

ATRIMMEC[®]

PLANT GROWTH REGULATOR

For Growth Regulation of
Landscape Plants & Trees

ACTIVE INGREDIENT:

Dikegulac-sodium (Sodium salt of 2,3:4,6-bis-O-(1-methylethylidene)-a-L-xylo-2-hexulofuranosonic acid) 18.5%

OTHER INGREDIENTS 81.5%
TOTAL 100.0%

THIS PRODUCT CONTAINS:

1.67 lb. dikegulac-sodium per gallon or 200 grams active ingredient per liter. (1.55 lb. dikegulac acid equivalent per gallon or 17.1%)

KEEP OUT OF REACH OF CHILDREN

CAUTION



READ THE ENTIRE LABEL FIRST. OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Mixers, loaders, applicators, and other handlers must wear: long-sleeved shirt, long pants, shoes and socks.

User Safety Requirements

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

User Safety Recommendations

- Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/ PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should 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.

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 inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for treatment advice.
If on skin or on 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.

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First Aid (cont.)	
If swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-877-800-5556 for emergency medical treatment advice.	

Environmental Hazards

For terrestrial uses: Do not apply directly to water, or to areas where water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

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.
- Do not apply through any type of irrigation system.
- Do not use on food or fodder crops.

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 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.

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 soil or water, is:

- coveralls,
- protective eyewear
- chemical-resistant gloves made of any waterproof materials and
- shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. **Reentry Statement:** Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

1. Product Description

What Atrimmec[®] Plant Growth Regulator Does:

- This product is a growth retardant for use on hedges, shrubs, trees and groundcovers. It can also be used on certain trees and shrubs to prevent flowering and undesired (nuisance) fruit set.
- This product temporarily stops shoot elongation and promotes lateral branching. This reduces the need for trimming and pruning. It can also improve the appearance of landscape ornamentals by gradually filling in growth and providing a more uniform, compact shape.
- This product is a systemic plant growth regulator applied as a foliar spray that reduces or breaks apical dominance and enhances lateral branching.
- This product is a systemic plant growth regulator applied as a foliar spray. It is absorbed by the leaves and translocated to the shoot tips. Growth retardant effect is limited to sprayed branches.

- This product is absorbed through the leaves and translocated to the shoot tips. Pinching effect is limited to sprayed branches.
- This product will chemically pinch unpruned shoots and will also increase branching of trimmed shoots.
- This product produces full, well branched plants with more abundant bloom.
- This product reduces the need for mechanical pinching and pruning.

Atrimmec Plant Growth Regulator Is Easy To Use:

- Mix with water in a well rinsed sprayer. The spray solution should be used the same day it is prepared. Do not mix this product with fertilizers or other pesticides.
- A surfactant is incorporated in the product. No additional wetting agent is needed for foliar applications.
- Plant foliage should be dry when spray is applied.
- On very hot, sunny days, spray preferably early in the morning or late in the afternoon.
- Spray entire plant until wet. Thorough coverage of foliage is the key to good results.
- After spray has dried, re-spraying may overdose previously treated plants. Be careful to avoid overlapping treatment of plants.
- If treated plants are subject to rainfall or overhead irrigation within 6 hours after spraying, effectiveness may be reduced.
- Trimming after applying this product may interfere with the action of the product.

Considerations When Using Atrimmec Plant Growth Regulator For Landscape Maintenance:

- **Looking for a formal appearance?** Trim the shrub or groundcover to shape, leaving at least two pairs of expanded leaves on each shoot to absorb the spray. Apply this product within three days.
- **Looking for a more natural appearance?** Either trim only the long, wild shoots and immediately apply this product spray or trim shrub or groundcover to shape, allow the new shoots to grow at least two inches (5 cm) and then apply this product spray.

Spray Drift Management:

Non-target terrestrial plants can be adversely affected when exposure to this product. Avoid spray drift to non-target terrestrial plants during application.

- Do not apply when wind velocity exceeds 15 mph, or when wind gusts approach 15 mph.
- Do not apply this product if the wind direction does not favor on-target deposition.
- Use only spray equipment with medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators must use a coarser droplet size.

