

125601
SHAUGHNESSY NO.

4
REVIEW NO.

EEB BRANCH REVIEW

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FILE OR REG. NO. 10182-EUP-GA

PETITION OR EXP. PERMIT NO.

DATE OF SUBMISSION October 4, 1984

DATE RECEIVED BY HED January 15, 1985

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RD ACTION CODE/TYPE OF REVIEW 701/EUP

TYPE PRODUCT(S): I, D, H, F, N, R, S Plant Growth Regulator

DATA ACCESSION NO(S).

PRODUCT MANAGER NO. R. Taylor (25)

PRODUCT NAME(S) Bonzi

COMPANY NAME ICI Americas, Inc.

SUBMISSION PURPOSE Proposed EUP for use on ornamentals

SHAUGHNESSY NO. CHEMICAL & FORMULATION S.A.I.

125601

Paclobutrazol

0.42

Experimental Use Permit Review: Bonzi: (paclobutrazol)

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

(EUP outline is attached).

Application is for an experimental use permit to test Bonzi™ plant growth regulator containing paclobutrazol, for container-grown greenhouse ornamental plants. This application changes the previous Bonzi formulation reviewed on January 17, 1984 (EEB review #2) by D. McLane for registration of this use. The percent ai in this formulation is considerably reduced, being

100.2 Formulation Information

(from CSF dated June 22, 1984)

Bonzi™ Plant Growth Regulator

8.73 lb/gal @ 25°C

Active Ingredient:

% by weight

PP333 Technical (Paclobutrazol) 0.42

Inerts Ingredients:

100.3 Application Methods, Directions, Rates

Bonzi™ should be diluted according to the tables listed on the attached label. Foliar and soil drench applications are indicated. This is an indoor greenhouse use. Foliar applications approximately 2 quarts (4.365 lb) per 100 ft². This is approximately 0.01833 lb. ai per 100 ft² of bench surface. Soil drench treatments are applied to pots at 4 fl. oz per 1000 pots.

100.4 Target Organisms

Ageratum, Antirrhinum, Begonia, Celosia, Chrysanthemums,
Cineraria, Coleus, Cosmos, Euphorbia, Fuchsia, Gomphrena,
Gardenia, Hibiscus, Hydrangea, Impatiens, Kalanchoe,

Nephrolepis, Nicotiana, Pelarganium, Petunia,
Plictrunthus, Primula, Rhododendron, Tibouchina, Vinca
and Zebrina.

100.5 Precautionary Labeling

"Environmental Hazards: Do not contaminate water by cleaning of equipment or disposal of wastes."

101 Hazard Assessment

101.1 Discussion

The EUP is for container-grown greenhouse ornamental plants. They are requesting at least 10 lb. a.i. total, which will be used to treat 3,000,000 plants based on one (1) application at an average use rate of 1.5 mg a.i. per plant. Depending on local conditions, the applications will be made from one week following pinching to a few weeks prior to finishing.

Foliar applications are made using broadcast sprays or other conventional handheld equipment. Spray volume is 2 quarts per 100 ft² of bench area. Pot drenches are 4 oz per 6-inch pot.

See attached EUP program outline for details of treatments.

Phytotoxicity will be evaluated at 4 times the maximum proposed rate (15.2 mg/6" pot and 19.2 mg ai/ft² bench area). Such heavy doses will only be used on "a small number of plants" (unspecified number).

Permit is requested for 24 months.

101.2 Likelihood of Adverse Effects to Non-Target Organisms.

Because of the minimum exposure potential posed under this EUP (greenhouse), and due to the relatively low toxicity of paclobutrazol to fish, aquatic invertebrates and birds, EEB does not expect unreasonable adverse effects to result from this EUP, except as noted below.

The Section "G" program description does not outline, how the treated ornamental plants will be disposed of. The foliage of most ornamental plants is not particularly palatable to most birds and mammals, although fruits and berries may be eaten. At the proposed rate, (.01833 lb ai/100 ft² or = 44,000 ft²/A X .01833 = 806 lb ai/A), foliar residues could exceed 100,000

ppm, while residues on cherry-sized fruit could exceed 6,000 ppm. These levels could be hazardous to nontarget wildlife exposed as a result of careless disposal of treated material.

101.3 Endangered Species Considerations

The endangered Bahaman Swallowtail and Schaus' Swallowtail butterflies may be exposed from this use pattern. The butterflies are somewhat restricted in their food sources, but both feed on zinnias, which are ornamental plants.

The Schaus' Swallowtail butterfly occurs on Key Largo, several remote keys northeast of Key Largo, and the islands of the Biscayne National Monument. It was formerly distributed as far inland as Brickell Hammock, near Miami, to Lower Matecumbe Key. This subspecies also occurs in Haiti. The Bahaman Swallowtail butterfly is apparently restricted to the islands of Biscayne National Monument. It may be restricted to Elliot Key, but is probably found on all keys in the monument north of Key Largo. It formerly ranged to the south Miami area and was occasionally reported from Key Largo and Lower Matecumbe Key. This race also occurs in the Bahamas.

Based on the above information, the EUP use of Bonzi 50 WP has potential to cause adverse effects to these butterflies when it is used on zinnias within their range, if the plants are not properly disposed of after treatment in greenhouses.

Since the precise locations of greenhouses to be used and disposal techniques have not been addressed, we are unable to assess exposure to particular endangered vertebrate species. However, if disposal of treated plants is complete (i.e., destruction of plants after experimentation) the exposure potential should be zero.

101.4 Adequacy of Toxicity Data

The data base is adequate to support this EUP.

101.5 Adequacy of Labeling

The label should additionally specify that treated plants and soil may not be disposed of out-of-doors unless they are completely wrapped, packaged or otherwise treated to prevent exposure of nontarget birds and other wildlife. We recommend that the label

specify that treated plants and soil be destroyed after experimentation. We also recommend tht the label specify that under no circumstances should the treated plants be transplanted out-of-doors.

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Conclusions

Based upon the avialable data and use information EEB concludes that the proposed use provides for minimal hazard to nontarget organisms providing that proper methods of disposal of treated materials are employed.

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Paclobutrazol scientific review

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