

Clarelle®

PLANT GROWTH REGULATOR FOR TURFGRASS

Active Ingredient:
Paclobutrazol* 22.9%

Other Ingredients: 77.1%

Total: 100.0%

*CAS No. 76738-62-0

Clarelle is a suspension concentrate containing 2 lb active ingredient per gallon

EPA Reg. No. 100-1412

EPA Est. 5905-IA-01

KEEP OUT OF REACH OF CHILDREN. CAUTION

See additional precautionary statements and directions for use inside booklet.

Product of China

SCP 1412A-L1A 0920

1 gallon
Net Contents

FIRST AID	
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 a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
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.
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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOTLINE NUMBER For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) Call 1-800-888-8372	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed or absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Avoid contact with skin, eyes, or clothing. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, or Viton® ≥ 14 mils
- Shoes plus socks

User Safety Requirements

Follow the 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.

User Safety Recommendations
Users should: <ul style="list-style-type: none">• Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.• Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

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

Physical or Chemical Hazards

Do not use or store near heat or open flame.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

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 the label about personal protective equipment (PPE), restricted-entry interval, and notification to workers. 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.

For early entry into 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 wear:

- Coveralls
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, or Viton® ≥ 14 mils
- Shoes plus socks

TURF

USE INFORMATION

Clarelle is a plant growth regulator for non-residential turfgrass that slows grass growth for up to two months after application. The frequency of mowing can be reduced by up to 50% during the period of effective retardation. Use of Clarelle on fine turf should be accompanied by moderate-to-high fertility to maintain turfgrass appearance and reduce discoloration. Growth and development of some grasses (e.g., *Poa annua*) can be significantly reduced, leading to selective control after prolonged use in mixed populations.

What Applications of Clarelle to Turfgrasses Provide

- Slowed vertical growth and reduced mowing for 6 to 8 weeks on established hybrid bermudagrass, bentgrass and perennial ryegrass fairways, tees and roughs, and on St. Augustinegrass and Kentucky bluegrass/perennial ryegrass turf areas (use reduced rates on bentgrass and overseeded bermudagrass greens).
- Improved and extended fertilizer performance for up to 12 weeks when combined with a nitrogen fertilizer while improving turfgrass quality versus fertilizer alone.
- Reduced potential for scalping of all turfgrass areas.
- Better ball playability on hybrid bermudagrass due to increased turf density and tighter-knit turf areas.
- Suppression of *Poa annua* by reducing its growth and competitive ability.

When to Use for Growth Suppression of Warm-Season Grasses

Use anytime when established hybrid bermudagrass and St. Augustinegrass are green, actively growing and have recovered from dormancy (filled in fully following winter).

When to Use for Growth Suppression of Cool-Season Grasses

Apply in spring after green-up and after turf has been mowed once or twice. Apply at least 1 month before onset of high air temperatures. In late summer/early fall, apply at least 1 month before anticipated first killing frost.

When to Use for *Poa annua* Suppression

Apply when the *Poa annua* is actively growing. In moderate climates the application timing may be fall through late spring. In northern climates, spring and fall timings are recommended. In climates with a prolonged winter dormancy, fall applications can be made up to one month prior to anticipated first killing frost. Repeat application should be made as part of a *Poa annua* suppression program.

When to Use for Color and Quality Enhancement of Winter Overseeded Turf and *Poa annua* Suppression

Apply anytime after overseeded turf has successfully established itself (cool-season turf species should be near 85% of turf composition). Do not apply after March 15th to putting greens to avoid delay in bermudagrass green-up. Moderate soil moisture conditions should be present before and after application to achieve best regulating effect.

USE DIRECTIONS

Apply treatment solution uniformly to turf. Do not use on residential turf. For best results, apply 0.25 inch of water within 24 hours after application to remove product from foliage and onto soil surface.

Apply with standard pressurized spray application equipment with by-pass or mechanical agitation using strainer screens of 50 (or coarser) mesh. Product should be added during filling of applicator tank. When tank is allowed to stand, vigorous agitation should be used to assure material suspension before application.

