

DowElanco ID 5987

**A-REST SOLUTION
PLANT GROWTH REGULATOR
Net Contents 1 Quart**

A PLANT GROWTH REGULATOR FOR HEIGHT CONTROL IN:

**CONTAINER-GROWN ORNAMENTALS
FOLIAGE PLANTS
BEDDING PLANTS**

Active Ingredient:

ancymidol*: [~~1~~-cyclopropyl]-4-(p-methoxyphenol)-
5-pyrimidinemethanone].....0.0264%

Inert Ingredients.....99.9736%

Contains 250 mg of active ingredient per quart

*A-Rest(R) - (ancymidol, DowElanco)

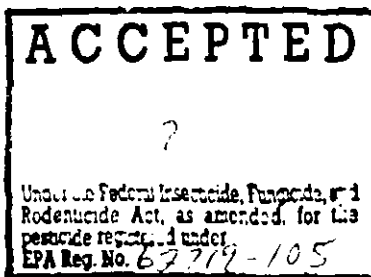
KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panel for additional precautionary statements

EPA Reg. No. 62719-105
EPA Est. No. XXX-XX-XX
FN 7086

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BEST AVAILABLE COPY

PRECAUTIONARY STATEMENTS

KEEP OUT OF REACH OF CHILDREN

Hazards to Humans and Domestic Animals

CAUTION:

Avoid breathing spray mist and contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. See "DIRECTIONS FOR USE" for additional farm worker safety requirements under the heading "NOTE TO USER - REENTRY".

First Aid

If swallowed: Do not induce vomiting. Call a physician or poison control center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

If in eyes: Flush eyes with plenty of water. Get medical attention if irritation develops.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

If inhaled: Remove individual to fresh air. If breathing difficulty occurs, get medical attention.

ENVIRONMENTAL HAZARDS

Do not contaminate water or wetlands. Do not contaminate water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

Storage: Avoid freezing. Store in original container only. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

Pesticide Disposal: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

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

DIRECTIONS FOR USE

Read all directions carefully before applying this product.

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

NOTE TO USER - REENTRY

Because certain states may require more restrictive reentry intervals for various crops treated with product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. (Indicate specific oral warnings which inform workers or areas or fields that may not be entered with specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure.) When oral warnings are given, warnings shall be given in a language customarily understood by workers. Written warnings must include the following information: CAUTION. Area treated with A-Rest on (date of application). Do not enter without protective clothing until sprays have dried. In case of eye contact, flush eyes with plenty of water. Get medical attention if eye irritation develops. If case of skin contact, wash with plenty of soap and water. Get medical attention if skin irritation develops. If inhaled and discomfort occurs, move individual to fresh air. Get medical attention if breathing difficulty occurs.

GENERAL INFORMATION

A-Rest is a plant growth regulator for use on container grown bedding plants, flowers and foliage plants. A-Rest produces a more compact growth form by suppressing internode elongation. Growth regulation effects produced by A-Rest are the result of inhibition of gibberellin biosynthesis.

GENERAL USE PRECAUTIONS

Use A-Rest only on approved plant species grown under optimum conditions. A-Rest should not be considered a substitute for ideal light, moisture and temperature conditions. The following use precautions should be noted when using A-Rest:

- Do not use wetting agents in combination with A-Rest as crop injury may occur.
- A-Rest treated plants may require less water; adjust irrigation accordingly.
- Avoid uneven application or over-application to prevent irregular or excessive growth control.
- Use of highest recommended application rates may cause a slight delay (two to five days) in flower development.
- Use of pine bark or similar additives in potting soil mix may reduce the effectiveness of A-Rest soil drench treatments.
- Do not allow spray drift to contact nontarget plants.

Chemigation: Do not apply this product through any type of irrigation system.

FACTORS AFFECTING RESPONSE TO A-REST:

Plants absorb A-Rest through both foliage and roots. A-Rest reaching the soil surface as runoff from foliar treatments or overspray will cause additional growth regulation from root uptake. For this reason, application rates should be based on active ingredient per pot, or active ingredient per unit of bench area treated.

