73049-1 07/08/2009 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 1/56

Ms. Maria Herrerro
Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048

JUL 08 2009

Subject: Valent BioSciences Corporation; ProGibb 40%
EPA Registration No. 73049-1
Amendment to Add Crops and Pasture
D#408757, Application Dated 4/15/9

Dear Ms. Herrero:

The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(A), 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 two (2) 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.

If you have any questions contact Chris Pfeifer at 703-308-0031 or by email at: pfeifer.chris@epa.gov. A stamped copy of the label is enclosed for your records.

Sincerely,

Linda A. Hollis, Chief
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)

Enclosure

CONCURRENCES								
SYMBOL ▶	7511P							
SURNAME ▶	PFEIFER							
DATE ▶	7/8/9							

EPA Form 1320-1A (1/90) *Printed on Recycled Paper* **OFFICIAL FILE COPY**

* U.S. Government Printing Office: 2005 206-899 (mac)

MASTER LABEL

Primary Product name: ProGibb 40% Plant Growth Regulator, Water Soluble Granule.

Sublabel I: ProGibb 40%, Plant Growth Regulator, Water Soluble Granule;
For agricultural use on grapes, citrus, blueberry, banana/plantain, pineapple, sour and sweet cherries, pecan, celery, lettuce for seed, artichoke, carrot, cucumber, pepper, rhubarb, spinach, mustard greens, collard greens, turnip, strawberry, watercress and the stonefruit group. Also rice, hops, dry bean, wheat and cotton.

Sublabel II: RyzUp Smartgrass, Plant Growth Regulator;
For agricultural use on Pastures and commercial use on Sod and Turf.

For Organic Production

Active Ingredient	
Gibberellin A_3	40.0% w/w
Other Ingredients	60.0% w/w
Total	100.0% w/w

Contains a total of 128 g of Gibberellic Acid in 320 g of product.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Registration No. 73049-1
EPA Establishment No.

Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, IL 60048

Net Contents: 2.5g satchets, 80 or 320 g bottles
This container will treat __acre at the maximum use rate, as directed for use on _____.

ACCEPTED
JUL 0 8 2009

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 73049 - 1

SUB-LABEL I

ProGibb® 40% Plant Growth Regulator

Water Soluble Granule

For agricultural use on grapes, citrus, blueberry, banana/plantain, pineapple, sour and sweet cherries, pecan, celery, lettuce for seed, artichoke, carrot, cucumber, pepper, rhubarb, spinach, mustard greens, collard greens, turnip, strawberry, watercress and the stonefruit group. Also rice, hops, dry bean, wheat and cotton.

PROGIBB® 40%
Plant Growth Regulator
Water Soluble Granule

For Organic Production

Active Ingredient
Gibberellin A_3 ..... 40.0% w/w
Other Ingredients ..... 60.0% w/w
Total ..... 100.0% w/w

Contains a total of 128 g of Gibberellic Acid in 320 g of product.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See inside booklet for Precautionary Statements.

EPA Registration No. 73049-1
EPA Establishment No.

Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, IL 60048
1-847-968-4700

Net Contents: 2.5g, 80 g and 320 g
This container will treat __acre at the maximum use rate, as directed for use on _____.

FIRST AID	
If in eyes	• 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 on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call toll-free 1-800-892-0099 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-6-Valent.	

PROGIBB® 40%
Plant Growth Regulator
Water Soluble Granule

For Organic Production

Active Ingredient	
Gibberellin A_3	40.0% w/w
Other Ingredients	60.0% w/w
Total	100.0% w/w

Contains a total of 128 g of Gibberellic Acid in 320 g of product.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See inside booklet for Precautionary Statements.

EPA Registration No. 73049-1
EPA Establishment No.

Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, IL 60048
1-847-968-4700

Net Contents: 2.5 g

Please see Box or Pamphlet for Precautionany Statements and Directions For Use

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

Caution: Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.

Follow the 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.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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
For terrestrial uses: 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 or disposing of equipment washwaters or rinsate.
Do not use treated seed for food, feed, or oil purposes. Exposed treated seed may be hazardous to birds and other wildlife. Treat only those seeds needed for immediate use and planting. Do not store excess treated seed beyond planting time. Dispose of all excess treated seed and seed packaging by burial away from bodies of water.

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 State or Tribe 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 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 4 hours *unless wearing appropriate PPE.*

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.
- Waterproof gloves.
- Shoes plus socks.

GENERAL DIRECTIONS FOR USE

Use only as directed. Read the label thoroughly and make sure it is understood before making applications. Keep out of reach of children.

Application Instructions:

• ProGibb 40% water soluble granule contains gibberellic acid which is an extremely potent plant growth regulator; when applying plant growth regulators, deviations from the label directions in the rates, timings, water volumes, or the adoption of untested spray mixes, results in undesirable effects. Always consult the local Valent representative in your area for the spray regimen best suited to your conditions.

• Do not apply to plants under pest, nutritional, or water stress.

• When a range of rates is indicated, use the concentration and spray volume indicated by the local Valent representative.

• For optimum effectiveness, thorough spray coverage of the target area must be achieved. Prepare solution concentrations by mixing the required amount of product with water in a clean, empty spray tank. Discard any unused spray material at the end of each day following local, state or federal law.

• For most efficacious results, the water pH is best at 7.0, and always below 8.5.

• Applications made under slow drying conditions (cool to warm temperatures, medium to high relative humidity, and no wind) will increase absorption of the active ingredient by the plant, thus optimizing effectiveness. Night-time applications are encouraged when day-time conditions are not conducive to slow drying conditions.

• Product persistence: Re-apply if significant rain occurs within 2 hours of application.

• Compatibility: When considering tank mixing with other products, use the following compatibility jar test before mixing a whole tank.

Start with a clear glass or plastic quart jar. Add water from the same water source that will be used for the larger tank mix. Add the pesticides in correct proportions. Mix thoroughly and let stand for a minimum 15 minutes. Heat, separation, gelling, are all signs of incompatibility. Before using any mixes that pass the jar tests for compatibility, it is imperative to test the mixture on a designated area as it may result either in phytotoxicity or ineffectiveness. For further information, consult your local Valent representative.

• For aerial applications spray volumes must be greater than 2 gallons per acre (10 gallons per acre for tree crops).

• No preharvest interval is required for this product.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage

Keep containers tightly closed when not in use.

Pesticide Disposal

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

Container Disposal: (80 or 320 g bottles)

Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill container ¼ full with water and recap. Shake 10 seconds. Pour rinsate into application equipment or 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 dispose of in a sanitary landfill, or incineration, if allowed by state and local authorities by burning. If burned, stay out of smoke.

(2.5 g sachets)

Nonrefillable container. Do not reuse or refill this container. Offer for reconditioning if appropriate or dispose of in a sanitary landfill, or incineration, if allowed by state and local authorities by burning. If burned, stay out of smoke.

