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264-267

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ETHREL® Plant Regulator

For Commercial Or Agricultural Use Only
Not For Residential Use

For use on apples, blackberries, blueberries, cantaloupes, cherries,
cranberries, figs, filberts, grapes, lemons, peppers, tangerine, tangerine
hybrids, tomato (fresh and processed), walnuts

ACTIVE INGREDIENT:

Ethephon (2-chloroethyl)phosphonic acid*.....21.7%

INERT INGREDIENTS:.....78.3%

*Contains 2 pounds ethephon per gallon.

EPA Reg. No. 264-267AA

EPA Est. No. 264-PA-01

KEEP OUT OF REACH OF CHILDREN

WARNING

AVISO

PRECAUTIONARY STATEMENTS: SEE INSIDE BOOKLET.

PRECAUCION AL USARIO: Si usted no lee ingles, no use este producto hasta que
le etiqueta haya sido explicada ampliamente.

IN CASE OF EMERGENCY PHONE COLLECT (24 HOURS A DAY) IN U.S.A. 1-800-UCC-HELP
FOR GENERAL PRODUCT INFORMATION CALL 1-800-334-9745

UNION CARBIDE AGRICULTURAL PRODUCTS COMPANY, INC.
P.O. Box 12014, T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

ETHREL is the registered trademark of Union Carbide Agricultural Products
Company, Inc.

NET CONTENTS 1 GALLON

0465G/PENDING/7-16-87

ACCEPTED
NOV 24 1987
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 264-267

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ETHREL® HELPS NATURE HELP YOU

ETHREL® Plant Regulator

- Promotes earlier coloration and maturity of APPLES, CRANBERRIES, GRAPES, TOMATOES, and PEPPERS
- Loosens CHEKRIES, WALNUTS, and APPLES for earlier, more efficient harvest
- Promotes fruit abscission (slipping) in CANTALOUPEs
- Increases dormant fruit bud hardiness and delayed spring bloom of SWEET CHERRIES in the Pacific Northwest
- Reduces degreening time for LEMONS. Loosens and degreens TANGERINE and TANGERINE HYBRIDS
- Accelerates BLACKBERRY ripening and loosening
- Concentrates BLUEBERRY maturity and aids in barrenberry control
- Accelerates early uniform FIG ripening
- Hastens FILBERT husk maturity for earlier more efficient harvest
- Promotes early uniform color development of EMPEROR and TOKAY GRAPES. Hastens maturity of THOMPSON SEEDLESS GRAPES

GENERAL INFORMATION - (DIRECTIONS FOR USE)

For local recommendations on rates, spray volumes, and spray equipment under varying temperature and rainfall conditions consult your Extension Pomologist, Horticultural Specialist, RP Representative or Farm Advisor for his experience with this product in your area. Do not exceed the rate of ETHREL® Plant Regulator per acre recommended on this label.

APPLES - A foliar spray of ETHREL® Plant Regulator promotes fruit maturity and loosens apples, making harvest by hand or machine easier and more efficient. ETHREL® applied in combination with a chemical to control pre-harvest drop stimulates early development of red color and ripening without loosening fruit. Applied to young trees, ETHREL® will suppress vegetative growth and promote flower bud formation.

BLACKBERRIES IN OREGON AND WASHINGTON - A foliar spray of ETHREL® Plant Regulator will concentrate maturity and loosen fruit improving the harvesting efficiency while reducing cane injury from mechanical harvest.

BLUEBERRIES - A foliar spray of ETHREL® Plant Regulator concentrates maturity of blueberries for easier and more efficient harvest. A foliar spray of ETHREL will abort black barrenberry (Aronia melanocarpa) flowers and/or fruit growing in Maine lowbush blueberry fields reducing the number of undesirable barrenberry fruit harvested with blueberries.

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CANTALOUPE IN CALIFORNIA, ARIZONA AND TEXAS - A foliar spray of ETHREL® Plant Regulator promotes abscission (slipping) of fruit allowing more efficient and economical harvesting.

CHERRIES - A foliar spray of ETHREL® Plant Regulator loosens fruit and promotes early uniform ripening. These effects are important for increasing efficiency, recoverable yields, and for maintaining fruit quality from a once-over mechanical harvest. DO NOT USE ON CHERRIES IN CALIFORNIA. A fall application of ETHREL to sweet cherries in the Pacific Northwest area increases dormant fruit and hardiness and delays bloom the following spring.

CRANBERRIES IN MASSACHUSETTS, NEW JERSEY AND WISCONSIN - A foliar spray of ETHREL Plant Regulator can hasten maturity and intensify cranberry color development, allowing earlier harvest of more uniform high quality fruit.

FIGS IN CALIFORNIA - A foliar spray of ETHREL® Plant Regulator accelerates early uniform fig ripening, allowing earlier harvest of high quality fruit and improving the efficiency of scheduled harvest.

FILBERTS IN OREGON - A foliar spray of ETHREL® Plant Regulator will hasten bush maturity providing increased recoverable yield from an earlier once over harvest.

