

SUSTAINABLE LIVELIHOOD SUCCESS STORY OF FARMERS UNDER RICE FALLOW PILOT PROJECT IN UTTAR BASTAR KANKER, CHHATTISGARH

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Abstract: Though, increasing production and productivity of rice is essential to feed the growing population, considering its poor cost-benefit ratio and negative impact on the environment, alternatives need to be thought off. Based on this issue, a study was conducted in the Mahanadi river command area of Uttar Bastar Kanker of Chhattisgarh under Rice Fallow Pilot Project. It was found that the economic viability and ecological soundness of diversified farms especially that of paddy+ vegetables + dairy systems were higher than the non-diversified systems. Dairy and vegetables cultivation were found to have contributed significantly for the high level of sustainability of the diversified farms. Considering the need to increase the income of farmers and conserve the environment, vegetables and dairy would serve as an ideal combination with rice crop to boost the sustainability of the Mahanadi river basin.

Keywords: Sustainability, Rice, Vegetables, Dairy system

INTRODUCTION

The name of Shri Chintaram Sahu of village Araud of Charama area in Uttar Bastar Kanker District is well known as a most successful progressive farmer of the District. By dint of perseverance hard working, intelligent farm planning and management, ably supported by trainings, study tours outside the state sponsored by the Rice Fallow Pilot Project, Krishi Vigyan Kendra, Kanker assistances received from the department he has attained this status. Born in a typical poverty stricken farm family, Sri Chintaram is the only one son of Pursotam Sahu and Mrs Manbai. He used to help his father in farming activities since his school days. His education in higher secondary in Agriculture, and his interest in Agriculture activities. He took full control of family land since 1989 and since then he never looked back. Step by step he extended in his

intensive farming activities with expected returns and visible economic upliftment. Today Sri Chintaram Sahu is the pride owner of 35 acre to increased from 5 acre of agricultural land. He is well supported by his family members in farming activities. Today the traders are making Be-line to his farm to purchase his pride produces like tomato, brinjal, cole crops, gram and paddy etc. Amongst the rice varieties he is cultivating Masuri, Sava, IR-64, hybrid 6444 etc. His net yearly income is now some lakhs. He is cultivated tomato in drip system convert wastland to cultivated land approximately three lack from five acre in four month. He is adjudging best farmer in 2012 by the Governor of Chhattisgarh. He was also rewarded several times by several organizations as a mark of recognition of his successful farming carrier. The success story of Sri Chintaram Sahu is an eye-opener to present educated youth for adopting farming as a means of livelihood.

Table 1. Integrated farming system followed by Farmers

Components	Crop	Area (Acre)	Expenditure (Rs)	Return (Rs)	NMR (Rs)	B-C Ratio
Crop components	Paddy(SRI)-fallow	5.0	72500	224000	151500	2.08
	Line sowing	5.0	55000	115200	60200	1.09
	Broadcasting	13.0	117000	249600	1800	1.13
	Maize (Singal crop)	5.0	37500	120000	82500	2.20
	Horse gram	5.0	45000	250000	205000	3.55
	Alsi	1.0	4000	8200	4200	1.05
	Tiwra	1.0	4000	7000	3000	0.75
Components	Crop	Area (Acre)	Expenditure (Rs)	Return (Rs)	NMR (Rs)	B-C Ratio
Horticulture	Tomato (drip)	5.0	1,50,000	5,00,000	3,50,000	2.33
	Brinjal	1.0	20,000	80,000	60,000	3.00
	Chilli	0.5	15,000	30,000	15,000	1.00
	Mango (planting)	0.5	2000	-	-	-
	Radish	0.3	2000	15,000	13,000	3.12
	Marigold	0.2	5,00	3,000	2,500	2.56
	Compost	2no.	8000	12,000	4,000	1.71

Conventional Cropping System followed by farmers

Components	Crop	Area (Acre)	Expenditure (Rs)	Return (Rs)	NMR (Rs)	B-C Ratio
Crop components	Rice fallow (Broadcasting)	15	1,80,000	2,25,000	45,000	0.25
	Maize	1.0	7,500	14,400	6,900	0.75
	Parti	19.0	-	-	-	-

