

# **BERMUDAGRASS OVERSEEDED WITH PERENNIAL RYEGRASS**

## General Information

### GENERAL INFORMATION

### GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply through any type of irrigation system.
- Do not apply by air.
- Do not apply to golf greens or roughs.
- Do not apply if rain is expected within 12 hrs. after application.
- Do not mow or irrigate turfgrass within 12 hrs. after application.
- Do not apply to moist or wet turfgrass.
- Do not mix with other pesticides, fertilizers, wetting agents, spreader stickers, surfactants or other adjuvants.
- Do not apply more than one 2 oz. water-soluble packet per acre per application.
- Do not apply more than a total of one 2 oz. water-soluble packet per 0.75 acre in a 28 day period.
- Do not apply with flood jet nozzles, air induction nozzles or hand sprayers.

### GENERAL INFORMATION

Velocity is a postemergence herbicide that, when used in accordance with the label, will selectively control annual bluegrass (*Poa annua*), rough bluegrass (*Poa trivialis*) and numerous broadleaf weeds that are growing within certain species of established turfgrass. Velocity will also suppress seedhead production by annual bluegrass. Velocity displays excellent activity against emerged weeds, but has almost no preemergent activity. Therefore, Velocity will not control weeds that

germinate after application.

Velocity inhibits the enzyme acetolactate synthase (ALS), which plants require to produce three key amino acids. Annual bluegrass and other susceptible weeds usually stop growing within 3 to 7 days after treatment, and turn yellow or brown within 3 to 14 days after treatment. Plant death typically occurs by 21 to 28 days after treatment. More than one application of Velocity is usually required for maximum control, especially for annual and rough bluegrass.

Velocity may cause mild but temporary growth regulation and chlorosis (yellowing) in labeled turf species (i.e., creeping bentgrass, perennial ryegrass).

Velocity is absorbed by plant foliage and roots. Plant uptake and performance of Velocity is influenced by environmental conditions, cultural practices and spray coverage. For best results, only apply Velocity when turf and weeds are actively growing. Thorough spray coverage is also required to maximize performance; therefore, only apply Velocity using the application equipment and spray volume specified on the label. Irrigation is not required to activate Velocity. Turfgrass should not be mowed or irrigated for at least 24 hours after application in order to allow time for Velocity to be absorbed and translocated within foliage. Velocity may be less effective if applied when weeds or turfgrass are under stress due to extremes in temperature, drought, excessive water, disease, low fertility, heavy thatch or other stresses.

Velocity has not been evaluated under all microclimates or against all biotypes of annual and rough bluegrass. Therefore, performance may be less effective in some locations, and against some biotypes of these weed species.

Application of Velocity to control weeds will also suppress infection of creeping bentgrass by dollar spot, *Sclerotinia homeocarpa*. Suppression of dollar spot will be greatest when a weed control program is initiated in the late spring or early summer before the appearance of significant dollar spot infection. When Velocity is applied at this time, dollar spot suppression is usually evident for several weeks after the last application of Velocity. Therefore, early season application of Velocity may delay the initiation of a dollar spot control program with fungicides, and reduce overall fungicide application on creeping bentgrass.

Velocity will also provide some curative control of dollar spot, but should not be used in place of labeled fungicides to control established infections of this disease.

**IMPORTANT:** Velocity is a very active herbicide, and users should exercise good judgment and caution until familiarity is gained with this product. Due to variability of turfgrass varieties, growth stages, environmental conditions, cultural practices and application techniques, users should test this product under user growing conditions in a small area, and evaluate treated turf for 28 days for phytotoxicity. Testing Velocity in a small area will help determine if the herbicide can be used safely in a widespread application.

Limitations, Restrictions, and Exceptions

**DIRECTIONS FOR USE IN BERMUDAGRASS OVERSEEDED WITH PERENNIAL RYEGRASS**

**CROP AND USE SITE**

- Hybrid or Common Bermudagrass turf, *Cynodon dactylon*, that is fall overseeded with perennial ryegrass, *Lolium perenne*.
- Golf course fairways and tees mowed at 3/8" to 3/4" in height; sod farms mowed at 1/2" to 3/4".

Velocity can be safely applied to overseeded perennial ryegrass that is well established and mowed at the prescribed height, but should not be applied to greens or roughs. Do not apply Velocity in heavy traffic and/or heavily shaded turf areas, as these areas are more prone to herbicide injury.

Ryegrass tolerance varies by cultivar and is influenced by environmental and cultural practices.

