



PM22 241-74

1 of 8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

AUG 5 1993

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Ms. Zareen Ahmed  
Product Registration Manager  
U. S. Regulatory Affairs  
American Cyanamid Company  
Agricultural Research Division  
P.O. Box 400  
Princeton, NJ 08543-0400

Dear Ms. Ahmed:

SUBJECT: Proposed Amendment Containing Minor Label Changes  
CYCOCEL® Plant Growth Regulant  
EPA Reg. No. 241-74  
Your Letter Dated 05/19/93

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below. Five copies of the finished labeling must be submitted prior to releasing the product for shipment.

1. Place the STORAGE AND DISPOSAL section under the DIRECTIONS FOR USE section.
2. This acceptance of your label does not relieve you of any obligation to comply with the Worker Protection Standard (WPS). Under the WPS labeling regulations at 40 CFR part 156, subpart K, §156.200(c)(3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

If you have any questions, please contact Terri Stowe of my staff at (703) 305 - 6117.

Sincerely yours,

/s/

Cynthia Giles-Parker  
Product Manager (22)  
Fungicide-Herbicide Branch  
Registration Division (H7505C)

2 of 8

**CYCOCEL®**

**PLANT GROWTH REGULANT**

**FOR USE ON AZALEAS, POINSETTIAS, GERANIUMS AND HIBISCUS**

**Active Ingredient:**

chlormequat (2-chloroethyl)trimethylammonium chloride..... 11.8%

Inert Ingredients..... 88.2%

**TOTAL** 100.0%

(1 gallon contains 1 pound (2-chloroethyl)trimethylammonium chloride)

EPA Reg. No. 241-74-AA

EPA Est. No. 5905-AR-01

**KEEP OUT OF REACH OF CHILDREN  
CAUTION!/PRECAUCION!**

---

**PRECAUCION AL USUARIO:** Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

---

In case of emergency endangering life or property involving this product, call collect, day or night, Area Code 201-835-3100.

**ACCEPTED**  
with **COMMENTS**  
in EPA Letter Dated:  
See Additional Precautionary Statements Inside. See Directions For Use Inside.

8/5/93

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

241-74

American Cyanamid Company  
Agricultural Products Division  
Vegetation and Pest Control  
Wayne, NJ 07470 ©1993

Net Contents: 1 Gallon

®Registered Trademark of American Cyanamid Company

3048

**STATEMENT OF PRACTICAL TREATMENT**

**If Swallowed:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of the throat with a finger. DO NOT induce vomiting or give anything by mouth to an unconscious person. Avoid alcohol.

**If in Eyes:** Flush eyes with plenty of water. Call a physician if irritation persists.

**If on Skin:** Flush with plenty of water. Get medical attention if irritation persists.

**Note to physician:** The use of Atropine is contraindicated.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION!**

Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**ENVIRONMENTAL HAZARDS**

This product is toxic to wildlife. Keep out of lakes, streams and ponds. Do not contaminate water when disposing of equipment washwaters.

**STORAGE AND DISPOSAL**

**DO NOT STORE BELOW FREEZING TEMPERATURES.**

**Storage:** DO NOT contaminate water, food or feed by storage.

**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:** 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**

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

DO NOT apply this product through any type of irrigation system. Observe all Precautionary Statements, Limitations, and Application instructions on the CYCOCEL plant growth regulant package label. Do not reenter sprayed areas without appropriate protective clothing until foliage is dry.

### AZALEAS

OBTAIN EXPERIENCE IN SMALL-SCALE TRIALS BEFORE EXTENSIVE USE OF EACH VARIETY.

1. TO PRODUCE EARLY BUDDED, COMPACT, SYMMETRICAL PLANTS - Apply as a uniform foliar spray at the rate of 2 to 3 ounces CYCOCEL per gallon of water in early July when regrowth following pinching or shearing is 3/4 to 1 inch long. Repeat application 1 week later. Use the higher rate in the South. In conjunction with optimum cultural practices, this treatment has induced development of multiple buds on many varieties forced for early blooming in the greenhouse.

Do not apply CYCOCEL on Dawn or other Pericat varieties as leaf injury may result. Over treatment with CYCOCEL may cause temporary leaf yellowing of some varieties forced for early blooming in the greenhouse. Experience indicates that such yellowing usually disappears during storage.

CYCOCEL treatment is not a substitute for any cultural practice (light, watering, fertilizer, temperature). Optimum cultural practices for greenhouse forcing of high quality plants vary with variety and geographical location. Consult your experiment station horticulturist for proper timing and duration of light intensity, day length, cool storage and greenhouse conditions for forcing early blooming azaleas. CYCOCEL may slightly delay flowering of some varieties exposed to certain cool storage conditions.

2. TO CONTROL UNDESIRABLE VEGETATIVE GROWTH AND PREVENT LATE SEASON GROWTH IN NURSERY STOCK - When plants have reached desired head size following pinching or shearing, apply as a uniform foliar spray at the rate of 3 ounces CYCOCEL per gallon of water. Repeat application 1 week later.

Apply spray to well watered, vigorously growing plants.

Foliage should be dry at time of treatment.

Repeat application if rain occurs or foliage is washed within 24 hours after treatment.

The compatibility of CYCOCEL when mixed with insecticides, acaricides, fungicides and fertilizers is not known. Therefore, do not use CYCOCEL in combination with these materials.

### SOIL DRENCHES FOR POINSETTIAS

CYCOCEL is recommended for use on all poinsettia varieties. Plants treated with CYCOCEL are more compact, with stronger stems, and deeper green foliage.

Dilute CYCOCEL by adding 1 quart to 10 gallons of water. Apply the diluted solution as a uniform soil drench using the amounts listed in the table.