Components		No.	Milking	Dry	NMR (Rs)
Livestocks	Cow	3	2	1	9800
	Buffalo	2	2	-	
	Calf	4	-	-	1800
Others Agric. equipment	Borwels	3	Working condition		
	Wel (Kunwa)	2			
	Tractor	2			
	Trali	1			
	Rotovator	1			
	Plough	1			
	Seeddrill	1			
	Levelar	1			
	Geaser	1			
Thresar	2				

Integrated farming system for Sustainable Livelihood: A Success Story of a tribal farmer

Kotela village of Charama Block in Uttar Basta Kanker district is 12 km away from Charama block. In this village 50 families are residing and all are marar tribe (Particularly Vulnerable Tribal Group). Though this village is nearer to the town Charama, they are not having basic amenities. People are suffering chronically from food security and malnutrition problems. Rice Fallow Pilot Project (RFPP) has selected this village for holistic development with the support of NGO and Agriculture department, Chhattisgarh. Earlier in this village farmers were growing paddy and some minor millets under rain-fed conditions. No irrigation facility was available for cultivation. During rainy season this becomes difficult and dangerous. Realizing the needs, RFPP has planned systematically to improve the livelihood of the tribal people. The first step initiated was constructing check small pond (Dabri). They have constructed 5 check small pond (Dabri) and 1500 m field channel for storing water and irrigation. They also constructed gravity flow water supply for drinking water as well as vegetable cultivation from the surplus water by the help of drip and sprinkler irrigation. Land development like loose boulder structure (LBS) and gully control measures were also made in this village. About Rs.50 lakhs has been spent by the villagers from RFPP funds for land and water management. RFPP also introduced crop diversion programme for increasing productivity and income. Improved and high yielding varieties of cauliflower, bottle gourd, cowpea, bean, ragi, paddy,

gram, kharif and rabi tomato, yam, tapioca and maize were introduced in this village. Farmers started irrigation in the kharif crops during dry spell. Rabi crops were also taken in an area of about 150 acres (horse gram and vegetable). Shi Jagdish Shori, a tribal farmer usually grows paddy and minor millets in his land of 5 acres. Most of the time crop failure occurs due to terminal moisture stress and he was getting very low yield. He was struggling to get one square meal every day. After development of irrigation facilities and training on integrated crop management practices through RFPP, he started growing more number of crops in his available land along with some livestock. He has developed his own integrated farming system which fetches him high income and food security. He is one of the progressive farmers in his village. He has been awarded as a best farmer from the district administration and also given prize by Honorable Vice Chancellor of Indira Gandhi Krishi Vishwavidyalaya, Raipur. The integrated farming system model consists of field crops (Rice, maize, pigeonpea on bund), horticultural crops (Mango (Chausa, Amrapali, Battisa), Banana, Guava, Sweet potato Yam, tapioca and vegetables), composting (Naphed), tick plant and livestock. Integrating all these components he enhanced the productivity as well as the profitability as compared to the conventional farming system. By adopting this farming system module, Jagdish Shori earned 10 times higher net monetary return (NMR) as compared to traditional method in 2007-08. To enable this farming module, Jagdish Shori cultivated paddy in SRI method, gram, ragi in line sowing

IGKV interventions, vegetables, yam and tapioca through the guidance of Krishi Vigyan Kendra, Kanker and tissue culture banana as demonstration,

compost unit from Govt. Agriculture Department and reared livestock by taking loan from Rural financial services under RFPP.

