

Elimination of Subterranean Termite Colonies With Hexaflumuron in an Improved Bait Matrix, Preferred Textured Cellulose (PTC)

ABSTRACT

An improved, cellulosic bait matrix (Preferred Textured Cellulose, PTC) containing 0.5% hexaflumuron was tested against field colonies of the subterranean termites *Coptotermes gestroi* and *Schedorhinotermes* sp. in Malaysia. Of the eight colonies of *C. gestroi* detected, six were estimated for population size using dyed blank bait before treatment. Then, the colonies were treated with hexaflumuron-PTC baits. Bait consumption and days to colony elimination were estimated. All of the eight colonies were eliminated between 42-77 days (mean = 60 days) with estimated bait consumption of 22.93-167.00 g (mean = 60.17 g) which is equivalent to 114-835 mg of hexaflumuron. A *Schedorhinotermes* sp. colony appeared in one of the sites within two months after the elimination of *C. gestroi*. The *Schedorhinotermes* colony was baited with hexaflumuron-PTC bait and eliminated after 59 days with an estimated 48.85 g of bait consumed. While the effect of PTC bait on *Coptotermes* sp. showed no difference from that of Laminated Textured Cellulose (LTC) matrices, the PTC matrices showed increased palatability to other termite species such as *Schedorhinotermes* and *Microtermes pakistanicus*.

Keyword: hexaflumuron, preferred textured cellulose, *Coptotermes gestroi*, *Schedorhinotermes* sp, Malaysia, *Microtermes pakistanicus*, *Globitermes globosus*