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TWO BAITING METHODS FOR *NESOKIA INDICA* GRAY, THEIR RELATIVE EFFICACY AND ECONOMICS

P. RAMESH
Indian Agricultural Research Institute, New Delhi 110 012.

The short-tailed bandicoot rat, *Nesokia indica* Gray is a fossorial predominant rodent pest in Haryana, Punjab, Uttar Pradesh, Rajasthan and the Union Territory of Delhi (Biswas and Tiwari, 1966). It was observed that the usual method by which baits were applied at Indian Agricultural Research Institute farm (i.e. baits wrapped in a piece of paper and placed in front/inside the burrows) was not acceptable. Some of the baits were burried in the excavated soil and the others were thrown out of the burrows in the process of excavation. Therefore, a new method was developed termed as the "Hanger method" of bait application. This study investigated the comparative efficacy and economics of the two baiting techniques, the "Wrapped bait method" and the "Hanger method."

The bait hanger consisted of a flexible wire (16 gauge) of 15 cm long and was bent in inverted "L" shape. The angle between two arms was 45–60. The end of its smaller arm was bent inwards for fixing the bait material. The live burrows were located and cleaned by removing soil plugs, the longer end of the hanger was fixed on the top of the burrow opening so that the bait remained hanging 1–2 cm. away in front of the opening and 3–5 cm. above the ground. The wrapped bait method consisted of placing the bait wrapped in paper near exit holes at dusk.

About two hundred and fifty live burrows were located in 3 spots over 4h. of heavily infested fields at Indian Agricultural Research Institute. Pre-baiting was done on the first day by using kneeded plain jowar flour (*Sorghum bicolor*) baits (each weighing 2.5g). On second day, poison baits of similar weight containing 3% Zinc-Phosphide were placed at the same spots soon after the dusk in the similar manner. On the next day dead rats were collected from the vicinity of openings as well as from the burrows.

The data on two methods were subjected to "t" test to determine their comparative efficacy. The economics of methods was also assessed.

The "Hanger method" gave mean ($\overline{X}$ ± S.E) mortality of 99.18 ± 0.09%, which was significantly greater than for the wrapped bait method (60.34 ± 0.79).

Economics of the two methods of baiting was worked out (see Table 1). The cost of "Hanger method" was Rs. 2.13/ha. whereas, with the "Wrapped bait method", it was Rs. 1.57/ha. However the former is preferable as it gave nearly 100% control.

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*Research Fellow, Sorghum Entomology, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru PO, Andhra Pradesh 502 324.

TABLE 1. Economics of poison baiting over 4 ha. area

Details	Hanger method	Wrapped bait method
	Rs.	Rs.
Cost of rodenticide* @Rs. 60 per kg.	1.15	1.15
Cost of carier 1.28 kg. @ Rs. 2 per kg.	2.56	2.56
Cost of hangers or wrapper paper	2.80	0.60
Cost of labour for 2 hrs @ Rs. 8/day	2.00	2.00
Total cost for 4 ha. cost per ha.	2.13	1.57

* 19.2 g of Zinc Phosphide (3%)

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