

BIOEFFICACY OF FLOCOUMAFEN AGAINST *TATERA INDICA*

A.P. JAIN, MANJU MATHUR AND R.S. TRIPATHI

Coordinating and Cooperating Centre (Rodent Control)
Central Arid Zone Research Institute, Jodhpur-342 003

Indian gerbil, *Tatera indica* is a predominant pest of Indian agriculture (Barnett and Prakash, 1975). Zinc phosphide baiting results in rapid development and persistence of bait shyness for about 4 months (Prakash and Jain, 1971). Second generation anticoagulant rodenticides like bromadiolone and brodifacoum have broadened the horizons of rodent management technology (Anonymous, 1986). A new anticoagulant "flocoumafen" [3-(3-(4'-Trifluoromethyl benzyloxyphenyl-4-yl) 1, 2, 3, 4,-tetrahydro-1-naphthyl)-4-hydroxy-coumarin] obtained from NOCIL, New Delhi was tested against the Indian gerbil.

Tatera indica, live trapped from crop fields were sexed and lodged individually in the laboratory cages. To acclimatize, whole grains of pearl millet and water ad libitum were provided for a minimum period of seven days. Ten healthy adults (males and non-pregnant females) of known body weights were exposed to the test baits in no choice and choice feeding tests following Mathys (1975). A stock mixture of 0.5% flocoumafen was used to give 0.0025, 0.005 and 0.01 per cent concentrations in the whole grains of pearl millet. In the no choice tests, only 20g bait was provided for 1, 2 and 3 days. In the choice feeding trials, equal amounts of flocoumafen - treated as well as untreated pearl millet grains were offered in two separate containers to the test animals. In the tests continued for more than one day, the positions of the food containers were altered daily to avoid any place-preference effect.

After the completion of the feeding periods, the animals were allowed to feed on plain pearl millet grains and observations for the symptoms of poisoning and death were continued for a month.

In no choice tests, complete kill of experimental rodents was recorded in 3, 2 and 3 days of exposure to 0.0025, 0.005 and 0.01 per cent concentrations, respectively (Table 1). Mortality set in earliest (4-12 days) in 0.005 per cent flocoumafen. In choice tests, three-day exposure knocked 70 per cent gerbils when 0.0025 and 0.01 per cent concentrations of flocoumafen were provided. The 0.005 per cent concentration, however, produced cent per cent mortality with minimum (4-11) days to death (Table 2). The difference in the consumption of plain bait and poison bait was not statistically significant except in case of 0.02 per cent concentration (Table 2) indicating a good acceptability of the poison bait.