

2217-759

08/03/2006

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

AUG 3 2006

James L. Kunstman, PhD
PBI/Gordon Corporation
P.O. Box 014090
Kansas City, Missouri 64101

Subject: Embark 2-S Plant Growth Regulator
EPA Registration No. 2217-759
Your Label Amendment application dated June 16, 2006

Dear Dr. Kunstman:

The amendment referred to above, submitted in connection with registration under FIFRA, sec. 3(c)(7)(A), has been reviewed and is acceptable provided that you submit a revised final printed label complying with the conditions as described herein, within 45 days of the date of this letter. A copy of the label stamped "Accepted With Comments" is included for your records.

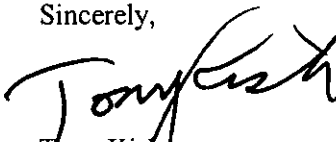
1. The restriction "Do not apply this product through any type of irrigation system" (on page 2) must be included in the subsection "Limitations" appearing on pp. 4 (turfgrass limitations) and 6 (ornamentals and groundcovers limitations).
2. Use site "Ornamental Olives" must be accompanied by a prohibition statement listing the product's limitation as non-food use only. To further ensure conveyance of this limitation to the user it must be included among the Limitations (appearing on page 8) for the section "Ornamentals and Groundcovers." By observing this limitation specific to this use site, label ambiguity will be minimized and the registrant's guidance will be more deliberate.
3. Under "Turfgrass" on page 3, change "golf courses" to "golf courses (except greens)".
4. On page 9, in the second sentence of the opening paragraph correct "six species" to read "seven species".
5. Append the common trade name: "Acetamide" to the chemical name in the "Ingredient Statement" on page 1 and where applicable.

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Embark 2-S Plant Growth Regulator
EPA Registration No. 2217-759

If you have any questions, please contact Bryant Crowe by phone at (703) 305-0025 or via email at crowe.bryant@epa.gov.

Sincerely,



Tony Kish
Product Manager (22)
Fungicide Branch
Registration Division (7505P)

Enclosure

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EMBARK® 2-S PLANT GROWTH REGULATOR

ACTIVE INGREDIENT:

**Diethanolamine salt of mefluidide*(N-[2,4-dimethyl-5-
[[trifluoromethyl)-sulfonyl]amino]phenyl]acetamide) 28.00%

OTHER INGREDIENTS: 72.00%

TOTAL 100.00%

*U.S. Patent Nos. 3,639,474; 3,894,078; 4,013,444.

**Equivalent to 2.0 lbs. (21% by weight) (N-[2,4-dimethyl-5-[[trifluoromethyl)sulfonyl]amino]phenyl]acetamide) per gallon.

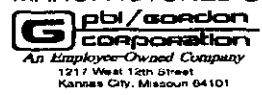
KEEP OUT OF REACH OF CHILDREN

CAUTION

See other panels for additional Precautionary Statements and First Aid.

NET CONTENTS: (1, 2.5, 5, 15, 30, and 55) GALLONS

686/ AP-----
EPA REG. NO. 2217-759
EPA EST. NO. 2217-KS-2
MANUFACTURED BY:



Telephone: 1-800-821-7925

ACCEPTED
with COMMENTS
In EPA Letter Dated
AUG 3 2006

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

2217-759

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READ THE ENTIRE LABEL FIRST. OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.

PRECAUTIONARY STATEMENTS

Hazards to Humans & Domestic Animals

CAUTION: Causes eye irritation. Harmful if inhaled, swallowed or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing. Wear protective clothing including rubber gloves when handling.

First Aid

If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-877-800-5556 for emergency medical treatment advice.	

ENVIRONMENTAL HAZARDS:

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater. Do not allow spray to drift onto nontarget crops or vegetation.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

STORAGE AND DISPOSAL

PESTICIDE STORAGE: Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke.

Embark® 2-S Plant Growth Regulator (PGR) may be applied to various species of turfgrass, ground covers, ornamental shrubs and trees in public, commercial, or industrial areas for reducing the frequency of mowing and trimming.

Do not apply this product through any type of irrigation system.

