

75499-3

07/25/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

JUL 25 2012

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Calvin Hartzog President
Plant Synergists Inc
6221 Warrington Place
Fort Worth TX 76112

Subject Plant Synergists Inc GA3 4% Liquid Plant Growth Regulator Solution
EPA Registration No 75499 3
Label Amendment to reduce the Re Entry Interval (REI) to 4 hours per EPA 738 F 96 005 RED
for Gibberellic Acid
Decision # 459547
Application Dated December 26 2011

Dear Mr Hartzog

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

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

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

Should you have any questions you may contact Ms Menyon Adams directly at 703 347 8496 or via email at adams.menyon@epa.gov

Sincerely

SYMBOL	7511P	Lee S. Omer
SUBSTANCE	adams	Biochemical Pesticides Branch
DATE	07/19/12	Biopesticides and Pollution Prevention Division (7511P)

EPA Form 7529-1A (1-99)



Plant Synergists, Inc GA₃ 4% Liquid Plant Growth Regulator Solution

ACTIVE INGREDIENTS

Gibberellic Acid 04 0% w/w

OTHER INGREDIENTS

96 0% w/w

TOTAL

100 0% w/w

PSI GA₃ 4% contains approximately 1 0 gram of active ingredient per fluid ounce of formulated product

KEEP OUT OF THE REACH OF CHILDREN

CAUTION

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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Call 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
HOTLINE 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 the National Pesticide Information Center at (800) 858 7378 for general or medical information	

EPA Reg No 75499 3
EPA Est No 75499 TX 001

Batch Number

Net Contents

- ___ 1 0 gallon ___ 2 5 gallons
- ___ 5 0 gallons ___ 30 gallons
- ___ 275 gallons

ACCEPTED

JUL 25 2012

Under the Federal Insecticide Fungicide and Rodenticide Act as amended for the pesticide registered under EPA Reg No

75499 3

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

CAUTION

Harmful if swallowed Causes moderate eye irritation Avoid contact with eyes or clothing Wash thoroughly with soap and water after handling and before eating drinking chewing gum using tobacco of using the toilet

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear

- Long sleeved shirt and long pants
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product s concentrate Do not reuse them

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

ENVIRONMENTAL HAZARDS

For terrestrial use Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark Do not contaminate water when cleaning equipment or disposing of equipment washwaters Exposed treated seed may be hazardous to birds and other wildlife Dispose of all excess treated seed and seed packaging by burial away from bodies of water

PHYSICAL OR CHEMICAL HAZARDS

FLAMMABLE¹ Keep away from heat and open flame

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling Do not apply this product in a way that will contact workers or other persons either directly or through drift Only protected handlers may be in the area during applications For any requirements specific to your State or Tribe consult the agency responsible for pesticide regulation

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR part 170 This Standard contains requirements for the protection of 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) and restricted entry interval The requirements in this box only apply to uses 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 12 4 hours

EXCEPTION If the product is soil incorporated the Worker Protection Standard under certain circumstances allows workers to enter the treated areas if there will be no contact with anything that has been treated

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

- Coveralls over short sleeved shirt and short pants
- Chemical resistant gloves such as barrier laminate butyl rubber nitrile rubber neoprene rubber polyvinyl chloride and viton
- Shoes plus socks
- Protective eyewear

NON AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170) The WPS applies when this product is used to produce agricultural plants on farms forests nurseries or greenhouses

Do not enter without appropriate protective clothing until sprays have dried

USER SAFETY RECOMMENDATIONS

Users should

- Wash hands before eating drinking chewing gum using tobacco or using the toilet
- Remove PPE immediately after handling this product Wash the outside of gloves before removing As soon as possible wash thoroughly and change into clean clothing

GENERAL INFORMATION

Use only as directed The label should be read thoroughly and understood before making applications
Do not apply this product through any type of irrigation system

Application recommendations

GA₃ 4% contains gibberellic acid which is an extremely potent plant growth regulator when applying plant growth regulators follow the recommended label directions for rates timings and water volumes
Do not apply untested spray mixes

- Do not apply to plants under pest nutritional or water stress
- Effectiveness requires that all parts of plant or crop receive thorough spray coverage or desired result will not occur Prepare solution concentrations by mixing the required amount of product with water in a clean empty spray tank Dispose of any unused spray material at the end of each day following local state or federal law
- For best results use water with a neutral pH and always below 8.5
- GA₃ 4% applications made under slow drying conditions (cool to warm temperatures medium to high relative humidity and no wind) will increase absorption by the plant thus optimizing effectiveness Night time applications are encouraged when day time conditions are not conducive to slow drying conditions
- Product persistence GA₃ 4% should be re applied if significant rain occurs within 2 hours of application
- No preharvest interval is required for this product
- Compatibility The GA₃ 4% spray guidelines refer to the use of the product alone The use of surfactants and other additives has been reported to be beneficial Plant Synergists Inc does not assume responsibility for unexpected results due to the tank mixing of GA₃ 4% with other products
- DO NOT apply using ULV application methods For aerial applications use spray volumes of 2 gallons per acre or greater (10 gallons per acre for tree crops)

SPRAY INSTRUCTIONS FOR CROP CATEGORIES

GRAPE

For all grapes apply by ground sprayer Apply in sufficient water volume to ensure thorough wetting It is important to wet all flower clusters or berries thoroughly For specific spray rates and timings by variety see accompanying tables Do not exceed maximum rates

SEEDLESS GRAPE

For cluster elongation and looser cluster forms (Stretch) To reduce costs of thinning allow better air circulation to aid in the control of bunch rot and increase light penetration to aid in sugar development

Guide Apply one to three applications before bloom when flower clusters are 2 to 7 inches long

For decreased berry set (Thinning) reduced hand thinning costs and hastened maturity

Guide Apply one to four applications during bloom Make only 1 to 2 applications for Other Seedless Grapes When the bloom period is extended make subsequent sprays 1 to 7 days after the first application

NOTE Higher amounts or multiple applications cause an excess of shot berries or overthinning especially in young vines or vines with high vigor For Other Seedless Grapes new cultivars are very responsive and are over thinned easily Consult a local specialist before thinning unfamiliar cultivars

To help initiate the beginning of the berry growth period in Thompson Seedless variety bump spray
Guide Apply 16 to 24 grams a 1/acre as a single application during the period between the last thinning spray and the first sizing spray

For larger berries (Sizing) and larger clusters when used in conjunction with established girdling and thinning practices

