

GENERAL INFORMATION

DIRECTIONS FOR USE

See Attached Pamphlet for Detailed Instructions
 For local recommendations on rates, spray volumes and spray equipment under varying temperature and rainfall conditions, consult your Extension Pomologist, Horticultural Specialist, Amchem 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 anthocyanin and loosen fruit, improving the harvesting efficiency while reducing cone injury from mechanical harvest.

BLUEBERRIES (NEW JERSEY, MAINE, MICHIGAN)
 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 huckleberry (*Aronia melanocarpa*) flowers and/or fruit growing in Maine lowbush blueberry fields reducing the number of undesirable huckleberry fruit harvested with blueberries.

CANTALOUPE IN CALIFORNIA, ARIZONA AND TEXAS
 A foliar spray of ETHREL plant regulator promotes desiccation (stripping) 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. **NOT FOR USE ON CHERRIES IN CALIFORNIA.** A fall application of ETHREL to sweet cherries in the Pacific Northwest area increases dormant fruit bud 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 husk maturity resulting in an increased recoverable yield from an earlier once-over harvest.

LEMONS POSTHARVEST DEGREENING, FLORIDA
 A postharvest spray of ETHREL plant regulator will shorten the degreening time for mature lemons.

PEPPERS IN CALIFORNIA
 A foliar spray of ETHREL plant regulator promotes early, uniform ripening and coloring for more efficient picking 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 eliminating ethylene chamber degreening.

TOMATOES — FRESH MARKET IN CALIFORNIA
 A foliar spray of ETHREL plant regulator accelerates and concentrates tomato ripening, increasing recoverable 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. Concentrated fruit maturity enables high recoverable yields of ripe tomatoes in 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.

Form No 4380 10-75

ETHREL®

PLANT REGULATOR

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

ACTIVE INGREDIENT:
 Ethephon (2-chloroethyl) phosphonic acid* 21.6%

INERT INGREDIENTS: 78.4%

*Contains 2 pounds ethephon per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING

See side panel for additional precautionary statements.



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AMCHEM PRODUCTS, INC.

First Name in Herbicide Research
 AMBLER, PA ■ Clinton Iowa ■ St. Joseph Mo ■ Fremont Calif
 EPA Reg. No. 264-267AA EPA Est. 264-PA-1

NET CONTENTS 1 GALLON

ACCEPTED
 8/10/75

264-291

Ethrel®

plant regulator

- Promotes earlier coloration and maturity of APPLES, CRANBERRIES, TOMATO, and PEPPER
- Loosens CHERRIES, WALNUTS, and APPLES for earlier, more efficient harvest
- Promotes fruit abscission (slipping) in CANTALOUPE
- 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

ACCEPTED
Dec 5, 1975
... PESTICIDE ...
... SUBJECT ...
... COMPLIANCE ...

264-291

RECEIVED
OCT 25 1975
REGISTRATION DIVISION
EPA

DIRECTIONS

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.

For Fruit Loosening

Apply a foliage 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 2½ 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 uni-

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form 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 for his recommendations.

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.

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.

For Increased Flower Bud Development on Young Trees

To increase flower bud development on

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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 4 to 6 weeks after full bloom (immediately after June drop period) to minimize overthinning. Reduced vegetative growth and increased bud development during the season of application should increase flowering the following spring. 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. Spur Type Trees: Mix 1½ pints of ETHREL plant regulator in 100 gallons of water (5 pints in 300 gallons). Spray trees thoroughly and uniformly to the point of runoff.

II. Non-spur Type Trees: Mix 3½ pints of ETHREL plant regulator in 100 gallons of water (10 pints in 300 gallons). Spray trees thoroughly and uniformly to the point of runoff. This rate may completely defruit trees.

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

To loosen fruit and concentrate maturity, apply a foliage 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.

BLUEBERRIES

Concentration of Maturity and Fruit Coloring in New Jersey and Michigan.

Use only on the cultivars Bluecrop, Weymouth, Jersey, Rancocas, Rubel, Bluetta, and Erliblue. Application to other cultivars may cause steminess and/or premature drop. Apply a foliar spray of ETHREL plant regulator at a rate of 4 to 8 pints in 150 to 200 gallons of water per acre. Use the higher spray volume and rate on large, dense foliage bushes or when the temperatures are cool.

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 one to two weeks after treatment.

... thorough uniform coverage of foliage and fruit is essential for maximum fruit maturation and coloration. To aid in uniform wetting of plants, use a wetting agent such as Triton B-1956 at 1 pint per 100 gallons or X-77 at 2.0 pints per 100 gallons. A reduction in berry size may occur. ETHREL may not induce internal ripening as rapidly as outside color. Treat when air temperatures are 60° to 90°F. Make no more than one application per season. If used for barrenberry control, 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 barrenberries are between 90 to 100% petal fall and use the higher rates of ETHREL when black barrenberry fruit is 1/2 to 3/4 inch in diameter. This is generally 7 to 10 days after blueberries are in the early stages of development. Harvest blueberries, 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 quality, in terms of soluble solids and fresh 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

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Advisor for his experience with ETHREL in your area.

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

To loosen fruit, apply a foliage spray to cherry trees 7 to 14 days before anticipated harvest date. Treat when air temperatures are be-

tween 60° F and 85° F. To promote earlier fruit ripening, apply 7 to 14 days prior to normal harvest. Observe trees closely to determine application date.

Fruit clusters on shaded inside branches should be of marketable size and have some color development or signs of ripening prior to treatment. Applying earlier than two weeks prior to the normal peak harvest period may loosen immature or poorly colored fruit, may prevent fruit from reaching normal size, and may inhibit accumulation of sugars.

