#### **UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460



OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Lizbeth Rea Etigra 501 Cascade Pointe Lane, Suite 103 Cary, NC 27513

FEB 0 4 2009

Dear Ms. Rea:

Subject:

Amendment of label to add Barley and Wheat

Ethephon E-AG 2 Plant Growth Regulator

EPA Registration No. 79676-60

Decision Number 401185

Your Submissions Dated 9/25/08

The labeling referred to above submitted in connection with the Federal Insecticide, Fungicide and Rodenticide, as amended are acceptable provided you make the following changes before you release the product for shipment:

#### Label comments

- 1. On page 1, revise the first sentence under the product name to read: "Intended for Commercial or Agricultural Use only."
- 2. On page 1, after the Companies address and add your phone number and/or email address incase users have questions about the directions.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide. Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance. As an alternative, you may refer consumers to the company's phone number or e:mail address.

- 3. On page 2, under "Applicators and other handlers must wear," revise the second paragraph starting with "Discard clothing and other absorbent....." by adding the header in bold cap User Safety Requirements.
  - In addition on n page 2, under "Precautionary Statement," after "Corrosive" revise "Do not get in eyes or clothing" to follow after "Wear safety goggles when handling." Thereby all eye statement are given the appropriate attention.
- 4. On page 4, in the first bullet revise the sentence to read: "Do not exceed the rate of Ethephon E-AG 2 Plant Growth Regulator per acre per year specified on this label."
- 5. On page 5, under "Mixing Directions" delete the word "Caution" since the word "caution" is a signal word and can only be used for that purpose. Since the title has been changed to read "restrictions" no other word is needed.
- 6. On page 5, revise the third bullet under "Other Precautions" to read "Use only the additives specified on this label..." since rates are mandatory.
- 7. On page 7, in the table for "Apples" under the area titled "For Promotion of Uniform Ripening and Coloring..." revise the word "recommendations" in the second sentence to read "instructions" since the application instructions are mandatory.
- 8. On page 7, in the table for "Apples" under the area titled "For Thinning and Return Bloom," in the first full paragraph, revise the second to last sentence to read: "Consult local Extension Specialists for more information about which products can be mixed with this product." This will qualify what types of information they can obtain so that the reader is not mislead to ask for application "recommendations," which are mandatory.
- 9. On page 9, in the first bullet under "Precautions and Restrictions" you instruct "...harvested within three days after treatment..." however in the table you instruct "...spray at least three days before harvest." These instructions contradict on another, pick one.
- 10. On page 9, under "Precautions and Restrictions," in the second bullet revise the word "recommended" to "specified" since rates are mandatory.
- 11. On page 10, in the table under the heading "For Concentrations of Maturity and Earlier Fruit Coloring" revise the two sub headings "Concentration of first harvest" and "Concentration of final harvest" to read: "When applying at first harvest Concentration:" and "When applying at final harvest concentration:" to clarify that you must pick one set of instructions.
- 12. On page 13, Add a section titled "Tokay Grapes" and include any restrictions (if applicable). You must also state the maximum active ingredient allowed per acre per year.

- 13. On page 19, under "Precautions and Restrictions," in the third bullet revise the word "recommended" to "specified" since rates are mandatory.
- 14. On page 20, under the table "How to Prepare Ethephon E-AG 2 Plant Growth Regulator Spray Solutions for use in Walnuts" revise the statement "Not Recommended" since rates are mandatory.
- 15. On page 21, under "Use Rates," revise the first and second the sentences to read: "The specified application rate will be determined by environmental conditions and lodging pressure listed on the table. Contact your state extension specialist for information on local varying conditions." The rates and phi specified are mandatory.
- 16. On page 22, revise the heading "Recommended Barley and Wheat Application Rates" to read: "Barley and Wheat Application Rates" since rates are mandatory.
- 17. On page 22, revise the rate in the table for Barley (spring and winter seasons)/Heavy to read "1 to 1 ½" to match the parent label's rates.
- 18. On page 22, under "Restrictions" revise the \* to read: "Restrict application with the 2-pint rate to the following anticipated..." since rates are mandatory.
- 19. On page 22, under "Restrictions" revise the \*\* to read: "Do no apply this product if it is anticipated that anytime..." to make definitive.
- 20. On page 24, in the table for "Mistletoe Removal" revise the word "recommended" to read: "specified" in both sections.
- 21. On page 25, revise the heading under "Turf" to read: "Not intended for Residential Use".
- 22. On page 26, under Storage and Disposal" change "Container Disposal" to "Container Handling."
- 23. On page 27, please revise the "Warranty Statement" by inserting "To the extent consistent with applicable law" in the first paragraph, prior to the last sentence "Etigra make no warranties or merchantability......", and the second paragraph, second sentence "The Exclusive Remedy of the User or Buyer....."

#### Changes that are needed to provide definitive language:

- 3. On page 5, after "Mixing Directions" revise the second sentence to read: 'Do not allow any spillage of the concentrated product on any spray equipment..."
- 4. On page 5, under "Equipment Cleaning" revise the last sentence to read: "to prevent damage, rinse any exposed surface thoroughly using soap and water within..."

- 5. On page 6, in the table for "Apples," revise the first sentence of the second paragraph to read: "Make applications of Ethephon E-AG Plant Growth Regulator when temperatures are between..."
- 6. On page 10, under "Precautions and Restrictions," revise the fourth bullet to read: "Applications to blueberry plants under drought stress or when excessively high temperatures exist may result in defoliation and reduced yield."
- 7. On page 10, under "When to Harvest Blueberries," revise the first sentence to read: "Harvest when berries have reached maturity..."
- 8. On page 11, under "Precautions and Restrictions," revise the second sentence in the second bullet to read: "Do not treat fields where soluble solids are running less than 10%."
- 9. On page 11, under "When to Harvest Cantaloupe," revise the first sentence to read: "Monitor treated fields closely."
- 10. On page 12, under "Precautions and Restrictions," revise the second sentence in the fourth bullet to read: "Do not treat trees that experienced severe gummosis the previous year to prevent tree damage."
- 11. On page 13, under "Precautions and Restrictions," in the second sentence of the first bullet revise the sentence to read: "Only use the higher rates when grapes had difficulty..."
- 12. On page 13, under "Raisin Production (Thompson Seedless)" in the first bullet, revise the first sentence to read: "Do not treat grapes which are under stress from insect damage or moisture."
- 13. On page 18, in the second paragraph of the table, revise the last sentence to read: "Use settings on spray equipment (ground or air) and volumes that provide uniform spray coverage."
- 14. On page 18, in the fourth paragraph, revise the second sentence to read: "...applications are made, reduce the amount of Ethephon E-AG 2 Plant Growth Regulator in proportion to the area actually treated."
- 15. On page 18, under "Early and Midseason Crops OR High Temperatures," revise the second sentence of the second paragraph to read: "Use settings on spray equipment (ground or air) and volumes that provide uniform coverage."
- 16. On page 18, under "Late Season or Coastal Crops or Cool Temperatures," revise the second sentence of the first paragraph to read: "Use settings on spray equipment (ground or air) and volumes that provide uniform coverage."

- 17. On page 19, under "Advancing Harvest" revise the last sentence to read: "Schedule a second shake 10-12 days..."
- 18. On page 20, in the table for "Walnuts," revise the last sentence of the first section to read: "Use application equipment designed to provide penetration of the entire tree such as large air carrier sprayers or volute sprayer attachments."
- 19. On page 21, under "Application," revise the second sentence to read: "Do not allow overlapping sprays as yield and rate loss may be exaggerated."
- 20. On page 22, under "Restrictions" revise the \*\* to read: "Do no apply this product if it is anticipated that anytime..."
- 21. On page 22, under "Irrigated Wheat and Barley" delete the phrase "it is recommended" so that the sentence will read: "To prevent stress on the crop, irrigate prior to and after..."
- 22. On page 22, under "Precautions and Restrictions" revise the second bullet to read: "Do not apply if trees are weak or under stress from drought, insect or disease pressure..."
- 23. On page 24, under "For Leafy Mistletoe Removal," revise the last sentence of the first paragraph to read: "Make retreatment of mistletoe regrowth during the indicated application period."
- 24. On page 25, under "Precautions and Restrictions" revise the second sentence of the second bullet to read: "Do not apply if turfgrass..."
- 25. On page 25, under "Precautions and Restrictions." revise the fourth bullet to read: "Only apply Ethephon E-AG 2 Plant Growth Regulator to actively growing turf and which has not become dormant."
- 26. On page 25, under "Precautions and Restrictions," revise the third sentence of the 8th bullet to read: "Wash any plastic materials and painted surfaces which come in contact with Ethephon E-AG Plant Growth Regulator spray mixture thoroughly with detergent..."

A stamped copy of the labeling is enclosed for your records. Please submit one final printed copy of the labeling before releasing the product for shipment. If you have any questions regarding this label, please contact Autumn Metzger at (703) 305-5314.

Singerely,

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Product Manager (22)

Fungicide Branch

Registration Division (7505P)

### **Ethephon E-AG 2 Plant Growth Regulator**

For Commercial or Agricultural Use Only - Not for Residential Use.

For use on Tobacco, Tomatoes, Cherries, Grapes, Apples, Walnuts, Peppers, Blackberries, Blueberries and Cantaloupes, Turf, for the removal of Dwarf Mistletoe in Ornamental Conifers and Leafy Mistletoe in Ornamental Deciduous Trees and for the elimination of undesirable fruit on Apple, Crabapple, Carob, and Olive trees and for decreasing lodging in Barley and Wheat.

