

BROMINAL®

Controls annual broadleaf weeds in wheat, barley, oats, rye, flax, and newly seeded grasses.
Controls Russian thistle and other annual broadleaf weeds on roadsides, vacant lots, railroads and industrial sites.

ACCEPTED
Aug 26, 1975
WIDE AREA CONTROL OF WEEDS
BY BROMINAL
FOR UNDER MAT 24
ATTACHED COMMENTS

WARNING: Keep out of reach of children.
See other warnings on right side panel.

ACTIVE INGREDIENTS:

| | |
|---|-------|
| Octanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzonitrile) | 33.1% |
| INERT INGREDIENTS: | 66.9% |

*bromoxynil equivalent 22.6% by weight or 2 pounds per gallon.



AMCHEM® **AMCHEM PRODUCTS, INC.**
First Name in Herbicide Research
AMBLER, PA ■ Clinton, IA ■ St. Joseph, Mo. ■ Fremont, CA.
EPA Reg. No. 264-204 ZA EPA Est. 264-PA-1

DIRECTIONS

WHEAT, BARLEY, OATS AND RYE

Apply 1 to 2 pints of BROMINAL[®] per acre after small grains emerge, but before weeds are tall enough to be sprayed. Weeds that form rosettes should be treated when these weeds are less than 1 1/2 inches across.

Proper timing, rate of application, and spray volume will vary according to the weed species, the growing conditions, and the weather.

Good coverage is essential for maximum weed control. Use 10 or more gallons of water per acre with ground application. Nozzle pressure should be at least 30 psi. Use 2 or more gallons of water per acre with air application. Do not spray when wind is blowing from the side. Width of swath must not exceed length of spray boom.

Do not apply to small grains during or after the boot stage. Do not apply when crop is under stress, during drought, or when crop forms a canopy over weeds.

BROMINAL may be applied in liquid fertilizer or combinations of liquid fertilizer and water. Use constant agitation until the spray mixture has been completely applied.

Tank mixes permit choosing a herbicide combination most effective for the weed problems present on your farm. Use BROMINAL alone or in combination according to the table below. If the amine of 2,4-D or MCPA* is added, mix these into the water first, then add BROMINAL. Follow all cautions and limitations on labels of the 2,4-D or MCPA products.

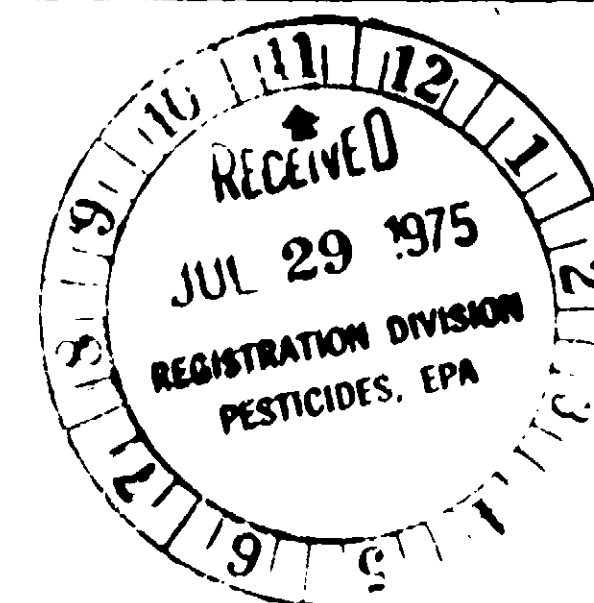
WHEAT - BARLEY - OATS - RYE - FLAX When to Spray, Amounts to Use

