

9779-335

01-27-2010

JAN 27 2010

Alice Walker, Ph.D.  
Registration Specialist  
Winfield Solutions, LLC  
3094 Country Club Road  
Senatobia, MS 38668

Subject: Ascend  
EPA Registration No. 9779-335  
Label Amendment with multiple revisions which include revising the product description, rearrange crops to appropriate crop sections, clarify application timing and at planting directions for crops, addition of in furrow application for crops; clarify stone fruits and addition of canola to seed treatment table.  
Decision # 426102  
Application Dated: December 30, 2009

Dear Mrs. Walker:

The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(5), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit three (3) copies of your final printed labeling before you release the product for shipment. Final printed labeling means the label or labeling of the product when distributed or sold. Clearly legible reproductions or photo reductions will be accepted for unusual labels, such as those silk-screened directly onto glass or metal containers or large bags or drum labels.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(b). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

If you have any questions contact Ms. Menyon Adams at 703-347-8496 or by email at: [adams.menyon@epa.gov](mailto:adams.menyon@epa.gov).

Sincerely,

Linda A. Hollis, Chief  
CONCURRENCES  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511F)

SYMBOL	▶ 7511F						
SURNAME	▶ Adams						
DATE	▶ 01/20/10						

ACCEPTED

JAN 27 2010

# ORIGIN<sup>®</sup> ASCEND<sup>™</sup>

Under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 9779-335

## PLANT GROWTH REGULATOR

*Hormone compounds to stimulate plant growth.  
Concentrations based on biological activity.*

### ACTIVE INGREDIENTS

- \*Cytokinin, as Kinetin .....0.090%
- \*Gibberellic Acid.....0.030%
- \*Indole Butyric Acid.....0.045%

<b>OTHER INGREDIENTS</b> .....	99.835%
<b>TOTAL</b>	<b>100.000%</b>

- \*Contains 0.03 oz. cytokinins/qt.
- \*Contains 0.015 oz. indole butyric acid/qt.
- \*Contains 0.01 oz. gibberellic acid/qt.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <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>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <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>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. <b>HOTLINE NUMBER:</b> In case of medical emergency call 1-877-424-7452.</p>	

Read additional precautionary statements found inside booklet.

EPA Reg. No. 9779-335

EPA Est. No. 63603-KS-1  
NET CONTENTS: 2 1/2 Gals.

Distributed by:  
WINFIELD SOLUTIONS, LLC,  
P.O. Box 64589, St. Paul, MN 55164

0/1230/9  
BATCH CODE -----

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

Causes eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse. Wear the appropriate Personal Protective Equipment (PPE).

**Personal Protective Equipment:**

Mixers, loaders, applicators and other handlers must wear:

- long-sleeved shirt and long pants,
- shoes plus socks, and
- chemical-resistant gloves.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

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 contaminate water by cleaning of equipment or disposal of equipment washwater or rinsate.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours unless wearing appropriate PPE.

**EXCEPTION:** If the product is soil-incorporated, the Worker Protection Standard, under certain

circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water, is:

- coveralls over long-sleeved shirt and long pants,
- chemical-resistant gloves, and
- shoes plus socks.

**GENERAL CHEMIGATION INSTRUCTIONS**

Apply this product only through sprinkler including center pivot, lateral move, side (wheel) roll, traveler, big gun, solid set, hand move, or furrow irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Maintain agitation in the supply tank while adding the required amount of ASCEND, and throughout the application. ASCEND should be added to the supply tank at the end of water application (prior to last complete cycle in moving systems).

The correct amount of ASCEND to add is calculated as the rate in fluid oz. per acre x the number of acres covered by the contents of the supply tank.

(For example, if the supply tank covers ten acres and the rate on the label for that crop is 2 fluid ounce per acre, add  $10 \times 2 = 20$  fluid ounces to the supply tank at the beginning of the last full cycle).

**CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS**

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with the pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

The pesticide supply tank should be agitated throughout the application of ASCEND. ASCEND should be applied at the end of the water application.

ASCEND should be applied at the end of the irrigation period in a sufficient amount of water to allow proper coverage of plant or crop but not to exceed 18 fluid ounces of ASCEND per acre per application.

**IN-FURROW CHEMIGATION**

1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

2. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Maintain agitation in the supply tank while adding the required amount of ASCEND, and throughout the application. ASCEND should be added to the supply tank at the end of water application (prior to last complete cycle in moving systems).

The correct amount of ASCEND to add is calculated as the rate in fluid oz. per acre x the number of acres covered by the contents of the supply tank.

(For example, if the supply tank covers ten acres and the rate on the label for that crop is 2 fluid ounce per acre, add  $10 \times 2 = 20$  fluid ounces to the supply tank at the beginning of the last full cycle).

**SPRINKLER CHEMIGATION**

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to a point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Maintain agitation in the supply tank while adding the required amount of ASCEND, and throughout the application. ASCEND should be added to the supply tank at the end of water application (prior to last complete cycle in moving systems).

The correct amount of ASCEND to add is calculated as the rate in fluid oz. per acre x the number of acres covered by the contents of the supply tank.

(For example, if the supply tank covers ten acres and the rate on the label for that crop is 2 fluid ounce per acre, add  $10 \times 2 = 20$  fluid ounces to the supply tank at the beginning of the last full cycle).

ASCEND should be applied at the end of the irrigation period in a sufficient amount of water to allow proper coverage of plant or crop but not to exceed 18 fluid ounces of ASCEND per acre per application.

**IMPORTANT:** Read the entire "Directions for Use" and the "Notice" before using this product. If terms are not acceptable, return the unopened product container at once.

Apply ASCEND by ground or air. If applied by air, use 3 to 5 gallons of water per acre. If applied by ground, use 5 to 25 gallons of water per acre. For turfgrass, apply ASCEND by ground using 0.2 to 0.5 gallon on water per 1,000 square feet.

Test results have shown that this product can stimulate higher yields through a larger root mass, earlier fruiting and increased fruit retention. ASCEND is a tool to increase plant efficiency.

### **SPRAY PROGRAM FOR VEGETABLE CROPS**

#### **BEANS AND PEAS:**

- 1st Application - Apply 3.2 fluid ounces per acre when the first trifoliolate is unfolded.
- 2nd Application - Apply 3.2 fluid ounces per acre 2 weeks after the first application.
- 3rd Application - Apply 3.2 fluid ounces per acre at first bloom.

#### **ASPARAGUS, BROCCOLI, CABBAGE, CELERY, LETTUCE, MINT AND SPINACH:**

- 1st Application - Apply 3.2 fluid ounces per acre when the fifth leaf begins to unfold.
- 2nd Application - Apply 3.2 fluid ounces per acre 2 weeks after the first application.
- 3rd Application - Apply 3.2 fluid ounces per acre 2 weeks after the second application.

For maximum benefit, apply continuous applications of 0.8 - 1.2 fluid ounces per acre at 7-10 day intervals after the first application throughout the production season.

#### **CANTALOUPE, CUCUMBERS, MUSKMELON, WATERMELON, HONEYDEW, OKRA, AND SQUASH:**

- 1st Application - Apply 3.2 fluid ounces per acre when the third leaf begins to unfold.
- 2nd Application - Apply 3.2 fluid ounces per acre 2 weeks after the first application.
- 3rd Application - Apply 3.2 fluid ounces per acre 2 weeks after the second application.

For maximum yields, make continuous applications of 2 fluid ounces per acre at 7-10 day intervals after the first application throughout the growing season.

#### **EGGPLANT, PEPPER, AND TOMATO:**

- 1st Application - Apply 3.2 fluid ounces per acre when the plants have 3 true leaves.
- 2nd Application - Apply 3.2 fluid ounces per acre 2 weeks after the first application.
- 3rd Application - Apply 3.2 fluid ounces per acre 2 weeks after the second application.