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SPRAY EQUIPMENT:

The following spray equipment is suitable for:

Ornamentals and Groundcovers: Use a power sprayer equipped with hand-held spray gun or vehicular-mounted equipment that will deliver sufficient spray to penetrate dense foliage and provide thorough coverage of all parts of shrubs or plants.

Turfgrasses and Low Maintenance Grasses: Use conventional power spray equipment fitted with a spray boom, off-center nozzles, or handgun (spray gun). Hand-pump sprayers are suitable for edging or spot treatments.

SPRAY PREPARATION:

Pour the required amount of Embark® 2-S PGR into the spray tank containing approximately one-half the required amount of water. Fill the tank as required with water and spray as recommended. Minimal agitation in the spray tank is necessary.

CALIBRATION:

It is essential that spray equipment is properly adjusted and calibrated to assure proper dosage and uniform spray coverage. Follow the spray equipment manufacturer's directions for cleaning, adjusting pressure and selecting appropriate nozzles.

RINSING:

Triple rinse the Embark® 2-S PGR container with water and pour the rinse solution into the spray tank prior to spraying. Do not use spray equipment for other purposes until thoroughly cleaned. Flush spray equipment with plenty of water immediately after use to avoid contamination of later sprays.

- TURFGRASS -

USE SITES:

Embark® 2-S PGR may be applied to specified turfgrasses in commercial and public areas such as:

- ◆ **COMMERCIAL-INDUSTRIAL AREAS:** Highway rights-of-way, utility rights-of-way, buildings, industrial parks, tank farms, airports.
- ◆ **PUBLIC AREAS:** Schools, libraries, hospitals, cemeteries, golf courses, parks, roads, walkways, condominiums, and apartment complexes.
- ◆ **UNCULTIVATED AGRICULTURAL AREAS:** Around farm buildings, storage sheds, implement storage sheds, implement storage areas, and roadsides.

MOWING:

When mowing after application: For an evenly trimmed appearance grass may be mowed 3 to 7 days after Embark® 2-S PGR is applied.

When mowing before application: Grass may be mowed up to two days before applying Embark® 2-S PGR. Clippings and other debris should be removed before spraying. If mowing removes most of the green leaf tissue, spraying should be delayed until sufficient new growth develops to assure product absorption into green leaves.

When mowing is not desired or practical: Apply Embark® 2-S PGR in the spring, after green-up, but before mowing is necessary, thus avoiding mowing until growth regulation wears off.

TANK MIXING WITH HERBICIDES:

Embark® 2-S PGR may be tank-mixed with one of the following herbicides to control broadleaf weeds:

HERBICIDE	MAXIMUM RATE
Trimec® Classic Broadleaf Herbicide	4 pints of product/acre
2,4-D low volatile ester and amine salt formulations	2 lbs. active ingredient/acre
MCP-p in amine salt formulations	2 lbs. active ingredient/acre

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ROADSIDE, LOW MAINTENANCE GRASSES AND UNCULTIVATED AGRICULTURAL AREAS:

Maximum benefits, including season long seedhead suppression of cool season grasses, can be attained by applying 2 pints/acre of Embark[®] 2-S PGR with surfactant after uniform grass green-up until approximately 2 weeks before seedhead appearance. Embark[®] 2-S PGR applications will give vegetative growth suppression for up to 8 weeks; however, a mowing will be necessary to eliminate escape seedheads which have not emerged. If temporary discoloration of turf occurs and is objectionable, reduce the 2 pint rate to 1½ pints/acre. (See Tables 1 and 2).

For roadside and low maintenance turf in California, follow the recommended rates according to Table 2.

SURFACTANTS:

The use of a nonionic surfactant (except Calif.) is recommended to increase the extent and consistency of turfgrass regulation on roadside and low maintenance turf only. The recommended surfactant rate is 0.25 to 0.5% V/V (1 to 2 quarts/100 gallons of spray solution). Temporary, slight discoloration of turf may increase with the use of a surfactant.

LIMITATIONS ON TURFGRASS:

- Do not apply Embark[®] 2-S PGR to golf greens.
- Do not apply to turf areas within 4 growing months after seeding and do not reseed within 3 days following application (except Calif. where reseeding may not occur within 2 weeks). Turf treated with Embark[®] 2-S PGR may appear less dense and temporarily discolored when compared with untreated, actively growing turf. However, with increasing time, turf may appear darker green than untreated areas.
- Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application.
- Do not allow animals to graze on treated areas.

