2217-768

05/12/2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

> OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Craig Martens Manager of Regulatory Services PBI/Gordon Corporation P.O. Box 014090 Kansas City, MO 64101

MAY 1 2 2003

Subject: Embark® E-Z-TU-USE Plant Growth Regulator EPA Reg No. 2217-768 Your amended label dated February 28, 2003

Dear Mr. Martens:

The label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made:

- 1. In the List of Ingredients section, change "INERT INGREDIENTS" to "OTHER INGREDIENTS"
- 2. In the section Hazards to Humans and Domestic Animals, add language warning that the product causes eye irritation and is harmful if inhaled.
- In the First Aid box, change the order as follows:
  If in eyes:
  If inhaled:
  If swallowed:
  If on skin or clothing:
- 4. In the Storage and Disposal section (page 10):

Change the subheading "STORAGE" to "PESTICIDE STORAGE"

In the section "CONTAINER DISPOSAL", add the word "by" to the phrase "...in a sanitary landfill, or (by) incineration, or...."

5. In the section LIMITATIONS (page 14), in the second line change the word "with" to "within" so the phrase reads "...If rain occurs within 8 hours...."

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### Embark® E-Z-TU-USE Plant Growth Regulator Page 2

6. In the section STORAGE AND DISPOSAL (page 15):

Change the subheading "STORAGE" to "PESTICIDE STORAGE"

In the section "CONTAINER DISPOSAL", add the word "by" to the phrase "...in a sanitary landfill, or (by) incineration, or...."

- 7. In the table RATE RECOMMENDATIONS FOR TREES ...." (page 20), under "Species" change "Crape" to "Crepe"
- 8. In the section STORAGE AND DISPOSAL (page 21):

Change the subheading "STORAGE" to "PESTICIDE STORAGE"

In the section "CONTAINER DISPOSAL", add the word "by" to the phrase "...in a sanitary landfill, or (by) incineration, or...."

- 9. In the section MIXING (page 21), in the second line of item 2., change the word "of" to "for" so the sentence reads "Refer to instructions for this...."
- 10. In the section STORAGE AND DISPOSAL (page 26):

Change the subheading "STORAGE" to "PESTICIDE STORAGE"

In the section "CONTAINER DISPOSAL", add the word "by" to the phrase "...in a sanitary landfill, or (by) incineration, or...." I

- 11. In the section MIXING (page 26), in the second line of item 2., change the word "of" to "for" so the sentence reads "Refer to instructions for this...."
- 12. In the section SPRAY VOLUME (page 31), specify units for the height of the trees (20 to 30 [feet?])
- 13. In the table RATE RECOMMENDATIONS FOR TREES ...." (page 31), under "Species" change "Crape" to "Crepe"

One copy of the label stamped "Accepted with comments" is enclosed for your information.

Please submit one copy of the final printed label before the product is released for shipment.

Embark® E-Z-TU-USE Plant Growth Regulator Page 3

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

MCN

Dennis McNeilly Acting Product Manager (22) Fungicide Branch Registration Division (7505C)

enclosure

# EMBARK<sup>®</sup> E-Z-TU-USE PLANT GROWTH REGULATOR

Reduces Frequency of Mowing and Trimming of Certain Grasses and Ornamentals

#### **ACTIVE INGREDIENT:**

Diethanolamine salt of mefluidide*(N-[2,4-d	limethyl-5-[[(trifluoromethyl)-	
sulfonyl]amino]phenyl]acetamide)		3.2%
INERT INGREDIENTS:		<u>96.8%</u>
	TOTAL	100.0%

Equivalent to 0.2 lbs. (2.4% by weight) (N-[2,4-dimethyl-5-[[(trifluoromethyl)sulfonyl]amino]phenyl]acetamide) per gallon. U.S. Patent Nos. 3,639,474; 3,894,078; 4,013,444. EMBARK<sup>®</sup> is a registered trademark of PBI/GORDON CORPORATION.

# **KEEP OUT OF REACH OF CHILDREN**

# CAUTION

See side panels for additional Precautionary Statements and First Aid.

### **NET CONTENTS:**

681/ AP-----EPA Reg. No. 2217-768 EPA Est. No. 2217-KS-1 or 2217-KS-2 MANUFACTURED BY:

An Employee Owned Company 1217 West 1214 Street Kannas Ofty. Missouri 84101 Telephone: 1-800-821-7925 ACCEPTED with COMMENTS In EPA Letter Dated:

MAY | 2 2003

Under the Federal Insecticide, Fungiciae and Roderticide Act, as amended, for the pesicide registered upder EPA Reg. No.

=22/7 768

EPA Reg. No. 2217-768

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

#### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if 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> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
lf on skin or clothing:	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If inhaled:	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
	ct container or label with you when calling a poison control center or doctor or going for may also contact 1-877-800-5556 for emergency medical treatment advice.

#### ENVIRONMENTAL HAZARDS:

Do not apply directly to lakes, ponds, or streams. Do not contaminate water when disposing of equipment washwater. For terrestrial uses, 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 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.

### **OPTION 1**

#### STORAGE AND DISPOSAL IN RESIDENTIAL AND HOUSEHOLD AREAS

Store product in original container only and in a locked storage area. For disposal, rinse thoroughly and securely wrap original container in several layers of newspaper and discard in trash. Do not reuse empty container.

Embark<sup>®</sup> E-Z-Tu-Use PGR is recommended for use in residential areas for regulating the growth of various species of turfgrass. When applied to turfgrass, Embark<sup>®</sup> E-Z-Tu-Use PGR reduces mowing requirements for up to 6 weeks following treatment by regulating growth and suppressing seedhead formation.

#### **RECOMMENDED USE AREAS:**

Embark® E-Z-Tu-Use PGR is recommended for use on less maintained turfgrass areas such as out of the way backyard areas, vacant lots, road and curbside grass, fenceline areas, steep banks, vacation home areas, rocky or rough terrain grass areas, and other fringe turf areas that are difficult to mow and where pristine, fine quality turf is not a priority.

*Note:* Embark<sup>®</sup> E-Z-Tu-Use PGR is a plant growth regulator and will not provide herbicidal control of weeds. For weed control, Embark<sup>®</sup> E-Z-Tu-Use PGR should be applied with a broadleaf herbicide such as Acme<sup>®</sup> Trimec<sup>®</sup> Lawn Weed Killer or other Weed-No-More<sup>®</sup> brand products. It is essential to follow label directions exactly for both the Embark<sup>®</sup> E-Z-Tu-Use PGR and the broadleaf herbicide used.

For residential turf areas that are frequently maintained and trimmed, or for home lawn areas which present a pristine quality, fine turf appearance, Embark<sup>®</sup> E-Z-Tu-Use PGR applications may not be suitable.

**EDGING:** Embark<sup>®</sup> E-Z-Tu-Use PGR may also be used for edging and trimming grass when uniformly applied with pump type sprayers or hose end sprayers.

Apply along and around obstacles bordering such areas as sidewalks, driveways, trees, and fences where grass is desired to meet the obstacle, but growth regulation is desired to avoid trimming.

**SPRAY EQUIPMENT:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied to localized turfgrass areas with small spray units such as hand pump tank type and hose end sprayers.

It is essential that the spray equipment is operating properly and is delivering the correct recommended dosage rates. Accordingly, a trial application over a measured area is recommended.

**MIXING:** Since Embark<sup>®</sup> E-Z-Tu-Use PGR is soluble in water, minimal mixing with the final spray solution is required. Accordingly, when mixing in spray equipment other than a hose end sprayer, pour the required amount of Embark<sup>®</sup> E-Z-Tu-Use 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.

**RINSING:** Triple rinse the Embark<sup>®</sup> E-Z-Tu-Use 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.

For hose end sprayers, thoroughly rinse spray container and spray solution onto treated area.

#### TURFGRASS:

When applied according to the application rates specified, Embark® E-Z-Tu-Use PGR will regulate the growth of the following turfgrass:

- Kentucky & Annual Bluegrass
- Tall, Red and Chewings Fescue
- Perennial Ryegrass
- Timothy
- Reed Canarygrass

- Kikuyugrass
- Centipedegrass
- Crested Wheatgrass

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- Orchardgrass
- Smooth Bromegrass

#### **RECOMMENDED APPLICATIONS:**

Apply Embark\* E-Z-Tu-Use PGR to well established turf areas when grass is green and actively growing. At the time of treatment, turf should be at the height which is desired to be maintained during the period of growth regulation. Do not apply to closely mowed areas where most of the green growth has been cut. Turf may be mowed up to one day before application. Remove all grass clippings and leaves prior to treatment. Embark\* E-Z-Tu-Use PGR may be applied more than once per season. However, wait until the grass resumes active growth and then mow prior to the next application for a more uniform turf appearance. Wait at least six weeks between applications. While a second mowing after spraying should not be necessary for 6 weeks some trim mowing may be desirable to maintain a uniform, even appearing turf area.

To maintain a healthy, well groomed turf area, continue to water grass on a regular basis and use fertilizers, herbicides, insecticides, or fungicides as needed.

