



FLOREL® BRAND PISTILL

- Increases Lateral Branching in Ornamentals
- Induces Flowering of Ornamental Bromeliads
- Reduces Plant Height of Potted Daffodils and Stem Topple of Potted Hyacinths
- Use In Production of Cucumber, Pumpkin and Squash Hybrid Seed

ACTIVE INGREDIENT:

Ethephon, [(2-chloroethyl) phosphonic acid]* 3.9%

INERT INGREDIENTS: 96.1%

TOTAL 100.0%

* This product contains 0.33 lbs. ethephon per gallon.

EPA Reg. No. 54705-8

EPA Est. No. 48498-CA-1

Manufactured for:

LAWN AND GARDEN PRODUCTS, INC.

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FLOREL is a registered trademark of Rhône-Poulenc Ag Company.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

If In Eyes:	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 contact CHEMTREC at 1-800-424-9300 for medical or transportation emergencies.

NOTE TO PHYSICIAN

Treat symptomatically. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. No specific antidote is available. Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, chemical resistant gloves (such as Nitrile, Butyl, Neoprene and/or Barrier Laminate) and shoes plus socks. 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.

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

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 clothing immediately if pesticide gets inside. Then wash body thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash the outside of gloves before removing.

ENVIRONMENTAL HAZARDS

Avoid spray drift to nearby crops as this product may cause temporary modifications in plant growth. Do not contaminate water used for irrigation or domestic purposes. 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 disposing of equipment washwaters. Prolonged exposure to spray deposits can damage acrylic plastics, certain paints, and metals. Remove automobiles and other vehicles from the treatment area prior to application to prevent spray deposits from falling on vehicles and potentially damaging finishes. Rinse acrylic plastic materials and painted surfaces exposed to inadvertent spray deposits using soap and water within an hour after exposure.

GENERAL INFORMATION

Apply FLOREL® BRAND PISTILL spray solution within 24 hours after mixing. DO NOT save unused diluted spray solutions as they will not be as effective as fresh solutions.

For ground application only.

GREENHOUSE, SHADEHOUSE AND FIELD GROWN FLORICULTURE CROPS

A foliar spray of FLOREL® BRAND PISTILL will increase lateral branching, prevent flower initiation and development, and inhibit internode elongation on a wide range of floricultural crops. These include, but are not limited to: Azalea, Begonia, Chrysanthemum, Fuchsia, Zonal and Ivy Geranium, Impatiens, English Ivy, Lantana, Petunia, Poinsettia, Verbena, and Vinca vine (*Vinca major*).

DEFOLIATION

A foliar spray of FLOREL® BRAND PISTILL applied after buds are matured, will initiate earlier leaf drop of Roses, Tallhedge, and Apple nursery stock. This will allow digging of stock plants prior to the onset of unfavorable weather.

A foliar spray of FLOREL® BRAND PISTILL to container-grown plumeria plants accelerates defoliation prior to storage. This reduces fungal problems on dormant plants. A foliar spray of FLOREL® BRAND PISTILL to plumeria trees in the field causes leaf abscission and stimulates the appearance of inflorescence buds. This use enhances winter flower production in warm sites such as Hawaii.

FLOWER INDUCTION OF BROMELIADS

A foliar spray of FLOREL® BRAND PISTILL initiates flowering of ornamental bromeliads such as *Ananas*, *Aechmea*, *Neoregelia*, *Vriesia*, and *Billbergia*.

REDUCTION OF PLANT HEIGHT AND STEM TOPPLE

A foliar spray of FLOREL® BRAND PISTILL will aid in reducing total plant height of potted daffodils and stem topple of potted hyacinths at time of full flower.

HYBRID SEED PRODUCTION

A foliar spray of FLOREL® BRAND PISTILL will modify sex expression and flowering pattern of cucumbers, pumpkins and squash to facilitate hybrid seed production. Do not use on cucumbers, pumpkins or squash to be harvested for fresh or processed markets.

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 regulations.

Read entire label before using this product.

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 expectations pertaining to the statements on this label about personal protective equipment (PPE), notification to workers and restricted-entry intervals. 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 48 hours. The REI is 72 hours in areas where average rainfall is less than 25 inches per year.

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 long-sleeved shirt and long pants, chemical resistant gloves, chemical resistant shoes plus socks, and protective eyewear.

Notify workers of the application by warning them orally and posting warning signs at entrances to treated areas.

CHEMIGATION: Do not apply FLOREL® BRAND PISTILL through any type of irrigation system.

