

US EPA ARCHIVE DOCUMENT



7-27-88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

July 28, 1988

MEMORANDUM

SUBJECT: Transmittal of Exposure Parameters for Bifenthrin  
in Greenhouses

FROM: Yuen-Shaung Ng, Ph.D., Entomologist *y.s. ng*  
Science Support Branch  
Benefits and Use Division (TS-768-C)

TO: Michael P. Firestone, Chief  
Special Review Section  
Exposure Assessment Branch  
Hazard Evaluation Division (TS-769-C)

THRU: E. David Thomas, Ph.D., Chief *ET*  
Animal Biology and Entomology Section  
Science Support Branch  
Benefits and Use Division (TS-768-C)

Attached are two copies of the projected exposure parameters and data for applicators applying bifenthrin in greenhouses using aerosol generator.

If I can be of further assistance, please do not hesitate to call me at #557-2991, my room number is 1016E.

Attachment

cc: William Phillips, BUD  
Allen Jennings, BUD  
Linda Kutney, RD

PROJECTED PARAMETERS AND DATA FOR APPLICATION EXPOSURE FOR APPLYING BIFENTHRIN GREENHOUSE (TOTAL RELEASE AEROSOL INSECTICIDE)

(NG. SSB/BUD. 557-2991) (7-28-88)

-----  
\*\*\* PARAMETERS \*\*\*

REF. 1. REQUESTED EXPOSURE ASSESSMENT FOR:

Chemical ----- Bifenthrin  
Trademark (example) ----- Whitmire Talstar PT 1800  
Major sites ----- Greenhouse  
Major pests ----- About 15 kinds of major  
pests (see label)  
Location ----- Nationwide  
Application methods ----- See REF. 3 AND 4

REF. 2. LABEL SUMMARY:

Formulation: ----- 0.50 %  
Container (aerosol generator) ----- 16.00 oz  
Label signal word: ----- CAUTION  
Restricted pesticide ----- No  
Rate applied (product) ----- 16.00 oz per  
3000 sq.ft.  
Max. applications ----- -

Re-entry and worker protection:

Pesticide respirator is required for all applicators.  
Occupants should not reenter greenhouse until it has been  
fully ventilated.  
This product is toxic to fish.

REF. 3. ASSUMPTIONS -- TREATED AREAS

Greenhouse width (avg.) ----- 42.00 ft  
length (avg.) ----- 500.00 ft  
Wall height ----- 8.00 ft  
Ridge height ----- 8.00 ft  
Total fogging area ----- 21000.00 sq.ft  
Application interval ----- 7-14 days  
No. of application ----- 5-10 per year  
Ave. No. of application ----- 6.00 per year

REF. 4. APPLICATION METHOD AND EQUIPMENTS:

Equipment ----- Aerosol generator  
Finished spray (area) ----- 21000.00 sq.ft  
Finished spray (# generator) ----- 7.00

Application directions:

Apply only after sunset when foliage is dry and temperature is between 70 and 80 F.  
 Close all outside openings, windows, doors, and outside fresh air ventilators.  
 Keep greenhouse tightly closed and fans operating overnight allowing insecticide to recirculate for maximum plant coverage.  
 Occupants should not reenter greenhouse until it has been been fully ventilated.

REF. 5. PROJECTED PARAMETERS AND DATA FOR APPLICATION EXPOSURE  
 \*\*\*\*\*

ONE GREENHOUSE --	DAY OPERATION	YEAR OPERATION	
No of application	-	6.00	
Area to spray (fogging)	21000.00	126000.00	sq. ft.
No. of aerosol generators used	7.00	42.00	
Product needed	112.00	672.00	oz
Product (a.i) needed	5.60	33.60	oz
Operation time	4.67	28.00	min

REF. LITERATURES CITED:

1. Requested by HEB
2. Whitmire Talstar PT 1800 Total Release Insecticide Aerosol Generator (EPA Reg. No. 499- , EPA Est. No. 499-MO-1) and supporting paper.
- 3.-5. Calculated by Ng, 1988
4. Exposure parameters for the use of Lindane in Greenhouse. David Brassard, 1988 EPA.
5. Ball Redbook: Greenhouse growing, 14th edition (1985) Reston Publishing Company, Virginia
6. Greenhouse Builder's Manual : National Greenhouse Co., IBC International, Janco Greenhouses