In comparison with untreated, actively growing grass, treated turf which is maintained in height by Embark® E-Z-Tu-Use PGR may appear less dense and temporarily discolored following application. With increasing time, however, Embark® E-Z-Tu-Use PGR treated turf may appear darker green than untreated areas.

**PRESSURE SPRAYERS:** Measure indicated amount of Embark® E-Z-Tu-Use PGR into tank and dilute with water according to the following chart. Use a spray pattern that will give a uniform full coverage spray to the area indicated. Avoid spray overlaps that will increase dosage above those recommended.

Amount of Em	bark⁰ to be Used	Amount of Water in Sprayer	Area To Be Sprayed	
(Tablespoons)	(Fluid Ounces)	(Gallons)	(Square Feet)	
2	1	1	200	
4	2	2	400	
6	3	3	600	

**HOSE END SPRAYERS:** Apply Embark® E-Z-Tu-Use PGR to well established turf areas when grass is green and actively growing. To ensure good coverage, spray until grass is thoroughly wet down to the soil without drenching the soil. For best results use a hose end sprayer designed for lawns and capable of delivering 7 to 10 gallons of water per 1,000 square feet. Put recommended amount of product (Column 1) in bottle and add water to indicated level (Column 2), and spray on area shown in Column 3.

	Column 1 Column 2		Column 3
Amount of Em	bark <sup>e</sup> to be Used	Fill Bottle To	Area To Treat
(Tablespoons)	(Fluid Ounces)	(Gallons)	(Square Feet)
4	2	4.	400
10	. 5	10	1,000
14	7	14	1,400
20	10	20	2,000
32	16	32	3,000

#### LIMITATIONS:

- Embark<sup>®</sup> E-Z-Tu-Use PGR should not be applied to golf greens.
- Do not apply Embark® E-Z-Tu-Use PGR to turf areas within four growing months after seeding and do not reseed within two weeks following application.
- Do not use in areas where there is heavy foot traffic.
- Do not allow animals to graze on treated areas.
- Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application.
- Avoid spray drift onto nontarget foliage.
- Avoid drift onto food crops.
- Do not wash foliage for at least 24 hours. If rain occurs within 8 hours, dilution of spray may occur.
- Do not apply to stressed, diseased, or otherwise unhealthy grass.
- Do not apply to plants grown in containers.
- Do not apply this product through any type of irrigation equipment.

#### STORAGE AND DISPOSAL IN RESIDENTIAL AND HOUSEHOLD AREAS

Store product in original container only and in a locked storage area. For disposal, rinse thoroughly and securely wrap original container in several layers of newspaper and discard in trash. Do not reuse empty container.

Embark<sup>®</sup> E-Z-Tu-Use PGR is recommended for use in residential areas for regulating the growth of various species of turfgrass and ornamentals. When applied to turfgrass, Embark<sup>®</sup> E-Z-Tu-Use PGR reduces mowing requirements for up to 6 weeks following treatment by regulating growth and suppressing seedhead formation.

**RECOMMENDED USE AREAS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied to turfgrass or ornamentals in the following areas:

- Public-Residential: Home lawns, schools, libraries, hospitals, cemeteries, golf courses, parks, walkways, condominiums, and apartment complexes.
- Agricultural Premises: Around farm buildings, storage sheds, and implement storage areas.

**EDGING:** Embark\* E-Z-Tu-Use PGR may also be used for edging and trimming grass or ornamentals when uniformly applied with pump type sprayers or hose end sprayers.

For turf, apply along and around obstacles bordering such areas as sidewalks, driveways, trees, and fences where grass is desired to meet the obstacle, but growth regulation is desired to avoid trimming.

Embark<sup>®</sup> E-Z-Tu-Use PGR is recommended for use on less maintained turf grass areas such as: out-ofthe-way backyard areas, vacant lots, road and curbside grass, fenceline areas, steep banks, vacation home areas, rocky or rough terrain grass areas, and other fringe turf areas that are difficult to mow and where pristine, fine quality turf is not a priority.

*Note:* Embark® E-Z-Tu-Use PGR is a plant growth regulator and will not provide herbicidal control of weeds. For weed control, Embark® E-Z-Tu-Use PGR should be applied with a broadleaf herbicide such as Acme® Trimec® Lawn Weed Killer or other Weed-No-More® brand products. It is essential to follow label directions exactly for both the Embark® E-Z-Tu-Use PGR and the broadleaf herbicide used.

For residential turf areas that are frequently maintained and trimmed, or for home lawn areas which present a pristine quality, fine turf appearance, Embark\* E-Z-Tu-Use PGR applications may not be suitable.

**SPRAY EQUIPMENT:** Embark® E-Z-Tu-Use PGR may be applied to localized turfgrass areas with small spray units such as hand pump, tank type and hose end sprayers, or to larger areas with conventional spray equipment fitted with a spray boom, off-centered nozzles, or hand operated spray gun.

It is essential that the spray equipment is operating properly and is delivering the correct recommended dosage rates. Accordingly, a trial application over a measured area is recommended.

**MIXING:** Since Embark<sup>®</sup> E-Z-Tu-Use PGR is soluble in water, minimal mixing with the final spray solution is required. Accordingly, when mixing in spray equipment other than a hose end sprayer, pour the required amount of Embark<sup>®</sup> E-Z-Tu-Use 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.

**RINSING:** Triple rinse the Embark® E-Z-Tu-Use 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.

For hose end sprayers, thoroughly rinse spray container and spray solution onto treated area.

#### RECOMMENDED APPLICATIONS USING CONVENTIONAL SPRAY EQUIPMENT

**TURFGRASS:** 

Apply Embark\* E-Z-Tu-Use PGR uniformly to green, actively growing grass. At the time of treatment, turf should be at the height which is desired to be maintained during the period of growth regulation. 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 two weeks prior to seedhead appearance). Do not apply to closely-mowed areas where most of the green growth has been cut. Turf may be mowed up to one day before or three to seven days after application. Remove all grass clippings and leaves prior to treatment. Avoid spray overlaps that will increase dosage above those recommended. Embark\* E-Z-Tu-Use PGR may be applied more than once per season. However, wait until the grass resumes active growth and then mow prior to the next application for a more uniform turf appearance. Wait at least 6 weeks between applications. Use the higher rate of application where the greatest growth regulation and seedhead suppression are desired. In comparison with untreated, actively growing grass, treated turf which is maintained in height by Embark\* E-Z-Tu-Use PGR may appear less dense and temporarily discolored following application. With increasing time however, turf may appear darker green than untreated areas.

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#### ORNAMENTALS:

Embark<sup>®</sup> E-Z-Tu-Use PGR reduces pruning and trimming for up to 8 weeks by regulating growth and/or inhibiting flower formation. Apply to foliage as a full coverage spray to the point of runoff and foliage penetration. Applications should be made to healthy, actively growing plants 7 to 14 days after pruning or trimming.

For flower inhibition of olive trees, apply Embark® E-Z-Tu-Use PGR to foliage as a full coverage spray to runoff at prebloom (tight bud stage) through the 5% bloom stage.

When applied according to the application rates specified, Embark<sup>®</sup> E-Z-Tu-Use PGR will regulate the growth of the following ornamentals:

USE ON: TURFGRASS	Amount of Embark <sup>®</sup> E-Z-Tu-Use PGR Per 1,000 Sq.Ft. in 3 Gals. of Water
Kentucky and Annual Bluegrass, Tall, Red and Chewings Fescue, Perennial Ryegrass, Timothy, Reed Canarygrass, Quackgrass, Kikuyugrass, & Centipedegrass	4 to 8 Fluid Ounces
Crested Wheatgrass, Orchardgrass, & Smooth Bromegrass	6 to 8 Fluid Ounces
St. Augustinegrass	4 Fluid Ounces
Common Bermudagrass	16 Fluid Ounces
USE ON: ORNAMENTALS	Amount of Embark <sup>®</sup> E-Z-Tu-Use PGR Per Gallon Water
USE ON: ORNAMENTALS Abelia, Barberry, Bottlebrush, Bougainvillea, Boxwood (Buxus sp.), Crepe Myrtle, Elaeagnus, Euonymus, Ficus, Hibiscus, Holly (Ilex sp.), Jasmine, Laurel, Melaleuca, Nandina, Oleander, Osmanthus, Photinia, Pittosporum, Podocarpus, Privet (Ligustrum sp.), Pyracantha, Viburnum, Xylosma, & Yaupon	

#### APPLICATION RATE TABLE USING CONVENTIONAL OR PORTABLE TANK TYPE PRESSURE SPRAYER

#### RECOMMENDED APPLICATIONS USING HOSE END/HIGH VOLUME APPLICATIONS

#### TURFGRASS:

Apply Embark\* E-Z-Tu-Use PGR to well established turf areas when grass is green and actively growing. To ensure good coverage, spray until grass is thoroughly wet down to the soil without drenching the soil. For best results use a hose end sprayer capable of delivering 7 to 10 gallons of water per 1,000 square feet. For a uniform appearance to the grass area, a mowing is recommended one to two days prior to spraying Embark\* E-Z-Tu-Use PGR. While a second mowing after spraying should not be necessary for 3 to 6 weeks, some trim mowing may be required to maintain a uniform, even appearing turf area. A repeat application may be made to turf; however, wait until the grass resumes active growth and then mow prior to the next application for a more uniform turf appearance. Wait at least 6 weeks between applications. To maintain a healthy, well groomed turf area, continue to water grass on a regular basis and use fertilizers, herbicides, insecticides, or fungicides as needed.

