

Pro-Gibb[®]

(Gibberellic Acid)
Spraying Guide

KEEP OUT OF REACH OF CHILDREN

CAUTION

Liquid Formulations

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

CAUTION: Harmful if swallowed. Avoid breathing vapors. Avoid contact with eyes.

SOLUBLE POWDER

CAUTION: Powder causes eye irritation. If powder gets in eyes, flush thoroughly with water.

ENVIRONMENTAL HAZARDS: Avoid direct applications to any body of water. Do not contaminate water by disposal of waste or cleaning of equipment.

DIRECTIONS FOR USE: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

STORAGE AND DISPOSAL

See container label.

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.

DIRECTIONS FOR USE

Discard any unused spray material at the end of each day. New solutions should be mixed only in a clean, empty spray tank. For best results, applications should be made during cooler parts of the day.

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 is indicated, use the concentration and spray volume recommended locally.

Gibberellic Acid is a naturally occurring compound produced by Abbott Laboratories in a living cell process.

Data concerning the compatibility of Pro-Gibb 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 bearing density or 30 to 60 gallons as a concentrate spray unless specified other wise. Do not exceed maximum rates. It is important to wet all berries thoroughly.

Thompson Seedless

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

* Guide: Apply 3 to 6.5 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.

* Guide: Apply 3 to 12 grams*/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*/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 temperature occurring during the interim between sprays. Potential effect will be reduced if the second spray occurs more than two weeks after the first application.

Flame Seedless

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

* Guide: 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.

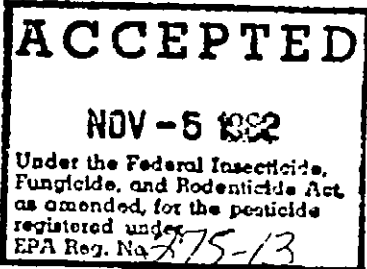
* Guide: Apply 8-48 grams*/A as one application when berry diameter reaches 6 to 8 millimeters, or as two applications of equal amounts with the first made when berry diameter reaches 6 to 8 millimeters, followed during the next 5 to 10 days by the second application. Timing of the second spray will be dictated by experience in the vineyard to be sprayed and rate of berry growth during the interim between sprays.

Other Seedless Varieties such as Petite, Seedless Tokay, Interlock Series and Related Hybrids

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

* Guide: 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 with the first made at or just after shatter, followed during the next two weeks by the second application.

* Refer to actual variety and See Tables to convert to amount of formulated Pro-Gibb needed.



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 right 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 rain quality and hastened maturity
Guide: Apply 0.75 to 6 grams*/A during bloom

Black Corinth (Zante Currant)
For improving berry size
Guide: Apply sprays containing 1 to 8 grams*/A 3 to 5 days after full bloom but before shatter begins

Emperor

For reducing berry shrivel. This use can also increase berry size.

- Guide: 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.

NAVEL ORANGES

(California)
To delay aging of the rind and reduce rind disorders (e.g. rind staining, water spotting, sticks or lumps 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 October or November before any color change. On large mature trees apply 10 to 40 grams*/A in 400 to 500 gal ions 4 dilute or 50 to 100 gallons A concentrate.

CAUTION: Do not apply to groves that may be harvested before March 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.

*Refers to actual Gibberellin A₂. See Tables to convert to amount of formulated Pro-Gibb needed.

LATE SPRAY (December-January - after marketable fruit is ready)
 Apply to groves where harvest may be before March if not known.
 Guide: Apply one spray in December or January just after marketable fruit is developed. On large mature trees apply 100 to 150 gal of 2% actual gibberellic acid solution per acre. On smaller trees apply 50 to 100 gal per acre. Apply in the morning.
CAUTION: Do not spray on trees with yellowed or spotted leaves. Do not spray on trees with yellowed or spotted leaves. Do not spray on trees between February 1 and August 1.

LEMONS
 (California)
 To increase the amount of early 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 (50 gal per acre) of 2% actual gibberellic acid solution.
 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.

TANGERINE HYBRIDS
 (Florida)
 To increase fruit set and yields on tangerine hybrid-orange groves (interfused with politana) in Florida such as the Orlando tango, Robinson and Miami tango.
 Guide: Apply spray during full bloom results to well developed fruit.
 Fruits are generally smaller. Use 5 to 10 ppm (50 to 100 gal per acre) of 2% actual gibberellic acid solution.
CAUTION: A slight increase in mature leaf drop occurs at concentrations above 20 ppm. Fruit size may be reduced and other development slightly retarded.

