

Weed Species Resistant to Herbicide Trade Names, Their Site of Action and WSSA Grouping in Ontario

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Gr ¹	Site of Action	Herbicide Trade Name (alphabetic order)	Confirmed resistant weed species in Ontario (As of Dec, 2009)
1	Inhibitors of acetyl CoA carboxylase (ACCase)	Acclaim Super, Achieve, Assure II, Excel Super, Poast, Puma ¹²⁰ Super, Select, Ultra, Venture	Currently none confirmed.
2	Inhibitors of acetolactate synthase (ALS) and also called acetoxyhydroxyacid synthase (AHAS)	Accent, Arsenal, Classic, Elim EP, FirstRate, Muster, Option 2.25 OD, Pinnacle, Prism, Pursuit, Refine SG, Telar, Ultim, Upbeet	Cocklebur, common ragweed, eastern black nightshade, giant foxtail, green foxtail, green pigweed, lamb's-quarters, redroot pigweed, waterhemp.
3	Microtubule assembly inhibitors	Bonanza, Dacthal W-75, Dimension, Prowl, Rival, Treflan	Currently none confirmed.
4	Synthetic auxins	2,4-D, Banvel II, Caliber, Cobutox, Compitox, Covitox Plus, Desormone, Diphenoprop, Dycleer, Dyvel, Embutox, Estaprop Plus, Garlon, IPCO Dichlorprop-D, IPCO Premium 2-Way XP Turf Herbicide, Killlex, Lontrel, MCPA, Mecoprop, Mecocrop 2,4-D, Meco-D, Par III, IPCO Premium 3-Way XP Turf Herbicide, Release, Sword, Target, Topside, Tordon 101, Trophy, Turf-Rite 2+2, Turboprop, Vanquish	Wild carrot.
5	Inhibitors of photosynthesis at photosystem II, Site A	Aatrex Liquid 480, Atrazine, Gesagard, Hyvar X, Princep, Pronone, Pyramin FL, Sencor, Simadex, Simazine, Sinbar, Spin-Aid, Velpar	Barnyard grass, common groundsel, common ragweed, goosefoot, redroot pigweed, waterhemp, wild mustard, witch grass, yellow foxtail.
6	Inhibitors of photosynthesis at photosystem II, Site B	Basagran, Basagran Forté, Koril, Pardner, Brotox	Green pigweed.
7	Inhibitors of photosynthesis at photosystem II, Site B (alternate binding site)	Diurex 80W, Herbec, Karmex, Lorox	Green pigweed, smooth pigweed.

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8	Conjugation of acetyl co-enzyme A	Betasan, Eradicane, Eptam, Ro-Neet	Currently none confirmed.
9	Inhibitors of 5-enolpyruvylshikimate-3-phosphate synthase (EPSP)	Credit, Credit Plus, EZJect, Factor, Factor 540, Glyphos, Maverick III, Roundup Ultra II, Roundup Weathermax, Sharpshooter, Sharpshooter Plus, Touchdown Total, Vantage, Vantage Plus, Vantage Plus Max, Vantage Plus Max II, Vision, Vision Max	Currently none confirmed.
10	Inhibitors of glutamine synthetase	Ignite, Liberty	Currently none confirmed.
11	Inhibitors of carotenoid biosynthesis	Amitrol	Currently none confirmed.
13	Diterpene synthesis inhibitor	Command 360	Currently none confirmed.
14	Inhibitors of protoporphyrinogen oxidase (Protox)	Aim EC, Blazer, Goal, Reflex, Ronstar, Valtera	Currently none confirmed.
15	Conjugation of acetyl co-enzyme A	Devrinol, Dual Magnum, Dual II Magnum, Frontier Max	Currently none confirmed.
19	Inhibitors of auxin transport system	Alanap	Currently none confirmed.
20	Inhibits cell wall synthesis, Site A	Casoron	Currently none confirmed.
22	Photo system I – electron diverters	Gramoxone, Reglone, Reward	Canada fleabane, field peppergrass.
23	Inhibitors of mitosis	CIPC	Currently none confirmed.
27	Inhibitors of p-hydroxyphenyl pyruvate dioxygenase (HPPD)	Callisto, Converge Flexx, Impact	Currently none confirmed.

¹ Herbicide groupings for Ontario follow the Weed Science Society of America's nationally accepted grouping. Groups 12, 13, 16, 17, 18, 21, 24, 25 and 26 are not available in Ontario.