

## PERFORMANCE OF GROUNDNUT VARIETIES IN RICE FALLOWS UNDER IRRIGATED CONDITIONS

Groundnut (*Arachis hypogaea* L.), the most important oil seed crop in the country, has been found to be a promising catch crop for multiple cropping in the rice fallows of the command areas in Kerala during summer season. The average yield of groundnut (1050 kg/ha) in the state remains low and variable, due to many reasons. Among them, the non-availability of the required quantity of improved varieties of seeds is an important one. In the present investigation, an attempt has been made to study the performance of groundnut varieties in the summer rice fallows with assured irrigation facilities.

Experiments were conducted in farmers field in two locations of the Chalakudy irrigation command (Kodassery and Meloor) during the period from February 1981 to June 1981. The treatments consisted of five varieties of groundnut viz., Pollachi-1, Pollachi-2, FSB-7-2, TMV-2, and JL-24 (Phulepragathi). The experiment was laid out in randomised block design with four replications. Nitrogen at the rate of 10 kg/ha,  $P_2O_5$  at the rate of 75 kg/ha and  $K_2O$  at the rate of 75 kg/ha were applied basally. Limewas applied at the rate of 1000 kg/ha at the time of flowering. Irrigation was given once a week. All the treatments received uniform cultural and plant protection operations as per the Package of Practices Recommendations of Kerala Agricultural University (Anon., 1978).

The data on yield attributes and on growth characters are presented in Table 1 and 2 respectively.

The pod yield in both the locations indicated the significant superiority of JL-24 over other varieties. The percentage increase in yield recorded by JL-24 over the two recommended varieties in the state viz., Pollachi-1 and T M V-2 was 84 and 103, respectively at Kodassery. The corresponding values at Meloor were 85 and 93. Patil (1979) has reported similar results with JL-24 from Maharashtra. Higher number of pods per plant and more number of kernels per pod have contributed to higher yield in JL-24. Although the difference in the number of pegs per plant was not perceptible, a significantly higher percentage of developed pods resulted in more number of pods per plant in JL-24. The data on growth characters (height of plants, number of branches per plant and number of leaves per plant) revealed that the varieties were more or less similar in their growth habit.

The results indicated the better adaptability of JL-24 variety of groundnut in the summer rice fallows of Kerala with assured irrigation.

Table 1  
Yield and yield attributes of groundnut varieties

Name of variety	Kodassery					Meloore				
	No. of pegs per plant	No. of pods per plant	* Percentage of pegs developed to pods	No. of kernels per pod	Yield of pods (kg/ha)	No. of pegs per plant	No. of pods per plant	Percentage of pegs developed to pods	No of kernels per pod	Yield of pods (kg/ha)
Pollachi-1	31.0	14.9	48.3 (7.0)	1.90	1415	18,6	7.8	41.7 (6.5)	1.9	767
Pollachi-2	32,7	14.0	42.7 (6.5)	1.85	1422	18,6	7.5	41.0 (6.4)	1.9	695
FSB-7-2	33.7	15.4	45.1 (6.7)	1,84	1817	20.8	9.1	44.4 (6.7)	2.0	950
TMV-2	32.0	16.5	53.0 (7.3)	1.70	1285	16.5	7.1	42.7 (6.5)	1.8	733
JL-24 (Phule pragathi)	25.1	17.6	70.6 (8.4)	2.15	2604	18.3	11.1	60.2 (7.8)	2.2	1417
C. D. (0.05)	NS	NS	(0.6)	0.25	589	NS	2.3	(0.7)	0,2	337
SEm±	3.4	1.6	(02)	0.08	191	1.7	0.8	(0.2)	0.08	109

\* Values presented in parenthesis are transformed (square root transformation) data

Table 2  
Growth attributes of groundnut varieties

Name of variety	Kodassery			Meloore		
	Height of plant (cm)	Number of branches per plant	Number of leaves per plant	Height of plant (cm)	Number of branches per plant	Number of leaves per plant
Pollachi-1	87.7	7.1	62.5	58.5	4.6	45.2
Pollachi-2	99.1	7.2	58.0	61.2	4.8	49.1
FSB-7-2	94.2	6.7	52.2	58.9	4.4	51.4
TMV-2	99.6	7.5	56.2	56.9	4.6	45.8
JL-24 (Phule pragathi)	81.5	5.8	56.4	67.6	4.7	45.5
C. D. (0.05)	NS	NS	NS	NS	NS	NS
SEm±	5.1	1.2	6.9	3.2	0.2	4.3

സംഗ്രഹം

വേനൽക്കാലത്ത് നെൽവയലുകളിൽ ജലസേചിത വിളയായി കൃഷി ചെയ്യാൻ പറ്റിയ നിലക്കടല ഇനങ്ങളെപ്പറ്റി നടത്തിയ പഠനങ്ങളിൽ നിന്നും, JL-24 എന്ന ഇനം ഇപ്പോൾ ശുപാർശ ചെയ്യപ്പെട്ടിരിക്കുന്ന ഇനങ്ങളേക്കാൾ ഉയർന്ന വിളവ് നൽകുന്നതായി കണ്ടു.

Command Area Research Centre,  
Vellanikkara-680 654  
Trichur, Kerala

Jose Mathew  
A. I. Thomas  
G. R Pillai  
Kuruvilla Varghese

References

Anonymous. 1978. Package of Practices Recommendations, Kerala Agricultural University, Trichur, 41-42.  
Patil, G. D. 1979. The march of oilseeds research in Maharashtra. *J. Maharashtra agric. Univ.*, 4 (3) 252-256.