**IMPORTANT:** Velocity can injure perennial ryegrass if applied before ryegrass is established. Therefore, do not apply Velocity until at least 60 days after seedling emergence.

Velocity may cause mild discoloration (chlorosis) and growth regulation to established ryegrass. Symptoms typically appear 3 to 10 days after application, but ryegrass will generally outgrow symptoms within 3 to 14 days. Cultural and environmental conditions (i.e., temperature, cloud cover and rainfall) will affect the

onset, intensity and duration of ryegrass discoloration and growth regulation. Under cool and cloudy conditions, symptoms tend to appear more slowly and be less apparent than under warm, sunny conditions. However, symptoms also tend to be less persistent under warm, sunny conditions. Tank mixing Velocity with surfactants or other adjuvants may increase ryegrass chlorosis to unacceptable levels and should, therefore, be avoided.

Application of a complete foliar fertilizer 3 to 4 days after application of Velocity may decrease the amount of ryegrass chlorosis. Some forms of iron can antagonize the performance of Velocity . Therefore, do not tank mix Velocity with foliar fertilizers that contain iron.

Annual bluegrass chlorosis can be mistaken for ryegrass chlorosis, especially under higher infestation levels of annual bluegrass, and when Velocity application is not initiated until mid-late flower. Turf chlorosis is usually more apparent when small patches of turf within a fairway or tee box are treated, and less apparent when entire tee boxes or fairways are treated. Therefore, if turf chlorosis is a concern, avoid treating small patches of ryegrass that are surrounded by larger areas of non treated turf.

Velocity should not thin ryegrass when applied in accordance with the label, but can cause thinning if applied at excessive rates, especially when ryegrass is under heat or moisture stress, and mowed at less than 1/2”.

Therefore, do not exceed labeled rates, do not apply to ryegrass that is exhibiting symptoms of heat or moisture stress, and do not apply when air temperatures are greater than 80°F or are predicted to exceed 80°F in the three days after application.

The efficacy of Velocity may be decreased when applied to overseeded ryegrass that is under environmental (i.e., temperature, drought etc.) or other stresses (i.e., herbicide injury, fertilizer injury, heavy thatch or nutrient deficiencies, etc.) that decrease plant metabolism and growth. Therefore, only apply Velocity to overseeded ryegrass that is healthy and actively growing.

To maximize performance, initiate treatment with Velocity when annual bluegrass first begins flowering in the midlate winter AND temperatures are high enough to promote active growth. Do not apply when air temperatures are below 55°F or are NOT predicted to exceed 55°F in any of the three days following application. In

general, Velocity will perform optimally (i.e. best weed control and least chlorosis to ryegrass) under sunny conditions when daytime high temperatures are consistently between 60°F and 75°F during and after application.

Velocity may be less efficacious against annual bluegrass growing in thin stands of ryegrass. In thin ryegrass stands, annual bluegrass is exposed to less competition from ryegrass and therefore, more annual bluegrass will germinate, and the resulting plants will grow more vigorously and be more difficult to control than in denser stands of ryegrass. To maximize the efficacy of Velocity, broadcast ryegrass seed at a minimum of 300 lb. per acre, and employ cultural practices that encourage the rapid formation of a dense stand of ryegrass.

Velocity can be applied in locations where bermudagrass does not go completely dormant and retains some green color during the winter, and will not delay spring green-up if applied before bermudagrass begins active growth (i.e. obvious tillering) in the late winter and spring. Velocity may temporarily discolor and regulate the growth of bermudagrass if applied after bermudagrass begins active growth, especially when applied at above the maximum labeled rate.

Runoff of Velocity from treated ryegrass onto adjacent creeping bentgrass greens or bermudagrass greens overseeded with *Poa trivialis* is possible if heavy rainfall occurs immediately after application, especially on heavier soils where greens are located down slope from treated ryegrass. Runoff could cause some chlorosis to bentgrass, but significant injury is unlikely because bentgrass is much more tolerant to Velocity than other ALS inhibitors currently labeled for use on turf. The potential for runoff injury is higher for *Poa trivialis* because this turf species is quite sensitive to Velocity. If runoff injury to bentgrass or *Poa trivialis* greens is a concern, do not treat ryegrass immediately adjacent to greens with Velocity.

Annual bluegrass density and vigor are higher in non overseeded bermudagrass than in bermudagrass overseeded with perennial ryegrass. As a result, Velocity may not be effective against annual bluegrass growing in non-overseeded bermudagrass, especially when applied during the late winter and spring. In addition, if Velocity is applied after non-overseeded bermudagrass has resumed actively growing, any resulting discoloration or growth regulation will be more evident than in an overseeded site, where it would be masked by ryegrass. Therefore, application of Velocity is not recommended in non overseeded bermudagrass.