2. Foliar Sprays For Growth Regulation (shrubs, hedges, and groundcovers)

Responses With Atrimmec Plant Growth Regulator:

After an application of this product in spring, plants can usually be maintained in acceptable shape for a full season. Under extremely good growing conditions or in areas with a long growing season, two treatments per year may be considered on certain species. However, in areas with a short growing season only a single spring treatment is recommended.

Plants must be well rooted and actively growing. Do not treat wilted or dormant plants. Plants must be healthy and not under stress from drought, nutritional deficiency or disease. Avoid treating slow growing plants under cool weather conditions or extremely hot summer temperatures.

Best response is obtained on lush spring growth or under good growing conditions.

Temporary reduction or suppression of flowering may be observed in shrubs and groundcovers such as alyssum, oleander, star jasmine and gazania, but normal bloom returns 3 to 6 weeks after spraying.

Chlorosis of the growing tip and terminal growth may occur a few weeks after the spraying of some species. This is usually transient but may persist up to 6 weeks on certain shrubs such as forsythia, oleander and privet. Fully expanded foliage is not affected.

Overdosing with this product may result in marked chlorosis and necrotic terminal shoots. Underdosing may result in little or no growth retardant effect.

Directions For Growth Control Of Landscape Ornamentals:

Directed use rates of this product vary with different species (Table 1). Where a dosage range is given, use a concentration in the lower part

of the indicated range for tender, sensitive varieties; use a concentration in the higher part of the directed range for vigorous, rank-growing varieties.

Spray volume will vary with the size of plants and amount of foliage. Spray to wet. On hedges, shrubs and groundcovers one gallon of spray solution covers 400 to 600 square feet (1 liter per 10 to 15 square meters). Small trees up to 16 feet (5 meters) tall require 1 to 5 gallons (5 to 20 liters) per tree. Larger trees 20 to 30 feet (6 to 9 meters) in height will require 10 to 15 gallons (40 to 60 liters) of spray solution per tree. Thorough coverage provides the best results.

Species of Ornamental Plant (Common/botanical name)	Scientific name	Concentration of Atrimmec Plant Growth Regulator in Water	
		fluid ounces per gallon	mL/liter
Abelia	Abelia x grandiflora	1	8
Alyssum	Alyssum spp.	2	16
Arborvitae, American	Thuja occidentalis	1	8
Ash, Arizona or Velvet	Fraxinus velutina	1 to 2	8 to 16
Ash, Shamel or Evergreen Ash	Fraxinus uhdei	1 to 2	8 to 16
Azaleas (Rhododendron hybrids)	Rhododendron spp.	2 to 3	16 to 24
Barberry	Berberis spp.	1	8
Bottlebrush	Calistemon spp.	2 to 3	16 to 24
Bougainvillea Temporary suppression of flowering may be observed 3 to 6 weeks after spraying.	Bougainvillea spp.	2	16
Butterfly bush or Buddleia	Buddleia spp.	1 to 2	8 to 16
Cape honeysuckle or Tecomaria	Tecomaria capensis	2 to 3	16 to 24
Cherry-laurel and English Laurel	Prunus spp.	2 to 3	16 to 24
Coprosmas	Coprosma	1 to 2	8 to 16
Cotoneaster	Cotoneaster spp.	1 to 2	8 to 16
Cypress	Cupressus spp.	1	8
Elaeagnus	Elaeagnus spp.	2 to 3	16 to 24
Elm, Chinese	Ulmus parvifolia	2	16
Elm, Siberian or Dwarf Elm	Ulmus pumila	1 to 2	8 to 16
Escallonias	Escallonia spp.	1 to 2	8 to 16
Euonymus	Euonymus spp.	2 to 3	16 to 24
Eugenia	Eugenia myrtifolia	2	16
Fig, Creeping Fig, Climbing Fig or Creeping Rubber Plant	Ficus repens or Ficus pumila	2 to 3	16 to 24
Fig, Laurel, Benjamin Tree or Weeping Fig	Ficus nitida	2	16
Firethorn	Pyracantha spp.	2 to 3	16 to 24
Forsythia Treat only spring growth. Summer treatments may retard flower bud set and development.	Forsythia spp.	2	16
Gazania	Gazania spp.	2	16
Hardy Orange	Poncirus trifoliata	2	16
Hawthorn, Indian	Raphiolepis indica	2 to 3	16 to 24
Hawthorn, Thorn, Thorn Apple, or Red Hawthorn	Crataegus spp.	1 to 2	8 to 16