SPRAY GUIDELINES FOR GRAPE

For all grapes, application by ground sprayer gives the most efficacious coverage. Apply as a concentrate or dilute spray in sufficient water volume to ensure complete coverage of all flower clusters or berries. For cultivar specific spray rates and timings, see accompanying tables.

SEEDLESS TABLE GRAPE

CLUSTER STRETCH SPRAYS – SEEDLESS TABLE GRAPE			
OBJECTIVE/BENEFIT	**APPLICATION TIMING**		
For cluster elongation and looser cluster forms. 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.	Make one to three applications before bloom when flower clusters are 2 to 7 inches long.		
CROP/ CULTIVAR	**GRAMS A.I./Acre**	Grams Product/Acre	Ounces Product/Acre
Perlette Seedless	**8 - 24**	20 - 60	0.7 – 2.2 oz
Flame Seedless	**8 - 24**	20 - 60	0.7 – 2.2 oz
Thompson Seedless	**8 - 24**	20 - 60	0.7 – 2.2 oz
Raisin	**8 - 24**	20 - 60	0.7 – 2.2 oz
Other Seedless Grapes	No indications are available at this time.		

BERRY THINNING SPRAYS - SEEDLESS TABLE GRAPE			
OBJECTIVE/BENEFIT	**APPLICATION TIMING**		
For decreased berry set, reduced hand-thinning costs, and hastened maturity.	Make one to four applications during bloom. Make only 1-2 applications for "Other Seedless Grapes." When the bloom period is extended, subsequent sprays are to be made 1 to 7 days after the first application.		
CROP/ CULTIVAR	**GRAMS A.I./Acre**	Grams Product/Acre	Ounces Product/Acre
Flame Seedless	**3 - 16**	7.5 – 40	0.3 - 1.4 oz
Thompson Seedless	**8 -20**	20 – 50	0.7 – 1.8 oz
Raisin	**3 - 12**	7.5 – 30	0.3 - 1.1 oz
Other Seedless Grapes	**0.5 - 12**	1.3 – 30	0.1 - 1.1 oz
NOTE: At the high end of the prescribed range of rates and number of applications, expect significantly more thinning in young vines or vines with high vigor. For "Other Seedless Grapes" use caution as some of the new cultivars are very responsive and over-thin easily. Consult the Valent representative or local specialist before thinning cultivars with which there is no familiarity.			

BUMP SPRAY – SEEDLESS TABLE GRAPE			
OBJECTIVE/BENEFIT	**APPLICATION TIMING**		
To help initiate the beginning of the berry growth period.	Make one application during the period between the last thinning spray and the first sizing spray.		
CROP/ CULTIVAR	**GRAMS A.I./Acre**	Grams Product/Acre	Ounces Product/Acre
Thompson Seedless	**16 - 24**	40 - 60	1.4 – 2.2 oz

BERRY SIZING SPRAYS - SEEDLESS TABLE GRAPE				
OBJECTIVE/BENEFIT		**APPLICATION TIMING**		
For larger berries and larger clusters when used in conjunction with established girdling and thinning practices.		Make one to four applications beginning when the average berry size reaches "target" diameter (See below). Timing of the subsequent sprays will be dictated by experience in the vineyard and temperatures occurring between sprays. Sprays made after 15-20 days from the first sizing spray are less effective.		
CROP/ CULTIVAR	**TARGET BERRY DIAMETER***	**GRAMS A.I./Acre**	Grams Product/Acre	Ounces Product/Acre
Perlette Seedless	4-5 mm	**32 - 128**	80 – 320	2.9 – 11.5 oz
Flame Seedless	6-9 mm	**20 - 128**	50 – 320	1.8 – 11.5 oz
Thompson Seedless	3-5 mm	**32 - 128**	80 – 320	2.8 – 11.5 oz
Raisin	3-5 mm	**4 - 20**	10 - 50	0.4 – 1.8 oz
Other Seedless Grapes	3-14 mm	**8 - 60**	20 - 150	0.7 – 5.4 oz
*Target average berry diameter for the first application.				
NOTE: In some growing regions and for some cultivars, the higher amounts of gibberellic acid indicated will reduce fruitfulness (cluster counts) the following year. At the high end of the prescribed range of rates and number of applications, a delay in berry skin color development, sugar accumulation and overall maturation has been observed. Consult the Valent representative or local specialist before sizing cultivars with which there is no familiarity.				

BERRY SIZING CLUSTER DIP - SEEDLESS TABLE GRAPE			
OBJECTIVE/BENEFIT	**APPLICATION TIMING**		
To increase berry size.	Apply 20 - 50 ppm GA3 solution as a dip or direct spray to the cluster when berries reach 12-15 mm.		
CROP/ CULTIVAR	**Rate Per 5 Gallons Treatment Solution**		
	PPM AI	Grams Product	Ounces Product
Seedless Grapes	20 - 50	1 – 2.5	0.1 – 0.25
Note: To prepare dip solution, add 1 – 2.5 gram ProGibb 40% for every 5 gallons of solution needed. Consult the Valent representative or local specialist before sizing cultivars with which there is no familiarity.			

BERRY SIZING SPRAYS – SEEDED TABLE GRAPE				
OBJECTIVE/BENEFIT		**APPLICATION TIMING**		
To increase berry size in listed cultivars; and also to reduce berry shrivel in Emperor.		Make one application during the indicted berry diameter range to the entire vine.		
CROP/ CULTIVAR	**BERRY DIAMETER (mm)***	**Rate**		
		GRAMS A.I./Acre	Grams Product / Acre	Ounces Product / Acre
Emperor	12-16	**20**	50	1.8
Red Globe	12-18			
Calmeria	12-16			
Christmas Rose	12-16			
Rogue	12-16			
Queens	12-15			
*Predominant average berry diameter for this application.				
NOTE: Whole vine applications have been known to reduce fruitfulness (cluster counts) the following year. Consult the Valent representative or local specialist before sizing cultivars with which there is no familiarity.				

BERRY SIZING CLUSTER DIPS – SEEDED TABLE GRAPE				
OBJECTIVE/BENEFIT		**APPLICATION TIMING**		
To increase berry size in listed cultivars; and also to reduce berry shrivel in Emperor.		Make one 20 - 50 ppm application during the indicted berry diameter range. Make the application as a direct spray or dip to the cluster.		
CROP/ CULTIVAR	**BERRY DIAMETER (mm)***	**Rate Per 5 Gallons Treatment Solution**		
		PPM AI	Grams Product	Ounces Product
Emperor	12 - 16	**20 - 50**	1 – 2.5	0.1 – 0.25
Red Globe	12 - 18			
Calmeria	12 - 16			
Christmas Rose	12 - 16			
Rogue	12 - 16			
Queens	12 - 15			
Other Seeded Grapes	2-3 weeks after bloom or when shatter is completed			
*Predominant average berry diameter for this application.				
NOTE: To prepare a 50 ppm GA3 solution, add 1 gram A.I. for every 5 gallons of dip solution needed. Consult the Valent representative or local specialist before sizing cultivars with which there is no familiarity.				

