ABBOTT

(Gibberellic Acid)

Planned Growth for Planned Profits

Read Back Cover for Precautions Before Using.

See inside back cover for available formulations.

PROS use PRO-GIBB

CONTENTS

Directions for Use

Where a range is indicated use the concentration and spray volumes recommended locally to obtain desired results

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

- For cluster elongation ("Stretch"), looser cluster forms, and reducing cost of thinning, when used in conjunction with established girdling and thinning practices.

  Guide: Apply 3 to 8.5 grams[z]/A before bloom when flower clusters are 3 to 5 inches long.

- For decreased berry set ("Thinning"), reducing hand-thinning costs, and hastened maturity.

  Guide: Apply 3 to 12 grams[z]/A during bloom. Higher amounts may cause an excess of shot berries or overthinning, except in high density plantings.

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

  Guide: Apply 8 to 48 grams[z]/A as one application at or just after shatter (usually 2 to 3 days later), or as two applications of equal amounts with the first made at or just after shatter, followed during the next two weeks by the second application. Timing of the second 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 spray occurs more than two weeks after the first application.

Other Seedless Varieties such as Perlette, Seedless Tokay, Interlocken Series and Related Hybrids

- For larger berries and larger clusters when used in conjunction with established girdling and thinning practices.

(z) Refers to actual Gibberellic Acid See Tables to convert to amount of formulated Pro Gibb needed

  Guide: Apply 8 to 48 grams[z]/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 [z]/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.

Thompson Seedless for Raisins

- For decreasing berry set, with increased raisin quality, and hastened maturity.

  Guide: Apply 0.75 to 6 grams[z]/A during bloom.

Black Corinth (Zante Currant)

- For improving berry size.

  Guide: Apply spray containing 1 to 8 grams[z]/A 3 to 5 days after full bloom, but before shatter begins.

Wine Varieties

- For looser clusters to reduce incidence of bunch rot.

  Guide: Apply one spray when shoots are 15 to 20 inches long Clusters should average 3 to 4 inches in length and may range from 2 to 5 inches in length. **It is important** that the proper rate be used on each variety; if indicated rates are exceeded, reduction in yield may occur during the year of application and the following year. Concentrations for registered varieties are shown below with the required dilute gallonage.

	PPM	Grams[z]/A	Gal./A
Tinta Madeira Palomino	1 to 2 5[z]	0 4 to 1[z]	100
Carignane Valdepenas Aleatico	2 5 to 5	1 to 2	100
Zinfandel Petite Sirah Chenin Blanc	5 to 10	2 to 4	100
Green Hungarian	10 to 20	4 to 8	100
Grenache Alicante	20	8	100
Salvadore	20 to 40	8 to 16	100

(z) Refers to actual Gibberellic Acid See Tables to convert to amount of formulated Pro Gibb needed

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 (October/November — before any color change).

Apply to groves where harvest is not anticipated before March 1. 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.

Guide: Apply one spray in Oct. or Nov. before any color change. Use 5 to 20 ppm[z]; 400 to 500 gal./A on large mature trees.

CAUTION: Do not apply to groves that may be harvested before Mar. 1 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 (December/January — after marketable color is reached).

Apply to groves where harvest may be before March 1 (or not known).

Guide: Apply one spray in Dec. or Jan. just after marketable color has developed. Use 5 to 20 ppm[z]; 400 to 500 gal./A on large mature trees.

CAUTION: Sprays applied in late Jan./Feb. may cause reduced production the following year.
Do not apply within 10 days of harvest
Do not spray navel orange trees between Feb. 15 and Aug. 1.

(California)

To decrease the amount of small tree ripe fruit and to produce a more desirable production pattern in relation to market demand.

Guide: Apply in a single spray in November or December to control fruit maturity by delaying development of yellow colored fruit. Use 10 ppm[z]; 500 gal./A on large mature trees.

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

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

(z) Refers to actual Gibberellic Acid See Tables to convert to amount of formulated Pro Gibb needed

(Florida)

To increase fruit set and yields on tangerine hybrids (tangelos, tangerines) with pollination problems such as the Orlando tangelo, Robinson, and Minneola tangerine.

Guide: Apply spray during full bloom. Be sure to wet the leaves sufficiently.