Guide Apply one to four applications beginning when the average berry size reaches target diameter (See Table 1) Timing of the subsequent sprays is dictated by experience in the vineyard and temperatures occurring between sprays Potential effect is reduced if the final spray occurs more than two weeks after the first application Consult a local specialist before sizing unfamiliar cultivars

TABLE 1 Application Rates (Grams AI/Acre) for Seedless Grape, Including Target Berry Diameters

Seedless Grape	Stretch	Thinning	Sizing	
	grams a i /acre	grams a i /acre	“Target” Diameter	grams a i /acre
Perlette	8 to 24	*	4 to 5 mm	32 to 128
Flame	8 to 24	3 to 16	6 to 9 mm	20 to 128
Thompson	8 to 24	8 to 20	3 to 5 mm	32 to 128
Raisin	8 to 24	3 to 12	3 to 5 mm	4 to 20
All Other Seedless Grape	*	0.5 to 12	3 to 14 mm	8 to 60

*No recommendations available for this variety/timing at this time

NOTE High amounts of gibberellic acid reduces fruitfulness (cluster counts) the following year and delays berry skin color development sugars accumulation and overall maturation

SEEDED GRAPE

Emperor Grape

For reducing berry shrivel This can also increase berry size

Guide Make applications as a whole vine spray or as a spray or dip directly to the cluster

Whole vine spray Apply 20 grams a i /acre as one application when the predominant berry diameter is 12 to 16 mm

Directed spray to grape clusters or cluster dip – Prepare a spray solution of 40 to 50 ppm (16 to 20 grams a i per 100 gallons water) and apply as a direct spray to clusters or dip the clusters

NOTE Whole vine application reduces fruitfulness (cluster counts) the following year High amounts of gibberellic acid may also delay berry skin color development sugars accumulation and overall maturation Consult a local specialist before sizing unfamiliar cultivars

Red Globe, Calmeria, Christmas Rose, Rogue and Queens

To increase berry size

Guide Make application as a whole vine spray or as a spray or dip directly to the cluster

Whole vine spray – Apply 20 grams a i /acre as one application when the average berry size reaches the target diameter (See Table 2)

Directed spray to grape clusters or cluster dip – Prepare a spray solution of 40 to 50 ppm (16 to 20 grams a i per 100 gallons water) and apply as a direct spray to the cluster only or dip the clusters

NOTE Whole vine application reduces fruitfulness (cluster counts) the following year High amounts of gibberellic acid delays berry skin color development sugars accumulation and overall maturation Consult a local specialist before sizing unfamiliar cultivars

TABLE 2 Application Rates for Seeded Grapes, Including Target Berry Diameters

Seeded Grape	"Target" Diameter	Whole Vine Spray (grams a i /acre)	Direct Spray to Cluster or Cluster Dip (rate in ppm of a i)
Emperor	12 16	20	40 50
Red Globe	12 18	20	40 50
Calmeria	12 16	20	40 50
Christmas Rose	12 16	20	40 50
Rogue	12 16	20	40 50
Queens	12 15	20	40 50

Black Corinth (Zante Currant) Grape

For improving berry size

Guide Apply 1 to 12 grams a i /acre as one application 3 to 5 days after full bloom but before shatter begins

Wine Varieties

To increase cluster length improve air circulation and light penetration within the cluster and help to reduce the incidence of bunch and sour rot

Guide Apply one spray when clusters found in the dominant shoots arising from buds on count spurs are starting to elongate average 3 to 4 inches in length and show separation of the uppermost flower groups Use 100 gallons of water per acre Concentrations for registered varieties are shown below (See Table 3)

NOTE Do not make applications less than three weeks before bloom IT IS IMPORTANT that the proper rate be used on each variety if late applications are made or if indicated rates are exceeded reduction in yield may occur during the year of application and subsequent years This reduction in yield may result from an increase in shot berries in the year of application and reduction in fruitfulness (cluster counts) in the first and second year following application If growers have no experience with this application consult local agricultural specialists before making this application

TABLE 3 Application Rates (Grams A I /Acre) and Recommended Water Volume on Seeded Wine Varieties

Variety	Grams a i /acre	Gallons/acre
Palomino	0 4 to 1	100
Sauvignon Blanc		
Tinta Madeira		
Aleatico	1 to 2	100
Carignane		
Chardonnay		
Chenin Blanc		
French Colombard		
Pinot Noir		
Valdepenas		
Barbera	2 to 4	100
Petite Sirah		
Zinfandel		
Green Hungarian	4 to 8	100
Grenache Alicante	8	100
Salvadore	8 to 16	100

CITRUS

For all citrus apply in sprays of sufficient water volumes to ensure thorough fruit wetting Do not apply to trees of low vigor or under stress (pest nutritional or water etc) to avoid severe leaf and/or fruit drop In most cases some drop of older mature leaves will occur after application Do not apply in white wash sprays in which lime or other caustic material has produced a high pH in the spray tank Do not make applications of copper fungicides and/or oils within three weeks (before or after) application of GA₃ 4% to avoid significant leaf and fruit drop

NAVEL ORANGE

To delay rind aging reduce physiological disorders (e g rind staining water spotting sticky or tacky surface puffy rind and rupture under pressure) and to produce a more orderly harvesting pattern The delay in rind aging is greatest when an early spray is applied This spray timing produces the firmest rind possible

Guide Apply 16 to 48 grams a 1/acre in sufficient water volume to ensure thorough wetting

EARLY SPRAY Apply one spray approximately two weeks prior to color break which normally occurs August through November

AND/OR

LATE SPRAY Apply one spray after marketable color has developed normally from October through December

This late application may cause fruit re greening

NOTE Do not apply the early spray to groves that are harvested early as fruit coloring will be delayed Do not apply from January through July as production will be reduced the following year Expect slower color development in the target crop After marketable color is achieved treatment effects will be reduced the longer treated fruit remains on the tree

(For Florida Use Only)

To enhance fruit set and yield

Guide Make a single application of 15 to 25 grams a 1/acre during December or January in 125 to 175 gallons of water per acre Use a pure organo silicone type surfactant at 0.05% (6 fl oz /100 gallons)

VALENCIA ORANGE

(For California and Arizona use only)

To reduce rind creasing and to delay rind aging and softening

Guide Apply a single spray in August to October to trees with a target crop of young fruit Apply 40 to 80 grams a 1/acre in sufficient water volume to ensure thorough wetting

NOTE Do not apply the early spray to groves that are harvested early as fruit coloring will be delayed Do not apply from January through July as production will be reduced the following year Expect slower color development in the target crop Increased re greening of mature fruit may occur After marketable color is achieved treatment effects will be reduced the longer treated fruit remains on the tree