When applied according to the application rates specified, Embark® E-Z-Tu-Use PGR will regulate the growth of the following turfgrass:

- Kentucky & Annual Bluegrass
- Tall, Red and Chewings Fescue
- Perennial Ryegrass
- Timothy
- Reed Canarygrass
- Quackgrass

- Kikuyugrass
- Centipedegrass
- Crested Wheatgrass
- Orchardgrass
- Smooth Bromegrass

**PRESSURE SPRAYERS:** Measure indicated amount of Embark® E-Z-Tu-Use PGR into tank and dilute with water according to the following chart. Use a spray pattern that will give a uniform full coverage spray to the area indicated. Avoid spray overlaps that will increase dosage above those recommended.

Amount of Em	bark• to be Used	Amount of Water in Sprayer	rayer Area To Be Sprayed	
(Tablespoons)	(Fluid Ounces)	(Gallons)	(Square Feet)	
2	1	1	200	
4	2	2	400	
6	3	3	600	

**HOSE END SPRAYERS:** Apply Embark® E-Z-Tu-Use PGR to well established turf areas when grass is green and actively growing. To ensure good coverage, spray until grass is thoroughly wet down to the soil without drenching the soil. For best results use a hose end sprayer designed for lawns and capable of delivering 7 to 10 gallons of water per 1,000 square feet. Put recommended amount of product (Column 1) in bottle and add water to indicated level (Column 2), and spray on area shown in Column 3.

Col	umn 1	1 Column 2			
Amount of Embark <sup>e</sup> to be Used		mbark• to be Used Fill Bottle To		Fill Bottle To	Area To Treat
(Tablespoons)	(Fluid Ounces)	(Gallons)	(Square Feet)		
4	2	4	400		
10	5	10	1,000		
· 14	7	14	1,400		
20	10	20	2,000		
32	16	32	3,000		

#### LIMITATIONS:

- Embark® E-Z-Tu-Use PGR should not be applied to golf greens.
- Do not apply Embark® E-Z-Tu-Use PGR to turf areas within four growing months after seeding and do not reseed within two weeks following application.

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- Do not use in areas where there is heavy foot traffic.
- Do not allow animals to graze on treated areas.
- Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application.
- Avoid spray drift onto nontarget foliage.
- Avoid drift onto food crops.
- Do not wash foliage for at least 24 hours. If rain occurs within 8 hours, dilution of spray may occur. Do
  not apply to stressed, diseased, or otherwise unhealthy grass or ornamentals.
- Do not apply to plants grown in containers.
- Do not apply this product through any type of irrigation equipment.

### **OPTION 3**

#### STORAGE AND DISPOSAL

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 incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke.

Embark<sup>®</sup> E-Z-Tu-Use PGR is recommended for regulating the growth of various species of turfgrass, broadleaf vegetation, and ornamentals in public, commercial, and industrial areas.

#### SPRAY EQUIPMENT: The following spray equipment is recommended for:

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

*Turfgrass:* Use conventional power spray equipment fitted with a spray boom, off-center nozzles, or hand operated spray gun. Hand pump sprayers are suitable for edging or spot treatments.

**MIXING:** Pour the required amount of Embark<sup>®</sup> E-Z-Tu-Use 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 since Embark<sup>®</sup> E-Z-Tu-Use PGR is soluble in water.

**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® E-Z-Tu-Use 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

#### **RECOMMENDED APPLICATIONS - TURFGRASS**

**RECOMMENDED USE AREAS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied to specified turfgrass in commercial, public and certain agricultural areas such as:

- **Commercial-Industrial:** Highway right-of-ways, utility right-of-ways, buildings, industrial parks, tank farms, airports.
- Public: Schools, libraries, hospitals, cemeteries, golf courses, parks, roads, walkways.
- Agricultural Premises: Around farm buildings, 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® E-Z-Tu-Use PGR is applied.

**When mowing before application** - Grass may be mowed up to two days before applying Embark® E-Z-Tu-Use 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® E-Z-Tu-Use PGR in the spring, after greenup, but before mowing is necessary, thus avoiding mowing until growth regulation wears off.

#### TANK MIXING WITH HERBICIDES:

Embark® E-Z-Tu-Use PGR may be tank mixed with one of the following herbicides to control broadleaf weeds:

HERBICIDE	MAXIMUM RATE
2,4-D low volatile ester and amine salt formulations	2 lbs. active ingredient/acre
MCPP in amine salt formulations	2 lbs. active ingredient/acre

**ROADSIDE AND LOW MAINTENANCE TURF:** Maximum benefits, including season long seedhead suppression of cool season grasses, can be attained by applying 1 7/8 to 2½ gallons/acre of Embark® E-Z-Tu-Use PGR with surfactant after uniform grass green-up until approximately 2 weeks before seedhead appearance. Use the 2½ gallon rate for maximum seedhead suppression during the last week of this period. If applied less than two weeks prior to seedhead appearance, Embark® E-Z-Tu-Use PGR applications will continue to give vegetative growth suppression for up to 8 weeks; however, a mowing will be necessary to eliminate seedheads. For roadside and low maintenance turf in California, follow the recommended rates according to the California rate table.

**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 surfactant rate is recommended at 0.25 to 0.5% volume/volume (1 to 2 quarts/100 gallons finished spray solution). Temporary, slight discoloration of turf also may increase with the use of a surfactant.

**LIMITATIONS:** Do not apply Embark® E-Z-Tu-Use 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® E-Z-Tu-Use 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. Do not apply this product through any type of irrigation equipment.

#### **APPLICATION RATE TABLE - TURFGRASS**

#### **RECOMMENDATIONS:**

Embark<sup>®</sup> E-Z-Tu-Use PGR applied to turfgrass, reduces mowing requirements for up to 6 weeks following treatment by regulating growth and preventing seedhead formation. Apply Embark<sup>®</sup> E-Z-Tu-Use 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<sup>®</sup> E-Z-Tu-Use 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<sup>®</sup> E-Z-Tu-Use PGR may be reseeded 3 days following application (except Calif. where reseeding may not occur within 2 weeks).

# RECOMMENDED RATE OF EMBARK® E-Z-TU-USE PGR

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Species	Per Acre in 15 to 150 Gallons	Per 1,000 Sq.Ft. in 3 Gallons of	Remarks
~ ~ ~ ~ ~ ~	of Water*	Water	
Annual Bluegrass** ( <i>Poa annua</i> ) (seedhead suppression)	2½ quarts	2 fl. ozs.	For seedhead suppression only apply after uniform green-up but before the first appearance of seedheads. Applications after the first seedhead appearance will suppress seedheads which have not emerged.
Kentucky and Annual Bluegrass, Tall, Red and Chewings Fescue, Perennial Ryegrass, Timothy, Reed Canarygrass, Quackgrass, Kikuyugrass, Crested Wheatgrass**, Orchardgrass**, Smooth Bromegrass**, Centipedegrass	1 <sup>7</sup> / <sub>8</sub> gallons	6 fl. ozs.	For those grasses recommended at the $17/_8$ gallon rate a slightly longer period of growth regulation can be attained with a 2½ gallon/acre rate. If temporary discoloration of turf occurs and is objectionable reduce the $17/_8$ gallon rate to 1¼ gallon/acre.
St. Augustinegrass	1¼ gallons	4 fl. Ozs.	
Common Bermudagrass	5 gallons	15 fl. Ozs.	
	CALIFO	RNIA USE ONLY	
Kentucky and Annual Bluegrass, Tall, Red and Chewings Fescue, Perennial Ryegrass, Timothy, Reed Canarygrass, Quackgrass, Centipedegrass, Kikuyugrass	17/ <sub>8</sub> gallons	6 fl. ozs.	For grasses recommended at the 17/ <sub>8</sub> gallon rate, reduce the rate to 1¼ gallon/acre if temporary discoloration of turf occurs and is objectionable. In turfgrass renovation programs, areas treated with Embark <sup>®</sup> E-Z-Tu-Use PGR may be reseeded 2 weeks following application.
St. Augustinegrass	1¼ gallons	4 fl. ozs.	
Common Bermudagrass	5 gallons	15 fl. ozs.	
I NATI			
<b>Grasses:</b> Wild Barley, Red Brome, Ripgut Brome, Wild Oats.	2½ gallons	8 fl. ozs.	For native grasses and broadleaf vegetation, areas with high soil fertility may require up to 5 gallons/acre.
Broadleaves: Cheeseweed, Sour Clover, Fiddleneck, Redstem Filaree, Black Mustard,			coverage is dependent on the type of

\* The amount of water used to give adequate and uniform spray coverage is dependent on the type of spray equipment used. \*\* Except California.

#### FIELD MARKING PAINTS

**FIELD MARKINGS:** Temporary field markings can be achieved by applying Embark<sup>®</sup> E-Z-Tu-Use PGR with line marking paints.