GREENHOUSE, SHADEHOUSE AND FIELD GROWN FLORICULTURE CROPS

A foliar spray of FLOREL® BRAND PISTILL can be used to increase lateral branching, prevent flower initiation and development, and inhibit internode elongation on a wide range of floricultural crops. These include, but are not limited to: Azalea, Begonia, Chrysanthemum, Fuchsia, Zonal and Ivy Geranium, Impatiens, English Ivy, Lantana, Petunia, Poinsettia, Verbena, and Vinca vine (*Vinca major*). FLOREL®

BRAND PISTILL has not been tested on all floricultural crops and varieties. If it is necessary to treat plants not listed above, treat only a small area using the lower rate of application to determine the effectiveness of the product.

A foliar spray with FLOREL® BRAND PISTILL in conjunction with hand pinching will increase the number of lateral branches on many ornamental species. In many species, this product can replace hand pinching. Plants being treated with this product will not initiate or develop flowers. FLOREL® BRAND PISTILL inhibits internode elongation which maintains plants in a compact form.

When applied, FLOREL® BRAND PISTILL readily enters the plant and breaks down into ethylene, a naturally occurring plant hormone. Ethylene production within the plant is stimulated by stress. For this reason, it is important that plants being treated are not under stress from drought, high temperature, disease or other environmental conditions. Treating stressed plants can cause severe injury such as defoliation or leaf scorching. While injury from this product usually does not kill the plant, it can render the plant unsightly and unfit for sale. The activity of this product is linked to plant growth activity and is therefore slower acting when temperatures are below 60°F or above 95°F. Avoid drift onto non-target plants.

Concentration and Coverage: Unless otherwise stated, the standard rate on greenhouse floricultural crops is 500 ppm (one pint in 10 gallons of water or 1.6 fluid ounces per gallon). Concentrations below 500 ppm can be used depending upon the growth control desired. Apply FLOREL® BRAND PISTILL to thoroughly wet the foliage, just to the point of run-off. FLOREL® BRAND PISTILL is not translocated, so portions of the plant not covered will not be affected. On most floricultural crops, FLOREL® BRAND PISTILL can be applied at 2 to 4 week intervals to maintain the degree of desired control. The first application can be made 1 to 2 weeks following transplanting. The spray interval will depend upon growing conditions dictated by experience.

For Stock Plants (Except Azalea): Stock plants of vegetatively propagated crops can be treated with FLOREL® BRAND PISTILL during the time between transplanting and the harvest of cuttings. Treatment will prevent flowering and maintain the plant in a vegetative stage of growth. Cuttings should not be harvested for at least one week following treatment.

For Finished Plants (Except Azalea): Apply FLOREL® BRAND PISTILL 1 to 2 weeks after transplanting. Repeat at the desired interval (2 to 4 weeks). The last application should be made 6 to 8 weeks prior to the desired flower date.

For New Guinea Impatiens: Premature flowering can be prevented with a FLOREL® BRAND PISTILL treatment. Since this species is more sensitive to this product, use a rate of 300 ppm (1 fluid ounce per gallon of water) and make the last application no less than 8 weeks prior to the desired flower date.

For Azalea (Both Stock And Finished Plants): To increase lateral branching, mix 2.5 to 5 quarts of FLOREL® BRAND PISTILL in 10 gallons of water (2,500 to 5,000 ppm) and apply to thoroughly wet the foliage. Application should be made at normal pinching times and can be used in conjunction with hand pinching or chemical pinching agents. Use the higher rate on vigorous, tolerant varieties as determined by experience. To prevent unacceptable plant injury, do not treat sensitive varieties such as Sweetheart. To optimize the vigor of cuttings, do not make application for 2 weeks prior to the harvest of cuttings from the treated stock plants. On finished plants, do not make application for 6 to 8 weeks prior to bloom or planned sale.

DEFOLIATION

A foliar spray of FLOREL® BRAND PISTILL will cause earlier leaf drop of roses, tallhedge and apple nursery stock. Apply only after the buds are mature or some injury may result.

A foliar spray of FLOREL® BRAND PISTILL to container-grown plumeria plants accelerates defoliation prior to storage. This reduces fungal problems on dormant plants. A foliar spray of FLOREL® BRAND PISTILL to plumeria trees in the field causes leaf abscission and stimulates the appearance of inflorescence buds.

For Roses: Mix 1 quart of FLOREL® BRAND PISTILL in 10 gallons of water and apply to thoroughly wet foliage. Amount of spray used will depend on the size of the rose bush. Amount of defoliation obtained will depend on the variety and temperature. The addition of 1 pint of a nonionic surfactant per 100 gallons of spray solution will improve defoliation. Do not treat sensitive varieties such as Red American Beauty as bud injury may result.

