

Original Research Article

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Ensuring Livelihood of Baiga Tribes through Quality Seed Production Programme

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ABSTRACT

Madhya Pradesh is pre-dominated by the Tribal population. The differences in the tribal community, spread over in various parts of the state, is clearly seen not only on the basis of their heredity, lifestyle and cultural traditions, but also from their social, economic structure, religious beliefs and their language and speech. Due to the different linguistic, cultural and geographical environment, and its peculiar complications, the diverse tribal world of Madhya Pradesh has been largely cut-off from the mainstream of development. The population of Tribals in Madhya Pradesh is 122.33 lakh constituting 20.27% of the total population of Madhya Pradesh (603.85 Lakh), according to the 2001 census. There were 46 recognized Scheduled Tribes and three of them have been identified as "Special Primitive Tribal Groups" in the State. The main tribal groups in Madhya Pradesh are Gond, Bhil, Baiga, Korku, Bhadia, Halba, Kaul, Mariya, and Sahariya. Dhar, Jhabua, Mandla and Dindori districts have more than 50 percent tribal population. The Dindori district comes under Northern Hill region of Chattisgarh. Almost entire district is hilly with undulating topography having different types of soil with large number of small size holding below 2.0 ha. Baigachuck area of Dindori District is mostly dominated by the tribal population. The present pilot project designed on livelihood security of Baiga tribals residing at remote places of the district farming in survival oriented system for livelihood. The primary reports of survey indicated that seed was the most required material keeping this in mind. The project was launched so as to create awareness about seed, production of quality seed for continuous availability in years. The K.V.K. Dindori took up this exploratory programme with rainfed sujata wheat variety on field of 350 farmers in the season Rabi 2007-08.

Keywords

Baiga tribes,
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Introduction

Krishi Vigyan Kendra Dindori comes under Northern Hill Zones of Chattisgarh surrounded by District Jabalpur, Anuppur Shahdol, Umaria and Mandla of M.P. and Khandwa and Bilaspur of Chhattisgarh.

The average rainfall of the district is 1350mm. Almost entire district is hilly with undulating topography having different types of soil (about 55% land is stony, sandy gravels and skeletal 35% is silty clay with high slopes and 15% is plain has clay soil). Majority of farmers comes under small size of

holding below 2.0 ha. Most of the rain water is lost as run off due to steep slopes. The irrigated area is only about 3% of the total cultivated area. The crop production is completely dependent on rainfall. The changes in crop production technique and other allied fields are still at a very slow rate in the district mainly because of poor socio-economic conditions topographical situation and under developed facilities of transportation and communication.

The Baiga tribes practice shifting cultivation in forest areas. They say they never ploughed the Earth, because it would be like scratching the breast of their Mother, and how could they possibly ask Mother to produce food from the same patch of earth time and time again – she would have become weakened. That's why Baigas used to lived a semi-nomadic life, and practiced Bewar cultivation (slash & burn) – out of respect, not

aggression. Until fairly recently the Baigas practiced 'dahiya' cultivation, that is, slash and burn. Thousands of square miles of sal forests have been clean destroyed by them in the progress of their dahiya cultivation, the ground being afterwards occupied by dense scrub of low sal species springing from the stumps. The Baigas are courageous woodsman and hunters.

Majority of Baiga respondents had small holding and resided in farm villages. The tribal baiga farmer had been following survival oriented system of Agriculture with integrated approach of farming, hunting and minor forest collections. Their dependence on forest and forest produces is very much which is not eco-friendly and leads to damage and destruction of forest. Kharif was the only crop growing season and fields remained normally fallow during Rabi.

Map of the district



District Statistical Data

Average Annual Rainfall	:	1350mm
Soil Type	:-	Light – 58%, Medium- 27%, Heavy- 15%
Temperature	:	Max. 42° C, Min. 2° C
No. of Blocks	:	7
No. of Villages	:	929

Major Crops of the District

<i>Season</i>	<i>Crop</i>	<i>Area in ha</i>	<i>Productivity Q/ha</i>
Kharif	Paddy	76.1	13.74
	Maize	23.2	12.07
	Arhar	2.5	10.00
	Urd	5.5	3.8
	Soybean	4.9	10.17
	Niger	34.0	2.88
	Kodo/Kutki/ Ragi/ Sawa	43.9	4.36
Rabi	Wheat	41.3	9.21
	Gram	6.6	8.85
	Lentil	19.6	4.80
	Pea	7.0	2.85
	Linseed	8.0	4.55
	Mustard	22.0	4.06

Note: Data represent district as a whole but are a under Rabi in Baiga Chak is negligible.

