

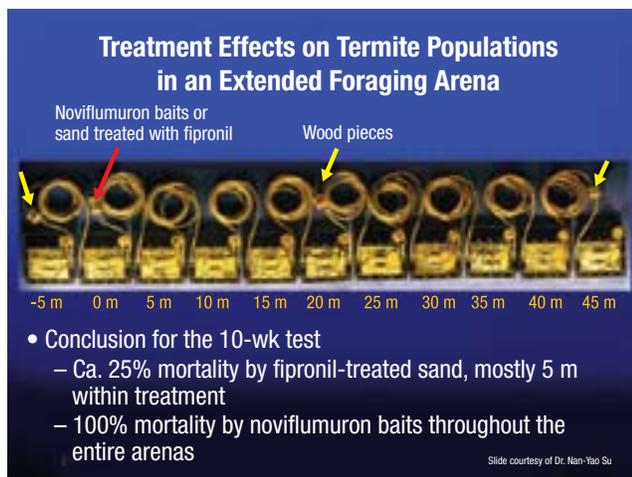
ELIMINATION VS. KNOCK-BACK

Take Care of the Problem Now with the Sentricon® System or Wait for Termites to Return

Recent field and laboratory studies have shown the limitations of currently available nonrepellent liquid chemical treatments. These liquid chemical treatments rely on termites foraging through treated soil and transferring the toxic molecule to other colony members (known as horizontal transfer). However, at higher doses, termites are killed too quickly to be effective toxicant carriers. Nonrepellency becomes repellency when dead termites are present in the tunneling system or inside infested wood. Over time, degradation of these liquid chemical treatments in the soil reduces their effectiveness. The following research examples give credibility to the inability of nonrepellent termiticides to eliminate termite colonies:

Laboratory Study Example 1

Dr. Nan-Yao Su (University of Florida) constructed 50-meter-long foraging arenas whereby a nonrepellent liquid chemical treatment was added to treat sand in one area of the arenas.



After 10 weeks, he found the horizontal transfer of lethal doses was restricted to less than five meters with overall termite mortality ranging from 25 percent to 35 percent. At the same time, noviflumuron, the active ingredient in *Recruit™ IV* termite bait of the Sentricon® *Termite Colony Elimination System*, was added to separate arenas and led to 100 percent subterranean termite mortality.

Laboratory Study Example 2

Recently presented at a professional meeting, Donald Reiersen, et al. (University of California-Riverside), suggested that lethal doses of nonrepellent termiticides in the soil will lead to reduced horizontal transfer because termites are killed too quickly. According to Dr. Michael Rust, et al. (UC-Riverside), “The distance of the colony from the treated zone was one of the main factors affecting the amount of horizontal transfer to other colony members.”

Field Study Example 1

Drs. Weste Osbrink and Alan Lax (USDA-ARS, New Orleans) treated 57 trees with nonrepellent liquid chemical treatments and sampled 87 independent monitors around these trees to assess overall termite activity post-treatment. They found the termite populations in their monitors had rebounded after six to 15 months and concluded liquid chemical tree treatments did not control termite populations in the independent monitors.

Field Study Example 2

Randy Nader (president, Nader's Pest Raiders in Jacksonville, Fla.) compiled data from selected commercial accounts in 2004 where the Sentricon System was installed along with a Termidor liquid chemical treatment. Results showed that approximately 39 percent of both curative and preventive

sites had activity inside the Sentricon stations after the liquid chemical treatment. According to Nader, a very small percent of the company's thousands of existing accounts using the Sentricon System show any activity following colony elimination. This activity is attributed to new colonies moving into the existing tunneling system.

Field Study Example 3

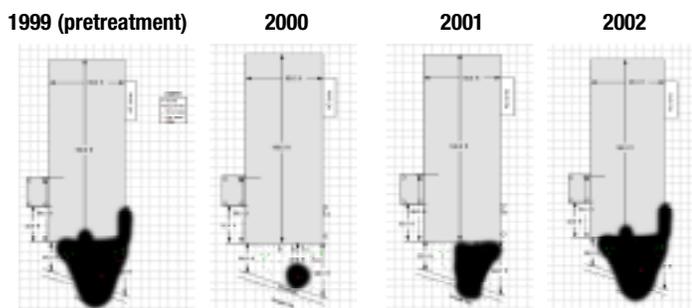
Beginning in 1999, a field study using mark-recapture (releasing dyed termites) to define the foraging territory of the colony was conducted by the author at a building infested with a Formosan subterranean termite colony in New Orleans. The Sentricon System was not utilized on this property. A professional pest management company provided an exterior liquid chemical treatment with fipronil, the active ingredient in Termidor, in late 1999 after confirmation that a single colony was infesting the building, a live oak tree 20 feet away and the area between the two (black shaded area). The following year, termites were only found inside the live oak tree. By 2001, termites were found throughout the previous foraging territory inside the monitoring stakes and stations, but were not inside the building. By 2002, termites were discovered inside the same infested area inside the building.

However, scientific evidence of colony elimination is lacking, especially when scientific studies have shown that horizontal transfer of the toxic molecule is limited over distance, which allows affected colonies a chance to rebound and continue to thrive around or inside a structure. At the same time, lack of exposure and avoidance to dead termites will reduce the overall effectiveness of liquid chemical treatments. Finally, degradation in the soil reduces their effectiveness over time, and the lack of monitoring stations may conceal a termite colony located within a few feet from a structure.

For the past 10 years, the Sentricon® *Termite Colony Elimination System* has been the only subterranean termite baiting system with extensive university testing in the laboratory and field, along with publication after publication of documented colony eliminations worldwide. In fact, 30 independent university studies, 45 published scientific articles and the U.S. Department of Agriculture have proven colony elimination with the Sentricon System. Therefore, the effectiveness of the Sentricon System relies on the fact that subterranean termites actively consume, retain and transfer the active ingredient, in addition to the continuous monitoring of Sentricon stations to confirm elimination and intercept new colonies in the future.

References:

- Su, N.-Y. 2005. Response of the Formosan subterranean termites (Isoptera: Rhinotermitidae) to baits or nonrepellent termiticides in extended foraging arenas. *Journal of Economic Entomology* 98: 2143-2152.
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- Osbrink, W. & A. Lax. 2003. Effect of imidacloprid tree treatments on the occurrences of Formosan subterranean termites, *Coptotermes formosanus* Shiraki (Isoptera Rhinotermitidae), in independent monitors. *Journal of Economic Entomology* 96: 117-125.



Closing Remarks

Nonrepellent liquid chemical treatments, when properly applied at the correct dosage, will kill termites in the soil.

 **Sentricon**[®]
Colony Elimination System

No more colony. No more problem.™

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