# 9779-335

04/04/2005



(Logo)

# **ESCALATE**<sup>®</sup>

PLANT GROWTH REGULATOR

Hormone-like compounds in a nutrient solution 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%
OTHER INGREDIENTS		99.835%
	TOTAL	100.000%

# **GUARANTEED ANALYSIS**

Copper (Cu)	0.2%
Iron (Fe)	0.9%
Total Manganese (Mn)	0.9%
Zinc (Zn)	1.25%

Derived from copper citrate, iron citrate, manganous citrate, and zinc citrate.

\*Contains 26.8 mg cytokinins/fl. oz.

\*Contains 13.4 mg indole butyric acid/fl. oz.

\*Contains 8.9 mg gibberellic acid/fl. oz.

# KEEP OUT OF REACH OF CHILDREN

# CAUTION

Read additional precautionary statements found inside booklet.

EPA REG. NO. 9779-335

EPA EST. NO. 63603-KS-1

Distributed by: AGRILIANCE, LLC P.O. Box 64089, St. Paul, MN 55164-0089

NET CONTENTS: 2 1/2 Gallon 0/J20/4

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes eye irritation. Harmful if absorbed through the skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID	
lf 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>
Have the produ	ict container or label with you when calling a poison control center or doctor, or pent. In case of emergency call 1-877-424-7452.

#### Personal Protective Equipment:

Applicators and other handlers must wear long-sleeved shirts and long pants, shoes plus socks, and waterproof 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.

#### 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 wash waters.

## 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 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.

**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, waterproof gloves, and shoes plus socks.

# 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:** For one gallon or larger plastic, triple rinse (or equivalent). Then offer for recycling, or reconditioning or puncture and dispose in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### 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 nonuniform 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 Escalate, and throughout the application. Escalate 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 Escalate 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.

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Chemigation systems connected to public water systems must contain a functional, reducedpressure 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 ESCALATE. ESCALATE should be applied at the end of the water application.

ESCALATE 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 ESCALATE 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, solenoidoperated 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 Escalate, and throughout the application. Escalate 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 Escalate 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 Escalate, and throughout the application. Escalate 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 Escalate 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).

ESCALATE 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 ESCALATE 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.

ESCALATE may be applied by ground or air. If applied by air, it is recommended to use 3 to 5 gallons of water per acre. If applied by ground, it is recommended to use 10 to 20 gallons of water per acre.

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

#### FOLIAR SPRAY PROGRAM FOR VEGETABLE CROPS

#### **BEANS:** Three foliar applications are recommended.

1st Application - Apply 3.2 fluid ounces per acre when the first trifoliate 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.

BROCCOLI, CABBAGE, LETTUCE, SPINACH: Three foliar applications are recommended. 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, WATERMELON, HONEYDEW, AND SQUASH:** Three foliar applications are recommended.

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.

#### **PEPPER AND TOMATO:** Three foliar applications are recommended.

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: Two applications are recommended.

1st Application - Apply 3.2 fluid ounces per acre when the plants are in the 4-6 leaf stage. 2nd Application - Apply 3.2 fluid ounces per acre at the 8-10 leaf stage.

**WHITE OR RED POTATOES:** Dip potato seed pieces in a solution of 1 part ESCALATE to 375 parts water for 30 to 60 seconds. ESCALATE can be used with a fungicide program.

1st Application - Apply 3.2 fluid ounces per acre at tuber initiation which occurs 4 weeks after emergence.

2nd Application - Apply 3.2 fluid ounces per acre 2-3 weeks after the first application. The last application should be at the beginning of bloom in those varieties that flower.

#### FOLIAR SPRAY PROGRAM FOR FRUIT CROPS

**CITRUS (ORANGES):** Two applications are recommended.

1st Application - Apply 3.2 fluid ounces per acre at first bloom.

2nd Application - Apply 3.2 fluid ounces per acre when fruit is approximately 1/2-inch in diameter.

#### STRAWBERRIES: Two applications are recommended.

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

# FOLIAR SPRAY PROGRAM FOR FIELD CROPS

**COTTON:** Apply ESCALATE according to one of the following schedules.

#### Schedule A:

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

Apply 2 fluid ounces per acre on a band at the 3-7 leaf stage.

Apply 4 fluid ounces per acre at the pinhead square stage.

#### Schedule B:

Apply 1 fluid ounce per acre on a band at first true leaf. Apply 2 fluid ounces per acre on a band at the 3-7 leaf stage. Apply 3 fluid ounces per acre at the pinhead square stage. Apply 3 fluid ounces per acre at early bloom.

#### Schedule C:

Apply 2 fluid ounces per acre on a band at the 2-7 leaf stage. Apply 3 fluid ounces per acre at the pinhead square stage. Apply 3 fluid ounces per acre at early bloom.

#### Schedule D:

Apply 2 fluid ounces per acre in the seed furrow at planting. Apply 3 fluid ounces per acre at the pinhead square stage. Apply 4 fluid ounces per acre at early bloom.

Higher rates and/or late season applications may be warranted under high stress conditions where square and/or boll retention is needed. Best results are obtained when ESCALATE is used for a total not to exceed 24 fluid ounces per acre are applied.

**FIELD CORN:** ESCALATE works best on varieties that have a tendency for multiple earing. Two applications are recommended.

1st Application - Apply 3.2 fluid ounces per acre at the 3-4 leaf stage.

2nd Application - Apply 3.2 fluid ounces per acre at the 8-11 leaf stage.

**GRAIN SORGHUM:** Two applications are recommended.

1st Application - Apply 3.2 fluid ounces per acre at the 3-5 leaf stage.

2nd Application - Apply 3.2 fluid ounces per acre after the 8th but before the 12th leaf stage.

**PEANUTS:** Four applications are recommended.

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 initial pegging.

3rd Application - Apply 3.2 fluid ounces per acre 10-14 days after the second application.

4th Application - Apply 4.8 fluid ounces per acre during 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:** Two applications are recommended.

1st Application - Apply 3.2 fluid ounces per acre after thinning.

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

WHEAT: Apply according to one of the following schedules.

1) Apply 3.2 fluid ounces per acre prior to jointing. Apply an additional 3.2 fluid ounces at the flag leaf stage.

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 If the first application is missed, apply 6.4 fluid ounces per acre at the flag leaf stage.

#### FOLIAR SPRAY PROGRAM FOR RICE

ESCALATE 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, ESCALATE 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. ESCALATE 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, no more than 6 fluid ounces per 1,000 square feet per month should be used.

#### SPECIAL NOTE FOR ALL DIRECT SEEDED CROPS

An in-furrow spray of 2 fluid ounces per acre or an appropriate amount applied as a seed coating will greatly enhance germination, seedling vigor, and rooting of any crop.

#### 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 ESCALATE 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 ESCALATE per gallon of water.

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

ESCALATE IS NOT A FERTILIZER. ALWAYS USE WITH GOOD FERTILIZER PRACTICES.

**NOTICE:** Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such use.