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WHERE TO USE: Sport stadiums, sport fields (schools, colleges/universities, parks, professional facilities), and athletic fields (football, baseball, soccer, lacrosse, softball, others).

#### TURFGRASS:

Cool Season Species: Including Kentucky bluegrass, perennial ryegrass, and fescues.

*Warm Season Species:* Including bermudagrass and St. Augustinegrass. This product is not recommended for bahiagrass.

**EQUIPMENT:** Powered stripers/sprayers, walk behind stripers, or wet line paint applicators capable of delivering lines (bands) 2 to 6 inches wide.

**MATERIALS:** Water based or latex formulations of paint. Line marking paints should comply with the requirements of the appropriate governing body (eg. National Collegiate Athletic Association (NCAA), State High School Athletic Association, or others).

**APPLICATION SCHEDULE:** Generally, begin applications after full green-up in the spring and apply during active growth until early fall. Applications to turfgrass weakened by drought, insects, or disease may increase the potential for discoloration or injury.

**NUMBER OF APPLICATIONS:** Top quality water based latex paints may remain visible for one season provided that heavy use areas are resprayed or touched-up periodically. Generally, one application of Embark® E-Z-Tu-Use PGR with the line marking paint is recommended per season.

**APPLICATION RATE:** The amount of paint per unit area to assure complete opacity and color of the lines should be recommended by the manufacturer. Our recommendations for plant growth regulation with Embark<sup>®</sup> E-Z-Tu-Use PGR are based upon applying one gallon of marking paint per 1,000 square feet.

For Cool Season Turfgrass: Apply 2 to 4 fluid ounces of Embark® E-Z-Tu-Use PGR per one gallon of marking paint to treat 1,000 square feet of line surface area.

For Warm Season Turfgrass: Apply 2 to 16 fluid ounces of Embark® E-Z-Tu-Use PGR per one gallon of marking paint to treat 1,000 square feet of line surface area. Refer to Table 3 for specific rate recommendations.

	AMOUNT TO USE
SPECIES	Fl. Ozs. of Embark <sup>®</sup> E-Z-Tu-Use PGR per 1 Gal. of Marking Paint per 1,000 Sq. Ft.
Cool Season Turf	
Kentucky Bluegrass	2 - 4 fl.oz.
Perennial Ryegrass	2 - 4 fl.oz.
Fescues	2 - 4 fl.oz.
Warm Season Turf	
Common Bermudagrass	15 - 16 fl.oz.
Hybrid Bermudagrass	6 - 8 fl.oz.
St. Augustinegrass	2 - 4 fl.oz.

**TABLE 3. RATE RECOMMENDATIONS FOR FIELD MARKINGS** 

#### ORNAMENTALS

#### **RECOMMENDED APPLICATIONS - ORNAMENTALS**

**RECOMMENDED USE AREAS:** Embark® E-Z-Tu-Use PGR may be applied to specified ornamentals and groundcover in commercial and public areas such as:

- **Commercial-Industrial:** Highway right-of-ways, utility right-of-ways, buildings, industrial parks, tank farms, airports.
- Public: Schools, libraries, hospitals, cemeteries, golf courses, parks, roads, walkways.

**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 with 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\* E-Z-Tu-Use PGR on ornamentals, thoroughly clean spray tank to remove any broadleaf herbicide that may be present.

#### **APPLICATION RATE TABLE - ORNAMENTALS**

**RECOMMENDATIONS:** Embark<sup>®</sup> E-Z-Tu-Use PGR, applied as a full coverage spray to specified ornamental shrubs, hedges, trees and groundcover reduces trimming and pruning for up to 8 weeks by regulating growth.

Species	Per 100 Gallons of Water*	Per Gallon of Water	Remarks
Japanese Ligustrum, Pyracantha, English Ivy, Burford Holly, & Japanese Holly (except Calif.)	5 gallons	6½ fl. ozs.	For growth regulation, apply Embark <sup>®</sup> E-Z-Tu- Use PGR as a full coverage spray to runoff and foliage penetration. 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.
	ORNAMENTA	ALS - CALIFO	DRNIA USE ONLY
Groundcover: African Daisy, Capeweed, Iceplant, English Ivy, & Algerian Ivy Shrubs and Trees: Acacia, Bottlebrush, Brazillian Pepper Tree, Carob, Ficus, Hibiscus, Burford Holly, Melaleuca, Oleander, Photinia, Pittosporum, Podocarpus, Privet (Ligustrum sp.), Pyracantha, Raphiolepis, Viburnum, & Xylosma	5 gallons	6½ fl. ozs.	For growth regulation, apply Embark* E-Z-Tu- Use PGR as a full coverage spray to runoff and foliage penetration. 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.
Ornamental Olive Trees	1¼ gallons	1²/₃ fl. ozs.	For flower inhibition of olive trees, apply Embark <sup>®</sup> E-Z-Tu-Use PGR to foliage as a full coverage spray to runoff at prebloom through the 5% bloom stage. Trees 20 to 30 feet in height will require 10 to 15 gallons of finished spray solution per tree.

#### **RECOMMENDED RATE OF EMBARK• E-Z-TU-USE PGR**

\*The amount of water used to give adequate and uniform spray coverage is dependent on the type of spray equipment used.

# **OPTION 4**

#### STORAGE AND DISPOSAL

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 incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke.

**RECOMMENDED USE AREAS AND BENEFITS:** Embark® E-Z-Tu-Use PGR may be applied to specified turfgrass and ornamentals in commercial, public and certain agricultural areas such as:

- Commercial-Industrial: Highway right-of-ways, utility right-of-ways, buildings, industrial parks, tank farms, airports.
- Public: Home lawns, schools, libraries, hospitals, cemeteries, golf courses, parks, walkways.
- Agricultural Premises: Around farm buildings, storage sheds, implement storage areas, and roadsides.
- Noncrop Wide Outdoor Areas: Backyard areas, vacant lots, road and curbside grass, fencelines, areas, steep banks, vacation home areas, rocky or rough terrain grass areas, and other fringe turf areas that are difficult to mow.

For Turfgrass: Embark® E-Z-Tu-Use PGR reduces mowing requirements for up to 4 weeks following treatment by regulating growth and suppressing seedhead formation.

For Ornamentals: Embark<sup>®</sup> E-Z-Tu-Use PGR reduces pruning and trimming for up to 8 weeks by regulating growth and/or inhibiting flower formation.

#### SPRAY EQUIPMENT AND MIXING INSTRUCTIONS:

The following spray equipment is recommended for:

**Turfgrass:** Use conventional power spray equipment fitted with a spray boom, off-center nozzles, or hand operated spray gun. Hose end sprayers are appropriate for localized spot treatments or broadcast treatments on larger turfgrass areas. Hand pump sprayers are suitable for edging or spot treatments.

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

**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.

**MIXING:** Pour the required amount of Embark<sup>®</sup> E-Z-Tu-Use 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 since Embark<sup>®</sup> E-Z-Tu-Use PGR is soluble in water.

**SURFACTANTS:** For low maintenance turf and roadsides only, 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% volume/volume or 1 to 2 quarts per 100 gallons of finished spray solution. Temporary, slight discoloration of the turf may increase with the use of a surfactant.

**RINSING:** Triple rinse the Embark<sup>®</sup> E-Z-Tu-Use 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 APPLICATIONS USING CONVENTIONAL EQUIPMENT:** Embark® E-Z-Tu-Use PGR applied to turfgrass reduces the mowing requirements and the clipping weights for up to 4 weeks after treatment.

**TIMING:** Apply Embark<sup>®</sup> E-Z-Tu-Use PGR uniformly to green, actively growing grass. At the time of treatment, turf should be at the height which is desired to be maintained during the period of growth regulation. 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 two weeks prior to seedhead appearance).

#### MOWING AND IRRIGATION:

*Mowing before application* - Grass may be mowed up to two days before applying Embark<sup>®</sup> E-Z-Tu-Use 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<sup>®</sup> E-Z-Tu-Use PGR is applied.

Treated areas can be irrigated within 24 hours after application. Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. If rain occurs within 8 hours, dilution of spray may occur.

Species	Amount of Embark•	
	Per Acre	Per 1,000 Square Feet
Kentucky and Annual Bluegrass, Tall, Red and Chewings Fescue, Perennial Ryegrass	5 pints	1¾ fluid ounces
St. Augustinegrass	10 pints	3²/₃ fluid ounces

#### RATE RECOMMENDATIONS FOR TURFGRASS USING CONVENTIONAL EQUIPMENT

**SPRAY VOLUMES:** Apply Embark<sup>®</sup> E-Z-Tu-Use PGR with sufficient water for good coverage. Spray volumes of 15 to 150 gallons per acre or 3 gallons per 1,000 square feet are recommended. Uniform application is essential. Avoid spray overlaps that will increase the dosage above those recommended.

**MULTIPLE APPLICATIONS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied more than once per season; however, wait at least 6 weeks between applications. For fall applications, apply at least 2 months before winter dormancy. In turfgrass renovation programs, areas treated with Embark<sup>®</sup> E-Z-Tu-Use PGR may be reseeded 3 days following application (except California where reseeding may not occur within 2 weeks).

