



United States  
Environmental Protection Agency  
Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number  
253425

Application for Pesticide - Section I

1. Company/Product Number 57538-18	2. EPA Product Manager Janet Andersen	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) ProGA3	PM# 90	
5. Name and Address of Applicant (Include ZIP Code) Stoller Enterprises, Inc. c/o Alice Walker Consulting 811 Country Club Drive Senatobia, MS 38668 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated <b>NOTIFICATION</b>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below. Date Reviewed: <u>6/28/02</u>

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Reviewed By: [Signature]

Notification per PRN 98-10 to change primary brand name, add trade name annotations, and add metric units

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes" Unit Packaging wgt. No. per container		<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Package wgt. No. per container			
Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Alice Walker, Ph.D.	Title Agent	Telephone No. (Include Area Code) 662-562-5995
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature <u>Alice Walker</u>	3. Title Agent	
4. Typed Name Alice Walker, Ph.D.	5. Date 1-25-02	

# N-LARGE™

**ACTIVE INGREDIENTS:**

Gibberellic acid (GA<sub>3</sub>) ..... 4.0%

**OTHER INGREDIENTS:** ..... 96.0%

Total 100.0%

This product contains approximately 1.0 gram active ingredient per fluid ounce (30ml).

**KEEP OUT OF REACH OF CHILDREN**

**WARNING-AVISO**

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

**FIRST AID**

<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. <b>NOTE TO PHYSICIAN:</b> Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

See additional Precautionary Statements on side panel.

EPA Reg. No. 57538-18  
EPA Est. Nos. 57538-FL-6,  
57538-TX-1, 57538-TX-2

**NOTIFICATION**

Manufactured by

Date Reviewed: 6/28/02

Reviewed By: [Signature]

**NET CONTENTS**

(6.7 lb/gallon or 0.8 kg/liter)

o 1.0 Gallon      o 4.0 Liters

**STOLLER ENTERPRISES, INC.**

4001 W Sam Houston Pkwy N, Suite 100

Houston, Texas 77043 U. S. A.

Toll Free 1-800-KEYLATE (539-5283)

Phone (713) 461-1493 • Fax (713) 461-4467

Web: [www.keylate.com](http://www.keylate.com) • E-mail: [stoller@keylate.com](mailto:stoller@keylate.com)

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

**WARNING**

Causes substantial but temporary eye injury. Harmful if inhaled or absorbed through skin. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist, and avoid contact with skin. Wear goggles or safety glasses. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**PERSONAL PROTECTIVE EQUIPMENT**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical-resistant category selection chart.

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride and viton, shoes plus socks, and protective eyewear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

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

**ENVIRONMENTAL HAZARDS**

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

**PHYSICAL OR CHEMICAL HAZARDS**

Flammable. Keep away from heat and open flame.

**DIRECTIONS FOR USE**

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

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

Exception: If the product is soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls over short-sleeved shirt and short pants, chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride and viton, shoes plus socks, and protective eyewear.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Keep containers tightly closed when not in use. Keep away from heat and open flame.

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

**CONTAINER DISPOSAL:** Do not reuse empty containers. Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by the state authorities, by burning. If burned, stay out of smoke.

**APPLICATION RECOMMENDATIONS**

Use only as directed. The label should be read thoroughly and understood before making applications.

N-LARGE™ 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, may result in undesirable effects. Always consult the State Extension Service Specialist 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 recommended locally by the State Extension Service Specialist.
- For optimum effectiveness, thorough spray coverage must be achieved. All parts of the plant or crop must receive the spray or desired results will not occur. 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 best results, the water pH should be around neutral and always below 8.5.
- N-LARGE™ applications made under slow drying conditions (cool to warm temperatures, medium to high relative humidity and no wind) will increase absorption by the plant, thus optimizing effectiveness. Night-time applications are encouraged when day-time conditions are not conducive to slow drying conditions.
- Product persistence: N-LARGE™ should be reapplied if significant rain occurs within 2 hours of application.
- Compatibility: The N-LARGE™ spray guidelines refer to the use of the product alone. The use of surfactants and other additives has been reported to be beneficial. Stoller Enterprises does not assume responsibility for unexpected results due to the tank mixing of N-LARGE™ with other products.
- DO NOT apply using ULV application methods. For aerial applications, spray volumes must be greater than 2 gallons per acre (20 l/ha), 10 gallons per acre for tree crops (100 l/ha).
- N-LARGE™ can be applied up to 7 days before harvest.

