US EPA ARCHIVE DOCUMENT

Product Performance Data Evaluation Review
by Kevin J. Sweeney, Entomologist, Insecticides Branch

1/8/03

Date: January 8, 2003

Reviewer: Joseph Tavano

Product: Lufenuron Termite Bait

EPA File Symbol: 100-EUP-RRE

PM: Marion Johnson, PM 10

Submission No: S625984

DP: D287244

Insecticide: 0.15% lufenuron applied as a RTU termite bait.

OPPTS Guideline: 810.3600 to the extent that it applies.

MRID submitted: None

Registrant submitted an EUP application. I have reviewed Sections B, E, and G below.

Section B - Experimental Use Label

1. What evidence exists to show that lufenuron is distributed from one worker termite to another as claimed on this label?

2. Under this EUP, infested structures should receive post-construction treatments until the infestation is eliminated. The preventive program should be started after the infestation is eliminated. None of initial treatments should made to structures without infestations as preventive or pre-treatments.

3. From the labeling, it appears that the in-ground and above ground stations will have the same EPA Registration Number. Therefore, they must be used together. If either the in-ground or above ground station are to be used as stand-alone products (see preventive treatment section of the label), they should have their own registration and EUP.

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Section E

4. The quantity of efficacy data collected with termites is minimal. Most data are laboratory based and there were no studies submitted with this EUP application to demonstrate the activity of the compound against termites. The results of Syngenta, Dow AgroSciences and the University of Florida laboratory testing do not agree. Copies of the studies cited in this Section of the EUP should have been submitted. Clearly, these results indicate the need for additional testing to better establish the secondary effects of lufenuron in termite populations and to provide evidence that the dose chosen for field application - and possibly registration - is effective and not considered a repellent by termites. These data should be collected under this EUP.

Section G

5. As stated above, if you want to use the in-ground and above ground stations as stand-alone products, they must be tested independently of one another to show that they work when used as directed. Report the number of sites testing above ground and/or in-ground stations in each state.

6. The number of structures and number of states proposed is acceptable. However, testing should done in at least 100 termite infested structures. I suggest you contact the State of Florida to make sure that testing only 10 structures in Florida is acceptable to support a state registration. The number of research sites and their state locations are acceptable.

7. The amount of lufenuron proposed for use is only 0.26 lbs. I suggest you increase the maximum amount of active ingredient to applied. Large termite populations may require more active ingredient to be killed. This will prevent the need for an amendment to the program in the future.

Syngenta Termite Bait Research Protocol beginning on page 33.

My comments below pertain to the bullets listed in the protocol.

1. Characterization of the Colony

OK, but termite samples should be retained for future genetic testing as well.

2. Determination of foraging territory and population size.

OK but I don't see a need to determine colony size. Perhaps you may want to characterize colonies as small or large. *Reticulitermes* sp. colonies may be difficult to identify. As you know, termite colony size estimates have large margins of error. Research by Thorne and others has shown that estimates can vary greatly.

Syngenta Commercial Termite Bait Protocol beginning on page 37

1. Site Selection

vii. Change to "Site should have termite activity IN the structure."

2. Selection and training of cooperating Pest Management Professionals.
OK

3. Program Oversight

c. Number of QCI sites should equal 25 sites. QCI sites should include above ground and in-ground testing sites. Submit a list of above ground and in-ground sites organized by state when they are selected by Syngenta.

4. Monitoring and Bait Deployment Procedures

g. Data Recording Method - this section requires more detail. Submit copies of forms to be used, and examples of electronic data recording. The information collected on these forms will comprise the efficacy database and the information to be collected needs to agreed upon. Likewise, a more detailed example of the Quality Control Inspection procedures is needed. How will it be conducted?

5. Inspections and Other Confirmation of Termite Activity

i. Please provide a more exact definition of termite activity/infestation.

If an infested deck is attached to a home, would you consider the home to be infested? What about a garage or a shed? Is an alate swarm considered an infestation? Are termites in a bait/monitoring station considered an infestation? Can inactive mud tubes be used to define an infestation? I believe that live termites must figure into the infestation equation in every circumstance. This needs to be discussed further with EPA.

6. Definition of Infested Structure. (Bullets 5 & 6 should probably be lumped together.)

As stated above, live termites need to be present. Therefore, we need to discuss this section as an "AND" instead of an "OR" situation.

Entomologist's Conclusions and Recommendations:

Syngenta should address the above questions and recommendations before the EUP is approved. We also need to discuss the testing and registering of above ground and in-ground bait stations.