#### ACTIVE INGREDIENT:

Etherhor: (2-Chlo oethyl) phosphonic acid*	 21.7%
OTHER INGREDIENTS:	 <u>78.3%</u>
TOTAL:	

<sup>\*1</sup> gailon contains 2 lbs. ethephon.

## KEEP OUT OF REACH OF CHILDREN DANGER – PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

	FIRST AID
If in eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.
	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
	Call a poison control center or doctor for treatment advice.
If swallowed:	Call a poison control center or doctor immediately for treatment advice.
	Have person sip a glass of water if able to swallow.
	Do not induce vomiting unless told to do so by the poison control center or doctor.
	Do not give anything by mouth to an unconscious person.
If on skin or	Take off contaminated clothing.
clothing:	Rinse skin immediately with plenty of water for 15-20 minutes.
	Call a poison control center or doctor for treatment advice.
If inhaled:	Move person to fresh air.
	• If person is not breathing, call 911 or an ambulance, then give artificial respiration,
•	preferably by mouth-to-mouth, if possible.
	Call a poison control center or doctor for further treatment advice.
	HOT LINE NUMBER

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

#### NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote is available. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

Victims of severe overexposure by inhalation should be kept under medical observation for up to 72 hours for delayed onset of pulmonary edema. In a victim of overexposure by ingestion, careful gastric lavage is required due to the possibility of stomach or esophageal perforation. This material is an acid but the use of alkaline substances to neutralize it is contraindicated.

EPA Reg. No. 79676-60

EPA Est. No.

Manufactured for:

Etigra®
501 Cascade Pointe Lane, Suite 103
Cary, NC 27513
www.etigra.com

Ethephon E-AG 2 Plant Growth Regulator contains ethephon, the active ingredient used in Ethrel®.

**Net Contents:** 

ACCEPTED
with COMMENTS
In EPA Letter Dated

FEB 4 2009

Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the posticide registered under #FA Reg. No.

79676-60

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

**CORPUSIVE:** Causes irreversible eye damage. Wear safety goggles when handling. Harmful if swallowed or absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Do not inhale vapors as this product will irritate mucous membranes.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance selection chart.

#### Applicators and other handlers must wear:

- long-sleeved shirt and long pants;
- chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene or barrier laminate;
- shoes plus socks, and;
- protective eyewear

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard for agricultural pesticides (WPS) [40 CFR 170 240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, 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. As soon as possible, wash thoroughly and change into clean clothing. Wash the outside of gloves before removing.

#### **ENVIRONMENTAL HAZARDS**

Do not contaminate water used for irrigation or domestic purposes. Do not apply directly to water, or to areas where surface is water present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Avoid spray drift to nearby crops, as this product will cause modifications in plant growth. Plant injury or reduced yields may result. Do not plant another crop within 30 days after treatment.

#### SPRAY DRIFT

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment and weather related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- 1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

When states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the <u>Aerial Drift Reduction Advisory Information</u>, below.

#### **Aerial Drift Reduction Advisory Information**

[This section is advisory in nature and does not supersede the mandatory label requirements].

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions below).

#### **Controlling Droplet Size:**

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle
   sypes lower pressure produces larger droplets. When higher flow rates are needed, use higher
   flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream
  produces larger droplets than other orientations and is the recommended practice. Significant
  deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle
  types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid
  stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

#### IMPORTANT:

- Do not apply Ethephon E-AG 2 Plant Growth Regulator through any type of irrigation system.
- Do not use this product for purposes other than those listed on the label.

 Do not exceed the rate of Ethephon E-AG 2 Plant Growth Regulator per acre per year recommended on this label.

#### DIRECTIONS FOR USE

It is a Molation 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 regulations.

Read entire label before using this product.

#### **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 agricultural 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 (PPE), notification to workers, 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 48 hours. The REI is 72 hours in areas where average rainfall is less than 25 inches per year.

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 made of any waterproof material, such as nitrile, butyl, neoprene, or barrier laminate.
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

Notify workers of the application by warning them orally and posting warning signs at entrances to treated areas:

Ethephon E-AG 2 Plant Growth Regulator is a plant growth regulator which penetrates plant tissues and degrades to ethylene which affects the growth process of the plant. Ethephon E-AG 2 Plant Growth Regulator can be used to produce the following effects in treated crops:

Apples, Grapes, Peppers,

Tomatoes:

Apples, Cherries [except CA], Walnuts:

Blackberries [WA & OR only]:

Blueberry:

Cantaloupes:

**Sweet Cherries:** 

(Pacific Northwest)

Flue-Cured Tobacco:

Apples, Crabapples, Carob, Olive (Ornamental trees only):

**Ornamental Conifers:** 

**Ornamental Deciduous Trees:** 

Turf:

earlier maturation and coloring of leaves

loosens crops for easier harvest earlier ripening, loosens fruit

concentrates maturation for earlier harvest, reduces

undesirable barrenberry fruit

helps abscission of fruit

increases hardiness of dormant fruit buds, delays spring

bloom

uniform coloring of mature leaves, earlier harvest

prevents formation of undesirable fruit

eliminates dwarf mistletoe

eliminates leafy mistletoe

slows growth of turfgrass; suppresses seedhead formation of *Poa annua* and white clover [except CA]

#### **GENERAL INFORMATION**

Additional information on how to use this product (including use rates, spray volumes (gallons of water per acre), and spray equipment) or if an application should be made based on weather conditions (such as variable temperatures or anticipated rainfall) can be obtained from your local Extension or Horticultural Specialist, Etigra Representative or Farm Advisors.

#### MIXING DIRECTIONS

Caution: Do not prepare more spray solution than required for one day's use. Do not allow the spray solution to starid overnight. Avoid spilling the concentrated product on any spray equipment or on airpiane parts. Ethephon E-AG 2 Plant Growth Regulator is corrosive. CLEAN UP SPILLS IMMEDIATELY BY FLUSHING WITH PLENTY OF WATER.

#### **OTHER PRECAUTIONS**

- Do not allow spray to drift to nearby crop. Ethephon E-AG 2 Plant Growth Regulator will affect their growth and could injure the crop or lead to reduced yields.
- Do not plant another crop in treated fields until 30 days after the last application.
- Use only the additives recommended on this label with Ethephon E-AG 2 Plant Growth Regulator.
- DO NOT MIX ETHEPHON E-AG 2 PLANT GROWTH REGULATOR WITH AMMONIUM THIOSULFATE. SUCH TANK MIXTURES MAY RESULT IN FORMATION OF TOXIC FUMES.

#### **APPLICATION VOLUMES AND SPRAY COVERAGE**

Thorough spray coverage is essential for Ethephon E-AG 2 Plant Growth Regulator to produce maximum effects. Spray coverage is affected by choice of equipment, nozzle selection and spray boom setup as well as spray pressure, plant size and canopy density. For both air and ground applications, choose equipment that will assure thorough coverage of plant canopy (foliage and fruit). The actual spray volume required will vary with the size and density of the plant canopy and the equipment used. In California and Arizona use a minimum spray volume of 5 gallons per acre for aerial applications.

#### **EQUIPMENT CLEANING**

Ethephon E-AG 2 Plant Growth Regulator is acidic and can damage acrylic plastics, certain paints, and metals when exposed to spray droplets for extended periods of time. To prevent damage, any exposed surface should be rinsed thoroughly using soap and water within one hour of exposure.

#### **APPLES**

Ethephon E-AG 2 Plant Growth Regulator promotes fruit maturity and loosens apples. Hand and mechanical harvest will be easier and more efficient. Ethephon E-AG 2 Plant Growth Regulator can be applied with FRUITONE® N to control pre-harvest drop. This mixture stimulates early development of red color and ripering without loosening fruit.

The effects of Ethephon E-AG 2 Plant Growth Regulator on apples will depend on the rate and time of application of Ethephon E-AG 2 Plant Growth Regulator. Some of the benefits of Ethephon E-AG 2 Plant Growth Regulator include: fruit loosening, uniform ripening and coloring without loosening, thinning and return bloom, and increased flower bud development in young trees. Follow the specific instructions in the table below for the type of effect desired from applications of Ethephon E-AG 2 Plant Growth Regulator.

#### PRECAUTIONS AND RESTRICTIONS

- A number of environmental factors can affect thinning and return bloom. Test small plots of trees
  each year under the program desired to gain experience under local conditions.
- Over thinning and reduced fruit size may result from applications of Ethephon E-AG 2 Plant Growth Regulator. Use caution when applying Ethephon E-AG 2 Plant Growth Regulator to young trees just starting to bear as excessive fruit thinning and fruit size reduction may occur.
- When Ethephon E-AG 2 Plant Growth Regulator is applied to achieve early maturity, the fruit size may be reduced especially if fruit are small at application.
- Reduced fruit quality and size may be noticed in harvested apples if Ethephon E-AG 2 Plant Growth Regulator is applied earlier than 3 weeks before normal anticipated harvest.
- Apply Ethephon E-AG 2 Plant Growth Regulator only to vigorous trees. Weakened trees which are treated will show an excessive reduction in growth.
- Avoid overlap of spray applications in orchards.
- Do not graze or feed cover crops grown in treated apple orchards to livestock.
- Preharvest Interval: 7 days.
- Do not apply more than 8.0 pints of Ethephon E-AG 2 Plant Growth Regulator (2.0 lb ethephon) per acre per year.

#### WHEN TO HARVEST APPLES

Monitor fruit daily. The proper harvest period is shorter with Ethephon E-AG 2 Plant Growth Regulator treated fruit than untreated fruit. Harvest fruit before they become overripe on the trees. Check fruit intended for fresh markets for quality and maturity. In addition to fruit color, the internal maturity of applies must be checked using a pressure gauge or other suitable methods. Fruit which are harvested when over-ripe and then stored may soften sooner than untreated fruit.

