

# **PASTURE/RANGELAND - LEAFY SPURGE CONTROL - SOUTH DAKOTA**

## General Information

### GENERAL INFORMATION

Plateau herbicide is an aqueous solution to be mixed with water and an adjuvant and applied as a spray solution to provide weed control and/or turf height suppression on pastures, rangeland (see "GUIDELINES FOR RANGELAND USE" section), Federal Conservation Reserve Program (CRP) land and noncropland areas including noncropland areas that may be grazed or cut for hay.

Examples of noncropland areas include, but are not limited to railroad, utility, pipeline and highway rights-of-way, railroad crossings, utility plant sites, petroleum tank farms, pumping installations, non-agricultural fence rows, storage areas, non-irrigation ditchbanks, prairie sites, airports, industrial turf, golf courses, recreational and non-residential turf and other similar areas. Plateau may be used for the release of bermudagrass, bahiagrass, smooth bromegrass, wheatgrass, "wildtype" common Kentucky bluegrass, native prairiegrass, wildflowers, crown vetch, other grasses and certain legumes. Plateau can also be used for weed control during the establishment of native prairiegrasses and other grasses (see "REVEGETATION WITH PRAIRIEGRASSES AND OTHER FORAGE GRASSES" section). Plateau may also be used for conifer plantation site preparation.

Plateau is readily absorbed through leaves, stems, and roots and is translocated rapidly throughout the plant, with accumulation in the meristematic regions. Treated plants stop growing soon after spray application. Chlorosis appears first in the newest leaves, and necrosis spreads from this point. In perennials, the herbicide is translocated into, and kills, underground storage organs which prevents regrowth. Chlorosis and tissue necrosis may not be apparent in some plant species for several weeks after application.

Complete kill of plants may not occur for several weeks after application. Adequate soil moisture is important for optimum Plateau activity. When adequate soil moisture is present, Plateau will provide residual control of susceptible germinating weeds.

Activity on established weeds will depend on the weed species and rooting depth. Plateau is rainfast one hour after application.

Plateau will control annual and perennial grasses and broadleaf weeds and vine species. Plateau will provide residual control of labeled weeds which germinate in the treated area. Certain brush species and ornamentals may be injured by direct application of Plateau to their foliage. This product may be applied either preemergence or postemergence to the weeds. However, postemergence application is the method of choice in most situations, particularly for perennial species. For maximum activity, weeds should be growing vigorously at the time of postemergence applications and the spray solution should include an adjuvant (see "SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS" section). These solutions may be applied as a broadcast or as a spot treatment using backpack, or ground equipment.

Plateau may be applied in the dormant or growing season for weed control.

Tolerance of desirable grass species to Plateau may be reduced when grasses are stressed due to insect damage, disease,

environmental conditions, shade, poorly drained soils or other causes.

Depending on the turf type being treated, some yellowing of turf may occur with applications during the growing season. Depending on weather conditions, yellowing will usually disappear in 2 to 4 weeks.

Plateau should not be applied to newly seeded or sprigged grass stands, unless otherwise stated in the label (see "REVEGETATION WITH PRAIRIEGRASSES AND OTHER FORAGE GRASSES" section).

Aerial Application Methods and Equipment: Use 2 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

Ground Application (Broadcast): Use 5 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

## SPRAYING INSTRUCTIONS

DO NOT apply during windy or gusty conditions unless applications are being made with a drift control agent and/or an enclosed or shielded spray system. DO NOT apply if rainfall is threatening. Rainfall within 1 hour after Plateau application may reduce weed control.

### GROUND APPLICATIONS:

Uniformly apply with properly calibrated ground equipment in 2 or more gallons of water per acre. Application equipment, specially designed to make low volume application should be used when making applications using less than 10 gallons of water per acre. A spray pressure of 20 to 40 psi is recommended.

To achieve acceptable control of the target vegetation, good spray coverage of the weed foliage (postemergence) or soil surface (preemergence) is required. To achieve good spray coverage the sprayer must be calibrated to deliver the recommended spray volume and pressure and adjust the spray boom height to ensure proper coverage of weed foliage or soil surface (according to the manufacturer's recommendation). Avoid overlaps when spraying.

### SPOT TREATMENTS:

To prepare the spray solution, thoroughly mix in water 0.25 to 1.5% (0.3 to 1.9 oz/gallon water) Plateau plus an adjuvant (see "SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS" section). A methylated seed oil at 1% v/v is the recommended spray adjuvant except when treating seedling prairiegrasses and wildflowers.

When making spot applications, spray coverage should be sufficient to moisten the leaves of the target vegetation, but not to the point of run-off. See section on desired species and DO NOT exceed the recommended Plateau rate per acre. Also see “WEEDS CONTROLLED” and “SPECIAL WEED CONTROL” sections for specific rate and/or tank-mix recommendations.

#### AERIAL APPLICATION:

All precautions should be taken to minimize or eliminate spray drift.

Fixed wing aircraft and helicopters can be used to apply Plateau herbicide, however, when making applications by fixed wing aircraft maintain appropriate buffer zones to prevent spray drift out of the target area. Aerial equipment designed to minimize spray drift such as a helicopter equipped with a MICROFOIL™ boom, or THRU-VALVE™ boom or raindrop nozzles, must be used and calibrated. Except when applying with a MICROFOIL boom, a drift control agent may be added at the recommended label rate. To avoid drift, applications should not be made during inversion conditions, when winds are gusty, or under any other conditions that promote spray drift.