BERRY SIZING SPRAYS – BLACK CORINTH			
OBJECTIVE/BENEFIT	**APPLICATION TIMING**		
To increase berry size.	Make one application 3-5 days after full bloom, but before shatter begins.		
CROP/ CULTIVAR	**GRAMS A.I./Acre**	Grams Product / Acre	Ounces Product / Acre
Black Corinth (Zante Currant)	1 - 12	2.5 - 30	0.1 - 1.1

SPRAY GUIDELINES FOR CITRUS

For citrus, apply in sprays of sufficient water volume to ensure thorough fruit wetting. In most cases, this application will cause some drop of oldest (most mature) leaves; this drop of older leaves is inconsequential. However, application to trees of low vigor or under stress (pest, nutritional, or water, etc) causes severe leaf and/or fruit drop. Do not apply in white wash sprays in which lime or other caustic material has produced a high pH in the spray tank. Applications of copper fungicides and/or oils within three weeks (before or after) the ProGibb 40% application often results in significant leaf drop and fruit drop.

CITRUS: FIELD APPLICATIONS

CITRUS – INCREASE FRUIT SET			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE / ACRE**	**APPLICATION TIMING**
Navel and Ambersweet Orange	To enhance fruit set and yield.	**15 – 25 GRAMS A.I** 37.5 – 62.5 grams product 1.4 – 2.3 ounces product	Make a single dilute spray between mid December and late January using sufficient spray volume for adequate coverage of tree canopy
NOTE: Many blocks of Ambersweet and Navel orange in Florida tend to flower very heavily, yet set poor crops. In these blocks, it appears that tree resources are wasted by heavy flowering, compromising the trees' ability to set fruit, support early fruit growth, and carry fruit to harvest. Productivity of heavily blooming blocks is often increased by reducing flower formation.			
Clementine Mandarin	To increase fruit set and yield	**1 – 40 GRAMS A.I** 2.5 – 150 grams product 0.9 – 3.6 ounces product	Make one to two applications from early bloom up to 4 weeks after petal fall. Use a dilute spray with sufficient spray volume for adequate coverage of tree canopy. Typically 1 – 8 grams a.i. is diluted per 100 gallons spray solution. Allow a minimum of three days between sprays.

Tangerines and Mandarin Hybrids (Orlando, Robinson, Minneola, Sunburst, and others) (Not for use in California)	To increase fruit set and yield.	**8 - 30 GRAMS A.I** 20 – 75 grams product 0.7 – 2.7 ounces product	Make one to two applications during the bloom period. Apply as a dilute spray.
Grapefruit (Not for use in California)	To enhance fruit set, size and yield	**8 - 30 GRAMS A.I** 20 – 75 grams product 0.7 – 2.7 ounces product	Make a single application in December - January. Apply in 125-175 gallons of water per acre.
NOTE: The rate and number of applications depends upon amount of desired fruit set. Generally, more fruit will be set by 2 applications, earlier applications, higher rates, and climactic conditions more favorable to set. Differential responses to the PGR across citrus cultivars also interact with the above factors to affect the degree of fruit set achieved. Reductions in final fruit size are known to occur as a result of excessive fruit set. Increases in mature leaf drop occur in trees under stress.			

CITRUS – REDUCE FRUIT DROP			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE / ACRE**	**APPLICATION TIMING**
Star Ruby Grapefruit (Not for use in California)	To reduce early-season small fruit drop of Star Ruby Variety thereby increasing yields.	**25 – 35 GRAMS A.I** 62.5 – 87.5 grams product 2.3 – 3.2 ounces product	Make a single dilute application during the bloom period.
NOTE: Results vary from season to season depending on environmental conditions. Maintain a well-balanced fertilization and watering program.			

CITRUS – DELAY RIND AGING			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE / ACRE**	**APPLICATION TIMING**
Navel and other orange cultivars (except Valencia)	To delay rind aging, reduce physiological disorders (e.g., rind staining, water spotting, sticky or tacky surface, oleocellosis), and produce a more orderly harvesting . pattern	**16 - 48 GRAMS A.I** 40 – 120 grams product 1.4 – 4.3 ounces product	Make one or two applications as a concentrate or dilute spray. Early application: spray approximately 2 weeks prior to color break (typically AUG. – NOV.). This timing causes the greatest delay in rind aging and produces the firmest rind possible. AND/OR Late application: one application after marketable color (typically OCT. – DEC.). This late spray has been known to cause re-greening.
Valencia Orange	To reduce rind creasing and to delay rind aging and softening	**40 - 80 GRAMS A.I** 100 – 300 grams product 3.6 – 7.2 ounces product	Make a single application as a concentrate or dilute spray in August to October to target crop of young fruit.
NOTE: • Do not apply the early spray to groves that will be harvested early, as fruit coloring will be delayed. Do not apply from January through July, as production is often reduced the following year. • Slower color development is to be expected in the target crop. Increased re-greening of mature fruit has been known to occur. After marketable color is achieved, treatment effects are reduced the longer treated fruit remain on the tree.			

Tangerine Hybrids (Orlando, Robinson, Minneola, Sunburst, and others)	To delay disorders associated with rind aging, puffiness, and softening, and to increase peel strength, of tangerine hybrids	**20 - 40 GRAMS A.I** 50 – 100 grams product 1.8 – 3.6 ounces product	Make one spray application two weeks prior to color break. Apply as a dilute spray.
NOTE: Do not apply if early harvest is planned. Do not apply after coloring as pre-harvest rind staining and re-greening has been known to occur. Application during coloring sometimes causes variation in rind color development.			
Grapefruit (Not for use in California)	To delay disorders associated with rind aging (e.g., puffiness, softening, and orange coloration), prevent preharvest drop of mature fruit, increase peel strength, reduce water loss during storage, and produce a more orderly harvesting pattern.	**16 - 48 GRAMS A.I** 40 – 120 grams product 1.4 – 4.3 ounces product	Make one or two dilute spray applications in sufficient volume to ensure coverage. Do not exceed 20 ppm a.i. (8 grams a.i. /100 gallons) in spray solution. EARLY: Make application two weeks prior to color break. Apply as a dilute spray (AUG. – SEPT). AND/OR LATE: Make application after marketable color has developed (OCT – DEC).
NOTE: Do not spray groves that will be harvested early, as fruit coloring will be delayed. Treated fruit will re-green if allowed to remain on the tree for extended periods. Do not use concentrate sprays. Results vary from season to season depending on environmental conditions. For maximum effect on rind firmest and delay in rind aging, make applications before color change.			

