
BONZI®

PLANT GROWTH REGULATOR

COMMERCIAL

SUSPENSION

For Use on Container Grown Ornamental Bedding Plants and Plugs, and Poinsettias

ACTIVE INGREDIENT:

Paclobutrazol 4 g/L

Contains 1,2-benzisothiazolin-3-one at 0.019% as a preservative.

**READ THE LABEL AND BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

REGISTRATION NUMBER: **25453**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **1 L to 208 L**

Syngenta Canada Inc.
140 Research Lane, Research Park
Guelph, Ontario N1G 4Z3
Telephone: 1-877-964-3682

Label

1.0 NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

2.0 FIRST AID

IN CASE OF POISONING, contact a physician or a poison control centre **IMMEDIATELY**. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed, call a poison control centre 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 centre or doctor. Do not give anything by mouth to an unconscious person.

If in eyes, 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 centre or doctor for treatment advice.

If on skin or clothing, take off contaminated clothing. Rinse skin **IMMEDIATELY** with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

3.0 TOXICOLOGICAL INFORMATION

Perform gastric lavage taking care to prevent aspiration of gastric contents. Then treat symptomatically.

4.0 PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.

Handle and pour carefully to avoid spilling or splashing.

RESTRICTED ENTRY INTERVAL (REI): DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

Use only as directed on the label.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear chemical-resistant coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair activities. When handling plants treated with this product, wear gloves.

Remove any contaminated clothing and wash separately from other clothing before re-using. Dispose of clothing if it has been drenched with the product.

Do not smoke, drink or eat while using this product. Wash thoroughly with soap and water after handling and spraying, and before eating, drinking or smoking.

6.0 ENVIRONMENTAL PRECAUTIONS

Avoid drift onto other plants.

Do not re-use soil contaminated by BONZI® Plant Growth Regulator.

7.0 STORAGE

Store product in a cool, dry, well ventilated area away from food and feed, and out of reach of children and animals. Keep product from freezing.

8.0 DISPOSAL

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean up of spills.

For Recyclable Containers

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For Refillable Containers

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not use this container for any other purpose.

If the container is not being refilled, refer to the section "For Recyclable Containers".

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,
CALL 1-800-327-8633 (FASTMED)***

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Pamphlet

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9.0 PRODUCT INFORMATION

BONZI Plant Growth Regulator is a plant growth regulator for greenhouse use on ornamental bedding plants and plugs, and poinsettias. When applied by foliar spray or into the soil, it is translocated to growing terminals and reduces internode elongation resulting in more desirable compact plants.

10.0 DIRECTIONS FOR USE

10.1 General Information

BONZI Plant Growth Regulator is a plant growth regulator for use in greenhouses for annual bedding plants grown in containers such as plug trays, cell packs in flats and small pots. Desired height control is usually obtained with a single BONZI Plant Growth Regulator foliar spray or drench application but good height control can also be accomplished by repeated application 7-10 days apart using BONZI Plant Growth Regulator at one-half the recommended concentration.

BONZI Plant Growth Regulator users should note that height control may vary with different cultivars. Short slow growing types require a lower rate than fast growing types. When used as directed, BONZI Plant Growth Regulator produces no toxic effects. Overly stunted plants or leaf burn may result from excessively high application rates.

WARNING: Be sure of your calculations, volume measurements and sprayer calibration. When in doubt recalculate. Frequent agitation of the spray mixture is essential.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Syngenta Canada Inc. at 1-87-SYNGENTA (1-877-964-3682) for information before applying any tank mix that is not specifically recommended on this label.

Syngenta Canada Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) of all potential tank-mixes under all environmental conditions or for all crop varieties. Tank mixes that are not specifically listed on this label should be tested on a small area first, under local conditions and using standard practices, to confirm the tank mix is suitable for widespread application.

To determine the physical compatibility of this product with other products, use a jar test.

Always read and follow label directions including WALES mixing order.

10.2 Spray Applications

PLEASE NOTE: Thorough and uniform coverage of stems is essential for effective results from foliar applications. Spray application should simulate a high coverage miticide treatment.