For maximum yields and quality, make continuous applications of 0.8 fluid ounces per acre after the first application at 7-10 day intervals throughout the growing season.

**SWEET CORN AND POPCORN:**

- 1st Application – Apply 4.5 to 6 fluid ounces per acre in-furrow or 2 inches beside and 2 inches below seed or 3 inches below the seed with a strip till machine at planting.
- 2nd Application - Apply 3.2 fluid ounces per acre when the plants are in the 4-6 leaf stage.
- 3rd Application - Apply 3.2 fluid ounces per acre at the 8-10 leaf stage.

**WHITE OR RED POTATOES:**

Apply according to *one* of the following schedules:

To increase tuber size number and promote better rooting:

- 1st Application - Apply 3.2 fluid ounces per acre at tuber initiation.
  - 2nd Application - Apply 3.2 fluid ounces per acre 2-3 weeks after the first application.
- The last application should be during tuber bulking.

OR

To enhance tuber size and uniformity:

- 1st Application - Apply 3.2 fluid ounces per acre at tuber initiation.
- 2nd Application - Apply 3.2 fluid ounces per acre at the onset of tuber bulking.

**CARROTS, PARSLEY, RADISHES, AND TURNIPS:**

- 1st Application - Apply 3.2 fluid ounces per acre when the plants have 3 true leaves.
- 2nd Application - Apply 3.2 fluid ounces per acre 2 weeks after the first application.
- 3rd Application - Apply 3.2 fluid ounces per acre 2 weeks after the second application.

**SWEET POTATOES AND YAMS:**

- 1st Application – Apply 0.2 to 0.4 fluid ounces per acre on a band just wide enough to cover all the plants seven to fourteen days after transplanting.
- 2nd Application - Apply 0.5 fluid ounces per acre in a band as above at twenty-eight days after transplanting.
- 3rd Application – Apply 0.1 fluid ounces per week along with a foliar fertilizer such as 15-5-5 at the rate of 32 fluid ounces or 1 quart per acre. Continue this program on a weekly basis until the potatoes have desirable harvest size.

**FOLIAR SPRAY PROGRAM FOR FRUIT CROPS**

**BANANAS:**

- 1st Application - Apply 3 to 6 fluid ounces per acre shortly prior to or at first bloom.
- 2nd Application - Apply 3 to 6 fluid ounces per acre two to three weeks after the first application.

**CITRUS (GRAPEFRUIT, LEMON, LIME, AND ORANGES):**

- 1st Application - Apply 3 to 6 fluid ounces per acre at first bloom.
  - 2nd Application - Apply 3 to 6 fluid ounces per acre two to three weeks later.
- If there is an extended bloom period, make additional applications at 3 to 6 fluid ounces per acre.

**GRAPES:**

- 1st Application - Apply 3.2 fluid ounces per acre shortly prior to or at bloom stage.
- 2nd Application - Apply 3.2 fluid ounces per acre 2 weeks after the first application.



**GUAVA AND PAPAYA:**

1st Application - Apply 3.2 fluid ounces per acre shortly prior to or at first bloom stage.

2nd Application - Apply 3 to 6 fluid ounces per acre 2 to 3 weeks after the first application.

**POME (APPLE, MAYHAW):**

1st Application - Apply 3 to 6 fluid ounces per acre shortly prior to or at first bloom.

2nd Application - Apply 3 to 6 fluid ounces per acre two to three weeks after the first application.

**STONE (PEACH, CHERRY, APRICOT, NECTARINE):**

1st Application - Apply 3 to 6 fluid ounces per acre shortly prior to or at first bloom.

2nd Application - Apply 3 to 6 fluid ounces per acre two to three weeks after the first application.

