

## Original Research Article

### Participation of Rural Youth of Bargarh District of Odisha in Agriculture and Allied Activities

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#### ABSTRACT

The study was conducted in Bargarh district of Odisha state, during the year 2018-19 to detect, analyze and determine the participation of rural youth in different agriculture and allied activities with ex-post-facto survey research design. A total of 120 respondents covering six villages were selected as sample respondents. The data was collected by personal interview using well-structured questionnaire. Participation of rural youths in different agricultural and allied activities was recorded and analyzed using statistical measures. Higher participation of rural youths was found in ploughing, irrigation, harvesting and grazing of cattle with scores 1.92, 1.93, 1.97 and 1.85 respectively. Lower participation of rural youths was found in preparation of nursery, seed treatment, poultry care and harvesting fish with scores 1.73, 1.44, 1.36 and 1.36 respectively. The findings can be used by extension personnel and government departments for motivating and training the rural youths.

#### Keywords

Agriculture,  
Participation,  
Rural, Youth

#### Introduction

Agriculture generally, involves five stages viz., production, processing, storage, marketing and consumption. In most of these stages, rural youth can actively be involved. They are participating in most of the agricultural operations like ploughing, harrowing, sowing, transplanting, weeding, harvesting, post harvesting activities and so on. Rural youth participate in marketing

where the trade or enterprise is highly/largely commercialized. Rural youth play a key role in performing various tasks related to dairy and goater enterprise like maintenance of cattle/goat shed feeding of animal/goats, collection of kendu leaves, mahua collection etc. Crop farming and livestock rearing are the two major activities in which they are involved (Chaudhary *et al.*, 2019).

The basic input for achieving higher yields are assimilation of technological knowledge for which the first step is getting the knowledge. Knowledge is one of the important components of behavior and the adoption of any innovation depends upon the knowledge, attitude and investment capacity of an individual. It has been globally accepted that the attitude of an individual plays an essential role in influencing his/her behavior. Hence, the attitude of rural youth in India towards modern agriculture will most certainly have bearing on the future of agricultural development in India.

Agricultural activities are seasonal in nature. The rural youth engage themselves in these activities during seasonal period or during off/lean periods. Therefore they will have to be given proper training and orientations about self-employment programmes to take up self-employment. Thereby, adding additional income to their family and improving their standard of living. In this context it is worthwhile to access the extent of participation of rural youth in the farm activities, their knowledge level towards improved agriculture, which in turn would help the planner and administrators to develop/modify training, recreational programmes and developmental strategies for rural youth. The urban youth are mostly educated, organized in many forms and have access to facilities and institution meant for youth services. Whereas, rural youth are mostly illiterate, burdened with the needs of their own families, lack of opportunities for organizing themselves to engage in constructive work and also lack guidance for participation in development activities. Rural youth involvement in agriculture is characterized with constraints that include lack of access to capital, poor storage facilities, poor road networks, poor access to agriculture insurance for farm produce, and lack of technical assistance (Trevor and

Kwenye, 2018). Njeru (2017) reported that youth's negative perceptions of agriculture as a reason why many did not participate in the sector; where 18.1% youth felt that there were no role models in agriculture and 17.6% claimed that agriculture was not profitable.

The Bargarh district is situated in the western portion of Odisha state and is bounded on the south by Bolangir district of Odisha, on the north Jharsuguda district, on the east by district of Sambalpur and on the west by Chhatisgarh state. The total covering an area of 5,837 sq. km. and positioned at 21.33°N 83.62°E with an average elevation of 171 meter (561 feet). The headquarters of Bargarh district was situated about 350 km. from the capital of Odisha. The district is coming under Agro-Climatic zone- Western Central Table Land and divided into five Agro Ecological Situation (AES). The District experiences extreme type of climate with hot and dry summer followed by humid monsoon and severe cold. The temperature varies between 10°C to 48°C. The district receives rainfall from South-West monsoon. The average annual rainfall in the district is 1367mm. But the rainfall is not well distributed. The erratic distribution of rainfall very often hampers the Kharif crop production particularly in Padmapur Sub-division and Bhatli, Ambabhona Blocks of Bargarh Sub-division.

### **Materials and Methods**

The study was conducted in Bargarh district of Odisha state, during the year 2018-19 to detect, analyze and determine the participation of rural youth in different agriculture and allied activities. Now a day's rural youth are the key elements for the development of nation. Therefore, the study was taken to know various facts about them. 'Ex-post-facto survey research design' was employed in the study and both purposive

and non probability random sampling methods were adopted for selection of the district, block, village and respondents. A total of 120 (One hundred twenty) number of respondents were selected for the purpose of the investigation. The data were collected through structured interview schedule from the respondent. The collected data were analyzed using statistical tools viz. frequency, percentage, mean, rank order.

