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Article · January 2016

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Analysis of Resource Use by Paddy Growers of District Etah of Uttar Pradesh

Vikas Kumar¹, Vinod Kumar², Sanjeev Kochewad³, S.L. Verma⁴ and S.P. Singh⁵

¹Indian Grassland and Fodder Research Institute, Jhansi, India

²Nalanda College of Horticulture, Nalanda, Bihar, India

³Indian Institute of Farming Systems Research, Modipuram, UP, India

⁴Chander Shekhar Azad University of Agriculture & Technology, Kanpur, UP, India

⁵Krishi Vigyan Kendra, Morena, MP, India

Corresponding author: vyadav21@gmail.com

Abstract

A three-stage sampling technique was adopted for selection of block, villages and paddy growers. The district Etah was selected purposively for the research work. From the list of the total number of the farmers of the each village, a sample of 100 paddy growers (the farmers having 20 percent and above area under paddy in their cropping patterns) was selected and stratified into 3 farm size groups viz. 70 marginal (0- 1 hectare), 19 small (1-2 hectares) and 11 large farmers (2 and above hectares) indicates that number of milch animals decreases with the increase in farm size. The number of draught animals maintained by marginal households is higher than that of small and large size farms. The number of milch animals is lower in each category than that of draught animals. The investment on land, in percentage term is 87.17 percent, 86.94 percent and 87.15 percent in marginal, small and large farms respectively. The percentage of total investment in livestock on marginal, small and large farms size group comes to 9.01 percent, 8.12 percent and 7.38 percent respectively. The value of land is highest on all categories of farms followed by the value of livestock, agriculture implements and irrigational structures.

Keywords:

The Economy of Uttar Pradesh revolves mostly around the agriculture. Paddy contributes remarkably to provide food security to the people. U.P. has attained prominent position in Paddy area and production among the Indian states. In the agricultural economy of the district Etah, Paddy plays a remarkably important role. Paddy occupied about 17 percent of net sown area in kharif season. The area, production and productivity of Paddy in district was 54726.10 hectares, 1081934.90 quintals and 19.77 qtls./hectare respectively during 2001-02. Paddy has tremendous importance to both farming and non-farming community of India (Sarkar and Pal, 2003). The resource structure of paddy farmers

is an important determinant of total production and productivity. The investments in different farm fixed assets also vary with the size of farm and affect the income and sustainability of farms.

MATERIALS AND METHODS

A three-stage sampling technique was adopted for selection of block, villages and paddy growers. The district Etah was selected purposively for the research work. From the list of blocks, a block, which had highest area under paddy crop was selected randomly. From the list of the total number of the farmers of the each village, a sample of 100 paddy growers (the farmers having 20 percent and above

area under paddy in their cropping patterns) was selected and stratified into 3 farm size groups viz. 70 marginal (0- 1 hectare), 19 small (1-2 hectares) and 11 large farmers (2 and above hectares). Both primary and secondary data were collected for the purpose of the study. First hand (Primary) data were collected from the selected paddy growers through survey method with the help of imaginatively designed and pre-tested schedules and questionnaires. The schedules and questionnaires prepared were sufficiently comprehensive and covered almost all the aspects of Paddy cultivation and marketing. The data were pertained to 2003- 04. Two types of resources were studied for the sample farmers, one is livestock population and another is fixed assets.

Status of live stock population with the sample farmers

Livestock plays a very vital role in Indian agriculture as they are kept for draught and milk purpose. But in other countries of the world, the cattle are maintained for milk and meat. The Indian farmers continue to keep and assorted of milch and draught animals not only to ensure supply of milk, plough, power and transport but also for the purpose of the commerce. Animal population maintained per household in different categories is presented in Table 1.

Table 1: Animal population per farm under different farm size categories (No.)

Particulars	Farm size groups			Overall
	Marginal	Small	Large	
She buffalo	1.74	1.76	2.10	1.78
Cow	1.61	1.22	1.02	1.47
Adult goat and sheep	2.30	1.56	0.74	1.99
Total	5.65	4.54	3.86	5.24
Draught animals				
Bullock	0.76	0.85	0.63	0.73
He buffalo	0.32	0.21	0.08	0.27
Mule and donkey	0.19	0.03	0.01	0.14
Total	6.92	5.63	4.58	6.42
Calf, heifer and kids				
Calf and heifer	2.83	3.12	3.62	2.97
Kids	0.81	0.74	0.26	0.73
Grand total	10.56	9.63	8.46	10.15

The Table 1 shows that overall number of milch animal is 5.24. Out of this, the number of she-buffalo, cow and goat comes to 1.78, 1.47 and 1.98 respectively. The number of milch animals decreases with the increase in farm size. The number of draught animals maintained by marginal houseold is higher than that of small and large size farms. The number of milch animals is lower in each category than that of draught animals.

Investment on livestock and on other fixed capital

The investment in fixed capital plays an important role in the economy of the farm. For the purpose of present study, the capital investment has been worked out per farm and per hectare by adding up the values of various fixed assets found on farms under study in different categories of farm and presented in Table 2.

