

10182-92-92

ACCEPTED

JUL - 1 1986

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 10182-92

BONZI™
ORNAMENTAL GROWTH REGULATOR

ICI Americas Inc.
Agricultural Chemical Division
Parsippany, New Jersey 07054

PRECAUTIONARY STATEMENTS

CAUTION

Harmful if absorbed through skin. Avoid contact with skin or clothing. Wear protective clothing, long sleeved shirt and rubber gloves. Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling.

STATEMENT OF PRACTICAL TREATMENT: IF ON SKIN, wash with plenty of soap and water.

For 24-hour emergency assistance, call ICI Americas Inc. 302/676-3000.

ENVIRONMENTAL HAZARDS: Do not contaminate water by cleaning of equipment or disposal of wastes.

PHYSICAL OR CHEMICAL HAZARDS: Do not use or store near heat or open flame.

Directions For Use: Refer to Supplemental Tag for directions for use.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not reuse empty containers. Do not contaminate water, food or feed by storage or disposal.

STORAGE: Keep container closed when not in use. 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: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Plastic Containers: Triple rinse for equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. If burned stay out of smoke.

EPA Est. No: 10182-NC-01
EPA Reg. No: 10182-92

Net Contents:
1 QUART
Batch No:

BONZI™
ORNAMENTAL GROWTH REGULATOR

ACTIVE INGREDIENT

Pactobutrolol	
(1S,3R,5R)-2-(4-chlorophenyl)-1-methyl-1,3-dimethyl-1H-1,2,4-triazole-1-ethanol	0.4%
INERT INGREDIENTS	99.6%
TOTAL	100.0%

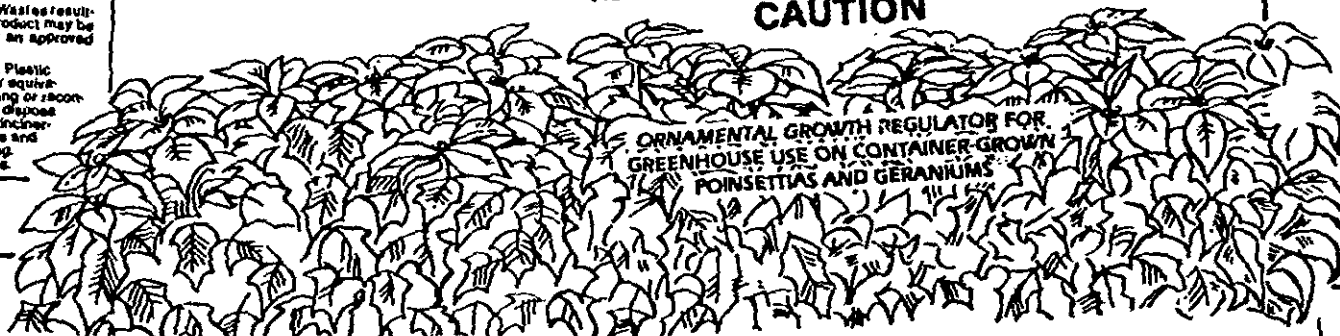
BONZI contains 0.12 g active ingredient per fluid ounce.

See Back Panel for Additional Precautionary Statements and Statement of Practical Treatment

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

ORNAMENTAL GROWTH REGULATOR FOR
GREENHOUSE USE ON CONTAINER-GROWN
POINSETTIAS AND GERANIUMS

ACD 862-001R1 C/F



KEEP OUT OF REACH
OF CHILDREN

CAUTION

ACTIVE INGREDIENT

Paclobutrazol

(±)(R*,R*)-β-[(4-chlorophenyl)methyl]-
α-(1,1-dimethylethyl)-

1H-1,2,4-triazole-1-ethanol 0.4%

INERT INGREDIENTS 99.6%

TOTAL 100.0%

BONZI contains 0.12 g active ingredient per fluid
ounce.

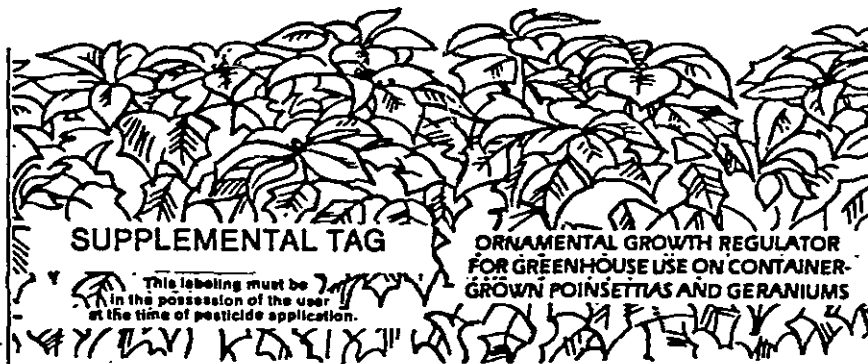
SEE CONTAINER
LABEL FOR
PRECAUTIONARY
STATEMENTS
AND STATEMENT OF
PRACTICAL
TREATMENT

BONZI™
ORNAMENTAL GROWTH REGULATOR

EPA Reg. No.: 10182-92



ICI Americas Inc.
Agricultural Chemicals Division
Wilmington, Delaware 19837



SUPPLEMENTAL TAG

This labeling must be
in the possession of the user
at the time of pesticide application.