Crop	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Apples - Application Instructions
Apples  EARLY AND MID- SEASON MATURING VARIETIES	2 ½	Make Ethephon E-AG 2 Plant Growth Regulator foliar applications 7 to 14 days before normal anticipated harvest. Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. A wetting agent may be used to improve spray coverage. The application equipment and size of trees will affect the volume required.
(Varieties maturing with McIntosh or earlier)		Typical applications of Ethephon E-AG 2 Plant Growth Regulator should be made when temperatures are between 60°F and 90°F; although applications can be made if temperatures are at 50°F but will rise during

the day.  High temperatures: fruit treated with Ethephon E-AG 2 Plant Growth Regulator may experience reduced color response, however ripening and loosening effects will be accelerated.  Cool temperatures: longer periods of time between application and later than McIntosh place than McIntosh preharvest may be required.  FOX PROMOTION OF UNIFORM RIPENING AND COLORING OF RED VARIETIES WITHOUT LOOSENING  1 - 4 Make Ethephon E-AG 2 Plant Growth Regulator foliar applications with a preharvest drop control chemical registered for use on applies (such as FRUITONE® N). Follow the directions for use on the preharvest drop control label since recommendations may vary depending on location and apple variety. Time applications to begin 2 to 3 weeks before normal harvest and about 1 to 2 weeks before desired harvest date. Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required. A wetting agent may be used to improve spray coverage. For apples which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored in cold air storage facilities.  Do not apply Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after than McIntosh provided greater thinning: AMID-THIN® W, SEVIN® brand AF Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN	Сгор	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Apples - Application Instructions
VARIETIES IN THE EASTERN UNITED STATES (varieties maturing) late: than Mcliftosh) FOR TRINDING AND COLORING OF RED VARIETIES WITHOUT LOOSENING Apples EARLY OR MIDSEASON MATURING VARIETIES (varieties Mclintosh or earlier)  EARLY OR MIDSEASON MIDSE	Cri		
EASTERN UNITED STATES (varieties maturing later than McMroth) FOR TROMO(TI(N) CF UNIFORM RIPENING AND COLORING OF RED VARIETIES WITHOUT LOOSENING Apples FRUITONE® N). Follow the directions for use on applies (such a preharvest drop control chemical registered for use on applies (such a preharvest drop control chemical registered for use on applies (such a preharvest drop control chemical registered for use on applies (such a preharvest drop control label since recommendations may vary depending on location and apple variety). Time applications to begin 2 to 3 weeks before normal harvest and about 1 to 2 weeks before desired harvest date. Apply in a sufficient amount of water for thorough, uniform sprey coverage. For apples which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored in cold air storage facilities.  LATE MATURING VARIETIES WARIETIES		5	
Cool temperatures: longer periods of time between application and harvest may be required.  FOR TROMO(ICIN) CF UNIFORM RIPENING AND COLORING OF RED VARIETIES WITHOUT LOOSENING  Apples  EARLY OR  MIDSEASON  MATURING  With  Middle Label since recommendations may vary depending on location and apple variety. Time applications with a preharvest drop control chemical registered for use on applies (such as FRUITONE® N). Follow the directions for use on the preharvest drop control label since recommendations may vary depending on location and apple variety. Time applications to begin 2 to 3 weeks before normal harvest and about 1 to 2 weeks before desired harvest date.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required. A wetting agent may be used to improve spray coverage.  For applies which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored in rool air storage facilities.  Do not apply Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Wasterties Maturing  Apples  Most Varieties  1.5 - 4  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 46 Carbaryl Insecticide, SEVIN brand 80 VSP Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XILR Plus Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XILR Plus Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XILR Plus Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XILR Plus Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XILR Plus Carbaryl I		,	
Cool temperatures: longer periods of time between application and later than McIntosh):			and loosening effects will be accelerated.
harvest may be required.  FOR PROMO(YON OF UNIFORM RIPENING AND COLORING OF RED VARIETIES WITHOUT LOOSENING  Apples  Apples  EARLY  OR  MIDSEASON  MATURING  VARIETIES (varieties maturing with colorism and paper of the service of th			
FOR TRINNING AND RETURN BLOOM  Apples  1 - 4  Apples  Angles  Apples			
Apples  EARLY OR  MIDSEASON  MATURING  VARIETIES (varieties maturing with McIntosh or earlier)  LATE MATURING  AVAIETIES (varieties maturing later than McIntosh)  FOR THINNING AND RETURN BLOOM  Apples  1.5 – 4  Make Ethephon E-AG 2 Plant Growth Regulator foliar applications with a prevail between the foliage and fruit. The application equipment and size of trees will affect the volume required. A wetting agent may be used to improve spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required. A wetting agent may be used to improve spray coverage. For apples which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored in cold air storage facilities.  Do not apply Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Make Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 48 C Carbaryl Insecticide, SEVIN brand 80 C Sarbaryl Insecticide, SEVIN brand 80 C Sarba		MUPARIA SISSI	
Apples EARLY OR MIDSEASON MATURING VARIETIES (varieties maturing with Michitosh or earlier)  EARLY OR MATURING WARIETIES (varieties maturing with Michitosh or earlier)  EARLY OR MATURING VARIETIES (varieties maturing with Michitosh or earlier)  EARLY OR MATURING VARIETIES (varieties maturing with Michitosh or earlier)  EARLY OR MATURING VARIETIES  Varieties maturing later than Michitosh)  EOR THINNING AND RETURN BLOOM  Make Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Most Varieties  1.5-4  Make Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Most Varieties  1.5-4  Tank mixes of the following products will provide greater thinning; AMID-THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XLR Plus Carbaryl Insecticide. Read all labels for specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be add to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator or a combination	<del></del>		
MIDSEASON MATURING VARIETIES (varieties maturing) with Michitosh or earlier)  Michitosh or earlier)  LATE MATURING APPLIANTS  MAKE Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  LATE MATURING APPLIANTS  MAKE Ethephon E-AG 2 Plant Growth Regulator will provide greater thinning: AMID-THIN BROWLICH APPLIANTS  LATE MATURING APPLIANTS  MAKE Ethephon E-AG 2 Plant Growth Regulator will provide greater thinning: AMID-THIN BROWLICH APPLIANTS  LATE MATURING APPLIANTS  MAKE Ethephon E-AG 2 Plant Growth Regulator Plant Days Application of Ethephon E-AG 2 Plant Growth Regulator Plant Application equipment and size of trees will affect the volume required.  LATE MATURING  LATE MATURING APPLIANTS  MAKE Ethephon E-AG 2 Plant Growth Regulator Plant Days Application	Apples	1 – 4	preharvest drop control chemical registered for use on applies (such as FRUITONE® N). Follow the directions for use on the preharvest drop
MATURING VARIETIES (varieties maturing with McIntosh or earlier)  Make Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Most Varieties  McIntosh or earlier)  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand AF Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, or SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN	1.3		
VARIETIES (varieties maturing with McIntosh or earlier)  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of tress will affect the volume required. A wetting agent may be used to improve spray coverage.  For apples which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored in cold air storage facilities.  Do not apply Ethephon E-AG 2 Plant Growth Regulator to more acreage than Acintosh FOR THINNING AND RETURN BLOOM  Apples  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Most Varieties  1.5 - 4  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide. SEVIN brand 80 WSP Carbaryl Insecticide was directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance. Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus combination of Ethephon E-AG 2 Plant			
maturing with McIntosh or earlier)    Coverage of foliage and fruit. The application equipment and size of trees will affect the volume required. A wetting agent may be used to improve spray coverage. For apples which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored in cold air storage facilities.   Do not apply Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.		*	
For apples which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored in cold air storage facilities.  VARIETIES (varieties maturing later than McIntosh)  FOR THINNING AND RETURN BLOOM  Apples  Make Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Itan can be harvested in 1 to 2 days.  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Most Varieties  1.5 – 4  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide Read all labels for specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing a good crop from one season to another can be a Problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing a good crop from one season to another can be a Problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing a good co	naturing with		coverage of foliage and fruit. The application equipment and size of trees will affect the volume required. A wetting agent may be used to
Do not apply Ethephon E-AG 2 Plant Growth Regulator to more acreage than can be harvested in 1 to 2 days.  Varieties maturing later than McIntosh)  FOR THINNING AND RETURN BLOOM  Apples  Most Varieties  1.5 – 4  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide. Read all labels for specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus and Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			For apples which will be stored after harvest, use the lower application rate. As long as harvested fruit are in good condition, they can be stored
VARIETIES (varieties maturing) later than McIntosh)  FOR THINNING AND RETURN BLOOM  Apples  Most Varieties  1.5 – 4  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, SEVIN brand XLR Plus Carbaryl Insecticide, Sevin brand 80 S Carbaryl Insecticide, or specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates to not make the prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus and Internation of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus and International bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.	ATE MATURING	2 – 4	
Apples  Make Ethephon E-AG 2 Plant Growth Regulator applications 10 to 20 days after full bloom.  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XLR Plus Carbaryl Insecticide. Read all labels for specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus and or of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.	/ARIETIES varieties maturing	<b>-</b> ''	
Apples  Most Varieties  1.5 – 4  Tank mixes of the following products will provide greater thinning: AMID-THIN® W. SEVIN® brand 4F Carboryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 S. Carbaryl Insecticide, or SEVIN brand XLR Plus Carbaryl Insecticide. Read all labels for specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.		TIME OF CO.	
Apples  Most Varieties  1.5 – 4  Tank mixes of the following products will provide greater thinning: AMID-THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XLR Plus Carbaryl Insecticide. Read all labels for specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus and an beaving the splication of Ethephon E-AG 2 Plant Growth Regulator plus and on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.	OR THINNING AND RE	IUKN BLOOM	Mala Sharkan F AO O Black Crouds Danielan and Santana 40 (1900)
THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN brand XLR Plus Carbaryl Insecticide. Read all labels for specific use directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress. Higher Rates: reduced fruit size may result.	Apples		
directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which prohibits such mixing. Consult local Extension Specialists recommendations. A non-ionic surfactant may be added to improve effects.  In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.	Nost Varieties	1.5 – 4	THIN® W, SEVIN® brand 4F Carbaryl Insecticide, SEVIN brand 80 WSP Carbaryl Insecticide, SEVIN brand 80 S Carbaryl Insecticide, or SEVIN
effects. In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance. Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Difficult to Thin Varieties, such as Golden Delicious  Season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			directions on apples and follow the most restrictive of the label limitations and precautions. Do not exceed label use rates. Do not mix Ethephon E-AG 2 Plant Growth Regulator with any product with a label which
In locations where water is alkaline, add buffers to the spray solution to a pH of 3 to 5 for improved performance.  Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Difficult to Thin Varieties, such as Golden Delicious  Season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			· · · · · · · · · · · · · · · · · · ·
Apply in a sufficient amount of water for thorough, uniform spray coverage of foliage and fruit. The application equipment and size of trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			In locations where water is alkaline, add buffers to the spray solution to a
trees will affect the volume required.  Ensuring a good crop from one season to another can be a problem when a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			Apply in a sufficient amount of water for thorough, uniform spray
When a high percentage of spurs and lateral buds bloom in a single season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			
Season. The trees in the following year may show a severe drop in bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.		3 – 6	
bearing. This problem can be avoided by the application of Ethephon E-AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			
AG 2 Plant Growth Regulator or a combination of Ethephon E-AG 2 Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard. A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.	Solden Delicious	•	
Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant Growth Regulator plus one of the SEVIN products listed above. Make applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.		•	
applications 7 to 21 days after full bloom. Selection of the best program to use will depend on the amount of thinning required and the biennial bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			Plant Growth Regulator plus AMID-THIN W or Ethephon E-AG 2 Plant
bearing history of the orchard. A reduction of "type" and fruit size of Red Delicious apples is expected particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.			applications 7 to 21 days after full bloom. Selection of the best program
particularly from applications to trees under stress.  Higher Rates: reduced fruit size may result.	•		bearing history of the orchard.  A reduction of "type" and fruit size of Red Delicious apples is expected
7			particularly from applications to trees under stress.
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Сгор	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Apples - Application Instructions
FOR INCREASED FLO	WER BUD DEVEL	OPMENT
Apples		Make Ethephon E-AG 2 Plant Growth Regulator applications 2 to 4 weeks after full bloom  To minimize fruit thinning, time applications to occur 6 weeks after full
NON-BEARING TREES	2-8	bloom and after June drop.  Apply in a sufficient amount of water to the point of runoff. The application equipment and size of trees will affect the volume required. A wetting agent may be used to improve spray coverage.  Higher Rate: for use on more vigorous trees.
BEARING TREES	½ - 3	Non-bearing trees: Make Ethephon E-AG 2 Plant Growth Regulator applications 2 to 4 weeks after full bloom for increased flower bud development.
		Ethephon E-AG 2 Plant Growth Regulator may cause excessive fruit thinning and reduced fruit size and yield reduction the year of use. However, vegetative growth should be reduced and flowering increased the following spring. Do not treat trees to initiate flower buds unless they are large enough to support a crop of apples.