Fertilizer Consumption Kg/ha

N	8.6
P	3.43
K	0.16

Pesticide consumption Kg/ha

Fungicide	0.003
Insecticide	0.0132
Herbicide	0.0019

Ensuring the Livelihood Security of tribal farmers through supply of quality seed.

Capacity building including skill improvement of tribal farmers on improved Agricultural technology specially quality seed production and its utilization.

Enhancing the resources for income generation activities and upliftment of socio economic status of the farmers through use of quality seeds.

Enhancing the production and productivity of various crops on tribal farms through quality seed production and its utilization.

Materials and Methods

The project had been launched in eight villages of three development blocks of Dindori District namely Samnapur, Bajag and Karanjia. The selected villages were Sarai Mal, Majgaon Pipariya, Barga, Podi and Mohati of Samnapur Block Pipariya and Vikrampur of Bajag Block Thadpathra of Kaanjiya Block. The distance of selected villages varies from 35km to 90 km with 3 tm to 18 km difficult approach. Selection of 350 farmers was done simple random sampling method. Baseline survey of all beneficiaries was done before and after intervention of KVK Project. The impact assessment of the programme was done after three years of project implementation.

Results and Discussion

The project had been launched in eight villages of three development blocks of Dindori District namely Samnapur, Bajag and Karanjia. The selected villages were Sarai Mal, Majgaon Pipariya, Barga, Podi and Mohati of Samnapur Block Pipariya and

Vikrampur of Bajag Block Thadpathra of Kaanjiya Block. The distance of selected villages varies from 35km to 90 km with 3 tm to 18 km difficult approach. Selection of 350 farmers was done simple random sampling method. Baseline survey of all beneficiaries was done before and after intervention of KVK Project. The impact assessment of the programme was done after three years of project implementation.

Annual requirement 18000.00
 Deficit in Budget 4500.00

Which would be overcome by depts., or sacrificing basic requirements. Observation were recorded prior to and after the demonstration for various factors such as knowledge increase, increase in awareness income levels, employment generation etc. (Table 1)

The data revealed as in the table 2 indicate that out of total 350 beneficiaries 62.85% beneficiaries had very less awareness about wheat seed production technology and after the intervention of KVK that awareness level reached to 88.57%. This awareness is not only for wheat but similar message has passed for other improved technologies as the scientists used to have interaction on other aspects also during training and visits.

Data in terms of Knowledge level increase. Out of 350 beneficiaries 62.85% of the tribal farmers had low knowledge level about wheat production technologies which was enhanced upto 78.57% in the medium category, 7.14% high level and 14.28% only remained in low level of knowledge in respect of wheat technology (Table 3).

Table.1 Annual income from different crops and other sources

Season	Name of Crop	Income (Rs/ha)
(A)Kharif	Paddy	1200.00
	Millets	1000.00
	Niger	300.00
	Maize	1000.00
	Arhar	
	Moong	
	Urud	
(B)Rabi	Mustard	1000.00
	Wheat	<i>In Small area under recidual moisture conditions</i>
	Lentil	
(C)	Minor forest products	1000.00
(D)	Annual/Live Stock	1000.00
(E)	Assured income through Rajgar guarantee	7000.00
	Total Expected Average Income	13500.00

Table.2 Distribution of beneficiaries in terms of intervention in awareness

S.No.	Awareness Level	No. of Beneficiaries before K.V.K. intervention	Percentage	No. of Beneficiaries after K.V.K. intervention	Percentage
1.	Low	220	62.85	00	00
2.	Medium	128	36.57	40	11.42
3.	High	02	0.58	310	88.57
	Total	350	100.00	350	100.00