---

### SPRAY GUIDELINES FOR GRAPES

N-LARGE™ contains approximately 1.0 gram a.i./fl. oz. (30 ml)

For all grapes, application is recommended by ground sprayer. Apply in sufficient water volume to insure thorough wetting. It is important to wet all flower clusters or berries thoroughly. For specific spray rates and timings, by variety, see accompanying table. Do not exceed maximum rates.

#### SEEDLESS GRAPE

Do not apply more than 208 grams a.i./acre (514 grams a.i./ha) per growing season for all uses.

For cluster elongation and looser cluster forms (“Stretch”). To reduce costs of thinning, allow better air circulation to aid in the control of bunch rot, and increase light penetration to aid in sugar development. **Guide:** Apply one to two applications before bloom when flower clusters are 2 to 5 inches long (5 to 13 cm long).

For decreased berry set (“Thinning”), reduced hand-thinning costs, and hastened maturity. **Guide:** Apply one to three applications during bloom. When the bloom period is extended, subsequent sprays should be made 1 to 7 days after the first application.

**Note:** Higher amounts or multiple applications may cause an excess of shot berries or over-thinning, especially in young vines or vines with high vigor.

For larger berries (“Sizing”) and larger clusters when used in conjunction with established girdling and thinning practices. **Guide:** Apply one to three applications beginning when the average berry size reaches “target” diameter (see Table 1). Timing of the subsequent sprays will be dictated by experience in the vineyard and temperatures occurring between sprays. Potential effect will be reduced if the final spray occurs more than 2 weeks after the first application.

**Table 1: Application Rates (Grams A.I.) for Seedless Grape, Including Target Berry Diameters**

Seedless Grapes	Stretch (g a.i.)		Thinning (g a.i.)		Sizing (grams a.i.)		
	Acre	Hectare	Acre	Hectare	Target	Acre	Hectare
Perlette	8-16	20-40	*	*	4-5 mm	32-80	80-200
Flame	8-16	20-40	3-16	7-40	6-9 mm	20-80	50-200
Thompson	8-16	20-40	8-16	20-40	3-5 mm	32-80	80-200
Raisin	8-16	20-40	3-12	7-30	4-5 mm	4-12	10-30
All Others	*	*	*	*	12-14 mm	8-48	20-120

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

**Note:** Do not apply more than 208 grams a.i./acre (514 grams a.i./ha) per growing season for all uses.

**SEEDED GRAPE**

**EMPEROR GRAPE**

For reducing berry shrivel. This use can also increase berry size. **Guide:** Apply 20 grams a.i./acre (50 g a.i./ha) as one application approximately 2 weeks after completion of berry shatter. This timing should correspond to a period when the predominant berry diameter ranges from 10 to 15 mm.

**BLACK CORINTH (ZANTE CURRANT) GRAPE**

For improving berry size: **Guide:** Apply 1 to 8 grams a.i./acre (2.5 to 20 g a.i./ha) as one application 3 to 5 days after full bloom but before shatter begins.

**SPRAY GUIDELINES FOR CITRUS**

N-LARGE™ contains approximately 1.0 gram a.i./fl. oz. (30 ml)

For all citrus, apply in sprays of sufficient water volumes to insure thorough fruit wetting. Application to trees of low vigor or under stress (pest, nutritional or water, etc.) may cause severe leaf and/or fruit drop. In most cases some drop of older mature leaves will occur after application. Do not apply in white wash sprays in which lime or other caustic material has produced a high pH in the spray tank.

**NAVEL ORANGE**

To delay rind aging 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: The delay in rind aging is greatest when an early spray is applied. This spray timing produces the firmest rind possible. **Guide:** Apply 16 to 48 grams a.i./acre (40 to 120 grams a.i./ha) in sufficient water volume to insure thorough wetting.