#### **BLACKBERRIES - OREGON AND WASHINGTON ONLY**

Etherhon E-AG 2 Plant Growth Regulator applied to blackberries will concentrate maturity and loosen fruit. Harvest efficiency will improve and cane injury from mechanical harvest will be reduced.

#### PRECAUTIONS AND RESTRICTIONS

- Do not spray more blackberries than can be harvested within three days after treatment as considerable fruit may drop.
- To prevent a reduction in berry size, only apply Ethephon E-AG 2 Plant Growth Regulator at the recommended times and rates to healthy, vigorous plants and not to damaged or diseased plants.
- Preharvest Interval: 3 days.
- Do not apply more than 8 pints of this product (2 lbs ai ethephon) per acre per year.

Crop	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Blackberries - Application Instructions
Blackberries – Oregon and Washington Only (Cultivars Chehalem Thornless and Evergreen)	5 - 8	Make Ethephon E-AG 2 Plant Growth Regulator applications as a foliar spray at least three days before harvest. Wait to make applications when air temperatures are between 60°F and 90°F and when rain is not predicted within 24 hours.  To obtain thorough, uniform coverage of the foliage and fruit, use sufficient spray volumes.  Ethephon E-AG 2 Plant Growth Regulator applications can be made early in the harvest season to reduce the number of pickings, or late in the harvest season for a once-over final picking.

#### **BLUEBERRIES**

Ethephon E-AG 2 Plant Growth Regulator applications to blueberries will concentrate maturity of berries for easier and more efficient harvest. Ethephon E-AG 2 Plant Growth Regulator will abort black barrenberry (Aropid melanocarpa) flowers and/or fruit growing in Maine lowbush blueberry fields; this effect reduces the number of undesirable barrenberry fruit harvested with blueberries.

#### PRECAUTIONS AND RESTRICTIONS

- Do not apply to cultivars other than those listed in the table below, or excessive steminess and/or prematu(e crops may result.
- Note: Applications of Ethephon E-AG 2 Plant Growth Regulator may increase the number of berries with stems, and berries with slightly decreased fruit size or soluble solids and acidity. Ethephon E-AG 2 Plant Growth Regulator affects berry color more quickly than it will internal ripening.
- Do not make more than one application per season. If Ethephon E-AG 2 Plant Growth Regulator is
  used for barrenberry control in Maine, do not make a second application for blueberry concentration
  of maturity or coloring.
- Avoid applications to blueberry plants under drought stress or when excessively high temperatures
  exist as defoliation and reduced yield may result.

#### WHEN TO HARVEST BLUEBERRIES

Harvest should occur when berries have reached maturity, i.e., when colored, which typically occurs one to two weeks after application of Ethephon E-AG 2 Plant Growth Regulator. Monitor berries often. The proper harvest timing for optimum internal and external berry quality is shorter with Ethephon E-AG 2 Plant Growth Regulator treated fruit than with untreated fruit. Berries will ripen faster at high temperatures (90°F).

<u> </u>	<del></del>	
Crop	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Blueberries - Application Instructions
FOR CONCENTRATION	N OF MATURITY	AND EARLIER FRUIT COLORING
Blueberries	4-8	Make foliar applications of Ethephon E-AG 2 Plant Growth Regulator in 150 to 200 gallons per acre when air temperatures are 60° to 90°F.
Cultivars Bluecrop, Weymouth, Jersey, Rancocas, Rubel,		Thorough uniform spray coverage of foliage and fruit is essential. A wetting agent such as Triton B-1956™ at 0.5 pints per 100 gallons or X-77® at 2.0 pints per 100 gallons will help the uniform wetting of plants.
Bluetta, Erliblue, Wolcott, Croatan, Murphy, Angola,	:	High Rate: when using the high rate, use the higher spray volume on large dense foliage bushes or when temperatures are cool.
Morrow, Garden Blue, Trifblue and NC901		Concentration of first harvest: make Ethephon E-AG 2 Plant Growth Regulator applications when 15 to 20% of the berries are blue.  Concentration of final harvest: make Ethephon E-AG 2 Plant Growth Regulator applications after the first or second picking.
FOR BLACK BARREN	BERRY CONTROL	
Low Bush Blueberries in Maine	4-8	Make applications of Ethephon E-AG 2 Plant Growth Regulator in 100 to 200 gallons per acre for ground sprayers and 10 gallons per acre for aerial application. Thorough uniform spray coverage of foliage and fruit is essential. A wetting agent such as X-77 at 0.1% of spray volume will help the uniform wetting of plants.
		Lower Rate: use when black barrenberries are at 90 to 100% petal fall. Higher Rate: use when black barrenberry fruit is 1/8 to 3/16 inch in diameter which occurs generally 7 to 10 days after blueberries are in the same stages of development.
		Blueberry harvest can generally occur when fruit are ripe, 6 to 8 weeks after application.

#### CANTALOUPES - ARIZONA, CALIFORNIA AND TEXAS ONLY

Ethephen E-AG 2 Plant Growth Regulator applications to cantaloupe results in abscission (slipping) of fruit which results in a more efficient and economical harvesting.

#### PRECAUTIONS AND RESTRICTIONS

- Do not apply Ethephon E-AG 2 Plant Growth Regulator if night temperatures are below 60°F.
- Make applications of Ethephon E-AG 2 Plant Growth Regulator to fruit that have a fairly uniform fruit set, have vines in good condition, and have fruit with marketable soluble solids and internal flesh color. Treatment of fields where soluble solids are running less than 10% is not recommended.
- Ethéphon E-AG 2 Plant Growth Regulator applications may cause some yellowing or rapid aging of vines, and some plants with poor vigor will not respond properly to Ethephon E-AG 2 Plant Growth Regulator applications.
- Rotation Crop Restriction: Do not plant another crop in treated fields within 30 days after treatment.
- Preharvest Interval: 2 days.
- Do not apply more than 3 pints of this product (0.75 lb ethephon) per acre per year.