Apply Clarelle to turf in sufficient amount of water (minimum 1 gallon treatment solution per 1,000 sq ft = 43.5 gal/acre) to ensure uniform coverage. For best results, use 2 to 3 gallons of water per 1,000 sq ft. A color agent or other marking device is advised to avoid skipping and/or overlapping.

Treatment Coverage Chart¹

Rate of Active Ingredient per Acre	Fluid Ounces of Product per Acre
0.10 lb ai/A	6.4 oz
0.16 lb ai/A	10.0 oz
0.25 lb ai/A	16.0 oz
0.50 lb ai/A	32.0 oz
0.75 lb ai/A	48.0 oz

¹Product should be mixed with minimum 1 gal water/1,000 sq ft. Use 2 to 3 gal/1,000 sq ft for best results.

Specific Rates

Warm Season Grasses	Cool Season Grasses ¹ (except putting greens)	Bentgrass Putting Greens	Overseeded Bermudagrass
0.50 lb ai/A (sandy soils)	0.25 to 0.50 lb ai/A	0.10 to 0.25 lb ai/A	0.10 to 0.16 lb ai/A
0.75 lb ai/A (clay soils)			

¹Reduce application rate by 50% if *Poa annua* is a significant portion of turfgrass population (greater than 50%).

Apply 0.5 to 0.9 lb nitrogen/1,000 sq ft of a non-burning fertilizer product on warm and cool season grasses. Apply 0.25 to 0.5 lb nitrogen/1,000 sq ft on bentgrass greens and overseeded bermudagrass.

Results to Expect from Application of Clarelle

When applied as directed, vertical growth of turf will be slowed within 3-10 days, resulting in reduced mowing frequency for a 6- to 8-week period. Following applications, turf will gradually undergo increased greening and density, which may persist up to 12 weeks.

Following application of product, weed populations should not be any greater than on untreated turf, although weed visibility may be higher on regulated turf.

Growth and competitive ability of *Poa annua* will be reduced within 1 to 2 weeks after application; regulation will last 3 to 8 weeks. Turfgrass shoots and leaves will become discolored for 3 to 8 weeks following onset of growth regulation. With proper fertilization, desired turfgrasses will be stimulated to crowd out weakened *Poa annua*.

As density of treated fairways increases due to altered growth habit, ball playability may improve, causing ball to sit higher on turf. This result is most evident on hybrid bermudagrass.

Seedhead formation will not be prevented. Seedheads should be mowed off as they grow above turf cutting height to maintain a desirable-looking turf.

Excessive irrigation and/or nitrogen fertilization may shorten period of growth regulation.

Regulator response will vary somewhat according to turf variety. For St. Augustinegrass, Bitter Blue will be the most responsive and Floratam the least responsive.

HYBRID BERMUDAGRASS

Cultivar	Sensitivity/Activity	Period of Growth Regulation	Period of Color Response
Tifway I, II	Medium/Good	5 - 6 weeks	6 - 8 weeks
Tifgreen	High/Excellent	6 - 8 weeks	8 - 10 weeks
Ormond	High/Excellent	6 - 8 weeks	8 - 10 weeks

ST. AUGUSTINEGRASS

Cultivar	Sensitivity/Activity	Period of Growth Regulation	Period of Color Response
Floratam	Low/Moderate	4 - 6 weeks	5 - 8 weeks
Floralawn	Low/Moderate	4 - 6 weeks	5 - 8 weeks
Floratine	Medium/Good	6 - 7 weeks	7 - 8 weeks
Raleigh, Texas Common	Medium/Good	6 - 7 weeks	7 - 8 weeks
Bitter Blue, Seville	High/Excellent	7 - 8 weeks	8 - 10 weeks

Program Scheduling

If crabgrass or other annual grassy weeds have been a problem in the past, an application of the appropriate preemergence weed control product should be made before the use of Clarelle. Space the applications of Clarelle and oxadiazon-based preemergence products at least 4 weeks apart on putting greens.

