

Varietal evaluation of Colocasia var. Muktakeshi under climatic condition of Tripura

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ABSTRACT

The experiment was conducted in a village of Gourangatilla, Khowai district of Tripura with full technical support and investigation of Krishi Vigyan Kendra scientists during 2013-14. The main objective of the experiment was to evaluate the performance of this high yielding variety of colocasia in comparison with local variety. It has been reported from the investigation that the variety Muktakeshi is better than the local variety in terms of yield, pest and disease percentage, eating quality with good size and shape. In case of var. Muktakeshi a highest yield of 140 q/ha and an average yield of 129 q/ha has been recorded while in case of local check average yield 100 q/ha was observed.

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Among the tuber crops produced, colocasia (*Colocasia esculenta* Schott), a member of family Araceae (Metha, 1959) native to South Central Asia is one of the important tuber crop particularly grown in Africa and Asia and occupies a very selective and special position. World wide it is the fifth most consumed root vegetable (FAOSTAT, 2005) with over 25 per cent produced in Oceania and South-East Asia. Colocasia is also known as Kachu- Bengali, Saru-Oriya, Chemadumpali- Telugu, Sapan Kizhangu-Tamil, Alu-Marathi, Alavu-Gujarati, Ghivan-Hindi, Arvi-Punjabi. Africa ranks first in area and production of colocasia and in India colocasia are favorite among Gujarat, Konkan region of Maharashtra and several other parts of South India. Since the crop is grown in very limited area, hence statistics regarding area, production, productivity are not available. It is mainly cultivated for the edible rootstocks but the leaves and its young stalks are also cooked and used like spinach. Corms of colocasia is said to be richer in carbohydrate and protein and nearly one and half time more nutritious than potato (Plucket, 1976; Kuruvilla and

Singh, 1981 and Coates *et al.*, 1988). In north eastern state of Tripura, colocasia is very much popular among the Tribal and Bengali community, but they are mainly growing local varieties which are having acidity nature and low production. Thus the present investigation aimed to find out the performance of colocasia var. Muktakeshi under the climatic condition of Tripura to improve the productivity.

The experimental details and techniques employed in the study are described as follows :

Site of experiment :

Crops were grown in Gourangatilla village of Khowai district of Tripura; situated 7 km. away from Krishi Vigyan Kendra, West Tripura where 10 numbers of farmers of this village were selected for the experiment.

Crop :

Colocasia var. Muktakeshi was selected for the experiment; this variety has been released from Central Tuber

Table 1 : Comparison of var. Muktakeshi with local one in different aspect

Variety	Av. height (m)	Av. no. of off shoot/plant	Av. dia. of tuber (cm)	Av. wt. of tuber (g)	Pest and disease %	Av. yield (q/ha)	Acridity	B:C
Muktakeshi	0.9	5	3.8	50	10	129	Non-acrid	2.3
Local	0.6	3	3.1	30.2	25	100	acid	1.8

Crop Research Institute, ICAR, Kerala during 2001, containing 2-3 per cent protein, crop duration 6-7 months, resistant to blight, yield 15-18 t/ha.

Package of practice :

The cultivation practice was followed as per the recommended practice of CTCRI. Spacing- 50 × 30 cm, Manure and fertilizer- FYM 12 t as basal and NPK 80:40:100 kg/ha (1/3rd N + full P + 1/3rd K at 15 DAP and remaining N and K in 2 equal splits at 1 month interval), Mulching: Paddy straw mulching. Plant protection: need based (Mohankumar *et al.*, 2000)

The yield performance and some crop parameters of the variety are shown in the table below

The data presented in the Table 1 revealed that Muktakeshi is comparatively taller (0.9m) than local one. But the average numbers of off shoots per plant is more in case of Muktakeshi. It is also observed from the table that the diameter and weight of individual tuber of var. Muktakeshi is higher than local one *i.e.*, tubers are more bold and prominent. From the presented data it is found that pest and disease percentage mainly leaf blight is much lower or negligible in case of Muktakeshi, the result also supported by Pandey, 2007. The recorded average yield of Muktakeshi and local is 129 q/ha and 100 q/ha, respectively. Thus, we can say that yield increase percentage is 29 per cent. Moreover, Muktakeshi is a non acrid variety whereas local variety is having acidity. The economical performance of Muktakeshi is also good because of its good size and shape with better cooking quality.

Conclusion :

The variety Muktakeshi is better than local variety in terms of yield, size and shape and in all other preferable aspects. Thus, from the findings we can conclude that var. Muktakeshi can be grown very well under the climatic condition of Tripura and can recommend the colocasia grower to go for var. Muktakeshi for better performance.

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