#### WHEN TO HARVEST CANTELOUPE

Treated fields should be monitored closely. Harvest fruit when the quality is acceptable for marketing. Do not allow fruit to remain in the field too long or this quality will decline. Typically fruit can be harvested 2 to 5 days after treatment; however temperature will also affect the time to harvest after applications.

Crop	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Cantaloupes - Application Instructions
Cantaloupes – Arizona, California and Texas Only	3	Make applications of Ethephon E-AG 2 Plant Growth Regulator in a minimum of 40 gallons per acre for ground sprayers.
		<b>Texas Only:</b> apply in a minimum of 10 gallons per acre for aerial application.
		Thorough uniform spray coverage of foliage and fruit is essential for uniform abscission.
		The effects of Ethephon E-AG 2 Plant Growth Regulator occur faster at higher temperatures.
		Time applications to occur once fruit quality (i.e., soluble solids and flesh color) have reached marketable levels since Ethephon E-AG 2 Plant Growth Regulator applications do not increase these qualities. Applications made too early will yield fruit with poor color and unacceptable soluble solids.

#### **CHERRIES - EXCLUDING CALIFORNIA**

Ethephon E-AG. 2. Plant Growth Regulator applied to cherry trees will loosen fruit and allow an early, uniform ripening. These effects reduce the shaker force needed for mechanical harvest of fruit, and thereby increases efficiency and recoverable yields, while maintaining fruit quality and reducing tree injury. In the Pacific Northwest, Ethephon E-AG 2 Plant Growth Regulator applied to sweet cherries increases dormant bud hardiness and delays bloom the following spring.

#### PRECAUTIONS AND RESTRICTIONS

- DO NOT USE ON CHERRIES IN CALIFORNIA.
- Fruit drop with stems attached may occur if applications are made too early.
- Applications may cause early leaf yellowing and drop and gummosis.
- Severe gummosis may occur if temperatures during and after application remain high. Trees that
  experienced severe gummosis the previous year should not be treated to prevent tree damage.
- Excessive gummosis will occur if applications are made to trees that are of low vigor or have experienced severe stress (such as winter injury, drought, or disease), and particularly if high temperatures and/or drought conditions follow treatment. Make applications when air temperatures are between 60° and 85°F. Do not treat when air temperatures exceed 85°F.
- Irrigation of orchards after application may prevent drought stress which can lead to gummosis.
- Applications to sweet cherry trees under the fall bud hardiness treatment may cause slight gummosis and reduced individual fruit sizes.
- Do not apply until all fruit, including those inside the tree canopy, are in stage 3 (defined as when fruit undergo rapid size increase and change from bright green to yellow background color).
- Thorough, uniform coverage of fruit and foliage is important. Use caution when applying with concentrated sprays and avoid erratic application as these can lead to gummosis and tip dieback.
- Preharvest Interval: 7 days
- Do not apply more than 4.0 pints of this product (1.0 lb ethephon) per acre per year.

Crop	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Cherries - Application Instructions
Tart Cherries	Dilute Spray:  1  Concentrate Spray: 2/3 - 1	Make applications of Ethephon E-AG 2 Plant Growth Regulator as either a dilute or a concentrate spray. Concentrate sprays are typically less than 100 gallons per acre. Use sufficient water for thorough, uniform coverage. Several factors (such as trees size, density of trees, and type of application equipment) will determine the optimum spray volumes to select.
Sweet Cherries (including varieties such as Windsor, Napoleon-Royal Anne, Emperor Francis)	Dilute Spray: 3-4 Concentrate Spray: 2 - 3	When the lower use rates are used, the treatment to harvest interval may be longer.
Sweet Cherries – Pacific Northwest Only	3	To increase dormant fruit bud hardiness and to delay spring bloom An application of Ethephon E-AG 2 Plant Growth Regulator in the first two weeks of September increases fruit bud hardiness by decreasing the chance for winter injury and delays bloom by 3 to 5 days, which may help avoid frost injury. Bloom delay from treatment of early flowering varieties may help to coincide pollination from other varieties.

#### **GRAPES - CALIFORNIA AND ARIZONA ONLY**

**TABLE GRAPES:** Ethephon E-AG 2 Plant Growth Regulator applications cause early uniform color dévelopment in the table grape varieties listed below which allows a more efficient harvest of quality fruit.

GRAPES GROWN FOR RAISINS: A foliar spray of Ethephon E-AG 2 Plant Growth Regulator will speed the maturation of Thompson seedless grapes and result in higher quality raisins containing less acids and increased sugars.

### PRECAUTIONS AND RESTRICTIONS Table Grapes

- Do not use rates higher than 1 pint/A to avoid an increase in cracked fruit. The higher rates should be used only when grapes had difficulty in coloring in previous seasons.
- Ethephon E-AG 2 Plant Growth Regulator applications to certain grape varieties may cause berry softening which limits or influences storage of grapes.
- Do not store Tokay grapes.
- Preharvest Interval: 14 days.
- Do not apply more than 2 pints of this product (0.5 lb ethephon) per acre per year.

#### Raisin Production (Thompson Seedless)

- Grapes which are under stress from insect damage or moisture stress should not be treated. Monitor treated vineyards closely and harvest when grapes are mature as indicated by sugar acid levels.
- Do not apply more than 2 pints of this product (0.5 lb ethephon) per acre per year.

#### WHEN TO HARVEST GRAPES

Monitor treated vineyards closely and harvest when grapes are mature—usually two weeks or longer after application--as indicated by color and sugar acid levels. Harvest grapes before the berries become too dark. Contact your Farm Advisor or Extension Viticulturist for more information regarding local experiences with Ethephon E-AG 2 Plant Growth Regulator on grapes.

Сгор	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Grapes - Application Instructions
TABLE GRAPES (such as Cardinal, Emperor, Flame Seedless, Red Malaga, and Queen)  California and Arizona Only	1/2 - 2	High temperature conditions (above 85°F): apply Ethephon E-AG 2 Plant Growth Regulator at ½ to 1 pint per A. Low temperature conditions (but above 65°F): apply Ethephon E-AG 2 Plant Growth Regulator at the higher use rates.  Thorough, uniform coverage of the fruit and vines are needed for optimum effect. Use sufficient water using conventional ground sprayers. Make applications when 5 − 30% of the berries show color.
TOKAY GRAPES California and Arizona Only	1 – 2	Make applications when 5 – 15% of berries show color.
RAISIN PRODUCTION (Thompson Seedless) California and Arizona Only	1-2	Make foliar applications at 5% berry softening and when 5 – 30% of berries show color.  Ethephon E-AG 2 Plant Growth Regulator speeds the maturation of Thompson Seedless grapes and produces grapes with reduced acids, increased sugars and increased raisin quality.  Contact your Farm Advisor or Extension Viticulturist for more information regarding local experiences with Ethephon E-AG 2 Plant Growth Regulator on grapes.

#### **PEPPERS**

Ethephon E-AG 2 Plant Growth Regulator can be applied as a foliar spray to peppers and leads to early, uniform ripening and coloring for more efficient harvesting, packaging and handling of fruit.

#### PRECAUTIONS AND RESTRICTIONS

- Do not make applications when temperatures exceed 100°F, or if prolonged temperatures of 95°F or more are expected after treatment. Applications under these conditions will cause excessive fruit ripening, yellowing of foliage, defoliation and immature fruit abscission.
- Do not tréat when average temperatures are below 60°F as these temperatures may reduce or negate the effects of Ethephon E-AG 2 Plant Growth Regulator. Ethephon E-AG 2 Plant Growth Regulator will not ripen immature, green fruit.
- Applications may cause yellowing and general aging of treated leaves.
- Preharvest Interval: 5 days.
- Do not apply more than 4 pints of this product (1.0 lb ai ethephon) per acre per year.
- Under certain conditions tank mixtures of Ethephon E-AG 2 Plant Growth Regulator with desiccants containing sodium chlorate could result in the formation of hypochlorous acids which on heating will emit toxic chloride fumes.

#### WHEN TO HARVEST PEPPERS

Monitor the crop in several locations for crop stage and degrees of maturity. Do not apply Ethephon E-AG 2 Plant Growth Regulator too early or if there is a lack of uniform, mature, green fruit (due to split fruit set or other soil cultural practices) or total yields may be reduced. Typically fruit can be harvested 14 or more days after treatment when fruit reach desired color and maturity.

Crop	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Peppers - Application Instructions
Peppers	. 11/4-4	For optimum results, ensure thorough, uniform coverage of spray solution to fruit and foliage by selecting the appropriate application equipment (ground or air) and spray volumes.  Make Ethephon E-AG 2 Plant Growth Regulator applications to bell
		peppers when 10% of fruit turn red and chocolate in color and to chili and pimento pepper varieties when 10 to 30% of fruit turn red and chocolate in color. Be sure that there are sufficient mature green fruit to produce desired tonnage since Ethephon E-AG 2 Plant Growth Regulator will not ripen immature, green fruit.
		<b>High Rate:</b> for situations when cool temperatures are anticipated (less than 65°F), or when dense foliage is present. Also use when higher spray volumes (3-4 pints/40 gal/A) are required.
	·	<b>Lower Rate:</b> for use with lower spray volumes (1 ¼ to 2 pint rate in 20 gal/A).
		<b>Note:</b> Using the 3-4 pint rate in less than 40 gallons per acre may cause foliage burn under hot dry conditions.