For Container-grown Plumeria: Mix 2 gallons FLOREL® BRAND PISTILL in 100 gallons of water and apply ½ pint to 1 quart per plant depending on size and leafiness. Use of a nonionic surfactant at 0.2% vol/vol improves defoliation. Apply in the fall just prior to frost. Spray upper and lower surfaces of foliage to wetness. Leaf drop occurs in 8-12 days. Young leaves may be slow to abscise. Short day lengths enhance response. Since varietal differences were noted between cultivars, make a test application on a limited number of plants prior to field-wide applications.

For Field-grown Plumeria: Mix 2 gallons FLOREL® BRAND PISTILL in 100 gallons of water and apply ½ to 2 gallons per tree depending on size and leafiness. Use of a nonionic surfactant at 0.2% vol/vol improves defoliation. Spray upper and lower surfaces of foliage to wetness. Winter flowering of plumeria is attained when treatments are made in October. Defoliation is enhanced by short day lengths and water stress. Do not apply before September. Application before September may result in deformed inflorescences. Existing flowers will abscise with FLOREL® BRAND PISTILL treatment. Flower development in new inflorescences is dependant upon local temperature conditions, not FLOREL® BRAND PISTILL concentrations. Since varietal differences were noted between cultivars, make a test application on a limited number of plants prior to full-scale applications.

For Tallhedge Buckthorn: Mix 5 to 10 quarts FLOREL® BRAND PISTILL in 10 gallons of water and apply to thoroughly wet foliage. Amount of spray used will depend on size of tallhedge. Use the higher rate when temperatures are cool or earlier defoliation is desired.

For Apple Nursery Stock: Mix 1 to 2 pints FLOREL® BRAND PISTILL plus 3 quarts of a nonionic surfactant in 50 gallons of water and apply no more solution than is necessary to moisten foliage without runoff. A second treatment 3 to 7 days later using the above rates may be applied. Apply no more than 4 pints FLOREL® BRAND PISTILL per season. Do not use on Rome apples as defoliation will not be satisfactory. Amount of defoliation obtained will depend on variety and temperatures.

FLOWER INDUCTION OF BROMELIADS

FLOREL® BRAND PISTILL initiates flowering of ornamental bromeliads such as *Ananas*, *Aechmea*, *Neoregelia*, *Vriesia*, and *Billbergia*.

Amounts To Use: For most bromeliad varieties, mix 8 fluid ounces of FLOREL® BRAND PISTILL per gallon of water. This prepares a spray concentration of approximately 2,500 ppm of ethephon. Spray all surfaces of the plant to "wet". Avoid overspraying to "runoff" which may cause damage to leaves or the growing points. For treating groups of plants, use approximately 1/2 pint of spray solution per 10 square feet of greenhouse bench or outdoor bed area.

Apply FLOREL® BRAND PISTILL spray solutions within 4 hours after mixing. Mix up only the amount of spray you plan to use immediately. DO NOT save unused diluted spray solutions as they will not be as effective as fresh solutions.

The degree of flower induction with a given rate of FLOREL® BRAND PISTILL is influenced by the plant age, variety, growth rate, climate and cultural conditions. Lower rates may effectively force flowering or produce desirable foliage coloring on certain varieties. Trial applications at lower rates are suggested before making extensive treatments.

Guidelines For Consistent Flower Forcing:

1. Grow plants on photoperiods regulated to maintain plants vegetatively active prior to treatment; long days for *Ananas*, *Billbergia*, *Neoregelia*, and short days for *Aechmea* and *Vriesia*.
2. Treat mature plants that have well established root systems. Treatments too early in the development of the plant will cause erratic flower initiation and the few flowers formed will be small.
3. Remove water at base of leaves. Allow foliage to dry prior to treatment. Water may be replaced 24 hours after treatment.
4. A minimum night temperature of 65 to 70°F or higher should be maintained throughout the forcing period.

5. Do not apply fertilizer two weeks prior or for two weeks after treatment.

NOTE: Inconsistent results may be obtained if the leaf surface is covered with algae.

REDUCTION OF HYACINTH STEM TOPPLE AND DAFFODIL PLANT HEIGHT

To reduce potted hyacinth stem topple at time of full flower, apply a foliar spray of FLOREL® BRAND PISTILL before florets have opened. Most cultivars will respond to applications of FLOREL® BRAND PISTILL at 1000 to 2000 ppm (1/2 to 1 pint in 2.5 gallons of water). Bismarck, Jan Bos, Blue Giant, Delft Blue, and Madame Kruger may benefit from a second spray 2 days after the first.