(For Florida Use Only)

To enhance fruit set and yield

Guide Make a single application of 15 to 25 grams a 1/acre during December or January in 125 to 175 gallons of water per acre Use a pure organo silicone type surfactant at 0.05% (6 fl oz /100 gallons)

**OTHER ROUND ORANGES
(For Florida Use Only)**

To reduce rind creasing and puffiness and to delay aging and softening of the rind

Guide Apply a single spray in August to October to trees with a target crop of young fruit Apply 20 to 60 grams a 1/acre in sufficient water volume to ensure thorough wetting Use a pure organo silicone type surfactant at 0.05% (6 fl oz in 100 gallons)

**AMBERSWEET ORANGE
(For Florida Use Only)**

To enhance fruit set and yield

Guide Make a single application of 15 to 25 grams a 1/acre during January in 125 to 175 gallons of water per acre with a pure organo silicone type surfactant at 0.05% (6 fl oz /100 gallons)

LEMON/LIME

To decrease the amount of small ripe fruit and to produce a more desirable production pattern relative to market demand

Guide Apply one spray when target crop is 1/2 to 3/4 full size but still green Use 10 to 32 grams a 1/acre in sufficient water volume to ensure thorough wetting

When applied two years in a row an even larger difference in harvest pattern and maturity occurs

TANGERINE HYBRIDS

To delay disorders associated with rind aging puffiness and softening and to increase peel strength of tangerine hybrids such as Orlando Robinson Minneola and Sunburst

Guide Apply 20 to 40 grams a 1/acre approximately two weeks prior to color break Apply in sufficient water volume to ensure thorough wetting

NOTE Do not apply if early harvest is planned Do not apply after coloring as preharvest rind staining may occur Application during coloring may cause variation in rind color of development

(All States except California)

To increase fruit set and yields on tangerine hybrids with pollination problems such as the Orlando Robinson Minneola and Sunburst

Guide Apply 8 to 30 grams a 1/acre during full bloom Make one to two applications Apply in sufficient water volume to ensure thorough wetting

NOTE Expect reduced fruit sizes and slightly retarded color development A slight increase in mature leaf drop will occur in trees under stress

GRAPEFRUIT
(All States except California)

To delay disorders associated with rind aging (e.g. puffiness softening and orange coloration) to prevent preharvest drop of mature fruit to increase peel strength and reduce water loss during storage and to produce a more orderly harvesting pattern. The delay in rind aging is greatest when an early spray is applied before color change. This spray timing produces the firmest rind possible.

Guide Apply 16 to 48 grams a 1/acre in a minimum of 250 gallons per acre

EARLY SPRAY Apply one spray approximately two weeks prior to color break which normally occurs August through September

AND/OR

LATE SPRAY Apply one spray after marketable color has developed which is normally from October through December

This late application may cause fruit re-greening

NOTE Do not apply the early spray to groves that are harvested early as fruit coloring will be delayed. Spot pick heavy crops to aid early marketing and to avoid reduction of yields which generally follow late held crops. Fully colored fruit to which applications have been made will begin to re-green if allowed to remain on the tree for extended periods.

Application made after December or when trees begin to break dormancy will adversely affect new crop. Do not use concentrate sprays. Results vary from season to season depending on environmental conditions.

To enhance fruit set size and yield

Guide Make a single application of 15 to 25 grams a 1/acre during December or January in 125 to 175 gallons of water per acre with a pure organo-silicone type surfactant at 0.05% (6 fl. oz./100 gallons)

GRAPEFRUIT, STAR RUBY VARIETY
(All States except California)

To reduce early season small fruit drop of Star Ruby Variety thereby increasing yields

Guide Apply a single spray during the bloom period. Use 25 to 35 grams a 1/acre in a minimum of 250 gallons of water per acre.

NOTE Results vary from season to season depending on environmental conditions. Maintain a well balanced fertilization and watering program.

CLEMENTINE MANDARIN

To increase fruit set and yield

Guide Make one to two applications of 1 to 8 grams a 1/acre in sufficient spray volume to ensure adequate coverage of tree canopy. Make applications from 50% petal fall up to three weeks after petal fall.

NOTE The number of applications depends upon the desired amount of fruit set. Generally more fruit will be set by 2 applications earlier applications higher rates and climactic conditions more favorable to set. Differences in crop strain interact with the above factors to affect the degree of fruit set achieved. Reductions in final fruit size can occur as a result of excessive fruit set.

POSTHARVEST APPLICATIONS

LEMON

To delay fruit senescence and prolong storage life

Guide Add 2 to 4 fl oz of GA₃ 4% (2 to 4 grams of a l) in 10 gallons of storage wax which has been diluted as per the wax label instructions The incidence of sour rot is reduced by delaying senescence

YELLOW LEMONS AND OTHER MATURE CITRUS FRUIT

To delay rind senescence and color changes

Guide Add 2 to 4 fl oz of GA₃ 4% (2 to 4 grams of a l) in 10 gallons of storage wax which has been diluted as per the wax label instructions The incidence of sour rot is reduced by delaying senescence

FRUIT CROPS

BANANA

To stimulate plant growth and overcome the effects of stress caused by insects disease or adverse weather

Guide Apply 1 to 6 grams a l/acre by ground or aerial application in sufficient water volume to adequately cover foliage Make applications once every 30 to 90 days throughout the year Make more frequent applications (monthly) for 6 months prior to anticipated weather stress periods

BLUEBERRY

(All States Except California)

To improve fruit set For natural fruit set problems due to insufficient natural honeybee pollination adverse weather conditions or physiological factors

Highbush blueberry – (for varieties such as Coville Jersey Stanley Earliblue Weymouth Walcott Berkeley Blueray Bluecrop 1316A Concord and others)

Guide Make one or two applications in 40 to 100 gallons of water If a single application is made apply 80 grams a l/acre at full bloom (when 75% of the flowers are fully open) When 2 applications are made apply 40 grams a l/acre per application Make the first application at full bloom and the second one within 10 14 days of the first one For Weymouth delay application up to two weeks after bloom to increase size of shot berries

Rabbiteye blueberry – (for varieties such as Aliceblue Beckyblue Bonita Brightwell Climax Delite Tifiblue Woodward and others)

Guide Make a single application of 40 grams a l/acre in 100 to 300 gallons of water per acre when most of the flowers are elongated but not yet open (bloom Stage 5)

