Skeptical of Cal's orange-oil 'study'

Richard Fagerlund
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Q: We have drywood termites and we called a fumigation company. They showed me a UC Berkeley study that said orange oil isn't effective. I was going to call an orange oil company as well to get a competing bid. If Berkeley said orange oil isn't effective, aren't I wasting my time and shouldn't I just go with the fumigation?

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A: I said I wasn't going to write about this for a while unless something major developed and, **of** course, something did. I am familiar with that study and I want everyone in **California** to be familiar with it as well.

It is a "Technical Release" by Dow Agrosciences titled "Laboratory Evaluation **of** Efficacy **of** Orange Oil (XT-2000) for Control **of** Drywood Termites in Naturally-Infested Boards." You can go to my Web site to view the study at askthebugman.com/images/Newsletter/2009.pdf.

Let's take a look at this study. Recently, Dow Chemical Co., the manufacturer **of** sulfuryl fluoride (Vikane), announced a new program on Sustainable Products and Solutions at the Haas School **of** Business at UC **Berkeley** in partnership with the Haas School and the College **of** Chemistry. UC **Berkeley** got a $2 million gift from Dow to research sustainable chemicals. Additional corporate funding is expected and it is directed by a Dow executive, Tony Kingsbury, who has moved from Midland, Mich., and now has an office at Haas. He will serve as executive director **of** the program.

The authors **of** the study claim they tested XT-2000 orange oil, which resulted in only a 77 percent termite kill. But there are questions about where they got the orange oil, and how they used it. The company that distributes the oil says it did not receive an order or request for an order. Furthermore, a certified XT-2000 Orange Oil affiliate did not apply the treatment.

Clearly, the operator in the study photo on the Web site was not trained by XT-2000, Inc. In fact, the fellow in the photo works for Clark's Pest Control, a company that actively promotes fumigation and has a vested interest in putting the orange oil companies out **of** business.

A big problem with the study's claim **of** a 77 percent kill rate has to do with how the operator applied the oil. The study claims that 100 percent **of** it was absorbed into the wood, which, if true, makes the 77 percent figure look bad.

But if you look at the photographs, you can see that the wood being injected with orange oil is not only lying on one side, but is full **of** fissures. Since orange oil follows the path **of** least resistance, much **of** it would naturally be lost in the cracks, not totally absorbed. This would allow some **of** the termites to survive.

This is akin to draping a structure in a ripped tent, then pumping in 10 lbs. **of** Vikane. How could you evaluate the kill rate with a hole in the tent?

Keep in mind that the study was conducted and managed by pesticide industry people who would like to see orange oil eliminated as the competition.

Sulfuryl fluoride is a known greenhouse gas, as reported in a previous column. It is a dangerous chemical that should not be used in the environment. Remember, DDT, chlordane and aldrin were among the many chemicals the pesticide industry swore by but were later found to be extremely dangerous. Sulfuryl fluoride is in that category.

And we all know that oranges aren't dangerous and won't hurt the homeowners that use it or the environment.

Richard Fagerlund is a pest management specialist who promotes nontoxic methods of pest control. For information or to contact him, see www.askthebugman.com.

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