

**PERIMETER BAITS, SPRAY, or COMBINATIONS:
WHICH PROVIDE LONGER ODOROUS HOUSE ANT
(HYMENOPTERA: FORMICIDAE) RELIEF for RESIDENTIAL
ACCOUNTS?**

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The odorous house ant, *Tapinoma sessile* (Say), is the principal ant invading structures in the mid-south region of the United States (Hedges, 1998) and is ranked as one of the top five pest ants in the United States (Hedges, 2000). The objective of this study was to determine which treatment, perimeter baits, spray, or a combination of bait and spray, would reduce outdoor and indoor odorous house ant (OHA) populations. To evaluate the effects of these applications, outdoor OHA populations were monitored twice before treatments were applied and at 1, 2, 4, 6, 8, 10, 12, 14, and 17 weeks after treatment. Residents were phoned after each monitoring to determine indoor ant presence. Four homes were used for each treatment except for the triple bait, which had five. The perimeter spray of 0.06% fipronil (Termidor SC) was applied at 244 ml/m² (6 gallons per 1000 sq. ft) to 1 ft. up and out from the foundation base. Two bait treatments were applied: one consisted of a 1.3% borax experimental liquid bait (Whitmire Micro-Gen) and the other was a triple bait of 5% orthoboric acid (Niban-FG), 1% hydramethylnon (Maxforce Fine Granule Insect Bait) and 2% borax (Terro Ant Killer II). All baits were placed in an Advance A.C.E. station and located on the ground against the structure. Baits were placed where greater than 10 ants were found on a monitoring card. A combination of the 0.06% fipronil perimeter spray and the 1.3% borax experimental liquid bait was applied as described above, except the bait was placed outside the spray zone to intercept ants coming from the landscape. Control structures received no treatment. Percentage reduction in populations per house were arcsine transformed prior to analysis using PROC GLM and Tukey's studentized range test (SAS, 2001). By week 1, the bait and spray combination treatment reduced populations by greater than 94% and remained so throughout the 17-week monitoring period. The spray alone reduced populations by 93% or greater at 4 weeks after treatment and throughout the remainder of the study. The bait and spray combination was never significantly different from the spray alone. The liquid bait reduced outdoor populations by 82% by week 4 and reductions were greater than 94% from weeks 10–17. In the triple bait treatment, population reductions did not reach 94% until week 14 when outdoor temperatures were beginning to drop and control population reductions occurred for the first time. The liquid bait and spray combination treatment was the most effective. Although ants had been seen in all four homes before treatment, no ants were seen inside any of the bait and spray combination homes any time after treatment.

REFERENCES

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