Table.3 Distribution of beneficiaries in terms of knowledge level increase

S.No.	Knowledge Level	No. of Beneficiaries before K.V.K. intervention	Percentage	No. of Beneficiaries after K.V.K. intervention	Percentage
1.	Low	220	62.85	50	14.28
2.	Medium	128	36.57	275	78.57
3.	High	02	0.58	25	7.14
	Total	350	100.00	350	100.00

Table.4 Distribution of beneficiaries in terms of employment generation before and after K.V.K. intervention

S.No.	Available employment in days	No. of Beneficiaries prior to K.V.K. intervention	Percentage	No. of Beneficiaries after K.V.K. intervention	Percentage
1.	Low (Upto 200 days)	330	94.28	00	00
2.	Medium (Upto 300 days)	20	5.71	338	96.57
3.	High (Above 300 days)	00	00	12	3.42
	Total	350	100	350	100

Table.5 Distribution of Beneficiaries before & after KVK intervention in respect of income level

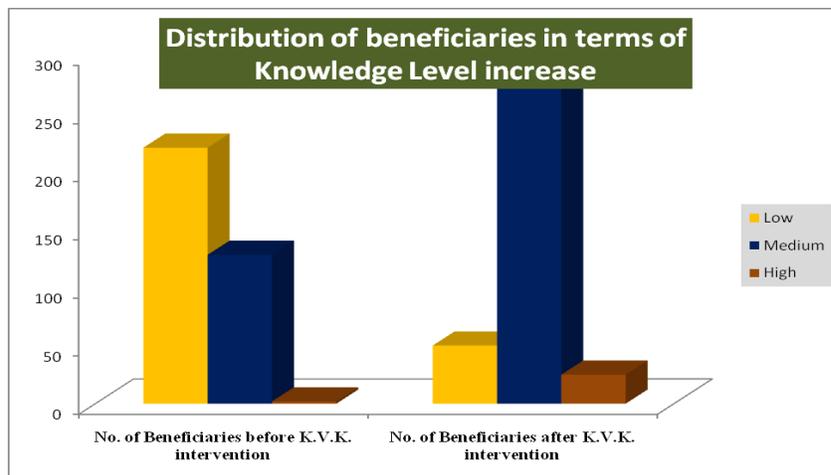
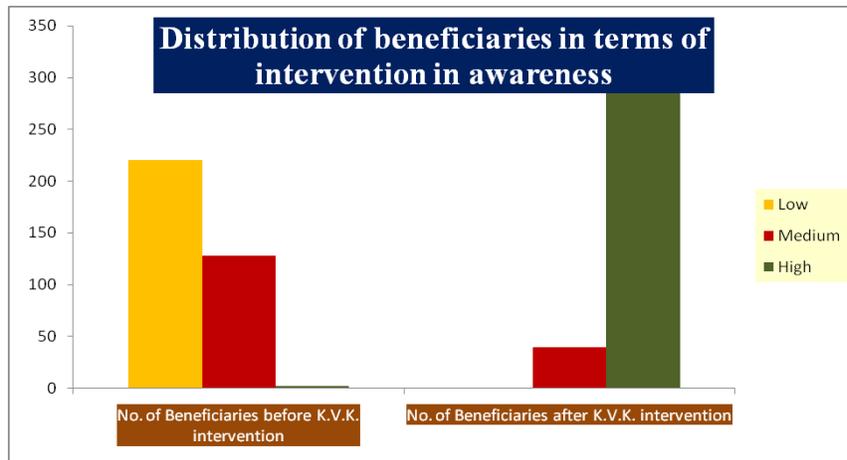
S.No.	Income Rs./Year	Level	No. of Beneficiaries (Before)	Percentage	No. of Beneficiaries (After)	Percentage
1.	Upto 12000		94	26.85	10	2.85
2.	Upto 14000		240	68.27	81	23.14
3.	14000 & Above		16	4.57	259	74.00
	Total		350	100	350	100