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Species of Ornamental Plant (Common/botanical name)	Scientific name	Concentration of Atrimmec Plant Growth Regulator in Water	
		fluid ounces per gallon	mL/liter
Ivy, Algerian	Hedera canariensis	2 to 3	16 to 24
Ivy, English	Hedera helix	2	16
Holly Use 3 fluid ounces of this product per gallon for growth control of Yaupon holly (Ilex crenata). Avoid spraying Japanese holly (Ilex crenata) just before or during the flowering period if berry display is desired.	Ilex spp.	2 to 3	16 to 24
Honeysuckle	Lonicera spp.	3	24
Jasmine, Star Jasmine or Confederate Jasmine	Trachelospermum jasminoides	2	16
Jessamine, Orange, Orange Jasmine or Satinwood	Murraya paniculata	2	16
Juniper	Juniperus spp.	1	8
Lantana or Yellow Sage	Lantana camara	1 to 2	8 to 16
Lippia, Creeping	Phyla nodiflora	2	16
Mulberry, White	Morus alba	2	16
Oleander, Common Oleander or Rosebay	Nerium oleander	1 to 2	8 to 16
Osmanthus	Osmanthus spp.	2	16
Periwinkle or Myrtle	Vinca minor	2	16
Photinia, Red tip	Photinia fraseri	3	24
Pittosporum, Japanese Pittosporum, Mock Orange, Tobira or Australian Laurel	Pittosporum tobira	2	16
Podocarpus, Southern Yew, Buddhist Pine	Podocarpus macrophyllus	2	16
Privet Use 2 fluid ounces of this product per gallon on waxleaf privet (Ligustrum japonica 'Texanum')	Ligustrum spp.	1 to 2	8 to 16
Viburnum	Viburnum spp.	2 to 3	16 to 24
Willow	Salix spp.	1 to 2	8 to 16
Xylosma	Xylosma spp.	2 to 3	16 to 24

3. Bark Banding To Reduce Undesired (Nuisance) Fruit And Flower Formation

Bark banding of certain landscape plants can reduce or prevent undesired (nuisance) fruit formation. **IMPORTANT:** Make one application 2 to 4 weeks prior to flower buds at pinhead sized (or smaller) for optimum application timing. Applications made after flower buds have formed or flowers have opened will not be effective. Use low pressure settings. Compressed air sprayers, backpack (knapsack) sprayers and other pressurized sprayers can be used.

Spray concentration:
Mix 3 fl. oz. of this product plus 0.5 to 1.0 fl. oz. of a 100% organo-silicone surfactant to one (1) gallon of water. Refer to the quick-mix table for additional spray preparations.

Spray mixture desired (gallons)	Add this amount of Atrimmec Plant Growth Regulator (fl. oz.)	Add this amount of 100% organosilicone surfactant (fl. oz.)
1	3 fl. oz.	0.5 to 1.0 fl. oz.
2	6 fl. oz.	1.0 to 2.0 fl. oz.
3	9 fl. oz.	1.5 to 3.0 fl. oz.
5	15 fl. oz.	2.5 to 5.0 fl. oz.
10	30 fl. oz.	5.0 to 10.0 fl. oz.
100	300 fl. oz.	50 to 100.0 fl. oz.

Note: Proportionally for each 12 inch trunk diameter at breast height (DBH) or at 4.5 feet above the soil, apply 1 gallon of spray mixture.
Equivalent concentrations: 3 fl. oz./1 gallon = 2.3% v/v solution = 0.4% dikegulac acid equivalent or 4000 ppm dikegulac acid equivalent.