**Early Spray:** Apply one spray approximately 2 weeks prior to color break, which normally occurs August through November.

**OR**

**Late Spray:** Apply one spray after marketable color has developed, normally from October through December. This late application may cause fruit re-greening.

**Note:** Do not apply the early spray to groves that may be harvested early, as fruit coloring will be delayed. Do not apply from January through July, as production may be reduced the following year.

**VALENCIA ORANGE**

To reduce rind creasing and to delay rind aging and softening: **Guide:** Apply a single spray in August to October to trees with a target crop of young fruit. Apply 40 to 80 grams a.i./acre (100 to 200 grams a.i./ha) in sufficient water volumes to insure thorough wetting.

**Note:** Slower color development should be expected in the target crop. Increased re-greening of mature fruit may occur. After marketable color is achieved, treatment effects may be reduced the longer treated fruit remains on the tree.

**OTHER ORANGES (All States Except California)**

To reduce rind creasing and to delay aging and softening of the rind: **Guide:** Apply a single spray in August to October to trees with a target crop of young fruit. Apply 40 to 80 grams a.i./acre (100 to 200 grams a.i./ha) in sufficient water volume to insure thorough wetting.

**Note:** Slower color development should be expected in the target crop. Increased re-greening of mature fruit may occur. After marketable color is achieved, treatment effects may be reduced the longer treated fruit remains on the tree.

**LEMON/LIME**

To decrease the amount of small ripe fruit and to produce a more desirable production pattern relative to market demand. **Guide:** Apply one spray when target crop is 1/2 to 3/4 full size, but still green. Use 10 to 32 grams a.i./acre (25 to 80 grams a.i./ha) in sufficient water volume to insure thorough wetting. When applied 2 years in a row, an even larger difference in harvest pattern and maturity occurs.

**TANGERINE HYBRIDS**

To delay disorders associated with rind aging, puffiness, and softening, and to increase peel strength of tangerine hybrids such as Orlando, Robinson, Minneola and Sunburst: **Guide:** Apply 20 to 40 grams a.i./acre (50 to 100 grams a.i./ha) approximately 2 weeks prior to color break. Apply as a dilute spray in sufficient water volume to insure thorough wetting.

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

**(All States Except California)**

To increase fruit set and yields as tangerine hybrids with pollination problems such as the Orlando, Robinson, Minneola and Sunburst: **Guide:** Apply 8 to 30 grams a.i./acre (20 to 75 grams a.i./ha) during full bloom. Apply as a dilute spray in sufficient water volume to insure through wetting.

**Note:** Fruit sizes may be reduced and color development slightly retarded. A slight increase in mature leaf drop may occur in trees under stress.

**GRAPEFRUIT (All States Except California)**

To delay disorders associated with rind aging (e.g., puffiness, softening and orange coloration), to prevent preharvest drop of mature fruit, to increase peel strength and reduce water loss during storage, and to produce a more orderly harvesting pattern. The delay in rind aging is greatest when an early spray is applied before color change. This spray timing produces the firmest rind possible. **Guide:** Apply 16 to 48 grams a.i./acre (40 to 120 grams a.i./ha) in a minimum of 250 gallons per acre (2500 liters/ha).

**Early Spray:** Apply one spray approximately 2 weeks prior to color break, which normally occurs August through September.

**OR**

**Late Spray:** Apply one spray after marketable color has developed which is normally from October through December. This late application may cause fruit re-greening.

**Note:** Do not apply the early spray to groves that may be harvested early as fruit coloring will be delayed. It is advisable to spot pick heavy crops to aid early marketing and to avoid reduction of yields, which generally follow late held crops. Applications made to fully colored fruit will begin to re-green if allowed to remain on the tree for extended periods.

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

**STAR RUBY GRAPEFRUIT (All States Except California)**

To reduce early-season small fruit drop of Star Ruby Variety thereby increasing yields. **Guide:** Apply a single spray during the bloom period. Use 25 grams a.i./acre (62 grams a.i./ha) in a minimum of 250 gallons of water per acre (2500 liters/ha).

**Note:** Results may vary from season to season depending on environmental conditions. Maintain a well-balanced fertilization and watering program.

