

## MANAGING THE DARK ROVER ANT USING BAITS

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**Abstract** The dark rover ant (DRA), *Brachymyrmex patagonicus*, is a relatively small invasive ant species that is found in many parts of the world, including the Southern United States and Southern California. Although they are not known to be subject to any significant aggression by fire ants and Argentine ants, they are known for their aggressive behavior toward conspecifics, even toward workers coming from adjacent nests that are only a few meters apart. DRA can become a structural pest when they enter buildings in search of stored food or shelter, or when they swarm inside. Managing DRA can be difficult since they don't respond well to all baits, leading to failed pest control efforts and unsatisfied customers. In this research, I studied the efficacy of several commercial baits containing borax, imidacloprid, thiamethoxam, clothianidin, and indoxacarb. The results showed a significant difference in the survival rates among various active ingredients, with products containing imidacloprid, thiamethoxam, and clothianidin being the fastest-acting treatments, while indoxacarb failed to show any statistically significant difference from the untreated control. I also looked into the effect of water stress on the efficacy of certain ant baits against DRA. When under water stress, all baits killed DRA at a faster pace. Nevertheless, the indoxacarb-containing gel bait still failed to kill the workers at a significantly faster rate compared to the untreated control. Lastly, I examined the effect of starvation on the survival of DRA. When exposed to borax bait, there was no significant difference in the survival of DRA that were not starved compared to those starved for 24 hours. However, there was a significant difference between the survival of DRA that were not starved and those starved for 48 hours.

**Key words** Ant baiting, clothianidin, thiamethoxam, borax