CULTURAL TIPS:

- Embark[®] 2-S PGR, applied to turfgrass, reduces mowing requirements for 6 weeks following treatment by regulating growth and preventing seedhead formation. Apply Embark[®] 2-S PGR uniformly to green, actively growing turf. For season long seedhead suppression of cool season grasses, apply no later than when the seedhead can be felt at the base of the stem (approximately 2 weeks prior to seedhead appearance). Do not apply to closely mowed areas, where most of the green growth has been cut.
- Remove excessive grass clippings and leaves prior to treatment.
- Avoid spray overlaps that will increase dosage above those recommended.
- Embark[®] 2-S PGR may be applied more than once per season, however, wait at least 6 weeks between applications.
- In turfgrass renovation programs, areas treated with Embark[®] 2-S PGR may be reseeded 3 days following application (except Calif. where reseeding may not occur within 2 weeks).

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TABLE 1. Application Rates for Turfgrass.

Species	Application Rates of Embark® 2S		Remarks
	Per Acre in 15-150 Gals./Water ¹	Fl. Oz. Per 1000 Sq.Ft. ¹	
Annual Bluegrass ² (<i>Poa annua</i>) (seedhead suppression only)	½ pint	⅓ fl.oz.	For seedhead suppression only: Apply after uniform green-up but before the first appearance of seedheads. Applications after first seedhead appearance will suppress seedheads which have not emerged.
Kentucky Bluegrass & Annual Bluegrass, Tall, Red & Chewing Fescues, Perennial Ryegrass, Timothy, Reed Canarygrass, Quackgrass, Kikuyugrass, Crested Wheatgrass ² , Orchardgrass ² , Smooth Bromegrass ² , Centipedegrass	1½ pints	⅔ fl.oz.	For those grasses recommended at 1½ pint rate, a slightly longer period of growth regulation can be attained with a 2 pint/acre rate. If temporary discoloration of turf occurs and is objectionable reduce the 1½ pint rate to 1 pint/acre.
St. Augustinegrass	1 pint	⅔ fl.oz.	
Common Bermudagrass	4 pints	1½ fl.oz.	
¹ The amount of water used to give adequate and uniform spray coverage is dependent on the type of spray equipment used.			
² Except California.			

TABLE 2. Application Rates for Turfgrass, CALIFORNIA ONLY.

Species	Application Rates of Embark® 2S		Remarks
	Per Acre in 15-150 Gals./Water ¹	Fl. Oz. Per 1000 Sq.Ft. ¹	
Kentucky Bluegrass & Annual Bluegrass, Tall, Red & Chewing Fescues, Perennial Ryegrass, Timothy, Reed Canarygrass, Quackgrass, Centipedegrass, Kikuyugrass	1½ pints	⅔ fl.oz.	For grasses recommended at the 1½ pint rate, reduce the rate to 1 pint/acre if temporary discoloration of turf occurs and is objectionable. In turfgrass renovation programs, areas treated with Embark® 2-S PGR may be reseeded 2 weeks following application.
St. Augustinegrass	1 pint	⅔ fl.oz.	
Common Bermudagrass	4 pints	1½ fl.oz.	
Native Grasses & Broadleaf Vegetation Grasses: Wild Barley, Red Brome, Ripgut Brome, Wild Oats Broadleaves: Cheeseweed, Sour Clover, Fiddleneck, Redstem Filaree, Black Mustard	2 pints	⅔ fl.oz.	For native grass and broadleaf vegetation, areas with high soil fertility may require up to 4 pints/acre.
¹ The amount of water used to give adequate and uniform spray coverage is dependent on the type of spray equipment used.			

- ORNAMENTALS AND GROUNDCOVERS -

USE SITES:

Embark[®] 2-S PGR may be applied to specified ornamentals and groundcovers in commercial and public areas such as:

- **COMMERCIAL-INDUSTRIAL AREAS:** Highway rights-of-way, utility rights-of-way, buildings, industrial parks, tank farms, airports.
- **PUBLIC AREAS:** Schools, libraries, hospitals, cemeteries, golf courses, parks, roads, walkways, condominiums, office and apartment complexes.

