

QUALITY ATTRIBUTES OF COLOCASIA (*COLOCASIA ESCULENTUS*)

*Colocasia* is a tropical tuber crop which is grown exclusively for culinary purposes in Kerala. Different local varieties of this crop of varying yield potential are available. Varietal preferences for cultivation of this crop are more governed by quality characteristics rather than yield. Among the quality attributes, the oxalic acid concentration is the important factor since the acidity is influenced by this factor.

A preliminary trial carried out at the Coconut Research Station, Nileshtar during 1977–1978 has indicated the high adaptability of this crop in the red sandy loam soil of the region. The varieties under trial were C.25, *Khassibhunga*, *Kovur*, *Narkatia*, and *Kanda* and these were raised during June–October and their quality characteristics were evaluated.

Fifteen tuber samples collected from separate plots were analysed for estimating dry matter, ash and protein, whereas samples from 20 plots were analysed for estimating oxalic acid and the mean values are given in Table-1. The tubers were analysed for dry matter, ash, protein and oxalic acid content (A. O. A. C. 1969) and starch (Ward-Pigman, 1970). The statistical significance of the data were tested by using 'F' test (Snedecor, 1946).

It can be seen from the results that the varieties did not differ significantly among themselves in respect of dry matter, starch, protein and ash. But the varieties differed significantly in the oxalic acid content, *Narkatia* recorded the highest.

Table-1  
Quality characteristics of colocasia varieties

Varieties	Percentage of dry matter.	Percentage of starch on dry weight basis	Percentage of protein	Percentage of ash	Oxalic acid (mg/g)
C-25	23.93	61.84	2.5	1.69	1.59
<i>Khassibhunga</i>	18.58	61.26	2.34	1.50	0.81
<i>Kovur</i>	19.9	60.01	2.66	1.77	0.94
<i>Narkatia</i>	21.77	50.80	2.65	1.57	1.84
<i>Kanda</i>	20.4	57.7	2.57	1.59	0.90
F Test	NS	NS	NS	NS	Significant
S E (m)	3.6	10.68	0.32	0.31	0.10

concentration of 1.84 mg/g of oxalic acid, while *Khassibhunga* had the lowest concentration of 0.81 mg/g of oxalic acid. The varieties *Kanda* and *Kovur* were on par. Though not significant, C-25 had recorded the highest percentage of dry matter and starch. In respect of protein and ash content, *Kovur* gave the highest value, while *Khassibhunga* recorded the lowest value. The lowest contents of ash and protein in *Khassibhunga* probably suggest the inherent ability of this variety for dilution of the absorbed nutrients, which is considered an index of higher productivity. The yield of economic produce obtained from the varieties (Anon. 1979) confirms this. Since the variety *Khassibhunga* showed the lowest oxalic acid content, this appears to be the ideal variety suitable for large scale cultivation.

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### സംഗ്രഹം

ഈ ലേഖനം കേരളവേഷണകേന്ദ്രത്തിൽ താരതമ്യ പഠനത്തിന് വിധേയമാക്കിയ അഞ്ച് ചേമ്പിനങ്ങളുടെ ഗുണപരിശോധന നടത്തിയതിൽ ഖാസിബുംഗ എന്ന ഇനം താരതമ്യേന മെച്ചമാണെന്ന് കാണുകയുണ്ടായി. വിളവിന്റെ കാര്യത്തിലും പ്രസ്തുത ഇനം മികച്ചുനിൽക്കുന്നതായി കണ്ടു.

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