

# **CONTROL OF BROADLEAF WEEDS IN FLAX - NORTH DAKOTA**

## General Information

## Product Information

Curtail M herbicide is recommended for selective control of broadleaf weeds in wheat, barley, oats and flax not underseeded with a legume, fallow cropland (including summer fallow, post-harvest, and set-aside acres), grasses grown for seed, rangeland, permanent grass pastures, and Conservation Reserve Program (CRP) acres.

## Precautions

- Use directions in Dow AgroSciences supplemental labeling may supersede directions or limitations in this labeling.

## Restrictions

- Do not exceed a cumulative amount of 0.25 lb active ingredient (a.i.) of clopyralid per acre per single crop year except in the state of New York (see New York restrictions above).
- Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.
- Do not use in greenhouses.
- Chemigation: Do not apply this product through any type of irrigation system.
- Many forbs (desirable broadleaf forage plants) are susceptible to Curtail M. Do not spray pastures containing desirable forbs, especially legumes, unless injury can be tolerated. However, the stand and growth of established perennial grasses is usually improved after spraying, especially when rainfall is adequate and grazing is deferred.
- Do not use on newly seeded areas until grass is well established as indicated by vigorous growth and development of tillers and secondary roots.
- Do not use on bentgrass.
- Apply only once per crop cycle, except for grasses grown for seed (see specific use directions).
- Grazing Restriction for Rangeland and Grass Pastures: Do not forage or graze

meat animals on treated areas within 7 days of slaughter. Do not forage or graze dairy animals on treated areas within 7 days after treatment.

- Do not transfer livestock from treated grazing areas (or feeding of treated hay) to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture (or feeding of treated hay). If livestock are transferred within less than 7 days of grazing untreated pasture or eating untreated hay, urine and manure may contain enough clopyralid to cause injury to sensitive broadleaf plants.

- Field Bioassay Instructions: In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seed bed of the new crop. The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the intended rotational crop. Observe the test crop for herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the test rotational crop; plant only a labeled crop or crop listed in the table below for which the rotational interval has clearly been met.

#### Avoiding Injury to Non-Target Plants

This product can affect susceptible broadleaf plants directly through foliage and indirectly by root uptake from treated soil. Therefore, do not apply Curtail M directly to, or allow spray drift to come in contact with, vegetables, flowers, grapes, tomatoes, potatoes, beans, lentils, peas, alfalfa, sunflowers, soybeans, safflower, or other desirable broadleaf crops and ornamental plants or soil where these sensitive crops will be planted the same season.

#### Residues in Plants or Manure

Do not use plant residues, including hay or straw from treated areas, or manure or bedding straw from animals that have grazed or consumed forage from treated areas, for composting or mulching, where susceptible plants may be grown the following season. Do not spread manure from animals that have grazed or consumed forage or hay from treated areas on land used for growing susceptible broadleaf crops. To promote herbicidal decomposition, plant residues should be evenly incorporated or burned. Breakdown of clopyralid in crop residues or manure is more rapid under warm, moist soil conditions and may be enhanced by

supplemental irrigation.

### Avoid Movement of Treated Soil

Avoid conditions under which soil from treated areas may be moved or blown to areas containing susceptible plants. Wind-blown dust containing clopyralid may produce visible symptoms, such as epinasty (downward curving or twisting of leaf petioles or stems) when deposited on susceptible plants; however, serious injury is unlikely. To minimize potential movement of clopyralid on wind-blown dust, avoid treatment of powdery dry or light sandy soils until soil is settled by rainfall or irrigation or irrigation shortly after application.

### Herbicide Resistance Management Guidelines

Clopyralid and MCPA the active ingredients in this product, are Group 4 herbicides, based on the mode of action classification system of the Weed Science Society of America. Development of plant populations resistant to this mode of action is usually not a problem on rangeland, permanent grass pastures, Conservation Reserve Program (CRP), or non-cropland sites since these sites receive infrequent pesticide applications.

Similar looking biotypes of a given weed species occurring in a treated area may vary in their susceptibility to a herbicide. Application of a herbicide below its labeled rate may allow more tolerant weeds to survive and a shift to more tolerant biotypes within the treated area. Where identified, spreading of resistant weeds to other fields may be prevented by cleaning harvesting and tillage equipment before moving to other areas and by planting weed-free seed.

