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ON THE RELATIVE PREFERENCE OF *RATTUS RATTUS* LINN
TO DIFFERENT VARIETIES OF TAPIOCA

Tapioca (*Manihot esculenta*) is important in Kerala as a subsidiary food crop and as a raw material for starch and glucose industries. Field rats especially *Rattus rattus* cause considerable damage to the tubers, to the extent of 10 to 20 per cent. Several varieties of tapioca are cultivated in Kerala of which a few are improved hybrid varieties. With a view to assessing the relative preference, if any, shown by the rat to these different varieties, a laboratory evaluation was undertaken the results of which are presented in this note.

In one experiment fresh tubers of five varieties of tapioca viz. M4, H 165, H 226, Adukkumuttan and Pannivella were fed to individual rats in separate cages of 30 x 18 x 18 cm at the rate of 70 to 80 g each per rat per day. Rats approximately of the same age and weight used in these studies were starved for 12 hours before the experiment. The quantity of tuber consumed by each rat during a period of 24 hours was ascertained by weighments. This was repeated for five days and the percentage consumption of each variety was calculated.

A second trial was made with another set of rats which were fed with tubers of the live varieties (*ad libitum*) one rat getting one variety in a day. This was repeated for five days, the individual rats receiving different varieties on succeeding days of feeding in varying sequences of varieties. There was an interval of 12 hours between successive feedings. Quantities of tubers consumed by the rats during 24 hours of feeding on each day of trial were assessed by weighments, corrections being made for the loss of moisture.

Results of the two trials are given in table 1, It may be seen that the varieties differed significantly with regard to their acceptability to the rat under conditions when it is given a chance to select the variety for feeding. Thus the variety Pannivella is significantly more acceptable to rats than all other varieties; 26.20 per cent of the supplied tubers being eaten by the rat. The varieties Adukkumuttan and M4 rank next with 15.64 and 13.72 per cent consumption. The two improved varieties showed the least acceptance the amounts eaten of these varieties being considerably lower than those of the other varieties.

But when the rat is forced to feed on one particular variety at a time as may be seen from the table, the different varieties show a different pattern of acceptability. Thus Pannivella which showed maximum preference under

Table 1**Acceptability of different varieties of tapioca to *Rattus rattus***

Varieties	Mean per cent of tubers consumed when	
	Supplied together	Supplied singly
M 4	13.72	29.14
H 165	1.31	30.88
H 226	3.78	34.90
Adukkumuttan	15.64	60.99
Pannivella	26.20	27.55
C. D. *	8.08	22.97

Significant at 5 per cent level

conditions of choice showed the least preference when fed alone and Adukkumuttan showed the maximum preference for feedings when fed alone.

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