GRAPES IN CALIFORNIA - An application of ETHREL® Plant Regulator promotes early uniform color development on table grape varieties Cardinal, Emperor, Flame Seedless, Red Malaga, Queen and Tokay allowing more efficient harvests of quality fruit.

A foliar spray of ETHREL® Plant Regulator will hasten maturity of Thompson Seedless grapes resulting in reduced acids, increased sugars and increased raisin quality.

LEMONS POSTHARVEST DEGREENING, FLORIDA - A postharvest spray of ETHREL® Plant Regulator will shorten the degreening time for mature lemons.

PEPPERS - A foliar spray of ETHREL® Plant Regulator promotes early, uniform ripening and coloring for more efficient packing and handling of fruit.

TANGERINES AND TANGERINE HYBRIDS, FLORIDA - A foliar spray of ETHREL® Plant Regulator will loosen and degreen tangerines and tangerine hybrids for reduced fruit plugging and improved color, while reducing or stimulating ethylene chamber degreening.

TOMATOES - FRESH MARKET IN CALIFORNIA - A foliar spray of ETHREL® Plant Regulator accelerates and concentrates tomato ripening increasing recoverable fruit yield from a once-over harvest.

TOMATOES - PROCESSED - A foliar spray of ETHREL® Plant Regulator accelerates tomato ripening increasing the early yields of marketable ripe fruit. ETHREL® application starts the normal ripening process earlier and increases the rate of ripening of mature green fruit concentrating maturity.

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Concentrated fruit maturity enables high recoverable yields of ripe tomatoes in a once-over field harvest. Early concentrated maturity extends the normal harvest season and will help growers to schedule harvesting sequence and handling of fruit more efficiently.

WALNUTS IN CALIFORNIA - A foliar spray of ETHREL® Plant Regulator will loosen walnuts for increased efficiency of mechanical harvest, promote earlier harvest, improve hull removal, and increase recoverable yields from a once-over harvest.

PRECAUTIONARY STATEMENTS

WARNING

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May cause eye damage. Do not get in eyes. Wear goggles or face shield when handling. In case of eye contact, immediately flush eyes with plenty of warm water for at least 15 minutes. Call a physician.

HARMFUL IF SWALLOWED: Avoid contamination of food. If taken internally call a physician and promptly drink large quantities of milk, egg white, gelatin solution or if these are not available, large quantities of water.

Avoid contact with skin or clothing and do not inhale vapors as this product may irritate the skin or mucous membranes. In case of skin contact, wash immediately with plenty of soap and water. Remove contaminated clothing.

Note to Physician

Probable mucosal damage may contraindicate the use of gastric lavage.

ENVIRONMENTAL HAZARDS

Keep out of lakes, ponds or streams. Do not contaminate water used for irrigation or domestic purpose.

STORAGE AND DISPOSAL

STORAGE

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

PESTICIDE DISPOSAL

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

CONTAINER DISPOSAL

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

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DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

Avoid spray drift to nearby crops as this product will cause modification in plant growth. Plant injury or reduced yields will result. Do not plant another crop within 30 days after treatment.

IMPORTANT:

Do not use ETHREL® Plant Regulator with any additives other than those specifically recommended on this label. Do not use this product for purposes other than those listed on this label.

Mix only the amount of spray you expect to use each day. Do not allow mixed solution to stand overnight.

GENERAL WORKER PROTECTION STATEMENTS

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

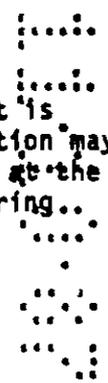
Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information. Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Advise workers to stay out of fields during application and until sprays have dried. See Precautionary Statements, Statement of Practical Treatment, and Note To Physician for information on accidental exposure. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: appropriate signal word (WARNING), area treated ETHREL® Plant Regulator, date of application, appropriate protective clothing, and reentry interval if applicable.

(CROP USE)

APPLES

For best results, a thorough uniform spray coverage of leaves and fruit is needed. A wetting agent may improve spray coverage. Fruit size reduction may occur when used to obtain early maturity, especially if fruit is small at the time of treatment. Use no more than one application per season on bearing trees.

Do not graze or feed cover crops grown in treated apple orchards.



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For Fruit Loosening

Apply a foliar spray to apple trees 7 to 14 days prior to normal anticipated harvest. Pick apples when they reach the degree of loosening desired for mechanical or hand harvesting. Observe treated fruit closely for abscission response since temperatures above 75°F accelerate fruit loosening and promote preharvest drop.

I. Early and Midseason Maturing Varieties (such as Tydeman, Milton, Wealthy and McIntosh).

Apply 2 1/2 pints of ETHREL® Plant Regulator per acre. Use sufficient water for thorough uniform spray coverage, generally 50 to 500 gallons per acre depending on the type and delivery of sprayer used and size of trees.

II. Late Maturing Varieties (such as Cortland, Red Delicious, Rome, Idared and Jonathan).

Apply 5 pints of ETHREL® Plant Regulator per acre. Use sufficient water for thorough uniform spray coverage, generally 50 to 500 gallons per acre depending on the type and delivery of sprayer used and size of trees.

