

Agronomy Spotlight



KEY BENEFITS OF TRIVOLT™ HERBICIDE (Restricted Use Pesticide)

TriVolt[™] herbicide, a restricted use pesticide, is a new product that is labeled for weed control in field corn, seed corn, and field corn grown for silage.¹

Benefits of TriVolt™ herbicide, a restricted use pesticide:²

- Three active ingredients (Table 1).
 - » Thiencarbazone-methyl, a group 2 herbicide that inhibits an enzyme essential for the plant's synthesis of certain branched-chain amino acids.
 - » Isoxaflutole, a group 27 herbicide that affects the plant's synthesis of plastoquinones and carotenoids.
 - » Flufenacet, from group 15 which inhibits the production of very long chain fatty acids.

With three modes of action (MOA), TriVolt™ herbicide, a restricted use pesticide, controls a broad spectrum of weed species, including some populations resistant to glyphosate, triazine, PPO (protoporphyrinogen oxidase) inhibitor, ALS (acetolactate synthase) inhibitor, or auxin containing herbicides.¹

- Keeps fields clean for up to eight weeks, in a variety of weather conditions (Figure 1).²
 - » The flufenacet component of TriVolt™ herbicide, a restricted use pesticide, has low water solubility along with moderate soil adsorption.
 - » This property of flufenacet helps TriVolt™ herbicide, a restricted use pesticide, maintain residual control for up to eight weeks even in variable weather conditions.

Table 1. Summary of the active ingredients in
TriVolt™ herbicide (Restricted Use Pesticide).

Active Ingredients	Thiencarbazone- methyl	Isoxaflutole	Flufenacet
Site of Action family (chemical family)	Acetolactate Synthesis Inhibitor (2)	HPPD* Inhibitor (27)	Long Chain Fatty Acid Inhibitor (15)
Activity	Soil residual and postemergence	Soil residual and postemergence	Soil residual
Weed spectrum	Broad spectrum	Broad spectrum	Grass and small seeded broadleaves
General soil properties	High water solubility, low/moderate soil adsorption, short/ medium half-life	Low water solubility, moderate soil adsorption	Low water solubility, moderate soil adsorption, lengthy half-life, advantageous when multiple rain events occur
*4-Hydroxyphenylpyruvate dioxygenase			



Figure 1. Corn field 50 days after application of TriVolt™ herbicide, a restricted use pesticide.

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- Broad spectrum weed control
 - » TriVolt™ herbicide, a restricted use pesticide, is labeled for the control of more than 40 broadleaf weed species and nearly 20 species of grass or sedge weeds (Table 2).¹
- Comparative Information:
 - » Compared to the three sites of action for Acuron[®] herbicide, TriVolt[™] herbicide, a restricted use pesticide, helps deliver an improved resistance management strategy with four different sites of action when tankmixed with atrazine.
 - » In thirty-one field trials across corn-growing areas in 2020 and 2021, TriVolt™ herbicide, a restricted use pesticide, provided increased levels of residual narrowleaf weed control compared to Resicore® herbicide, 56 days after preemergence applications when both products were tank-mixed with atrazine (Figure 2)

	Table 2. Partial listing of weeds labeled for control with TriVolt™ herbicide (Restricted Use Pesticide).¹				
Broadleaf weeds	Palmer amaranth Henbit Jimsonweed Kochia Common lambsquarter Marestail Black nightshade	Field pennycress Pigweed species Common ragweed Prickly sida Shepard's Purse Velvetleaf Common waterhemp			
Grass/Sedge Weeds	Barnyardgrass Crabgrass species Foxtail, bristly Foxtail, giant	Foxtail, green Foxtail, yellow Johnsongrass, seedling Fall Panicum			

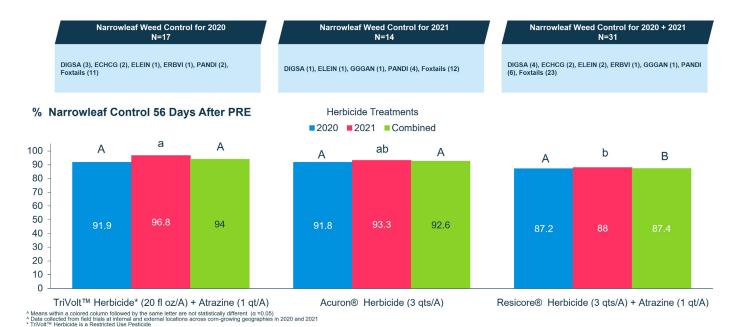


Figure 2. Residual grass control comparison between TriVoltTM herbicide, a restricted use pesticide, and competitors. Means collected within a colored column followed by the same letter are not statistically different ($\alpha = 0.05$). Data collected from field trials (N=31) at internal and external locations across corn-growing geographies in 2020 and 2021.



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Application flexibility

There is flexibility as to how TriVolt™ herbicide, a restricted use pesticide, should be applied and the application timing. Application instructions include:

- May be used in conventional, conservation tillage, or in no-till crop management systems.
- May be applied as preplant, preplant incorporated (less than 2-inches deep), preemergence, or early postemergence (spike through 2-leaf collar growth stages).
- May be tank mixed or applied in sequential applications with other compatible herbicides to control additional weeds.
- Most effective for weed control when applied and subsequently moved into the soil by rainfall, sprinkler irrigation, or mechanical tillage prior to weed emergence.

For more information about TriVolt™ herbicide, please go to TriVolt Herbicide | Crop Science US (bayer. us). TriVolt™ herbicide, a restricted use pesticide, is not labeled in all states. Consult the label for approved states as well as any soil texture or adjuvant restrictions. The complete label for TriVolt™ herbicide, a restricted use pesticide, can be found at TriVolt Label1fe.pdf

Sources:

¹TriVolt[™] herbicide label. EPA Reg. No. 264-1211. <u>TriVolt Label1fe.pdf</u>

²Bayer Crop Science. https://www.cropscience.bayer.us/products/herbicides/trivolt/.

Legal statements:

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

TriVolt™ is a restricted use pesticide. Not all products are registered for use in all states and may be subject to use restrictions. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local dealer or representative for the product registration status in your state. Tank mixtures: The applicable labeling for each product must be in the possession of the user at the time of application. Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Not all tank mix product formulations have been tested for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of tank mixtures by mixing small proportional quantities in advance. Bayer, Bayer Cross and TriVolt™ are trademarks of Bayer Group. All other trademarks are the property of their respective owners. For additional product information call toll-free 1-866-99-BAYER (1-866-992-2937) or visit our website at www.BayerCropScience.us. Bayer CropScience LP, 800 North Lindbergh Boulevard, St. Louis, MO 63167. ©2023 Bayer Group, All rights reserved. 1223_231657.