**SPRAY GUIDELINES FOR FRUIT CROPS**

N-LARGE™ contains approximately 1.0 gram a.i./fl. oz. (30 ml)

**BLUEBERRY (All States Except California)**

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

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

**Guide:** Make one or two applications at 40 grams a.i./acre in 100 gallons of water (100 grams a.i./ha in 1000 liters). The single application should be made at full bloom (when 75% of the flowers are fully open). When two applications are made, spray the first one at full bloom, and the second one within 10 to 14 days of the first one. For Weymouth, application can be delayed up to 2 weeks after bloom to increase size of "shot" berries.

**Rabbiteye Blueberry** (for varieties such as Aliceblue, Beckyblue, Bonita, Brightwell, Climax, Delite, Tiftblue, Woodward and others)

**Guide:** Make a single application of 40 grams a.i./acre in 100 to 300 gallons per acre (100 grams a.i./ha in 1000 to 3000 liters) when most of the flowers are elongated but not yet open (bloom Stage 5).

**OR**



For multiple applications make two to four applications 10 to 14 days apart starting at bloom Stage 5. Spray 40 grams a.i./acre in 50 to 300 gallons (100 grams a.i./ha in 500 to 3000 liters) per application.

**SWEET CHERRY**

To produce larger, brighter colored, firmer fruit. **Guide:** Apply a single spray when the fruit is light green to straw colored. Use 16 to 48 grams a.i./acre (40 to 120 grams a.i./ha) in sufficient water volume to insure thorough wetting.

**Note:** Color development and harvest may be slightly delayed.

**RED TART CHERRY (All States Except California)**

To maintain and extend high fruiting capacity of bearing tart cherry trees and reduce the occurrence of "blind" nodes. Treatment will cause bud differentiation, which is apparent the year after application. Therefore, changes in shoot, spur and flower production will not be evident until 2 or 3 years after program initiation. Applications must be applied annually to insure vegetative development and subsequent yield improvement year after year. **Guide:** Apply one spray 14 to 28 days after bloom. Optimum timing is defined as that stage when three to five terminal leaves have fully expanded, or, at least 1 to 3 inches of terminal shoot extension has occurred. Use 4 to 18 grams a.i./acre (10 to 45 grams a.i./ha), depending on tree age and vigor (see Table 2). Apply in sufficient water volume to insure thorough wetting.

**Table 2: Recommended Application Rates (grams a.i.) for Tart Cherry Trees by Age**

Tree Age (years)	Rate (grams a.i.)	
	Acre	Hectare
6-10	4-6	10-15
11-15	8-10	20-25
16-20	10-14	25-35
20+	14-18	35-45

**Note:** Rates are based on expected normal tree vigor at various ages. Adjust rate according to tree vigor. If trees are vigorous, use lowest recommended rates. 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.

**SPRAY GUIDELINES FOR NON-BEARING YOUNG TART AND SWEET CHERRY TREES (All States Except California)**

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

**Note:** DO NOT SPRAY TREES IN THE FIRST YEAR. Treat in the second season for reduction of flowering in the third season, and again in the third season if flower reduction and fruiting is desired in

the fourth season. Treat only trees that are in good physiological condition. Discontinue treatment the year before desired harvest.

**Guide:** Apply a single spray of 20 to 40 grams a.i./acre (50 to 100 grams a.i./ha), 2 to 4 weeks after bloom. Apply a foliar spray of 25 to 50 gallons per acre (250 to 500 liters/ha), assuming a tree density of 100 trees per acre equivalent (250 trees/ha). Under conditions of low vigor, two applications are recommended. If two spray applications are made, allow at least a 7-day interval between sprays.

### SPRAY GUIDELINES FOR OTHER FRUIT

N-LARGE™ contains approximately 1.0 gram a.i./fl. oz. (30 ml)

#### OLYMPUS STRAWBERRY (All States Except California)

To increase runner production of mother plants of the Olympus cultivar: **Guide:** Apply a single spray of 20 grams a.i./acre (50 grams a.i./ha) to mother plants 10 to 30 days after planting. At the time of spraying, plants should have one to six leaves. Apply 100 gallons per acre (1000 liters/ha) to thoroughly wet new foliage to the point of run-off.