**TURF COLOR AND NITROGEN/IRON COMBINATIONS:** Turf treated with Embark® E-Z-Tu-Use 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.

The discoloration of grasses caused by Embark<sup>®</sup> E-Z-Tu-Use PGR may be reduced (masked) by the addition of Ferromec<sup>®</sup> AC Liquid Iron. The tank mixture of Embark<sup>®</sup> E-Z-Tu-Use PGR and Ferromec<sup>®</sup> AC applied with spray volumes greater than 90 gallons per acre (2 gallons per 1,000 square feet) can maintain the turf color. Refer to the Ferromec<sup>®</sup> AC label for dosage rate recommendations.

**HERBICIDE COMBINATIONS FOR TURFGRASS:** Embark® E-Z-Tu-Use PGR is a plant growth regulator and will not provide weed control. Embark® E-Z-Tu-Use PGR may be applied with a broadleaf herbicide such as Trimec® Classic Broadleaf Herbicide, Super Trimec® Broadleaf Herbicide, Trimec® Southern Broadleaf Herbicide, and other herbicides labeled for use in turfgrass. It is essential to follow label directions exactly for both the Embark® E-Z-Tu-Use and the broadleaf herbicide used.



**SEEDHEAD SUPPRESSION OF** *POA ANNUA* **IN COOL SEASON TURF:** Embark\* E-Z-Tu-Use PGR may be used for seedhead suppression of *Poa annua* in golf course fairways. Do not apply Embark\* E-Z-Tu-Use PGR to golf greens. The effect of Embark\* E-Z-Tu-Use PGR is dependent upon the timing and rate of application.

**TIMING:** For seedhead suppression only, apply after uniform green-up but before the first appearance of seedheads. Applications after the first seedhead appearance will suppress seedheads which have not emerged. Seedheads that have emerged will not be controlled.

	Amount of Embark <sup>®</sup>	
Species	Per Acre	Per 1,000 Square Feet
Annual Bluegrass ( <i>Poa annua)</i> Seedhead suppression only.	2 to 5 pints	0.7 to 1.8 fluid ounces

#### RATE RECOMMENDATIONS FOR POA ANNUA SEEDHEAD SUPPRESSION

**TURFGRASS APPLICATIONS USING HOSE END SPRAYERS:** Hose end sprayers are suitable for localized spot treatments, edging, or broadcast treatments on larger turfgrass areas. When applied according to the application rates specified, Embark® E-Z-Tu-Use PGR will regulate the growth of the following turfgrass.

- Kentucky & Annual Bluegrass
- Tall, Red and Chewings Fescue
- Perennial Ryegrass
- Timothy

- Reed Canarygrass
- Kikuyugrass
- Centipedegrass
- St. Augustinegrass

**TIMING:** Apply Embark® E-Z-Tu-Use PGR uniformly to green, actively growing grass. At the time of treatment, turf should be at the height which is desired to be maintained during the period of growth regulation. 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 two weeks prior to seedhead appearance).

#### MOWING AND IRRIGATION:

**Mowing before application:** Grass may be mowed up to two days before applying Embark<sup>®</sup> E-Z-Tu-Use 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<sup>®</sup> E-Z-Tu-Use PGR is applied.

Treated areas may be irrigated within 24 hours after application. Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. If rain occurs within 8 hours, dilution of spray may occur. Management care should be continued on treated areas to promote a vigorous turf.

**RATE RECOMMENDATIONS AND SPRAY VOLUMES FOR HOSE END SPRAYERS:** Apply 1<sup>3</sup>/<sub>4</sub> to 3<sup>2</sup>/<sub>3</sub> fluid ounces of Embark® E-Z-Tu-Use per 1,000 square feet with a hose end sprayer delivering 7 to 10 gallons of water per 1,000 square feet for the eleven turfgrass species. To ensure good coverage, spray until grass is thoroughly wet down to the soil without drenching the soil. Avoid spray overlaps that will increase the dosage above those recommended.

Refer to the quick mix table below for spray preparation with areas larger than 1,000 square feet.

#### RATE RECOMMENDATIONS AND SPRAY VOLUMES FOR HOSE END SPRAYERS

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Area to Treat	ea to Treat Water Level of Amoun		of Embark® To Use	
(Square Feet)	(Gallons)	(Tablespoons)	(Fluid Ounces)	
1,000	10	3½ - 7¼	.1¾ - 3²/ <sub>3</sub>	
1,400	14	5 - 10½	21/2 - 51/4	
2,000	20	7 - 14²/ <sub>3</sub>	31/2 - 71/3	
3,000	32	10 ½ - 22	5¼ - 11	

**MULTIPLE APPLICATIONS:** Embark® E-Z-Tu-Use PGR may be applied more than once per season; however, wait at least 6 weeks between application. For fall application, apply at least 2 months before winter dormancy. In turfgrass renovation programs, areas treated with Embark® E-Z-Tu-Use PGR may be reseeded 3 days following application (except California where reseeding may not occur within 2 weeks).

**TURF COLOR:** Turf treated with Embark® E-Z-Tu-Use 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.

**EDGING WITH PUMP TYPE SPRAYERS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be used for edging grass when uniformly applied with pump type sprayers. To reduce the mowing frequency of difficult or dangerous turfgrass areas, Embark<sup>®</sup> E-Z-Tu-Use PGR is recommended for use on the following areas: Out-of-the-way backyard areas, vacant lots, road and curbside grass, fenceline areas, steep banks, vacation home areas, rocky or rough terrain grass areas, and other fringe turf areas that are difficult to mow and where pristine, fine quality turf is not a priority.

**RATE RECOMMENDATIONS AND SPRAY VOLUMES:** For Kentucky bluegrass, tall fescue, chewings fescue, red fescue, perennial ryegrass, and St. Augustinegrass - Apply 4 fluid ounces of Embark® E-Z-Tu-Use PGR per 1,000 square feet with a pump type sprayer delivering 4 gallons of water per 1,000 square feet. This spray concentration can be applied in a 6 inch band for 2,000 linear feet or a 12 inch band for 1,000 linear feet. *Refer to the spray preparation chart below for areas less than 1,000 square feet.* 

For Bermudagrass, apply 16 fluid ounces of Embark® E-Z-Tu-Use PGR per 1,000 square feet with a pump type sprayer delivering 4 gallons of water per 1,000 square feet. This spray concentration can be applied in a 6 inch band for 2,000 linear feet or a 12 inch band for 1,000 linear feet. *Refer to the spray preparation chart below for areas less than 1,000 square feet.* 

For all species - Use a spray pattern that will give a uniform full coverage spray to the area indicated. Avoid spray overlaps that will increase dosage above those recommended.

Species	Area to be Sprayed	Amount of Water in Sprayer	Amount of Embark® to Use	
	(Square Feet)	(Gallons)	(Fluid Ounces)	(Tablespoons)
Kentucky Bluegrass,	250	1	1	2
Tall, Red, & Chewings Fescue,	500	2	2	4
Perennial Ryegrass,	750	3	3	6
St. Augustinegrass	1,000	4	4	8
Bermudagrass	250	1	4	8
	500	2	8	16
	750	3	12	24
	1,000	4	16	32

#### SPRAY PREPARATION CHART

**MULTIPLE APPLICATIONS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied more than once per season; however, wait at least 6 weeks between application. For fall application, apply at least 2 months before winter dormancy. In turfgrass renovation programs, areas treated with Embark<sup>®</sup> E-Z-Tu-Use PGR may be reseeded 3 days following application (except California where reseeding may not occur within 2 weeks).

**PLANT GROWTH REGULATOR TANK MIXTURES FOR TURFGRASS:** Embark® E-Z-Tu-Use Plant Growth Regulator can be tank mixed with Limit Turf Regulator, a flowable containing 4.0 pounds per gallon of the active ingredient amidochlor. This combination must be mixed, used, and applied according to the more restrictive label limitations and precautions. No label dosage rates should be exceeded. Specific instructions for the dosage rates, spray volumes, and application schedules are presented below.

**MIXING INSTRUCTIONS:** Fill the spray tank with two-thirds of the required amount of water and begin agitation. First, add the Limit Turf Regulator and allow to disperse. Second, add the required amount of Embark<sup>®</sup> E-Z-Tu-Use Plant Growth Regulator and allow to disperse. Finally, add the balance of the required water volume and maintain agitation prior to and during the application. Apply the spray mixture on the same day of spray preparation. Dosage rate recommendations are as follows:

Species	Amount of Embark®		Amount	of Limit
	Per Acre	Per 1,000 Sq.Ft.	Per Acre	Per 1,000 Sq.Ft.
Kentucky Bluegrass, Perennial Ryegrass,	64 fluid ounces or	1.47 fluid ounces	32 fluid ounces or	0.74 fluid ounce
Tall, Red, & Chewings Fescue	2.0 quarts		1.0 quart	

#### RATE RECOMMENDATIONS FOR TURFGRASS USING CONVENTIONAL EQUIPMENT

**SPRAY VOLUMES:** Spray volumes of 15 to 150 gallons per acre will provide sufficient coverage, but spray volumes greater than 50 gallons per acre are recommended. Avoid excessive overlap, but ensure adequate coverage to avoid skips and streaking.