- Directions And Spray Amount Required For Each Tree:**
- The amount spray mixture required for bark banding depends upon the tree plant diameter.
 - Measure the diameter of the tree trunk in inches at breast height (DBH) or at 4.5 feet from the soil.
 - For multi-stemmed plants measure diameter of each stem at 4.5 feet from the soil, add the individual diameters of each stem to determine the total diameter of the tree at breast height. (Example at 4.5 feet above the soil: A three-limbed, forked tree with 7 inch diameter stem; a 5 inch diameter stem; 6 inch diameter stem = 18 inches and would require 1.5 gallons of spray mixture).
 - Apply the appropriate mixture to the tree starting at the tree trunk and lower limbs and apply down to the soil line. Larger trees require applications to upper tree trunk and lower limbs and apply down to the soil line.
 - Use low spray pressure. Apply with a technique, pressure setting and nozzle setting that maximizes the retention of the mixture on the trunk.
 - The spray mixture should be applied as a circular band to the entire circumference of the tree trunk or multi-stemmed plants.
 - Be sure to apply the entire appropriate mixture to each tree.
 - Include spray applications to the tree root flares. Excess spray may accumulate at the soil line.
 - For optimum plant translocation (uptake and upward movement), apply when daytime temperatures are expected to be 60°F or above for several days after application.
 - Do not apply to dormant trees, or during drought stress and during periods when trees are not actively transpiring.

Tree diameter at 4.5 feet from soil or breast height (DBH), inches	Amount (volume) of spray mixture see Table 2
6 inches	0.5 gallon
12 inches	1 gallon
18 inches	1.5 gallon
24 inches	2.0 gallon

Note: Proportionally for each 12 inch trunk diameter at breast height (DBH) or at 4.5 feet above the soil, apply 1 gallon of spray mixture.

4. Soil Drenching To Reduce Undesired (Nuisance) Fruit And Flower Formation

Soil drenches of certain landscape plants can reduce or prevent fruit formation. **IMPORTANT:** Make one application 2 to 4 weeks prior to flower buds at pinhead sized (or smaller) for optimum application timing. Applications made after flower buds have formed or flowers have opened will not be effective.

Use equipment capable of delivering the drench mixture uniformly around the base of the plant, in as close proximity in a band around the plant at the soil-to-trunk interface and root flares as possible.

Drench concentration:
Mix 3 fl. oz. of this product plus 0.5 to 1.0 fl. oz. of a 100% organo-silicone surfactant to one (1) gallon of water. Refer to the quick-mix table for additional drench mixtures.

Table 4: Quick Mix Table For Soil Drench Treatments

Spray mixture desired (gallons)	Add this amount of Atrimmec Plant Growth Regulator (fl. oz.)	Add this amount of 100% organosilicone surfactant (fl. oz.)
1	3 fl. oz.	0.5 – 1.0 fl. oz.
2	6 fl. oz.	1.0 – 2.0 fl. oz.
3	9 fl. oz.	1.5 – 3.0 fl. oz.
5	15 fl. oz.	2.5 – 5.0 fl. oz.
10	30 fl. oz.	5.0 – 10.0 fl. oz.
100	300 fl. oz.	50 – 100 fl. oz.

Note: Proportionally for each 12 inch trunk diameter at breast height (DBH) or at 4.5 feet above the soil, apply 1 gallon of spray mixture.

Directions And Drench Amount Required For Each Plant:

1. The amount drench mixture required for soil drench depends upon the plant diameter.
2. Measure the diameter of the plant in inches at breast height (DBH) or at 4.5 feet from the soil.
3. For multi-stemmed plants measure diameter of each stem at 4.5 feet from the soil, add the individual diameters of each stem to determine the total diameter of the tree at breast height. (Example at 4.5 feet above the soil: A three-limbed, forked plant with 7 inch diameter stem; a 5 inch diameter stem; 6 inch diameter stem = 18 inches and would require 1.5 gallons of spray mixture).
4. Apply the spray mixture to the root zone as a band around the base of the tree or individual plant.
5. Apply the amount (volume) listed in Table 5 in a band around the plant at the soil-to-trunk interface and root flares.
6. The soil drench should be made completely around the base of the plant and all root flares.
7. Apply slowly to allow the drench mixture to enter the soil at the base of the plant and all root flares.
8. Be sure to apply the entire appropriate mixture to each tree.
9. For optimum plant translocation (uptake and upward movement), apply when daytime temperatures are expected to be 60°F or above for several days after application.
10. Do not apply to dormant plants, or during drought stress and during periods when trees are not actively transpiring.

Table 5: Approximate amounts of spray solution for individual plant drench treatments are presented below:

Tree diameter at 4.5 feet from soil or breast height (DBH), inches	Amount (volume) of spray mixture see Table 4
6 inches	0.5 gallon
12 inches	1 gallon
18 inches	1.5 gallon
24 inches	2.0 gallon

Note: Proportionally for each 12 inch trunk diameter at breast height (DBH) or at 4.5 feet above the soil, apply 1 gallon of spray mixture.