To reduce total plant height of potted daffodils, apply a foliar spray of FLOREL® BRAND PISTILL when the shoots are 3 to 4 inches tall. Most cultivars will respond to 2000 ppm (1 pint in 2.5 gallons) sprays of FLOREL® BRAND PISTILL. For earlier forcing, Dutch Master, Joseph MacLeod, Flower Record, and Barrett Browning will benefit from a second spray 2 or 3 days after the first. Bridal Crown and Geranium require only 1000 ppm (1/2 pint in 2.5 gallons of water). Gold Medal, Van Sion, February Gold, and Tete-a-Tete do not require FLOREL® BRAND PISTILL treatment.

HYBRID SEED PRODUCTION

FLOREL® BRAND PISTILL modifies sex expression and flowering pattern of cucumber, squash and pumpkins to facilitate hybrid seed production. Application of FLOREL® BRAND PISTILL increases the number of pistillate (female) and decreases the number of staminate (male) flowers. FLOREL® BRAND PISTILL brings about earlier formation of female flowers at lower nodes where normally only male flowers are formed in standard (monoecious) cucumber, squash and pumpkin varieties.

Sexual modification towards femaleness in treated plants is temporary (5 to 15 nodes). Variety, location, climate and cultural practices may influence the best rate for treatment. Due to the wide range in sensitivity of cucumber and squash cultivars excessive injury may result from FLOREL® BRAND PISTILL application even when all label directions are followed. Treatment of cultivars classified as strongly male (Straight Neck, Crookneck) may result in unacceptable level of male flowers remaining. New breeding lines will require trial applications before full scale treatments are made.

Plants sprayed with FLOREL® BRAND PISTILL often flower 7 to 10 days earlier than untreated. Therefore pollen source plants should be seeded prior to seed parent to insure adequate pollen availability for hybrid seed production.

Temporary growth inhibition resulting from shortened internodes may be observed.

Hybrid Seed Production In Cucumbers, Pumpkins And Squash (CALIFORNIA ONLY)

Amounts to Use: Apply up to 3 quarts per acre of FLOREL® BRAND PISTILL in 40 to 100 gallons of water (300 to 750 ppm) by ground application. Apply no more than 6 spray applications per year at 3 to 10 day intervals beginning at first true leaf stage. Do not harvest within 60 days of last application.

The actual amount and number of applications needed to achieve a satisfactory level of performance without excessive injury is dependent on the specific cultivar and environmental conditions at time of treatment.

DO NOT harvest any treated cucumbers, pumpkins or squash for human or animal consumption. Treatments are to be made for seed production only.

Hybrid Seed Production In Cucumber And Squash

Amounts to Use: Apply 1 quart per acre of FLOREL® BRAND PISTILL in 40 to 100 gallons of water (100 to 250 ppm). The actual amount needed to achieve a satisfactory level of performance without excessive injury is dependent on the specific cultivar and environmental conditions at time of treatment. Spray plants at the two leaf stage.

When germination is variable, a repeat application 7 to 10 days after the first may be necessary.

DO NOT harvest any treated cucumbers or squash for human or animal consumption. Treatments are to be made for seed production only.

Hybrid Seed Production In Pumpkins

Amounts to Use: Apply 3 quarts of FLOREL® BRAND PISTILL per acre in 40 to 100 gallons of water (300 to 750 ppm) per acre. Apply no more than 6 spray applications per year at 7 to 10 day intervals beginning at 2 to 4 leaf stage. Do not harvest within 42 days of last application.

DO NOT harvest any treated pumpkins for human or animal consumption. Treatments are to be made for seed production only.

STORAGE AND DISPOSAL

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

STORAGE: Store in original container only. Keep in a cool, dry place inaccessible to children or animals, preferably in a locked storage area.

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: 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 state and local authorities, by open burning. If container is burned, stay out of smoke.

CONDITIONS OF SALE AND WARRANTY

Lawn and Garden Products, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated when used in accordance with the use directions under normal conditions. Lawn and Garden Products, Inc. neither makes, nor authorizes any agent or representative to make, any other warranties, express or implied, including fitness or merchantability.

The directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as timing and method of application, weather and crop conditions, presence of other materials, or other influencing factors, all of which are beyond the control of Lawn and Garden Products, Inc. and Seller. Buyer and user acknowledge and assume all risks and liability resulting from the handling, storage and use of this material not in strict accordance with directions given herewith. In no case shall Lawn and Garden Products, Inc. or the Seller be liable for consequential, special, indirect, or incidental damages or losses resulting from the handling or use of this product. The foregoing is a condition of sale by Lawn and Garden Products, Inc. and is accepted as such by the Buyer.