Lemon/ Lime	To decrease rind aging, yellowing, and the amount of small ripe fruit, and to produce a more desirable production pattern relative to market demand.	**10 - 32 GRAMS A.I** 25 – 80 grams product 0.9 – 2.9 ounces product	Make a single application when target crop is 1/2 to full size, but still green.
NOTE: When applied two years in a row, an even larger difference in harvest pattern and maturity have been known to occur.			

CITRUS – INCREASE JUICE YIELD			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE / ACRE**	**APPLICATION TIMING**
Processing oranges	To increase juice extraction yield in late-harvested processing oranges.	**20 GRAMS A.I** 50 grams product 1.8 ounces product	Make a single application at fruit color break in sufficient volume to ensure complete coverage of the fruits.

CITRUS: POST-HARVEST APPLICATIONS

CITRUS – DELAY SENESCENCE			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE**	**APPLICATION METHOD**
Lemon	To delay fruit senescence and prolong storage life. The delay in senescence has been shown to reduce the incidence of infection by sour rot (Geotrichum candidum).	**50-1000 PPM**	Dilute 2 to 40 grams a.i. per 10 gallons of final post-harvest application solution. Apply post-harvest application solution to the entire fruit as a spray or drench.
Yellow lemons and other mature citrus fruit	To delay aspects of rind senescence and color changes	**50-1000 PPM**	Dilute 2 to 40 grams a.i. per 10 gallons of final post-harvest application solution. Apply post-harvest application solution to the entire fruit as a spray or drench.

SPRAY GUIDELINES FOR TEMPERATE FRUIT CROPS

For temperate fruit crops, apply in sprays of sufficient water volumes to ensure thorough fruit wetting. Application to plants or trees of low vigor or under stress (pest, nutritional, or water, etc) causes severe leaf and/or fruit drop. Applications of copper fungicides and/or oils within three weeks (before or after) the ProGibb 40% application often results in significant leaf drop and fruit drop.

TEMPERATE FRUIT CROPS: FIELD APPLICATIONS

TEMPERATE FRUIT CROPS – FRUITSET			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Highbush Blueberry : Coville, Jersey, Stanley, Earliblue, Weymouth, Walcott, Berkeley, Blueray, Bluecrop, 1316A, Concord, and others (Not for use in California)	To improve fruit set.	**40 – 80 GRAMS A.I** 100 – 200 grams product 3.6 – 7.2 ounces product	Make a single application of 80 grams a.i. per acre in 40 to 100 gallons of water. The application should be made at full bloom (when 75% of the flowers are fully open). OR Make two applications of 40 grams a.i. per acre in 40 to 100 gallons of water. Make the first application at full bloom, and the second application within 10-14 days of the first spray. For Weymouth, application can be delayed up to two weeks after bloom to increase size of "shot" berries.

Rabbiteye Blueberry: Aliceblue, Beckyblue, Bonita, Brightwell, Climax, Delite, Tiftblue, Woodward and others. (Not for use in California)	To improve fruit set.	**40 – 80 GRAMS A.I** 100 – 200 grams product 3.6 – 7.2 ounces product	Make a single application of 40 to 80 grams a.i. in 40 -to-100 gallons of water per acre when most of the flowers are elongated but not yet open (Bloom Stage 5). OR Make two to four applications 10-to-14 days apart starting at bloom Stage 5. Spray 20 to 40 grams in 40 to 100 gallons of water per acre per application.
Melon (Not for use in California)	To stimulate fruit set during periods of cool temperatures	**1 - 4 GRAMS A.I** 2.5 – 10 grams product 0.1 – 0.4 ounces product	Make application just prior to bloom. For cantaloupes and watermelons two additional applications should be made at intervals of 10-to-14 days.
NOTE: • For maximum benefits, vines must be in good condition, except for reduced rate of growth due to cool temperatures.			

TEMPERATE FRUIT CROPS – SPUR FORMATION			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Sour Cherry (Not for use in California)	To maintain and extend high fruiting capacity of sour cherry trees by promoting spur formation and reducing the occurrence of "blind" nodes. Spur formation 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.	**4 - 18 GRAMS A.I** 10 – 45 grams product 0.4 – 1.6 ounces product	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 – 18 grams a.i. per acre, depending on tree age and vigor (See Table below). Apply as a dilute spray in sufficient water to ensure thorough wetting, or as a concentrate spray ensuring uniform coverage.

NOTE:

- Applications must be applied annually to ensure spur development and subsequent yield improvement year after year.
- 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. Lowest rates should also be used 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 will be obtained when combined with good cultural practices.

TREE AGE (YEARS)	GRAMS A.I./ACRE	GRAMS PRODUCT/ ACRE	OUNCES PRODUCT/ ACRE
6-10	**4 - 6**	10 – 15	0.4 – 0.5
11-15	**8 - 10**	20 – 25	0.7 – 0.9
16-20	**10 - 14**	25 – 35	0.9 – 1.3
20 + years	**14 - 18**	35 – 45	1.3 – 1.6

APPLICATION RATES FOR SOUR CHERRY TREES BY AGE

TEMPERATE FRUIT CROPS – FRUIT QUALITY			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Sweet Cherry	To produce larger, brighter colored, firmer fruit.	**16 – 48 GRAMS A.I** 40 – 120 grams product 1.4 – 4.3 ounces product	Apply a single spray when the fruit is translucent green to straw colored. Use sufficient water volume to ensure thorough wetting.
Sweet Cherry in cultivars with uneven maturity (Not for use in California)	To produce larger, brighter colored, firmer fruit	**16 – 48 GRAMS A.I** 40 – 120 grams product 1.4 – 4.3 ounces product	Make 2 applications. Apply 1/3 to 1/2 of the total desired amount when the majority of the fruit is translucent green, Apply the remaining material 3-7 days later, when the majority of the fruit is straw colored.
NOTE: • Color development and harvest date is often slightly delayed. • Use higher rates with heavier crop loads.			
Stone Fruit Group	To increase fruit firmness and improve fruit quality in the season of application	**16 - 32 GRAMS A.I** 40 – 80 grams product 1.4 – 2.9 ounces product	Apply as a single spray one to 4 weeks prior to the beginning of the harvest period. Use sufficient water to achieve complete coverage of fruits and foliage.
NOTE: • This application has been known to cause reduction in flower counts the year following the application, particularly if it is made during the months of May through July.			

Stone Fruit: Italian Prune (Not for use in California)	To reduce internal browning, improve quality, and increase size.	**16 - 48 GRAMS A.I** 40 – 120 grams product 1.4 – 4.3 ounces product	Make a single application four to five weeks before expected harvest. Apply in sufficient water volume to ensure thorough wetting.
NOTE: • Color development and harvest may be slightly delayed. May reduce bloom the following season.			