In spray applications, BONZI Plant Growth Regulator penetrates into plant stems and is translocated to the terminal where it reduces internode elongation. It is important that adequate spray volumes are used to thoroughly wet plant stems. The spray technique should provide consistent uniform coverage for all plants otherwise, uneven height control may result. However, care should be taken not to apply excessive volume of BONZI Plant Growth Regulator to young plugs where the plants have not completely covered the medium. Excessive spray application will enter the medium and act as a drench and may cause excessive stunting of sensitive species. Addition of a wetting agent for spray application is not necessary. Overhead irrigation or misting after BONZI Plant Growth Regulator spray applications does not reduce the effectiveness. BONZI Plant Growth Regulator may be applied at any time of the day without the danger of burning leaves or causing chlorosis.

There are two methods of application for insuring uniform coverage of BONZI Plant Growth Regulator sprays.

10.2.1 Spray by Area Method

This method is used where plants grown in defined areas such as greenhouse benches or floors are sprayed in one continuous operation. Plants are usually planted in smaller containers such as plug trays, cell packs in flats or in pots at close spacing.

Mix the spray solution with the amounts of BONZI Plant Growth Regulator and water shown in Table 1 to obtain the desired concentration. Spray this solution uniformly over the plants at a rate of 1-2 L per 10 m² of area depending on the stage of growth. A lower range of spray volume may be desired for young plug seedlings to prevent excessive drenching effect and stunting. As the stage of plant growth advances a larger volume of the solution at the same concentration can be applied.

10.2.2 Spray by Individual Plant Method

This method can be used to lessen the wastage of chemical where plants in larger containers are spaced wider apart. It is important that the chemical is uniformly applied ensuring complete coverage of the foliage and stem. The volume of solution will vary with plant size and type. The targeted spray volume for plants in 15 cm pots will be about 20 mL.

10.3 Drench Applications

Application of BONZI Plant Growth Regulator to the medium will provide good control of plant height. BONZI Plant Growth Regulator is readily absorbed by plant roots. In drench application the amount of chemical applied (number of milligrams per plot) is more important than volume of water used. Drench solutions should be prepared to deliver a desired number of milligrams per pot. For 15 cm pots it is recommended that BONZI Plant Growth Regulator be applied in a

volume of 120 mL of solution per pot. Four litres of solution will treat 31-32 pots. However, different style or design of the pot can influence the volume of the medium (standard vs azalea). Sufficient solution should be applied to thoroughly wet the medium and allow not more than 10% to run out of the pot.

PLEASE NOTE: Media containing pine bark will reduce the effectiveness of BONZI Plant Growth Regulator applied as a drench. Where pine bark is used the amount of chemical applied will need to be increased.

10.4 Factors Affecting Plant Height

There are genetic, environmental and cultural factors which affect plant growth. These factors cause variation in the amount of BONZI Plant Growth Regulator needed to provide desired plant height.

Genetics: It is well known that different plant genera influence varied response to plant growth regulators. Even within the same plant species, variable plant height control with BONZI Plant Growth Regulator may occur. More vigorous, tall growing cultivars will require more chemical than less vigorous or short cultivars. Bedding plant growers should make note of the differences in cultivar response to BONZI Plant Growth Regulator so that height control can be improved in subsequent years.

Cultural practices: Any practices such as growing plant at close spacings, using high fertilizer levels and optimum watering (subirrigation) will require more chemical for desired height control.

Environmental Factors: During high light periods when plant growth is accelerated, a higher dosage or repeated applications of BONZI Plant Growth Regulator is needed for good height control whereas in low light periods the amount of chemical applied can be reduced. Also, temperature can be the overriding factor in determining the amount of BONZI Plant Growth Regulator needed because stem elongation increases with increases in temperature. Since high temperature usually coincides with high light conditions growers should consider the use of multiple BONZI Plant Growth Regulator applications or the use of higher concentration of the chemical.

