

## **Involvement of rural youth on onion based farming system: Cases from the selected villages of Jharkhand**

DIBYAJYOTI NAG AND AVIJIT KUMAR DUTTA

*Dept. of Agriculture, Rural and Tribal Development, School of Agriculture and Rural Development, Ramakrishna Mission Vivekananda University, Morabadi, Ranchi- 834008, Jharkhand.*

### **Abstract**

*In India population blast is one of the severe problem as the resources are limited and nearly 2 million young people every year is adding to the ranks of the unemployed. As a result, large number of youth are unemployed or underemployed. But opportunities for rural youth entrepreneurs are numerous and if after education youth choose to live in villages and start the new agriculture movement, then the untapped human resource will become greatest strength for this country. Onion, the 'Queen of kitchen' is one of the important crop for the state Jharkhand. Though there is no commercial onion cultivation zone but, it is being cultivated by most of the farming families of this region. This paper focus on the role of youth in onion based family farms, challenges faced by them during production and labour utilization pattern. This study were conducted in 3 villages of Ranchi district in the session of 2013-14. Both, villages and households were chosen purposively, on the basis of onion growers and accessibility. Primary data were collected with the help of tools like census schedule, individual interview and group discussion. Secondary data were collected from existing available literatures. Both qualitative and quantitative methods including simple statistical tools were used for better analysis and interpretation of the data.*

**Key words:** Youth, Onion, Labour Requirement, Jharkhand

### **Introduction**

In India and in many developing countries the majority of the work force is employed in agriculture (Sen, 1999) sector and also it is the major private enterprise dominated by small and marginal farmers. Family farming covers all family based agricultural activities, which empower the family to strengthen itself in the field of rural development. Food security of this country are dependent on these small family farms. The contribution of small farmers to total farm output in India exceeds 50%, while they cultivate 44% of land (Thapa, 2009); because of diversity in their farming, crops and livestock, often record higher productivity than the big farms usually practising monoculture (Ayyappan, 2014). Agriculture is labour-intensive activity for these small farms and hence, serious constraint on the labour availability and high wage rates affect levels of output. United Nation defines those persons between the ages of 15 and 24 as youth (United Nation: Youth, 1981). There is variation in the Definition of youth perhaps due to circumstances, especially with the changes in demographic, financial,

economic and socio-cultural settings; however, the definition that uses 15-24 age cohort as youth fairly serves its statistical purposes for assessing the needs of the young People. The Indian government has recently drafted a proposal to cap the age of the 'youth' at 30 - scaling it down from its previous upper limit of 35 (Sawant, 2012). In India population blast is one of the severe problem as the resources are limited. In this country nearly 2 million young people every year is adding to the ranks of the unemployed (Prasad, 2011). As a result, large number of youth are unemployed or underemployed. (Boserup, 2005). But opportunities for rural youth entrepreneurs are numerous and if after education youth choose to live in villages and start the new agriculture movement, then the untapped demographic dividend will become greatest strength for this country (Swaminathan, 2011). Onion, the 'Queen of kitchen' is one of the important crop for the state Jharkhand. Though there is no commercial onion cultivation zone but, it is being cultivated by most of the farming families of this region.

In India, it is grown over an area of 992.23 thousand ha with a production of 16654.96 thousand MT with the productivity of 16.79 t/ha, the state Jharkhand has only 15.70 thousand ha area with the production potentiality of 318.19 thousand MT (Vanitha, *et al.* 2013). High returns of Onion cultivation was earlier mentioned by Ram *et al.* (2012), Aswaniet *al.* (2005) but if the imputed value of labour cost is added in small family farms, then the profit becomes very low.

#### Objectives

- i. To study the involvement of youth in onion based family farms.
- ii. To trace out the major challenges of these farms
- iii. To identify the labour utilization pattern

#### Materials and Methodology

Ranchi district comes under Chhotanagpur plateau of the state Jharkhand. This region is surrounded by deciduous 'Saal' (*Shorea robusta*) forest and the topography is undulating and the climate is sub-tropical. This study was conducted in three (3) villages of Namkom block of Ranchi district, namely, 'Baram', 'Aarah' and 'Sidhrol'. District and block were selected on the basis of road accessibility, whereas villages were chosen on the basis of prior information. All these villages are well connected with district head quarter. A formal household survey with sample of households from the three villages selected through purposive sampling in the growing season of 2014. Fifteen marginal farmers from each village, cultivating onion were chosen as samples for this study. During the course of the household survey participant group meetings were conducted and semi-structured interviews undertaken with members of the participating households to validate and provide additional information about the patterns emerging from the data. Secondary data related to this study were collected from related existing literature, websites and block office. Both qualitative and quantitative methods including simple statistical tools were used for better analysis and interpretation of the data. To determine accurate labour utilization pattern, data were collected on hour basis and later on it is being converted in man-day (1 man-day = 8 hours).

#### Results and Discussion

All these villages are multi ethnic village with high population. Settlement pattern is nuclear. Though Agriculture is the main occupation for most of them, but work as labour influences their economy upto a great extent. Daily migration of men and women to surroundings is very common in this area. Farms of these area may be characterised as Farming family has control over the main resources and main the labour

force comes from the family (Table 1). Family and the farm are interlinked and these farms contributes a part or all of its income and foods to the family. The farming family is part of knowledge flow that links past, present and future. As purposively marginal farmers cultivating onion were chosen for the study, so onion cultivation were same for all (Table 2). Onion cultivation mainly contributed their subsistence economy. Surpluses occasionally sold in market. These surpluses not only include matured bulbs, but also the seedlings or onion stalks. They usually cultivate onion on their *bari* (back-yard gardens), and after harvesting of potato, onion were cultivated on it.