TEMPERATE FRUIT CROPS – NON BEARING USES			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Pecan	To extend leaf retention and enhanced the canopy during late season in pecan; maintaining green foliage later in the season will improve return bloom and fruit set in next season's crop.	**10 GRAMS A.I** 25 g rams product	Make four applications at two week intervals beginning in late August and continuing until mid-October. Apply in 50-100 gals. total volume per acre.

TEMPERATE FRUIT CROPS – NON BEARING USES			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Non Bearing Stone Fruit (Not for use in California)	To reduce flowering and fruiting in young stone fruit trees in order to minimize the competitive effect of early fruiting on tree development.	**20 – 80 GRAMS A.I** 50 – 200 grams product 1.8 – 7.2 ounces product	Make a single application during the period of flower bud initiation for the following year. Use sufficient water to achieve good coverage of the canopy.
Non Bearing Blueberry (Not for use in California)	To reduce flowering and fruiting in young blueberry plants in order to minimize the competitive effect of early fruiting on plant development.	**20 – 80 GRAMS A.I** 50 – 200 grams product 1.8 – 7.2 ounces product	Make one to four applications during the period of flower bud initiation for the following year. Use sufficient water to achieve good coverage of the canopy.
NOTE: Do not spray plants/trees in their first year. Treat in the second season for reduction of flowering in the third season, and again in the third season if flower reduction and fruiting is desired in the fourth season. Treat only plants/trees that are in good physiological condition. Discontinue treatment the year before desired harvest. Consult with the Valent representative or local horticulturist for timings and rates for specific cultivars in your area.			
Strawberry (Not for use in California)	To increase runner production of mother plants.	**15 - 25 GRAMS A.I** 37.5 – 62.5 grams product 1.4 – 2.3 ounces product	Make a single application to mother plants 10 – 30 days after planting. Plants should have 1-6 leaves at spraying. Apply 100 gallons spray/acre to point of run-off.
NOTE: Not for use on fruiting plants. Treatments have not always been effective on plantings set out after mid-May. Response varies with cultivar and location. Consult your Valent representative or local horticulturist for specific recommendations.			

SPRAY GUIDELINES FOR TROPICAL FRUIT CROPS

TROPICAL FRUIT CROPS – FIELD USES			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE / ACRE**	**APPLICATION TIMING**
Pineapple	To improve fruit size.	**125-250 GRAMS A.I.** 312.5 – 625 grams product 11.3 – 22.5 ounces product	Apply after flowering. Make 2 applications at 3-5 weeks intervals. Direct sprays to the fruit. Use sufficient water to achieve adequate coverage.

TROPICAL FRUIT CROPS – POST-HARVEST USES			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE**	**APPLICATION TIMING**
Banana / Plantains	Extend fruit green life	750 to 1500 ppm	Spray or brush treatment solution directly to the crown after washing the fruit and before packing.

SPRAY GUIDELINES FOR VEGETABLE CROPS

For vegetable crops, apply in sprays of sufficient water volumes to ensure thorough fruit wetting. Foliage of treated plants occasionally and temporarily appears lighter green in color due to accelerated growth rates following application. Application to plants of low vigor or under stress (pest, nutritional, or water, etc) causes severe leaf yellowing, poor performance and/ or undesirable effects. Tank-mixing with surfactants, fertilizers, and/or other pesticides should not be done unless compatibility and phytotoxicity testing is done first using appropriate methods.

VEGETABLE CROPS			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Artichoke	To accelerate maturity and shift harvest to an earlier date	**10 -20 GRAMS A.I** 25 – 50 grams product 0.9 – 1.8 ounces product	For perennials: apply one to three applications at bud initiation stage. For annuals: apply one to four applications at 2-week intervals, beginning at the fourth true leaf. Use sufficient water volume to ensure thorough wetting of the entire plant (leaves, stems and buds).
Carrots Fresh and Processing	To delay leaf senescence. Maintaining vigorous foliage has been shown to help reduce the incidence of infection by Alternaria dauci.	**1 - 6 GRAMS A.I** 2.5 – 15 grams product 0.1 – 0.5 ounces product	Make the first application 4 –6 weeks after emergence using commercial ground or aerial equipment with spray concentrations of 20-30 ppm. In severe disease situations or cool weather a second spray 14 days later is sometimes required to achieve the desired amount of foliar recovery. Do not apply more than twice per crop.
NOTE: • Dilutions of greater concentration can increase the risk of excessive top growth, particularly with a second application.			

Celery	To increase plant height and yield and to overcome stress due to cold weather conditions or saline soils, and obtain earlier maturity.	**2.5 - 10 GRAMS A.I** 6.3 – 25 grams product 0.2 – 0.9 ounces product	Make a single application one to four weeks prior to harvest. Use 25-to-50 gallons of water per acre by ground application or 5-to-10 gallons of water per acre for aerial application (except in California). Use lower concentrations if applying 3-to-4 weeks before harvest and higher concentrations within 1-to-2 weeks before harvest.
NOTE: Do not apply by air in California. Do not apply earlier than 4 weeks before harvest as bolting has been known to occur.			
Cucumber (Not for use in California)	To stimulate fruit set during periods of cool temperatures.	**1 - 4 GRAMS A.I** 2.5 – 10 grams product 0.1 – 0.4 ounces product	Make one application prior to bloom followed by two additional applications at intervals of 10-to-14 days. It is acceptable to use up to four applications. Use sufficient water volume for thorough coverage of exposed foliage.
NOTE: For maximum benefits, vines must be in good condition, except for reduced rate of growth due to cool temperatures.			
Lettuce for Seed	To obtain uniform bolting and increase seed production	**1 - 4 GRAMS A.I** 2.5 – 10 grams product 0.1 – 0.4 ounces product	Apply one to four applications at two-week intervals, beginning at the fourth true leaf. Use sufficient water volume to ensure thorough wetting.
Pepper (Not for use in California)	To increase fruit set and promote early season fruit growth	**1 - 3 GRAMS A.I** 2.5 – 7.5 grams product 0.1 – 0.27 ounces product	Apply one to two sprays of 25 to 50 gallons per acre at weekly intervals during the flowering period.
NOTE: This use is best for areas with short growing seasons, or when low temperatures slow plant growth. The high rate is most efficacious for areas and/or varieties with pollination and/or fruit set problems.			