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

#### PINEAPPLE

Apply a single spray of 4 grams a.i./acre (10 grams a.i./ha) at the start of flowering.

### SPRAY GUIDELINES FOR VEGETABLE CROPS

N-LARGE™ contains approximately 1.0 gram a.i./fl. oz. (30 ml)

#### RHUBARB

To break dormancy on plants receiving insufficient chilling and to increase marketable yield of forced rhubarb. **Guide:** Make a single application of 2 fluid ounces (60 ml) of solution (containing 20 grams a.i. in 10 gallons of water) (0.52 g a.i./liter) to each cleaned crown, when the rest period is not completely broken. When the rest period is broken by cold weather, apply 2 fluid ounces (60 ml) of a solution containing 10 grams a.i. in 10 gallons of water (0.26 g a.i./liter) to each cleaned crown.

**Note:** Keep forcing house temperatures at 40° to 50°F (4°C to 10°C) for 24 hours after application. If house is warmer than 50°F (10°C), the crowns should be covered with plastic. Temperatures in the forcing house above 50°F (10°C) may lower yields and cause poor stalk color.

#### ARTICHOKE

To accelerate maturity and shift harvest to an earlier date. **Guide:** 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 10 to 20 grams a.i./acre (25 to 50 grams a.i./ha) per application in sufficient water volume to insure thorough wetting of the entire plant (leaves, stems and buds).

#### CELERY

To increase plant height and yield and overcome stress due to cold weather conditions or saline soils, and to obtain earlier maturity. **Guide:** Apply a single spray 1 to 4 weeks prior to harvest at a rate of 2.5 to 10 grams a.i./acre (6 to 25 grams a.i./ha). Use 25 to 50 gallons per acre (250 to 500 liters/ha) by ground

application or 5 to 10 gallons per acre (50 to 100 l/ha) for aerial application\*. Use lower concentrations applying 3 to 4 weeks before harvest and higher concentrations within 1 to 2 weeks before harvest.

\*Do not apply by air in California.

**Note:** Do not apply earlier than 4 weeks before harvest as bolting (seed stalk formation) may occur.

**LETTUCE FOR SEED**

To obtain uniform bolting and increase seed production. **Guide:** Apply one to four applications at 2-week intervals, beginning at the fourth true leaf. Use 1 to 4 grams a.i./acre (2.5 to 10 grams a.i./ha) per application in sufficient water volume to insure thorough wetting.

**MELON AND CUCUMBER (All States Except California)**

To stimulate fruit set during periods of cool temperatures. **Guide:** Use 2 grams a.i./acre (5 grams a.i./ha) in sufficient water volume for thorough coverage of exposed foliage. Make one application prior to bloom followed by two additional applications at intervals of 10 to 14 days on cantaloupes and watermelons. On cucumbers, up to four applications may be required.

For maximum benefits, vines must be in good condition, except for reduced rate of growth due to cool temperatures.

**PEPPER (All States Except California)**

To promote plant growth: **Guide:** Apply one to two sprays of 1 to 3 grams a.i./acre (2.5 to 7.5 grams a.i./ha) in 25 to 50 gallons per acre (250 to 500 liters/ha) at 2 week intervals. Begin sprays 2 weeks after transplanting.

**Note:** This use is recommended for areas with short growing seasons, or when low temperatures slow plant growth.

To increase fruit set and promote fruit growth: **Guide:** Apply one to two sprays of 1 to 3 grams a.i./acre (2.5 to 7.5 grams a.i./ha) at the beginning of the picking period. The high rate is recommended for plants with heavy fruit loads.

**SEED POTATO**

To stimulate uniform sprouting to aid in maximum production, more uniform development, fewer late maturing plants, and to break dormancy of newly harvested potatoes that have not had a full rest period. **Guide:** Dip whole or cut seed pieces in a solution containing 0.2 to 0.4 grams a.i. in 100 gallons (380 liters) of water prior to planting.

