70/A)
Coragen	Chlorantraniliprole	28	3.5-7.5 fl oz/A	TW, IF, DS	Head & Stem brassicas only	TW: Poor (Labeled as suppression only)	Worms	Affordable (~\$11/A for 5 fl oz). Minimum PPE required.	--
Verimark	Cyantraniliprole	28	10-13.5 fl oz/A	TD, TW, IF, DS	Head & stem, Leafy & Root	TD: Good-Excellent; TW: Good; DS: Moderate	Worms, flea beetles	Excellent control of worms and flea beetles. Minimal PPE required.	TD application can be tricky. Expensive (~\$105/A for 13 fl oz), but control of other pests could offset price. Rate/plant varies widely with different planting densities.

* **Federal and NYS Restricted Use.** All Federally Restricted Use pesticides are also restricted in New York State and require a pesticide applicator license to purchase and to apply. Pesticide handlers who do not have a spray license must be under the direct supervision of a licensed applicator.

1 **IRAC:** Insecticide Resistance Action Committee. Active ingredients within an IRAC group have the same mode of action and cross-resistance may occur among them. Rotation among IRAC groups for resistance management is recommended.

2 **Application Method:** **PPI:** surface broadcast spray that is incorporated 3-4 inches pre-plant. **TW:** transplant water treatment. **DS:** directed spray at base of plant in 4-6 inch band, post-planting. **IF:** in-furrow at-planting application. **PRE:** applied with pre-emergent herbicides, broadcast surface application, not incorporated. **TD:** plug transplant tray drench.

3 Relative control ratings are based mostly on Cornell trials conducted by Zaman 2018-2021, and Hoepting & Nault, 2021, 2022.

4 Worm pests such as diamondback moth, imported cabbage worm, etc.

5 **PPE** required for Diazinon includes a respirator with organic vapor cartridges, chemical resistant footwear, chemical resistant gloves made of barrier laminate or viton, and goggles/face shield.

6 Diazinon AG500 3 qt/A TW resulted in 46% stunting 25 days after planting in the on-farm trial in Oakfield (Hoepting & Nault, 2021). The label also cautions that TW application may cause stunting. Although the plants eventually grew out of the stunting, it seems backwards to apply a treatment that may cause stunting in order to protect the crop from an insect that can cause stunting.