Table 2: Per farm quantum of investment in fixed capital under different size groups. (Amount in Rupees)

Particulars	Farm Size Groups			Overall
	Marginal	Small	Large	
Land	114489.26 (87.17)	287308.13 (86.94)	709655.39 (87.15)	212793.12 (87.11)
Milch animals	8816.26 (6.71)	22628.84 (6.85)	56020.45 (6.88)	16633.11 (6.81)
Draught	3016.82 (2.30)	4187.63 (1.27)	4102.46 (0.50)	3358.69 (1.37)
Total	11833.08 (9.01)	26816.47 (8.12)	60122.91 (7.38)	19991.80 (8.18)
Farm building	1240.80 (0.94)	4375.01 (1.32)	12869.93 (1.58)	3115.50 (1.28)
Agricultural implements and machinery	1782.71 (1.36)	5554.73 (1.68)	14384.53 (1.77)	3885.51 (1.58)
Irrigational structures	1426.51 (1.09)	4628.48 (1.40)	11980.29 (1.47)	3195.80 (1.31)
Others	563.80 (0.43)	1793.57 (0.54)	5240.35 (0.65)	1311.88 (0.54)
Total investment	131336.16 (100.00)	330476.39 (100.00)	814253.37 (100.00)	244293.70 (100.00)

Figures in Parentheses indicate percentage

The Table 2 indicates that per farm total investment in land on marginal, small and large size farm is found to be ₹ 114489.26, ₹ 287308.13 and ₹ 709655.39 respectively and in percentage term it accounts to 87.17 percent, 86.94 percent and 87.15 percent under respective farm size groups. The percentage of total investment in livestock on marginal, small and large farms size group comes to 9.01 percent, 8.12 percent and 7.38 percent respectively. The investment in buildings on marginal, small and large farms is ₹ 1240.80, ₹ 4375.01 and ₹ 12869.93 respectively. The per farm value of fixed assets comes to ₹ 131336.16, ₹ 330476.39 and ₹ 814253.37 in case of marginal, small and large farm size groups respectively. The value of land is highest on all categories of farms followed by the value of livestock, agriculture implements and irrigational structures. The per hectare investment in fixed capital under different size groups has also been worked out and presented in Table 3.

Table 3: Per hectare investment in fixed capital under different farm size groups. (₹)

Particulars	Size group			Overall
	Marginal	Small	Large	
Land	204445.12 (87.17)	206696.49 (86.94)	213751.62 (87.15)	205896.59 (87.13)
Milch animals	15743.32 (6.71)	16279.74 (6.85)	16873.63 (6.88)	15969.57 (6.81)
Draught	5387.17 (2.30)	3012.69 (1.27)	1235.68 (0.50)	4479.35 (1.37)
Total	21130.49 (9.01)	19292.43 (8.12)	18109.31 (7.38)	20448.92 (8.18)
Farm building	2215.73 (0.94)	3147.49 (1.32)	3876.48 (1.58)	2575.45 (1.28)
Agricultural implements and machinery	3183.41 (1.36)	3996.21 (1.68)	4332.69 (1.77)	3464.26 (1.58)
Irrigational structures	2547.33 (1.09)	3329.84 (1.40)	3608.52 (1.47)	2892.40 (1.31)
Others	1006.79 (0.43)	1290.34 (0.54)	1578.42 (0.64)	1123.54 (0.54)
Total investment	234528.87 (100.00)	237752.80 (100.00)	245257.04 (100.00)	236321.51 (100.00)

Figures in parentheses indicate percentage

The Table 3 reveals that per hectare total investment in fixed assets on marginal, small and large farms comes to ₹ 234528.87, ₹ 237752.80 and ₹ 245257.04 respectively. Per hectare investment in land is ₹ 204445.12, ₹ 206696.49 and ₹ 213751.62 on marginal, small and large farm size groups respectively, which accounts to 87.17 percent, 86.94 percent and 87.15 percent on respective farm groups. The investment in live stock comes to ₹ 21130.49, ₹ 19292.43 and ₹ 18109.31 on marginal, small and large farm size group respectively. The total investment in farm buildings comes to ₹ 2215.73, ₹ 3147.49 and ₹ 3876.48 on marginal, small and large farm size group respectively. Which accounts to 0.94 percent, 1.32 percent and 1.58 percent of the total fixed cost on marginal, small and large farm size group respectively. The total investment in agricultural implements and machinery comes to ₹ 3183.41, ₹ 3996.21 and ₹ 4332.69 on marginal, small and large farm size group respectively, which accounts to 1.36 percent, 1.68 percent and 1.77 percent on respective farm size group. The totals investment on irrigational structures comes to ₹ 2547.33, ₹ 3329.84 and ₹ 3608.52 on marginal, small and large farm size group respectively, which accounts to 1.09 percent, 1.40 percent and 1.47 percent on respective farm size group. This shows that investment per farm increases with the increase in farm size (Desai, AR 2009)

Keeping in view the structure, cropping and resource use, it can be said that the households under study are required institutional efforts to help them in intensification and diversification of agriculture with the aim to increase the production and net income of the farmers. The productivity of farms are directly related to new technology and level of investments (Atribudhi and Singh 1994).

ACKNOWLEDGEMENT

The author is grateful to Dr. BRS Chauhan, Advisor, other staff of Deptt. of Agricultural Economics, JMV, Ajitmal, Auraiya (UP) and sample farmers.

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