Pepper (Not for use in California)	To increase fruit size and yield	**1 - 3 GRAMS A.I** 2.5 – 7.5 grams product 0.1 – 0.27 ounces product	Apply in 25-to-50 gallons of water per acre at the beginning of the picking period.
NOTE: The high rate is best for plants with heavy fruit loads.			
Rhubarb	To break dormancy on plants receiving insufficient chilling and to increase market-able yield of forced rhubarb.	**10 - 20 GRAMS A.I** 25 – 50 grams product 0.9 – 1.8 ounces product	1) When the rest period is not completely broken, make a single application of 2 fluid ounces (60 ml) of a solution containing 20 grams a.i. in 10 gallons of water to each cleaned crown. 2) When the rest period is broken by cold weather, apply 2 fluid ounces (60 ml) of a solution containing 10 grams a.i. in 10 gallons of water to each cleaned crown.
NOTE: • Keep forcing house temperatures at 40 – 50F for 24 hours after application. If house is warmer than 50F, cover crowns with plastic. Temperatures above 50F lower yields and cause poor stalk color.			
Spinach, Mustard greens, Collard greens and Turnip greens. (Not for use in California)	To facilitate harvest, increase yield and improve quality of fall and over-winter crops.	**4 - 10 GRAMS A.I** 10 – 25 grams product 0.4 – 0.9 ounces product	Apply a single spray 10-to-18 days before each anticipated harvest on fall or over-winter crops, ideally when daytime temperatures are 40° F-to-70° F and during early morning hours when dew is present on crop. When applied to promote growth of second cutting, wait until some regrowth has started before spraying. Maximum benefit is obtained when below normal

			temperatures prevail following application and growth would be otherwise slowed in untreated crops.
NOTE: • Since the promotion of bolting has been known to 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.			

TEMPERATE FIELD CROPS – SEED TREATMENT			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE / 100 LB SEED**	**APPLICATION TIMING**
Rice (semi-dwarf and tall varieties)	To promote germination, emergence and stand uniformity.	**0.5 – 2.1 GRAMS A.I** 1.25 – 5.25 grams product 0.05 – 0.2 ounces product	For every 100 lbs rice seed to be treated, mix the desired amount of product into 8 – 20 fl ounces of water to form treatment solution.
Note: • Do not apply product prior to a 24 hour presoak or to water used for the presoak. • Do not exceed 2.1 grams a.i./100 lbs of seed			

TEMPERATE FIELD CROPS – FIELD USES			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Rice	To promote early season plant vigor and more uniform seedling growth prior to permanent flood establishment.	**1 – 3 GRAMS A.I** 2.5 – 7.5 grams product 0.1 – 0.3 ounces product	Make one to two applications at the 1-2 and/or 4-5 leaf stages of growth.
NOTE: • Early flooding reduces 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. • Do not apply prior to the 2-to-3 leaf stage if gibberellin seed treatment is used. • Timing and dosage are to be based upon environmental conditions, tank mix combinations with herbicides, and preferred permanent flood practice in relation to rice leaf stage. • Do not apply when rice is subjected to drought stress conditions.			
Rice	To promote main culm and tiller panicle extension resulting in improved	**3 - 8 GRAMS A.I** 7.5 – 20 grams product	Make a single application between split-boot and 100% panicle heading. Heading applications to the

	pollination and seed yield.	0.3 – 0.7 ounces product	first crop also has been observed to accelerate re-growth of second crop rice.
Rice (Hybrid Seed Production)	To promote main culm and tiller panicle extension resulting in improved pollination and seed yield.	**20-100 GRAMS A.I** 50 – 250 grams product 1.8 – 9.0 ounces product	Make 1-5 applications at regular intervals during the heading period to promote main culm and tiller panicle extension.
Cotton	Promote early season growth and increase seedling vigor.	**1 - 6 GRAMS A.I** 2.5 – 15 grams product 0.1 – 0.5 ounces products	Apply 1 – 2 applications as a foliar broadcast spray during the 3 to 7 leaf/node stage. If applying as a banded spray reduce rates accordingly. Complete coverage of leaf tissue is essential. Use higher rates when temperatures will likely average 75°F or less during the 14 days following application(s).
Dry Bean	Promotes early season growth, increased seedling vigor, and increased plant height allowing for improved harvesting efficiency.	**1 - 6 GRAMS A.I** 2.5 – 15 grams product 0.1 – 0.5 ounces products	Apply 1 – 2 applications as a foliar broadcast spray during the 3 to 7 leaf/node stage. If applying as a banded spray reduce rates accordingly. Complete coverage of leaf tissue is essential. Use higher rates when temperatures will likely average 75°F or less during the 14 days following application(s).

NOTE: • Do not apply plants that are under drought stress. If plants are under continuous stress, delay the application until the stress is alleviated and the plants are beginning to recover. • Applying more often than necessary to achieve the desired height results in excessive vegetative growth. • Avoid drift or accidental application to other crops.			
Hops Seeded and seedless Fuggle hops and similar varieties adapted to the North-western states.	To increase fruit set and yield.	**4 - 6 GRAMS A.I** 10 – 15 grams product 0.4 – 0.5 ounces product	Make a single application in 100-150 gallons of water per acre when vine growth is 5-8 feet in length.

Wheat seed treatment (Not for Use in California)	To promote germination, emergence, and plant establishment, particularly for seed with dormancy problems that are planted under cool soil conditions.	0.1 -0.27 oz product in 8-20 fl oz water / 100 lb seed. (1.0 to 3.0 grams a.i. or 2.5-7.5 grams product in 237-591 ml / 45 kg seed.	Do not exceed 0.27 oz. Product / 100 lb seed.

SPRAY GUIDELINES FOR WATERCRESS:

DIRECTIONS FOR CHEMIGATION

Fill the supply tank with the desired amount of water. Then add the amount of ProGibb 40% required in order to achieve the final solution rate recommended for the specific crop to be treated. Agitate the mixture of ProGibb 4% frequently during the chemigation period to assure a uniform distribution throughout the system.
Apply ProGibb 4% continuously for the duration of the water application but do not exceed recommended rates and volumes as outlined on the product label.

CHEMIGATION PRECAUTIONS

Apply this product only through the following systems: Overhead sprinklers such as impact, micro-sprinklers, or booms. Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from nonuniform distribution of treated water. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Prior to application ensure that the chemigation system meets the following requirements:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

- The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

In addition to the above use rates and recommendations, the following precautions must be observed when using this product in any type of irrigation system.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS
Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water systems should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Watercress			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Watercress	1) To enhance growth in adverse weather conditions; 2) To help plants resume growth after insect and	**15 - 25 GRAMS A.I** 37.5 – 62.5 grams product 1.4 – 2.3 ounces product	Make one or two applications per acre per crop 3 to 7 days before harvest. Use 50-100 gallons of water per acre.

	disease attacks; 3) To increase root free stem length during low light/short day conditions.		

PROGIBB 40% CONVERSIONS

ProGibb 40% contains 1.0 gram of active ingredient per 2.5 grams (0.09 oz) of product.