For Promoting Uniform Ripening and Coloring of Red Varieties Without Loosening Fruit

Apply a foliar spray of ETHREL® Plant Regulator and a preharvest drop control chemical such as FRUITONE®-N. Begin spraying 2 to 3 weeks before normal harvest period and about 1 to 2 weeks before desired harvest date.

I. Early or Midseason Maturing Varieties (varieties maturing with McIntosh or earlier).

Mix 1/2 to 1 pint of ETHREL® Plant Regulator in 100 gallons of water. Use the lower rate on apples intended for storage. Apply as a normal dilute spray using sufficient water for thorough uniform coverage, generally 200 to 400 gallons per acre depending on tree size.

II. Late Maturing Varieties (varieties maturing later than McIntosh).

Mix 1 pint of ETHREL® Plant Regulator in 100 gallons of water. Apply as a normal dilute spray using sufficient water for thorough uniform coverage, generally 200 to 400 gallons per acre depending on size of trees. Since recommendations for chemical control of preharvest drop vary according to location and variety, follow directions on the FRUITONE®-N label or consult your local extension Pomologist or Horticulturist.

Treat when air temperatures are between 60°F and 90°F. However, application may be made at 50°F under rising temperature conditions. If daytime temperatures are high and nighttime temperatures are warm, color response from ETHREL® treatment will be reduced, but ripening and loosening effects will be accelerated. Cool weather may extend the interval between treatment and harvest.

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Important: Harvest fruit at proper maturity and put into cold storage immediately. Observe fruit daily as the proper picking period is shorter with ETHREL treated fruit than with untreated fruit. Do not allow fruit to become overripe on trees. Fruit intended for fresh market must be checked for quality and maturity, not just color. Color alone is not an adequate guide for fruit maturity. Use a pressure gauge or other suitable methods for determining internal maturity. If the fruit is over-mature when harvested and stored, the fruit may soften sooner than untreated fruit. ETHREL® applied earlier than 3 weeks before normal anticipated harvest may result in reduced fruit quality and size. Do not apply ETHREL® to more acreage than can be harvested in 1 to 2 days. Treated fruit can be satisfactorily stored in CA or regular cold air storage provided fruit is in good condition when put into storage.

THINNING AND RETURN BLOOM ON GOLDEN DELICIOUS

Golden Delicious is a difficult variety to adequately thin. Regulating cropping from one season to another is also a serious problem. Whenever a high percent of the spurs and lateral buds bloom in a single season severe alternate bearing can develop the following year.

To overcome this problem and maintain annual production, a series of of sprays is usually required, starting with a bloom spray with Elgetol followed by AMID-THIN W, ETHREL or a combination of AMID-THIN W plus ETHREL 7 to 21 days after full bloom.

The program to use will depend on the amount of thinning required and the biennial bearing history of your orchard.

There are many environmental factors which can affect thinning and return bloom. It is advisable to obtain experience under your condition by initially treating only a small percent of your trees each year with any one program.

IMPORTANT: THE USE OF ETHREL CAN RESULT IN OVER THINNING AND REDUCE FRUIT SIZE. AVOID DOUBLE COVERAGE AND USE ON LOW VIGOR TREES. DO NOT APPLY ON LIGHT BLOOMING TREES. IF ETHREL HAS BEEN USED FOR THINNING DURING THE SPRING DO NOT APPLY A FALL TREATMENT FOR FRUIT LOOSENING.

Consult the fruit thinning experts in your area for advice on local conditions and spray programs that have proven effective.

DIRECTIONS FOR USE.

Mix 1/2 to 1 pint of ETHREL Plant Regulator per 100 gallons of water (2 to 4 pints per acre). Treat 10 to 20 days after full bloom. Apply in a normal dilute spray of 300 to 400 gallons per acre. For greater thinning apply AMID-THIN W at 3 to 4 oz. plus ETHREL at 1/2 to 1 pint per 100 gallons of spray solution. Treat 10 to 20 days after full bloom. Apply in a normal dilute spray of 300 to 400 gallons per acre.

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SPUR GOLDEN DELICIOUS

Spur Golden Delicious with a heavy fruit set may require a higher rate of ETHREL Plant Regulator of 1 to 1 1/2 pints per 100 gallons of water at the earlier timing for adequate thinning and return bloom.

FOR INCREASED FLOWER BUD DEVELOPMENT ON YOUNG TREES

To increase flower bud development on young non-bearing trees, apply a foliar spray of ETHREL PLANT Regulator 3 to 4 weeks after bloom. On young trees just beginning to bear fruit, apply ETHREL 5 to 6 weeks after full bloom and after June drop. This treatment can result in excessive fruit thinning and reduced fruit size and yield reduction the year of usage. ETHREL should reduce vegetative growth and increase flowering the following spring.