LIMITATIONS:

- Avoid spray drift on nontarget foliage. Avoid drift on food crops.
- Do not wash foliage for at least 8 hours after application. If rain occurs within 8 hours, dilution of spray may occur.
- Do not apply to plants that are stressed, diseased, or otherwise unhealthy.
- Do not apply to plants grown in containers.
- Before using Embark[®] 2-S PGR on ornamentals, thoroughly clean spray tank to remove any broadleaf herbicide that may be present.

APPLICATION RATES FOR ORNAMENTALS AND GROUND COVERS:

Embark[®] 2-S PGR applied as a full cover spray to specified ornamental shrubs, hedges, trees and groundcovers reduces trimming and pruning for up to 8 weeks.

RATES OF EMBARK® 2-S PGR FOR ORNAMENTALS THROUGHOUT THE U.S.

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Species of Ornamental Plant Common/botanical name	Scientific name	Pints per 100 gallons of water	Fl. oz. per gallon of water	Remarks			
GROUNDCOVERS:							
African Daisy	<i>Arctotis spp.</i>	4 pints	2/3 fl. oz.	For growth regulation, apply Embark® 2-S PGR as a full cover spray with foliage penetration to the drip point. Applications should be made to healthy, actively growing plants 7 to 14 days after pruning or trimming. Once the plant resumes active growth, pruning and repeat applications may be made.			
Algerian Ivy	<i>Hedera canariensis</i>						
English Ivy	<i>Hedera helix</i>						
Capweed, Matgrass or Turkey-Tangle	<i>Phyla nodiflora</i>						
Ice plant	<i>Mesembryanthemum crystallinum</i>						
Rosemary	<i>Rosmarinus officinalis</i>						
Periwinkle, Trailing or Myrtle	<i>Vinca minor</i>						
SHRUBS AND TREES:							
Abelia	<i>Abelia x grandiflora</i>						
Acacia	<i>Acacia spp.</i>						
Barberry	<i>Berberis spp.</i>						
Bottlebrush	<i>Callistemon spp.</i>						
Bougainvillea	<i>Bougainvillea spp.</i>						
Box or Boxwood, Common, Korean or Japanese	<i>Buxus spp.</i>						
Brazilian Pepper Tree or Christmas Berry Tree	<i>Schinus terebinthifolius</i>						
Carob	<i>Ceratonia siliqua</i>						
Coprosmas	<i>Coprosma</i>						
Crape Myrtle	<i>Lagerstroemia indica</i>						
Elaeagnus, Oleaster, Wild Olive, Silverberry, Thorny Elaeagnus	<i>Elaeagnus spp.</i>						
Euonymus	<i>Euonymus spp.</i>						
Eugenias and Brush Cherry or Australian Bush Cherry	<i>Eugenia myrtifolia</i>						
Fig, Creeping Fig, Climbing Fig or Creeping Rubber Plant	<i>Ficus repens</i> or <i>Ficus pumila</i>						
Fig, Laurel, Benjamin Tree or Weeping Fig	<i>Ficus nitida</i>						
Fire Thorn and Scarlet Fire Thorn	<i>Pyracantha spp.</i>						
Heavenly Bamboo or Sacred Bamboo	<i>Nandina spp.</i>						
Hibiscus, Rose of China, Mallow or Rose Mallow	<i>Hibiscus spp.</i>						
Holly, Japanese ¹	<i>Ilex crenata</i>						
Holly, Chinese or Burford	<i>Ilex cornuta</i> cv. 'Burfordii'						
Holly, English, European or Oregon	<i>Ilex aquifolium</i>						
Holly, Yaupon, Cassina or Cassena	<i>Ilex vomitoria</i>						
Honeysuckle	<i>Lonicera spp.</i>						
Italian Buckthorn	<i>Rhamnus alaternus</i>						
Indian Hawthorn	<i>Raphiolepis indica</i>						