**STRAWBERRIES:**

1st Application - Apply 3.2 fluid ounces per acre shortly prior to or at first bloom stage.

2nd Application - Apply 3.2 fluid ounces per acre 2 weeks after the first application.

**SPRAY PROGRAM FOR FIELD CROPS**

**ALFALFA: Established**

1st Application - Apply 3.2 fluid ounces per acre upon dormancy break. Apply when sufficient re-growth is present.

2nd Application - Apply 3.2 fluid ounces per acre after each cutting. Apply when sufficient re-growth is present.

**ALFALFA: Newly Seeded**

1st Application - Apply 3.2 fluid ounces per acre when seedling alfalfa is in the 3<sup>rd</sup> to 4<sup>th</sup> trifoliate stage.

**CANOLA:**

1st Application - Apply 3.2 oz per acre between the rosette stage and bolting.

2nd Application - Apply 3.2 oz per acre at 20 percent bloom.

3rd Application - Apply 3.2 oz per acre at early pod fill.

**COTTON - Non-Transgenic Varieties:** Apply ASCEND according to *one* of the following schedules.

**Schedule A:**

1st Application - Apply 3 fluid ounces per 50 lbs. of seed in the hopper box.

OR

Apply 3.2 fluid ounces per acre in-furrow or 2 inches beside and 2 inches below seed or 3 inches below the seed with a strip till machine at planting.

2nd Application - Apply 3 fluid ounces per acre at pinhead square. This can be applied in a tank mix that contains 4 fl. oz. per acre of Mepex® Plant Regulator brand of mepiquat chloride.

3rd Application - Apply 4 fluid ounces per acre at early bloom.

**Schedule B:**

- 1st Application - Apply 2 fluid ounces per acre on a band at the 3-7 leaf stage.
- 2nd Application - Apply 3 fluid ounces per acre at the pinhead square stage. This can be applied in a tank mix that contains 4 fl. oz. per acre of Mepex® Plant Regulator brand of mepiquat chloride.
- 3rd Application - Apply 3 fluid ounces per acre at early bloom.

**COTTON - Transgenic Varieties:**

(Cotton varieties that have been genetically manipulated to have insect-resistance and/or herbicide-resistance built in)

- 1st Application - Use according to *one* of the following methods
  - Apply 3 fluid ounces per 50 lbs. of seed in the hopper box.
  - OR
  - Apply 3.2 fluid ounces per acre in-furrow or 2 inches beside and 2 inches below seed or 3 inches below the seed with a strip till machine at planting.
- 2nd Application - Apply 4 fluid ounces per acre at pinhead square. This can be applied in a tank mix that contains 4 fl. oz. per acre of Mepex® Plant Regulator brand of mepiquat chloride.
- 3rd Application - Repeat the above application at first bloom. If needed for vegetative growth control, repeat the above application at mid-bloom.

Higher rates and/or late season applications may be warranted under high stress conditions where square and/or boll retention is needed. During the bloom and post-bloom period, additional applications or higher rates can be applied but do not exceed a total of 24 fluid ounces per acre per season.

**FIELD CORN:**

- 1st Application - Apply 4.5 to 6 fluid ounces per acre in-furrow or 2 inches beside and 2 inches below seed or 3 inches below the seed with a strip till machine at planting.
- 2nd Application - Apply 3.2 fluid ounces per acre at the 3-4 leaf stage.
- 3rd Application - Apply 3.2 fluid ounces per acre at the 8-11 leaf stage.

**FLAX:**

- 1st Application - Apply 3.2 fluid ounces per acre when the plant is 2-4 inches tall.
- 2nd Application - Apply an additional 3.2 fluid ounces per acre two to three weeks later.

**GRAIN SORGHUM:**

- 1st Application - Apply 4.5 to 6 fluid ounces per acre in-furrow or 2 inches beside and 2 inches below seed or 3 inches below the seed with a strip till machine at planting.
- 2nd Application - Apply 3.2 fluid ounces per acre at the 3-5 leaf stage.
- 3rd Application - Apply 3.2 fluid ounces per acre after the 8th but before the 12th leaf stage.

