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A Socio – Economic Study of Vegetable Growers Practicing under *Badi* in Balaghat District of Madhya Pradesh, India

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A B S T R A C T

The land holding of farmers are gradually decreasing and such as small holdings are becoming smaller day by day. Small and marginal farmers are whatever so producing is hardly sufficient to meet out the food and daily requirement of family members. The adverse climatic conditions and incidence of insect pest and diseases also create the economic insecurity, looking to the above conditions, horticulture based module for *badi* cultivation was initiated in three clusters of Lalbarra block of Balaghat. The profile of the respondents shows that most of them ware belongs to middle age group (76.66 %) followed by old (13.33 %) and young (10%). As regards to their education (51.67%) possessed the qualification of higher secondary and above, while very less (3.33%) respondents were illiterate. The majority of respondents (51.67%) were small followed by (40.00%) marginal. On the other hand, (41.67%) respondents engaged in agricultural work on their own farm either alone or in association with labours. The majority of respondents (43.33%) had the high level of mass media exposer and most of them (41.67%) had the high level of contact with the development agencies. The production potential of vegetables in *badi* showed that a farmers have about 2000 m^2 area may produce on an average 4970 kg vegetable with a net income of Rs. 26080.00/ farmer. It gave Rs. 229/ day within 140 days in addition to their routine work plan.

Introduction

The land holding of farmers are gradually decreasing and as such the small holdings are becoming smaller day by day. The continuous increases in price of agricultural inputs are making agriculture enterprise less remunerative. Whatever so they are producing which is hardly sufficient to meet the food and other daily requirement of the family members. The small and marginal farmers have no sufficient scope to provide job opportunities to other, resulted in rural youths are migrating towards urban area in the search of job. On the other hand, poor farmers are not having sufficient sources of income to meet out their daily requirements. The Lalbarra block belonging to the Balaghat district having

79 panchayats and most of the farmers of this block particularly the panchayats of Koppe, Chillod, and Lendejhari have low productive and small land holdings, resulted in low house hold income. The adverse climatic conditions and incidence of insect pest and diseases also create the economic insecurity due to failure of main field crop.

Keeping the above points in views a horticulture based module for *Badi* cultivation was incited in these villages based on the survey carried out by conducting face to face interviews of the farmers in the cluster of villages. It was come in to the knowledge that most of the farmers have no economic use of *Badi* (Area left surrounding their house). They have an area about 2000 m^2 without any specific purpose. They simply use the area for keeping the animals for different purposes, feed and fodder for them. Only small portion are under taken to grow bottle guard, sponge guard, bitter guard, during in kharifonlyfor the purpose of vegetable for their own consumption. Hence, attempt has been made in this direction to assess and create awareness among the peoples by arranging training programmes about the utilization of space left surrounding their houses (*Badi*) for production of seasonal vegetables (Singh *et al.,* 2018).

Training is and essential and vital to create confidence, motivation and enhance the efficiency of an individual. If we are going to trained the peoples it will be more effective if considered the need based aspects. (Agrawal *et al.,* 2018)

Materials and Methods

The study was carried out in purposely selected villages Koppe, Chillod and Lendejhari under Farmer FIRST project, run under College of Agriculture, Balaghat, Murjhadfarm, Waraseoni, JNKVV Jabalpur (M.P.). Twenty farmers from each village (Total 60 farmers) were selected for the study. The randomly selected farmers were provided seeds of different vegetable crops to cultivate in *Badi* (Space left the house) during *rabi* season, those who have sufficient water to irrigate the crops. The each selected farmer were also made available the plug trays, and vermi compost, for an area of 2000 m^2 (Fig. 1).

Before launching of the project "Farmer FIRST" a bench mark survey of adopted villages was done based on agro – ecological situations and assets with the farmers in terms of irrigation facilities, transportation facilities along with roads (Table 2). The distance from the nearby market to selected villages which were pooled in three clusters (Table 1).

The awareness cum skill development Programme (Table 3) was initiated in these villages in order to popularize the techniques among the farmers for utilizing space left surrounding the houses by growing of seasonal vegetables through trainings with respect to production technologies of seasonal vegetables.