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Species of Ornamental Plant Common/botanical name	Scientific name	Pints per 100 gallons of water	Fl. oz. per gallon of water	Remarks
Jasmine or Jessamine	<i>Jasminum spp.</i>	4 pints	2/3 fl. oz.	For growth regulation, apply Embark® 2-S PGR as a full cover spray with foliage penetration to the drip point. Applications should be made to healthy, actively growing plants 7 to 14 days after pruning or trimming. Once the plant resumes active growth, pruning and repeat applications may be made.
Laurel	<i>Laurus</i>			
Melaleuca, Honey Myrtle or Bottlebrush	<i>Melaleuca spp.</i>			
Myoporum	<i>Myoporum spp.</i>			
Myrtle	<i>Myrtus spp.</i>			
Myrtle, Common, Compact, Dwarf, Greek, Swedish, German and Polish	<i>Myrtus communis</i>			
Nandina species including Heavenly Bamboo or Sacred Bamboo	<i>Nandina spp.</i>			
Oleander, Common Oleander or Rosebay	<i>Nerium oleander</i>			
Osmanthus species including American Olive, Fragrant Olive, Holly Olive, Chinese Holly, False Holly	<i>Osmanthus spp.</i>			
Photinia, Red tip	<i>Photinia fraseri</i>			
Photinia, Japanese	<i>Photonia glabra</i>			
Pittosporum, Japanese Pittosporum, Mock Orange, Tobira or Australian Laurel	<i>Pittosporum tobira</i>			
Podocarpus, Southern Yew, Japanese Yew or Buddhist Pine	<i>Podocarpus macrophyllus</i>			
Privet, Amur, Border, Chinese, California, European and Wax-leaf Privet	<i>Ligustrum spp.</i>			
Viburnum	<i>Viburnum spp.</i>			
Xylosma	<i>Xylosma spp.</i>			
Ornamental Olives		1 pint	1/6 fl. oz.	For fruit suppression of olive trees, apply Embark® 2-S PGR as a full cover spray at prebloom (tight bud stage) through the 5% bloom stage. See footnote 2.

Footnote 1: Except California

Footnote 2: NOTE: Embark® 2-S PGR will reduce or eliminate undesirable fruit from olive trees. Two foliar applications are recommended during the prebloom or tight bud stage through the 5% bloom stage of the trees. Mix 1 pint of product per 100 gallons of water per application. The interval between the first and the second applications (± 2 weeks) may vary between seasons and will be determined by the local environmental conditions. Full cover sprays are required, and all surfaces of the leaves and flower buds should be sprayed to the drip point. Flowers that have pollinated will set fruit. Spray volumes will depend on tree size. Generally, trees 20 to 30' in height may require 10 to 15 gallons of spray solution per tree.

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[Note to Reviewer: The following text on pages 9 through 12 is optional and/or interchangeable.]

Embark® 2-S PGR can be incorporated into highway vegetation management programs to eliminate seedhead production and to reduce the mowing requirements. Embark® 2-S PGR may be applied to bermudagrass and six species of established cool season grasses in noncropland sites. Embark® 2-S PGR may be useful in the following noncropland areas:

- ◆ **Highway rights-of-way:** (principal, interstate, state, and county highways), interchange ramps, waysides, service areas, and unpaved roads
- ◆ **Municipal, state, and federal lands such as:** airports, military installations, schools/universities, libraries, and hospitals
- ◆ **Commercial/Industrial areas including:** industrial parks, tank farms, plant sites, storage areas, fencerows, and utility rights-of-way.

Embark® 2-S PGR inhibits the growth of tall fescue, Kentucky bluegrass, perennial ryegrass, smooth brome grass, orchardgrass, and reed canarygrass and common bermudagrass. Mixed stands of these coarse textured species may respond unevenly to applications of Embark® 2-S PGR and the tank mixtures. All established perennial grasses should be at least one year old.

- SPRAY EQUIPMENT AND MIXING INSTRUCTIONS -

Spray Equipment:

Use conventional power spray equipment with bypass or mechanical agitation and fitted with a spray boom, off-center nozzles, or a spray gun.

It is essential that spray equipment is properly adjusted and calibrated to assure proper dosage and uniform spray coverage. Follow the spray equipment manufacturer's directions for cleaning, adjusting pressure and selecting appropriate nozzles.