**PEANUTS:**

- 1st Application - Apply 3.2 fluid ounces per acre at the 3-5 leaflet stage.
- 2nd Application - Apply 3.2 fluid ounces per acre at early flowering.
- 3rd Application - Apply 3.2 fluid ounces per acre at initial pegging.
- 4th Application - Apply 4.8 fluid ounces per acre during early pod fill.

**SOYBEANS:** Apply according to *one* of the following schedules.

- 1) Apply 3.2 fluid ounces per acre at the 3-5 trifoliate leaf stage. Apply a second application of 3.2 fluid ounces prior to bloom.
- 2) If the first application is missed, apply 6.4 fluid ounces per acre prior to bloom.

**SUGAR BEETS:**

1st Application - Apply 3.2 fluid ounces per acre between the 2<sup>nd</sup> and 10<sup>th</sup> true leaf stage.

2nd Application - Apply 3.2 fluid ounces per acre 2-3 weeks after the first application.

**SUGARCANE:**

1st Application - Use *one* of the following methods:

Apply 2 fluid ounces per acre in the furrow at planting.

OR

Apply 3.2 fluid ounces per acre at the 2-3 leaf stage.

2nd Application - Apply 3.2 fluid ounces per acre one month after emergence.

Additional Applications - Apply 3.2 fluid ounces per acre on monthly intervals throughout the production season for maximum benefit.

**SUNFLOWERS:**

1st Application - Apply 3.2 fluid ounces per acre at 4-true leaves.

2nd Application - Apply an additional 3.2 fluid ounces per acre two to three weeks later.

**WHEAT, BARLEY, OATS, AND RYE:** Apply according to *one* of the following schedules.

- 1) Apply 4.5 to 6 fluid ounces per acre in-furrow at planting.

OR

- 2) If no at-planting application, apply 3.2 fluid ounces per acre prior to jointing.

Apply 3.2 fluid ounces at the flag leaf stage.

**FOLIAR SPRAY PROGRAM FOR RICE**

ASCEND should be applied at 3.2 fluid ounces per acre as a foliar spray to the plant during either one of the following stages of development.

**Primary Recommendations - 3 to 7 Leaf Stage:** This application must be made after the rice seedling has 3 fully emerged leaves and the 4th leaf is beginning to emerge, but before the seedling has completed development of 7 leaves or 3 tillers. This period for application generally begins about 3-6 weeks after seeding and ends 5-9 weeks after seeding. The duration of this period depends on the variety and the growing conditions. This application may be made in conjunction with corresponding herbicide applications.

**Alternate Recommendation - Two Millimeter (mm) Panicle Growth Stage:** If the primary application is missed, ASCEND can be applied to stimulate cell differentiation in the developing panicle. This application must be made when no more than 10% of the main culms are at the 2 mm panicle growth stage. The 2 mm panicle growth stage occurs immediately after internode elongation or joint movement has begun. ASCEND must be applied as soon as internode elongation is detected so the 2 mm panicle growth stage is not missed. It is better to apply slightly early than to apply late. **IMPORTANT:** Timing of the application at 2 mm growth stage is critical. Check the entire field for stage of plant development. Large fields may require split applications on upper and lower ends of the field to ensure proper timing throughout the field.

### TURFGRASS

On all turfgrass, regardless of use, use no more than 0.3 fluid ounces per 1,000 square feet per month.

**WARM SEASON TURF (Bermuda, Bermuda hybrids, Zoysia, Centipede, St. Augustine, etc.):** For lower traffic areas and where ASCEND is used as a maintenance program, begin applications early in the growing season. Apply at the rate of 0.1 to 0.15 fluid ounces per 1,000 square ft. Maintenance application should be made on a two to three week schedule throughout the growing season. Applications can be made with foliarly-applied urea for added benefits.