User must consider the risk of excessive fruit thinning and fruit size reduction when using this treatment on bearing trees. Trees should be large enough to support a crop of apples before they are treated to initiate flower buds. Treat only vigorous trees since excessive growth reduction will result on low weak trees. Treat when air temperatures are between 60°F and 90°F.

I. Non-bearing trees: Mix 1 to 2 pints of ETHREL Plant Regulator in 100 gallons of water (3 to 6 pints/acre). Spray trees thoroughly and uniformly to the point of run-off. Use the higher rate on more vigorous trees. Treat 2 to 4 weeks after full bloom period.

II. Young trees just starting to bear: Mix 1/2 to 1 pint of ETHREL Plant Regulator in 100 gallons of water (1 1/2 to 3 pints/A). Spray trees thoroughly and uniformly to the point of run-off. To help minimize fruit thinning, delay application 5 to 6 weeks after bloom and after June drop; avoid double coverage and use on low vigor trees. This treatment can result in over thinning and reduction in fruit size.

BLACKBERRIES (Cultivars Chehalem, Thornless Evergreen and Boysenberry) in Oregon and Washington

To loosen fruit and concentrate maturity, apply a foliar spray of ETHREL® Plant Regulator at least 3 days prior to the expected harvest when the air temperature is between 60° and 90°F and rain is not predicted within 24 hours. Treat early in the harvest season to reduce the number of pickings OR treat later in the harvest season for a once-over final picking.

Mix 5 pints of ETHREL® per 100 gallons water and apply 100-175 gallons of spray mixture per acre.

Do not spray more than can be harvested on the third day following treatment, as considerable fruit may drop. Do not apply more than once per season.

Use only at recommended times and rates on healthy, vigorous plants, as a reduction in berry size may occur. Do not use on damaged or diseased plants.

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BLUEBERRIES

For concentration of maturity and earlier fruit coloring on cultivars Bluecrop, Weymouth, Jersey, Rancocas, Rubel, Bluetta, Erlblue, Wolcott, Croatan, Murphy, Angola, Morrow, Garden Blue, Trifblue and NC 901. Application to other cultivars may cause excessive steminess and/or premature crops.

Apply a foliar spray of ETHREL® Plant Regulator at a rate of 4 to 8 pints in 150 to 200 gallons per acre. Use the higher spray volume and rate on large dense foliage bushes or when temperatures are cool. Treat when air temperatures are 60° to 90°F. Thorough uniform spray coverage of foliage and fruit is essential for maximum fruit maturation and coloration. To aid uniform wetting of plants, use a wetting agent such as Triton B-1956 at 0.5 pint per 100 gallons or X-77 at 2.0 pints per 100 gallons.

To concentrate first harvest, apply ETHREL® when 15 to 20% of the berries are blue. To concentrate final harvest, treat after the first or second picking. Harvest blueberries at proper maturity when colored, generally one to two weeks after treatment. Observe fruit daily as the proper picking period for optimum internal and external quality is shorter with ETHREL® treated fruit than with untreated fruit. High temperatures (90°F) accelerate fruit ripening.

ETHREL® treatments may increase fruit with stems, slightly decrease fruit size, soluble solids and acidity. ETHREL® may not induce internal ripening as rapidly as fruit color. Make no more than one application per season. If used for barrenberry control in Maine, do not make a second application for blueberry concentration of maturity or coloring.

Black Barrenberry Control in Low Bush Blueberries in Maine

Apply 4 to 8 pints per acre of ETHREL® Plant Regulator in approximately 100 to 200 gallons per acre for ground sprayers and approximately 10 gallons per acre for aerial application. Thorough uniform spray coverage is essential. To aid in uniform wetting of plants, use a wetting agent such as X-77 at 0.1% of the spray volume. Use the lower rates of ETHREL® when black barren berries are between 90 to 100% petal fall and use the higher rates of ETHREL® when black barrenberry fruit is 1/8 to 3/16 inch in diameter. This is generally 7 to 10 days after blueberries are in the same stages of development. Harvest blueberry fruit when ripe, generally 6 to 8 weeks after application.

Do not treat blueberry plants under drought stress or excessively high temperatures as defoliation and reduced yield may result.

CANTALOUPEs in California, Arizona and Texas

ETHREL® Plant Regulator promotes abscission (slipping) so fruit separates more easily from vines. This allows more efficient and economical harvesting. Abscission generally will occur two to five days after ETHREL® treatment. The effect will be faster at higher temperatures. Proper timing of ETHREL® treatment is critical, but may vary from season to season. Fruit

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quality, in terms of soluble solids and flesh color, does not improve following treatment. Therefore, ETHREL® should not be used until after fruit has developed marketable levels of soluble solids and flesh color. ETHREL® promotes abscission of immature fruit as well as marketable fruit. Thus, using ETHREL® too soon will result in poorly colored fruit with substandard soluble solids.

Observe treated fields frequently and pick fruit when market quality is reached. Fruit allowed to remain in the field too long will lose quality. Some yellowing or rapid aging of vines will be seen following treatment. Plants with low vigor will not respond properly. Treat each field only once with ETHREL®. Do not plant another crop within 30 days after treatment.