To convert from Grams AI to Grams Product – Multiply grams AI x 2.5
(i.e. 32 g a.i. x 2.5 = 80g ProGibb 40%)

To convert from Grams AI to Dry Ounces Product – Multiply grams AI x 0.09
(i.e. 32 g a.i. x 0.09 = 2.9 oz ProGibb 40%)

CONVERSION TABLE *(for the 320 g size)*

Grams of Active Ingredient	Grams of ProGibb 40%	Ounces of ProGibb 40%
2	5	0.2
4	10	0.4
5	12.5	0.5
6	15	0.6
8	20	0.7
10	25	0.9
15	37.5	1.4
20	50	1.8
30	75	2.7
40	100	3.6
50	125	4.5
60	150	5.4
80	200	7.2
100	250	9.0
128	320	11.5

Grams of ProGibb 40% WSG for given ppm's of Gibberellic Acid at Different Water Volumes.

Gallons of Water	Desired parts per million (ppm) gibberellic acid									
	4	5	6	8	10	15	20	30	40	50
75	1.5	3	4.5	6	7.5	11	14	21	28	35
100	2	4	6	8	10	14	19	28	38	47
125	2.5	5	7.5	9	12	18	24	35	47	59
150	3	6	9	11	14	21	28	43	57	71
200	4	8	11	15	19	28	38	57	76	95
250	5	10	14	19	24	35	47	71	95	118
300	5.5	11	17	23	28	43	57	85	113	142
400	7.5	15	23	30	38	57	76	113	151	189
500	9.5	19	28	38	47	71	95	142	189	236
600	11	23	34	45	57	85	113	170	227	284
750	14	28	43	57	71	106	142	213	284	

Note: The numbers inside the table are the grams of ProGibb 40% WSG needed to obtain the desired ppm's for each gallonage.

Example:
To make 250 gallons of a 40 ppm gibberellic acid solution, dissolve 95 grams of ProGibb 40% WSG in 250 gallons of water (see shaded area).

CONVERSION TABLE *(for the 80 g size)*

ProGibb 40% contains approximately 10 grams of active ingredient per 25 grams of product.

Grams of Active Ingredient	Grams of ProGibb 40%	Ounces of ProGibb 40%
2	5	0.2
4	10	0.4
5	12.5	0.5
6	15	0.6
8	20	0.7
10	25	0.9
15	37.5	1.4
20	50	1.8
30	75	2.7
40	100	3.6
50	125	4.5
60	150	5.4
80	200	7.2

(Alternate for 80 g packaging)

Gallons of Water	parts per million (ppm) gibberellic acid									
	4	5	6	8	10	15	20	30	40	50
75	3.0	3.8	4.5	6.0	7.5	11.3	15.0	22.5	30.0	38
100	4.0	5.0	6.0	8.0	10.0	15.0	20.0	30.0	40.0	50
125	5.0	6.3	7.5	10.0	12.5	18.8	25.0	37.5	50.0	63
150	6.0	7.5	9.0	12.0	15.0	22.5	30.0	45.0	60.0	75
200	8/0	10.0	12.0	16.0	20.0	30.0	40.0	60.0	80.0	

Note: The numbers inside the table are the grams of ProGibb 40% WSG needed to obtain the desired ppm's for each gallonage.

Example:
To make 200 gallons of a 40 ppm gibberellic acid solution, dissolve 80 grams of ProGibb 40% WSG in 200 gallons of water (see shaded area).

Warranty and Disclaimer Statement:
To the fullest extent permitted by law, 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.

SUB-LABEL II

RyzUp Smartgrass™
PLANT GROWTH REGULATOR
Water Soluble Granule

For agricultural use on Pastures and commercial use on Sod and Turf.

RyzUp Smartgrass™
Plant Growth Regulator
Water Soluble Granule

For Organic Production

Active Ingredient	
Gibberellin A_3	40.0% w/w
Other Ingredients	60.0% w/w
Total	100.0% w/w

Contains a total of 128 g of Gibberellic Acid in 320 g of product.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See inside booklet for Precautionary Statements.

EPA Registration No. 73049-1
EPA Establishment No.

Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, IL 60048
1-847-968-4700

Net Contents: 320 g
This container will treat __acre at the maximum use rate, as directed for use on _____.

FIRST AID	
If in eyes	• 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 on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call toll-free 1-800-892-0099 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-6-Valent.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

Caution: Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.

Follow the 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.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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
For terrestrial uses: 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 or disposing of equipment washwaters or rinsate.
Do not use treated seed for food, feed, or oil purposes. Exposed treated seed may be hazardous to birds and other wildlife. Treat only those seeds needed for immediate use and planting. Do not store excess treated seed beyond planting time. Dispose of all excess treated seed and seed packaging by burial away from bodies of water.

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 State or Tribe 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 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 4 hours *unless wearing appropriate PPE.*

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.
- Waterproof gloves.
- Shoes plus socks.

GENERAL DIRECTIONS FOR USE

Use only as directed. Read the label thoroughly and make sure it is understood before making applications. Keep out of reach of children.

Application Instructions:

• Ryzup Smartgrass water soluble granule contains gibberellic acid which is an extremely potent plant growth regulator; when applying plant growth regulators, deviations from the label directions in the rates, timings, water volumes, or the adoption of untested spray mixes, results in undesirable effects. Always consult the local Valent representative in your area for the spray regimen best suited to your conditions.

• Do not apply to plants under pest, nutritional, or water stress.

• When a range of rates is indicated, use the concentration and spray volume indicated locally by the local Valent representative.

• For optimum effectiveness, thorough spray coverage of the target area must be achieved. Prepare solution concentrations by mixing the required amount of product with water in a clean, empty spray tank. Discard any unused spray material at the end of each day following local, state or federal law.

• For most efficacious results, the water pH is best at 7.0, and always below 8.5.

• Applications made under slow drying conditions (cool to warm temperatures, medium to high relative humidity, and no wind) will increase absorption of the active ingredient by the plant, thus optimizing effectiveness. Night-time applications are encouraged when day-time conditions are not conducive to slow drying conditions.

• Product persistence: Re-apply if significant rain occurs within 2 hours of application.

• Compatibility: When considering tank mixing with other products, use the following compatibility jar test before mixing a whole tank.

Start with a clear glass or plastic quart jar. Add water from the same water source that will be used for the larger tank mix. Add the pesticides in correct proportions. Mix thoroughly and let stand for a minimum 15 minutes. Heat, separation, gelling, are all signs of incompatibility. Before using any mixes that pass the jar tests for compatibility, it is imperative to test the mixture on a designated area as it may result either in phytotoxicity or ineffectiveness. For further information, consult your local Valent representative.

• For aerial applications spray volumes must be greater than 2 gallons per acre (10 gallons per acre for tree crops).

• No preharvest interval is required for this product.

STORAGE AND DISPOSAL
Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage
Keep containers tightly closed when not in use.