| Area & Crop Stage | Chemical Rate/Acre | Size of Weeds | Amount of water needed per Acre |
|---|---|--|---|
| GENERAL DIRECTIONS: fall or early spring applications before tillering (not underseeded with legumes) (Calif. early spring—Jan. or Feb.) | 1-2 pints BROMINAL | Apply to emerged susceptible weeds in the 2-4 leaf stage or when rosettes are less than 1 1/2 inches across. | Use 10 to 20 gal. with ground or 5-10 gal. with air application. Use higher volumes for larger weeds or when growing conditions are poor. |
| WASHINGTON, OREGON, IDAHO fall or early spring application before tillering or spring application after tillering | 1 1/2-2 pints BROMINAL 1 1/2-2 pints BROMINAL plus 1/2 lb/A or 2,4-D or MCPA* | gromwell, tarweed, fiddleneck, mustard, other broadleaf weeds, apply before the 4 leaf stage, before rosettes 1 1/2 inches across gromwell, tarweed, fiddleneck, mustard, other broadleaf weeds; apply before weeds are 6 inches high | Use 10 to 20 gal. with ground or 7-10 gal. with air application. Use higher rates and volumes for larger weeds or where weed growth is slow due to dry or cold weather. |
| MONTANA, NORTH and SOUTH DAKOTA, MINNESOTA and COLORADO spring application after tillering | 1-1 1/2 pints BROMINAL 1/2 lb/A or 2,4-D or MCPA* 1 1/2 pints BROMINAL plus 1/2 lb/A or 2,4-D or MCPA* | wild buckwheat, before 5-leaf stage, cow cockle & fumitory; apply before 4-leaf stage. where other common broadleaf weeds are mixed with wild buckwheat or cow cockle all weeds including wild buckwheat, cow cockle, fiddleneck, tarweed; apply after 4-leaf stage but before 6 inches high | Use 10 or more gal. with ground, 2 or more gal. with air application. Use 10-20 gal. with ground or 4-10 gal. with air application. Use higher volume on larger weeds. |
| FLAX spring application | 1-2 pints BROMINAL | Weeds in 2-4 leaf stage | Use 10-20 gal/Acre with ground or 5-10 gal/A with air application. |

Do not graze treated fields for 30 days after application.

*2,4-D amine - WEEDAR[®] 64; MCPA amine - WEEDAR MCPA

*2,4-D esters - WEEDONE[®] LV4
WEEDONE CONC. 48; MCPA ester - WEEDONE MCPA ESTER



GENERAL INFORMATION INDUSTRIAL USE

BROMINAL effectively controls Russian thistle and certain other summer annual broadleaf weeds such as saltbush (*Atriplex*), maretail, puncture vine, prostrate spurge, and *Bassia*.

BROMINAL should be applied in early summer when Russian thistle is young and growing vigorously. Results are best when temperatures are 80° F or higher.

DIRECTIONS INDUSTRIAL USE

Russian Thistle and Annual Broadleaf weeds on roadsides, vacant lots, railroads and industrial sites.

For broadcast treatment of small weeds:

Apply 2 quarts of BROMINAL with either 2 quarts of surfactant (such as X-77) or 2 gallons of diesel oil in 150 gallons of water for each acre sprayed. Thorough coverage is important. Make sure spray boom is high enough to contact tops of all plants. Use adequate spray pressure to contact all leaf surfaces.

For spot treatment of scattered infestations or large weeds along fencerows or buildings:

Mix 1 quart of BROMINAL with either 1 quart of surfactant (such as X-77) or 1 gallon diesel oil per 100 gallons of spray solution. Cover all the weed foliage thoroughly. Use at least 200 gallons of spray solution for each acre sprayed.

When using oil, add chemical to oil - then add this mixture to water while agitating vigorously.

Newly Planted Grasses for Sod, and Seed Production in Washington, Oregon, and Idaho

Apply 1/2 pint of BROMINAL per acre after grasses emerge and before broadleaf weeds are past the 3 to 4-leaf stage.

Use 2 pints of BROMINAL per acre if weeds are beyond the 3 to 4 leaf stage but less than 6 inches in height and before flower formation. Weeds that form rosettes should be treated when these rosettes are less than 1 1/2 inches across.

This treatment may be used on seedling grasses such as Merion, Park, Delta or common Kentucky bluegrasses, Pennlawn, Chewings, Illahee or Alta fescues, orchard grass, Highland, Seaside or Astoria bentgrasses, perennial ryegrasses planted for ornamental sod production. Do not feed BROMINAL treated grasses grown for seed to livestock.