*Refer to actual Gibberellic Acid % Tables to determine amount of formulated Pro-Gib needed.

Dilution Table for Spraying

Desired Actual Gibberellic Acid Concentration (ppm) in Finished Spray	PRO-G-88 PLUS POWDER (1% Wet)			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-Gib Fluid to Add to 100 Gal	Amount of Pro-Gib Fluid to Add to 300 Gal	Amount of Pro-Gib Fluid to Add to 500 Gal	Amount of Pro-Gib Fluid to Add to 100 Gal	Amount of Pro-Gib Fluid to Add to 300 Gal	Amount of Pro-Gib Fluid to Add to 500 Gal
1 ppm	1.785	5.355	8.925	1.785	5.355	8.925	1.785	5.355	8.925
2 ppm	3.570	10.710	17.850	3.570	10.710	17.850	3.570	10.710	17.850
3 ppm	5.355	16.065	26.775	5.355	16.065	26.775	5.355	16.065	26.775
4 ppm	7.140	21.420	35.700	7.140	21.420	35.700	7.140	21.420	35.700
5 ppm	8.925	26.775	44.625	8.925	26.775	44.625	8.925	26.775	44.625
6 ppm	10.710	32.130	53.550	10.710	32.130	53.550	10.710	32.130	53.550
7 ppm	12.495	37.485	62.475	12.495	37.485	62.475	12.495	37.485	62.475
8 ppm	14.280	42.840	71.400	14.280	42.840	71.400	14.280	42.840	71.400
9 ppm	16.065	48.195	80.325	16.065	48.195	80.325	16.065	48.195	80.325
10 ppm	17.850	53.550	89.250	17.850	53.550	89.250	17.850	53.550	89.250
15 ppm	26.775	80.325	133.875	26.775	80.325	133.875	26.775	80.325	133.875
20 ppm	35.700	107.100	178.500	35.700	107.100	178.500	35.700	107.100	178.500
25 ppm	44.625	133.875	223.125	44.625	133.875	223.125	44.625	133.875	223.125
30 ppm	53.550	160.650	267.750	53.550	160.650	267.750	53.550	160.650	267.750
35 ppm	62.475	187.425	312.375	62.475	187.425	312.375	62.475	187.425	312.375
40 ppm	71.400	214.200	357.000	71.400	214.200	357.000	71.400	214.200	357.000
45 ppm	80.325	240.975	401.625	80.325	240.975	401.625	80.325	240.975	401.625
50 ppm	89.250	267.750	446.250	89.250	267.750	446.250	89.250	267.750	446.250

SHAKE BOTTLE BEFORE MEASURING

DRY MEASURE CHART

1 Cup (Dry)	= 16 Tbs
1 Tbsp	= 3 Tsp
1 Tsp	= 3/4 Tsp
1/2 Tsp	= 3/8 Tsp
1/4 Tsp	= 3/16 Tsp

LIQUID MEASURE CHART

1 Gallon	= 128 Fl Oz	= 4 Quarts	= 16 Cups	= 32 Pints
1 Quart	= 32 Fl Oz	= 2 Pints	= 4 Cups	= 8 Pints
1 Pint	= 16 Fl Oz	= 2 Cups	= 4 Pints	= 8 Pints
1 Cup	= 8 Fl Oz	= 1 Pint	= 2 Pints	= 4 Pints
1 Tbsp	= 3/4 Fl Oz	= 1/2 Cup	= 1/4 Pint	= 1/2 Pint

BLUEBERRIES

For improving fruit set. For set problems due to insufficient natural honeybee pollination on varieties such as Cox's Jersey, Stanley, Earlhart, 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 single-petal flowers.

Use Pro-Gibb 101 Liquid Concentrate. Mix 80 fluid ounces in 100 gallons of water. Use of a streamer nozzle is recommended. Apply to the point of rain; thoroughly wetting all parts of the plant. Do not spray on windward side and do not spray the fruit.

CAUTION: Do not exceed 400 gallons per acre. Apply to 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.

SUGAR CANE

(In Hawaii)

Use Pro-Gibb Plus 10 Soluble Powder

For increase in sucrose yield

Guide: Apply 25 to 50 grams* in 7 to 10 gallons of spray per acre by airplane. Uniform coverage is essential for maximum response. Use 50 grams as a minimum treatment or 25 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 1500 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.

