July 28, 1988

MEMORANDUM

SUBJECT: Transmittal of Exposure Parameters for Bifenthrin in Greenhouse

FROM: Yuen-Shaung Ng, Ph.D., Entomologist
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
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 fully ventilated.

REF. 5. PROJECTED PARAMETERS AND DATA FOR APPLICATION EXPOSURE

<table>
<thead>
<tr>
<th>ONE GREENHOUSE --</th>
<th>DAY</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of application</td>
<td>-</td>
<td>6.00</td>
</tr>
<tr>
<td>Area to spray (fogging)</td>
<td>21000.00</td>
<td>126000.00 sq.ft.</td>
</tr>
<tr>
<td>No. of aerosol generators used</td>
<td>7.00</td>
<td>42.00</td>
</tr>
<tr>
<td>Product needed</td>
<td>112.00</td>
<td>672.00 oz</td>
</tr>
<tr>
<td>Product (a.i.) needed</td>
<td>5.60</td>
<td>33.60 oz</td>
</tr>
<tr>
<td>Operation time</td>
<td>4.67</td>
<td>28.00 min</td>
</tr>
</tbody>
</table>

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-MD-1) and supporting paper.
3. Calculated by Ng, 1988