Susceptible Weeds when Treated at the Proper Stage:

| | | | |
|-------------------------------|---------------------------------|---------------------------|------------------------------------|
| blue (purple) mustard | (<i>Chorispora tenella</i>) | pepperweed | (<i>Lepidium campestre</i>) |
| corn chamomile | (<i>Anthemis arvensis</i>) | pigweed | (<i>Amaranthus retroflexus</i>) |
| corn gromwell | (<i>Lithospermum arvense</i>) | ragweed | (<i>Ambrosia artemisiifolia</i>) |
| cow cockle | (<i>Saponaria vaccaria</i>) | shepherdspurse | (<i>Capsella bursa-pastoris</i>) |
| dog fennel (<i>Mayweed</i>) | (<i>Anthemis cotula</i>) | silver leaf nightshade | (<i>Solanum elaeagnifolium</i>) |
| fiddleneck | (<i>Amsinckia intermedia</i>) | smallseeded false flax | (<i>Camelina microcarpa</i>) |
| field pennycress, fanweed | (<i>Thlaspi arvense</i>) | tartary buckwheat | (<i>Fagopyrum tataricum</i>) |
| fumitory | (<i>Fumaria officinalis</i>) | tarweed | (<i>Hemizonia spp.</i>) |
| green smartweed | (<i>Polygonum scabrum</i>) | tumble (Jim Hill) mustard | (<i>Sisymbrium altissimum</i>) |
| groundsel | (<i>Senecio vulgaris</i>) | wild buckwheat | (<i>Polygonum convolvulus</i>) |
| henbit | (<i>Lamium amplexicaule</i>) | wild mustard | (<i>Brassica kaber</i>) |
| knawel (<i>German moss</i>) | (<i>Scleranthus annuus</i>) | wild radish | (<i>Raphanus raphanistrum</i>) |
| lambquarters | (<i>Chenopodium album</i>) | winter vetch | (<i>Vicia sativa</i>) |
| London rocket | (<i>Sisymbrium irio</i>) | yellow rocket | (<i>Barbarea vulgaris</i>) |

This treatment will not control established perennial broadleaf weeds such as Canada thistle, bindweed, or horse-tail rush.

GENERAL INFORMATION CROP USE

BROMINAL effectively controls broadleaf weeds germinating from seed, applied when these weeds are in the seedling stage.

BROMINAL applied early as directed, kills seedling broadleaf weeds that emerge in small grains and flax, thus reducing competition with these crops during their early growth.

BROMINAL may be applied in the fall, winter or spring of the year depending on the area. Spraying must be done while weeds are in the seedling stage. Application of BROMINAL to small grains undersown with legumes is not registered for use.

The most important factors for effective weed control are:

1. Spraying weeds in the seedling stage.
2. Uniform spray coverage.

Do not apply when crops form a canopy over weeds or when crop is under moisture stress and will be exposed to cold desiccating winds in the absence of snow cover. If high crop mortality from winds has occurred apply Brominal only after plants have sent out new roots and begin new top growth.

WARNING

Do not feed Brominal treated grasses grown for seed to livestock.

Harmful if swallowed. Avoid contact with skin, eyes or clothing. In case of contact, flush eyes with plenty of water; get medical attention. Wash skin with plenty of water and soap. Avoid breathing spray mist.

This product is toxic to fish and wildlife. Keep out of any body of water. Do not apply when weather conditions favor drift from areas treated. Rinse spray equipment and containers thoroughly and dispose of waste in a pit in noncrop areas located away from water supplies. Do not reuse shipping containers; destroy by crushing and burying where possible.

Avoid spray drift onto neighboring crops or pastures. Clean sprayer thoroughly before using for other purposes. Do not store near fertilizers, seeds, insecticides, or fungicides. Do not store with food stuffs.

Do not use this product for purposes other than those recommended on this label.

WARRANTY

Amchem warrants that composition of this product conforms to the chemical description given in the ingredient statement and the product is suited for the purposes described when used according to directions. Because of the broad range of conditions which may be encountered with the use of this product, it is impossible to eliminate all risks, even though label directions are followed. Amchem, therefore, makes no other express or implied warranty, and no agent of Amchem is authorized to do so. Buyer agrees, in purchasing this product, to assume the risks and in the event of damages arising from a breach of the warranty to accept refund of the purchase price of the product as full discharge of Amchem's liability.