SWEET CHERRIES

To delay harvest time to produce a brighter colored 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*, 400 to 600 gallons of large mature trees.

CAUTION: Do not apply within one week of harvest.

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

RED TART CHERRIES

(All states except California)

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 any suitable spray surfactant at the manufacturer's recommended rate may improve coverage and response. Terminal treatment is necessary to maintain satisfactory fruit start production and yields from annual successive seasons growth. Use 10 to 20 ppm* in 100 to 150 gallons. Avoid late mature trees.

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

YOUNG SOUR AND SWEET CHERRY TREES

(All states except California)

To reduce flowering and fruiting in young sour and sweet cherry trees to minimize the competitive effect of early fruiting on tree development.

Guide: Apply two to four weeks after bloom with no more than two sprays. Use 50 to 100 ppm*, 25 to 50 gallons. A 500-5000 density of 100 trees per acre is equivalent to about 1 qt. 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.

CAUTION: DO NOT SPRAY TREES IN THE FIRST YEAR. Treat in the second year or for reduction of flowering in the third season. Do not spray in the third season if reduction of flowering and fruiting is desired in the fourth season.

ARTICHOKES

(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 the point of runoff. Use 25 ppm*, 35 to 50 gallons. A.

CAUTION: Do not apply within seven days of harvest.

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

CELERY

To increase plant height and yield and overcome stress due to cold weather conditions, sea 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 100 ppm*, 25 to 50 gallons. A.

CAUTION: Do not apply earlier than four weeks before harvest as Gibberellic Acid may induce bolt in celery stalk formation.

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

Celery plants must be harvested when mature to ensure quality.

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 100 ppm* 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*, 100 to 150 gallons. A.

CAUTION: Do not apply within three weeks of harvest.

LETTUCE FOR SEED

To obtain uniform lettuce and increase seed production.

Guide: Apply the following spray schedule.

Growth Stage	ppm*	g / A	Gallons/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.

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* prior to planting.

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

OLYMPUS STRAWBERRIES

(In W US Only propagation stock)

To increase runner production of mother plants of the Olympus variety.

Guide: Apply a single spray to mother plants 10 to 15 days after planting. At the time of spraying plants should have 3 to 4 leaves. Apply 100 gal. of spray to thoroughly wet row foliage to the point of runoff. Use 10 ppm* (100 grams/Gallon) water.

CAUTION: Do not use on fruiting plants. Treatment may result in ineffective on plantings set out after mid May.

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

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 specific varieties of Grapes.

Active Ingredient: Gibberellic Acid 10% W/W

EPA Reg. No. 275-20

Pro-Gibb 3 91 Liquid Concentrate

Active Ingredient: Gibberellic Acid 3% W/W

Equivalent to 100 ppm when diluted 100 times

EPA Reg. No. 275-15

Pro-Gibb 2 Liquid Concentrate

Active Ingredient: Gibberellic Acid 2% W/W

Equivalent to 100 ppm when diluted 50 times

EPA Reg. No. 275-12

NOTICE TO USER

Supplier makes no warranty, express or implied, of merchantability, fitness or otherwise, concerning use of any product other than as indicated on the label. User assumes all risks of use, storage or handling in strict accordance with accompanying directions.

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

CONVERSION TABLE

Desired Actual Gibberellic Acid Concentration in Formulated Spray	PPM		GRAMS						
	Actual Gibberellic Acid in Formulated Spray	To	GALLONS OF SPRAY PER ACRE						
1	0.5	10	0.4	1	2	4	8	16	32
2.5	0.8	10	1	5	7	10	15	20	30
5	1.5	10	2	1	2	4	8	16	32
10	3	10	4	2	4	8	16	32	64
15	4.5	10	6	3	6	12	24	48	96
20	6	10	8	4	8	16	32	64	128
25	7.5	10	10	5	10	20	40	80	160
40	12	10	16	8	16	32	64	128	256
50	15	10	20	10	20	40	80	160	320
100	30	10	40	20	40	80	160	320	640

1. Data in table is for 100 ppm actual Gibberellic Acid in formulated spray.
2. Actual Gibberellic Acid concentration in formulated spray.
3. Number of gallons of formulated spray per acre of actual Gibberellic Acid.

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