

Helena

# EndRun™

FOR SALE TO AND USE BY COMMERCIAL APPLICATORS AND PROFESSIONAL LANDSCAPERS ONLY.

NOT FOR SALE TO OR USE BY HOMEOWNERS.

Controls Dandelion, Clover, Knotweed, Henbit, Chickweed, Plantain, Spurge and many other broadleaf weeds.

One Gallon Covers Up To 2½ Acres.

ACTIVE INGREDIENTS:

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid	30.56%
Dimethylamine salt of (+)-(R)-2-(2-methyl-4-chlorophenoxy) propionic acid	8.17%
Dimethylamine salt of dicamba: 3,6-dichloro-o-anisic acid	2.77%
<b>INERT INGREDIENTS:</b>	<b>58.50%</b>

TOTAL 100.00%

THIS PRODUCT CONTAINS:

2.38 lbs. 2,4-dichlorophenoxyacetic acid equivalent per gallon or 25.38%  
 0.63 lbs (+)-(R)-2-(2-methyl-4-chlorophenoxy)propionic acid equivalent per gallon or 6.75%  
 0.21 lb. 3,6-dichloro-o-anisic acid equivalent per gallon or 2.30%

Isomer Specific by AOAC Methods.

Contains the single isomer form of Mecoprop-p

SN 050605/0106

EPA REG NO. 2217-656-5905

EPA EST NO. 2217-KS-1

- NET CONTENTS:
- 2.5 Gallons (9.46 Liters)
  - 30 Gallons (113.55 Liters)
  - 55 Gallons (208.48 Liters)
  - 275 Gallons (1040.88 Liters)

MANUFACTURED FOR  
 HELENA CHEMICAL COMPANY  
 225 SCHILLING BOULEVARD, SUITE 300  
 COLLIERVILLE, TN 38017

**KEEP OUT OF REACH OF CHILDREN  
 DANGER/PELIGRO**

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**FIRST AID**

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

**IF ON SKIN:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:**

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**IF INHALED:**

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for treatment advice.

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment advice.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

See below for additional Precautionary Statements and First Aid  
 —KEEP FROM FREEZING—

**READ THE ENTIRE LABEL FIRST. OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.**

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER:** Corrosive. Causes irreversible eye damage. Causes skin irritation. Do not get into eyes, on skin or clothing. May be fatal if swallowed.

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**NON-WPS USES:**

Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170)—in general, only agricultural-plant uses are covered by the WPS—must wear the following:

- Wear face shield or goggles when mixing, loading or applying this product. When mixing, loading or applying this product, wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and eye protection. It is recommended that safety glasses include front, brow, and temple protection.

After using this product, rinse gloves before removing, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. Remove saturated clothing as soon as possible and shower.

**Engineering Control Statements For Non-WPS Uses:**

*Containers over 1 gallon and less than 5 gallons:* Persons engaged in open pouring of this product must also wear coveralls or a chemical resistant apron.

*Containers of 5 gallons or more:* Do not open-pour from this container. A mechanical system (such as probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

**WPS USES:**

Applicators and other handlers who handle this pesticide for any uses covered by the Worker Protection Standard (40 CFR Part 170)—in general agricultural-plant uses are covered—must wear the following:

- Coveralls over short-sleeved shirt and short pants.
- Waterproof gloves.
- Chemical-resistant footwear plus socks.
- Protective eyewear.

Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

**Engineering Control Statements For WPS Uses:**

*Containers over 1 gallon and less than 5 gallons:* Mixers and loaders who do not use a mechanical system (probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

*Containers of 5 or more gallons:* Do not open-pour product from this container. A mechanical system (such as probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**User Safety Recommendations:**

*Users should:*

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater. When cleaning equipment, do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources. Do not apply when weather conditions favor drift from target area. Do not contaminate domestic or irrigation waters.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and MCPP-p have been associated with mixing, loading and disposal sites. Caution should be exercised when handling 2,4-D and MCPP-p pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**  
 Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170.  
 This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.  
 Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.  
 For early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear.