ORNAMENTAL GROWTH REGULATOR
FOR GREENHOUSE USE ON CONTAINER-
GROWN POINSETTIAS AND GERANIUMS

100% REPRO



DIRECTIONS FOR USE

Read all label directions carefully before use.

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

GENERAL INFORMATION

GERANIUMS

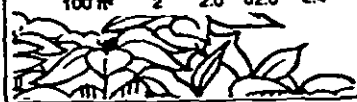
BONZI is a plant growth regulator for greenhouse use on container-grown geraniums. Use of BONZI effectively reduces internode elongation, resulting in more desirable compact plants. When used as directed, BONZI produces no phytotoxic effects. Desired height control is usually obtained with a single BONZI foliar spray application.

APPLICATION

Dilute BONZI with water according to the table below. The spray solution must be uniformly distributed within the treatment area.

Treat geraniums as needed for desired height control. After application, watering should be directed below treated foliage for the balance of the crop-finishing time.

Stock Area to be Treated	Application Volume (fl oz)	Dilution Ratio (fl oz BONZI to Water)	Treatment Rate (oz a/f/ft ²)	Spray Concentration (ppm a/f)
100 ft ²	2	0.5	63.5	0.80
100 ft ²	2	1.0	63.0	1.2
100 ft ²	2	2.0	62.0	2.4
				31.3
				62.6
				125.0



STORAGE AND DISPOSAL

PROHIBITIONS: Do not reuse empty containers. Do not contaminate water, food or feed by storage or disposal.

STORAGE: Keep container closed when not in use. 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: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE TO BUYER AND USER: Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Seller and Buyer assumes the risk of any such use. SELLER DISCLAIMS ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT AND SELLER'S SOLE LIABILITY AND BUYER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE.

ACD 862-002 R1 C/F

100% REPRO

POINSETTIAS

GENERAL INFORMATION

BONZI is a plant growth regulator for ^{greenhouse} use on container-grown poinsettias. Use of BONZI effectively reduces internode elongation, resulting in more desirable compact plants. When used as directed, BONZI produces no phytotoxic effects. Desired height control is usually obtained with a single BONZI foliar spray or drench application. Dual applications, however, may be desirable under certain conditions (See Section I).

Users should note that poinsettia cultivars vary in their rate response to BONZI (See Table 1). Short slow growing types require a lower rate than fast tall growing types. Overly stunted plants can result from rates that are too high.

I. SPRAY APPLICATIONS

In spray applications, BONZI 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, nonuniform height control may result. Addition of a wetting agent for spray applications is not necessary.

Overhead irrigation or rain 30 minutes after spray applications does not reduce the effectiveness of BONZI.

BONZI may be applied at any time of the day without danger of burning leaves or causing chlorosis.

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

Bench Spray Method - Mix the spray solution with the amounts of BONZI and water shown in Table 2 to obtain desired concentration. Spray this solution uniformly over the plants at a rate of 2 quarts per 100 square feet of bench space. This method is commonly used for plants in small containers and plants at a close spacing.

Individual Plant Method - Mix the spray solution to obtain the desired concentration of BONZI in ppm or amount per plant. Apply the spray to individual plants, insuring that plants are treated with a uniform amount of spray to achieve good coverage of stems. This volume varies with plant size and type; this volume is about 20 ml per plant for poinsettias in 6-inch pots. This method saves chemical when plants are at a wider spacing.

DUAL APPLICATIONS: Do not use a series of two sprays of one half the recommended rate. Growers in warmer climates (Florida) may use the full recommended rate for the 1st application followed by one half the initial rate. Growers in cooler climates (Northern United States) should initially use one half the recommended label rate followed by 50% of the initial application.

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

WARNING:

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

II. **DRENCH APPLICATIONS**

Application of BONZI to the medium will provide good control of plant height. BONZI is readily absorbed by plant roots. In drench applications the amount of chemical applied (number of milligrams per pot) is more important than the volume of water used. Drench solutions should be prepared as described in Table 3 to deliver a desired number of milligrams per pot. For 6-inch pots it is recommended that BONZI be applied in a volume of 4 fluid ounces (120 ml) of solution per pot. One gallon of solution will then treat 31.5 pots.