OR

MULTIPLE APPLICATIONS Make two to four applications 10 to 14 days apart starting at bloom Stage 5 Spray 20 to 40 grams a l/acre in 40 to 100 gallons of water per application

SWEET CHERRY

To produce larger brighter colored firmer fruit

Guide Apply a single spray when the fruit is light green to straw colored Use 16 to 48 grams a l/acre in sufficient water volume to ensure thorough wetting

NOTE Color development and harvest will be slightly delayed

RED TART CHERRY
(All States except California)

To maintain and extend high fruiting capacity of bearing tart cherry trees and reduce the occurrence of blind nodes Treatment will cause bud differentiation which is apparent the year after application Therefore changes in shoot spur and flower production will not be evident until two or three years after program initiation Make annual applications to ensure vegetative development and subsequent yield improvement year after year

Guide Apply one spray 14 to 28 days after bloom Optimum timing is defined as that stage when 3 to 5 terminal leaves have fully expanded or at least 1 to 3 inches of terminal shoot extension has occurred Use 4 to 18 grams a 1/acre depending on tree age and vigor (See Table 4) Apply in sufficient water volume to ensure thorough wetting

TABLE 4 Recommended Application Rates (Grams A I/Acre) for Tart Cherry Trees by Age

Tree Age (years)	Rate (grams a 1/acre)
6 to 10	4 to 6
11 to 15	8 to 10
16 to 20	11 to 14
20 + years	14 to 18

NOTE Rates are based on expected normal tree vigor at various ages Adjust rate according to tree vigor If trees are vigorous use lowest recommended rates Use lowest rates on trees that have been heavily pruned or hedged Use higher rates for trees low in vigor and weak in shoot and spur production Excessive application rates will increase vegetative growth at the expense of fruit production the following year

Applications will not improve growth of trees under stress conditions such as nutritional moisture or pest Best results are obtained when combined with good cultural practices

STONE FRUIT GROUP

To improve fruit quality and increase firmness in the season of application

Guide Apply a single spray of 16 to 32 grams a 1/acre in sufficient water volume to achieve complete coverage of fruits and foliage Make application one to four weeks prior to the beginning of harvest

NOTE This application causes reduction in flower counts the year following application particularly if application is made during the months of May through July

ITALIAN PRUNE
(All States except California)

To reduce internal browning improve quality and increase size

Guide Apply 4 to 5 weeks before expected harvest Apply a single spray at 16 to 48 grams a 1/acre in sufficient water volume to ensure thorough wetting

NOTE Color development and harvest will be slightly delayed May reduce bloom the following season

NON BEARING FRUIT TREES

(All States except California) *To reduce flowering and fruiting in young stone fruit trees in order to minimize the competitive effect of early fruiting on tree development*

NOTE DO NOT SPRAY TREES IN THE FIRST YEAR Treat in the second season for reduction of flowering in the third season and again in the third season if a reduction of flowering and fruiting is desired in the fourth season Treat only trees that are in good physiological condition Discontinue treatment the year before desired harvest

Guide Apply a single application of 20 to 80 grams a 1/acre during the period of flower bud initiation for the following year Use sufficient water to achieve good coverage of the canopy A local horticulturist can provide timings and rates for specific cultivars in your area

OTHER FRUIT

STRAWBERRY (All States except California)

To increase runner production of mother plants

Guide Apply a single spray of 15 to 25 grams a 1/acre to mother plants 10 to 30 days after planting when plants have 1 to 6 leaves Apply 100 gallons spray/acre to thoroughly wet new foliage to the point of run off

NOTE Not for use on fruiting plants Treatments will not be effective on plantings set out after mid May Response varies with cultivar and location Consult a local horticulturist for specific information in your area

CRANBERRY (All States except California)

To reduce or eliminate crop in the year of application

Guide Make a single application of 10 to 50 grams a 1/acre at early bloom (2 5% scatter bloom) in sufficient water volume to ensure thorough coverage

NOTE Applications made later than the early bloom stage will have no effect or result in increased fruit set Responses vary with cultivar age of the bog and location Consult a local specialist for specific information in your area

VEGETABLE CROPS

ARTICHOKE

To accelerate maturity and shift harvest to an earlier date

Guide For perennials apply one to three applications at bud irritation stage For annuals apply one to four applications at 2 week intervals beginning at the fourth true leaf Use 10 to 20 grams a 1/acre per application in sufficient water volume to ensure thorough wetting of the entire plant (leaves stems and buds)

CARROT

To delay leaf senescence Maintaining vigorous foliage may reduce the incidence of infection by *Alternaria dauci*

Guide Make the first application 4 to 6 weeks after emergence using ground or aerial spray equipment with spray concentrations of 20 to 30 ppm A second spray 14 days later may be required to achieve the desired amount of foliar recovery in severe disease situations or cool weather Do not apply more than twice per crop

NOTE Dilutions of greater concentration increase the risk of excessive top growth particularly with a second application

CELERY

To increase plant height and yield and overcome stress due to cold weather conditions or saline soils and to obtain earlier maturity

Guide Apply a single spray one to four weeks prior to harvest at a rate of 2 5 to 10 grams a 1/acre Use 25 to 50 gallons of water per acre by ground application or 5 to 10 gallons of water per acre for aerial

application* Use lower concentrations applying 3 to 4 weeks before harvest and higher concentrations within 1 to 2 weeks before harvest

*Do not apply by air in California

NOTE Do not apply earlier than 4 weeks before harvest as bolting (seed stalk formation) may occur

LETTUCE FOR SEED

To obtain uniform bolting and increase seed production

Guide Apply one to four applications at 2 week intervals beginning at the fourth true leaf Use 1 to 4 grams a 1/acre per application in sufficient water volume to ensure thorough wetting

PEPPER

(All States except California)

To Promote Plant Growth

Guide Apply one to two sprays of 1 to 3 grams a 1/acre in 25 to 50 gallons of water per acre at two week intervals Begin sprays 2 weeks after transplanting

NOTE This use is for areas with short growing seasons or when low temperatures slow plant growth

To Increase Fruit Set and Promote Fruit Growth

Guide Apply one to two sprays of 1 to 3 grams a 1/acre in 25 to 50 gallons of water per acre at weekly intervals during the flowering period The high rate is suggested for areas and/or varieties with pollination and/or fruit set problems

To Increase Fruit Size

Guide Apply 1 to 3 grams a 1/acre in 25 to 50 gallons of water per acre at the beginning of the picking period The high rate is for plants with heavy fruit loads

MELON AND CUCUMBER

(All States except California)