Inspect treated fruit to evaluate crop conditions. Harvest loosened fruit at proper maturity, generally 7 to 14 days after treatment. For programming harvest, spray a different orchard block each day and harvest blocks daily in the same sequence.

Be certain your spray equipment provides good penetration and uniform coverage in top and middle (interior) portions of trees. Concentrate applications will promote adequate loosening, but may cause adverse effect on trees such as gummosis and tip die-back.

ETHREL plant regulator works most effectively when applied to healthy trees. Some gummosis of cherry trees 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

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fall with treatment, if possible, irrigate orchards to prevent drought stress resulting in gummosis. Do not treat trees that had severe gummosis the previous year as tree damage will result. Use no more than one application per season.

NOT FOR USE ON CHERRIES IN CALIFORNIA.

FOR USE ON TART CHERRIES -- Varieties such as Montmorency. Mix $\frac{3}{4}$ 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.

FOR USE ON SWEET CHERRIES — Varieties such as Windsor, Napoleon (Royal Anne), Emperor Francis. Mix $\frac{5}{8}$ to $1\frac{1}{8}$ 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.

INCREASED DORMANT FRUIT BUD HARDI- NESS AND DELAYED SPRING BLOOM OF SWEET CHERRIES IN THE PACIFIC NORTH- WEST.

A fall application of ETHREL plant regulator

will increase fruit bud hardiness by decreasing the chance for winter injury and delay in bloom by 3 to 5 days which may help to 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.

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

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to be expected for several days after treatment. To assure 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 improving the efficiency of scheduled harvest.

ETHREL should be used only on Calimyrna 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 still present. Mix 3½ 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.

LEMONS—Postharvest Degreening (Florida)

Thoroughly mix 3½ 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 150 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 $\frac{1}{3}$ 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 in California

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 chili peppers 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 yields if applied too early or there is a lack of uniform, mature green fruit resulting from split fruit set or variable soil or cultural practices. ETHREL

will not ripen immature green fruit. Do not apply when prolonged temperatures above 95°F are predicted as loss of foliage cover may result. Do not plant to any crop until 30 days after ETHREL application.

Apply 3 to 4 pints of ETHREL in 40 to 100 gallons of water per acre. 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 season. Harvest fruit when the desired color and maturity have developed, generally 14 or more days after treatment.

TANGERINES and TANGERINE HYBRIDS in Florida

Apply a preharvest spray of ETHREL plant regulator to leaves and fruit when 10 to 20% of the mature fruit are showing color break. Maximum response will occur 5 to 10 days after treatment depending on percent color, maturity and temperature.

For treatment of tangerine and tangerine hybrid such as Dancy, Robinson, Nova, Murrett and Lee, mix $\frac{5}{6}$ pints of ETHREL in 100 gallons of water and apply a foliar spray of 400 to 600 gallons of spray mixture per acre. For Orlando, apply $\frac{2}{3}$ pints of ETHREL in 100 gallons of water and apply 400 to 600 gallons

4 spray gallons per acre. Use the higher rate on trees or large dense foliage trees to insure proper coverage.

Some defoliation or rapid aging of older leaves may occur from this treatment. Caution should be taken not to exceed recommended rates or treat trees with any of the following symptoms: low vigor, freeze injury, or drought stress, as excessive defoliation may occur. *Do not use a surfactant* as defoliation will be excessive. Do not treat trees with new vegetative growth which has not aged, or during flowering. Do not make more than one application of ETHREL per harvest season.

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. Foliage damage is more severe on certain varieties such as VF 10, VF 315, VF 145, 214 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.

A lack of uniform fruit maturity resulting from split set conditions or variable plant vigor due to different soil conditions or cultural operations requires special attention. The proportion of fruit in each maturity stage must be considered in determining the application stage for maximum recoverable yields. Consult your local Amchem representative, Extension Horticultural Specialist or Farm Advisor for suggestions on the proper use of ETHREL, within the rate and timing limitations shown on the label.

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 or 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

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vest 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 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 Amchem 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 3¼ 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

Apply foliar spray to walnuts after the packing tissue of all nuts inspected are completely brown. If treatment is made prior to this period, nut quality will be reduced. Treat when air temperatures are between 60 F and 90 F. Maximum benefit is obtained from applications made immediately after browning. Inspect nuts frequently and harvest when hull

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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.

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

I. Early and Midseason Tomato Crops

Apply 3¼ pints of ETHREL plant regulator per acre (0.8 lb. ethephon) 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 1¾ 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 3½ to 6½ pints ETHREL plant regulator per acre (0.8 to 1.6 lb. ethephon) when 5% to

30% of fruit in the field are red and pink (including breakers) and there is sufficient mature 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 or 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 3¼ pints of ETHREL plant regulator per acre (0.8 lb. ethephon) 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 6½ pints of ETHREL per acre (1.6 lbs. ethephon) 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. Har

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split occurs, generally 5 to 10 days after treatment. As with any early harvest, longer drying time may be required.

Apply 5 pints of ETHREL plant regulator per acre. Use sufficient water for thorough spray coverage, generally 50 to 500 gallons per acre depending on spray equipment and size of trees. ~~Uniform coverage of fruits is essential~~ for maximum effect. Be sure equipment provides good penetration of spray to all parts of trees. Some leaf drop is associated with treatment. Do not apply to diseased, low vigor, or moisture stressed trees since leaf drop will be excessive. 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. Use only one ETHREL spray per season on each orchard block.

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