**Note:** Under high soil temperatures use the minimum concentration for dormant seed. Do not treat rested seed.

**SPINACH (All States Except California)**

To facilitate harvest, increase yield and improve quality of fall and over-winter spinach. **Guide:** Apply a single spray 10 to 18 days before each anticipated harvest on fall or over-winter spinach, ideally when daytime temperatures are 40° to 70°F (4° to 21°C) and during early morning hours when dew is present on crop. Apply 6 to 8 grams a.i./acre in 10 to 50 gallons per acre (15 to 20 grams a.i./ha in 100 to 500

liters/ha) by ground sprayer or in a minimum of 5 to 10 gallons per acre (50 to 100 liters/ha) by air. When applied to promote growth of second cutting, wait until some regrowth has started before spraying. Maximum benefit is obtained when below normal temperatures predominate following application and growth would be otherwise slowed in untreated spinach.

**Note:** Since the promotion of bolting may occur, do not apply after the mid-winter period or if temperatures may be expected to exceed 75°F (24°C) within several days of application. Do not apply on spring plantings.

**SPRAY GUIDELINES FOR OTHER CROPS**

N-LARGE™ contains approximately 1.0 gram a.i./fl. oz. (30 ml)

**COTTON (All States Except California)**

To promote early plant growth, increase early seedling vigor, and to overcome stress caused by cool weather. **Guide:** Apply 1 to 3 grams a.i./acre (2.5 to 7.5 grams a.i./ha) as a foliar application for the 2-leaf stage through the 5-leaf stage. Make one to two applications as needed. Use 5 to 40 gallons of water (50 to 400 liters/ha) by ground application or 3 to 10 gallons (30 to 100 liters/ha) by air.

**Note:** Use higher rates when temperatures will likely average 75°F (24°C) or less during the 14 days following the application. Do not tank mix with herbicides. Do not apply more often than necessary to achieve the desired height, as overdosage may result in excessive growth.

**HOPS (Northwestern U.S. Only)**

For seeded and seedless Fuggle hop and similar varieties adapted to the Northwestern states. To increase yield and fruit set. **Guide:** Apply a single spray when vine growth is 5 to 8 feet in length (150 to 250 cm). Use 4 to 6 grams a.i./acre in 100 to 150 gallons/acre (10 to 15 g a.i./ha in 1000 to 1500 l/ha).

**RICE SEED TREATMENT (Except California)**

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

Apply only to rice seed intended for drill seeded or dry broadcast systems. Do not apply to rice used in a 24-hour presoak prior to broadcast. Do not use more than 2 grams a.i. per 100 pounds (45 kg) of seed. **DO NOT USE TREATED SEED FOR FOOD, FEED, OR OIL PURPOSES.**

**Guide:** Use 1 to 2 grams a.i. in 8 to 20 oz. water (240 to 600 ml) per 100 pounds (45 kg) of rice seed. N-LARGE™ can be applied to dry seed with standard mist-treating equipment. Best results are obtained using a higher treatment volume (12 to 20 oz./cwt. of seed) (360 to 600 ml/45 kg) to insure the seed is completely and uniformly covered with N-LARGE™. Fill the seed treatment tank with water to one-half the final tank mix volume. Add the required amount of N-LARGE™ mixing thoroughly while adding water and other seed treatment products to the desired final volume.

An approved dye must be added to distinguish treated seed and prevent inadvertent use for food, feed or oil purposes. Seed commercially treated with this product must be labeled in accordance with all applicable requirements of the federal and state seed laws. N-LARGE™ is compatible with most commonly used fungicide seed treatments such as Vitavax® and Dithane®, standard dyes and sticker-binding agents. When preparing tank mixes, the user should ensure adequate physical compatibility and mixing characteristics.

### **RICE POSTEMERGENCE SEEDLING TREATMENT (All States Except California)**

For use as a postemergence seedling application on rice grown in the U.S. to promote more uniform and vigorous growth prior to permanent flooding. Early season foliar applications of N-LARGE™ will promote vigorous and more uniform seedling growth of rice prior to permanent flood establishment. This will allow earlier (five to ten days) flooding of drill or dry broadcast seeded varieties and is particularly effective on semi-dwarf varieties. Early flooding may reduce additional flushing costs associated with a delay in permanent flooding, weed infestations and the number of herbicide applications as well as promote earlier and more uniform grain maturity. N-LARGE™ application may result in a temporary lighter green foliage color due to accelerated growth rates.