The amount of A-Rest required for an optimum growth response depends on pot size, stage of growth, method of application, season, and varietal response. Species specific cultural practices such as watering, potting media, fertilization and temperature will also affect the growth response to a given dosage. Therefore, growers should establish specific application rates based on small scale treatments under actual use conditions and keep records as to plant species and variety sensitivity.

The following rate and concentration ranges are recommended for different treatment methods:

1. Bench area sprays - 0.5 to 2.5 mg per sq ft
2. Soil drench - 1 to 4 parts per million (ppm)
3. Foliar application - 26 to 132 (ppm)

Table I provides directions for dilution of A-Rest for Bench Area Sprays and foliar sprays
Table II provides directions for dilution of soil drench treatments.

Effect of Plant/Container Size:

Response to A-Rest is affected by plant size at the time of treatment. Smaller plants are more strongly affected by a given dose of A-Rest. Plants grown in smaller containers also generally require a lower dosage to produce a given level of growth suppression.

Split Application:

Split applications under certain conditions allow greater treatment flexibility. Half of the usual dosage can be applied at an early growth stage. An additional treatment can be applied later if additional growth control needed.

PLANT TREATMENT METHODS

Bench Area Sprays:

Dilute A-Rest to the required concentration using the method described in Table 1. Apply uniformly at a rate of 1 gallon of spray per 200 sq ft of bench area. Use the application rate recommended in the "PLANT TREATMENT RECOMMENDATIONS" section of this label.

Soil Drench Treatments:

Soil drench treatments provide treatment accuracy for consistently uniform results. Dilute A-Rest to the required concentration using the method described in Table 2. Potting media should be moist, but not wet at the time of treatment. Best results are obtained when moisture content allows the drench treatment to become well distributed and retained entirely within the pot. Response may be variable if part of the treatment is lost to flow-through or if soil is too dry to allow for even distribution of the treatment.

Generally, a volume of 2 fluid ounces (60 ml) is required to treat a 4-inch pot or 4 fluid ounces (120 ml) for treatment of a six inch pot. Apply soil drench treatments at the application concentration (ppm) recommended in the "PLANT TREATMENT RECOMMENDATIONS" section of this label.

Foliar Spray Application:

Prepare foliar sprays using the dilution method described in Table 1. Apply spray uniformly to entire plant to point of runoff as indicated in the "PLANT TREATMENT RECOMMENDATIONS" section of this label.

Table 1. Spray Preparation.

Bench Area Spray ¹ / (mg/sq ft)	Foliar Spray Concentration (ppm)	Amount of A-Rest per Gallon of Finished Spray ² / (fluid ounces)
0.50	26	12.8
0.63	33	16.0
0.75	40	19.2
1.0	53	25.6
1.25	66	32.0
1.5	79	38.4
2.0	106	51.2
2.5	132	64.0

1. Application rates for bench area sprays are based on an application volume of 1 gallon per 200 sq ft of bench area regardless of plant spacing. If a different application volume is used, adjust dilution to maintain the desired dosage rate per sq ft.
2. When mixing, add A-Rest to a partially filled spray tank and then dilute to the finished spray volume with water. A-Rest may be measured in fluid ounces or milliliters (ml) (1 fluid ounce = 30 ml).

Table 2. Soil Drench Preparation.

Required Soil Drench Concentration (ppm)	Amount of A-Rest Per Gallon of Soil Drench Solution ¹ / (fluid ounces)	Active Ingredient per Pot at Drench Vol. Indicated ¹ / -----	
		4-inch pot (2 oz drench) (mg/pot)	6-inch pot (4 oz drench) (mg/pot)
1	0.5	0.06	0.12
2	1.0	0.12	0.25
3	1.5	0.18	0.36
4	2.0	0.25	0.5

1. When mixing, add A-Rest to a partially filled spray tank and then dilute to the finished spray volume with water. A-Rest or soil drench solution may be measured in fluid ounces or milliliters (ml) (1 fluid ounce = 30 ml).