<u>Pot Diameter (Inches)</u>	<u>Fluid Ounces of Dilute Solution Per Pot</u>	<u>1 Quart of CYCOCEL Treats (Number of Pots)</u>
2 1/4 to 3*	2	640
4	3	425
5	4	300
6	6	200
8	8	150

\*Two applications will be necessary to apply the recommended volume in 2 1/4 inch pots.

Plants should be well rooted and established in the container before treatment. CYCOCEL may be applied to plants rooted directly in pots or when rooted cuttings are established after transplanting. Most effective response is obtained when application is made during periods of active root growth. Treatments during late July and early September are preferred to later applications to produce compact plants on early propagated stock. CYCOCEL may be applied at one of the following stages of growth:

1. In pots or pans, treat after cuttings or rooted cuttings have established a well-developed root system. Do not apply later than September 15 in the North and October 1 in the South.
2. After panning 2 1/4" to 3" stock, treat when active root development is observed. Do not apply later than October 15 in the North and November 1 in the South.
3. After pinching plants or within two weeks thereafter. If 2 1/4" to 3" stock is pinched and shifted to pans, wait until root system is well established before treating. Do not apply later than October 15 in the North and November 1 in the South.

Do not apply CYCOCEL after the dates recommended since over-dwarfing and crinkled bracts may result. Avoid application when plants are pot bound.

Clean application equipment by rinsing thoroughly with water.

**FOLIAR SPRAY ON POINSETTIAS**

CYCOCEL can be used to reduce plant height of poinsettias. Cultivars will vary in their response to CYCOCEL and to different rates of CYCOCEL. Response to CYCOCEL may vary because of geographic location in the United States and greenhouse environmental conditions. Growers should obtain specific recommendations from the cultivar propagator for rates of CYCOCEL to use on each cultivar, and then test the recommended rates of CYCOCEL on small numbers of the cultivars under the grower's greenhouse conditions to determine the best rates and timings to use.

CYCOCEL can be applied as foliar sprays beginning when lateral branches (top to bottom) are 0.5 to 3.0 inches long. Repeat applications might be needed if plants are growing under conditions that favor rapid stem elongation. For natural-season production, foliar applications of CYCOCEL should be completed by October 15. Later applications might reduce bract size. If the crop is being produced for other than the natural season, the last application should be applied no later than 6 weeks prior to flower maturity.

CYCOCEL should be used at rates of 1000 to 3000 ppm in the spray solution, dependent on cultivar and growing conditions. The high concentration should be used only for applications made early in the growing season. Apply as a foliar spray at a volume that will provide complete coverage of all the foliage. The addition of a wetting agent to the spray solution might improve height control, but test the agent to insure that it is not phytotoxic to poinsettias. Avoid spray run-off from the foliage.

Plants should be completely turgid (excellent water balance) at time of foliar spraying. To ensure that condition, plants should be fully watered early in the evening before the day of application. CYCOCEL then should be applied early the next morning when ambient temperatures are lowest. Leaf chlorosis might occur if CYCOCEL is applied to dry plants and/or when greenhouse temperatures are above 75°F.

Low light intensities, greenhouse temperatures above 80°F, lack of good air circulation, crowding of poinsettia plants on the benches, and use of ammonium or urea nitrogen fertilizers can reduce control of plant height by CYCOCEL.

PREPARATION OF CYCOCEL SPRAY SOLUTIONS IN WATER

<u>PPM Desired</u>	<u>FL OZ CYCOCEL Per Gallon</u>	<u>ML CYCOCEL Per Gallon</u>	<u>ML CYCOCEL Per Liter</u>
1000	1.1	31.4	8.3
1500	1.6	47.1	12.5
2000	2.2	62.8	16.7
3000	3.2	94.2	25.0

GERANIUMS

CYCOCEL is recommended to induce early flowering of seed geraniums grown under greenhouse cultural conditions.

Apply CYCOCEL at 1500 ppm using a foliar application. Make two applications of CYCOCEL at 35 and 42 days after seeding. Plants treated with CYCOCEL show a decrease in days to flowering, vegetative height, and an increase in number of breaks.

To mix the spray solution, add the volume of CYCOCEL indicated in the table below to the desired amount of water.

**SPRAY SOLUTION MIXING GUIDE**

<u>SOLUTION VOLUME</u>	<u>AMOUNT OF CYCOCEL TO USE 1500 PPM</u>
1 Gallon	1.6 Fl. Oz.
5 Gallons	8.0 Fl. Oz.
10 Gallons	16.0 Fl. Oz.

**HIBISCUS**

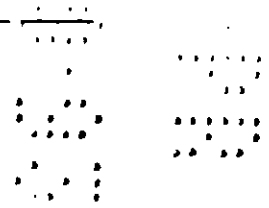
CYCOCEL is recommended to reduce shoot growth and to improve flowering of Hibiscus spp. grown under greenhouse cultural conditions.

Apply CYCOCEL at 460 ppm using a foliar application after pruning to new shoots when they are 4-5 cm long. Make two or three applications 14 days apart. Plants treated with CYCOCEL show a dwarfing of shoot growth and an increase in flowering.

To mix the spray solution, add the volume of CYCOCEL indicated in the table below to the desired amount of water.

**SPRAY SOLUTION MIXING GUIDE**

<u>SOLUTION VOLUME</u>	<u>AMOUNT OF CYCOCEL TO USE 460 PPM</u>
1 Gallon	0.5 Fl. Oz.
5 Gallons	2.5 Fl. Oz.
10 Gallons	5.0 Fl. Oz.



DISCLAIMER

The label instructions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the use or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user. American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above.

Any damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values or any other special or indirect damages.

American Cyanamid Company makes no other express or implied warranty, including any other express or implied warranty of FITNESS or MERCHANTABILITY.