Spray Volumes:

Spray volumes of 15 to 150 gallons per acre are recommended. Uniform application is essential. Avoid spray overlaps that will increase the dosage above those recommended.

Surfactants and Spray Colorants:

The use of a nonionic surfactant is recommended to increase the extent and consistency of the growth regulation. The suggested surfactant rate is 0.25 to 0.50% v/v or 1 to 2 quarts per 100 gallons of spray solution. Temporary, slight discoloration of the turf may increase with the use of a surfactant.

The use of a colorant is recommended to allow the applicator to make uniform applications.

Spray Preparation for Tank Mixtures:

Embark® 2-S PGR may be applied in combination with one or more of the specified herbicides or plant growth regulators. These tank mixtures must be used according to the most restrictive label limitations and precautions. No label dosage rate should be exceeded. Follow the labeling of each companion product for precautionary statements, directions for use, dosage rates, and application schedules. Tank mixture recommendations are for use only in states where the companion products and application site are registered.

Follow these guidelines and refer to the labeling of the companion product for further instructions.

1. Add $\frac{1}{2}$ - $\frac{2}{3}$ of the required amount of water into the spray tank.
2. Add the appropriate amount of the companion product (dispersible granules, ammonium salt formulations, or dimethylamine salt formulations) into the spray tank with agitation.
3. Pour the appropriate amount of Embark® 2-S PGR into the spray tank.
4. Continue agitation while adding the remainder of water and add the measured amounts of nonionic surfactant and spray colorant.
5. Continue agitation throughout the spraying operation.

[Note to Reviewer: Language is optional and/or interchangeable.]

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SEEDHEAD SUPPRESSION:

The application window or timing is critical for the optimum seedhead control.

Generally, the application window for the best results will range from 2 to 3 weeks. The beginning of the application window for Embark® 2-S PGR occurs in the spring after full green-up with rapid vertical growth. The end of the application window occurs approximately 2 weeks prior to the seedhead appearance or when the seedhead can be felt at the base of the stem. Applications of Embark® 2-S PGR after the optimum window will result in reduced seedhead suppression.

Embark® 2-S PGR must be applied prior to the seedhead appearance at the stem apex. Application of Embark® 2-S PGR after the seedhead emergence will suppress only the later forming seedheads.

Inconsistencies of seedhead suppression may occur with mixed stands. Different grass species may vary in the inflorescence development and in their responses to the plant growth regulators.

Refer to Table 1 for the application rates for seedhead suppression and refer to Table 3 for recommendations appropriate for California.

VEGETATIVE GROWTH SUPPRESSION:

Embark® 2-S PGR will provide growth inhibition for 6 to 8 weeks under favorable growing conditions. Apply Embark® 2-S PGR with a nonionic surfactant after full green-up of turfgrass in the spring. At the time of treatment, turf should have developed the desired appearance, the desired height, and sufficient leaf area for uptake.

Apply 24 - 32 fl. oz. (1½ - 2.0 pints) of Embark® 2-S PGR per acre with a nonionic surfactant to actively growing turf for growth suppression up to 8 weeks. If temporary discoloration of the turfgrass occurs and is objectionable, reduce the 2 pints of product rate to 1½ pints of product per acre. Refer to Tables 1 and 2 for the recommended rates for tank mixtures applied to low maintenance turf. Refer to Table 3 for the recommendations appropriate for California.

Embark® 2-S PGR may be applied more than once per season, however follow an application interval of at least 6 weeks between applications.

- CULTURAL RECOMMENDATIONS -

MOWING:

- **Mowing before application:** Grass may be mowed up to two days before applying Embark® 2-S PGR. Clippings and other debris should be removed before spraying. If mowing removes most of the green leaf tissue, spraying should be delayed until sufficient new growth develops to assure product absorption into green leaves.
- **Mowing after application:** For an evenly trimmed appearance grass may be mowed 3 to 7 days after Embark® 2-S PGR is applied.
- **When mowing is not desired or practical:** Apply Embark® 2-S PGR after full green-up in the spring, but before mowing is necessary.

IRRIGATION AND RAINFALL:

Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application.