The number of individuals or observations in each class of attributes/ variables is called frequency of that class of variable. The arrangement of Frequencies in different classes of a variable is called the Frequency distribution of the variables. Percentage was used in the descriptive analysis for making simple comparisons. In order to calculate percentage, the frequency of a particular cell was divided by the total number of respondents in that particular category to which the cell belong and multiplied with 100. Percentage was calculated up to two places after a decimal point.

Arithmetic mean of a variable is obtained by dividing the sum of all the variety values of a series of observations by the total number of observations. Thus, if there are n observations of a variable, x having values  $x_1, x_2 \dots x_n$ , then

$$\text{Arithmetic mean} = \frac{\sum f(x)}{N}$$

Ranking is an expression of people's priority about their thoughts and feelings. Ranking was done by assigning the first rank to highest mean score and the second rank to the next highest mean score and so on.

The mean score for a particular factor was worked out separately for the two areas by dividing the weighted score of the factor with the total number of respondent.

## Results and Discussions

### Farm activities

From table 1, it was observed that out of total respondents, ploughing of land (mean score=1.92) ranked 1<sup>st</sup> among farm activity participations, closely followed by respondents' preparation of ridge and furrow (mean score=1.90) ranked 2<sup>nd</sup>, levelling of land (mean score=1.88) ranked 3<sup>rd</sup>, spreading of F.Y.M. (mean score=1.79) ranked 4<sup>th</sup> respectively. Respondents' participation was found least in preparation of nursery (mean score=1.73) ranked 5<sup>th</sup>.

### During sowing

From table 2, it was found that out of the total respondents, maximum participation was in ploughing during sowing (mean score=1.89) ranked 1<sup>st</sup> followed by field preparation before planting (mean score=1.86) ranked 2<sup>nd</sup>, selection of seed (mean score=1.85) ranked 3<sup>rd</sup>, transplanting (mean score=1.83) ranked 4<sup>th</sup> and sowing (mean score=1.76) ranked 5<sup>th</sup> respectively.

Involvement in seed treatment during sowing time was least (mean score=1.44) ranked 6<sup>th</sup>. This was because of low level of knowledge among the farmers on selection and technical knowhow of treatment of seeds (Prusty *et al.*, 2020).

### During irrigation

From Table 3, maximum participation of rural youth was found in irrigation (mean score=1.93) ranked 1<sup>st</sup> among the irrigation and water management activities followed by making of drains and trenches (mean score=1.91) ranked 2<sup>nd</sup> and preparation of outlet was having least participation (mean score=1.87) ranked 3<sup>rd</sup>.

### Inter-cultural operations

From table-4, among inter-cultural activities, maximum participation of rural youth was found in case of care of standing crops (mean score=1.95) ranked first followed by weeding (mean score=1.77) ranked second.

### Harvesting

From Table 5, operations regarding harvesting revealed, maximum participation of respondents was found in harvesting of crops (mean score=1.97) ranked 1<sup>st</sup> followed by selling of produce (mean score=1.88) ranked 2<sup>nd</sup>, transportation of harvest to barn (mean score=1.86) ranked 3<sup>rd</sup> respectively and found least in storage of the harvested product (mean score=1.79) ranked 4<sup>th</sup>. Similar results were found by Rani and

Rampal (2016), they reported that majority the rural youths fully participated in most of the major activities such as variety selection, sowing and marketing in all crops that were grown by them except in transplanting in case of paddy where they were partially involved.

### Management of animal husbandry

From Table 6, out of the five activities related to animal husbandry management, maximum involvement was found in grazing of animal (mean score=1.85) ranked 1<sup>st</sup> closely followed by feeding of animal (mean score=1.78) ranked 2<sup>nd</sup>, care of ill animal (mean score=1.77) ranked 3<sup>rd</sup>, selection of breed (mean score=1.76) ranked 4<sup>th</sup> respectively and feed and fodder (mean score=1.59) ranked 5<sup>th</sup>.