5. Foliar Sprays To Reduce Undesired (Nuisance) Fruit And Flower Formation

Atrimmec Plant Growth Regulator spray applied prebloom or during the flowering period of certain ornamentals reduces or eliminates bloom and prevents undesired (nuisance) fruit set.

Certain landscape trees and shrubs are allergenic during bloom. Ripe fruit falling on sidewalks, streets, and parked cars present a difficult cleanup problem which can often be reduced or prevented with a single spray treatment.

The spray concentration and timing of treatments are given in Table 6 for each species of tree or shrub. This product treatment is generally ineffective for these purposes after fruit has begun to set.

Foliar injury may occur if this product is applied to drought stressed trees. Treat healthy, vigorously growing trees only.

Complete spray coverage is essential for good results. See directed spray volumes indicated for growth control of landscape ornamentals.

Table 6. Suppression of Flower and Fruit Formation.

Species of Ornamental Plant	Concentration of Atrimmec Plant Growth Regulator in Water	
	fluid ounces per gallon	approximate mL/liter
Olive, ornamental (<i>Olea europaea</i>) Treat at any time from prebloom period after floral rachis has elongated about 1/2 inch (1.3 cm) through early bloom. Best results are obtained in early spring during the tight bud stage of the prebloom period.	2 2/3 to 5	20 to 40
Privet, glossy (<i>Ligustrum lucidum</i>) Treat when flower parts have elongated 1 to 3 inches (2.5 to 7.5 cm), since subsequent vegetative growth will cover the dead floral rachis and maintain satisfactory appearance. Treatment at a later stage, when flower parts are 4 to 6 inches (5 to 15 cm), leaves the dead floral parts visible for the remainder of the season.	3/4 to 1.5	5 to 12
Rose, multiflora (<i>Rosa multiflora</i>) Apply this product at any time from the prebloom period when plants are in full foliage and flower buds have formed through early bloom (10 to 15% bloom).	3/4 to 1.5	5 to 12
Holly Japanese (<i>Ilex crenata</i>) To prevent berry set apply at any time from prebloom, tight bud stage through midbloom.	3/4 to 1.5	5 to 12

6. Atrimmec Plant Growth Regulator For Greenhouse and Nursery Crops

What Atrimmec Plant Growth Regulator Does:

- This product is a systemic plant growth regulator applied as a foliar spray that reduces or breaks apical dominance and enhances lateral branching.
- This product is absorbed through the leaves and translocated to the shoot tips. Pinching effect is limited to sprayed branches.
- This product will chemically pinch unpruned shoots and will also increase branching of trimmed shoots.
- This product produces full, well branched plants with more abundant bloom.
- This product reduces the need for mechanical pinching and pruning.

Considerations When Using Atrimmec Plant Growth Regulator For Greenhouse And Nursery Crops:

- Best response is obtained on lush spring growth or under good growing conditions. Avoid treating plants under cool weather conditions or extremely hot summer temperatures.
- Plants must be well rooted and actively growing. Do not treat wilted or dormant plants. Plants must be healthy and not under stress from drought, nutritional deficiency or disease. Avoid treating plants under conditions favoring root disease, such as standing water in poorly drained soil.
- This product should be applied on shorter, more tender new shoots than usually considered appropriate for hand pinching.
- For optimal results, remove any flower buds or flowers present, and trim all long shoots.
- This product is best absorbed by soft, fully developed leaves. If plants have been heavily pruned at least two pairs of expanded leaves should remain on each shoot.
- For best results use this product on rooted cuttings or young liners. One application is usually sufficient to get good frame branching. Subsequent pinching of older plants can be done with this product to further improve branching.
- In frost susceptible regions, the final treatment should be made sufficiently early in the season so that the new growth will harden off before frost.
- Overdosing with this product may result in marked chlorosis, necrotic terminal shoots and delayed regrowth. Underdosing may result in little or no pinching effect.

After Treating Plants With Atrimmec Plant Growth Regulator:

- Allow sufficient time for the chemical pinching response. There is no visible effect for the first 7 to 10 days. Trimming or hand pinching after applying this product may interfere with the action of the product.