#### **TOBACCO - FLUE-CURED ONLY**

Ethephen E-AG 2 Plant Growth Regulator when applied as a foliar application to flue-cured tobacco causes the mature leaves to uniformly turn yellow. This feature provides flexibility in scheduling harvest and also reduces suring time. The applications can be made by directing the spray to the bottom or middle part of the plant or by spraying over the top of the plants.

#### PRECAUTIONS AND RESTRICTIONS

- Do not apply Ethephon E-AG 2 Plant Growth Regulator to immature leaves as this can result in úμετιστατότη coloring, weight loss and reduced leaf quality.
- Do not allow the crop to over ripen in the field after using Ethephon E-AG 2 Plant Growth Regulator since this may cause some reduction in yield and quality.
- Do not treat before an anticipated major storm which could prevent harvest and result in crop loss.
- Do not apply Ethephon E-AG 2 Plant Growth Regulator if rain is expected with 6 hours.
- Do not harvest tobacco treated with Ethephon E-AG 2 Plant Growth Regulator sooner than 2 days after application.
- Do not apply more than 8 pints of this product (2 lb ethephon) per acre per year.

#### **APPLICATION TIMING**

For best results, apply Ethephon E-AG 2 Plant Growth Regulator to mature leaves. Treatment of immature leaves can lead to leaves that are not acceptable in color, quality or dryness. The correct timing for application can be tested by spraying a few plants in several different locations of the field. If the leaves begin to yellow within 24-72 hours, the leaves are mature. If some treated leaves do not change color within 72 hours, do not apply Ethephon E-AG 2 Plant Growth Regulator until another test is carried out a few days later to determine if the leaves are mature. To prepare a test spray solution, add 4 tsp. Ethephon E-AG 2 Plant Growth Regulator to 1 qt. water. Apply about 1 oz of the test spray solution as a fine mist and thoroughly cover the leaves. Immature leaves won't change color.

When the test shows that the desired number of leaves per plant change color, calculate the number of acres to treat in order to fill the barn.

Remove yellowed leaves before making an Ethephon E-AG 2 Plant Growth Regulator application as this will help yields and prevent leaf drop. Typical growing conditions will require the lower rates specified in the table below. If the higher rates are used, only apply if temperatures are below 65°F on the day of application.

#### WHEN TO HARVEST TOBACCO

Within 24 to 72 hours after the Ethephon E-AG 2 Plant Growth Regulator application, mature, sprayed leaves will begin to turn yellow, but the exact timing is dependent on the weather so that under cooler temperatures, yellowing will be delayed while under warm, sunny conditions, yellowing occurs faster. Monitor weather conditions and intensity of tobacco leaves color to determine timing of harvest. Usually within 48 hours after the Ethephon E-AG 2 Plant Growth Regulator application the leaves have reached the desired color intensity and can be harvested.

To avoid reduced yields and quality, harvest the tobacco before it over-ripens in the field after an Ethephon E-AG 2 Plant Growth Regulator application.

#### **CURING ETI 106 01 G TREATED TOBACCO**

A number of factors must be considered when curing treated tobacco. These factors include, but are not limited to tobacco condition, timing between application of Ethephon E-AG 2 Plant Growth Regulator and harvest, weather conditions, and type of curing. Best quality tobacco is obtained when the curing process is closely monitored during late leaf coloring and early leaf drying stages.

Application of Ethephon E-AG 2 Plant Growth Regulator to tobacco begins the coloring process before harvest, so the amount of time required in the coloring phase and drying phase may be reduced. Harvested green leaves will need to be colored for a few hours. Harvested yellow leaves will require adjustment of temperature and ventilation so the tobacco dries as quickly as possible without scalding. At the point of 75% dried state, the leaves can be treated using normal procedures for curing. However, Ethephon E-A/3 2 Plant Growth Regulator-treated leaves cure faster, so cure treated and untreated leaves in separate barns.

Type of Application	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Tobacco - Application Instructions
Directed Spray	4	Apply Ethephon E-AG 2 Plant Growth Regulator with drop nozzles and TG or OC spray tips designed to apply 50-60 gal/A at 35-40 psi and at tractor speed of 2-3 mph. Best results are obtained when thorough sprays are directed to the leaves to be ripened. Adjust the sprayer so that there are 2 nozzles per row placed low enough to direct the spray to the leaves. For this type of application, harvest when 20% or more of the leaves have yellowed.
Over-the-top Spray	4-8	Apply Ethephon E-AG 2 Plant Growth Regulator in a minimum spray volume of 40 gal/A.  Make applications only to the mature leaves left on the stalk. Use the test procedure described in the Application Timing section above to determine if remaining leaves are mature and will respond to applications of Ethephon E-AG 2 Plant Growth Regulator.  Apply the lower rate of Ethephon E-AG 2 Plant Growth Regulator for mature crop or if experience indicates that a minimum ripening inducement is required. The higher rate is used for heavy, more rank crops or when temperatures are lower than normal.

#### **TOMATOES**

TOMATOES FOR FROCESSING: Ethephon E-AG 2 Plant Growth Regulator applied foliarly will speed the ripening of fornatoes which leads to a uniform maturation of fruit. The uniform maturation generates a high yield of ripe tomatoes which are obtained from a once-over harvest. This early maturation extends the harvest season and allows growers to select when to harvest for more efficient handling of the processed commodity.

TOMATOES FOR FRESH MARKETS IN CALIFORNIA: Ethephon E-AG 2 Plant Growth Regulator applied foliarly will speed ripening of tomatoes and increase early yields of marketable tomatoes.

#### PRECAUTIONS AND RESTRICTIONS

- Apply Ethephon E-AG 2 Plant Growth Regulator only when there is sufficient mature green fruit to
  produce the desired tonnage since Ethephon E-AG 2 Plant Growth Regulator does not ripen
  immature green fruit. Foliage may become yellow or age after an Ethephon E-AG 2 Plant Growth
  Regulator application.
- Do not treat plants with poor root systems or if growing under stress (from poor soil conditions, drought, disease, or insect damage) because these weakened plants will lose their foliage cover, and risk sunburn and sunscalding, especially under high temperature conditions.
- Do not apply Ethephon E-AG 2 Plant Growth Regulator if temperatures are expected to remain above 105°F. For sensitive varieties, do not apply if temperatures are above 100°F to prevent foliar damage. Particularly sensitive varieties include VF 10, VF 315, VF 145, 21-4, and 13L. Use the lower rates on these varieties when temperatures are high.
- Do not apply Ethephon E-AG 2 Plant Growth Regulator as a tank mix with sun protection products, sun protection whiteners, spray adjuvants or other additives.
- Do not apply Ethephon E-AG 2 Plant Growth Regulator to more acres than can be harvested in 2 to 3 days.
- Do not use on greenhouse tomatoes or on varieties which soften rapidly or shatter when ripe.
- Pre-harvest interval: 3 days.
- Do not apply more then 6.5 pints of this product (1.63 lb ethephon) per acre per year.

#### WHEN TO HARVEST TOMATOES

Observe treated fields closely and harvest fruit at proper maturity after application of Ethephon E-AG 2 Plant Growth Regulator.

Сгор	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Tomato - Application Instructions
Tomatoes for		Early and Midseason Crops OR High Temperatures
Propessing	1 1/4 - 3 1/4	Make the application of Ethephon E-AG 2 Plant Growth Regulator when enough mature green fruit will give the tonnage required and when 5-15% of the fruit are red and pink (includes breakers). To determine the
		proper application date, check the fruit weight and calculate the percent fruit which is red and pink, including breakers. Do not rely on fruit size alone and check for specific directions to determine treatment stage for your situation.
		Foliage and fruit must receive a thorough coverage of Ethephon E-AG 2 Plant Growth Regulator. Spray equipment (ground or air) and spray volumes should be selected that will provide this uniform spray coverage.
		When temperatures exceed 85°F, the lower rate is effective.
	·	Do not overlap spray swaths to prevent severe foliage injury. If banded spray applications are made, the amount of Ethephon E-AG 2 Plant Growth Regulator should be reduced in proportion to the area actually treated.
		Continue normal cultural practices after application and prior to harvest. Before making the application of Ethephon E-AG 2 Plant Growth Regulator, contact the processor to check delivery schedules and quotas.
		If you have questions on how to use Ethephon E-AG 2 Plant Growth Regulator, contact your local Etigra Company Representative, Extension Horticultural Specialist or Farm Advisor. They can advise you especially
· · · .		if fields have variable plant vigor due to differences in soil conditions or cultural practices and can provide rates of fruit ripening as affected by temperature, within the rate and timing limitations shown on the label.
	3 1/4 - 6 1/2	Late Season or Coastal Crops or Cool Temperatures
		Make the application of Ethephon E-AG 2 Plant Growth Regulator when enough mature green fruit will give the tonnage required and when 5-30% (for optimum response, 5-15%) of the fruit are red and pink (includes breakers).
		Foliage and fruit must receive a thorough coverage of Ethephon E-AG 2 Plant Growth Regulator. Spray equipment (ground or air) and spray volumes should be selected that will provide this uniform spray coverage.
		If night temperatures are expected to be cool (below 65°F) or if foliage is dense, use the higher rate of Ethephon E-AG 2 Plant Growth Regulator.
		When temperatures exceed 90°F, fruit may ripen sooner. When temperatures fall below 65°F, the development of the fruit's natural color may be delayed and result in a longer period of time needed between application and harvest.
Tomatoes for the Fresh Market - California	1 1/4 - 5	Make an Ethephon E-AG 2 Plant Growth Regulator application about 3-6 days prior to the desired harvest date but be sure that the desired tonnage of fruit has reached marketable size and maturity. No more than one harvest is expected from areas treated with Ethephon E-AG 2

Сгор		Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Tomato - Application Instructions
	<del></del>		Plant Growth Regulator.
			Foliage and fruit must receive a thorough coverage of Ethephon E-AG 2 Plant Growth Regulator. Spray equipment (ground or air) and spray volumes should be selected that will provide this uniform spray coverage.
			For late season crops, if temperatures are generally below 85°F and if foliage is dense, use the higher application rate and longer preharvest interval (3 days).  When temperatures exceed 85°F, the lower rate is effective and does not damage foliage especially in sensitive varieties.
			To time harvest of different blocks of fruit on different days, apply Ethephon E-AG 2 Plant Growth Regulator to a different block each day. Then harvest the blocks daily in the same sequence.