Fruits are generally seedless. Use 5 to 15 ppm[z]; 400 to 500 gal./A on large mature trees.

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

For improving fruit set. For set problems due to insufficient natural honeybee pollination on varieties such as Coville, Jersey, Stanley, Earlieblue, Weymouth and others.

Guide: 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 **Pro-Gibb** 3.91% Liquid Concentrate. Mix 80 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.

CAUTION: Do not exceed 300 gallons per acre. 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.

(Hawaii)

Use Pro-Gibb Plus 10% Soluble Powder

For increase in sucrose yield

Guide: Apply 28 to 84 grams[z] in 7 to 10 gallons of spray per acre by airplane Uniform coverage is

(continued on page 10)

(z) Refers to actual Gibberellic Acid See Tables to convert to amount of formulated Pro Gibb needed

Dilution Table for Spraying

Desired Actual Gibberellic Acid Concentration, (ppm) in Finished Spray	PRO-GIBB PLUS POWDER (Fluffed)			3.91% LIQUID			2% LIQUID		
	Amount of Powder to Add to 100 Gal.	Amount of Powder to Add to 300 Gal.	Amount of Powder to Add to 500 Gal.	Amount of Pro-Gibb Fluid to Add to 100 Gal.	Amount of Pro-Gibb Fluid to Add to 300 Gal.	Amount of Pro-Gibb Fluid to Add to 500 Gal.	Amount of Pro-Gibb Fluid to Add to 100 Gal.	Amount of Pro-Gibb Fluid to Add to 300 Gal.	Amount of Pro-Gibb Fluid to Add to 500 Gal.
5 ppm	3/10 TBS	9/10 TBS	1½ TBS.	4/10 TBS	1¼ TBS.	1 Oz.	¼ TBS	1¼ Oz	2 Oz
1.0 ppm	⅝ TBS	1¼ TBS.	3 TBS	¾ TBS	1¼ Oz	2 Oz	1¾ TBS.	2½ Oz.	4 Oz.
2.5 ppm	1½ TBS	4½ TBS	½ Cup*	1 Oz.	3 Oz	5 Oz.	2 Oz	6 Oz	10 Oz
5.0 ppm	3 TBS	½ Cup*	⅞ Cup*	2 Oz	6 Oz.	10 Oz.	4 Oz	12 Oz.	20 Oz.
7.5 ppm	¼ Cup*	¾ Cup*	1¾ Cups*	3 Oz	9 Oz	15 Oz.	6 Oz	18 Oz	30 Oz.
10 ppm	⅓ Cup*	1 Cup*	1¼ Cups*	4 Oz	12 Oz	20 Oz	8 Oz	24 Oz.	40 Oz.
15 ppm	½ Cup*	1½ Cups*	2⅝ Cups*	6 Oz	18 Oz	30 Oz.	12 Oz.	36 Oz	60 Oz
20 ppm	⅔ Cup*	2⅛ Cups*	3½ Cups*	8 Oz	24 Oz	40 Oz	16 Oz	48 Oz	80 Oz
25 ppm	⅞ Cup*	2⅝ Cups*	4⅓ Cups*	10 Oz	30 Oz	50 Oz	20 Oz	60 Oz	100 Oz
40 ppm	1⅓ Cups*	4¼ Cups*	7 Cups*	16 Oz	48 Oz	80 Oz	32 Oz	96 Oz	160 Oz
50 ppm	1¾ Cups*	5¼ Cups*	8¾ Cups*	20 Oz	60 Oz	100 Oz	40 Oz	120 Oz	200 Oz
100 ppm	3½ Cups*	10½ Cups*	17½ Cups*	40 Oz	120 Oz	200 Oz	80 Oz	240 Oz	400 Oz

SHAKE BOTTLE BEFORE MEASURING

DRY MEASURE CHART

1 Cup* (Dry)

= 16 TBS
= 3.8 oz of Pro Gibb PLUS (fluffed)
= 108 grams of Pro Gibb PLUS (fluffed)
= 10.8 grams of Actual Gibberellic Acid (fluffed)

*Standard measuring cup of 8 ounces — NOT the small ¼ cup scoop as previously supplied with Pro Gibb PLUS

LIQUID MEASURE CHART

1 Gallon = 128 Fl Oz = 4 Quarts = 8 Pints = 16 Cups
1 Quart = 32 Fl Oz = 2 Pints = 4 Cups
1 Pint = 16 Fl Oz = 2 Cups
1 Cup = 8 Fl Oz = 16 TBS
1 TBS = ½ Fl Oz

(continued)

essential for maximum response. Use 56 grams as a single treatment, or 28 grams two or three times in separate applications with 30 to 45 day intervals. Application may be made to cane during the first and/or second year of culture. Young cane should be at least three months old to avoid possible tiller reduction. Application should not be made less than 4 months prior to harvest.