PLANT TREATMENT RECOMMENDATIONS

ORNAMENTAL FOLIAGE AND BEDDING PLANTS LISTED IN THE TABLE BELOW MAY BE TREATED WITH A-REST
 ALTERNATIVE TREATMENT METHODS ARE INDICATED AS FOLLOWS: A = BENCH AREA SPRAY; F = FOLIAR;
 SD = SOIL DRENCH; (SUI) = SEE SPECIAL USE INSTRUCTIONS.

Plant Species	Alternative Treatment Methods
Ageratum	A
Alternanthera	A
Azalea	F (SUI)
Balsam	A
Bleeding Heart Glorybower	SD (SUI)
Blue Bell	A
Celosia	A
China aster	A
Chrysanthemum	A, SD (SUI)
Cleome	A
Clematis	A, SD
Coleus	A
Columbine	A, SD (SUI)
Cornflower	A
Dahlia	SD (SUI)
Delphinium	A, SD (SUI)
Dianthus	A
Dracaena	A
Easter Lily	A, SD (SUI)
Fatshedera	A, SD (SUI)
Gardenia	A (SUI)
Geranium	A
Gerbera daisy	A
Green Gold Nephthytis	A
Green Nephthytis	A
Holly	A, SD (SUI)
Iberis	A, SD
Liatris	A, SD (SUI)
Marigold	A
Monstera	A
Petunia	A
Philodendron	A
Pilea	A
Poinsetta	SD (SUI)
Pothos	A
Purple passion	A
Salvia	A
Scheffelera	A, SD
Tulip	SD (SUI)
Vinca	A
Wandering Jew	A
Zinnia	A

Application to Foliage and Bedding Plants:

Application rates recommended in the "PLANT TREATMENT RECOMMENDATIONS" section are based on research results and reported grower experience. However, since many factors affect the response to A-Rest, growers should establish specific application rates based on small scale treatments under actual use conditions and keep records as to plant species and varietal sensitivity.

Bench Area Spray:

Dilute A-Rest according to directions in Table 1 and apply at a rate of 0.5 to 2.5 mg per square foot of bench area (26 to 132 ppm). A base rate of 1.0 mg per sq ft (53 ppm) is recommended. Growers should establish specific application rates based on small scale treatments under actual use conditions and keep records as to plant species and variety sensitivity. Apply spray solution uniformly over the treatment area at a rate of 1 gallon per 200 sq. ft. regardless of plant spacing. Apply to foliage and bedding plants when well rooted, 2 to 10 weeks after planting. Apply to rooted cuttings when 1 1/2 to 2 inches of growth has occurred, either in height or width. Use this treatment where recommended in the "PLANT TREATMENT RECOMMENDATIONS" section of this label.

Soil Drench Treatments:

Apply to uniformly moist potting soil. Apply at a solution concentration of 1 to 4 ppm at the recommended volume per pot (see Table 2). Use this treatment method where indicated for a given species in the "PLANT TREATMENT RECOMMENDATIONS" section of this label. Rates for a specific plant variety and set of use conditions should be determined in small scale treatments prior to large scale applications.

Foliar Sprays:

Apply uniformly to the point of runoff according to directions in the "PLANT TREATMENT RECOMMENDATIONS" section of this label.

SPECIAL USE INSTRUCTIONS

Azalea

Foliar Spray: Apply after plants have been trimmed. Prepare foliar spray according to directions in Table 1. Apply at a base rate of 53 ppm and thoroughly cover all foliage.

Bleeding Heart Glorybower

Bench Area Spray: Apply at 1.25 to 2.5 mg per sq ft (66 to 132 ppm) when plants are well rooted and have 6-8 inches of new growth, but prior to initiation of flowering.

Soil Drench: Apply to uniformly moist soil about 3 weeks after planting at a concentration of 2 to 4 ppm (0.25 to 0.5 mg per 8-inch pot).