Velocity may cause unacceptable injury to other desirable turf species.

#### SPECIAL INSTRUCTIONS:

Velocity should be applied in the winter or early spring when annual bluegrass first begins to actively flower in the late winter or early spring and temperatures are within the recommended range, but not until at least 60 days after ryegrass emergence. The use season will, therefore, vary according to location and environmental conditions.

Recommended Use Season: January 1 to April 15.

Application of Velocity should be avoided during the latter part of the Recommended Use Season in areas where bermudagrass does not go completely dormant during the winter, and avoided during the early part of the recommended use season in areas where bermudagrass does go completely dormant during the winter.

Velocity may be less efficacious if applied when annual bluegrass is not actively growing due to cold temperatures.

Therefore, avoid application until after rising temperatures stimulate annual bluegrass to begin flowering.

Velocity may injure ryegrass that is under heat stress, and may also injure actively growing bermudagrass. Therefore, do not apply when temperatures are above 80°F, or after bermudagrass begins to actively tiller in the late winter or spring.

Contact your Valent representative or your local extension specialist for a

recommendation specific to your area.

#### Recommended Control Programs:

Velocity may cause mild chlorosis and growth regulation to ryegrass, but symptoms will be temporary when applied in accordance with the label. The control program for Velocity should be determined by considering the desired level of control, and the tolerance for ryegrass chlorosis. Effective control or seed head suppression will require more than one application.

##### 1. Maximum Control of Annual Bluegrass and Broadleaf Weeds

Apply Velocity two or three times on a 14 to 21 day interval at one 2.0 oz. wt. WSP per 1.5 acres. Use 21 day interval if perennial ryegrass is exhibiting undesirable chlorosis at 14 days after application. Do not make more than two applications per year where mowing height is less than 1/2". Efficacy may be decreased if application interval exceeds 21 days. This program should be considered for heavier infestations of annual bluegrass, and where there is a higher tolerance for temporary ryegrass chlorosis.

##### 2. Seed Head Suppression of Annual Bluegrass

Apply Velocity three times on a 14 day interval at one 2.0 oz. wt. WSP per 3.0 acres of perennial ryegrass. Efficacy may be decreased at longer applications. While this program will strongly suppress production of seed heads, it may kill a lower percentage of annual bluegrass and other labeled weeds than will the Maximum Control program. This program will cause less chlorosis than the Maximum Control program, and should be considered where there is a low tolerance for ryegrass chlorosis.

On sites where ryegrass is mowed at no less than 1/2", Velocity may be applied at up to one 2.0 oz. WSP per acre. When applied at more than one 2.0 oz. WSP per 1.5 acres, the application interval must be increased to 28 days. Do not make more than two applications per year.

Turf growth regulators may affect the efficacy and safety of Velocity.

#### USE PRECAUTIONS:

- Do not apply to other species of desirable turfgrass.
- Do not apply to golf greens or roughs.
- Do not apply to perennial ryegrass until at least 60 days after seedling emergence.
- Do not apply in spring after bermudagrass has begun actively tillering.
- Do not apply Velocity to ryegrass mowed at less than 3/8".
- Do not apply more than one 2.0 oz. WSP of Velocity per acre in a single application.
- Do not apply more than one 2.0 oz. WSP of Velocity per 1.5 acres in a single application when mowing height is less than 1/2".
- Do not apply more than a total of one 2.0 oz. WSP of Velocity per 0.75 acres in a 28-day period.
- Do not apply more than a total of two 2.0 oz. WSPs of Velocity per acre per year.
- Do not exceed three applications per acre per year.
- Do not apply when temperatures are below 55°F or above 80°F.
- Do not apply if rainfall is expected within 12 hours after application.
- Do not mow or irrigate ryegrass for at least 12 hours after application.
- Do not apply to perennial ryegrass under stress due to moisture, temperature, mechanical injury or disease.
- Velocity has not been evaluated for safety on all ryegrass cultivars, or for efficacy against all biotypes of annual bluegrass.

Do not exceed one 2.0 oz. WSP per 1.5 acres per application when ryegrass is mowed at less than 1/2"

Method

[Broadcast/Foliar Ground](#)

Restricted Entry Interval

12 hours

Timings

[Postemergence \(Crop\)](#)

[Postemergence \(Weed\)](#)