**NON-AGRICULTURAL USE REQUIREMENTS**  
 The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.  
**Reentry Statement:** Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried or dust has settled.

**STORAGE & DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.  
**STORAGE:** Store in original container in a locked storage area inaccessible to children or pets. Keep from freezing.  
**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your state Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.  
**CONTAINER DISPOSAL:** For Metal Containers—Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. For Plastic Containers—Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke.

**SOD FARMS:**  
**EndRun™** is intended for use on sod farms. **EndRun™** provides selective broadleaf control in warm season and cool season turfgrass established for commercial sod production.

**APPLICATION SCHEDULES FOR SOD FARMS:**  
 Apply **EndRun™** to broadleaf weeds that are actively growing. Follow-up applications may be required for dense infestations of perennial and biennial weeds. Do not apply this product to 'Floratam' St. Augustinegrass.

**NEWLY SEEDED AREAS:**  
 The application of **EndRun™** to grass seedlings is recommended after the second mowing.

**NEWLY SODDED, SPRIGGED, OR PLUGGED AREAS:**  
 The application of **EndRun™** to newly sodded, sprigged, or plugged grasses should be delayed until 3 to 4 weeks after the sodding, sprigging, or plugging operations. Also, applications to dormant bermudagrass, dormant zoysiagrass, and dormant bahiagrass are suggested.

**APPLICATION RATES FOR SOD FARMS:**  
 Dosage rates and spray volume recommendations of **EndRun™** for use in commercial sod production are presented in Table 1.

Generally, the lower application rates within the specified range will provide satisfactory control of sensitive weed species. The higher application rates within the specified range will be required for dense infestations of perennial weeds, for adverse/extreme environmental conditions, or for weeds beyond the appropriate growth stages.

The maximum application rate to turf is 1.3 pounds 2,4-D acid equivalent per acre per application per site.

**TABLE 1. RATE RECOMMENDATIONS FOR SOD FARMS.**

Species	Amount of Product Pints/Acre	Spray Volume Gallons/Acre
<b>Cool Season Turf</b>		
Kentucky Bluegrass	3.0 to 4.0	5 to 175

Species	Amount of Product Pints/Acre	Spray Volume Gallons/Acre
Perennial Ryegrass	3.0 to 4.0	5 to 175
Fescue spp.	3.0 to 4.0	5 to 175
Creeping Bentgrass	1.8	5 to 175
<b>Warm Season Turf</b>		
Common Bermudagrass	2.0 to 2.5	5 to 175
Hybrid Bermudagrass	2.0 to 2.5	5 to 175
Bahiagrass	2.0 to 2.5	5 to 175
Zoysiagrass	2.0 to 2.5	5 to 175
St. Augustinegrass	2.0 to 2.5	5 to 175

**USE PRECAUTIONS AND LIMITATIONS FOR SOD FARMS:**

1. Do not apply this product through any type of irrigation system.
2. Avoid drift of spray mist onto vegetables, flowers, ornamental plants, shrubs, trees, and other desirable plants. Do not pour spray solutions near these plants.
3. Delay mowing 1 to 2 days before and after the application of this product.
4. Do not apply this product immediately before rainfall or irrigation. Do not irrigate or water the turfgrass within 24 hours after application.
5. Treated areas may be reseeded 3 to 4 weeks after application.

**ORNAMENTAL LAWNS AND TURFGRASS: WHERE TO USE:**

**EndRun™** is intended to be applied by lawn care operators and landscape personnel for use in ornamental lawns and turf established in institutional, ornamental, and residential/domestic sites. Institutional sites are defined as turf areas around properties or facilities providing a service to public or private organizations including, but not limited to hospitals, nursing homes, schools, museums, libraries, sport facilities, golf courses, and office buildings. Ornamental sites include turfgrass established around residences, parks, streets, retail outlets, cemeteries, industrial and institutional buildings. Finally, residential/domestic sites are defined as areas associated with the household or home life including, but not limited to apartment complexes, condominiums, and patient care areas of nursing homes, mental institutions, hospitals, or convalescent homes.