Application should be made when growth rate is depressed by temperature. Cane grown below 1,500 feet elevation will benefit from applications made during November through March.

Cane should be treated when there is sufficient soil moisture from rain or irrigation to sustain a high growth rate for at least 30 days following each treatment. Lack of water will negate treatment effect.

To delay harvesting, to produce a brighter colored, firmer fruit, and to increase size.

Guide: Apply spray when the fruit is light green to straw colored. Apply spray to thoroughly wet the entire tree. Use 10 to 20 ppm[z]; 400 to 600 gal./A on large mature trees.

CAUTION: Do not apply within one week of harvest

To counteract the effect of cherry yellow virus by increasing the development of lateral vegetative buds for subsequent production of leaves, spurs, and lateral shoots, thus increasing yield of infected orchards.

Guide: Apply an outside spray from 10 to 14 days after bloom (about the stage of shuck split). Be sure lower limbs are well covered. The addition of one pint of U.S.P. glycerin or a polysorbate wetting agent may enable reduction of the concentration to the lower recommended levels. Perennial treatment is necessary to maintain satisfactory fruit spur production and yields from each successive season's growth. Use 10

(z) Refers to actual Gibberellic Acid See Tables to convert to amount of formulated Pro Gibb needed

to 20 ppm[z]; 200 to 400 gal./A on large mature trees.

CAUTION: Do not spray within one month of harvest. Too high concentrations will increase leafy growth at the expense of fruit production the following year and excessive fruit production the year after that.

(California)

To accelerate maturity of artichokes and to shift the harvest to an earlier date.

Guide: Apply spray in the fall up to November 1. Be sure the entire plant (leaves, stems and buds) are covered to point of run-off. Use 25 ppm[z]; 35 to 50 gal./A.

CAUTION: Do not apply within seven days of harvest

(Washington, Oregon, Idaho)

For reduction in internal browning and watery pits of the Italian prune and to increase yields.

Guide: Apply spray three to four weeks prior to harvest. Be sure to wet each tree thoroughly. Use 50 ppm[z]; 200 to 300 gal./A.

CAUTION: Do not apply less than two weeks before harvest.

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

Guide: 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 25 to 50 ppm[z]; 25 to 50 gal./A.

CAUTION: Do not apply earlier than four weeks before harvest as gibberellic acid may induce bolting (seed stalk formation).

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

Celery plants must be harvested when mature to ensure quality.

(z) Refers to actual Gibberellic Acid See Tables to convert to amount of formulated Pro-Gibb needed

FORCING RHUBARB

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

Guide: Apply 2 fl oz (60 ml) of a 500 ppm[z] solution to each cleaned crown, when the rest period is not completely broken. When the rest period is broken by cold weather, apply 2 fl oz (60 ml) of a 250 ppm solution.

CAUTION: 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.

HOPS

For seeded and seedless Fuggle hops and similar varieties adapted to Oregon and the Northwest.

To increase yield and pickability.

Guide: Apply spray when vine growth is five to eight feet in length. Use 10 ppm[z]; 100 to 150 gal/A.

CAUTION: Do not apply within three weeks of harvest.

To obtain uniform bolting and increase seed production.

Guide: Apply the following spray schedule.

Growth Stage	ppm[z]	g.[z]/A	Gal./Acre
4 leaf stage	10	0.4	10
8 leaf stage	10	1.6	40
12 leaf stage	10	4	100

CAUTION: Do not feed crop wastes to livestock.

[z] Refers to actual Gibberellic Acid. See Tables to convert to amount of formulated Pro-Gibb needed.

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.

Guide: Dip freshly dug seed pieces in a solution containing 0.5 to 1 ppm[z] prior to planting.

