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QUALITY CHARACTERISTICS OF FIVE VARIETIES OF *DIOSCOREA ALATA* L

Though *Dioscorea alata*,a tuber crop free of dioscorine (Anon., 1972), is a homestead crop in Kerala state grown for starchy tubers, very little is known about the quality characteristics of the crop. Experiments designed to study the growth and yield of five varieties of this crop in the red sandy loam soils of northern Malabar had shown that varieties did not differ substantially in their yield potential (Anon., 1979). A qualitative assessment of these varieties, will be helpful to judge the suitability of the previously tested variety for cultivation and the present experiment was carried out with this objective.

Tubers of five varieties of *Dioscorea alata* namely Da 42, Da 48, Da 60, Da 80 and Da 122 were raised at Coconut Research Station, Nileswar during 1978-'79 and the tubers were analysed for dry matter, ash and protein (AOAC, 1969) and starch (Ward Pigman, 1970) content. The different varieties were given uniform cultural and manurial practices as per the recommendation of the Kerala Agricultural University (Anon., 1978). The crop was planted during March-April 1978 and harvested in January, 1979.

It can be seen from the Table 1 that the varieties did not show any significant difference among themselves in respect of dry matter, ash and protein. However the varieties differed significantly in starch content. Da 80 gave the lowest analysis and was significantly inferior to other varieties in percentage of starch recovery. The data show that Da 80 was also the poorest in respect of protein content of tubers. Da 42 had recorded the highest percentage of dry matter and ash content while Da 122 was the poorest in in these attributes. The results also show that extent of variation in starch was high and pronounced. It ranged from 64 to 74.8 per cent on dry weight basis.

It can be seen from the results that the variety, Da 80 which gave the lowest recovery of starch and accounted for the lowest protein content and Da42 which had the highest starch content gave highest values for protein also.

Thus the data show the four varieties viz., Da 42, Da 48, Da 60 and Da 122 can be recommended for extensive cultivation in northern Malabar since they do not show any significant variation in yield or quality characteristics.

സംഗ്രഹം

നീലേശ്വരം ഗവേഷണ കേന്ദ്രത്തിൽ താരതമ്യ പഠനത്തിന് വിധേയമാക്കിയ അഞ്ച് ഇനം കാച്ചിലുകളുടെ ഗുണപരിശോധന നടത്തിയതിൽ നാല് ഇനങ്ങളും തുല്യ സവിശേഷതകളുള്ളവയാണെന്നു തെളിഞ്ഞു. ഉല്പാദനക്ഷമതയിലും തത്തുല്യമായ ഈ നാല് ഇനങ്ങളും ഒരുപോലെ കൃഷിക്കുപയുക്തമാണെന്നും raroml നാൽ ശുപാർശ ചെയ്യപ്പെടാമെന്നും പരീക്ഷണം സൂചിപ്പിച്ചു.

Table 1

Quality characteristics of different varieties of *Dioscorea alata* L

Varieties	Dry matter (%)	Ash (%)	Starch (%)	Protein (%)
Da 42	28.68	0.13	74.8	2.54
Da 48	29.43	0.14	70.0	2.49
Da 60	27.61	0.13	73.0	2.47
Da 80	26.68	0.14	64.0	2.39
Da 122	26.43	0.12	72.0	2.50
SEm+	2.21	0.22		0.07

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