



HERBICIDE



INSECTICIDE



FUNGICIDE



SPECIALTY

Nufarm Ester Formulations (Low Volatile Esters)

Main Active Ingredients: 2,4-D (4-dichlorophenoxyacetic acid),
MCPA (2-methyl 4-chlorophenoxyacetic acid)



Nufarm Ester Formulations Profile

Nufarm ester herbicides are extremely effective on hard-to-kill perennial weeds and woody species, especially in cool, dry and low vigor growing conditions. Each ester herbicide has been specially formulated to afford the most effective weed control by crop and environmental conditions.

TECHNICAL BULLETIN

Always consult product label for current application use instructions.



Nufarm Agriculture Division

The Nufarm Advantage

Nufarm ester formulations resist rainfall effect, making them washoff resistant. All Nufarm esters are low volatile formulations, and penetrate the leaf surfaces of the plant more readily. Nufarm esters are also compatible with liquid fertilizer solutions.

Mode of Action

The active ingredient for Nufarm 2,4-D esters is 2,4-dichlorophenoxyacetic acid (2,4-D), one of the most widely used herbicides in the world today. MCPA formulation's active ingredient is methyl-chlorophenoxy-acetic acid. 2,4-D stimulates different responses within a plant depending on a lower or higher level of concentration, much like a natural plant growth regulator. MCPA, as a phenoxy herbicide, is closely chemically related to 2,4-D. MCPA can be less injurious to crops more sensitive to 2,4-D applications.

The sequences of activity within the plant are:

- Phloem becomes plugged, preventing plant sugar movement from the leaves to the roots.
- Food reserves are used up.
- The plant dies slowly with complete dieback within days of application.

Primary Application Times and Methods

Crop staging and application timing can be critical to the tolerance of crops to the phenoxyes 2,4-D and MCPA. To decrease potential crop injury, consult label for current application use instructions.

“Weedone has worked well for us — it has always taken care of what we’re after.”

**Bernie Baltes
Rolling Prairie, Indiana**

For most phenoxy herbicide, ground applications are recommended to ensure the most effective coverage and efficient targeting and placement of the herbicide. Aerial applications are also viable, depending on product, crop and crop stage of growth.

Nufarm Ester Herbicide Products

Specific Formulations for Specific Results

Nufarm Ester Herbicide Products

PRODUCT	PRIMARY USE	FEATURES	ADVANTAGE
Weedone LV4 Solventless <i>2,4-D isooctyl (2EHE) 3.8 lb solventless ester formulation</i>	Small grains, corn, sorghum, pasture/rangeland, non-crop, and preplant soybeans and corn	Contains no solvents. Solvents are replaced with high-quality emulsifiers and surfactants. Low odor formulation. Easily rinses out of containers and spray equipment.	Safer on host crop than conventional 2,4-D herbicides.
Weedone LV4 EC <i>2,4-D isooctyl (2EHE) 3.8 lb ester formulation</i>	Small grains, corn, sorghum, pasture/rangeland, non-crop, and preplant soybeans and corn	The first low volatile 2,4-D ester formulated in the U.S. market. Mixes well with all fluid fertilizers, offering improved control over 2,4-D amine formulations.	Wild onion and garlic control.
Weedone LV6 <i>2,4-D isooctyl (2EHE) 5.6 ester formulation</i>	Small grains, corn, sorghum, pasture/rangeland, weeds and brush in non-crop areas	Low volatile formulation mixes well with liquid fertilizers. Mixes with water and oil to control tough perennial broadleaf weeds and brush. Ideal for aerial application utilizing less product.	Highest acid concentration for more efficient shipping and storage. Lower cost per active ingredient.
Turret 6 lb 2,4-D Solventless <i>5.6 lb isooctyl (2EHE) solventless 2,4-D ester</i>	Small grains, pasture/rangeland, fallow land and Christmas trees	High concentration ester formulation. Contains no solvents. Easily washes out of containers and spray rigs. Low odor. Turret is the only solventless 6 lb 2,4-D ester formulation available.	Mixes well with other herbicides.
Esteron 99c <i>2,4-D isooctyl (2EHE) 3.8 lb ester formulation</i>	Small grains, corn, sorghum, pasture/rangeland, non-crop, and preplant soybeans and corn	One of the first low volatile esters sold. Mixes well with all fluid fertilizers.	Better control of hard-to-control weeds than 2,4-D amine formulations.
Weedone 638 Broadleaf Herbicide <i>Combination of 2,4-D Butoxyethyl ester (BEE) and emulsified 2,4-D acid</i>	Corn, sorghum, wheat, barley, pasture/rangeland, fallow land, roadsides, fencerows, drainage ditches, perennial weeds, and preplant burndown soybeans and corn	Original, unique formulation of emulsified acid + BEE ester of 2,4-D. Best translocation property of any 2,4-D ester formulation. Mixes with liquid fertilizer solutions. Butoxyethyl ester offers lower volatility vs. iso-octyl based 2,4-D esters. Very high quality, low odor formulation.	Superior perennial control, effective in cold spring, fall weather or less vigorous growing conditions.
Dagger <i>5.2 lb solventless MCPA ester</i>	Small grains not underseeded to legumes, flax and oats	Unique solventless, low odor formulation mixes well with other herbicides. Features the highest a.i. concentration of any other MCPA ester on the market.	Extremely effective, yet there's less product to handle for applicators and less storage space required for inventory.
Rhonox <i>3.8 lb MCPA isooctyl (2-EHE) ester</i>	Small grains not underseeded to legumes, flax and oats	More effective on tougher to kill weeds in small grains than MCPA amines. Best effectiveness in low humidity areas. Tank mix partner with sulfonyl ureas, dicamba and bromoxynil herbicides for prescription weed control.	Most effective MCPA formulation for larger and difficult to control species.

The Nufarm Ester Formulations Advantage

Formulated for Best Results, Crop by Crop

Not all Nufarm ester formulation products are created equal. Some are better than others — for certain crops, that is. Each product is formulated to be more effective for specific uses and crops. See labels for more information.

Nufarm Ester Formulations Crop Specifier

CROP	Weedone 638	Weedone LV4 Solventless	Weedone LV4 EC	Weedone LV6	Turret	Esteron 99	Chiptox	Dagger	Rhonox
Wheat	✓						✓		
Barley	✓						✓		
Corn	✓	✓	✓	✓		✓	✓		
Small Grains		✓	✓	✓	✓	✓		✓	✓
Sorghum	✓	✓	✓	✓		✓	✓		
Christmas Trees					✓				
Fallow Land	✓				✓		✓		
Preplant Burndown	✓	✓	✓			✓	✓		
Pasture/Rangelands	✓	✓	✓	✓	✓	✓	✓		
Non-Crop Areas	✓	✓	✓	✓		✓			
Roadsides	✓						✓		
Fencerows/Ditches	✓						✓		



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