LABORATORY AND FIELD EVALUATION OF
A LIQUID BORIC ACID ANT BAIT

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A boric acid - sucrose water bait was evaluated for efficacy against five species of urban pest ants: Camponotus abdominalis floridanus (Buckley), Solenopsis invicta Buren, Tapinoma melanocephalum (F.), Linepithema humile (Mayr), and Monomorium pharaonis (L.). LC₅₀s for C. abdominalis floridanus and LC₅₀s for S. invicta showed a delayed toxicity to boric acid over a 10-fold range of concentration.

A continuous exposure to 0.25, 0.5, 0.75, and 1% boric acid - sucrose water bait was effective in reducing large laboratory colonies (60,000-75,000) of S. invicta. By the 6th wk there was a 90% reduction in population index at all four concentrations. A faster kill was obtained with smaller laboratory colonies (250-500 workers) of T. melanocephalum, L. humile, and M. pharaonis feeding continuously on a 1% boric acid-sucrose water bait. All colonies were completely eliminated by 10 wk. Only partial elimination of colonies was achieved when they were exposed to the boric acid bait for 3 d.

A bait application of a 1% boric acid in 10% sucrose water against infestations of M. pharaonis in an apartment complex achieved control within the 1st wk. In laboratory tests
ANTS

with *S. invicta*, there was a negative correlation with bait consumption and boric acid concentration. As concentration increased, consumption decreased.

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Our research results show that low concentration (≤1%) of boric acid are capable of eliminating ant colonies and that at these rates there is reduced repellency.

**KEY WORDS**

Ants, insecticidal bait, boric acid