Diversified Agriculture adopted by tribale farmer of Kotela (Jagdish Shori)

Table 1. Integrated farming system followed by Jagdish Shori

Crop components			Before RFPP	Now RFPP		
Horticulture	Mango (Amrapali,Chausa,Battisa)		15	100		
	Coconut		5	10		
	Aonla		-	5		
	Maida		-	2		
	Khamar		-	34		
	Guava		-	10		
	Behra		-	3		
	Custard apple		30	50		
	Lemon		-	8		
	Peepal		-	1		
	Neem		5	9		
	Gular		5	13		
	Ber		-	3		
	Ukeliptus		-	30		
Kusum		-	4			
Banana		-	10			
Vegetables	Bhindi,Bottle gourd, Cauliflower,Cabbage,Knol-khol,Coriander,Fenugreek,Colocassia		-	1 Acre in Rabi season		
Livestocks	Cow (domestic)		2	12		
	Milking (Cow)		-	4		
	Calf (male+female)		-	4+4		
Irrigation	Bore		-	2+1		
	Drip system		-	2 acre		
Compost	NADEP		-	1		
Components	Crop	Area (Acre)	Expenditure (Rs)	Return (Rs)	NMR (Rs)	B-C Ratio
Crop components	Paddy(SRI)-fallow	2.0	4600	14400	9800	3.13
	Line sowing	1.0	1400	3200	1800	2.28
	Broadcasting	2.0	740	2100	1360	2.83
	horse gram	1.0				
	Alsi	1.0	1050	1800	750	1.71
	Wheat					

Paddy varieties : IR-1036,Sonam

Farm ponds used for fish production in Araud of Kanker district

Rice Fallows Pilot project is being implemented in Araud & Kotela villages by KVK, Kanker in Chhattisgarh. As part of the natural resource management interventions, farm ponds are being promoted for rainwater harvesting by individual farmers. Once, sufficient water was harvested in

these ponds, the KVK in consultation with the local fisheries department consulted the farmers and advised them to make use of the farm ponds for fisheries as well. A mix of fingerlings of Rohu, Katla and Mrugal were released in the farm ponds. A total of four farmers have come forward to participate in fisheries production.

Table 1. Integrated farming system followed by Shivram Sahu
(*Parat bhoomi ko upjau evam Sudhar*)

Crop components	Crops	Before	Now with help by Project			
Horticulture	Mango (Dashari, Langra)	-	40			
	Sagaun	25	151			
	Neelgiri	-	101			
Vegetables	Tomato, Bhindi, Cowpea, Cauliflower, Cabbage, Knol-khol, Coriander, Fenugreek	<i>parti</i>	2 Acre in Rabi season			
Mix cropping system	Cauliflower+Brinjal+Coriander Cauliflower+Brinjal+Fenugreek Tomato+Knol-Khol	<i>parti</i>	1 acre in drip sytem			
Livestocks	Cow (milking)	1	3			
	Ox	-	2			
	Milking (buffalo)	-	2			
	Calf (male+female)	-	1+1			
Irrigation	Bore	1	2+2+1			
	Drip systemSprinklar	-	-			
Compost	NADEP	-	1			
Agricultural equipment	Holler	-	1			
	Oil extract (Sarson)	-	1			
	Spices mixer	-	1			
	Flour chakki	-	1			
	Tractor	-	2			
	Cultivator	-	1			
	Seed dril	-	1			
	Rotavator	-	1			
Components	Crop	Area (Acre)	Expenditure (Rs)	Return (Rs)	NMR (Rs)	B-C Ratio
Crop components	Paddy(SRI)-fallow	4.0	4600	14400	9800	3.13
	Line sowing	1.0	1400	3200	1800	2.28
	Broadcasting	2.0	740	2100	1360	2.83
	horse gram	2.0				

Paddy varieties : IR-1036, Sonam

REFERENCES

Venkatachalam, M., Kshirsagar, H.H. Tiwari, R. and Sathe, S.K. (2002). *Annual meeting and food expo* Anaheim, California. Session 30c, food chemistry: proteins.

Dewey, D.R. and Lu, K.H. (1959). A correlation and path coefficient analysis components of crested

wheat grass seed production . *Agron J.* **51**(6): 515-518.

Singh, J. B. and Singh, S. (1993). Comparative performance of tomato cultivars under rainfed conditions of Khadi area (Punjab). *Punjab Horticulture Journal*, **3**: 123-126.