#### APPLICATION SCHEDULES AND MANAGEMENT PRACTICES:

*For seedhead suppression and growth regulation in the Spring* - Apply after spring green-up to actively growing grass prior to seedhead emergence. Applications should be made after the turfgrass has developed the desired appearance and has been mowed to the desired height.

*For multiple applications to extend the turfgrass growth regulation* - Observe a 6 to 8 week interval between applications. Do not exceed an annual total of 4.5 quarts of Limit per acre per year or an annual total of 3.3 fluid ounces of Limit per 1,000 square feet per year.

Fall Application - Apply this tank mixture at least 2 months prior to winter dormancy.

**IRRIGATION AFTER APPLICATION:** For optimum results, treated areas require irrigation or rainfall 24 to 48 hours after application of at least 1/4 inch of water.

# LIMITATIONS OF THE EMBARK\* E-Z-TU-USE PLANT GROWTH REGULATOR AND LIMIT TURF REGULATOR COMBINATIONS:

- Following treatment, avoid spray areas; keep animals and people off treated areas until foliage has dried.
- Do not apply to turf less than 1 year old.
- Do not apply to residential turf sites, school yards or playgrounds.
- Caution is advised in spraying around or over ornamentals and flowers.

#### **ORNAMENTALS:**

Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied to specified ornamentals and groundcovers in commercial, residential, and public areas.

Embark® E-Z-Tu-Use PGR reduces pruning and trimming for up to 8 weeks by regulating growth and/or inhibiting flower formation.

**TIMING:** 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.

For flower inhibition of ornamental olive trees, apply Embark<sup>®</sup> E-Z-Tu-Use PGR to foliage as a full coverage spray at prebloom (tight bud stage) through the 5% bloom stage.

**SPRAY VOLUME:** For ornamentals, apply Embark\* E-Z-Tu-Use PGR to foliage as a full coverage spray to the point of runoff. Spray penetration of dense foliage and thorough coverage of all parts of shrubs, trees, and ornamentals are essential. The spray volumes will vary according to tree/shrub size, but trees 20 to 30 in height will require 10 to 15 gallons of spray solution per tree.

#### RATE RECOMMENDATIONS FOR TREES, SHRUBS, AND ORNAMENTALS

Species	Amount of Embark <sup>®</sup> E-Z-Tu-Use PGR Per Gallon of Water
Acacia, Abelia, African Daisy, Algerian Ivy, Barberry, Bottlebrush, Bougainvillea, Boxwood ( <i>Buxus sp.</i> ), Brazilian Pepper Tree, Burford Holly, Capeweed, Carob, Crape Myrtle, Elaeagnus, English Ivy, Euonymus, Ficus, Hibiscus, Holly ( <i>Ilex sp.</i> ), Iceplant, Jasmine, Laurel, Melaleuca, Nandina, Oleander, Osmanthus, Photinia, Pittosporum, Podocarpus, Privet ( <i>Ligustrum sp.</i> ), Pyracantha, Raphiolepis, Viburnum, Xylosma, & Yaupon	61/2 fl.ozs./gal. of water
Ornamental Olive Trees*	11/2 fl.ozs./gal. of water
*For flower inhibition of olive trees, apply Embark® E-2 at prebloom (tight bud stage) through the 5% bloom s	

#### LIMITATIONS FOR TURFGRASS AND ORNAMENTALS:

Embark<sup>®</sup> E-Z-Tu-Use PGR should not be applied to golf greens. Do not use in areas where there is heavy foot traffic. Do not apply to stressed, diseased, or otherwise unhealthy grass. Do not apply to plants grown in containers. Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. Do not wash foliage for at least 24 hours. If rain occurs within 8 hours, dilution of spray may occur. Avoid spray drift onto nontarget foliage. Avoid drift onto food crops. Do not allow animals to graze on treated areas. Do not apply Embark<sup>®</sup> E-Z-Tu-Use PGR to turf areas within four growing months after seeding and do not reseed within 3 days following application (except Calif. where reseeding may not occur within 2 weeks). Do not apply this product through any type of irrigation system.

# **OPTION 5**

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#### STORAGE AND DISPOSAL

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 incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke.

**RECOMMENDED USE AREAS AND BENEFITS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied to cool season and warm season turfgrass in commercial, public and noncropland areas such as:

- **Commercial lawns,** defined as areas around properties or facilities providing a service to public or private organizations including, but not limited to office buildings, hospitals, nursing homes, schools, universities, museums, libraries, sport facilities (golf courses), recreation areas, and athletic fields.
- **Residential lawns**, defined as areas associated with the household or home life including, but not limited to, apartment complexes, condominiums, and patient care areas of nursing homes, mental institutions, or convalescent homes.
- Noncropland areas, defined as vacant lots, road and curbside grass, fencelines, steep banks, rocky or rough terrain, and other fringe turf areas.
- Agricultural premises, such as around farm buildings, storage sheds, implement storage areas, and roadsides.

Embark® E-Z-Tu-Use PGR suppresses seedhead formation, decreases the amount of clippings, and reduces the mowing requirements for up to 4 weeks.

**SPRAY EQUIPMENT AND MIXING INSTRUCTIONS:** The following spray equipment is recommended for:

**EQUIPMENT:** Use conventional power spray equipment fitted with a spray boom, off-center nozzles, or spray gun. Hose end sprayers and backpack sprayers are appropriate for localized spot treatments or broadcast treatments on larger turfgrass areas. Hand pump and backpack sprayers are suitable for edging or spot treatments.

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

#### **MIXING:**

- 1. Pour the required amount of Embark\* E-Z-Tu-Use PGR into the spray tank containing approximately one-half the required amount of water.
- 2. Gordon's Professional Spray Colorant is recommended to ensure the uniformity of the application. Refer to instructions of this colorant for the proper concentration.
- 3. Fill the tank as required with water and spray as recommended.

**SURFACTANTS:** For low maintenance turf only, 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% volume/volume 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.

**RINSING:** Triple rinse the Embark<sup>®</sup> E-Z-Tu-Use 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 water and Gordon's Spray Tank Cleaner immediately after use and dispose the rinsate by approved procedures.

**SPRAY VOLUMES:** Spray volumes of 20 to 175 gallons per acre or 0.5 to 4.0 gallons per 1,000 square feet are recommended. Uniform applications are essential. Avoid spray overlaps that will increase the dosage above those recommended.

**MULTIPLE APPLICATIONS:** Embark® E-Z-Tu-Use PGR may be applied more than once per season; however, wait at least 6 weeks between applications. For fall applications, apply at least 1 month before winter dormancy. In turfgrass renovation programs, areas treated with Embark® E-Z-Tu-Use PGR may be reseeded 3 days following application (except California where reseeding may not occur within 2 weeks).

**TURF COLOR AND NITROGEN/IRON COMBINATIONS:** Turf treated with Embark® E-Z-Tu-Use PGR may appear less dense and temporarily discolored when compared with untreated turf. However, turf quality and color may be increased when compared to the untreated areas after the end growth regulation period.

Turf color and quality during weeks 1 thru 3 of the growth regulation period may be improved with an application of Ferromec<sup>®</sup> AC Liquid Iron. Schedule the application of Ferromec<sup>®</sup> AC Liquid Iron within 10 days before the application of Embark<sup>®</sup> E-Z-Tu-Use PGR. Refer to the Ferromec<sup>®</sup> AC Liquid Iron label for the fertilizer rate recommendations.

**HERBICIDE COMBINATIONS FOR TURFGRASS:** Embark® E-Z-Tu-Use PGR is a plant growth regulator and will not provide weed control. Embark® E-Z-Tu-Use PGR may be applied with a broadleaf herbicide such as Trimec® Classic Brand Broadleaf Herbicide, Super Trimec® Broadleaf Herbicide, Trimec® Southern Broadleaf Herbicide, and other herbicides EPA registered for use in turfgrass. It is essential to follow label directions exactly for both the Embark® E-Z-Tu-Use and the broadleaf herbicide used.

**EDGING WITH PUMP TYPE SPRAYERS:** Embark® E-Z-Tu-Use PGR may be used for edging grass when uniformly applied with pump type sprayers. The benefits of Embark® E-Z-Tu-Use PGR will be extended trimming intervals, reduced time and labor associated with yard maintenance, and reduced growth in areas difficult to trim.

This edging treatment can be used as a substitute for trimming in areas including:

- · along sidewalks, driveways, parking areas, road and curbside grass
- around trees, shrubs, ornamental plantings, and under fencelines or guardrails
- around rocks, signposts, or fringe areas
- around buildings, patios, houses, mobile homes, and areas associated with household or home life.
- and other turfgrass areas requiring hand or mechanical trimming.

WHEN TO USE: Generally, begin applications in the spring after full green-up and continue applications until early fall.

At the time of application, the turfgrass should have developed the desired appearance, the desired height, and sufficient foliage for uptake. Avoid scalping for all turf species. If mowing or trimming removes most of the green leaf tissue, spraying should be delayed until sufficient new growth develops to assure product absorption into green leaves. Allow one or two days after mowing or trimming before applying Embark® E-Z-Tu-Use PGR. Clippings and other debris should be removed before spraying.

