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Extent of human Resource and Employment level in Dryland Region

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A study was carried out in black soil dryland tract of Tirunelveli and Ramnad districts to find out the level of employment in on farm and off farm sectors This study revealed that the average number of days employed in an year in respect of male and female labour were 199 days and 143 days respectively, of which, 70 per cent of male labour days and 66 per cent of female labour days were utilized in others farm, an labourers The represssion analysis showed that the labour force and cash inputs alone had significant influence over the employment level.

Human resource is a great social asset and one of the most important resources used in accelarating the process of economic development. Seventy per cent of the country's population still depends upon agriculture for its livelihood. This implies that a vast reserve of human resource exists in the farm sector. This important input of human resource is not fully and gainfully utilized in the farm front. There is a large wastage of this important resource which. if utilized properly would play a significant role in increasing the productivity and in achieving a certain level of economic development. It is therefore necessary that the farm family labour should be utitized fully by creation of gainful employment. Only through increased employment. the standard of living of this workforce could be raised, The present study was taken up to study the extent of human resource utilization of the selected households in the on-farm and off-farm sectors and to find out the extent of under utilization of human resource in the selected households.

METHODOLOGY

This study covered 73 rural farm households distributed in Kovilpatti taluk of Tirunelveli district Sattur and Aruppukottai taluks of Ramanathapuram district. Based on farm size, the sample was classified into five groups as follows: I size = less than 1.00 ha, II size = 1 01 to 2.00 ha. III size = 2.01 to 4.00 ha, IV size = 4.01 to 8.00 ha and V size = 8.01 ha and above. These farm holdings were selected at random with probability proportional to size.

RESULTS AND DISCUSSION

i) Extent of human resource availability in the selected households: Family is the main source of providing human labour to meet the labour requirements. The total strength of the members in the 73 households was 347 and the average size of household was 4.75. Though inter-farm size group variations were evident the percentage of work force on the whole averaged to 44 63. Of the total available family male members, the share of male work force

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(49.19%) was found to be more than the share of family female work force (39.65%) in tha total available female members. The number of workers on an averaga per family ranged from 48 73 per cent in the second size group farm households to 34 82 pel cent in the fifth size group farm households. to 34.62 per cent in the fifth size group farm heuseholds. It was also observed that with increase in size groups the workforce decreased.

ii) Averege level of employment per family labour : For assessing the utilization of human labour among different occupations. a day has been calculated on the basis of 8 hours of work The distribution of family labour according to nature of work done is furnished in Table 1. Opportunities for employment in 'on farm' and 'livestocke depend on the size of holding, livestock maintained and cropping pattern.

The utilization of male labour in on farm' varied from 7.69 per cenr in first size group to 59.23 per cent in fifth size group. This indicates that a male labour in higher size group has more work than a worker in the lower size groups. This was because crop production was a minor activity for small farmers but major activity in bigger size farms. Livestock receives better attention in the farms of large size group than smaller ones, 'Off-farm' activity being the main occupation of the workers in the lower size group, the number of days devoted as 'hired labour on other farms' declinsd from 92.31 per cent in first size group to 40.77 per cent in fifth size group farms.

Inspite of doing all domestic work. the contribution of female labour was in no way less important than that of male labour. Analysis of the sexwise family labour indicates that except in III and V size group farms, the total labour days utilized in owned farm exceed the male labour days utilized in respective size groups, In the case of livestock maintenance also, except in III and IV size group the total labour days shared by female labour was almost equal to that of male labour days.

iii) *Under utilization of human Resources* : Under utilization of the human resources is one of the most serious and pressing problems in the dryland region. It is evident that except fifth size group (above 8 ha), in other farms the overall employed days of family labour on owned farm was less than 40 per cent. Even in the fifth size group farms male, labour got more than 40 per cent of total employment in others farm only. Considering hired out labour, unemployed days for male labour varied from 144 days in I size group farms to 208 days in fifth size group farms. On an average about 45 per cent of the male labour days and 61 per cent of the female labour days were not utilized for anv gainful employment by the farm families.