11.0 CROP USE DIRECTIONS

11.1 Suggested BONZI Application for Bedding Plants

CROPS	APPLICATION METHOD	RATE RANGE
Begonia Cellpack	Spray	1-2 ppm at 200 mL/m ²
Celosia Cellpack	Spray	20-40 ppm at 200 mL/m ²
Coleus Cellpack	Spray	20-40 ppm at 200 mL/m ²
Geranium 10 cm pot	Spray	5-15 ppm at 200 mL/m ²
Impatiens Plugs Impatiens Cellpack	Spray Spray	1-6 ppm at 150 mL/m ² 6-12 ppm at 150 mL/m ²
Petunia Cellpack Petunia 10 cm pot	Spray Drench	30-60 ppm at 200 mL/m ² 0.5-1.0 ppm at 60 mL/pot

Salvia Cellpack	Spray	20-40 ppm at 200 mL/m ²
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* **Spray Application: 200 mL/m² = 2 L/10 m²**

CAUTION: BONZI Plant Growth Regulator is extremely active at very low concentrations. Plant response to a BONZI Plant Growth Regulator application varies widely depending on growing conditions and species, and may also vary between cultivars. It is recommended that growers test with lower concentrations on all cultivars to obtain the optimum rate for a given cultivar and growing conditions to avoid over stunting or plant damage.

* Drench Application: suggested volume by pot size.

Pot size (cm)	Drench Volume (mL)
10	60-80
15	120-140
20	180-200

11.2 Suggested BONZI Application for Poinsettias

Spray applications of BONZI will effectively control height of poinsettias. Recommended rates are 10 to 30 ppm.

Single applications may be made using the higher recommended rates. However, sequential applications initially using lower rates will provide better safety against overly retarded plants. For subsequent applications use 50 to 100% of the initial rate, depending on plant vigor at the time of reapplication.

Applications to slower growing varieties in cool climates should begin when axillary shoots are 5 to 7.5 cm long. For vigorous growing varieties in warm climates, applications should begin when axillary shoots are 4 to 5 cm long. Sequential applications may be applied 1 to 3 times, at 7- to 14-day intervals, depending on plant vigor/growth.

Seasonably late applications of BONZI will reduce plant height, but, like most PGR's they may also reduce bract size. To prevent this, BONZI should not be applied as a spray after initiation of short days. As a guide, do not apply BONZI sprays after October 1.

Drench applications are also an effective means of height control, and are most commonly used for late season application to plants which have initiated bracts or have reached or are near their desired marketing size.

Recommended rates are in the range of 0.25 to 3 ppm, based on a drench volume of 120 mL of diluted solution per 15 cm pot. See DRENCH APPLICATIONS section for directions on making the diluted solution.

Application during early production should be made when axillary shoots are 4 to 7.5 cm long. Early drenches of BONZI may be made prior to or sequential to other PGR applications. As a guide, apply BONZI at 0.05 ppm to 0.20 ppm. Vigorous Poinsettia varieties may require higher

concentrations. When BONZI is applied at low rates, bract formation and size are less affected. Subsequent growth may require additional drench applications every 10 to 21 days.

Seasonably late applications are sometimes required after initiation of short, days to prevent late stretch and, unlike spray applications, can be safely applied with little to no effect on bract size.

NOTE: Optimum BONZI rates and timings for both spray and drench applications to poinsettias will vary depending on the variety.

11.3 BONZI Plant Growth Regulator Dilutions

Desired ppm	mL per Litre	mL per 10 Litres	mL per 100 Litres
0.05	0.0125	0.125	1.25
0.1	0.025	0.25	2.5
0.2	0.05	0.50	5.0
0.5	0.125	1.25	12.5
1	0.25	2.5	25
2	0.50	5.0	50
3	0.75	7.5	75
4	1.00	10.0	100
5	1.25	12.5	125
6	1.50	15.0	150
7	1.75	17.5	175
8	2.00	20.0	200
9	2.25	22.5	225
10	2.50	25.0	250
15	3.75	37.5	375
20	5.00	50.0	500
25	6.25	62.5	625
30	7.50	75.0	750
40	10.00	100.0	1,000
50	12.50	125.0	1,250