

Performance of finger millet varieties in coastal region of Karaikal

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ABSTRACT

A field experiment was carried out at Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Karaikal during June to September 2004 to study performance of seven finger millet varieties under irrigated condition. The experiment was conducted in Randomized Block Design with three replications. The treatments consisted of seven varieties GPU 26, GPU 28, GPU 45, PR 202, L 5, Indaf 8 and CO 13. The results revealed that higher growth attributes like plant height and dry matter production were recorded by the varieties CO 13, Indaf 8 and GPU 26. The varieties GPU 26 were also found superior with higher yield attributes like number of ear head m², Length of panicle, number of grains ear head⁻¹ and weight of grains. Among the seven varieties CO 13 recorded the highest grain yield of 2008 kg ha⁻¹ followed by Indaf 8 (1940 kg ha⁻¹) and GPU 26 (1933 kg ha⁻¹) and these varieties yielded statistically similar yield and significantly higher than other four varieties. The next best varieties in order were GPU 28 and GPU 45 which registered the grain yield of 1753 kg ha⁻¹ and 1685 kg ha⁻¹, respectively.

Key words : Finger millet, Varieties, Growth, Yield.

INTRODUCTION

Small millets are the traditional crops and they are agronomically more adopted to impoverished soil and climatic conditions. They can be cultivated where no other food crops can be profitably grown. Among them, finger millet is the most important one and ranks third with an area of 2.0 M ha producing 2.6 M t in India. It is the richest source of P, Fe, Ca, S and minerals. Though there has been a declining trend in area, scope exists to improve the yield by 30 to 50 per cent through technology adoption (Seetharam, 1997). Standardisation of suitable varieties for a particular location is paramount importance to realize the yield potential of finger millet. Therefore, an attempt was made to study the performance of different finger millet varieties in the coastal region of Karaikal, Union Territory of Puducherry.

MATERIALS AND METHODS

Field experiment was carried out at Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Karaikal during June to September 2004 to study performance of finger millet varieties under irrigated condition. The experiment was conducted in Randomized Block Design with three replications. The treatments consisted of seven varieties GPU 26, GPU 28, GPU 45, PR 202, L 5, Indaf 8 and CO 13. The soil of the experimental field was sandy loam with the available NPK status of low, high and low, respectively. The crop was transplanted with a spacing of 22.5 x 15 cm. The fertilizer

application was done with a blanket recommendation of 90:45:45 kg NPK ha⁻¹. Half the dose of N and Full dose of P and K were applied as basal and remaining half dose of nitrogen was applied in to two equal splits during 20 and 40 days after transplanting (DAT). Biometric observation on growth, yield attributes and grain yield were recorded.

RESULTS AND DISCUSSION

Growth attributes:

Different varieties exerted significant influence on growth attributes of finger millet (Table 1). Among hem CO 13 produced taller plants than other varieties and this

Table 1 : Effect of finger millet varieties on growth attributes

Varieties	Plant height (cm)		Leaf area index		Dry matter production (kg ha ⁻¹)	
	30 DAP	60 DAP	30 DAP	60 DAP	30 DAP	60 DAP
GPU 26	54.1	77.3	1.94	2.73	1101	2562
GPU 28	53.0	74.1	1.81	2.64	1032	2495
GPU 45	48.2	68.3	1.78	2.59	962	2408
PR 202	51.3	63.8	1.76	2.41	803	2102
L 5	51.7	61.4	1.78	2.55	908	2319
Indaf 8	54.5	75.2	2.03	2.85	1114	2624
CO 13	55.3	81.7	2.15	3.03	1281	2818
S.E. _±	2.19	3.24	0.10	0.18	41.9	110.4
C.D. (P=0.05)	4.77	7.05	0.21	0.39	91.3	239.8

DAP – Days After Planting

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