**COOL SEASON TURF (Tall Fescue, Rye, Bentgrass, Bluegrass, etc.):** Apply 0.15 fluid ounces per 1,000 square feet in fall, or when stand is established. Repeat application in late winter when grasses begin to grow actively.

**APPLICATION WITH FOLIARLY-APPLIED UREA:** Maximum benefit and color can be achieved when ASCEND applications are made with foliarly-applied urea solutions. To prepare urea solution, dissolve 46% urea into spray solution at the rate of 1.0 lb. per 5,000 square feet to be sprayed and apply with specified rate of ASCEND.

### SPECIFIC RATES OF APPLICATION

**TEES AND GREENS:** Apply 0.1 to 0.15 fluid ounces per 1,000 square feet on a 2 week schedule throughout the growing season. Begin in early spring after grasses have begun to grow. Sunbelt and transition zones should continue spray program throughout playing season. Courses north of the transition zone should continue applications through September.

**FAIRWAYS:** Begin applications in early spring as soon as grasses have begun to actively grow. Apply 0.1 fluid ounce per 1,000 square feet and repeat on a monthly schedule as long as grass is growing.

**PRE-TOURNAMENT QUICK GREEN-UP:** Apply at the rate of 0.1 to 0.15 fluid ounces per 1,000 square feet in conjunction with urea solution 4 to 5 days prior to playing time. Make application with a minimum spray volume of 0.5 gallon of water per 1,000 square feet.

**SPRING DORMANCY BREAK:** Apply 0.1 fluid ounce per 1,000 square feet in spring as soon as new growth (opening) is visible. Raking of thatch prior to making this application is most desirable. Application at this time generates rapid growth and often reduces incidence of "spring die back" on certain species of grass.

**FALL APPLICATION FOR WINTER HARDINESS:** Make 2 applications 7-10 days apart in late summer or early fall just prior to the cessation of normal active growth. Apply 0.1 to 0.15 fluid ounces per 1,000 square feet. Make application with a spray volume of 0.5 gallon of water per 1,000 square feet. Applications at this time will greatly increase root mass and depth of roots. Winter kill problems are often greatly reduced.

**COMMERCIAL TURF, CEMETERIES, ATHLETIC FIELDS, GOLF COURSES, AND OTHER FINE TURF AREAS:** Applications of 0.1 to 0.15 fluid ounces per 1,000 square feet made at any point during the growing season will produce desirable results. Make applications during the very early growth stages and continue on a regular monthly schedule throughout the growing season. Healthier and more beautiful turf can be realized in high traffic areas such as golf greens and tees by making regular applications every two weeks.

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### SOD FARMS

Apply 4-8 fluid ounces per acre on a monthly basis during the growing season. Two weeks prior to cutting sod, make an application of 4 to 8 fluid ounces per acre.

### SPECIFIC RATES OF APPLICATION

After sod is cut, a reestablishment program is necessary. Start this program as soon as there is any greening over 30% of the area. Spray with 4 to 8 fluid ounces per acre of ASCEND. Repeat in 2 weeks and thereafter once per month throughout the growing season. Make a final application of 4 to 8 fluid ounces per acre 2 weeks before dormancy.

Start the monthly program again as soon as some green-up has started in the spring.

When species started from seed have reached 1 inch in height, the monthly treatment may be started and followed in the same way as non-seeded varieties.

### SPECIAL NOTE FOR ALL DIRECT SEEDED GRASSES

Acting through its unique combination of plant growth regulators, ASCEND is a ready-to-use seed dressing that aids in enhancing germination and early season root and top growth.

ASCEND can be used at the rate of 2 to 4 fluid ounces per 100 pounds of seed. Sufficient water needs to be added to insure uniform coverage. Improper coverage will minimize product performance.