#### **WALNUTS-CALIFORNIA ONLY**

Applications of Ethephon E-AG 2 Plant Growth Regulator to walnut trees will loosen the nuts for a more efficient mechanical harvest. As a result of this application, nuts can be harvested earlier, their hull more effectively removed, and yields increased from a once-over harvest.

#### PRECAUTIONS AND RESTRICTIONS

- Reduced nut quality may occur if application is made before the packing tissue brown (mature) stage.
- Applications may cause some leaf drop, which is enhanced if trees under stress (vigor, drought) are treated.
- Use caution when measuring the dosage. Injury to trees (excessive defoliation, reduced catkin formation and twig dieback) may occur if higher than recommended rates are used.
- Preharvest Interval: 5 days.
- Do not apply more than 5 pints of this product (1.25 lb ethephon) per acre per year.

#### WHEN TO HARVEST WALNUTS

Sample nuts from different parts of the tree to determine the percent nut maturity. When the packing tissue between the kernel halve has turned completely brown, the nuts are mature.

<u>Advancing Harvest</u> – Make an application of Ethephon E-AG 2 Plant Growth Regulator when 95-100% of the nuts have reached maturity. Continue to inspect the nuts to determine the harvest date, which typically occurs 10-16 days after the application. However, walnut varieties and weather conditions will determine the time when adequate hullability will occur. A second shake should be scheduled 10-12 days after the first shake.

<u>Once-Over Harvest</u> – Before deciding on a once-over harvest, contact an Extension Specialist or Farm Advisor to determine if your situation warrants this type of harvest. A number of factors will play a role in the walnut maturity timing for this type of harvest (i.e., variety, growing conditions and weather). Make an application of Ethephon E-AG 2 Plant Growth Regulator to mature walnuts 10 days before the expected harvest date. The timing of harvest may actually range from 7-12 days after treatment.

Crop	Ethephon E-AG 2 Plant Growth Regulator Pints/Acre	Walnuts - Application Instructions
Walnuts – California Only	3 - 5	For optimum results: Use spray concentrations between 300 and 900 ppm. These concentrations can be determined by checking the chart below. Make applications when the air temperature is between 60 and 90°F. The walnuts hull must be thoroughly covered by the spray solution to ensure maximum hull split and nut loosening. Application equipment designed to provide penetration of the entire tree such as large air carrier sprayers or volute sprayer attachments are recommended.  High rate: use under conditions of low humidity or low temperatures. Note that the time from application to harvest may be shorter with higher rates than with lower rates.  At higher air temperatures (>90°F) and low humidity, Ethephon E-AG 2 Plant Growth Regulator may evaporate and be less effective.

### HOW TO PREPARE ETHEPHON E-AG 2 PLANT GROWTH REGULATOR SPRAY SOLUTIONS FOR USE IN WALNUTS

		Spray	Volume	(gallons/A)	
ETI 106 01 G Rate	100	200	300	400	500
Pints/A (Ib /A)		C	oncentration (	opm)	
3 (0.75)	900	450	300		
4 (1.00)		600	400	300	
5 (1.25)		750	500	375	300

-- = Not Recommended

#### WHEAT AND BARLEY (NOT REGISTERED FOR USE IN CALIFORNIA)

This product can be applied as a preventative measure in a tank-mix with certain cereal insecticides and fungicides approved for such use. Do not apply such a tank mix to plants stressed by cold, disease, heat, insect or moisture as a decrease in yield or injury to crops may occur. When tank mixed with Tilt®, this product may cause a decrease in yield or flag leaf burn.

Treatment timing of this product may or may not coincide with insecticide and fungicide treatments. Make an economic and plant condition assessment prior to deciding on a tank mix partner.

#### RESTRICTIONS

- Do not supplement this product with adjuvants, surfactants or wetting agents or tank mixed with nitrogen solutions or herbicides.
- Do not apply through any type of irrigation system. Failure to observe label instructions may result in decreased product quality or yield.
- Lodging reduction effects may not occur for up to seven days following treatment. Once crops are lodged, this product is not effective.
- This product may affect certain disease infestations, such as mildew, rust and Septoria. If this occurs, use this product in conjuction with a fungicide control program.
- Yield loss may occur if, during or after application, plants are subject to disease, moisture or temperature stress. Yield loss may occur if this product is applied under non-lodging conditions.
- Always follow label temperature restrictions.
- Harvest maturity may be delayed 1-4 days and heading by 1-2 days following use of this
  product. Additional harvest maturity delay may occur if crops are subject to extreme temperatures

within five days following treatment. Extreme temperatures are under 35° F or above 85° F for non-imparted crops, or over 90° F in irrigated crops.

- Do not use on late-seeded crops in short-season growing areas due to the potential for maturity and harvest delays.
- Secondary tillers may increase following application of this product to certain spring barleys. This
  may particularly occur if crop is subject to temperature or moisture stress.
- Use of this product on Azure barley or Tyler wheat is prohibited.
- Do not apply this product when rain will likely occur within six hours.
- Grazing or foraging by livestock or cutting for hay or silage are prohibited. Mature straw at normal harvest may be consumed by animals.
- A 30-day plant-back interval is required.

#### TREATMENT DECISION GUIDE

Shortly before application, check the fields to be treated to determine the chance lodging will occur. Apply this product only under these circumstances:

- Lodging is anticipated with a considerable decrease in grain quality, harvest efficiency, and recoverable yield likely to occur.
- There is no disease stress or insect pressure on the crop.
- There is little to no chance of crop stress following application because of adequate irrigation
  or soil moisture. Extreme temperature fluctuations (as described above) are not anticipated to
  occur within five days following application.
- Crop is at the proper growth stage (Feekes 8 to 10).

#### APPLICATION TIMING

Apply this product at the point the flag leaf is slightly visible to the boot stage. Apply prior to awn emergence or sheath split. These visual cues correspond to Feekes-Large Scale 8-10 and Zadok's Code 37-45. Crop damage and decreased yields may occur if application contacts exposed heads.

#### **APPLICATION**

For best results, post-treatment temperatures should be no less than 60° F. Avoid overlapping sprays as yield and rate loss may be exaggerated.

Ground application: Make conventional ground equipment applications in at least 7 gals/A of water. Use of flat fan nozzles is suggested. Make air foil-type equipment or controlled droplet application (CDA) treatments in at least 5 gals/A of water. Adjust spray boom to drive at moderate speed and at the height of the plant canopy to avoid an uneven application.

Make aerial applications in at least 3 gals/A of water.

#### **USE RATES**

The application rate will be determined by environmental conditions and lodging pressure. Contact your state extension specialist for local recommendations on rates of application for varying conditions. Use the 1 pint/A rate on more responsive varieties. Do not apply more than 2 pints (0.5 lb. ethephon) of this product per acre per year. The pre-harvest interval is forty (40) days.

RECOMMENDED BARLEY AND WHEAT APPLICATION RATES

	ANTICIPATED LODGING PRESSURE			
CROP CONDITION	MODERATE	HEAVY	SEVERE	COMMENTS
	APPLICATION	ON RATE	pts/A)	
Bariey (Spring and Winter (Seasons)	1	1 to 1 'A	1 1/2 to 2*	The 2 pts/A rate may be necessary for use on certain vigorously growing tall varieties.
\Winter \Wheat	1.	1 to 1 1/2	1 1/2 to 2*	For certain tall straw varieties (e.g., "Roughrider" and "Agassiz"), the listed rates may be unable to control lodging under severe lodging conditions.
Most Spring Wheats	1	1	11/2	For certain tall durum wheats (e.g., "Vic"),
Sensitive Variety or High Temperature **	1	. 1	1	the listed rates may be unable to control lodging under severe lodging conditions.

#### **RESTRICTIONS**

#### **NON-IRRIGATED WHEAT AND BARLEY**

Application of this product to non-inigated wheat and barley in states West of the Mississippi River is prohibited except West of the Cascade Range in the States of Oregon and Washington.

#### **IRRIGATED WHEAT AND BARLEY**

To prevent stress on the crop, it is recommended to irrigate prior to and after twenty-four (24) hours following application. Continue irrigation through the period of grain head filling if weather remains hot and dry. Please note that considerable decreases in yield and plant quality may occur if crop is subject to heat stress and moisture during grain fill and antithesis. As a result, it is imperative to avoid plant stress during these periods when treating with this product.

#### **GROWTH STAGE CHART**

Growth Class	2" <sup>d</sup> Node Detect able	Flag leaf Barely Visible	Flag Leaf Ligule Visible	Swollen Boot	First Spikelet Visible	Inflorescence 3/4 complete
FeekesLarge Scale	7	8	9	10	10.1	10.4
Zadok's Code	32	37	39	45	50	57
Treatment time advice	Too early				Too late	

#### FRUIT ELIMINATION - ORNAMENTAL USE ONLY

**TO ELIMINATE UNDESIRABLE FRUIT:** Ethephon E-AG 2 Plant Growth Regulator will reduce or eliminate undesirable fruit development on ornamental apple, crabapple, carob and olive trees.