Pesticide Disposal
Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Disposal
Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill container ¼ full with water and recap. Shake 10 seconds. Pour rinsate into application equipment or 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 dispose of in a sanitary landfill, or incineration, if allowed by state and local authorities by burning. If burned, stay out of smoke.

SPRAY GUIDELINES

Apply in sprays of sufficient water volumes to ensure thorough wetting. Foliage of treated plants occasionally and temporarily appears lighter green in color due to accelerated growth rates following application. Application to plants of low vigor or under stress (pest, nutritional, or water, etc) causes severe leaf yellowing, poor performance and/ or undesirable effects. Tank-mixing with surfactants, fertilizers, and/or other pesticides should not be done unless compatibility and phytotoxicity testing is done first using appropriate methods.

DIRECTIONS FOR CHEMIGATION

Fill the supply tank with the desired amount of water. Then add the amount of Ryzup Smartgrass required in order to achieve the final solution rate recommended for the specific crop to be treated. Agitate the mixture of of Ryzup Smartgrass frequently during the chemigation period to assure a uniform distribution throughout the system.
Apply of Ryzup Smartgrass continuously for the duration of the water application but do not exceed recommended rates and volumes as outlined on the product label.

CHEMIGATION PRECAUTIONS

Apply this product only through the following systems: Overhead sprinklers such as impact, micro-sprinklers, or booms. Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from nonuniform distribution of treated water. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Prior to application ensure that the chemigation system meets the following requirements:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

- The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

In addition to the above use rates and recommendations, the following precautions must be observed when using this product in any type of irrigation system.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS
Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water systems should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

PASTURES – FIELD USES			
CROP/ VARIETY	**OBJECTIVE/ BENEFIT**	**USE RATE/ ACRE**	**APPLICATION TIMING**
Pasture Grass	To stimulate dry matter production when cool season soil conditions limit natural pasture growth rates.	**3 - 11 GRAMS A.I** 7.5 – 27.5 grams product 0.3 – 1.0 ounces product	Apply 1 to 6 applications every 3 to 4 weeks from late autumn to early spring. Allow at least 1 – 5 days after grazing before treating. Moisture levels and fertility must be adequate for grass growth prior to application.
NOTE: • Do not apply to pastures that are not at least 1 year old.. • When natural pasture grass growth is very rapid, grass may not respond with additional growth. • Do not apply when pasture grass is subjected to drought stress conditions. • Foliage occasionally and temporarily appears lighter green in color due to accelerated growth rates following application.			
Bermudagrass (Tifdwarf, Tifgreen, and other cultivars)	To initiate or maintain growth and prevent color change during periods of cold stress and light frosts.	**10-25 GRAMS A.I** 25 – 62.5 grams product 0.9 – 2.3 ounce product	Under cool conditions, apply 10 grams a.i./acre weekly or 25 grams a.i./acre biweekly in 25-to-100 gallons of water/acre.
Bermudagrass Tifdwarf, Tifgreen	To maintain or enhance regrowth Bermudagrass during summer months.	**1-3 GRAMS A.I** 2.5 – 7.5 grams product 0.1 – 0.3 ounces product	Under hot conditions, apply 1-to-3 grams a.i./acre weekly in 25-to-100 gallons of water/acre.
NOTE: • Maintain adequate moisture and proper fertilization programs as required for the local area. • Keep applications of the high rate at least two weeks apart. • Do not use on dormant grass • Discontinue treatments if thinning is observed. • More frequent mowing is occasionally necessary.			

CONVERSION TABLE *(for the 320 g size)*

Ryzup Smartgrass contains approximately 10 grams of active ingredient per 25 grams of product.

Grams of Active Ingredient	Grams of ProGibb 40%	Ounces of ProGibb 40%
2	5	0.2
4	10	0.4
5	12.5	0.5
6	15	0.6
8	20	0.7
10	25	0.9
15	37.5	1.4
20	50	1.8
30	75	2.7
40	100	3.6
50	125	4.5
60	150	5.4
80	200	7.2
100	250	9.0
128	320	11.5

Grams of ProGibb 40% WSG for given ppm's of Gibberellic Acid at Different Water Volumes.

Gallons of Water	Desired parts per million (ppm) gibberellic acid									
	4	5	6	8	10	15	20	30	40	50
75	1.5	3	4.5	6	7.5	11	14	21	28	35
100	2	4	6	8	10	14	19	28	38	47
125	2.5	5	7.5	9	12	18	24	35	47	59
150	3	6	9	11	14	21	28	43	57	71
200	4	8	11	15	19	28	38	57	76	95
250	5	10	14	19	24	35	47	71	95	118
300	5.5	11	17	23	28	43	57	85	113	142
400	7.5	15	23	30	38	57	76	113	151	189
500	9.5	19	28	38	47	71	95	142	189	236
600	11	23	34	45	57	85	113	170	227	284
750	14	28	43	57	71	106	142	213	284	

Note: The numbers inside the table are the grams of RyzUp Smartgrass™ WSG needed to obtain the desired ppm's for each gallonage.

Example:
To make 250 gallons of a 40 ppm gibberellic acid solution, dissolve 95 grams of RyzUp Smartgrass™ WSG in 250 gallons of water (see shaded area).

CONVERSION TABLE *(for the 80 g size)*

ProGibb 40% contains approximately 10 grams of active ingredient per 25 grams of product.

Grams of Active Ingredient	Grams of ProGibb 40%	Ounces of ProGibb 40%
2	5	0.2
4	10	0.4
5	12.5	0.5
6	15	0.6
8	20	0.7
10	25	0.9
15	37.5	1.4
20	50	1.8
30	75	2.7
40	100	3.6
50	125	4.5
60	150	5.4
80	200	7.2

(Alternate for 80 g packaging)

Gallons of Water	parts per million (ppm) gibberellic acid									
	4	5	6	8	10	15	20	30	40	50
75	3.0	3.8	4.5	6.0	7.5	11.3	15.0	22.5	30.0	38
100	4.0	5.0	6.0	8.0	10.0	15.0	20.0	30.0	40.0	50
125	5.0	6.3	7.5	10.0	12.5	18.8	25.0	37.5	50.0	63
150	6.0	7.5	9.0	12.0	15.0	22.5	30.0	45.0	60.0	75
200	8/0	10.0	12.0	16.0	20.0	30.0	40.0	60.0	80.0	

Note: The numbers inside the table are the grams of RyzUp Smartgrass™ WSG needed to obtain the desired ppm's for each gallonage.

Example:
To make 200 gallons of a 40 ppm gibberellic acid solution, dissolve 80 grams of RyzUp Smartgrass™ WSG in 200 gallons of water (see shaded area).

WARRANTY AND DISCLAIMER STATEMENT

To the fullest extent permitted by law, 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.

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