

AGRICULTURAL GUIDE

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Chemical weed control for legumes and pastures

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Federal regulations on herbicide use change frequently; this means you need to keep informed on the status of label clearances. Labels include information on application restrictions, but they may not always be up-to-date on recently approved new uses or removal of previous limitations.

We have tried to make recommendations in this guide conform to laws and regulations. Research has shown these recommendations to be sound from the performance standpoint. However, future developments in research and label clearance probably will require that some modifications be made.

It is illegal to use a herbicide inconsistent with label instructions. A herbicide cannot be used on a given crop unless specifically stated on the label.

Weed infestations in pastures can usually be avoided by maintaining a vigorous, thick stand of forage plants. Most pastures become weedy because of overgrazing or lack of fertilizer nutrients. Most pasture and hay fields have a vast reservoir of weed seeds present in the soil. When the forage stand becomes thin and sparse, weed seeds germinate and weeds become established.

No available herbicide can maintain weed-free forage fields unless proper grazing and fertility management is used with the spraying program.

Before applying a herbicide, take soil tests to determine lime and fertilizer needs. Lime and fertilizer should be applied before spraying. After the spraying operation, some form of rotation grazing system should be used so that grass plants can develop stronger root systems. This will eventually result in more vigorous, thicker stands of grass.

Legumes usually have to be re-established after the pasture has been sprayed. The steps for doing

this are outlined in UMC Guide 4651, "Renovating grass sods with legumes."

Legumes

New seedlings: Pre-emergence

EPTC (Eptam): This herbicide may be used to establish small-seeded legumes. Good results have been obtained with preplanting treatments of 1 to 3 pounds/acre. The treatment is made by preparing the seedbed and then spraying the materials on the soil surface. The herbicide should then be immediately incorporated in the soil to a depth of about 2 inches.

Both weed grasses and broadleaved weeds are controlled with this material, although it is more effective on grasses. With rapid growing legumes such as alfalfa, satisfactory weed control may be obtained throughout the season.

Slow-growing birdsfoot trefoil may become weedy in mid-summer after a spring treatment. Frequently, smartweed is not controlled well. Some injury to Kenland red clover has been observed; thus, it is not certain the EPTC may be used safely on all varieties of red clover. No feeding or grazing restrictions are involved when used as above.

Do not use Eptam for weed control in legumes with a nurse crop such as oats or if a legume-grass mixture is to be seeded.

New seedlings: Post-emergence

Dinoseb (Dow General or Sinox General): Apply when legume seedlings have two or more true leaves and weeds are less than 3 inches tall. Do not graze or feed treated forage for six weeks following application. This material has been used successfully in the northern states, but under warm conditions in Missouri, excessive injury to legumes may occur.

2,4-DB: If broadleaf weeds are a problem, 2,4-DB can be used to control them. Apply amine form at 0.75-

1.5 pounds/acre, or ester at 0.5-1 pounds/acre when seedlings have two or more true leaves and broadleaf weeds are less than 3 inches tall. Do not graze or feed treated forage to livestock within 60 days after application.

Pronamide (Kerb): Apply when legume seedlings have reached the trifoliolate leaf stage or to established legumes actively growing or dormant.

Established stands

Dinoseb (Dow General or Sinox General): One to 1½ pounds/acre may be used to control winter annual weeds such as henbit, chickweed, and yellow rocket in legumes. Apply amine salts of dinoseb in late fall when legumes are dormant and weeds are small. A second application may be made in early winter if necessary when legumes are still dormant. It can be used on alfalfa, red clover, ladino clover and birds-foot trefoil. Do not graze livestock on treated fields before the first cutting.

Chlorpropham (Furloe): Apply to established alfalfa at rates of 1 to 4 pounds/acre when the crop is dormant or after first cutting. Furloe is effective on chickweed either before or after the weed emerges. It is less effective on other broadleaved annual weeds. Furloe will injure forage grasses in legume mixes. Do not apply within 14 days before grazing or harvest.

Pronamide (Kerb): This herbicide controls chickweed and winter annual grasses in established alfalfa. Apply 1½ pounds/acre as a fall application. Kerb is absorbed through the roots; thus, soil moisture from rain or melting snow is essential after an application. Check label for required protective safety measures. Do not graze or harvest for 25-45 days after application of Kerb. It can be used on seedling alfalfa after it reaches the third trifoliolate leaf.