To stimulate fruit set during periods of cool temperatures

Guide Use 1 to 4 grams a 1/acre in sufficient water volume for thorough coverage of exposed foliage Make one application prior to bloom followed by two additional applications at intervals of 10 to 14 days on cantaloupes and watermelons On cucumbers up to four applications are required

For maximum benefits vines in good condition are required except for reduced rate of growth due to cool temperatures

RHUBARB

To break dormancy on plants receiving insufficient chilling and to increase marketable yield of forced rhubarb

Guide Make a single application of 2 fluid ounces (60 ml) of a solution containing 20 grams a 1 in 10 gallons of water to each cleaned crown when the rest period is not completely broken When the rest period is broken by cold weather apply 2 fluid ounces (60 ml) of a solution containing 10 grams a 1 in 10 gallons of water to each cleaned crown

NOTE Keep forcing house temperatures at 40 F to 50 F for 24 hours after application If house is warmer than 50 F cover the crowns with plastic Temperatures in the forcing house above 50 F may lower yields and cause poor stalk color

SEED POTATO

To stimulate uniform sprouting to aid in maximum production more uniform development fewer late maturing plants and to break dormancy of newly harvested potatoes that have not had a full rest period

Guide Dip whole or cut seed pieces in a solution containing 0.2 to 0.4 grams a.i. in 100 gallons of water prior to planting

NOTE Under high soil temperatures use the minimum concentration for dormant seed Do not treat rested seed pieces

SPINACH
(All States except California)

To facilitate harvest increase yield and improve quality of fall and over winter spinach

Guide Apply a single spray 10 to 18 days before each anticipated harvest on fall or over winter spinach ideally when daytime temperatures are 40° F to 70° F and during early morning hours when dew is present on crop Apply 6 to 10 grams a.i./acre in 10 to 50 gallons of water per acre by ground sprayer or in a minimum of 5 to 10 gallons of water per acre by air When applied to promote growth of second cutting wait until some regrowth has started before spraying Maximum benefit is obtained when below normal temperatures predominate following application and growth is otherwise slowed in untreated spinach

NOTE Since the promotion of bolting may occur do not apply after the mid winter period or if temperatures are expected to exceed 75° F within several days of application Do not apply on spring plantings

ORNAMENTAL CROPS, CUT FLOWERS AND TURFGRASS

The following suggestions are based on results with common cultivars Differences in responsiveness vary between cultivars growing conditions and cultural management systems Therefore prior to widespread usage test a small number of plants from each cultivar under a specific set of growing and cultural management conditions to verify desired efficacy

When applying foliar applications of GA₃ 4% spray plants to run off The actual spray application rate will vary depending on plant size and spacing density Thorough spray coverage is essential for uniform flowering

NOTE A representative spray application rate which has been proven effective for 6 inch potted plants spaced at a density of 1 per square foot is 1 gallon spray solution/200 square feet

ORNAMENTALS

*** Not for use in California on ornamental crops with an asterisk**

AZALEA

As a partial replacement of cold treatment to break flower dormancy

Guide Apply three sprays of 250 to 500 ppm a.i. (See Table 5) at weekly intervals after 3 to 4 weeks of chilling Plants should be at Stage 5 of floral development (i.e. style elongated and open) when treatment is initiated A representative spray schedule would consist of applications made at 3, 10, and 17 days after four weeks of chilling Flowers will not develop properly if applied prior to Stage 5

NOTE Thorough spray coverage is essential for uniform flowering Do not apply after flower buds show color On some cultivars (e.g. Gloria Prize and Redwing) a single spray of 1000 ppm a.i. after 4 weeks of chilling has proven effective in breaking dormancy

As a complete substitution of cold treatment to break flower dormancy DO NOT USE IN CALIFORNIA

Guide Apply four to six sprays of 1000 ppm a.i. (See Table 5) at weekly intervals Apply first spray when plants are at Stage 5 of floral development (style elongated and open) Flowers will not develop properly if applied prior to Stage 5 of floral development

NOTE Thorough spray coverage is essential for uniform flowering Do not apply after flower buds show color

To inhibit flower bud initiation during vegetative growth

Guide After each pinch apply two to three sprays of 100 to 750 ppm a.i. (See Table 5) at intervals of 2 to 3 weeks. Continue applications on a weekly basis for 1 to 2 weeks after the first application.

NOTE Apply a maximum of three applications.

Use Table 5 to convert spray concentrations (ppm of a.i.) to actual number of fluid ounces of GA₃ 4% needed for one gallon of spray solution.

TABLE 5 Application Rates and Recommended Water Volume for Azalea

Desired ppm value	grams a.i./gallon*	grams a.i./acre**	Fl Oz of GA ₃ 4%/acre**
100	0.38	87	87
250	0.95	207	207
500	1.90	414	414
750	2.85	610	610
1000	3.80	828	828

*Note GA₃ 4% is a liquid. Each fluid ounce contains approximately one (1) gram of active ingredient.

**Based on a spray application rate of 1 gallon of spray solution/200 square feet.

CALLA LILY

For increased flowering

Guide Soak rhizome or tuber in a 500 ppm solution of GA₃ 4% for 10 minutes prior to planting.

NOTE Flower or leaf stretching occurs in some cultivars. Reduce rates if this occurs.

***CAMELIA**

For substitution of chilling requirements and to increase bloom size

Guide Prepare a 2.0% solution of GA₃ 4% by mixing equal volumes of product and water. Remove the vegetative bud immediately adjacent to or below the floral bud. Place a single drop of the prepared solution to the vegetative bud scar.

NOTE Adding a deposition aid (such as carboxymethylcellulose) to thicken the solution will decrease run off.

***CYCLAMEN**

For uniform flowering

Bud Application – Apply 8 ml (0.25 fl. oz.) of a 10 to 15 ppm solution directly to the crown when buds are pinhead size in the leaf axils.

Foliar Application – Apply a single foliar application of 25 ppm directly toward the crown and adjacent leaves when buds are pinhead size in the leaf axils. Thoroughly wet the crown.

NOTE Both bud and foliar applications have been shown to promote uniform flowering. Late or excessive applications result in weakened floral stems or poorly formed flowers.

***FUCHSIA**

To produce tree forms of common fuchsia cultivars by stem elongation

Guide Apply a single foliar application of 250 ppm for four consecutive weeks. Begin applications after the plant has reached the desired size. Spray the entire plant to the point of run off.

NOTE Staking is required after treating plants. Concentrations higher than 250 ppm may cause plants to become stretched and spindly with weakened stems.

GERANIUM

Cuttings *To increase flower number and size of geranium cuttings*

Guide Apply a single foliar application of 1 to 5 ppm when inflorescence first begins to show color
Direct spray at the developing inflorescence

NOTE Concentrations above 5 ppm or treatments prior to inflorescence showing color cause peduncle stretching

Seedlings – *To advance flowering*

Guide Make a single foliar application of 5 to 15 ppm when first flower bud set is noted Spray the entire plant to the point of run off

NOTE Incorrect timing or concentrations above 15 ppm cause plant stretching

Tree Forms – *To produce tree forms of common geranium cultivars by stem elongation*

Guide Make a single foliar application of 250 ppm for four consecutive weeks Spray the entire plant to the point of run off

NOTE Plants require staking after treatment

***HYDRANGEA**

To substitute for chilling requirements to break flower bud dormancy

Guide Apply a single foliar application of 2 to 5 ppm for one to four consecutive weeks Begin applications at the start of forcing Thoroughly cover all growing points containing flower buds

NOTE Overuse or concentrations above 5 ppm may result in stretched spindly and weak stems

POMPOM CHRYSANTHEMUM

For elongating peduncles on Pompom chrysanthemum

Guide Apply a single foliar application of 25 to 60 ppm 4 to 5 weeks after initiation of short day conditions Apply directing the spray solution towards the flower buds

NOTE Overuse of incorrect timing may cause long spindly and weak stems

SPATHIPHYLLUM

To accelerate bloom and increase the number of flowers per plant

Guide Make a single foliar application of 150 to 250 ppm approximately 9 to 12 weeks prior to the expected sale date Spray to the point of run off and thoroughly wet all growing points

NOTE Flower distortion or leaf stretching may occur on some cultivars such as Petite Starlight Tasson and Mauna Loa Reduce rates if this occurs On other cultivars prior to application on a commercial basis evaluate the effects of GA₃ 4% on a small number of plants

***AGLAONEMA, ANTHURIUM, DIFFENBACHIA (Dumb Cane) AND SYNGONIUM**

To accelerate bloom and increase the number of flowers per plant

Guide Apply a single foliar application of 250 to 500 ppm a 1 for one to four consecutive weeks beginning at the start of forcing for Aglaonema Anthurium and Diffenbachia Apply a single foliar application of 500 to 2000 ppm a 1 for one to four consecutive weeks beginning at the start of forcing for Syngonium Thoroughly apply solution to all growing points containing flower buds

NOTE Application of GA₃ 4% can increase flower yield and decrease time to flowering Make 1 or 2 applications during the vegetative phase of plant development to induce bloom On other cultivars prior to application on a commercial basis evaluate the effects of GA₃ 4% on a small number of plants

CUT FLOWERS

Apply GA₃ 4% to ornamental plants grown for cut flowers to promote stem elongation and flowering
GA₃ 4% is very active and application at excessive rates results in undesirable effects Evaluate the effects of GA₃ 4% on a small number of plants prior to application on a widespread basis

ASTER

Monte Carlo type Nov1 type and Belgi type – *To promote stem elongation and break dormancy*

Guide Make 1 to 3 applications of 50 to 100 ppm during the early vegetative period when plants are 2 to 6 tall Make applications at 2 to 3 week intervals

BABY'S BREATH (Gypsophila)

To accelerate plant growth increase flower yield and uniformity

Guide Make 3 to 4 applications of 150 to 500 ppm a 1 solution at 4 weeks of growth (after pinching)
Make applications at 2 week intervals

***BELLS OF IRELAND (Moluccella)**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a 1 solution when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***BUPLUREUM**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a 1 solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***CAMPANULA**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a 1 solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

CANDY TUFT (Iberis)

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a 1 solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***COLUMN STOCK (Matthiola)**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a 1 solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

DELPHINIUM

Including *D elatum D grandiflorum D belladonna D cardinale D nudicale* and Delphinium hybrids *To promote plant growth and stem elongation*

Guide Apply a 50 to 100 ppm a 1 solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***DIDISCUS (Trachyme)**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a 1 solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***HYDRANGEA**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

LARKSPUR

Consolida ambigua C orientalis Delphinium ajacis To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***LISIANTHUS (Eustoma)**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***PHLOX**

Phlox paniculata and Drummondii hybrida To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

QUEEN ANNE'S LACE (Ammi)

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***SAFFLOWER**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***SOLIDASTER**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

STATICE

To promote earlier flowering and to increase flower yield

Guide Apply as a foliar spray consisting of 10 ml (0.33 fl oz) of a 400 to 500 ppm a₁ solution to each plant when plants are 10 inches or more in diameter (approximately 90 to 110 days after normal seeding time)

NOTE Do not exceed specified rates Do not apply repeated sprays Accelerated flowering is influenced by extended photoperiod adequate nutrition and reduced night temperatures This treatment reduces the cold requirement and/or the long photoperiod

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

***SUNFLOWER**

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

SWEET WILLIAM (Dianthus)

To promote plant growth and stem elongation

Guide Apply a 50 to 100 ppm a₁ solution as a foliar spray when plants are 4 to 8 tall Make applications at 2 to 3 week intervals

TURF

(Golf Courses, Parks and Turf Farms)

Application of GA₃ 4% to Bermudagrass grown in golf courses parks and turf farms has been shown to initiate or maintain growth and prevent color change during periods of cold stress

NOTE Do not exceed specified rates Maintain adequate moisture and proper fertilization programs for your local area Keep high rate applications at least 2 weeks apart Do not use on dormant turf Stop treatments if thinning is observed More frequent mowing may be necessary

Cool Weather Application

BERMUDAGRASS (Tidwarf, Tifgreen, and other cultivars)

To initiate or maintain growth and prevent color change during periods of cold stress and light frosts

Guide Apply 10 grams a₁/acre weekly or 25 grams a₁/acre biweekly in 25 to 100 gallons of water/acre

Warm Weather Application

BERMUDAGRASS (Tidwarf, Tifgreen, and other cultivars)

To maintain or enhance regrowth of golf course Bermudagrass during summer months

Guide Apply 1 to 3 grams a₁/acre weekly in 25 to 100 gallons of water/acre

BEDDING PLANTS, ANNUAL AND PERENNIAL POTTED CROPS, FIELD GROWN ORNAMENTALS AND BULB CROPS

To promote plant growth and/or overcome the effects of overuse of a gibberellin inhibiting plant growth regulator

Guide Apply a single application of 1 to 25 ppm a₁ solution directly to plant foliage When applying GA₃ 4% to promote plant growth start with a 1 ppm a₁ solution unless previous experience dictates a higher rate is warranted If desired results are not achieved a reapplication or higher rate is necessary

NOTE GA₃ 4% is very active and excessive application rates result in undesirable stem elongation Do not use more than 25 ppm a₁ Evaluate the effects of GA₃ 4% on a small number of plants prior to application on a widespread basis

OTHER CROPS

HOPS

(Northwestern U S only)

For seeded and seedless Fuggle hop and similar varieties adapted to the Northwestern states

To increase yield and fruit set

Guide Apply a single spray when vine growth is 5 to 8 feet in length Use 4 to 6 grams a₁/acre in 100 to 150 gallons of water/acre

COTTON (Not for use in California)

To promote early plant growth and increase early seedling vigor on young cotton plants

Guide Apply 1 to 6 grams a₁/acre via in furrow application to seed or as a foliar application from the cotyledon stage through the 7 leaf/node stage Repeat applications to a maximum of 3 applications

NOTE Use higher rates when temperatures will likely average 75° F or less during the 14 days following the applications Do not tank mix with herbicides Do not apply to cotton plants under drought stress If cotton plants are under continuous stress delay application until the stress is alleviated and plants are beginning to recover Do not apply more often than necessary to achieve the desired height as overdosage results in excessive growth

Mixing Instructions

Fill the treatment tank with half of the final tank mix volume Add the required amount of GA₃ 4% and mix thoroughly while adding water to the desired final volume Dispose of any unused spray material at the end of the day

Application Equipment

Apply GA₃ 4% by aerial or ground spray equipment As an aerial spray use a spray system capable of producing a uniform spray pattern of medium to fine spray droplets at 10 gallons per acre (GPA) Apply no less than 3 GPA of total spray volume Low pressure ground sprayers equipped with boom and flat fan nozzles using 10 to 15 GPA spray volume may be used

Compatibility with Other Chemicals

Compatibility information regarding tank mixtures of GA₃ 4% with herbicides used in cotton is not available

GRAIN SORGHUM

(All States except California)

For use as a seed treatment to break dormancy and allow germination under cold soil conditions

Guide Apply 0.25 to 1.00 grams a₁ per 100 pounds of seed GA₃ 4% can be applied to dry seed with standard mist treating equipment Make certain the seed is completely and uniformly covered with GA₃ 4% Fill the seed treatment tank with water to one half the final tank mix volume Add the required amount of GA₃ 4% mixing thoroughly while adding water and other seed treatment products to the desired final volume

DO NOT USE TREATED SEED FOR FOOD FEED OR OIL PURPOSES Add an approved dye to distinguish GA₃ 4% treated seed and prevent inadvertent use for food feed or oil purposes Seed commercially treated with this product must be labeled in accordance with all applicable requirements of the federal and state seed laws GA₃ 4% is compatible with most commonly used fungicide seed treatments such as Vitavax® and Dithane® standard dyes and sticker binding agents When preparing tank mixes ensure adequate physical compatibility and mixing characteristics

RICE

*** NOT FOR USE IN CALIFORNIA**

FOLIAR APPLICATION

Early season foliar application of GA₃ 4% promotes vigorous and more uniform seedling growth of rice prior to permanent flood establishment This may permit earlier flooding (5 to 10 days earlier) of drill or broadcast seeded rice and is particularly effective on semi dwarf varieties Early flooding may reduce the additional flushing costs associated with a delay in establishing the permanent flood reduce weed infestations and the number of herbicide applications and/or promote earlier and more uniform grain maturity

*Late season foliar applications of GA₃ 4% between split boot and 100% heading increases panicle height of rice This may facilitate harvest efficiency in the field by allowing the rice grain to be cut above the leaf canopy at faster combine speeds and at reduced vegetative load Grain quality and maturity are advanced with the promotion of tiller panicle development Heading applications to the first crop

accelerates regrowth of second crop rice This results in earlier second crop maturity and maximized grain yield

Timing and Rate Recommendations

Seedling Applications (Early Season)

Apply GA₃ 4% at a rate of 1 to 3 fl oz (30 to 90 ml) of product per acre to rice between the 1 2 and 4 5 leaf stages of growth Timing and dosage is based upon environmental conditions tank mix combinations with herbicides and preferred permanent flood practice in relation to rice leaf stage

For best results apply GA₃ 4% at a rate of 1 to 2 fl oz (30 to 60 ml) of product per acre using either a non ionic surfactant known to be non phytotoxic to rice or in tank mix combination with rice herbicides (See Compatibility with Other Chemicals section) Use higher rates of 1 5 to 3 fl oz (45 to 90 ml) of product with some dry and water based herbicide formulations or when temperatures will likely average 75 F or less during 14 days after application

NOTE Do not apply when rice is subjected to drought stress conditions Foliage may temporarily appear lighter green in color due to accelerated growth rates following GA₃ 4% application

***Panicle Extension Applications (Late Season)**

GA₃ 4% may be applied at a rate of 3 to 8 fl oz (90 to 240 ml) of product per acre between split boot and 100% panicle heading to promote main culm and tiller panicle extension Tank mix with a non ionic surfactant known to be non phytotoxic to rice Timing and dosage is based upon environmental conditions tank mix combinations with herbicides and preferred permanent flood practice in relation to rice leaf stage

NOTE Do not apply when rice is subjected to drought stress conditions Foliage may temporarily appear lighter green in color due to accelerated growth rates following GA₃ 4% application

Mixing Instructions

Fill the treatment tank with half of the final tank mix volume Add the required amount of GA₃ 4% and mix thoroughly while adding water to the desired final volume Dispose of any unused spray material at the end of the day

Application Equipment

Apply GA₃ 4% by aerial or ground spray equipment As an aerial spray use a spray system capable of producing a uniform spray pattern of medium to fine spray droplets at 10 gallons per acre (GPA) Apply no less than 3 GPA of total spray volume Use low pressure ground sprayers equipped with boom and flat fan nozzles using 10 to 15 GPA spray volume

Compatibility with Other Chemicals

GA₃ 4% can be tank mixed with most commonly used rice herbicides and fungicides When applying GA₃ 4% in mixtures with Arrosolo[®] Riverside Propanil[○] 60DF Stam[®] M4 Stam[®] 80EDF or Wham![○] EZ plus one of their recommended adjuvants use of an additional surfactant is not necessary Do not apply GA₃ 4% with Whip[®] IEC or Whip[○] 360