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

OLYMPUS STRAWBERRIES
(N.W. US Only; propagation stock)

■ To increase runner production of mother plants of the Olympus cultivar:

Guide: 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 gal/acre to thoroughly wet new foliage to the point of runoff. Use 50 ppm[z] (18.9 grams[z]/acre).

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

[z] Refers to actual Gibberellic Acid. See Tables to convert to amount of formulated Pro-Gibb needed.

CONVERSION TABLE

PPM
Of Actual Gibberellic Acid
In Finished Spray

To

Grams
Of Actual Gibberellic
Acid Per Acre

Desired Actual Gibberellic Acid Concentration in Finished Spray	GRAMS GALLONS OF SPRAY PER ACRE						
PPM	**7-1/2**	**10**	**50**	**100**	**300**	**400**	**500**
1	03	.04	2	.4	1.2	1 6	1
2.5	.08	.1	.5	1	3	4	5
5	15	.2	1	2	6	8	10
10	3	4	2	4	12	16	20
15	45	6	3	6	18	24	30
20	.6	.8	4	8	24	32	40
25	75	1	5	10	30	40	50
40	1.2	1.6	8	16	48	64	80
50	1 5	2	10	20	60	80	100
100	3	4	20	40	120	160	200

1 Determine gallons and ppm concentration desired.
2 Trace each respective column to the point of intersection.
3 Number at point of intersection equals grams of actual gibberellic acid.

Three forms of Pro-Gibb brand Gibberellic Acid are now available to better serve the needs of individual growers.

Pro-Gibb PLUS 10% Soluble Powder

(Registered for use on Navel Oranges, Sugar Cane, Olympus Strawberries and all varieties of Grapes)

Active Ingredient:
Gibberellic Acid(z) . . . 10% W/W
EPA Reg. No.: 275-20-AA-50546

Pro-Gibb 3.91% Liquid Concentrate

Active Ingredient:
Gibberellic Acid(z) . . . 3.91% W/W
Equivalent to approximately 1.0 gram(z) of Gibberellic Acid per fluid ounce of product.
EPA Reg. No.: 275-15-AA-50546

Pro-Gibb 2% Liquid Concentrate

Active Ingredient:
Gibberellic Acid(z) . . . 2% W/W
Equivalent to approximately 0.5 gram(z) of Gibberellic Acid per fluid ounce of product.
EPA Reg. No.: 275-12-AA-50546

(z) Refers to actual Gibberellic Acid See Tables to convert to amount of formulated Pro-Gibb needed

WARNING: 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 Abbott agricultural specialist in your area for the spray schedule best suited to your conditions.

Discard any unused spray material at the end of each day. New solutions should be mixed only in a clean, empty spray unit. The best results, experience shows, should be made during [illegible]

Use only as directed. Good spray practices should be followed. 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 are indicated, use the concentration and spray volume recommended locally.

Gibberellic Acid is a naturally occurring compound, produced by Abbott Laboratories in a biological process.

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.

CAUTION! KEEP OUT OF REACH OF CHILDREN. If powder gets in eyes, flush thoroughly with water. Harmful if swallowed.

WARNING: FLAMMABLE (Liquid Formulations)

Keep away from heat or open flame. Keep container tightly closed when not in use. Use with adequate ventilation. Avoid breathing vapor.

AGRICULTURAL AND
VETERINARY PRODUCTS DIVISION
ABBOTT LABORATORIES
NORTH CHICAGO, ILLINOIS 60064

[illegible] (X) Rev. Feb 1976 Printed in U.S.A.

PRODUCT NUMBER 406

A Chipman Weed Control Product

CHIPMAN CHLORAX LIQUID

WEED AND GRASS KILLER

Result of Chlorax vegetation control [illegible] storage yard of creosoting plant

A liquid combination of sodium chlorate and sodium metaborate . . . for spray application after diluting with water.

Has three types of uses, depending on rate of application and desired results:

Ideal for killing deep rooted perennials . . . because of its high water solubility it reaches deep rooted areas

Effective as a contact spray for quick top kill of tall vegetation

Excellent for preventing vegetation growth under paving and blacktop

PACKAGE SIZES

55 gallon drums

30 gallon drums

5 gallon drums

SEE REVERSE SIDE FOR LABEL INFORMATION

ACCEPTED

[illegible] 4 [illegible] 63