Table 3: Number of programmes organized for creating awareness come skill development numbers of respondents participated in the programme during 2016 – 17 to 2018 - 19

The primary data collection was done by face to face interviews of Gram Panchayat Sarpanch, Secretory and progressive farmers, whereas the secondary data were collected from base line survey of the project. (Anonymous 2016)

Results and Discussion

The profile of the respondents in relation to their age, education level, land holdings and occupation are given in Table 4. It is clear from the data that out of 60 most of the

respondent (46.00 respondents) belongs to meddle age group (76.66%) followed by (13.33 %) and (10.00 %) under old and young age group, respectively. Out of the total respondents (51.67 %) has passed higher secondary and above level of formal education followed by (26.67 %) middle and (18.33 %) primary level of education.Whereas only 02 (3.33 %) were illiterate.Majority of respondents were small (51.67 %) and marginal farmers (40.00 %)and few of them (8.33 %) respondents possessed medium size of land holding.The majority of respondents (41.67 %) were engaged in agricultural work on their own farm either alone or association with agricultural labors. (21.67 %) respondents were engaged in other occupation with agricultural work. None of the participants doing the govt. regular or private job, they depended on the agricultural work and some allied enterprises. (Singh *et al.*, 2017) found most of the vegetable growers were middle aged, have small land holdings and engaged in agricultural work as occupation.

While studying the communicational attributes in terms of exposure to mass media and contact with the development agencies, it was noted that the highest number 26 (43.33 %)had high mass media exposure followed by medium 19 number (31.67 %) while 15 number (25.00 %)had lower exposer to mass media. Majority of the vegetable growers 25 (41.67%) and 19 (36.66%) were classified into high and medium level of contact with development agencies, respectively. More over remaining (21.67 %) vegetable growers had low level of contact with development agencies (Table 5).

Table.1 Details of villages selected under clusters.

S. No.	Name of cluster	Name of village	Distance from nearby waraseoni market
1	Koppe	Koppe, Budhatola, Amraitola, NarbodTola, Uadaitola	6
2.	Chillod	Chillod, Mararitola, Raghotola, School tola	9
3.	Lendejhari	Lendejhari,Basti	10

Table.2 Agro – ecological situation of villages under clusters

Village	Topography	Soil type	Cropping System	Crops use to grow		Irrigation sources	Land holding
				Kharif	Rabi		
Koppe	Undulated, sloppy, bunded fields	Loamy	Rice – Fallow, Rice(K) – Rice (S)	Rice	Fallow	Canal, Open well,	Marginal & small
Chillod	Sloppy, eroded soils, bunded fields	Silty, clay loam	Rice – Fallow Rice – Chick pea	Rice Pigeon pea	Fallow, Chick pea	Canal, Bore well, Tank	Small & medium
Lendejhari	Sloppy, and bunded fields	Sandy loam	Rice – Linseed, Rice – Wheat, Rice(K) – Rice (S)	Rice	Wheat, Linseed	Canal, water tank, and open well	Small & medium

K = Kharif, S = Summer

Table.3

Year	No of programmes organized	Duration (days)	No of participants	No of villages
2016 – 17	3	2	174	10
2017 – 18	3	2	180	10
2018 – 19	2	2	168	10
Total	**8**	**6**	**522**	**30**

Table.4 Distribution of the vegetable growers according to their age, education level land holding and occupation

S. No.	Categories	Number	Percentage
1.	Age of the respondents		
	Young (18 – 25 years) Middle (26 – 50 years) Old (above 50 years)	6 46 8	10.00 76.66 13.33
2.	Education level		
	Illiterate Primary passed Middle passed High school passed and above	2 11 16 31	3.33 18.33 26.67 51.67
3	Size of land holdings		
	Marginal (Up to 1 ha) Small (1.01 to 2 ha) Medium (2.01 to 5 ha) Large (Above 5 ha)	24 31 5 0	40.00 51.67 8.33 0
4.	Occupation		
	Agriculture Agriculture + Agriculture Labour Agriculture + other occupation Agriculture + Regular / private service	25 22 13 0	41.67 36.67 21.67 0

Table.5 Distribution of the vegetable growers according to their communicational attributes

S. No.	Category	Number	Percentage
1.	Mass media exposer		
	Low (up to 7) Medium (8 – 11) High (above 11)	15 19 26	25.00 31.67 43.33
2.	Contact with development agencies		
	Low (Up to 6) Medium (7 – 10) High (above 10)	13 22 25	21.67 36.66 41.67