DUAL APPLICATIONS: Do not use a series of two applications of one half the recommended rate. Growers in warmer climates (Florida) may use the full recommended rate for the 1st application followed by one half the initial rate. Growers in cooler climates (Northern United States) should initially use one half the recommended label rate followed by 50% of the initial application.

PLEASE NOTE:

- Media containing pine bark will reduce the effectiveness of BONZI applied as a drench and amounts applied will need to be increased where pine bark is used.
- Extrapolating the recommendation for 6-inch pots to smaller or larger containers may not be correct for total drench solution. A suitable volume is enough drench solution applied to achieve total run through of no more than 10%.

WARNING:

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

III. FACTORS AFFECTING PLANT HEIGHT

SEVERAL ENVIRONMENTAL FACTORS AND CULTURAL PRACTICES AFFECT PLANT GROWTH. This causes variation in the amount of BONZI needed to provide desired plant height under different growing situations.

Cultural practices which increase the amount of BONZI needed include growing at close spacing or in smaller pots and using high water and fertilizer levels. For a given plant species, the more vigorous varieties require more chemical than do the naturally short varieties. Growers should consult with plant and seed suppliers for vigor and other growth characteristics for newly released varieties. For poinsettias, the greater the time between planting and flower initiation or between pinching and flower initiation the taller final plant height will be.

Temperature can be the overriding factor in determining amount of BONZI needed. Stem elongation increases with increases in temperatures. Therefore, growers in warm climates need to use higher rates or multiple applications compared to those in cooler climates. Also, optimum rates can change with time of year with higher rates needed during warmer months.

Like most PGRs seasonably late applications of BONZI may reduce plant height, but may also reduce bract size. Optimum BONZI rates will vary with different growers and will depend on their individual desired final plant height and growing conditions. Growers should conduct trials with small numbers of plants using the recommended rates to determine the optimum rate for their situation.

IV. WHEN TO APPLY

Apply to poinsettias when laterals are 1 1/2 to 2 inches long for foliar sprays or at 3-4 inches for drenches or sprays in situations where plants will naturally be short.

PLEASE NOTE: Growers who are concerned about achieving uniform coverage with singular applications may desire to use the split application as described in the recommendation above.

V. RECOMMENDED RATES

The following are the general recommended rates for poinsettias. Refer to TABLE 1 for recommendations for foliar applications to specific poinsettia varieties. Refer to TABLES 2 and 3 for recommendations for BONZI spray and drench dilutions for use on poinsettias.

Species	Fl. oz. BONZI per gal. H ₂ O	Spray (ppm)	Drench (mg/pot)
Poinsettia	1.5 - 3.2	46.9 - 100	0.125 - 0.25

TABLE 1
Foliar Application Recommendations*

<u>Poinsettia Variety</u>	<u>Fl Oz per gal.</u> <u>BONZI</u>
Annette Hegg Lady	1.5
Annette Hegg Diva	1.5
Annette Hegg Brilliant	
Diamond	1.5
Annette Hegg Dark Red	1.5
Annette Hegg Top White	2
Gutbier V-14 Glory	2
Gutbier V-14 White	2
Gutbier V-14 Dark Pink	2
EckesPoint	2

*For foliar spray application, BONZI should be mixed with water to produce a final spray volume of 2 quarts/100 square feet of bench space and sprayed uniformly across the area.

TABLE 2
BONZI Spray Dilutions

<u>ppm</u>	<u>fl. oz. per</u> <u>gallon</u>	<u>ml per</u> <u>gallon</u>	<u>ml per</u> <u>liter</u>	<u>mg in*</u> <u>20 ml</u>
10	0.32	9.5	2.5	0.2
25	0.8	24	6.3	0.5
31.25	1.0	30	7.8	0.625
46.9	1.5	44	11.7	0.9
50	1.6	47	12.5	1.0
62.5	2.0	59	15.5	1.25
75	2.4	71	18.8	1.5
93.75	3.0	89	23.4	1.8
100	3.2	95	25.0	2.0
150	4.8	142	37.5	3.0
200	6.4	189	50.0	4.0

*In the individual plant method for spray application about 20 ml of spray per pot is needed for poinsettias in 6" pots.

TABLE 3
BONZI Drench Dilutions*

<u>mg/6" pot</u>	<u>fl oz per</u> <u>gallon</u>	<u>ml per</u> <u>gallon</u>	<u>ml per</u> <u>liter</u>
0.125	0.03	0.1	0.26
0.168	0.05	1.5	0.39
0.25	0.07	2.0	0.52

*4 fl. oz. (120 ml) of final dilution should be applied per 6-inch pot. One gallon of BONZI will treat 31.5 pots.