STRESSES:

Applications of Embark® 2-S PGR to turfgrass that is stressed because of high air temperatures, drought, excessive soil water, diseases, or insects may cause temporary discoloration. Management practices to promote the health and vigor of the turfgrass should be continued on the treated areas.

PRECAUTIONS AND LIMITATIONS:

- ◆ Do not apply this product through any irrigation system.
- ◆ Turf treated with Embark® 2-S PGR may appear less dense and temporarily discolored when compared with untreated, actively growing turf.
- ◆ Do not allow animals to graze on treated areas.
- ◆ In turfgrass renovation programs, areas treated with Embark® 2-S PGR may be reseeded 3 days following application (except California where reseeding may not occur within 2 weeks).
- ◆ Do not apply to any body of water such as lakes, streams, rivers, canals, ponds, reservoirs, or bays. Also, do not apply to areas where water is present on the soil surface such as swamps, bogs, potholes, or marshes. However, it is allowable to treat seasonally dry swamps, bogs, potholes, or marshes, berms of ditches, and road shoulders.

Table 1. Application Rates for Embark® 2-S Plant Growth Regulator and tank mixtures for six cool season turfgrasses (tall fescue, Kentucky bluegrass, perennial ryegrass, orchardgrass, smooth brome grass and reed canarygrass) established in noncropland sites.		
Product Name	Amount of Product	
	fl. oz./acre	ounces/acre
1. Embark® 2-S Plant Growth Regulator	24 -32	-----
2. Embark® 2-S Plant Growth Regulator plus Event Grass Growth Regulator	8 4	----- -----
3. Embark® 2-S Plant Growth Regulator plus Telar® Herbicide Dispersible Granule	12 – 16 -----	----- 0.25
4. Embark® 2-S Plant Growth Regulator plus Event TM Grass Growth Regulator plus Arsenal® Herbicide 2#/Gal.	8 4 1.5	----- ----- -----
5. Embark® 2-S Plant Growth Regulator plus Arsenal® Herbicide 2#/Gal.	8 2	----- -----
6. Embark® 2-S Plant Growth Regulator plus Escort® Herbicide Dry Flowable	8 -----	----- 0.125—0.25
Table 2. Application Rates for Embark® 2-S Plant Growth Regulator for common bermudagrass established in noncropland sites.		
Product Name	Amount of Product	
	fl. oz./acre	ounces/acre
Embark® 2-S Plant Growth Regulator	64	-----

Turfgrass	Amount of Product	
	pints/acre	fl. oz. acre
Kentucky bluegrass, tall fescue, perennial ryegrass, reed canarygrass	1 ½ pints	24
Common Bermudagrass	4 pints	64
Native Grasses: Wild barley, red brome, riggut brome, wild oats	2 pints	32
Broadleaf Vegetation: Cheeseweed, sour clover, fiddleneck, redstem filaree, black mustard		

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LIMITED WARRANTY AND DISCLAIMER.

The manufacturer warrants only that the chemical composition of this product conforms to the ingredient statement given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use.

THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED. This limited warranty does not extend to the use of the product inconsistent with label instructions, warnings or cautions, or to use of the product under abnormal conditions such as drought, excessive rainfall, tornadoes, hurricanes, etc. These factors are beyond the control of the manufacturer or the seller. Any damages arising from a breach of the manufacturer's warranty shall be limited to direct damages, and shall not include indirect or consequential damages such as loss of profits or values, except as otherwise provided by law.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

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APPENDIX I: Trade Name Acknowledgements.

EMBARK[®], TRIMEC[®] and HI-DEP[®] are registered trademarks of PBI/GORDON CORPORATION.

EVENT[®] and ARSENAL[®] are registered trademarks of BASF

ESCORT[®] and TELAR[®] are registered trademarks of E.I. DUPONT DE NEMOURS AND CO. INC.

APPENDIX II: Previously-Approved Brand Names.

Embark[®] 2-S Plant Growth Regulator

Embark[®] 2-S IVM Plant Growth Regulator

APPENDIX III: Advertising claims that may be presented on the container labels.

- Reduces Frequency of Mowing and Trimming of Certain Grasses and Ornamentals.