Refer to Table 2 for rate recommendations.

Species	Amount of Embark <sup>®</sup> E-Z-Tu-Use*, FI. Ozs./1,000 Sq. Ft.	
Cool Season Turf	· ·	
Kentucky Bluegrass	4	
Perennial Ryegrass	4	
Tali Fescue	4	
Red Fescue (Chewings Fescue, Slender Creeping Fescue, Spreading Fescue)	4	
Warm Season Turf		
Common Bermudagrass	16	
Hybrid Bermudagrass	8	
St. Augustinegrass	4	
Centipedegrass	8	
Zoysiagrass	8	
<ul> <li>Apply the recommended amount of product in the recommended amount of product in a 6 in</li> </ul>		

#### TABLE 2. RATE RECOMMENDATIONS FOR EDGING TREATMENTS

**OVERSEEDING ESTABLISHED COOL SEASON TURFGRASS:** Overseeding established turf with cool season grass seed can improve the turf density and restore the aesthetic quality of turf. Embark\* E-Z-Tu-Use PGR can increase the success of overseeding by suppressing the growth of the existing turfgrass and by reducing the frequency of mowing by 50 percent. The reduction of mowing prevents damage to the newly established seedlings. *Refer to Table 3.* 

Season	Application Window (Days before Seeding)	Dosage Rate	Comments
Spring:	3 to 14 days	See Table 1.	Aeration and seedbed preparation should be completed after the application of Embark® E- Z-Tu-Use PGR.
Fall:	3 to 14 days	See Table 1.	In California, the application window is 14 days before seeding for spring and fall applications.

**OVERSEEDING BERMUDAGRASS TURF:** Hybrid bermudagrass is overseeded with perennial ryegrass, annual ryegrass, and other cool season grasses during the fall to enhance the appearance during winter. Embark\* E-Z-Tu-Use PGR can reduce the persistence of the cool season grasses during spring and can improve the hybrid bermudagrass recovery during the transition period.

Apply 5.0 pints of product per acre to the cool season grasses used for overseeding during early spring or prior to the recovery of the dormant bermudagrass.

#### LIMITATIONS FOR TURFGRASS:

 Do not use in areas where there is heavy foot traffic. Do not apply to stressed, diseased, or unhealthy grass.

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- Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. Do not wash foliage for at least 24 hours. If rain occurs within 8 hours, dilution of spray may occur.
- Avoid spray drift onto nontarget foliage. Avoid drift onto food crops. Do not allow animals to graze on treated areas.
- Do not apply Embark® E-Z-Tu-Use PGR to turf areas within four growing months after seeding and do not reseed within 3 days following application (except California where reseeding may not occur within 2 weeks).
- Do not apply this product through any type of irrigation system.

## **OPTION 6**

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#### STORAGE AND DISPOSAL

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 incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke.

**RECOMMENDED USE AREAS AND BENEFITS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied to cool season and warm season turfgrass in commercial, public and noncropland areas such as:

- Commercial lawns, defined as areas around properties or facilities providing a service to public or private organizations including, but not limited to office buildings, hospitals, nursing homes, schools, universities, museums, libraries, sport facilities (golf courses), recreation areas, and athletic fields.
- Residential lawns, defined as areas associated with the household or home life including, but not limited to, apartment complexes, condominiums, and patient care areas of nursing homes, mental institutions, or convalescent homes.
- Noncropland areas, defined as vacant lots, road and curbside grass, fencelines, steep banks, rocky
  or rough terrain, and other fringe turf areas.
- Agricultural premises, such as around farm buildings, storage sheds, implement storage areas, and roadsides.

Embark® E-Z-Tu-Use PGR suppresses seedhead formation, decreases the amount of clippings, and reduces the mowing requirements for up to 4 weeks.

SPRAY EQUIPMENT AND MIXING INSTRUCTIONS: The following spray equipment is recommended for:

**EQUIPMENT:** Use conventional power spray equipment fitted with a spray boom, off-center nozzles, or spray gun. Hose end sprayers and backpack sprayers are appropriate for localized spot treatments or broadcast treatments on larger turfgrass areas. Hand pump and backpack sprayers are suitable for edging or spot treatments.

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

#### MIXING:

- 1. Pour the required amount of Embark<sup>®</sup> E-Z-Tu-Use PGR into the spray tank containing approximately one-half the required amount of water.
- 2. Gordon's Professional Spray Colorant is recommended to ensure the uniformity of the application. Refer to instructions of this colorant for the proper concentration.
- 3. Fill the tank as required with water and spray as recommended.

**SURFACTANTS:** For low maintenance turf only, 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% volume/volume 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.

**RINSING:** Triple rinse the Embark® E-Z-Tu-Use 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 water and Gordon's Spray Tank Cleaner immediately after use and dispose the rinsate by approved procedures.

#### APPLICATION RECOMMENDATIONS FOR GROWTH SUPPRESSION:

**DOSAGE RATES:** Rate recommendations with broadcast applications for cool season and warm season turfgrass are presented in Table I.

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WHEN TO USE: Apply Embark<sup>®</sup> E-Z-Tu-Use PGR uniformly to green, actively growing grass. At the time of treatment, turf should have developed the desired appearance, the desired height, and sufficient foliage for uptake. 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 two weeks prior to seedhead appearance).

**FOR SEEDHEAD SUPPRESSION OF POA ANNUA:** The effect of Embark\* E-Z-Tu-Use PGR is dependent upon the timing and rate of application. Apply after uniform green-up but before the first appearance of seedheads (approximately two weeks prior to seedhead appearance). Applications after the first seedhead appearance will suppress seedheads which have not emerged. Seedheads that have emerged will not be controlled. *Refer to Table I for rate recommendations.* 

#### MOWING AND IRRIGATION:

**Mowing before application** - Grass may be mowed up to two days before applying Embark<sup>®</sup> E-Z-Tu-Use 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<sup>®</sup> E-Z-Tu-Use PGR is applied.

Treated areas can be irrigated within 24 hours after application. Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. If rain occurs within 8 hours, dilution of spray may occur.

Species	Amount of Embark <sup>®</sup> E-Z-Tu-Use				
	Pints per Acre	Fl. Ozs./1,000 Sq. Ft.			
Cool Season Turf:					
Kentucky Bluegrass	5.0	1.8			
Perennial Ryegrass					
Tall Fescue					
Red Fescue (Chewings Fescue, Slender Creeping Fescue, Spreading Fescue)					
Mixtures	See Footnote 1.	See Footnote 1.			
Annual Bluegrass/Poa annua	2.0 to 5.0	0.7 to 1.8			
Warm Season Turf:	Warm Season Turf:				
St. Augustinegrass	5.0	1.8			
Hybrid Bermudagrass (Tifgreen, Tifway, Tifdwarf, Tifway 419, and Tifgreen 328)	20.0	7.4			
Centipedegrass	20.0	7.4			
Zoysiagrass	15 to 20.0	5.5 to 7.4			
Footnote 1: For mixed species of the occur with Embark® E-Z-Tu-Use F appearance. Determine the predo application instructions for the spec	PGR and may result in irreg minant species in the mixed	ular heights or a non-uniform turf and follow the appropriate			

TABLE 1. RATE RECOMMENDATIONS FOR TURFGRASS

**SPRAY VOLUMES:** Spray volumes of 20 to 175 gallons per acre or 0.5 to 4.0 gallons per 1,000 square feet are recommended. Uniform applications are essential. Avoid spray overlaps that will increase the dosage above those recommended.

**MULTIPLE APPLICATIONS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied more than once per season; however, wait at least 6 weeks between applications. For fall applications, apply at least 1 month before winter dormancy. In turfgrass renovation programs, areas treated with Embark<sup>®</sup> E-Z-Tu-Use PGR may be reseeded 3 days following application (except California where reseeding may not occur within 2 weeks).

**TURF COLOR AND NITROGEN/IRON COMBINATIONS:** Turf treated with Embark® E-Z-Tu-Use PGR may appear less dense and temporarily discolored when compared with untreated turf. However, turf quality and color may be increased when compared to the untreated areas after the end growth regulation period.

Turf color and quality during weeks 1 thru 3 of the growth regulation period may be improved with an application of Ferromec<sup>®</sup> AC Liquid Iron. Schedule the application of Ferromec<sup>®</sup> AC Liquid Iron within 10 days before the application of Embark<sup>®</sup> E-Z-Tu-Use PGR. Refer to the Ferromec<sup>®</sup> AC Liquid Iron label for the fertilizer rate recommendations.

**HERBICIDE COMBINATIONS FOR TURFGRASS:** Embark® E-Z-Tu-Use PGR is a plant growth regulator and will not provide weed control. Embark® E-Z-Tu-Use PGR may be applied with a broadleaf herbicide such as Trimec® Classic Brand Broadleaf Herbicide, Super Trimec® Broadleaf Herbicide, Trimec® Southern Broadleaf Herbicide, and other herbicides EPA registered for use in turfgrass. It is essential to follow label directions exactly for both the Embark® E-Z-Tu-Use and the broadleaf herbicide used.

