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EFFECT OF APPLICATION OF GRADED DOSES OF LIME ON THE GROWTH AND YIELD OF BANANA VARIETY 'ZANZIBAR'

'Zanzibar' a nendran type of banana introduced from Africa is gaining ground in Kerala because of its high yield and quality. This variety usually produces only 2—3 hands having large sized fruits with no male axis (bud or heart) being classified as a 'Horn plantain'. In Nendran banana, Veeraraghavan (1972) found that application of higher doses of lime and NPK fertilizers has significantly increased the yield. In order to find out the effects of graded doses of lime on the growth and yield of banana Var. 'Zanzibar' a study was undertaken at the Banana Research Station, Kannara during 1976—77 season. The crop was raised under irrigated conditions in clay loam soils of pH 4.5. The lay out of the trial was R. B. D with 5 replication and 4 treatments. The plants were spaced at 2 M x 2 M either way. A uniform dose of 15 kg green leaf and NPK fertilizers to supply 225, 225 and 450 g. per plant as ammonium sulphate, superphosphate and muriate of potash respectively was given to all the plants. Four levels of lime (vide Table 1) were applied in a single dose around the base after planting constituted the treatments. Observations recorded on growth parameters at flowering stage and yield characters are presented in Table 1. The data on the effects of graded doses of lime on soil reactions are presented in Table 2.

Table 1 Mean on growth parameters at flowering stage and yield characters

Treatments	Height (cm)	Girth (cm)	Total No. of leaves produced	Bunch weight (kg)	No. of hands per bunch	No. of fingers per bunch
Control (no lime) (L_0)	323.5	54.2	25.6	6.9	2.1	16.4
250 g lime per plant (L_1)	323.8	53.7	25.8	7.5	2.2	19.2
500 g lime per plant (L_2)	324.6	55.7	25.0	8.0	2.3	19.8
1000 g lime per plant (L_3)	325.0	56.1	25.9	8.5	2.4	22.4
CD at 1%	N. S.	0.7	N. S.	0.5	0.2	1.1

N. S.: Not Significant.

Table 2 Effect of graded doses of lime on soil reaction

	Levels of lime			
	Control (L ₀)	0.25 kg (L ₁)	0.5 kg (L ₂)	1.0 kg (L ₃)
Initial pH	4.60	4.60	4.55	4.60
pH at 3rd month	4.60	4.85	5.05	5.43
pH at 6th month	4.55	4.95	5.10	5.51
pH at harvest (11th month)	4.55	4.90	5.10	5.50

The data vide Table 1 indicated that application of lime significantly contributed for an increase in the girth of the pseudostem, bunch weight, number of hands as well as fingers per bunch. In respect of bunch weight there was an increase of 8 per cent for 0.25 kg lime per plant treatment, 16 per cent for 0.5 kg lime per plant treatment and 23 per cent for 1.0 kg lime per plant treatment over no lime. However, application of 1.0 kg lime per plant resulted in maximum value in these regards. The pH of soil was raised from 4.6 to 4.9 in respect of treatment (L₁), 4.55 to 5.1 for treatment (L₂) and 4.6 to 5.5 in respect of treatment (L₃) from planting to harvest.

The application of lime resulted in an increased yield in banana. The beneficial effect of lime can be attributed to better utilization of NPK fertilisers due to increased pH resulted in the soil consequent on application of lime. Therefore, application of lime at one kg per plant over and above the fertilizer dosage is recommended for banana being grown under such soils.

സംഗ്രഹം

സാൻസിബാർ ഇനം വാഴക്കു കുമ്പായം *raraslojgffioctln* നൽകകുമ്പലം ഉളവാകുന്ന ഗുണഗണങ്ങളെക്കുറിച്ച് പഠിക്കുന്നതിനു 1976 - 77-ാം ആണ്ടിൽ കണ്ണൂർ വാഴഗവേഷണകേന്ദ്രത്തിൽ ഒരു പരീക്ഷണം നടത്തപ്പെട്ടു. പരീക്ഷണഫലങ്ങളിൽ നിന്നും വാഴ ഒന്നിനു് ഒരു കിലോഗ്രാം വീതം കുമ്പായം മാറ്റു വളങ്ങൾക്കുപരിയായി നൽകകുമ്പലം കൂടുതൽ വിളവു ലഭിക്കുന്നതായി തെളിഞ്ഞിരിക്കുന്നു.

REFERENCE

Veeraraghavan, 1972. Manurial cum liming experiment on Nendran banana. *Agri. Res. J. Kerala*, 10, 116-118.

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