**Table.1** Distribution of respondents according to farm activities (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
<b>Ploughing of land</b>	<b>110</b>	<b>91.67</b>	<b>10</b>	<b>8.33</b>	<b>1.92</b>	<b>I</b>
Leveling of land	106	88.33	14	11.67	1.88	III
Preparation of ridge/ furrow	108	90.00	12	10.00	1.90	II
Application of FYM	95	79.17	25	20.83	1.79	IV
Preparation of nursery	87	72.50	33	27.50	1.73	V

**Table.2** Distribution of respondents according to sowing activities (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
Selection of seed	102	85.00	18	15.00	1.85	III
Seed treatment	53	44.17	67	55.83	1.44	VI
Sowing	91	75.83	29	24.17	1.76	V
<b>Ploughing during sowing</b>	<b>107</b>	<b>89.17</b>	<b>13</b>	<b>10.83</b>	<b>1.89</b>	<b>I</b>
Field preparation before planting	103	85.00	17	14.17	1.86	II
Transplanting	99	82.50	21	17.50	1.83	IV

**Table.3** Distribution of respondents according to activities during irrigation (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
Drains and trenches preparation	109	90.83	11	9.17	1.91	II
<b>During irrigation</b>	<b>112</b>	<b>93.33</b>	<b>08</b>	<b>6.67</b>	<b>1.93</b>	<b>I</b>
Outlet preparation	104	86.67	16	13.33	1.87	III

**Table.4** Distribution of respondents according to their inter-cultural operation (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
Weeding	92	76.67	28	23.33	1.77	II
<b>Care in standing crop</b>	<b>114</b>	<b>95.00</b>	<b>06</b>	<b>5.00</b>	<b>1.95</b>	<b>I</b>

**Table.5** Distribution of respondents according to harvesting activities (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
<b>Harvesting</b>	<b>116</b>	<b>96.67</b>	<b>04</b>	<b>3.33</b>	<b>1.97</b>	<b>I</b>
Transportation to barn	103	85.83	17	14.17	1.86	III
Storage	95	79.17	25	20.83	1.79	IV
Sale of produce	106	88.33	14	11.67	1.88	II

**Table.6** Distribution of respondents as per management of animal husbandry (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
Selection of breed	91	75.83	29	24.17	1.76	IV
Feeding of animal	93	77.50	27	22.50	1.78	II
Care of ill animal	92	76.67	28	23.33	1.77	III
Feed and fodder Purchase	71	59.17	49	40.83	1.59	V
<b>Grazing of animal</b>	<b>102</b>	<b>85.00</b>	<b>18</b>	<b>15.00</b>	<b>1.85</b>	<b>I</b>

**Table.7** Distribution of respondents as per management of poultry farming (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
Making poultry shed	61	50.83	59	49.17	1.51	II
Purchase of feed	48	40.00	72	60.00	1.40	III
<b>Purchase/selling of poultry</b>	<b>79</b>	<b>65.83</b>	<b>41</b>	<b>34.17</b>	<b>1.66</b>	<b>I</b>
Taking care of poultry	43	35.83	77	64.17	1.36	IV

**Table.8** Distribution of respondents according to management of fish farming (n=120)

Activities / participation	Yes		No		Mean	Rank
	F	%	F	%		
Site selection	41	34.17	79	65.83	1.34	II
Purchase of pond	36	30.00	84	70.00	1.30	III
<b>Purchase /selling of fish</b>	<b>42</b>	<b>35.00</b>	<b>78</b>	<b>65.00</b>	<b>1.35</b>	<b>I</b>
Selection of varieties	35	29.17	85	70.83	1.29	IV
Harvesting of fish	31	25.83	89	74.17	1.26	V

### Management of poultry farming

From Table 7, among the activities related to poultry farming, maximum participation of respondents was found in purchase and selling of poultry (mean score=1.66). This was followed by making poultry shed (mean score=1.51) ranked 2<sup>nd</sup>, purchase of feed (mean score=1.40) ranked 3<sup>rd</sup> respectively and taking care of poultry was found least (mean score=1.36) ranked 4<sup>th</sup>.

### Management of fish farming

From Table 8, with regard to fish farming, maximum involvement was found in purchase/selling of fish (mean score=1.35) ranked 1<sup>st</sup> followed by site selection (mean score=1.34) ranked 2<sup>nd</sup>, pond purchase (mean score=1.30) ranked 3<sup>rd</sup>, selection of varieties (mean score=1.29) ranked 4<sup>th</sup> respectively and was found least in harvesting of fish (mean score=1.26) ranked

5<sup>th</sup>. Similar findings were reported by Mavuti *et al.*, (2018) who evaluated the management practices of farmers in fish farming.

It was concluded from the study that out of total respondents, there was high level of participation of youths in ploughing of land, irrigation and harvesting with scores 1.92, 1.93 and 1.97 respectively. Low level of participation was found in preparation of nursery and seed treatment with score 1.73 and 1.44 respectively. In cattle rearing most youth were involved in grazing of cattle with score 1.85. Higher numbers of youths were involved in purchasing and selling of poultry and fish with scores 1.66 and 1.35 respectively. Lower involvements of youths were observed in poultry care and harvesting fish with scores 1.36 and 1.26 respectively. The findings can be used by extension personnel and government departments for motivating and training the rural youths.

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