If a weed, disease or insect problem occurs after application of Clarelle, apply an appropriate control product at its recommended rate. Clarelle is compatible with most existing control products. Use of Clarelle in combination with fungicides containing propiconazole, fenarimol, triadimefon, and myclobutanil can result in increased growth inhibition of *Poa annua* on putting greens.

For Growth Regulation

Repeat applications can be made within the same growing season as long as the turf is actively growing. Turfgrass species and growth rate will dictate rate and timing of applications. Do not apply more than 4 quarts per acre per year (2 lb ai/A).

For *Poa annua* Suppression

Clarelle will suppress the growth and competitive ability of *Poa annua*. Apply when *Poa annua* is actively growing at 16 to 32 ounce per acre. Lower rates and more frequent applications can be made if *Poa annua* discoloration cannot be tolerated. However, only moderate *Poa annua* suppression may be achieved. Do not apply more than 4 quarts per acre per year (2 lb ai/A).

For Color, Quality Enhancement, and *Poa annua* Suppression in Overseedings

On bentgrass greens and overseeded bermudagrass, repeat applications can be made as long as the turf is actively growing. Do not apply more than 4 quarts per acre per year (2 lb ai/A). Apply to overseeded turf when seed has established and turf composition is near 85% of the cool season species.

Do not apply to overseeded bermudagrass greens after March 15th to avoid delay of spring green-up of dwarf-type bermudagrass.

Do not aerify or topdress and drag greens with steel mats while under growth regulation.

Do not seed within 6 weeks prior to or 2 weeks after application of Clarelle.

If Embark® is used for *Poa annua* seedhead control, apply this product at least 14 days after application of Embark.

USE PRECAUTIONS

Do not use on residential lawns or industrial rights-of-way.

Do not use on bermudagrass putting greens except for winter overseeding enhancement use.

Do not use on athletic fields under heavy traffic where maximum growth potential of turf is desired.

Do not use on shrubs, flowers, fruits, or vegetable plants (applications to turf areas under trees will not affect/harm trees).

Do not use during periods of extreme dry or cold weather conditions, or during heavy insect or disease activity.

Do not apply product when soil is already saturated. Heavy rainfall or irrigation in the treated areas may cause active ingredient to move laterally on slopes and collect in low areas. These areas may undergo more severe growth control for a longer period of time.

Do not use on areas containing greater than 70% *Poa annua*, since discoloration of *Poa annua* may be unacceptable.

Delay treatment of newly-sodded or sprigged turf until grass has knitted down and rooted firmly.

Delay sprigging for at least 4 weeks and sodding at least 2 weeks after application is made.

Do not apply this product through any type of irrigation equipment.

Withhold application on large turf areas that have been thinned from winter drainage, disease, or insects until desired fill-in is achieved.

Assure that dosage rates are measured accurately since rates greater than those recommended may cause undesirable turf growth control and may discolor areas temporarily.

Shake container thoroughly before use.

For best residual activity, Clarelle should be removed from leaf surfaces by irrigation or rainfall prior to mowing.

Broadleaf weeds are not significantly affected by Clarelle. To control the growth of weeds, treat with an appropriate herbicide when weeds are actively growing. Carefully follow label directions.

Do not use on areas to be cultivated for food or feed crops or to be resown with grasses within two years of treatment.

Do not apply more than 4 qt per acre per year (2 lb ai/A).

Do not graze treated areas or harvest for forage or hay.

For best results, water in applications of Clarelle, but not to the point of runoff, within 24 hours to limit surface movement. Allow the product to remain on the plant for at least 30 minutes prior to the watering event. To prevent product runoff, time applications to allow for watering-in and maximum absorption into treated turf prior to a rain event.

STORAGE AND DISPOSAL

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

Pesticide Storage

Keep container closed when not in use. Do not store near food or feed. Protect from freezing. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Handling [less than or equal to 5 gallons]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Container Handling [greater than 5 gallons]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Container Handling [greater than 5 gallons]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

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Embark® is a trademark of PBI/Gordon Corporation.

Viton® is a trademark of E.I. duPont de Nemours and Company.

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For non-emergency (e.g., current product information) call
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