Iv) *Variation in family labour use Source wise* : The co-efficient of variation of monthty labour use under different production activities viz., crop production, livestock maintenance and hired out are furnished in Table II.

Table II Co-efficient of variation in the family labour use-source wise

Particulars	On own farm						Hired out	
	Crop		Livestock		Total			
	SD	CV	SD	CV	SD	CV	SD	CV
Male	2.22	75.25	0.48	23.08	3.67	70.97	1.27	11.00
Female	4.08	136.91	0.08	7.48	3.66	90.37	1.41	17.96

SD=Standard Deviation, CV=Co-efficient of variation

It is obvious from the data presented in Table II that the co-efficient of variation of monthly labour usnd in crop production was relatively much higher. The mixed farming with crop production and lievstock maintenance showed relatively less co-efficient of variation compared to crop production enterprise alone.

v) *Functional Analysis* : To analyse the determinents of employment level in own farm, regression analysis was carried out. The total employed days per annum in owned farm was taken as dependent variable (Y) with farm size in acres(X_1), labour force in family (X^2) and cash expenditure on crop production and livestock maintenance (X_n) as the independent variables. The estimated function for employment level in owned farm is as follows :

$$y = 0.05414 + 0.01836\ X_1 + 0.09345^{*}X_2 + 0.08061^{**}X_3$$

[0.01083] [0 04427] [0.00621)

$n = 73$ $R^2 = 0.81$

* Significant at five per cent level ** Significant at one per cent level where

y=Total employed days in owed farm (days in 100s)

X_1=Farm size in acres,

X_2=Labour force in the family

X_3=Cash expenditure on crop production and livestock maintenance (Rs. in 100s)

The estimated standard errors of the partial regression co-efficient are given in parenthesis.

The co-efficient of multiple determination (R^2) was found to be 0 81 indicating the goodness of fit implying that .81 per cent of the variation in the employment level could be explained by the included dependent variables. The variables labour force (X_2) and cash input (X_3) were found positive and had significant influence on the employment level (y). It could be intrepreted that an increase of one member in the labour force would *Ceteris paribus* add nine days to the employmet level. Similarly, for every increase of one hundred rupees in cash expenditure on crop production and livestock maintenance, there would be *Ceteris paribus*, an addition of eight days in the employment level.

TABLE I Average level of employment per family labour

Size group	MALE					FEMALE				
	On own farm			Hired out	Total	On own farm			Hired out	Total
	Crop	Livestock	Total			Crop	Livestock	Total		
I	13	4	17	204	221	18	5	23	165	188
	[5.88]	[1.81]	[7.69]	[92.31]	[100.00]	[9.57]	[2.66]	[12.23]	[87.77]	[100.00]
II	33	12	45	167	212	40	12	52	133	185
	[15.57]	[5.66]	[21.23]	[78.77]	[100.00]	[21.62]	[6.49]	[28.11]	[71.89]	[100.00]
III	34	35	69	133	202	45	13	58	120	178
	[16.83]	[17.33]	[34.16]	[65.84]	[100.00]	[25.28]	[7.30]	[32.58]	[67.42]	[100.00]
IV	49	29	78	125	203	48	31	79	48	127
	[24.14]	[14.28]	[38.42]	[61.58]	[100.00]	[37.80]	[24.40]	[62.20]	[37.80]	[100.00]
V	48	45	93	64	157	28	3	31	5	36
	[30.57]	[28 66]	[59.23]	[40.77]	[100.00]	[77.78]	[8.33]	[86.11]	[13.89]	[100.00]
Average	35.40	25.00	60.40	138.60	199.00	35.80	12.80	48.60	94.20	142.80
	[17.79]	[12,56]	[30.35]	[69.65]	[100.00]	[25.07]	[8.96]	[34.03]	[65.97]	[100.00]