**EDGING WITH PUMP TYPE SPRAYERS:** Embark<sup>®</sup> E-Z-Tu-Use PGR may be used for edging grass when uniformly applied with pump type sprayers. The benefits of Embark<sup>®</sup> E-Z-Tu-Use PGR will be extended trimming intervals, reduced time and labor associated with yard maintenance, and reduced growth in areas difficult to trim.

This edging treatment can be used as a substitute for trimming in areas including:

- along sidewalks, driveways, parking areas, road and curbside grass
- around trees, shrubs, ornamental plantings, and under fencelines or guardrails
- around rocks, signposts, or fringe areas
- around buildings, patios, houses, mobile homes, and areas associated with household or home life.
- and other turfgrass areas requiring hand or mechanical trimming.

**WHEN TO USE:** Generally, begin applications in the spring after full green-up and continue applications until early fall.

At the time of application, the turfgrass should have developed the desired appearance, the desired height, and sufficient foliage for uptake. Avoid scalping for all turf species. If mowing or trimming removes most of the green leaf tissue, spraying should be delayed until sufficient new growth develops to assure product absorption into green leaves. Allow one or two days after mowing or trimming before applying Embark\* E-Z-Tu-Use PGR. Clippings and other debris should be removed before spraying.

Refer to Table 2 for rate recommendations.

#### **TABLE 2. RATE RECOMMENDATIONS FOR EDGING TREATMENTS**

Species	Amount of Embark® E-Z-Tu-Use*	
Fl. Ozs./1,000 Sq. Ft.		
Cool Season Turf		
Kentucky Bluegrass	4	
Perennial Ryegrass	4	
Tall Fescue	. 4	
Red Fescue (Chewings Fescue, Slender Creeping Fescue, Spreading Fescue)	4	
Warm Season Turf		
Common Bermudagrass	16	
Hybrid Bermudagrass	8	
St. Augustinegrass	4	
Centipedegrass	8	
Zoysiagrass	8	

#### FIELD MARKING PAINTS:

FIELD MARKINGS: Temporary field markings can be achieved by applying Embark<sup>®</sup> E-Z-Tu-Use PGR with line marking paints.

WHERE TO USE: Sport stadiums, sport fields (schools, colleges/universities, parks, professional facilities), and athletic fields (football, baseball, soccer, lacrosse, softball, others).

#### TURFGRASS:

Cool Season Species: Including Kentucky bluegrass, perennial ryegrass, and fescues.

*Warm Season Species:* Including bermudagrass and St. Augustinegrass. This product is not recommended for bahiagrass.

**EQUIPMENT:** Powered stripers/sprayers, walk behind stripers, or wet line paint applicators capable of delivering lines (bands) 2 to 6 inches wide.

**MATERIALS:** Water based or latex formulations of paint. Line marking paints should comply with the requirements of the appropriate governing body (eg. National Collegiate Athletic Association (NCAA), State High School Athletic Association, or others).

**APPLICATION SCHEDULE:** Generally, begin applications after full green-up in the spring and apply during active growth until early fall. Applications to turfgrass weakened by drought, insects, or disease may increase the potential for discoloration or injury.

**NUMBER OF APPLICATIONS:** Top quality water based latex paints may remain visible for one season provided that heavy use areas are resprayed or touched-up periodically. Generally, one application of Embark® E-Z-Tu-Use PGR with the line marking paint is recommended per season.

**APPLICATION RATE:** The amount of paint per unit area to assure complete opacity and color of the lines should be recommended by the manufacturer. Our recommendations for plant growth regulation with Embark\* E-Z-Tu-Use PGR are based upon applying one gallon of marking paint per 1,000 square feet.

For Cool Season Turfgrass: Apply 2 to 4 fluid ounces of Embark® E-Z-Tu-Use PGR per one gallon of marking paint to treat 1,000 square feet of line surface area.

For Warm Season Turfgrass: Apply 2 to 16 fluid ounces of Embark® E-Z-Tu-Use PGR per one gallon of marking paint to treat 1,000 square feet of line surface area.

Refer to Table 3 for specific rate recommendations.

SPECIES	AMOUNT TO USE FI. Ozs. of Embark• E-Z-Tu-Use PGR per 1		
• •	Gal. of Marking Paint per 1,000 Sq. Ft.		
Cool Season Turf			
Kentucky Bluegrass	2 - 4 fl.oz.		
Perennial Ryegrass	2 - 4 fl.oz.		
Fescues	2 - 4 fl.oz.		
Warm Season Turf	X		
Common Bermudagrass	15 - 16 fl.oz.		
Hybrid Bermudagrass	6 - 8 fl.oz.		
St. Augustinegrass	2 - 4 fl.oz.		

#### OVERSEEDING ESTABLISHED COOL SEASON TURFGRASS:

Overseeding established turf with cool season grass seed can improve the turf density and restore the aesthetic quality of turf. Embark® E-Z-Tu-Use PGR can increase the success of overseeding by suppressing the growth of the existing turfgrass and by reducing the frequency of mowing by 50 percent. The reduction of mowing prevents damage to the newly established seedlings. *Refer to Table 4.* 

TABLE 4. RECOMMENDATIONS FOR OVERSEEDING COOL SEASON TURFGRASS.

Season	Application Window (Days before Seeding)	Dosage Rate	Comments
Spring:	3 to 14 days	See Table 1.	Aeration and seedbed preparation should be completed after the application of Embark <sup>®</sup> E- Z-Tu-Use PGR.
Fall:	3 to 14 days	See Table 1.	In California, the application window is 14, days before seeding for spring and fall applications.

#### OVERSEEDING BERMUDAGRASS TURF:

Hybrid bermudagrass is overseeded with perennial ryegrass, annual ryegrass, and other cool season grasses during the fall to enhance the appearance during winter. Embark® E-Z-Tu-Use PGR can reduce the persistence of the cool season grasses during spring and can improve the hybrid bermudagrass recovery during the transition period.

Apply 5.0 pints of product per acre to the cool season grasses used for overseeding during early spring or prior to the recovery of the dormant bermudagrass.

#### LIMITATIONS FOR TURFGRASS:

 Do not use in areas where there is heavy foot traffic. Do not apply to stressed, diseased, or unhealthy grass.

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- Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. Do not wash foliage for at least 24 hours. If rain occurs within 8 hours, dilution of spray may occur.
- Avoid spray drift onto nontarget foliage. Avoid drift onto food crops. Do not allow animals to graze on treated areas.
- Do not apply Embark<sup>®</sup> E-Z-Tu-Use PGR to turf areas within four growing months after seeding and do not reseed within 3 days following application (except California where reseeding may not occur within 2 weeks).
- Do not apply this product through any type of irrigation system.

#### ORNAMENTALS:

Embark<sup>®</sup> E-Z-Tu-Use PGR may be applied to specified ornamentals and groundcovers in commercial, residential, and public areas.

Embark® E-Z-Tu-Use PGR reduces pruning and trimming for up to 8 weeks by regulating growth and/or inhibiting flower formation.

**TIMING:** 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.

For flower inhibition of ornamental olive trees, apply Embark<sup>®</sup> E-Z-Tu-Use PGR to foliage as a full cover spray at prebloom (tight bud stage) through the 5% bloom stage.

**SPRAY VOLUME:** For ornamentals, apply Embark® E-Z-Tu-Use PGR to foliage as a full cover spray to the drip point. Spray penetration of dense foliage and thorough coverage of all parts of shrubs, trees, and ornamentals are essential. The spray volumes will vary according to tree/shrub size, but trees 20 to 30 in height will require 10 to 15 gallons of spray solution per tree.

#### RATE RECOMMENDATIONS FOR TREES, SHRUBS, AND ORNAMENTALS

Species	Amount of Embark
Acacia, Abelia, African Daisy, Algerian Ivy, Barberry, Bottlebrush, Bougainvillea, Boxwood ( <i>Buxus sp.</i> ), Brazilian Pepper Tree, Burford Holly, Capeweed, Carob, Crape Myrtle, Elaeagnus, English Ivy, Euonymus, Ficus, Hibiscus, Holly ( <i>Ilex sp.</i> ), Iceplant, Jasmine, Laurel, Melaleuca, Nandina, Oleander, Osmanthus, Photinia, Pittosporum, Podocarpus, Privet ( <i>Ligustrum sp.</i> ), Pyracantha, Raphiolepis, Viburnum, Xylosma, & Yaupon	6½ fl.ozs./gal. of water
Ornamental Olive Trees*	11/2 fl.ozs./gal. of water

#### LIMITATIONS FOR ORNAMENTALS:

Do not apply to plants grown in containers. Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. Do not wash foliage for at least 24 hours. If rain occurs within 8 hours, dilution of spray may occur. Avoid spray drift onto nontarget foliage. Avoid drift onto food crops. Do not allow animals to graze on treated areas. Do not apply this product through any type of irrigation system.

#### 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.

# APPENDIX

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- *I. Advertising claims that may be used by supplemental registrants:* These claims and/or graphics may be presented on the retail container label or on the labeling accompanying the product.
- ISO 9002 Quality Assurance Logo:

