

Reg # 55146-62

PM-22

file 197



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 7 1994

LINDA C. WATSON
AGTROL CHEMICAL PRODUCTS
7322 SOUTHWEST FREEWAY,
SUITE 1400
HOUSTON, TX 77074

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 9/14/93 Response to PR Notice 93-7
EPA Reg. No. 55146-62
GIBGRO 4LS

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

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Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

KEEP OUT OF REACH OF CHILDREN

WARNING - AVISO

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

FLAMMBLE

HARMFUL IF SWALLOWED

ACTIVE INGREDIENT:

*Gibberellic Acid 4.0% W/W

INERT INGREDIENTS: 96.0%

TOTAL 100.0%

*Equivalent to 121.6 g. Gibberellic Acid per gallon.

EPA Reg. No. 55146-62

STATEMENT OF PRACTICAL TREATMENT

AGREEMENT
with COMMENTS
in EPA Letter Dated

7 1994

- IF IN EYES: Flush with plenty of water. Call a physician.
- IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, gelatin solution, or, if these are not available, drink large quantities of water. Avoid alcohol.
- IF ON SKIN: Wash with plenty of soap and water. Get medical attention.
- IF INHALED: Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 55146-62

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Causes substantial but temporary eye injury. Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical resistance category selection chart. Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier Laminata, Butyl Rubber ≥14 mils, Nitrile Rubber ≥14 mils, Neoprene Rubber ≥14 mils, Polyvinyl Chloride (PVC) ≥14 mils, Viton ≥14 mils, shoes plus socks and protective eyewear. 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.

ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

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.

ENVIRONMENTAL HAZARDS

Avoid direct applications to any body of water. Keep out of lakes, ponds or streams. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

FLAMMABLE! Keep away from heat and open flame. Keep container tightly closed when not in use.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Before application, read accompanying GIBGRO 4LS Spray Guide carefully and use only as directed. DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.

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 of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. 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, chemical-resistant gloves, such as Barrier Laminata, Butyl Rubber ≥14 mils, Nitrile Rubber ≥14 mils, Neoprene Rubber ≥14 mils, Polyvinyl Chloride (PVC) ≥14 mils, Viton ≥14 mils, shoes plus socks and protective eyewear.

STORAGE AND DISPOSAL

- Do not contaminate water, food or feed by storage or disposal.
- STORAGE: Keep containers tightly closed when not in use. Keep away from heat and open flame.
- 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: Do not reuse empty containers. Triple rinse (or equivalent). 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.

WARRANTY STATEMENT

AGTROL CHEMICAL PRODUCTS warrants that the product conforms to the chemical description on the label and is reasonably fit for the purposes set forth on the label when used according to directions under normal use conditions. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. This warranty does not extend to the handling or use of this product contrary to label instructions or under abnormal conditions or under conditions not reasonably foreseeable to seller and buyer - assumes all risk of any such use.

GibGro 4LS

(Liquid Gibberellic Acid)

SPRAY GUIDE

KEEP OUT OF REACH OF CHILDREN
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STATEMENT OF PRACTICAL TREATMENT

- IF IN EYES:** Flush with plenty of water. Call a physician.
- IF SWALLOWED:** Drink promptly a large quantity of milk, egg whites, gelatin solution, or, if these are not available, drink large quantities of water. Avoid alcohol.
- IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.
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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.

ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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.

ENVIRONMENTAL HAZARDS

Avoid direct applications to any body of water. Keep out of lakes, ponds or streams. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

FLAMMABLE! Keep away from heat and open flame. Keep container tightly closed when not in use.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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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 of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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, chemical-resistant gloves, such as Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils, Viton ≥ 14 mils, shoes plus socks and protective eyewear.

DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.

STORAGE AND DISPOSAL

See container label.

NOTE: Gibberellic Acid is an extremely potent plant growth regulator. For best results, read all directions for use thoroughly. Consult your local experiment station specialist, distributor, or the Agtrol agricultural specialist in your area for the spray schedule best suited to your conditions.

GENERAL DIRECTIONS FOR USE

Discard any unused spray material at the end of each day. Prepare solution concentrations by mixing the required amount of product with water only in a clean, empty spray tank.

Use only as directed. The label should be read thoroughly and understood before making applications. Effectiveness requires that all parts of plant or crop must receive spray or desired result will not occur, so spray thoroughly. When a range of rates is indicated, use the concentration and spray volume recommended locally.

Data concerning the compatibility of GibGro with other agricultural compounds is not available.

SPRAY GUIDELINES FOR GRAPES

For all grapes, application is recommended by ground sprayer. Use 100 to 500 gallons as a dilute spray according to foliage density, or 30 to 80 gallons as a concentrate spray, unless specified otherwise. Do not exceed maximum rates. It is important to wet all berries thoroughly.

THOMPSON SEEDLESS GRAPES.

For cluster elongation ("Stretch"), looser cluster forms, and reducing cost of thinning, when used in conjunction with established girdling and thinning practices: apply 8 to 16 grams/A before bloom when flower clusters are 3 to 5 inches long.

For decreased berry set ("Thinning"), reducing hand-thinning costs, and hastened maturity: apply 8 to 16 grams/A per application during bloom as one application or as two applications of equal amounts when the bloom period is extended with the second application made 3 to 7 days after the first application.

For larger berries ("Sizing") and larger clusters when used in conjunction with established girdling and thinning practices: apply 32 to 80 grams/A per application in 1 to 3 applications beginning when average berry size is 4-5 millimeters in diameter. Applications should be applied within a 14 day period. Timing of the second and third spray will be dictated by experience in the vineyard to be sprayed and temperatures occurring during the interim between sprays. Potential effect will be reduced if the second and/or third spray occurs more than two weeks after the first application.

NOTE: Do not apply more than 208 grams/A* per growing season for all uses.

THOMPSON SEEDLESS GRAPES FOR RAISINS

For cluster elongation ("Stretch") and looser cluster forms, allowing better air circulation to aid in the control of bunch rot and increase light penetration aiding in sugar development: Apply 8 to 16 grams/A before bloom when flower clusters are 3 to 5 inches long.

For decreasing berry set, ("Thinning") with increased raisin quality, and hastened maturity: apply 0.75 to 6 grams/A when most bunches are in 60% to 80% bloom.

FLAME SEEDLESS GRAPES

For decreased berry set ("Thinning") and reducing hand-thinning costs: apply 3 to 7.5 grams/A during bloom. Higher amounts may cause an excess of shot berries or overthinning.

For larger berries ("Sizing") and larger clusters when used in conjunction with established girdling and thinning practices: apply 20 to 48 grams/A per application in 1 to 3 applications beginning when average berry size reaches 6 to 8 millimeters in diameter. Applications should be applied within a 14 day period. Timing of the second and third spray will be dictated by experience in the vineyard to be sprayed and temperatures occurring during the interim between sprays. Potential effect will be reduced if the second and/or third spray occurs more than two weeks after the first application.

NOTE: Do not apply more than 103.5 grams/A per growing season for all uses.

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PERLETTE GRAPES

For larger berries ("Sizing") and larger clusters when used in conjunction with established girdling and thinning practices: Apply 32 to 80 grams/A per application in 1 to 3 applications beginning when average berry size is 4 to 5 millimeters in diameter. Applications should be applied within a 14 day period. Timing of the second and third spray will be dictated by experience in the vineyard to be sprayed and temperatures occurring during the interim between sprays. Potential effect will be reduced if the second and/or third spray occurs more than two weeks after the first application.

NOTE: Do not apply more than 160 grams/A per growing season for all uses.

OTHER SEEDLESS VARIETIES SUCH AS SEEDLESS TOKAY, INTER-LOCKEN SERIES AND RELATED HYBRIDS

For larger berries and larger clusters when used in conjunction with established girdling and thinning practices: apply 8 to 48 grams/A as one application at or just after shatter (usually 2 to 3 days later) or as two applications of equal amounts not to exceed a total of 48 grams/A, with the first made at or just after shatter, followed during the next two weeks by the second application. Timing of the second spray with split application will be dictated by experience in the vineyard to be sprayed and temperatures occurring during the interim between sprays. Potential effect will be reduced if the second spray occurs more than two weeks after the first application.

EMPEROR GRAPES

For reducing berry shrivel. This can also increase berry size: apply 20 grams/A as one application in 200 to 250 gallons/A approximately two weeks after completion of shatter following bloom. This timing should correspond to a period when the predominant berry diameter ranges from 10 to 15 millimeters.

BLACK CORINTH (ZANTE CURRANT) GRAPES

For improving berry size: apply spray containing 1 to 8 grams/A 3 to 5 days after full bloom, but before shatter begins.

SPRAY GUIDELINES FOR CITRUS

NAVEL ORANGES

(California) To delay aging of the rind and reduce rind 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: EARLY SPRAY (before color change). The delay in rind aging is greatest when the early spray is applied before a color change. This spray timing produces the firmest rind possible. Apply one spray two weeks prior to color break which normally occurs August to November. Apply 10 to 40 grams/A as a concentrate or dilute spray in sufficient gallonage to insure thorough wetting.

NOTE: Do not apply to groves that may be harvested early as a reduction in grade may result due to the delayed coloring. Do not apply in white wash sprays in which lime or other caustic material has produced a high pH in the spray tank.

LATE SPRAY: (after color break) Apply one spray just after marketable color has developed which is normally from October through December. Apply 16 to 48 grams/A as a concentrate or dilute spray in sufficient gallonage to insure thorough wetting.

NOTE: Do not spray Navel orange trees from January through July. Sprays applied in January/February may cause reduced production the following year. Do not apply within 10 days of harvest.

NOTE: A slight increase in mature leaf drop may occur in trees under stress.

VALENCIA ORANGES

(California) To reduce rind creasing and to delay aging and softening of the rind: apply a single spray in August or September to trees with a target crop of young fruit. Apply 40 to 80 grams/A as a concentrate or dilute spray in sufficient gallonage to insure thorough wetting.

NOTE: Slower color development should be expected in the target crop. Increased greening of mature fruit, if present, may occur. After marketable color is achieved, treatment effects may be reduced the longer treated fruit remain on the tree.

LEMONS

(California except desert valleys) To decrease the amount of small tree ripe fruit and to produce a more desirable production pattern in relation to market demand: apply one spray when target crop is 1/2 to 3/4 full size but still green. Use 10-20 grams/A as a concentrate or dilute spray in sufficient gallonage to insure thorough wetting.

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

NOTE: Do not apply within one month of harvest. Do not apply in spring or summer.

TANGERINE HYBRIDS

(Florida) To increase fruit set and yields on tangerine hybrids with pollination problems such as the Orlando, Robinson, Minneola and Sunburst: apply spray during full bloom. Be sure to wet the leaves sufficiently.

Fruits are generally seedless. Use 8 to 30 grams/A in 400 to 500 gallons/A on large mature trees.

NOTE: A slight increase in mature leaf drop occurs at concentrations above 25 ppm. Fruit sizes may be reduced and color development slightly retarded.

(California) To delay disorders associated with rind aging of the Minneola tangelo; e.g., puffiness and softening and to increase peel strength: apply 20 to 40 grams/A as a dilute spray in sufficient gallonage to insure thorough wetting.

NOTE: Do not apply if early harvest is planned. Do not apply after coloring as pre-harvest rind staining may occur. Application during coloring may cause variation in rind color development.

GRAPEFRUIT

(Florida and Texas) To delay disorders associated with rind aging; e.g.,

pulliness, softening and orange coloration, to prevent preharvest drop of mature fruit and to increase peel strength and reduce water loss during storage: apply a single spray to fully colored fruit during the November through January period. Use 20 to 56 grams/A in 500 to 700 gallons/A containing a suitable non-ionic surfactant at the manufacturer's recommended rate. It is advisable to spot pick heavy crops to aid early marketing and to avoid reduction of yields which generally follow late held crops.

NOTE: Applications made after January or when trees begin to break dormancy may adversely affect new crop. Do not use concentrate sprays. Results may vary season to season depending on environmental conditions.

GRAPEFRUIT, STAR RUBY VARIETY

(Texas) To reduce early-season drop of small fruit of Star Ruby Variety thereby increasing yields: apply a single spray during the bloom period. Use GibGro 4LS (25 fluid ounces) or GibGro 2LS (50 fluid ounces) (25 grams/A) in 250 gallons water final spray mixture per acre. A suitable surfactant may be used to enhance efficacy.

NOTE: Do not tank-mix with other chemicals. Do not apply concentrated solution. Results may vary season to season depending on environmental conditions. Maintain a well-balanced fertilization and watering program.

SPRAY GUIDELINES FOR FRUIT CROPS

BLUEBERRIES

For improving fruit set. For set problems due to insufficient natural honeybee pollination on varieties such as Coville, Jersey, Stanley, Earleblue, Weymouth and others: make a single foliage spray application at full bloom (when over 75 percent of all flowers are fully open). For Weymouth, application can be delayed up to two weeks after full bloom to affect sizing of shot berries. Use GibGro 4LS (80 fluid ounces) or GibGro 2LS (160 fluid ounces) in 100 gallons of water. Use of a spreader-sticker is recommended. Apply to the point of run-off, thoroughly wetting all parts of the plant. Total gallonage will depend on size and density of the plants.

NOTE: Do not exceed 300 gallons/A. Although some varieties bloom closer to harvest than others—in no case should application be made closer than 40 days before harvest. Do not apply to plants in a low state of vigor.

SWEET CHERRIES

To delay harvesting, to produce a brighter colored, firmer fruit and to increase size: apply spray when the fruit is light green to straw colored. Apply spray to thoroughly wet the entire tree. Use 16 to 48 grams/A in 400 to 600 gallons/A on large mature trees.

NOTE: Do not apply within one week of harvest.

RED TART CHERRIES

(All states except California) To maintain and extend high fruiting capacity of bearing tart cherry trees and reduce occurrence of "blind" nodes by stimulating lateral vegetative buds to develop a more productive balance of lateral shoots and spurs. GibGro must be applied annually to insure vegetative development and subsequent yield improvement year after year.

Timing: Apply a single foliar spray between 14 to 28 days after bloom. Research and commercial experience has determined 21 days after full bloom to be optimum. Best timing is further defined as that stage when 3-5 terminal leaves have fully expanded, or, at least 1-3 inches of terminal shoot extension has occurred.

Concentration: 10 to 25 ppm. The most commonly used rate is 15 ppm. However, higher or lower rates may be used, depending upon the response you desire.

Method of Application: Best results have been achieved with high volume sprays of 100 gallons or more of finished spray per acre. However, lower volume sprays can be equally effective, but extreme care must be exercised to avoid an overdose as spray volume is decreased.

HIGH VOLUME SPRAY GUIDE (100 or more gallons per acre)

NOTE: Each ounce of GibGro 2LS contains approximately 1/2 gram of the active ingredient, gibberellic acid and each ounce of GibGro 4LS contains approximately 1 gram of the active ingredient, gibberellic acid.

TREE AGE	6-10 YRS.	10-15 YRS.	16-20 YRS.	20+ YRS.
CONCENTRATION (PPM)	10 PPM	15 PPM	20 PPM	25 PPM
GRAMS ACTIVE INGREDIENT PER 100 GALLONS	4 GRAMS	6 GRAMS	8 GRAMS	10 GRAMS
RECOMMENDED WATER VOLUME (GALLONS/ACRE)	150	150	150	150
GRAMS ACTIVE INGREDIENT PER ACRE	6 GRAMS	9 GRAMS	12 GRAMS	15 GRAMS

LOW VOLUME SPRAY GUIDE (50-100 gallons per acre)

APPROXIMATE TREE AGE	GRAMS OF ACTIVE INGREDIENT PER ACRE	
	NORMAL VIGOR	LOW VIGOR
6-10 YEARS	4	6
10-15 YEARS	8	10
15-20 YEARS	10	14
20+ YEARS	14	18

NOTE: Use a minimum of 50 gallons/acre for a low volume spray application and obtain uniform coverage of the whole tree. Rates of GibGro in the above chart are based on expected tree vigor at various ages in a normal orchard. Each orchard presents a different situation. Adjust GibGro rate to complement vigor of trees. If trees are vigorous, use lowest recommended rates. Use higher rate for trees low in vigor and weak in shoot and spur production. Excessive application rates on any tree will increase vegetative growth at the expense of fruit production the following year.

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NOTE: Lowest rates of GibGro should be used on trees that have been heavily pruned or hedged. The use of additional wetting or spreading agents is not recommended.

GibGro will not improve growth of trees under stress (nutritional, moisture, winter injury) or other factors inhibiting normal growth and development resulting from physical damage or unsound orchard practices. Best results from GibGro will be obtained when combined with good cultural practices.

SPRAY GUIDELINES FOR NON-BEARING FRUIT TREES

YOUNG TART AND SWEET CHERRY TREES

(All states except California) To reduce flowering and fruiting in young tart and sweet cherry trees to minimize the competitive effect of early fruiting on tree development: apply GibGro liquid two to four weeks after bloom. Mix 20 to 40 ounces of GibGro 4LS or 40 to 80 ounces of GibGro 2LS in 100 gallons of water. Apply a foliar spray of 25 to 50 gallons per acre, assuming a tree density of 100 trees per acre equivalent, or apply about one quart of spray volume per tree. Under conditions of low vigor, two applications are recommended. If two spray applications are made, allow at least a seven-day interval between sprays.

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 reduction of flowering and fruiting is desired in the fourth season.

NON-BEARING PEACHES

(North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi) To reduce flowering and fruiting in young non-bearing peaches to minimize the competitive effect of early fruiting on tree development: Apply a single spray in the fall after flower buds have been initiated. This corresponds to the period immediately before and at the onset of early leaf drop, typically late September to early October. Apply GibGro at the rate of 200-400 PPM in 10-50 gallons of water per acre. Best results are obtained when applied with a handgun and tree canopy is wetted thoroughly to the point of run-off. The addition of a non-ionic surfactant will improve efficacy. Refer to the table for mixing instructions.

OUNCES OF GIBGRO 4LS IN:	200 PPM	400 PPM
10 Gallons of Water	8	16
50 Gallons of Water	40	80

Treat only trees that are in good physiological condition. Trees should have completed their first leaf before commencing treatments. Discontinue treatment the year before desired harvest.

SPRAY GUIDELINES FOR OTHER FRUIT

OLYMPUS STRAWBERRIES

(N.W. US Only; propagation stock) To increase runner production of mother plants of the Olympus cultivar: apply a single spray to mother plants 10 to 30 days after planting. At the time of spraying, plants should have 1 to 6 leaves. Apply 100 gallons/A to thoroughly wet new foliage to the point of run-off. Use 20 grams*/A.

NOTE: Not for use on fruiting plants. Treatments may not be effective on plantings set out after mid-May.

FORCING RHUBARB

To increase yield of marketable forced rhubarb and to break dormancy on plants receiving insufficient chilling: apply 2 fluid ounces (60 ml) of a solution containing 20 grams* in 10 gallons 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* in 10 gallons.

NOTE: Keep forcing house temperatures at 40° to 50°F for 24 hours after application. If house is warmer than 50°F, the crowns should be covered with plastic. Temperatures in the forcing house above 50°F will result in lower yields and poor stalk color.

SPRAY GUIDELINES FOR VEGETABLE CROPS

ARTICHOKES

(California) To accelerate maturity of artichokes and to shift the harvest to an earlier date: apply spray at bud initiation time, normally six weeks prior to anticipated harvest. Be sure the entire plant (leaves, stems and buds) are covered to point of run-off. Use 10 grams* in 100 to 125 gallons/A.

NOTE: Do not apply within seven days of harvest.

CARROTS

To aid in mechanical harvesting of carrots by increasing top growth damaged by disease or environmental stress: apply spray of 1-2 grams*/A in a minimum of 5 gallons per acre by air or 10 gallons per acre by ground sprayer. A second application in 10-20 days may be required to obtain the desired amount of top growth required for harvesting. A spreader-sticker, used as per the manufacturer's recommendation, is desired for thorough wetting of the leaf foliage.

NOTE: Applications should be made soon after carrot tops have been damaged by disease or environmental stress. Do not exceed the recommended rate or apply more than two applications per season since an undesirable amount of top growth may be obtained at the expense of root development. Do not apply within 7 days of harvest.

CELERY

To increase plant height and yield, and overcome stress due to cold weather conditions, or saline soils and to obtain earlier maturity: apply spray one to four weeks prior to harvest. Lower concentrations are applied at the three to four-week interval. Higher concentrations at the one to two-week interval. Use 2.5 to 10 grams* in 25 to 50 gallons/A.

NOTE: Do not apply earlier than four weeks before harvest as Gibberellic Acid may induce bolting (seed stalk formation).

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Applications made less than one week preharvest may result in residues.

Celery plants must be harvested when mature to ensure quality.

LETTUCE FOR SEED

To obtain uniform bolting and increase seed production: apply the following spray schedule:

Growth Stage	ppm*	g*/A	Gallon/Acre
4 leaf stage	10	0.4	10
8 leaf stage	10	1.6	40
12 leaf stage	10	4	100

NOTE: Do not feed crop wastes to livestock.

MELONS and CUCUMBERS

To stimulate fruit set during periods of extended cool temperatures, apply 2 grams Al (2 ounces) per acre. Make one application prior to periods of extended cool temperatures. Make one application prior to bloom and two additional applications at 10-14 day intervals following fruit set on cantaloupes and watermelons. For cucumbers, as many as 3 to 4 applications may be required after fruit set.

An adequate spray volume should be used to insure thorough coverage of the exposed foliage. In order to obtain maximum benefit from GibGro, the vines must be in good condition except for a reduced growth rate due to cool temperatures.

SEED POTATOES

To stimulate uniform sprouting—for 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: Dip freshly dug seed pieces in a solution containing 0.2 to 0.4 gram* in 100 gallons prior to planting.

NOTE: If soil temperature is very high, avoid treating rested seed and use the minimum concentration for dormant seed.

SPINACH

(All States except California) To facilitate harvest, increase yield and improve quality of fall and over-winter spinach: apply a single spray 10 to 14 days before each anticipated harvest on fall or over-winter spinach, ideally when daytime temperatures are 40° to 70°F and during early morning hours when dew is present on crop.

Use 6 to 8 grams*/A in 10 to 50 gallons/A by ground sprayer or in a minimum of 5 to 10 gallons/A by air.

Maximum benefit from GibGro is obtained when below normal temperatures predominate following application and growth would be otherwise slowed in untreated spinach.

NOTE: Since Gibberellic Acid can promote bolting, do not apply to spinach after the mid-winter period or if temperatures may be expected to exceed 75°F within several days of application. Do not apply on spring-planted spinach.

SPRAY GUIDELINES FOR FLORICULTURE CROPS

POMPOM CHRYSANTHEMUMS

(Florida) For elongating peduncles on pompom chrysanthemums: apply a single spray 4 to 5 weeks after initiation of short day conditions.

Use 1/2 to 1 gram* in 12 gallons for application to 1,000 sq. ft. of bed (equivalent to 20 to 40 grams* in 500 gallons/A).

Apply with overhead nozzles directing the spray to the flower buds.

NOTE: Overuse or incorrect timing may cause long, spindly and weak stems.

STATICE

(Florida) To promote earlier flowering and to increase flower yield: apply a single drench spray when plants are more than 10 inches in diameter (approximately 90 to 110 days after normal seeding time). Use 40 to 50 grams* in 25 gallons to provide 10 ml (5mg*) solution per plant.

NOTE: Do not exceed specified rates. Do not apply repeated sprays. Accelerated flowering is influenced by extended photoperiod, adequate nutrition and reduced night temperature. Treatment with gibberellins lessens the requirement for the cold requirement and/or the long photoperiod.

SPRAY GUIDELINES FOR ADDITIONAL CROPS

BERMUDAGRASS GOLF TURF

(Florida) To initiate or maintain growth and prevent color change during periods of cold stress and light frosts on golf course Bermudagrass (e.g., Tifdwarf, Tifgreen, etc.): apply 10 grams* weekly or 25 grams* biweekly in 25 to 100 gallons/A.

Use 1/4 to 2/3 gram* in approximately 6 gallons appropriate for the spray equipment to: application to 1,000 sq. ft. (equivalent to 10 to 25 grams*/A in 25 to 100 gallons/A).

NOTE: Do not exceed specified rates.

Do not apply during extended warm periods where night temperatures exceed 65°F.

Maintain adequate moisture and proper fertilization programs recommended in local area.

Discontinue treatments if thinning is observed.

Do not apply the high rate more frequently than every two weeks. More frequent mowing may be necessary.

Do not use on dormant turf.

HOPS

(For seeded and seedless Fuggle hops and similar varieties adapted to Oregon and the Northwest) To increase yield and pickability: apply spray when vine growth is five to eight feet in length. Use 4 to 6 grams* in 100 to 150 gallons/A.

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NOTE: Do not apply within three weeks of harvest.

RICE SEED TREATMENT (EXCEPT CALIFORNIA)

For use as a seed treatment on both semi-dwarf and tall rice varieties to promote germination, emergence and final stand densities when planted at greater depths where soil moisture levels are more adequate for germination. GibGro is particularly effective on semi-dwarf varieties such as 'Lemont', 'Gulmont', and 'Texmont'. This will also result in more uniform emergence thus allowing more accurate and efficient herbicide, fertilizer, fungicide and insecticide applications and may maximize yield and improve grain quality.

Apply only to rice seed intended for drill seeded or dry broadcast systems. Do not apply to rice used in a 24 hour presoak prior to broadcast. Do not use more than 2.0 grams* per 100 pounds of seed. DO NOT USE TREATED SEED FOR FOOD, FEED OR OIL PURPOSES.

Use 1.0-2.0 grams* in 8 to 20 ounces of water per 100 pounds of rice seed. GibGro can be applied to dry seed with standard mist-treating equipment. Best results are obtained using a higher treatment volume (12 to 20 ozs/cwt of seed) to insure the seed is completely and uniformly covered with GibGro. Fill the seed treatment tank with water to one-half the final tank mix volume. Add the required amount of GibGro, mixing thoroughly while adding water and other seed treatment products to the desired final volume.

An approved dye must be added to distinguish GibGro treated seed and prevent inadvertent use for food, feed or oil purposes. GibGro is compatible with most commonly used fungicide seed treatments such as VITAVAX® and DITHANE®, standard dyes and sticker-binding agents. When preparing tank mixes, the user should ensure adequate physical compatibility and mixing characteristics.

RICE POST EMERGENCE SEEDLING TREATMENT (EXCEPT CALIFORNIA)

For use as a postemergence seedling application in semi-dwarf rice varieties grown in the United States to promote more uniform and vigorous growth prior to permanent flooding. This will allow earlier flooding of drill or dry broadcast-seeded varieties and may reduce additional flushing costs associated with a delay in permanent flooding, weed infestations and the number of herbicide applications as well as promote earlier and more uniform grain maturity. GibGro application may result in a temporary lighter green foliage color due to accelerated growth rates.

Apply GibGro only to fields which have been drained of flood water taking precautions to avoid drift or accidental application to other crops. Use should be limited to a single application prior to permanent flood and should not be applied when rice is subject to stress conditions. GibGro can be tank mixed with Propanil when these commonly used rice herbicides are used according to their manufacturer's label recommendations. Use the more restricted labeling instructions.

GibGro may be applied at a rate of 1 to 3 grams* per acre to semi-dwarf rice between the 1 to 4 leaf growth stage. Timing and dosage is based on environmental conditions and preferred permanent flood practice in relation to tiller development.

For best results, apply GibGro at a rate of 2-3 grams* per acre in 1 to 2 leaf stage rice when permanent flood is desired before tiller development. Apply 1-3 grams* per acre in 3 to 4 (4th leaf showing) stage rice when flooding will be made following initial tillering. Use higher rates when temperatures are likely to average 75°F or less during the 14 days after application. Either application will permit establishment of a permanent flood 7 to 10 days earlier.

Apply GibGro by fixed wing aircraft equipped with spray systems capable of

producing a uniform medium to fine spray droplet pattern. Do not apply less than 10 gallons total spray volume per acre. Low pressure ground sprayers equipped with boom and flat fan nozzles and applying 10 to 15 gallons total spray volume per acre may be used.

GibGro 4LS (20 fl. oz/bottle and 128 fl. oz/bottle) 7 2 7

Active Ingredient

Gibberellic Acid* 4.0% w/w

Equivalent to approximately 1.0 gram* of Gibberellic Acid per fluid ounce of product.

EPA Reg. No. 55146-62

NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

CONVERSION TABLE

GRAMS OF ACTUAL GIBBERELIC ACID PER ACRE	TO	AMOUNT OF GIBGRO LIQUID FORMULATION PER ACRE
Desired Actual Gibberellic Acid Concentration (Grams*) in Finished Spray (Per Acre)		GibGro 4LS Liquid Contains (1.0 Grams*/Fluid Ounce of Formulated Product)
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.

* Refers to actual Gibberellic Acid.

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