



# Florel<sup>TM</sup>

plant growth  
regulator

- **Modifies sex expression and flowering pattern of CUCUMBERS and SQUASH to facilitate hybrid seed production**
- **Causes BROMELIADS to flower**
- **Concentrates and accelerates TOMATO ripening for home garden tomato production**
- **Promotes earlier defoliation of ROSES, TALLHEDGE BUCKTHORN, APPLE NURSERY STOCK**
- **Eliminates undesirable fruit on APPLE and CRABAPPLES, CAROB and OLIVE**
- **Stimulates lateral branching of AZALEAS and GERANIUMS**

EPA Reg. No. 264-263

## HYBRID SEED PRODUCTION

FLOREL<sup>TM</sup> plant growth regulator modifies sex expression and flowering pattern of cucumbers and squash to facilitate hybrid seed production. Application of FLOREL<sup>TM</sup> increases the number of pistillate (female) and decreases the number of staminate (male) flowers. FLOREL<sup>TM</sup> brings about earlier formation of female flowers at lower nodes where normally only male flowers are formed in standard (monoecious) cucumber and squash 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. New breeding lines will require trial applications before extensive treatments are made.

## AMOUNTS TO USE:

Apply one quart of FLOREL<sup>TM</sup> plant growth regulator in 40 to 100 gallons of water per acre. Spray plants thoroughly when they have developed two true leaves.

When germination is variable under field conditions, repeat application of one quart of FLOREL<sup>TM</sup> plant growth regulator per acre when the first true leaf is the size of a quarter and the third true leaf is expanding.

## GENERAL COMMENTS:

Apply FLOREL<sup>TM</sup> plant growth regulator spray solutions within 4 hours after mixing. Mix 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.

Plants sprayed with FLOREL<sup>TM</sup> 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.

**NOTE:** For home garden use follow spray guide at end of pamphlet.

## CAUSES BROMELIADS TO FLOWER

FLOREL<sup>TM</sup> plant growth regulator initiates flowering of ornamental bromeliads such as ANANAS, ACHMEA, NEOREGELIA, VRIESIA and BILLBERGIA.

## AMOUNTS TO USE:

For most bromeliad varieties, mix 8 fluid ounces of FLOREL<sup>TM</sup> plant growth regulator per gallon of water. This prepares a spray concentration of approximately 2,500 ppm of ethephon.

**FLOREL**<sup>TM</sup>

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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<sup>TM</sup> plant growth regulator 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<sup>TM</sup> 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 ACHMEA, and VRIESIA.

**ACCEPTED**

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UNDER THE FEDERAL INSECTICIDE  
FUNGICIDE AND RODENTICIDE ACT  
FOR ECONOMIC POISON REGISTERED  
UNDER NO. \_\_\_\_\_ SUBJECT  
TO ATTACHED COMMENTS.

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 65-70°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.

#### HOME GARDEN TOMATO PRODUCTION USE

FLOREL™ can be used as an overall, foliar spray to concentrate and accelerate tomato ripening. Apply FLOREL™ at the end of the growing season to hasten ripening of mature green tomatoes and allow harvesting of fruit before frost. FLOREL™ spray will be most effective on healthy plants. Harvest fruit at proper maturity, generally 14 to 21 days after treatment. Some defoliation or yellowing of foliage following treatment will be observed.

#### AMOUNTS TO USE:

When treating several plants mix 1 teaspoon of FLOREL™ in 3 ounces (6 tablespoons) of water. When treating a larger number of plants (10 to 15) mix 1 tablespoon of FLOREL™ in 9 ounces (18 tablespoons) of water. Apply FLOREL™ with a clean hand sprayer. Thoroughly wet all leaves and fruit.

#### DEFOLIATION:

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

FOR ROSES: Mix 1 quart FLOREL™ 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 nonionic surfactant such as Tween 20 or X-77 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 TALLHEDGE BUCKTHORN: Mix 5 to 10 quarts FLOREL™ in 10 gallons 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 IN WASHINGTON: Mix 1-2 pints FLOREL™ plus 3 quarts Dupont Surfactant WK in 50 gallons water and apply no more solution than is necessary to moisten foliage without runoff. A second treatment 3-7 days later using the above rates may be applied. Apply no more than 4 pints FLOREL™ per season. Do not use on Rome Apples as defoliation will not be satisfactory. Amount of defoliation obtained will depend on variety and temperature.

#### FRUIT ELIMINATION:

A foliar spray of FLOREL™ will reduce or eliminate undesirable fruit from apple trees, crabapple trees, carob trees, and olive trees. Applications should be made at the flower bud to full bloom stage, prior to fruit set.

FOR APPLES AND CRABAPPLES: Mix ¾ to 1 quart FLOREL™ in 10 gallons of water and apply to thoroughly wet foliage. Amount of spray used will depend on tree size. Use the higher rate when temperatures are cool. Do not use on small, red fruited varieties of crabapples as fruit elimination will not be satisfactory.

FOR CAROB (Ceratonia) Mix 1 quart FLOREL™ in 10 gallons water and apply to thoroughly wet foliage. Amount of spray used will depend on leaf drop of older leaves in treatment.

FOR OLIVE (Olea europaea) Mix 1 quart FLOREL™ in 10 gallons water and apply to thoroughly wet foliage. Amount of spray used will depend on tree size. Applications must be made for best results.

NOTE: This recommendation is intended to be used in commercial production as a thinning agent.

#### INCREASED LATERAL BRANCHING:

A foliar spray of FLOREL™ will increase lateral branching in Azaleas.

FOR AZALEAS: Mix 2½ quarts FLOREL™ in 10 gallons water and apply to thoroughly wet foliage. Amount of spray used will depend on plant size. Apply at normal flowering in conjunction with either, h

pinching agents. Use the higher rate on vigorous tolerant varieties as determined by experience. Do not treat sensitive varieties such as Sweetheart as growth and flower inhibition can occur.

FOR GERANIUMS: Mix 1 quart of FLOREL™ in 10 gallons of water and spray to thoroughly wet foliage. Apply two weeks prior to normal pinching. Use only on stock plants as delay in flowering can occur.

**FLOREL™  
HOME SPRAY GUIDE**

Read Detailed Instructions  
in This Pamphlet First

APPLICATION	Amount to Use	
	FLOREL™	WATER
<b>Flower Induction</b>		
Bromeliads	1 Oz.	1 Pt.
<b>Tomato Ripening</b>		
Fall Season	1 Tsp.	3 Oz.
<b>Fruit Elimination</b>		
Apples/Crabapples	3 Oz.	1 Gal.
Carob	1½ Oz.	1 Gal.
Olive	3 Oz.	1 Gal.
<b>Lateral Branching</b>		
Azaleas	2-4 Oz.	1 Qt.
Geraniums	3 Oz.	1 Gal.

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10-13-76

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**AMCHEM PRODUCTS, INC.**

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