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Labour Requirements of Crops*

S. PALANISAMY[1] and V. RAJAGOPALAN[2]

In the study of labour requirements of crops it was revealed that commercial crops required 57 per cent more labour than food crops. The labour for irrigated crops required 113 per cent more than dry crops. The female labour contribution was more than that of male labour in all crops except in rice where it was equal.

The new strategies for Agricultural Production adopted in the Five Year Plans call for new directions in the type of inputs including labour. Season, nature of crop and duration of crop influence the pattern of requirements of labour. These changing conditions in agriculture demand, a change in the requirement of labour also. With a general objective of studying the pattern of labour utilisation and wage structure in the farm holdings, a study was taken up and the results are presented herein. One of the specific objectives is to estimate the labour requirement of crops.

MATERIALS AND METHODS

The present study was taken up in Theni block of Madurai district, where the Intensive Agricultural Area Programme (IAAP) and the High Yielding Variety Programme (HYVP) were under operation.

The farm holdings in the three randomly selected villages that constituted 25 per cent of total villages were arranged in the ascending order of magnitude and stratified into three broad size groups (1) small. 0.20 to 2.00 hectares; (2) medium: 0.01 to 4.68 hectares and (3) large: 4.69 hectares and above. The sample size consisted of 90 holdings in all; 30 each in small, medium and large size groups. The holdings were selected by applying the techique of probability proportion to the number of holdings in each category and in each village. While selecting holdings, the holdings which were using tractors were rejected for the reason that tractorized farms would not give true picture of the labour use in the locality.

The labourers - men and women- were expressed in terms of mandays of eight hours on the basis of wage rate (Sanghvi, 1969). As the wage ratio was 1:2 for men and women in the selected villages, two women days were considered as equivalent to one manday for computing manday units.

RESULTS AND DISCUSSION

Important crops and the period of cultivation in Theni Block are given below :

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1 - 2 : Department of Agrl. Economics, Tamil Nadu Agricultural University Coimbatore - 641 003.

Crop	Period
Chillies	April to September-October
Cotton	1. September - October to February - March
	2. February to July
Groundnut	1. November - December to February - March
	2. March-April to June-July
Rice	August - September to November - December.
Cholam	November - December to February
Ragi	July - August to October-November

Labour Requirements for different Crops: The labour engaged for crop production in the three size groups of farms for different crops are presented in the Table I. In general, there was not much variations among the size groups. This was because the sum total of the labour, engaged in the three size groups for various operations, was nearly the same. Besides, the schedule of labour employed for such operations like forming beds and channels, harvesting were nearly set by experience and hence inter-size variations were not noticed. The essential differences in the labour requirements among various crops are highlighted below:

It is seen that chillies and cotton crops required more labour than other crops since the operation of harvesting these crops extended two to three months. Relatively chilli crop consumed more labour than cotton because timely intercultivations at more frequent intervals were given and also the harvesting period extended 20 to 30 days more for chilli crop than cotton. Ragi and cholam required 47.9 and 37.4 man days respectively which are less when compared to chilli and cotton since harvesting is done only once.

Irrigated groundnut required 47.9 man days per acre as against 22.6 man days for rainfed groundnut, due to operations like irrigation and intercultivation and especially harvesting which require more labour because of the higher yield than the rainfed crop. The same phenomenon was noticed in the case

TABLE I. Labour requirements of crops per hectare (in standard manday equivalents)

Farm size	Chillies	Cotton	Ground-nut	Cholam	Ragi	Rice	Dry ground-nut	Dry cotton	Dry cumbu	Dry cholam
Mandays :										
Small	255.40	176.11	120.04	94.36	130.42	143.51	—	81.51	46.93	—
Mendium	265.28	187.47	119.05	93.61	117.57	129.68	56.81	86.45	43.91	45.94
Large	240.33	174.63	116.09	89.41	107.45	135.60	54.83	76.57	48.17	44.95
Average	253.67	179.40	118.31	92.38	118.31	136.34	55.82	81.51	46.19	45.45

TABLE II. Labour requirements of crops per hectare - sexwise

Farm size	Crop													
	Chillies		Cotton		Groundnut		Cholam		Ragi		Rice		Dry Groundnut	
	Men	Women	M	W	M	W	M	W	M	W	M	W	M	W
Small	109.42	291.95	68.17	215.63	63.73	112.63	56.56	75.34	64.22	132.64	91.39	104.23	—	—
Medium	109.17	311.96	74.10	227.24	61.75	114.86	54.63	77.56	56.81	121.77	93.86	71.63	22.23	69.16
Large	101.27	278.12	73.11	203.28	58.79	114.86	49.40	79.78	59.28	96 33	93.12	85.22	18.53	72.87
Average	106.70	293.93	71.88	215.38	61.36	114.11	53.60	77.56	60.02	116.83	92.87	86.94	20.50	70.89

Dry cotton		Dry cumbu		Dry cholam	
M	W	M	W	M	W
37.05	88.92	14.82	64.22	—	—
23.47	125.97	18.03	52.12	16.80	58.05
19.76	113.62	17.29	56.81	17.29	55.58
26.68	109.42	16.80	57.80	17.04	56.81

of irrigated and rainfed cotton. This clearly shows that the irrigation is the binding factor which influences the labour use. Warrier (1970) and Misra (1970) have also observed that fuller utilization of labour depended on fuller use of water resources.

Labour Requirements-Sexwise: When the labourers were analysed, sexwise more women workers were engaged in all crops except that of rice. It is seen from Table II that the ratio of male and female workers employed in chillies and cotton crop was roughly 1 : 3 and in groundnut, cholam and ragi it was 1 : 2 or less. Female labour engaged in the former case was more when compared to the latter because the harvesting operation, extended two to three months in the cotton and chillies whereas it was not in the other case. Dhavle (1964) also observed the predominance of women labour in the selected rural centres of Maharashtra.

In the irrigated and rainfed groundnut crops the ratio was 1 : 2 and 1 : 3 respectively because in the former crop the operation of irrigation demanded male labourers and this operation did not exist at all in the dry groundnut crop. The women workers were engaged in all operations except the preparatory cultivation which is the specified job of the men.

In the case of rice crop women were engaged rarely for harvesting and that is why the women labour-use was less when compared to other crops.

Further, it was observed that the labour requirement for commercial crops was more than that of the food crops. Besides, the female labourers engaged were more in commercial crops than food crops since the harvesting chillies and cotton, the specified job for women, extended upto two to three months.

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