**HOW MUCH TO USE:**  
 The maximum application rate to turf is 1.3 pounds 2,4-D acid equivalent per acre per application per site. The maximum number of broadcast applications per treatment site is 2 per year.

**For Kentucky Bluegrass, Fescue spp., Perennial Ryegrass, Bermudagrass and Zoysiagrass:**  
 Apply 3.0 to 4.0 pints of **EndRun™** per acre with spray volumes ranging from 5 to 220 gallons per acre. Or, apply 1.1 to 1.5 fluid ounces of **EndRun™** per 1,000 square feet with spray volumes ranging from 0.5 to 5.0 gallons per 1,000 square feet of turf. For mature weeds, apply 3.25 to 4.0 pints of **EndRun™** per acre. The best time to control clover is in the fall. When making a spring application to control clover a 4 pints per acre rate is recommended.

**For Closely Managed Bentgrass:**  
 Apply a maximum rate of 1.8 pints of **EndRun™** per acre with spray volumes greater than 145 gallons per acre. The equivalent application rate would be 1.0 fluid ounce of **EndRun™** mixed with 5.0 gallons of water and applied to 1,500 square feet.

**Note:** Care should be taken to avoid overdosing bentgrass or injury may result. High spray volumes will provide uniform coverage.

**For St. Augustinegrass:**  
 Apply 2.3 pints of **EndRun™** per acre with spray volumes ranging from 40 to 150 gallons per acre. The equivalent application rate would be 1.3 fluid ounces of **EndRun™** in 5.0 gallons of water per 1,500 square feet.

Do not spray St. Augustinegrass when stressed from heat or drought. Slight turf yellowing should disappear after about one week.  
 Cultivars vary in tolerance to this product. Do not apply this product to 'Floratam' St. Augustinegrass.  
**Note:** Care should be taken to avoid overdosing St. Augustinegrass or injury may result. High spray volumes will provide uniform coverage.  
 Refer to the chart below for additional application instructions.

APPLICATION METHODS	REMARKS
<b>A. Kentucky Bluegrass, Fescue spp., Perennial Ryegrass, Bermudagrass and Zoysiagrass.</b>	
Conventional Equipment:	Use 5 to 80 gallons of water per acre. (0.5 to 2.0 gallons of water per 1,000 square feet.)
Professional Lawn Maintenance:	Use 0.5 to 5.0 gallons of water per 1,000 square feet. Higher spray volumes may be used when tank mixed with a turf fertilizer. Follow fertilizer labels for proper amounts to add.
Controlled Droplet Applicators (CDA):	Reduced rates of <b>EndRun™</b> must be used when grass is stressed from heat or drought. Add 2.0 pints <b>EndRun™</b> to the Herbi container then fill with 3.0 pints of water. Keeping the container agitated, spray entire contents over 33,000 square feet (approximately 0.75 acre). Do not overlap between spray patterns. Do not use this application rate on warm season grasses.

APPLICATION METHODS	REMARKS
<b>B. Closely Managed Bentgrass:</b>	
	On closely managed bentgrass (e.g. bowling greens) apply <b>EndRun™</b> at a maximum rate of 1.0 fluid ounce in 5.0 gallons of water per 1,500 square feet preferably in May or mid-August through September. Slight turf yellowing will disappear after about one (1) week. (See Note.)
<b>C. St. Augustinegrass</b>	
	Apply <b>EndRun™</b> at 2.3 pints in up to 150 gallons of water per acre (1.3 fluid ounces <b>EndRun™</b> in 5.0 gallons of water per 1,500 square feet). Do not spray St. Augustinegrass when stressed from heat or drought. Slight turf yellowing should disappear after about one (1) week. (See Note.)
<b>Note:</b> Care should be taken to avoid overdosing bentgrass and St. Augustinegrass or injury may result. High spray volumes will aid in obtaining uniform coverage.	