#### PRECAUTIONS AND RESTRICTIONS

- For optimum results, make applications before fruit set.
- Avoid applications if trees are weak or under stress from drought, insect or disease pressure to prevent excessive leaf drop or twig drop.

<sup>\*</sup> Application with the 2-pint rate should be restricted to the following anticipated yield-decreasing conditions: 1) very tall varieties that are lodging-prone, 2) cereal types like durum notorious for severe lodging, or 3) irrigated crops that are subject to abnormally severe lodging.

<sup>\*\*</sup> This product should not be applied if it is anticipated that anytime during the five days following treatment, temperatures are to go above 85° F for non-irrigated crops or 90° F for irrigated crops.

- Applications of Ethephon E-AG 2 Plant Growth Regulator may cause some leaf drop or temporary leaf yellowing.
- Do not apply Ethephon E-AG 2 Plant Growth Regulator to small red fruited varieties of crabapple to avoid unsatisfactory fruit elimination.
- Do not use. Ethephon E-AG 2 Plant Growth Regulator on commercial fruit production as a phinning agent.

Crop	Ethephon E-AG 2 Plant Growth Regulator Rate	Ornamental Fruit Trees - Application Instructions
Apples Crabapples	8 to 12 fl. oz./20 gal	Make Ethephon E-AG 2 Plant Growth Regulator foliar applications in a minimum of 20 gallons of water per acre. Ensure application gives a thorough, uniform coverage of tree foliage. Time application to occur at the flower bud to full bloom stage, but before fruit set.  Do not over-apply Ethephon E-AG 2 Plant Growth Regulator or excessive leaf drop and/or tree defoliation may occur.  Use the higher rates under cooler temperature conditions.
Carob ( <i>Ceratonia</i> siliqua)	6 fl. oz./20 gal	Make Ethephon E-AG 2 Plant Growth Regulator foliar applications in a minimum of 20 gallons of water per acre. Ensure application gives a thorough, uniform coverage of tree foliage.
Olive (Olea europaea)	12 fl. oz./20 gal	

#### **ORNAMENTALS - MISTLETOE REMOVAL**

DWARF (AND) LEAFY MISTLETOE REMOVAL: Ethephon E-AG 2 Plant Growth Regulator applied to crnamental conifers or ornamental deciduous trees will remove the mistletoe species noted in the table below.

Çro, ,	Ethephon E-AG 2 Plant Growth Regulator Rate	Mistletoe Removal - Application Instructions
FOR DWARF MISTLE	TOE REMOVAL	
Ornamental Conifers	2 pints/20 gal	Make Ethephon E-AG 2 Plant Growth Regulator foliar applications in a minimum of 20 gallons of water per acre. Direct sprays to dwarf mistletoe shoots and ensure thorough coverage of shoots with spray solution. Non-ionic surfactants at the recommended use rates help increase the coverage of spray on shoots. Time applications to occur prior to mistletoe seed dispersal.
Douglas Fir Ornamentals	1 pint/20 gal	When Ethephon E-AG 2 Plant Growth Regulator is applied in conjunction with sylvicultural mistletoe management, the spread of the mistletoe parasite to other parts of the tree and other trees is avoided.  Ethephon E-AG 2 Plant Growth Regulator may speed the normal mature needle drop that occurs in the fall.  Do not apply higher rates to Douglas fir to prevent excessive needle drop.
FOR LEAFY MISTLET	OE REMOVAL	
Ornamental Deciduous Trees	2 quarts/20 gal	Make Ethephon E-AG 2 Plant Growth Regulator applications in a minimum of 20 gallons of water per acre. Direct sprays to mistletoe shoots and ensure thorough coverage of shoots with spray solution. Non-ionic surfactants at the recommended use rates help increase the coverage of spray on shoots. Time applications to occur after fall leaf drop through mid-winter. Retreatment of mistletoe regrowth should be made during the indicated application period.
		Retreatment may be necessary for severe mistletoe infestations and for mistletoe found in mesquite.

#### **TURF**

#### Not for Residential Use

Applications of Ethephon E-AG 2 Plant Growth Regulator to turf can be used to suppress seedheads of Pop annua and white clover and to suppress growth of turfgrass on golf courses and commercial turfgrass.

#### PRECAUTIONS AND RESTRICTIONS

- Do not allow entry to treated areas until sprays have dried.
- Make applications to turfgrass with good root systems growing under favorable conditions. Avoid applications if turfgrass or the roots are stressed from poor soil conditions, drought, disease or insect damage.
- Make applications in sufficient amounts of water so that uniform coverage of the grass is achieved.
- Ethephon E-AG 2 Plant Growth Regulator should only be applied to actively growing turf and which has not become dormant. Do not apply Ethephon E-AG 2 Plant Growth Regulator if excessive thatch is present in the turf.
- Use of more than 2 applications of Ethephon E-AG 2 Plant Growth Regulator to suppress *Poa* seedhead formation may cause scalping on creeping bentgrass cultivars.
- Although Ethephon E-AG 2 Plant Growth Regulator has been used successfully on many bentgrass cultivars, test new cultivars for tolerance to Ethephon E-AG 2 Plant Growth Regulator on small areas before applying ETU 106 01 G on large areas.
- Spreaders or stickers are not required when applying Ethephon E-AG 2 Plant Growth Regulator. If tank mix partners are used with Ethephon E-AG 2 Plant Growth Regulator, test the tank mix on a small plot before using on large areas.
- Ethephon E-AG 2 Plant Growth Regulator is acidic. Long term exposure to spray deposits will damage acrylic plastics, certain paints and metals. Any plastic materials and painted surfaces which came in contact with Ethephon E-AG 2 Plant Growth Regulator spray mixture should be washed thoroughly with detergent and water within one hour after exposure.
- Do not apply more than a maximum of 30 oz. of Ethephon E-AG 2 Plant Growth Regulator per 1000 sq. ft. per year.

Sites	Ethephon E-AG 2 Plant Growth Regulator Rate	Turf - Application Instructions
For <i>Poa annua</i> and Wh	ite Clover Seedhead s	suppression - [Not registered for this use in CA]
Golf courses including		
Greens, Tees,	,	Make a foliar application of ETU 106 01 G before new seedheads
Fairways, and Roughs	5 fl. oz./1000 sq. ft.	emerge. Apply Ethephon E-AG 2 Plant Growth Regulator in 1 – 2 gallons of water per 1000 sq. ft. Two to three weeks may be
Commercial		required for suppression to be observed. Make a repeat
Turfgrasses, including		application if needed but no sooner than 2 weeks after the previous
Bentgrass, Kentucky	·	application.
Bluegrass, Perennial	·	
Ryegrass, Tall and	• 1	
Fine Fescue, and	· .	
Bermudagrass	,	
For Growth Suppression	n of Turfgrasses	•
Golf course turf		Ethephon E-AG 2 Plant Growth Regulator applications to turf will
including Greens*,		slow the growth of turfgrasses. Fewer mowings will be required
Tees*, Fairways, and	·	and less clippings will be generated. Best results are obtained if
Roughs	'	Ethephon E-AG 2 Plant Growth Regulator is applied during the day
	5 fl. oz./1000 sq. ft.	when temperatures are 65°F and rising. Wait to make an
Commercial		Ethephon E-AG 2 Plant Growth Regulator application until the

Ė.		
Sites	Ethephon E-AG 2 Plant Growth Regulator Rate	Turf - Application Instructions
Turfgrasses, including Bentgrass, Kentucky Bluegrass, Perennial Ryegrass, Tall and Fine Fescue		turfgrass mowing heights have been established for the season. Do not make multiple applications of Ethephon E-AG 2 Plant Growth Regulator in areas where excessive thatch has accumulated since Ethephon E-AG 2 Plant Growth Regulator must reach the turfgrass to be effective.
Not registered for use on tees and greens in California.		Multiple applications of Ethephon E-AG 2 Plant Growth Regulator may be made at the following intervals after the previous application:  Bentgrass – 4 weeks  Kentucky Bluegrass – 7 weeks  Perennial Ryegrass – 7 weeks  Tall/Fine Fescue – 4 weeks
Regulator with Primo N		suppression - Tank Mixtures of Ethephon E-AG 2 Plant Growth ro MEC Plant Growth Regulator) – [Not registered for this use in
California]	· · · · · · · · · · · · · · · · · · ·	
Golf courses including	Ethephon E-AG 2	Ethephon E-AG 2 Plant Growth Regulator can be tank mixed with
Greens, Tees, Fairways, and Roughs	Plant Growth Regulator at 5 fl. oz./1000 sq. ft.	Primo MAXX (or T-Pac E-Pro MEC Plant Growth Regulator) at the given rates to suppress seedhead formation and to promote turfgrass quality. Although multiple applications of the tank mix
Commercial Turfgrasses, including Bentgrass, Kentucky	PLUS	may be made, do not exceed the number of applications or total use rate or timings for either product applied once. Follow the directions for use on each product label for the most restrictive
Bluegrass, Perennial	Primo MAXX (or T-	application interval for turfgrass. Temporary discoloration of
Ryegrass, Tall and	Pac E-Pro MEC	turfgrass may occur if the tank mix is applied when frost is present.
Fine Fescue, and	Plant Growth	·
Bermudagrass	Regulator)	
	at	•
	0.125-0.25	
	oz./1000 sq. ft.	

#### STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container and keep tightly closed. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent) empty containers. 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.

#### CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Etigra or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Etigra and Seller harmless for any claims relating to such factors.

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