Paraquat: Apply 0.5 pound + nonionic surfactant after weeds emerge in dormant alfalfa. Paraquat is effective in controlling several winter annual weeds. It is a contact herbicide and will kill any alfalfa leaves present. Alfalfa must be dormant.

Simazine (Princep): One pound/acre will control chickweed and other winter annuals in dormant alfalfa and birdsfoot trefoil, if applied before or shortly after seed germination. This period would be from early December through January. Late winter application may injure alfalfa that has broken dormancy.

Princep should not be applied to alfalfa or birds-foot trefoil less than one year old since injury may occur. Rates above 1 pound/acre may injure legumes. On light soils, simazine may injure legumes at rates of less than 1 pound/acre. Do not graze within 30 days or harvest hay within 60 days.

Metribuzen (Sencor Lexone): Sencor should be applied only on established stands. Do not apply during

seeding year. Application to established stands should be made when alfalfa plants are dormant or after growth ceases in the fall. Rates vary from ¾ to 2 pounds/acre, depending upon weed species to be controlled and the soil type. High rates are used on soils high in clay and organic matter. Do not graze or harvest within 28 days after application.

Terbacil (Sinbar): Treat only alfalfa stands established for one year or longer. Make a single application of ½ or 1½ pounds/acre in the fall after alfalfa has become dormant or in the spring before new growth starts. Do not use on seedling alfalfa or on alfalfa-grass mixtures or other mixed stands. Do not apply to established stands after new growth starts in the spring, and do not apply on snow-covered or frozen ground as crop injury may result.

Pastures

Dicamba (Banvel): For weed control in pastures, apply 4 to 8 pounds/acre when weeds are making active growth. For aerial application, use 3 or more gallons water per acre. For ground application, use sufficient water to give good coverage. There is no waiting period between treatment and grazing for animals *except for dairy cattle* when using Banvel alone. Do not apply by plane when sensitive crops are nearby. Banvel will kill legumes in the pasture.

Glyphosate (Roundup): (For multiflora rose). Apply 2 pounds/acre as a broadcast spray or as a 1 percent solution with hand-held equipment. Apply during active growth when most canes are at or beyond early to full bloom. See directions on label for uses and other specific application instructions. Do not graze treated areas within eight weeks following application. Glyphosate will kill or injure plants through contacts.

Picloram (Tordon 10K): Apply at 0.5 to 1.0 pound per 1000 square feet or 0.75 to 1.5 ounces of product per 100 square feet. Use the higher rate for multiflora rose, juniper or sumac. Treatment will not be effective until rain occurs after application. Injury to desirable grasses usually is followed by increased growth and development due to release from brush competition. Observe label limitations and restrictions. Juniper is difficult to kill.

2,4-D: One-half pound/acre is effective on many weeds. Where weed infestations are severe, 1 pound/acre of 2,4-D amine will increase yield of lespedeza considerably.

Best results are obtained when weeds are small. Rates up to 1 or 2 pounds/acre of the amine or ester form may be used to control perennial weeds such as ironweed, but severe injury to legumes can be expected. Apply when grasses are well established. Do not apply to newly seeded areas or after heading begins. Do not graze dairy animals on treated areas within seven days after application.

Wick wipers or roller applicators

Where a height differential of at least 6 inches exists between target weeds and the crop canopy, a wiper or roller applicator can be used to advantage.

Several precautions should be observed:

- Special care required on sloping terrain.
- Operate at 2-3 mph in heavy weed infestations.
- A second application in the opposite direction may be necessary.
- Avoid application to wet weeds.
- Keep lowest application point 2 inches above canopy.
- Avoid leakage to crop canopy.
- Use only clean water.

Roundup: For wick wiper, use a 1:2 ratio (1 gal. Roundup, 2 gal. water).

With roller, use a 1:20 ratio (1 gal. Roundup, 20 gal. water). Maintain roller speed at 40-60 r.p.m.

Tordon: For wick wiper, mix one part Tordon 22K with 2 parts water (1 gal. 22K + 2 gal. water). Apply when weeds are actively growing and are well above desirable pasture plants. For musk thistle control apply during early bud but before purple flowers emerge. For ironweed and goldenrod, apply prior to early bud stage.

Precautions associated with Tordon:

- Do not apply to cropland used for production of desirable crops other than forage grasses.
- Do not apply to pastures or rangeland if injury to forage legumes cannot be tolerated.
- New legume establishment may not be successful if seeded within two years following Tordon application.
- Do not transfer livestock from treated grass areas onto a broadleaved crop area without first allowing seven days grazing on a non-treated grass pasture.

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