Table 1: Demographic profile of studied households, village wise

Age group	Baram		Aarah		Sidhrol	
	M	F	M	F	M	F
0-18 years	9	7	11	10	7	6
18-30 years	12	11	15	12	19	16
30-60 years	21	22	19	26	21	20
Above 60 years	1	4	2	1	2	1
Avg. family size	5.80		6.40		6.13	

Table 2: Average distribution of lands (in Acre)

	Baram	Aarah	Sidhrol
Total land	0.95	0.72	1.23
Onion cultivation	0.014	0.021	0.012

Most of the studied sample population were educated with formal education (Table 3). 85 person of total studied population were trained with some vocation training like bee keeping, preparation of compost, computer literacy *etc.* Table 4 depicted the perception of the respondents on involvement in different farm activities. Total population were divided under certain categories and respondents were asked to score that. On the basis of involvement in different farm activities, they had given weightage (out of five) to different operation. Operations like Nursery preparation, Main field preparation *etc.* were mainly done by male members of both age groups 18-30 years and above 30 years, whereas, Sowing, Transplanting, Storage *etc.* were done by female members of these same groups. All of the operations were operated by the age group of 18-30 upto a great extent.

Table 5 illustrates the labour utilization pattern in different operations of Onion cultivation. Usually 3-4 times weeding is done followed by hoeing operation;

Table 3: Educational status of the studied population

Particulars	Baram		Aarah		Sidhrol	
	No.	Percentage	No.	Percentage	No.	Percentage
Non-literate	-	-	4	4.17	6	6.52
Primary (0-IV)	9	10.34	17	17.71	18	19.57
Middle (V- VIII)	33	37.93	36	37.50	27	29.35
Secondary (IX-X)	18	20.69	11	12.50	24	26.09
Higher Secondary (XI-XII)	15	17.24	10	14.58	12	13.04
Above XII	12	13.79	11	13.54	5	5.43
Total	87	100	96	100	92	100.00
Special skill training	33	20.69	28	29.17	24	26.09

Table 4: Involvement of family members in different farm activities

Operations	Below 18 years		18-30 years		Above 30 years	
	M	F	M	F	M	F
Preparation of nursery	+	-	+++++	+++	+++++	++
Sowing	+++	+++	++++	+++++	+++	+++++
Preparation of main field	++	-	+++++	++++	+++++	++++
Transplanting	++	++	+++++	+++++	++++	+++++
Irrigation	+++	+++	+++	++++	++++	+++
Intercultural operations	+++	+++	+++	+++++	+++	++++
Harvesting	+++	++	+++++	++++	++++	++++
Storage	-	++	++++	+++++	+++	+++++

Weightage out of five (+++++)

Table 5: Labour utilization pattern in different study areas for 1ha. of land

Components	Baram	Aarah	Sidhrol
Preparation of nursery	5.36 ± 0.20	5.98 ± 0.62	6.60 ± 0.36
Cultural operation at Nursery	13.08 ± 1.07	12.49 ± 0.98	13.03 ± 1.70
Preparation of main field	29.76 ± 2.65	32.10 ± 2.34	28.36 ± 1.54
Transplanting	27.80 ± 1.26	28.20 ± 1.21	29.10 ± 1.89
Irrigation	19.66 ± 1.19	18.72 ± 1.14	21.95 ± 1.18
Intercultural operation	69.10 ± 7.18	76.40 ± 9.30	70.20 ± 5.19
Harvesting	23.81 ± 2.16	25.92 ± 1.18	24.65 ± 2.11
Storage	2.10 ± 0.13	3.20 ± 0.15	2.95 ± 0.18

as a result inter-cultural operation incurred highest amount of labour followed by preparation of main field. Labour requirement of onion cultivation were recorded low as onion were mainly transplanted after harvesting of potato. This labour requirement corroborated well with the earlier findings of Singh and Singh (2009), Haque *et al.* (2011).

#### Problems

\*Expensive and non-availability of good quality planting

materials were an important problem for that area. 3 farmers of *Baram* village complain, 3 years ago they purchased seedlings from local *haat*. They transplanted those seedlings, these were of very poor quality. As a result only plant became vigour in size but bulb yield were very low. Sometime due to non-availability of Quality planting materials, farmers bound to pay higher amount for purchasing good planting materials.

\*Irrigation water was another problem for onion

cultivation. Onion needs certain irrigation, but, no such proper irrigation facility were found. Though, some of the family had got dug well under MGNREGA and lift irrigation was under construction in one village, even then it was a challenge for onion cultivation.

- \* Basically, Onion was being cultivated in their kitchen garden. After *kharif* grazing animals were free to graze. Though, Onion leaves do not attract cattle very much, but cattle often entered in their kitchen gardens for other *rabi* crops, resulting a severe loss of crop.
- \* Farmers of these area used traditional technologies for cultivation. They often treated planting materials or tested the soil. Absence of energy efficient machinery was another problem.
- \* One of the major challenge of onion cultivation was storage of onion at household level. Huge amount of onion get rotted every year. For this reason farmers did not go for cultivating onion in large scale.
- \* Fluctuation in selling price was another problem. Rotting problem and price fluctuation restricted the area under onion cultivation.
- \* Perception of the youth on farming was another challenge. They thought farming was not a white collar job, so they were more interested on work as labour than farming. As a result a huge number of labour force moved out of agriculture. Though it was good for their economy but at the same time this restricted the area under onion cultivation. This constraint on the labour availability and high wage rates affect levels of output.

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