For more specific directions under varying temperature and moisture conditions, consult your Extension Horticulturist or Farm Advisor.

CALIFORNIA AND ARIZONA

Treat only those fruit that have a fairly uniform fruit set, have vines in good condition, and have fruit with marketable soluble solids and internal flesh color. Do not treat fields where soluble solids are running less than 10%.

Apply 3 pints of ETHREL® Plant Regulator per acre in 40 to 80 gallons of water. Good spray coverage is important for producing uniform abscission. Be prepared to harvest abscised fruit two to five days after treatment. The exact pre-harvest interval will vary with temperature. Be sure to coordinate your harvesting schedule with your packer/shipper.

TEXAS

Treat only those fields that have a fairly uniform fruit set, have vines in good condition, and have fruit with marketable soluble solids and internal flesh color. Apply 3 pints of ETHREL® Plant Regulator per acre in 40 to 80 gallons of water with ground sprayers, or 10 to 12 gallons of water with aerial applications. ETHREL® should not be applied when night temperatures are 60°F or below.

CHERRIES

For Fruit Loosening and Uniform Ripening

Do not apply too early as this can cause early fruit drop with stems attached. At the time of application all fruit including those inside the tree canopy should be in stage 3 as indicated by a rapid size increase and the presence of ground color (change from bright green to yellow background color).

Check treated fruit frequently and harvest at optimum maturity. When programming harvest, spray a different orchard block each day and harvest those blocks daily in the same sequence.

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Treat when air temperatures are between 60 and 85°F. Do not treat when air temperatures exceed 85°F during application or are forecast for the following five days. High temperatures during and after application may cause severe gummosis.

Some gummosis is associated with treatment. Do not apply to trees that are of low vigor or have experienced severe stress (such as winter injury, drought, disease), since gummosis will be excessive particularly when high temperatures and/or drought follow treatment. If possible irrigate orchards to prevent stress. Do not treat trees that had severe gummosis the previous year as tree damage will result.

Uniform coverage is important, concentrated sprays associated with erratic application can result in gummosis and tip dieback.

Do not make more than one application per season.

NOT FOR USE ON CHERRIES IN CALIFORNIA

TART CHERRIES - Varieties such as Montmorency: Mix 1/3 pints ETHREL® Plant Regulator in 100 gallons of water. Apply as a dilute spray with sufficient water for thorough, uniform coverage, generally 300 gallons per acre depending on the type and delivery of sprayer used and size of trees.

For concentrate sprayers, apply 2/3 to 1 pint ETHREL® per acre in 50 to 100 gallons of water. Uniform coverage is essential for optimum response.

FOR USE ON SWEET CHERRIES - Varieties such as Windsor, Napoleon (Royal Anne), Emperor Francis: Mix 1 to 1 1/3 pints of ETHREL® Plant Regulator in 100 gallons of water. Apply as a dilute spray with sufficient water for thorough uniform coverage, generally 300 gallons per acre depending on the type and delivery of sprayer used and size of trees. Use the lower rates on the light or yellow colored varieties. A longer treatment to harvest interval will occur with the lower rate.

For concentrate sprayers, apply 2 to 3 pints ETHREL per acre in 50 to 100 gallons of water per acre. Uniform coverage is essential for optimum response.

INCREASED DORMANT FRUIT BUD HARDINESS AND DELAYED SPRING BLOOM OF SWEET CHERRIES IN THE PACIFIC NORTHWEST

A fall application of ETHREL® Plant Regulator will increase fruit bud hardiness by decreasing the chance for winter injury and delaying bloom by 3 to 5 days which may help avoid frost injury. Treatment of early flowering varieties may delay bloom to better coincide with pollenization from other varieties. Apply 3 pints of ETHREL® per acre in a dilute spray (300 to 400 gallons per acre). Treat during the first two weeks of September. Some early leaf yellowing and drop may be noted following application. Slight gummosis and individual fruit size reduction may be noted.

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CRANBERRIES - Grown in Massachusetts, New Jersey and Wisconsin

In Wisconsin apply ETHREL® Plant Regulator during the first two weeks in September. In Massachusetts and New Jersey apply ETHREL® after 1 to 5% of the total fruit is pink and red. To determine percent colored fruit, take a scoop and harvest fruit from several plants. Separate and count pink and red versus white and green fruit. Do not look at top fruit only. Use only one ETHREL® treatment per season. Harvest treated berries when the desired intensity of maturity and coloration is reached and before bogs freeze over. An increase in maturity and color may occur in 10 to 14 days.

For best results, it is essential to thoroughly cover all leaves and fruit. Earlier coloration can be produced on berries that have been directly contacted by ETHREL® spray.

Apply when daytime temperature above 65°F is expected for several days after treatment. To aid in uniform wetting of plants add a surfactant such as X-77 at 2 pints per 100 gallons or Triton B-1956 at .5 pints per 100 gallons to the spray mixture.

Apply 4 to 6 pints of ETHREL® per acre in 200 to 300 gallons of water for ground sprayers and 5 to 30 gallons of water for aerial sprayers. Use the higher rates and volumes when foliage is dense and temperatures are cool.

