A LABORATORY COMPARISON OF TWO BAITS AS CONTROL AGENTS FOR THE PHARAOH'S ANT (*MONOMORIUM PHARAONIS*) AND EVALUATION OF HYDRAMETHYLNON BAITS AGAINST A FIELD INFESTATION

SHORT J.E., GREIG I.A. and EDWARDS J.P.
Central Science Laboratory, Ministry of Agriculture, Fisheries and Food, London Road, Slough, Berks. SL3 7HJ, UK

An experiment was carried out in which sulfluramid and hydramethylnon baits were investigated as control agents against laboratory colonies of Pharaoh's ant (*Monomorium pharaonis*). Laboratory colonies were exposed to the baits for a 14 day period with no alternative food source. Each treatment was replicated 3 times. The effects of the baits were assessed in terms of their ability to reduce brood in nest boxes and their effect on worker and queen mortality.

Both the sulfluramid and hydramethylnon baits killed the majority of adults in the colonies within 24-48 hours. The brood from the bait-treated colonies had disappeared after 21 days. All workers, queens and brood were eradicated after 21 days in the sulfluramid and 28 days in the hydramethylnon baited colonies.

Comparison of pre-treatment and post treatment weights of each bait showed that a mean of 0.38g (+0.03) of the sulfluramid, and 0.13g (+0.01) of the hydramethylnon bait was taken by each colony (after changes in the baits as a result of environmental effects had been taken into account). This is equivalent to 1.92mg sulfluramid active ingredient against 1.17g a.i. of hydramethylnon.

The experiment has demonstrated that both sulfluramid and hydramethylnon baits are potentially highly effective control agents against Pharaoh's ant colonies. Hydramethylnon baits ("Maxforce") were also evaluated against a field infestation. A heavy infestation of *M.pharaonis* was present in a large, centrally heated, detatched bungalow near Oxford.

The preliminary survey of this infestation indicated that most of the ants were confined to the warmer end of the house which included the kitchen, bathroom, living rooms and children's bedrooms. A total of 2881 worker ants were found on the liver baits prior to treatment, of these, 1085 were on the bait points chosen for later monitoring. The premise was treated with 34 "Maxforce" Pharaoh's ant baits which were applied according to the manufacturers instructions. The site was then monitored at intervals using honey/peanut butter baits for up to one year after treatment.

The infestation was eliminated extremely quickly. Within 24 hours of treatment, 80% of foraging workers had disappeared and no further ants were detected on monitoring baits after only one week. The premises then remained clear of ants for the remainder of the trial.

Proceedings of the First International Conference on Urban Pests.
K.B. Wildey and Wm H.Robinson (editors). 1993