SEED TREATMENT APPLICATION

Use GA₃ 4% as a seed treatment for rice GA₃ 4% stimulates seed germination and promotes faster and more uniform stand establishment The following table describes GA₃ 4% application and expected benefits

GA₃ 4% Seed Treatment Application

Crop	GA₃ 4% Use Rates	Important Considerations	Benefits
Rice	0 5 to 2 1 fl oz product in 8 20 fl oz water/100 lbs seed (Equivalent to 15 to 20 ml in 237 to 591 ml)	For use with drill or broadcast seeding systems Do not apply GA ₃ 4% prior to a 24 hour presoak or to	May promote germination and emergence for semi dwarf and tall varieties May help increase final stand density

	water/45 kg seed)	water used for the presoak Do not exceed 2.1 fl oz product/100 lbs of seed (or 62 ml product/45 kg seed)	and uniformity when seed are planted deeper to receive adequate moisture
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Mixing Instructions

GA₃ 4% may be applied to seed with standard mist treating equipment. For best results, higher treatment volume of 12 to 20 fl oz per 100 pounds of seed (355 to 591 ml/45 kg seed) ensures complete and uniform coverage.

Fill the treatment tank with half of the final tank mix volume. Add the required amount of GA₃ 4% and mix thoroughly while adding water and other co-applied seed treatment products (see Compatibility with Other Chemicals section) to the desired final volume.

Add an approved dye to distinguish GA₃ 4% treated seed and prevent inadvertent use for food, feed, or oil purposes. Treated seed must be labeled in accordance with the requirements of the Federal Seed Act.

Use Restriction

Do not use treated seed for food, feed, or oil purposes.

Compatibility with Other Chemicals

GA₃ 4% is compatible with most commonly used fungicide seed treatments (e.g., Vitavax[®] CT and Dithane[®]) standard dyes, and sticker/binding agents. When preparing tank mixes, ensure adequate physical compatibility and mixing.

**HYBRID RICE SEED PRODUCTION
NOT FOR USE IN CALIFORNIA**

Apply GA₃ 4% during heading to increase panicle height of hybrid rice. This will facilitate pollination and harvest efficiency in the field, thus maximizing potential seed yield.

Timing and Rate Recommendations

For hybrid rice, make 1 to 5 applications of 20 to 100 grams a.i./acre at regular intervals during the heading period to promote main culm and tiller panicle extension, thus helping to maximize flower pollination.

Use Precautions

Avoid drift or accidental application to other crops. Higher rates of GA₃ 4% application to hybrid rice plants can result in excessive vegetative growth, thus producing a taller plant that is more prone to lodging.

Compatibility with Other Chemicals

Most commonly used rice herbicides and fungicides are compatible with GA₃ 4%. When applying GA₃ 4% in mixtures with Arrosolo[®], Riverside Propanil[®] 60DF, Stam[®] M4, Stam[®] 80EDF, or Wham[®] EZ, plus one of their suggested adjuvants, use of an additional surfactant is not necessary. Do not apply GA₃ 4% with Whip[®] IEC or Whip[®] 360.

Mixing Instructions

Fill the treatment tank with half of the final tank mix volume. Add the required amount of GA₃ 4% and mix thoroughly while adding water to the desired final volume. Dispose of any unused spray material at the end of the day.

Application Equipment

Make aerial applications of GA₃ 4% with spray systems capable of producing a uniform spray pattern of medium to fine spray droplets. Apply no less than 3 gallons per acre (GPA) of total spray volume. Use low pressure ground sprayers equipped with boom and flat fan nozzles using 10 to 15 GPA spray volume.

CONVERSION TABLES

Grams of Gibberellic Acid Per Acre Desired Gibberellic Acid Concentration (Grams Active Ingredient per acre) in Finished Spray	To	Amount of GA₃ 4% Formulation Per Acre GA ₃ 4% Liquid Contains Approximately 1.0 Gram Active Ingredient/Fluid Ounce of Formulated Product
0.2		0.2 oz
0.5		0.5 oz
1.0		1 oz
2.0		2 oz
4.0		4 oz
5.0		5 oz
8.0		8 oz
10.0		10 oz
12.0		12 oz
16.0		16 oz
20.0		20 oz
25.0		25 oz
32.0		32 oz
40.0		40 oz
48.0		48 oz
50.0		50 oz
128.0		128 oz

ppm (parts per million) GA₃	Milliliters (ml) of GA₃ 4% per liter of spray solution	Milliliters (ml) of GA₃ 4% per gallon of spray solution	Fl oz of GA₃ 4% per gallon of spray solution
1	0.03	0.1	0.003
5	0.15	0.6	0.02
10	0.3	1.1	0.04
25	0.74	2.8	0.09
50	1.5	5.6	0.19
100	3.0	11.2	0.4
250	7.4	28.0	0.95
500	14.8	56	1.9
750	22.2	84	2.8
1 000	29.6	112	3.8

STORAGE AND DISPOSAL

Do not contaminate water food or feed by storage or disposal

PESTICIDE STORAGE

Keep containers tightly closed when not in use Store away from any heat source

PESTICIDE DISPOSAL

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

CONTAINER DISPOSAL

Use label language appropriate for container size and type

NONREFILLABLE CONTAINERS Do not reuse or refill this container Clean container promptly after emptying

Nonrefillable container equal to or less than 5 gallons Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after flow begins to drip Repeat this procedure two more times Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration or if allowed by state and local authorities by burning If burned stay out of smoke

Nonrefillable container greater than 5 gallons Triple rinse as follows Empty the remaining contents into application equipment or a mix tank Fill the container 1/4 full with water Replace and tighten closures Tip container on its side and roll it back and forth ensuring at least one complete revolution for 30 seconds Stand the container on its end and tip it back and forth several times Turn the containers over onto its other end and tip it back and forth several times Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal Repeat this procedure two more times Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration or if allowed by state and local authorities by burning If burned stay out of smoke

LIMITED WARRANTY AND DISCLAIMER

It is the manufacturer s intention that this product is to be used in accordance with the Directions for Use as stated on this label The use of this product being beyond control of the manufacturer no guarantee expressed or implied is made as to the effects of such use or the results to be obtained if not used in accordance with printed directions and established safe practice To the fullest extent permitted by law the buyer s exclusive remedy and manufacturer s or seller s exclusive liability for any and all claims losses damages or injuries resulting from the use or handling of this product whether or not based in contract negligence strict liability in tort or otherwise shall be limited at the manufacturer s option to replacement of or the repayment of the purchase price for the quantity of product with respect to which damages are claimed

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