FIGS in California

A foliar spray of ETHREL® Plant Regulator accelerates early uniform fig ripening, allowing earlier harvest of high quality fruit and improved efficiency of scheduled harvest.

ETHREL® should be used only on Calmyrna and second crop Black Mission figs. Do not use on other varieties as crop loss may result. Apply 4 pints of ETHREL® per acre using 250 gallons of water. For best results, a thorough uniform spray coverage of leaves and fruit is required. Treat when 70 to 90% of the basal figs (closest to branch fork) are yellow.

Do not treat earlier as reduced fruit quality, increased incidence of "puff" balls, or premature fruit drop may result.

Figs generally start to drop 14 to 21 days following treatment. Pick up fruit promptly to avoid loss of quality due to insect damage or adverse weather. Dry and process figs as usual.

Treat trees only once per season. For more information regarding local experience with this product on figs, consult your Farm Advisor or Extension Horticulturist.

FILBERTS in Oregon

Apply a foliar spray of ETHREL® Plant Regulator to trees when the first nuts have loosened, will spin within their husk, and begin to fall naturally. At this time some husks have turned brown at the tips but many green husks are

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still present. Mix 3 1/2 pints of ETHREL® per 100 gallons of water and apply approximately 75 to 100 gallons of spray mixture per acre for average size trees. To assure uniform coverage of large trees, apply 150 gallons of spray mixture per acre. Use only one ETHREL® spray per season.

For best results, a thorough, uniform spray coverage of leaves and husks is needed. Some premature leaf drop will be associated with treatment. Do not apply to diseased or low vigor trees as leaf drop may be excessive. For maximum benefit, harvest should begin when 90% or more of the filberts have dropped.

TABLE GRAPES IN CALIFORNIA

An application of ETHREL® Plant Regulator promotes early uniform color development of colored table grape varieties including Cardinal, Flame Seedless, Red Malaga, Queen and Tokay allowing more efficient harvest of quality fruit.

Apply 1 to 2 pints of ETHREL® per acre in sufficient water to wet vines and fruit clusters uniformly, generally 50 to 300 gallons using conventional ground sprayers. Rates higher than 1 pint/A may increase incidence of cracked fruit and should only be used in areas or during weather conditions where grapes have been especially hard-to-color in past seasons. Except Tokay treat all varieties when 5 to 30% of the berries are showing color. Treat Tokays when 5 to 15% of the berries are showing color. Aerial application of 1 to 2 pints of ETHREL® in 20 gallons of spray volume per acre or concentrate ground applications of 1 to 2 pints of ETHREL® in 25 to 50 gallons per acre may be used to treat Tokays. Harvest fruit at desired maturity and quality, as indicated by sugar content, acidity and color. This is generally two weeks or more after treatment. Watch treated areas closely and harvest before berries become too dark.

Some berry softening is associated with ETHREL® treatment of some varieties which may limit or influence storage considerations. Do not store Tokays.

Treat each vine only once per season. For more information regarding local experiences with this product on grapes consult your Farm Advisor or Extension Viticulturist.

THOMPSON SEEDLESS GRAPES FOR RAISIN PRODUCTION

A foliar spray of ETHREL® Plant Regulator will hasten maturity of Thompson Seedless grapes resulting in reduced acids, increased sugars and increased raisin quality.

Apply a foliar spray of 1 to 2 pints (0.25-0.5 lb.) per acre ETHREL® Plant Regulator in 30 to 300 gpa of water at 5% berry softening. Do not apply to grapes which are under stress from insect damage or which are under moisture stress. Observe treated vineyards closely and harvest at proper maturity as determined by sugar and acid levels.

Treat each vine only once per season. For more information regarding local experience with this product on grapes consult your Farm Advisor or Extension Viticulturist.

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LEMONS - Postharvest Degreening (Florida)

Thoroughly mix 3 1/3 pints of ETHREL® Plant Regulator per 100 gallons of water and apply a postharvest spray mist to lemons prior to placement in the curing room. One hundred gallons of spray mix will treat approximately 100 to 130 tons of fruit. Complete, uniform coverage of fruit is essential for desired response. If ETHREL® is to be used in conjunction with a fungicide such as TBZ, follow all directions and cautions on the fungicide label.

An ETHREL® treatment will shorten the degreening time for lemons by up to 1/3 over untreated fruit. Cure treated lemons following normal practices, but check frequently to determine when desirable color is obtained. If ETHREL® is used for postharvest degreening do not place fruit in ethylene chambers.

Do not make preharvest applications to lemons or treat more than once after harvest. Do not pick lemons until the minimum juice requirement (30% v/v) has been obtained.