Uniformly apply recommended amount of Plateau, using enough water volume to provide adequate coverage of target area or foliage. Include an adjuvant in the spray solution (see “SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS” section). A foam reducing agent may be added at the recommended rate, if needed. Aerial application to target species growing under the canopy of trees and brush may not receive sufficient spray coverage for effective control. For weed species with a recommended fall application timing (see “SPECIAL WEED CONTROL” section), delaying the aerial application until trees and brush have dropped their leaves can improve weed control and reduce the potential for tree and brush injury (see “TOLERANCE OF TREES AND BRUSH TO PLATEAU HERBICIDE” section).

**IMPORTANT:** Thoroughly clean application equipment, including landing gear, immediately after use of this product. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part.

The maintenance of an organic coating (paint) may prevent corrosion.

Avoid overlaps when spraying.

## SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS

Postemergence applications of Plateau require a spray adjuvant.

See “SPECIAL WEED CONTROL” section. Due to variations in surfactant contents, certain surfactants containing high amounts of alcohols, paraffin based petroleum oils, and other compounds which can increase phytotoxicity to desirable vegetation, it is recommended to choose a low phytotoxic surfactant.

**Methylated Seed Oils or Vegetable Oil Concentrates:** Instead of a surfactant, a methylated vegetable-based seed oil concentrate containing 5 to 20% surfactant and the remainder methylated vegetable oil is the preferred adjuvant for use with Plateau and may be used at the rate of 1.5 to 2 pints per acre. Methylated seed oils provide their greatest effects at 30 GPA or less. At spray volumes above 50 GPA, their advantage appears negated. When using spray volumes greater than 30 gallons per acre methylated seed oil or vegetable based seed oil concentrates should be mixed at a rate of 1% of the total spray volume or alternatively use a nonionic surfactant as described below. Research indicates these oils may aid in deposition and uptake of Plateau for hard-to-control perennials, waxy leaf species or when plants are under moisture or temperature stress. **DO NOT** use a methylated seed oil or vegetable oil concentrate when making applications to newly emerged seedling prairiegrasses or wildflowers as injury may occur.

**Nonionic Surfactants:** Use a nonionic surfactant at the rate of 0.25% v/v or higher (see manufacturer’s label) of the spray solution (0.25% v/v is equivalent to 1 quart in 100 gallons). For best results, select a nonionic surfactant with a HLB (hydrophilic to lipophilic balance) ratio between 12 and 17 and having at least 60% surfactant in the formulated product (alcohols, fatty acids, oils, ethylene glycol or diethylene glycol should not be considered as surfactants to meet the above requirements).

Silicone-Based Surfactants: See manufacturer's label for specific rate recommendations. Silicone-based surfactants may reduce the surface tension of the spray droplet allowing greater spreading on the leaf surface as compared to conventional nonionic surfactants. However, some silicone-based surfactants may dry too quickly, limiting herbicide uptake and higher spray volumes may exhibit "run-off".

Fertilizer/Surfactant Blends: Nitrogen-based liquid fertilizers such as 28%N, 32%N, 10-34-0, or ammonium sulfate, may be added at the rate of 2 to 3 pints per acre in combination with the recommended rate of nonionic surfactant or methylated seed oil.

Research indicates that nitrogen based fertilizers aid in the burndown of annual weeds and increase Plateau uptake through waxy leaf species. However, fertilizers may increase phytotoxicity to desired species and newly emerged seedling prairiegrasses and wildflowers. The use of liquid fertilizers at a rate of 2 to 3 pints per acre in a tank-mix without a nonionic surfactant or a methylated seed oil is not recommended and may result in herbicide failure.

Only when liquid fertilizer is used as the spray carrier is no additional spray adjuvant required.

Refer in the label regarding tank mix information.

Limitations, Restrictions, and Exceptions

ENDANGERED SPECIES

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of an endangered species. For this emergency exemption use, in order to protect the endangered terrestrial plant (Western prairie fringed orchid, *Plantanthera praeclara*), a 20 foot set-back buffer for ground application and a 300 foot set-back buffer for aerial application must be observed. Avoid aerial application within one mile of the above endangered plant, if wind is blowing in direction of the endangered plants. Where populations occur within one mile of the treatment site, the appropriate state authority must be notified as to when and where the application will occur so that they may monitor any potential adverse effects if they so desire.

- PLATEAU herbicide may be applied for the control of leafy spurge (*Euphorbia esula*) in pasture/rangeland areas. PLATEAU herbicide may also be applied for the control of leafy spurge on Conservation Reserve Program (CRP) land.

#### LEAFY SPURGE CONTROL IN PASTURE/RANGELAND

For the control of leafy spurge, PLATEAU herbicide should be applied in accordance with the use directions provided in the SPECIAL WEED CONTROL section of the leaflet label.

A single application may be made in the fall at a maximum rate of 12 fl. oz. per acre, or 8 fl. oz. may be applied in the fall, followed by 4 fl. oz. in the spring.

#### LEAFY SPURGE CONTROL ON CONSERVATION RESERVE PROGRAM (CRP) LAND

On Conservation Reserve Program (CRP) land, PLATEAU herbicide may be applied at rates up to 12 fluid oz. per acre for the control of leafy spurge. See the NATIVE PRAIRIEGRASS RENOVATION AND RESTORATION section of the leaflet label for use directions regarding desirable grass tolerance.

Do not harvest hay for 7 days after treatment with PLATEAU herbicide.

DO NOT apply this product through any type of irrigation system.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Pre-Harvest Interval

7 days

Rates

[field rates 0](#)

[field rates 1](#)

[field rates 2](#)

[field rates 3](#)

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Restricted Entry Interval

12 hours

Timings

[Postemergence \(Weed\)](#)