

### EFFICACY OF DIFFERENT BAITS FOR ATTRACTING THE WESTERN GHATS SQUIRREL, *FUNAMBULUS TRISTRIATUS* WATERHOUSE\*

The Western Ghats squirrel, *Funambulus tristriatus* Waterhouse is one of the important rodent pests of cacao, *Theobroma cacao* L. in south India (Bhat, 1978; Abraham and Remamony, 1979; Bhat, *et al.* 1981). Among the dry grains, the grains of paddy (*Oryza sativa* L.) were considered to be the best bait for this squirrel (Bhat, 1979). In nature squirrels also feed on fruits and other succulent vegetable parts (Barnett and Prakash 1975). Hence experiments were carried out to study the preference of the Western Ghats squirrel for different succulent baits as compared to paddy grains. The most accepted method for studying the preferences of rodents for dry baits is to expose the bait to the species and recording the rate of consumption (Prakash, *et al.*, 1959; Jain, *et al.*, 1974; Soni, *et al.*, 1980). But when succulent baits, which differ from one another in their moisture contents are to be tested for their preferences, the method of counting the animals attracted towards each bait is considered to be more realistic (Beer, 1964; Sullivan and Sullivan, 1980).

In this experiment, the preference of the Western Ghats squirrel for eleven wet baits (Table 1) was studied and compared with that for paddy grains. For convenience, the baits were randomly divided into four groups of four baits each as shown below:

- Group 1 Whole grains of paddy, ripe pod (opened) of cacao, ripe fruit of banana and ripe perianth of jack fruit;
- Group 2 Ripe apple of cashew, tubers of cassava, raw kernel of coconut and ripe fruit of papaya;
- Group 3 Ripe fruit of mango, tubers of sweet potato, roasted kernel of coconut and ripe pineapple;
- Group 4 The preferred baits in each of the above three groups.

Each bait was kept in a separate 'wonder trap' (45 x 25 x 20 cm) and all the four traps in a particular group were set side by side in each bait station so as to give ample chance for a squirrel to exercise its preference. A total of four permanent baiting stations, in different localities, were selected for each group and in each group trapping was continued for 20 days. All the four traps in a baiting station were set simultaneously at 0800 to 0900 hours and the trapped squirrels were removed at intervals of 2 hours to minimise the effects of visible and auditory signals on trapping other squirrels. The traps were washed thoroughly before setting them again. Each day the positions of the traps and the baits in them were interchanged. Total number of squirrels trapped with each bait was recorded.

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In all, 83 Western Ghats squirrels were trapped in the first group, 37 in traps with paddy and 35 in those with jack fruit as baits (Table 1). The numbers trapped with these baits were significantly more than the general mean. Cacao and banana were significantly less attractive as baits.

Table 1  
Number of Western Ghats squirrels trapped in cages with various baits

Group	Baits	Number of squirrels trapped		Rank
		Actual Number	Percentage	
1	Jack fruit ( <i>Artocarpus integrifolia</i> Auth)	35*	42.2	2
	Cacao pod, ( <i>Theobroma cacao</i> L.)	5	6.0	4
	Paddy grain, ( <i>Oryza sativa</i> L.)	37*	44.6	1
	Banana fruit, ( <i>Musa paradisiaca</i> L.)	6	7.2	3
2	Cashew apple, ( <i>Anacardium occidentale</i> L.)	43*	60.6	1
	Papaya fruit, ( <i>Carica papaya</i> L.)	14	19.7	2
	Cassava tuber, ( <i>Manihot utilissima</i> Pohl.)	10	14.1	3
	Coconut kernel (raw), ( <i>Cocos nucifera</i> L.)	4	5.6	4
3	Mango fruit, ( <i>Mangifera indica</i> L.)	42*	57.5	1
	Pineapple fruit, ( <i>Ananas sativas</i> Schult.)	7	9.6	4
	Sweet potato tuber, ( <i>Ipomoea batatas</i> Lam.)	13	17.8	2
	Coconut kernel (roasted)	11	15.1	3
4	Jack fruit	23	30.3	1
	Paddy grain	20	26.3	2
	Cashew apple	18	23.7	3
	Mango fruit	15	19.7	4

\* Significantly more from the general mean for that group.  $P=0.01$

In the second group ripe apples of cashew attracted significantly more squirrels than the general mean. The coconut kernel was a poor bait attracting significantly less animals.

In the third group ripe mango captured significantly more squirrels than the general mean, but ripe pineapple captured significantly less. Roasted kernels of coconut attracted more animals than its raw form.

When the top ranking baits in the above three groups were tried simultaneously, the traps baited with the jack fruit captured more squirrels followed by paddy, cashew, apple and mango in that order. Though the jack fruit was slightly preferred to the paddy grains, the latter, because of their easy availability and good keeping qualities were considered to be better baits than the former.

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#### സംഗ്രഹം

പശുപിമാലട്ട അണ്ണാനെ കെണികം ഉപയോഗിച്ച് പിടിക്കുന്നതിന് 12 പദാർത്ഥങ്ങളുടെ ആകർഷകതയെ വിലയിരുത്തിയിരിക്കുന്നു. മേൽപ്പറഞ്ഞ പഠനത്തിൽനിന്നും അണ്ണാനെ ഏറ്റവും കൂടുതൽ ആകർഷിക്കുന്ന വസ്തു ചക്കപ്പഴം ആണെന്നും അതുകഴിഞ്ഞാൽ നെൻമണി, കശുമാമ്പഴം, മാമ്പഴം എന്ന മുറയ്ക്കും അണ്ണാൻ ആകർഷിക്കപ്പെടുന്നുവെന്നും തെളിഞ്ഞിരിക്കുന്നു. എന്നാൽ എല്ലാ കാലങ്ങളിലും ലഭ്യമാകുക, പെട്ടെന്ന് കേടാകാതിരിക്കുക എന്നീ ഗുണങ്ങൾ കണക്കിലെടുത്ത് നെൻമണി ഏറ്റവും ഉപയോഗപ്രദവും ഫലപ്രദവുമായ ഇരയായി (baits) പരിഗണിച്ചിരിക്കുന്നു.

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