PEPPERS

A foliar spray of ETHREL® Plant Regulator promotes early, uniform ripening and coloring for more efficient picking and handling of fruit. Apply ETHREL® to bell peppers when 10% of the fruit are red and chocolate and to pepper varieties, chili and pimento when 10 to 30% of the fruit are red and chocolate and there is sufficient mature green fruit to produce the desired tonnage per acre. Check several field locations to determine the crop stage and degree of maturity. ETHREL® treatments may reduce total yields if applied too early or there is a lack of uniform, mature green fruit resulting from split fruit set, variable soil or cultural practices. Do not apply when prolonged average high temperatures of 95°F after treatment are expected. Do not treat if temperatures exceed 100°F. Applications made under high temperatures will accentuate fruit ripening, yellowing of foliage, defoliation and immature fruit abscission while average low temperatures, 60°F after treatment have reduced or negated the effects of ETHREL®.

Apply 3 to 4 pints of ETHREL® in 40 to 100 gallons of water per acre with ground spray equipment. Use the higher rate when cool temperatures are anticipated (less than 65°F), when plants are growing vigorously or when foliage is dense to assure thorough wetting of all leaves and fruit. Some yellowing and general aging of leaves will be noted after treatment. Do not make more than one application of ETHREL® per crop. Harvest fruit when the desired color and maturity have developed, generally 14 or more days after treatment.

ETHREL® will not ripen immature green fruit. Do not plant any crop until 30 days after ETHREL® application.

TANGERINES and TANGERINE HYBRIDS in Florida

ETHREL® promotes loosening of tangerines for easier harvest and degreening for improved marketability. Apply a preharvest spray of ETHREL® Plant Regulator to leaves and fruit when 10 to 20% of the mature fruit are showing

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color break. Observe treated fruit to determine optimum harvest response which generally occurs 5 to 10 days after treatment depending on percent color and maturity at time of spraying and temperature after application.

For treatment of tangerine and tangerine hybrids such as Dancy, Robinson, Nova, Murcott and Lee, mix and apply 3 1/3 to 5 pints of ETHREL® in 400 to 600 gallons of water per acre. For Orlando, apply 2/3 pints of ETHREL® in 100 gallons and apply 400 to 600 gallons of spray mixture per acre. Use a higher rate and spray volume on large dense vigorous trees. Uniform spray coverage is essential for maximum response.

Some defoliation or yellowing of older leaves may occur from ETHREL® treatment. Excessive defoliation can result from treatment of trees with low vigor or treating trees exhibiting freeze injury, drought or other stress symptoms. Do not use a surfactant or wetting agent since this promotes defoliation. Do not make more than one application of ETHREL® per harvest season. Do not treat trees with new vegetative growth or during flowering.

TOMATOES

Some yellowing and general aging of foliage may be observed following treatment. Do not treat plants with poor root systems or growing under stress due to poor soil conditions, drought, disease or insect damage. Treatment of weak plants will result in rapid loss of foliage cover increasing sunburn and sun scald potential, especially under high temperature conditions. Do not treat when sustained temperatures above 105°F are anticipated. Foliar damage is more severe on certain varieties such as VF 10, VF 315, VF 145, 21-4, and 13L. Do not treat sensitive varieties during period when temperatures exceed 100°F. ETHREL® Plant Regulator will not ripen immature green fruit. Check fields closely for stage and degree of uniform maturity prior to application. Sample several plants throughout the field to determine proper spray date. Sort, weigh and calculate the percent fruit which is red and pink, including breakers. Fruit size alone is not an adequate indicator.

Timely harvest is essential for maximum return of high quality fruit. Consult processor representatives concerning delivery schedules and quotas prior to application of ETHREL®.

Apply recommended amount of ETHREL® in 20 to 100 gallons of water per acre for ground boom sprayers and 10 to 12 gallons of water per acre for aerial application. Uniform ripening requires uniform spray coverage on plants. Do not tank mix with sun protection whiteners. Use only one application per season. Do not apply ETHREL® to more acreage than can be harvested in 2 to 3 days. Do not apply ETHREL® to varieties known to soften rapidly or shatter when ripe. Rates listed below are for broadcast coverage of the total area. If bands are sprayed over the row reduce the amount of ETHREL® used in proportion to the area actually treated. Overdosing from overlapping swaths or spray nozzle patterns can cause severe foliage injury.

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FOR USE IN CALIFORNIA, TEXAS AND OTHER WESTERN AREAS HAVING SIMILAR VARIETIES AND CULTURES

I. Early and Midseason Tomato Crops

Apply 3 1/4 pints of ETHREL® Plant Regulator per acre (0.8 lb.a.i./acre) when 5% to 15% of the fruit in the field are red and pink (including breakers) and there is sufficient mature green fruit to produce the desired tonnage.

During the midseason, particularly under high temperatures, rates as low as 1 1/4 pints ETHREL® per acre have been effective for increasing recoverable yields and reducing sorting times with less vine damage. There will be little change in the harvest date, compared to untreated tomatoes. Walk treated fields frequently to evaluate crop condition. Maintain normal cultural practice between treatment and harvest. Harvest fruit at proper maturity generally 14 to 21 days after treatment.