**EndRun™ Controls:**

—BROADLEAF WEEDS—		
Annual fleabane	Field oxeye-daisy	Poison oak
Aster, white heath & white prairie	(*creeping oxeye)	Prostrate knotweed (*knotweed)
Bedstraw	Field pennycress	Puncturevine
Beggarticks	Filaree, whitestem & redstem	Purple cudweed
Beggarweed, creeping	Florida pusley	Purslane
Bindweed	Ground ivy	Ragweed
Birdsfoot trefoil	Groundsel	Redweed
Black medic	Hairy bitterress	Red sorrel (*sheep sorrel)
Broadleaf plantain	Hawkweed	Roundleaf greenbriar
Buckhorn plantain	Healall	Shepherdspurse
Bull thistle	Henbit	Spotted spurge
Burclover	Horsenettle	Spurge
Burdock, common	Horseweed	Sunflower
Buttercup, creeping	Innocence (Blue-eyed Mary)	Thistle
Carolina geranium	Jimsonweed	Velvetleaf (*buttonweed)
Carpetweed	Kochia	Venice mallow
Chickweed, common	Lambsquarters	Veronica (*corn speedwell)
Chicory	Lawn burweed	Virginia buttonweed
Cinquefoil	Lespedeza, common	Virginia-creeper
Clover	Mallow, common	Western salsify
Cocklebur	Matchweed	White clover (*Dutch clover, honeysuckle clover, white trefoil & purplewort)
Compassplant	Mouseear chickweed	Wild carrot
Curly dock	Mustard	Wild garlic
Dandelion	Nettle	Wild geranium
Dayflower	Old world diamond flower	Wild lettuce
Deadnettle	Oxalis	Wild mustard
Dock	(*yellow woodsorrel & creeping woodsorrel)	Wild onion
Dogfennel	Parsley-piert	Wild strawberry
Dovefoot geranium	Pennsylvania smartweed	Wild violet
English daisy	Pennywort (*dollarweed)	Yarrow
False dandelion	Pepperweed	Yellow rocket
(*spotted catsear & common catsear)	Pigweed	
Field bindweed	Pineappleweed	
(*morningglory & creeping jenny)	Plantain	
Field madder	Poison ivy	

\*Synonyms

**USE PRECAUTIONS FOR ORNAMENTAL LAWNS AND TURFGRASS:**

- Do not apply this product through any type of irrigation system.
- Avoid drift of spray mist to vegetables, flowers, ornamental plants, shrubs, trees and other desirable plants. Do not pour spray solutions near these plants.
- Do not spray on carpetgrass, dichondra, nor on lawns or turf where desirable clovers are present.
- Use only lawn type sprayers. Coarse sprays are less likely to drift. Use coarse spray droplets. Avoid fine mists. Do not spray roots of ornamentals and trees. Do not exceed specified dosages for any area. Be particularly careful within the dripline of trees and other ornamental species.
- Do not broadcast apply when air temperatures exceed 85°F; some injury may be expected with spot treatments when air temperatures exceed 85°F.
- Seed can be sown 3 to 4 weeks after application at recommended rates.
- After using this product, clean sprayer with soap or detergent and water, or an approved spray tank cleaner and rinse thoroughly before applying other pesticides. Failure to observe the above precautions may result in injury.
- Some hybrid bermudagrass may be sensitive to this product. Contact your local Extension Service Weed Control Specialist.
- Do not apply this product to St. Augustinegrass during spring green-up which is the transition period between dormancy and active growth.

**LIMITED WARRANTY AND DISCLAIMER**

The manufacturer warrants only that the chemical composition of this product conforms to the ingredient statement given on the label, and that the product is

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reasonably suited for the labeled use when applied according to the Directions for Use.

THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED. This limited warranty does not extend to the use of the product inconsistent with label instructions, warnings or cautions, or to use of the product under abnormal conditions such as drought, excessive rainfall, tornadoes, hurricanes, etc. These factors are beyond the control of the manufacturer or the seller. Any damages arising from a breach of the manufacturer's warranty shall be limited to direct damages, and shall not include indirect or consequential damages such as loss of profits or values, except as otherwise provided by law.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

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