Chrysanthemum

Bench Area Spray: A base rate of 0.5 mg per sq ft (26 ppm) is recommended for sensitive varieties and 1.0 mg per sq ft (53 ppm) for all others. Spray sensitive varieties when plants have reached the desired height. For less sensitive varieties, spray when the axillary shoots following the pinch are 2 1/2 to 3 inches long. If a second application is required, it should be made two weeks after the first.

Soil Drench: Apply at a concentration of 2 to 4 ppm which corresponds to a rate of 0.25 to 0.5 mg per 8-inch pot (see Table 2). For optimum results, apply to uniformly moist potting soil when plants are 2 to 6 inches in height (approximately two weeks following pinch).

Columbine (Aquilegia)

Bench Area Spray: Apply at a rate of 1.25 to 2.5 mg per sq ft (66 to 132 ppm) when plants are well rooted but prior to initiation of flowering.

Dahlia

Soil Drench: Apply at a concentration of 2 to 4 ppm which corresponds to a rate of 0.25 to 0.5 mg per 6-inch pot (see table 2). Apply to uniformly moist potting soil approximately 2 weeks after planting. Dahlia cultivars, Siemen, Doombosch and Honey may not respond satisfactorily to A-Rest treatment.

Delphinium

Bench Area Spray: Apply at a rate of 0.63 to 2.5 mg per sq ft (33 to 132 ppm) when plants are well rooted but prior to initiation of flowering.

Soil Drench: Apply at a concentration of 2 to 4 ppm which corresponds to a rate of 0.25 to 0.5 mg per 6-inch pot (see table 2). Apply to uniformly moist potting soil.

Easter Lilly

Bench Area Spray: Apply to plants 2 to 6 inches in height. Apply in a rate range of 0.63 to 1.25 mg per square foot (33 to 66 ppm). A base rate of 1.0 mg per sq ft (53 ppm) is recommended on "Ace" and "Nellie White" varieties. A rate of 1.25 to 2.5 mg per sq ft (66 to 132 ppm) is recommended on the Japanese Georgia variety. A second application, if required, should be made two weeks after the first.

Soil Drench: Apply at a concentration of 2 to 4 ppm which corresponds to a rate of 0.25 to 0.5 mg per 6-inch pot (see table 2). Apply to uniformly moist potting soil. Plants may be treated from emergence to 12 inches in height. For optimum results, treat when plants are from 2 to 6 inches in height.

Fatshedera

Bench Area Spray: Apply at a rate of 1.25 to 2.5 mg per sq ft (66 to 132 ppm) when plants are well rooted and actively growing.

Soil Drench: Apply at a concentration of 2 to 4 ppm which corresponds to a rate of 0.25 to 0.5 mg per 6-inch pot (see table 2). Apply to uniformly moist potting soil.

Gardenia

Bench Area Spray: A base rate of 1.0 mg per sq ft (53 ppm) is recommended. For optimum results, apply A-Rest to plants 4 to 6 inches in height.

Holly

Foliar Spray: Apply at a base rate of 66 ppm after plants have been trimmed. Thoroughly cover all foliage.

Soil Drench: Apply at a concentration of 2 to 4 ppm which corresponds to a rate of 0.25 to 0.5 mg per 6-inch pot (see table 2). Apply to uniformly moist potting soil. Treat after plants have been trimmed.

Liatris

Soil Drench: Apply at a rate of 2 to 4 ppm (0.25 to 0.5 mg per 6-inch pot). Apply to uniformly moist potting soil.

Poinsetta

Soil Drench: Apply at a concentration of 2 to 4 ppm which corresponds to a rate of 0.25 to 0.5 mg per 6-inch pot (see table 2). Apply to uniformly moist potting soil. Treat plants at pinch to 4 weeks after pinch, or 8 to 12 weeks before finishing.

Tulip

Soil Drench: Apply at a concentration of 1 to 4 ppm which corresponds to a rate of 0.12 to 0.5 mg per 6-inch pot (see table 2). A base concentration of 2 ppm (0.25 mg per 6-inch pot) is recommended. Apply to uniformly moist potting soil from one week before to two days after forcing begins. The rate used should be established in small scale treatments according to variety used and the final height desired for market.

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A-Rest Full Label
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