II. Late Season or Coastal Tomato Crops

Apply 3 1/4 to 6 1/2 pints ETHREL® Plant Regulator per acre (0.8 to 1.6 lb. a.i./acre) when 5% to 30% of fruit in the field are red and pink (including breakers) and there is sufficient mature green fruit to produce the desired tonnage. Maximum response will be when treated fruit is 5 to 15% pink and red. Use the higher rate of ETHREL® when nighttime temperatures are cool (below 65°F) or vegetative growth is dense.

Walk treated fields frequently to evaluate condition of crop. Maintain normal cultural practice between treatment and harvest. Harvest maturity of late season cooler coastal crops can be expected 18 to 24 days after treatment. However, nighttime temperatures below 65°F retard natural color development and may extend the interval between treatment and harvest.

FOR USE IN TOMATO PRODUCING AREAS OF THE MIDWEST AND EAST

Apply 3 1/4 pints of ETHREL® Plant Regulator per acre (0.8 lb.a.i./acre) when 5% to 30% of the fruit in the field are red and pink (including breakers) and there is sufficient mature green fruit to produce the desired tonnage. When average temperatures are cool (below 65°F) and vegetative growth is dense, apply 6 1/2 pints of ETHREL® per acre (1.6 lbs.a.i./acre) when 5% to 30% of the fruit in the field are red and pink (including breakers).

Walk treated fields frequently to evaluate condition of crop. Maintain normal cultural practice between treatment and harvest. Harvest fruit at proper maturity, generally 14 to 21 days after treatment. Temperatures above 90°F may cause fruit to ripen sooner, whereas temperatures below 65°F retard natural color development and may extend the interval between treatment and harvest.

TOMATOES - Fresh Market - in California

A foliar spray of ETHREL® Plant Regulator accelerates and concentrates tomato ripening, increasing recoverable fruit yield from a once-over harvest. Apply ETHREL® when desired tonnage of fruit has reached marketable size and

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maturity, generally 3 to 6 days before desired harvest date. Expect only one harvest from treated areas. ETHREL® will not ripen immature green fruit and accelerates aging of tomato plants. Check fields closely for stage and degree of uniform maturity prior to application. Sample several locations throughout the field to determine proper spray date.

Do not treat when temperatures above 100°F are anticipated. Do not use on greenhouse tomatoes. Do not tank mix with sun protection whiteners. Use only one application per season.

Consult your local RP Representative, Extension Horticultural Specialist or Farm Advisor for suggestions on the proper use of ETHREL® when fields have variable plant vigor due to differences in soil conditions or cultural practices and for rates of fruit ripening as affected by temperature, within the rate and timing limitations shown on the label. Do not plant to any other crop until 30 days after ETHREL® treatment.

Apply a foliar spray of 3 1/4 to 5 pints of ETHREL® per acre in 40 or more gallons of water for ground sprayers or 10 to 12 gallons of water for aerial sprayers. Use the higher rate and longer preharvest interval on late season crops, when temperatures are cool (generally below 85°F) and foliage is dense. Uniform ripening requires uniform spray coverage of plants. Rates listed are for broadcast coverage of the total area. If bands are sprayed over the row reduce the amount of ETHREL® used in proportion to the area actually treated. Overdosing from overlapping swaths or spray nozzle patterns can cause severe foliage injury. Walk treated fields frequently to evaluate conditions of crop. Maintain normal cultural practice between treatment and harvest.

Timely harvest is essential for maximum return of high quality fruit.

WALNUTS IN CALIFORNIA

ETHREL® Plant Regulator application promotes uniform hull split providing greater potential for increased recoverable yields of optimum quality walnuts with early harvest. Maximum benefit is obtained with application immediately after walnut packing tissue has turned brown.

Apply 3 to 5 pints of ETHREL® per acre in ground spray volumes of 100 to 500 gallons per acre depending on spray equipment and size of trees. Treat when air temperatures are between 60°F and 90°F and after the packing tissue of walnuts inspected is completely brown. Use 5 pints per acre when minimum time interval between treatment and harvest is desired and with cool temperature harvest conditions.

Uniform spray coverage of walnut hulls is essential for maximum hull split and loosening response. Be sure equipment provides good penetration of spray to all parts of the tree. Check spray nozzles frequently to assure uniform distribution of spray droplets. Application equipment should not be operated in excess of 3 mph and directional spray volute equipment should be utilized when treating tall dense foliage trees.

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Inspect treated orchards frequently and harvest as soon as adequate hull split occurs, generally 5 to 10 days after treatment. Cool temperatures increase the time requirement for optimum harvest response. As with early harvest, longer drying time may be required.

Treatment prior to brown coloration of packing tissue may reduce nut quality. Some leaf drop is associated with treatment. Do not treat diseased, low vigor or moisture stressed trees as excessive leaf drop may occur. Use only one spray application per season.

Do not use rates above that recommended since tree injury (such as excessive defoliation, reduced catkin formation, twig dieback) may result.

For a programmed harvest, spray a different orchard block each day and harvest blocks daily in the same sequence starting 5 to 10 days after treatment.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and (c) that the directions, warnings and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and of residues and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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