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**CRUDE PROTEIN COMPOSITION OF ELEPHANT FOOT YAMS**  
(*AMORPHOPHALLUS CAMPANULATUS*)

Elephant Foot Yam (*Amorphophallus campanulatus*) otherwise called as "Suran", is a cheap source of carbohydrate and is a good secondary food during period of scarcity. However, yams in general, though poor in protein content exhibit a high degree of variation in their protein content depending on variety. There is thus an urgent need to identify varieties with high protein content in yams. All sources of information (Coursey 1967, Martin and Thompson 1971), suggest that the true yams (*Dioscorea* species) are richer in protein than other root and tuber crops and the content varies from 6 to 13 per cent. Literature on the protein content of Elephant Foot Yam has not so far been determined and therefore this species was investigated for its protein content.

Nine cultivars of yam collected in Tamil Nadu were utilised for the study. Tubers of uniform maturity were selected after harvest and 2.0 mm peeled transverse sections were taken from the upper and lower portions of the tubers. The slices

**Table 1**  
**Crude protein content of yam cultivars.**

Type No.	Crude protein content	
	Upper portion	Lower portion
A. C. 2	9.18	9.62
A. C. 3	7.87	7.00
A. C. 4	7.87	7.00
A. C. 5	5.25	6.56
A. C. 6	7.44	8.75
A. C. 7	10.50	9.87
A. C. 8	6.12	6.56
A. C. 9	5.69	6.56
A. C. 13	8.75	7.87

were dried for 20-24 hour in an oven at 57°C, milled to a fine powder and stored in air tight containers. Duplicate sub samples were taken from the milled samples and the total N was estimated by microkjeldahl's method (A. O. A. C. 1960). The crude protein content was computed by multiplying N with 6.25 and the data are presented in Table 1.

The crude protein content of the different cultivars varied from 5.63 to 10.50 per cent. Among the types, A. C. 7 recorded the higher content while the type A. C. 5 recorded the least. The different portions of yarn did not differ much in protein content.

The differences among cultivars are distinct, offering scope for the isolation of varieties with high protein content for breeding programmes. It has been reported by Payne quoted by Martin and Thompson (1971), that foods containing five per cent utilizable balanced protein, can sustain health, if eaten in sufficient quantity. Thus these cultivars with high protein content have immense practical value, provided the biological value of such proteins, then amino acid composition and biological utilization are also worked out.

സംഗ്രഹം

ഒൻപതിനും ചേനകളിൽ egg മാംസ്യംശം പരിശോധിച്ചതിൽ raring 5.69 മുതൽ 10.60 ശതമാനം വരെ വ്യത്യാസപ്പെടുന്നതായ കണ്ടു AC.7 എന്ന ഇനത്തിലാണ് ഏറ്റവും കൂടുതൽ മാംസ്യംശം കണ്ടത് rfb1\*P6!Jr3Aj36>s മുക്തഭാഗത്തിനും കീഴ്ഭാഗത്തിനും യാതൊരു വ്യത്യാസവും കണ്ടില്ല. ബ്രീഡിംഗിന് ചേന തിരഞ്ഞെടുക്കുമ്പോൾ അവയിലടങ്ങിയിട്ടുള്ള മാംസ്യംശവും കണക്കിലെടുക്കേണ്ടതാണ്.

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