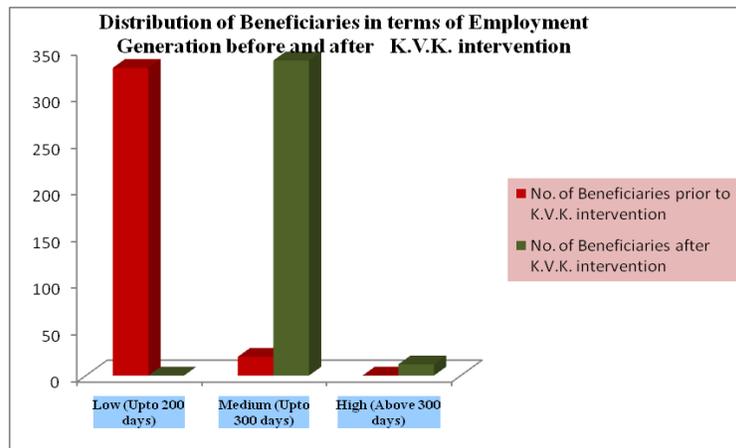
Table.6 Economic impact of the wheat production technology

S.No.	Average Yield (q/ha)			Average Cost of Cultivation (Rs./ha)		Average Gross Return (Rs./ha)		Average Net Return (Rs./ha)	
	Local	Dist Avg	Demo	Local	Demo	Local	Demo	Local	Demo
1.	4.2	9.21	10.40	4620.00	7820.00	5880.00	14560.00	1260.00	6740.00

Table.7 Incremental change

S.No.	Increase in Yield over Local Check (%)	B.C. Ratio		Expected Horizontal spread farmers over 350 farms	Cropping intensity	
		Local	Demo		Pre	Post
1.	147	1.27	1.86	3500	100	150





Data in Table 4 indicate the employment/engagement in terms of day's in the year, under three groups low, medium and high.

Data reveals that 94.28% of the people could obtain upto 200 days of and 5.71% could obtain employment upto 300 days. None of the beneficiaries could have employment above 300 days. After the intervention of K.V.K. 96.57% of tribals could obtain employment upto 300 days and 3.42 had employment above 300 days. Thus it is concluded that the majority of the respondent were engaged for more that 200 days, which indirectly reduced drudgery and destruction of forest based things (hunting and wood cutting).

The result revealed from the data in Table 5 indicate that 68.57% of the tribals had income upto 'Rs. 14000.00', 26% had income upto Rs. 12000.00 and 4.57% had income above Rs. 14000.00. It is point to be noted that this group had better cultivable land prior to intervention by K.V.K.

A tremendous change in the hike of financial status was observed 74% of tribals could reach the higher income level i.e. above 14000/-, 23.14 had income upto 14000/- and

only 2.85% of the tribals remained at the lower level of income upto 12000/- however on an average the deficit in the budget could be overcome by the K.V.K. intervention despite of adverse climate conditions scanty rains and (950mm against 1350 mm) extreme cold, horizontal and vertical frost which has effected even wheat (Table 7).

Sujata is a rainfed wheat it observed maximum yield 15 q/ha, average of 10.40 q/ha and a few patches where wheat was grown got average yield of 4.2 q/ha which was 147% increase.

The B.C. Ratio in the case of local check was observed to be 1.27 and that of demonstration 1.86%.

Since the area was mostly single cropped, the demonstration increased cropping intensity to 150%. The average net returns cover the deficit of 4500.00 computed during pre survey. Hence Rs. 2240.00 will remain with him as saving and thus his livelihood has been recurred.

In conclusion, seed is a major factor on which the total agriculture scenario depends and unfortunately this has been a great problem. The present project will proof to be a land

mark in the stream lining of primitive tribe Baiga community. The project not only helped in over coming the deficit but also increased level of knowledge and awareness about the improved production technologies in which seed itself plays a very important role.

Maximum area in the Baiga belt was monocropped except a few patches of unorganized Rabi cultivations. The present programme not only increased income and employment but also imparted knowledge and created awareness for improved technologies.

The programme will bring down change in life style of Baiga community feeding habit in specific. Tribals were delighted to have wheat in food they said poorer has not remained a dream now. Efforts of JNKVV will definitely

play an important role in development of Baiga Community and help them to join in the main stream very soon.

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