### SEED TREATMENT

#### SPECIAL NOTE FOR ALL DIRECT SEEDED CROPS

Acting through its unique combination of plant growth regulators, ASCEND is a ready-to-use seed dressing that aids in enhancing germination and early season root and top growth.

Use ASCEND at the rate of 1 to 4 fl. oz. per 100 lbs. of seed. Use the higher rate when conditions favor poor germination such as cool soil temperatures or low germination seed. Sufficient water needs to be added to insure uniform coverage. Improper coverage will minimize product performance.

Seed Type				
Alfalfa	Celery	Lettuce	Peas	Spinach
Barley	Corn	Melons	Peppers	Squash
Cabbage	Cotton	Oats	Rice	Sugarbeets
Canola	Cucumber	Okra	Rye	Sunflowers
Carrots	Dry Beans	Onions	Sorghum	Tomatoes
Cauliflower	Eggplant	Peanuts	Soybeans	Wheat

### RED OR WHITE POTATOES:

Choose *one* of the following methods:

Dip potato seed pieces in a solution of 1 part ASCEND to 375 parts water (0.34 fl. oz./gal. of water) for 30 to 60 seconds or spray seed pieces with the above solution so that seed pieces are covered and thoroughly wetted. ASCEND can be used with a fungicide program.

OR

Use 0.50 oz. to 1.0 oz (volumetric measurement), which equals 8 grams to 16 grams on a dry basis of ASCEND per 100 lbs. of cut seed pieces. Treat seed pieces immediately after they have been cut. Apply so that the cut seed pieces are thoroughly covered. ASCEND can be mixed with other seed treatments and carriers such as fir and alder bark to insure uniform coverage.

**SWEET POTATOES AND YAMS:**

Dip potato slips in a solution of 1 part ASCEND to 375 parts water (0.34 fl. oz./gal. of water) for 30 to 60 seconds. ASCEND can be used with a fungicide program.

**MECHANICAL SEED TREATERS**

Apply the appropriate amount of ASCEND to a premeasured amount of seed and mix thoroughly until all seed are uniformly coated. Seed can be treated in this manner and stored until used for planting. Do not use treated seed for food, feed or oil purposes. An approved dye must be added to distinguish ASCEND treated seed and prevent inadvertent use for food, feed or oil purposes. Seed treated with this product must be labeled in accordance with all applicable requirements of the Federal and State seed laws. **DO NOT USE TREATED SEED FOR FOOD, FEED OR OIL PURPOSES.**

**BROADCAST SEED APPLICATION**

Partially fill broadcast spreader with a premeasured amount of seed. Apply the appropriate amount of ASCEND diluted with water on the surface of the seed. Mix with a stick or paddle until all seed are coated. Repeat procedure until broadcast spreader is filled. **DO NOT USE TREATED SEED FOR FOOD, FEED OR OIL PURPOSES.** Treat only those seeds needed for immediate use and planting. Do not store excess treated seed beyond planting time.

**SPECIAL NOTE FOR ALL TRANSPLANTED CROPS**

Two methods are recommended for this program:

- A. Dip or spray roots with a solution of 0.75 fluid ounces of ASCEND per gallon of water prior to transplanting.
- B. Bedding seedlings may be sprayed or drenched in flats 12-24 hours before transplanting to reduce transplant shock with a solution of 0.75 fluid ounces of ASCEND per gallon of water.

Begin the foliar program two (2) weeks after transplanting. A combination of the transplant and foliar spray program is most effective.

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Protect from freezing. Store out of direct sunlight.

**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:** Use label language appropriate for container size and type.

**Nonrefillable containers.** Do not reuse or refill this container. Clean container promptly after emptying.

**Nonrefillable container equal to or less than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. 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.

**Nonrefillable container greater than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Tip the container over onto its other end and tip it back and forth

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several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. 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.

**Refillable container.** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. 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.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure or accident, call CHEMTREC 1-800-424-9300.**

#### **WARRANTY DISCLAIMER**

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