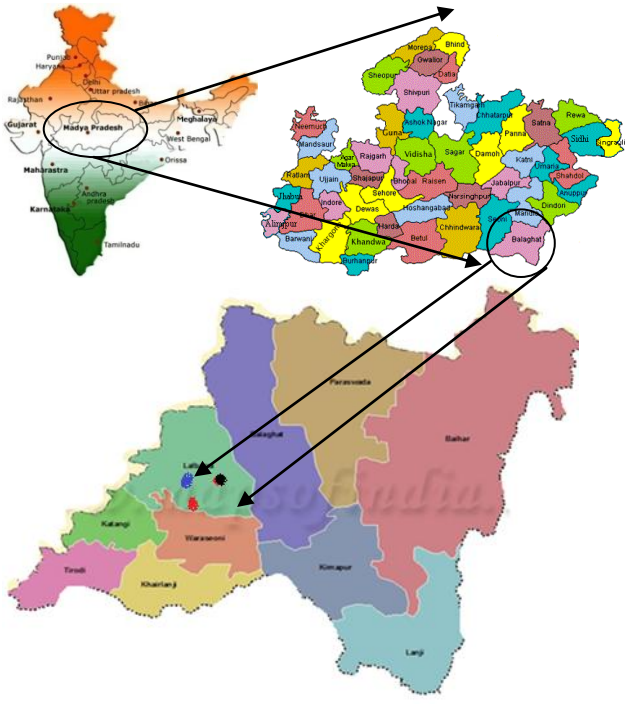
Table.6 Production potential of rabi vegetables under *badi*

S. No.	Name of crop	Area (m^2)	Average production in (kg)	Duration (Days)
1	Okara	400	360	87
2	Bottle Guard	100	160	88
3	Chilli	300	150	140
4	Brinjal	400	1640	125
5	Tomato	400	1360	125
6	Cabbage	400	1300	115
Total		**2000**	**4970**	

Table.7 Income generation (Rs.) with the cultivation of vegetables from 1/5th ha area (2000 m^2) of *badi*

S. No.	Name of crop	Area (m^2)	Cost of cultivation (Rs.)	Gross return (Rs.)	Net return (Rs.)	Net Income / Day
1	Okara	400	2800	7200	4400	51
2	Bottle Guard	100	650	1600	950	11
3	Chilli	300	1150	2250	1100	8
4	Brinjal	400	2200	11480	9280	74
5	Tomato	400	2680	10880	8200	66
6	Cabbage	400	2400	4550	2150	19
Total		**2000**	**11880**	**37960**	**26080**	**229**

Fig.1 Geo – graphical location of selected villages



Village Index	
Koppe	
Chillod	
Lendejhari	

A total of 60 respondents were provided skill development training and inputs for growing of vegetables round the year for the purpose of sale and family consumption. Each and every respondent were use the space about 2000 m^2 for the vegetable cultivation in *Badi* (Table 6). Result shows that on an average 4970 kg of different vegetables were produced by the respondents in 2000 m^2 area under *badi* within 140 days. Further analysis of cost of cultivation and return are given in Table 7. It is clear from the data that Rs 11880 is the cost of cultivation for the six vegetable crops grown on area of 2000 m^2. However, cost of cultivation is different for different crops and allotted area. Farmers get maximum net return of Rs. 9280 from brinjal, closely followed by Rs. 8200 from tomato within a 125 days.However, the bottle guard and chili found less remunerative. From the result it can be concluded that on an average a small farmer may earn at least Rs. 229 per day from their back yard gardening with the cultivation of seasonable vegetables. Similar options were reported by Singh *et al.,* (2018) and stated that farmers can grow more remunerative crops like vegetable instead of wheat and paddy and may earn more profit within a short period.

It can be concluded from the above findings that the majority of the vegetable growers were middle aged, having high school and above level of education and possessed small to marginal size of land holdings. Most of the vegetable growers had high level of mass media exposer and contact with the development agencies and get the technical knowledge. On the bases of average production and cost involved it, found that the cultivation of six different vegetables, a family having an area of about 2000 m^2may earn Rs. 26080 within 140 days. Which mean it gave about Rs. 229 per day, in addition to their routine work.

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