Avoid drift or accidental application to other crops. Do not apply when rice is subject to drought stress conditions. N-LARGE™ can be tank mixed with most commonly used rice herbicides and fungicides. When N-LARGE™ is applied in tank mixes with Arrosolo®, Stam® M4 combined with labeled herbicides, Stam® 80EDF or Wham® EZ, plus a recommended adjuvant, the use of a surfactant is not necessary. Do not apply with Whip®.

N-LARGE™ applied between split-boot and 100% heading can increase height of semi-dwarf rice. This may facilitate harvest efficiency in the field by allowing the rice grain to be cut above the leaf canopy at faster combine speeds and at reduced vegetative load. Grain quality and maturity can be advanced with the promotion of tiller panicle development. Heading applications to the first crop can also accelerate regrowth of second crop rice. This can result in earlier second crop maturity and maximize grain yield.

### **SEEDLING APPLICATIONS**

N-LARGE™ may be applied at a rate of 1 to 3 grams a.i./acre (2.5 to 7.5 grams a.i./ha) to rice between the 1 to 2 leaf stage and the 4 to 5 leaf stage of growth. Timing and dosage is based on environmental conditions, tank mix combinations with herbicides, and preferred permanent flood practice in relation to rice leaf stage.

For best results, apply N-LARGE™ at a rate of 1 to 2 grams a.i./acre (2.5 to 5 grams a.i./ha) using a non-ionic surfactant such as Stoller's NATUR'L OIL™ or in tank mix combination with rice herbicides. Use higher rates (1.5 to 3 grams a.i./acre) (3.75 to 7.5 grams a.i./ha) with some dry and water based herbicide formulations, or when temperatures will likely average 75°F (24°C) or less during fourteen days after application.

### **PANICLE EXTENSION APPLICATIONS**

Apply 3 to 8 grams a.i./acre (7.5 to 20 grams a.i./ha) between split-boot and 100% panicle heading to promote main culm and tiller panicle extension. Applications should be made with fixed wing aircraft at 10 gallons spray volume per acre (100 liters/ha). Tank mixing with Stoller's NATUR'L OIL™ spray adjuvant is recommended.

### APPLICATION EQUIPMENT

Apply N-LARGE™ by fixed wing aircraft equipped with spray systems capable of producing a uniform medium to fine spray droplet pattern. Do not apply less than 10 gallons total spray volume per acre (100 liters/ha). Low pressure ground sprayers equipped with boom and flat fan nozzles and applying 10 to 15 gallons total spray volume per acre (100 to 150 liters/ha) may be used.

### CONVERSION TABLE

N-LARGE™ is a liquid and each fluid ounce (30 ml) contains approximately one (1) gram of active ingredient.

Amount Per Acre		Per Hectare	
Active Ingredient	N-LARGE™	Active Ingredient	N-LARGE™
0.5 g	= 0.5 fl. oz.	2.5 g	= 75 ml
1.0 g	= 1.0 fl. oz.	5.0 g	= 150 ml
2.0 g	= 2.0 fl. oz.	7.5 g	= 225 ml
4.0 g	= 4.0 fl. oz.	10.0 g	= 300 ml
5.0 g	= 5.0 fl. oz.	20.0 g	= 600 ml
10.0 g	= 10.0 fl. oz.	30.0 g	= 900 ml
20.0 g	= 20.0 fl. oz.	40.0 g	= 1200 ml

Arrosolo® is a registered trade name for Syngenta Crop Protection, Inc.

Dithane® is a registered trade name for Dow AgroSciences L.L.C.

Stam® is a registered trade name for Dow AgroSciences L.L.C.

Vitavax® is a registered trade name for Uniroyal Chemical Co., Inc.

Wham® is a registered trade name for RiceCo

Whip® is a registered trade name for Aventis CropScience

**NOTICE:** The information contained herein is true and accurate to the best of our knowledge and belief, but it is presented without guarantee since field conditions and use are beyond our control. Neither the manufacturers nor the seller make any warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use of this material when such use is contrary to label instructions. Read and follow the label directions carefully.