Contact your extension specialist, certified crop consultant, or Dow AgroSciences representative for the latest resistance management information.

### Application Directions

#### Application Timing

Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures prior to, at or following application may reduce weed control and increase the risk of crop injury at all stages of growth. Only weeds that have emerged at the time of application will be affected. If foliage is wet at the time of application, control may be decreased. Applications of Curtail M are rainfast

within 6 hours after application.

### Application Rates

Generally, application rates at the lower end of the labeled rate range will be satisfactory for young, succulent growth of susceptible weed species. For less sensitive species, perennials, and under conditions where control is more difficult (plant stress conditions such as drought or extreme temperatures, dense weed stands and/or larger weeds), the higher rates within the rate range will be needed. Weeds in fallow land or other areas where competition from crops is not present will generally require higher rates for control or suppression.

### Use of Surfactants

Addition of wetting and/or penetration agents is not usually necessary when using Curtail M; however, if a surfactant will be added to the spray solution, use a non-ionic surfactant suitable for use in growing crops of at least 80% active ingredient and do not exceed 4 pints per 100 gallons of spray solution (0.5% v/v). Use of a surfactant in the spray mixture may increase weed control effectiveness but may reduce crop safety, particularly under conditions of plant stress.

### Spray Coverage

Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. Do not broadcast apply in less than 2 gallons of total spray volume per acre. For best results and to minimize spray drift, apply in a spray volume of 10 gallons or more per acre. As vegetative canopy and weed density increase, spray volume should be increased to obtain equivalent weed control. Use only nozzle types and spray equipment designed for herbicide application. To reduce spray drift, follow precautions under Avoiding Injury to Non-target Plantsbel.

### Spot Treatments

To prevent misapplication, it is recommended that spot treatments be applied only with a calibrated boom or with hand sprayers according to directions provided below.

**Hand-Held Sprayers:** Hand-held sprayers may be used for spot applications. Care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on an area of 1000

sq ft. Mix the amount of Curtail M (fl oz or ml) corresponding to the desired broadcast rate in 1 or more gallons of spray. To calculate the amount of Curtail M required for larger areas, multiply the table value (fl oz or ml) by the area to be treated in "thousands" of square feet, e.g., if the area to be treated is 3500 sq ft, multiply the table value by 3.5 (calc.  $3500 \div 1000 = 3.5$ ). An area of 1000 sq ft is approximately 10.5 x 10.5 yards (strides) in size.

## Limitations, Restrictions, and Exceptions

### Control of Broadleaf Weeds in Flax

(For Distribution and Use Only in the State of North Dakota)

### Directions for Use

Refer to product label for a complete list of weeds controlled, General Use Precautions, Mixing and Application instructions.

Apply 1 1/3 to 1 3/4 pints per acre of Curtail M when flax is 2 to 6 inches tall and target weeds are actively growing. The higher rate may be used when the condition of the weeds and/or crop at the time of treatment may prevent optimum control. Follow the application directions for ground or aerial application on the product label for Curtail M, including advisories for avoiding spray drift. To control or suppress weeds listed on the label, apply after maximum emergence of the target weeds but before they exceed 3 inches in height or diameter (for rosettes). To obtain season-long control of perennial weeds such as Canada thistle, apply after the majority of the weed's basal leaves have emerged from the soil (plants 4 to 6 inches in height) up to bud stage.

Extreme growing conditions such as drought or near freezing temperatures prior to, at, and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Only weeds that have emerged at the time of application will be affected. If foliage is wet at the time of application, control may be decreased. Curtail M is rainfast within 6 hours after application.

Tank Mixtures: Curtail M may be used in combination with other herbicides that are labeled for flax. Refer to the label of the tank mix partner for lists of other weeds controlled, rates of application, and use precautions.

## Specific Use Restrictions:

- Do not apply after flax has begun bolting as crop injury may occur if applied during the bloom period.
- Do not apply more than 1 3/4 pint per acre or make more than 1 application per crop season.
- Carefully follow rotational crop restrictions and other use precautions and limitations on the product label for Curtail M.

## Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

## Pre-Harvest Interval

72 days

## Rates

[field\\_rates 0](#)

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## Restricted Entry Interval

12 hours

## Timings

[Postemergence \(Weed\)](#)

[When flax is 2 to 6 inches tall.](#)