



Research Article

THE EXISTING PRACTICES OF *BADI* FARMING SYSTEM AMONG THE TRIBAL FARMERS

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Abstract: The study was conducted in Baster plateau zone of Chhattisgarh and 320 respondents had taken for the current study. Respondents adopted different practices for the *badi* cultivation, where the majority of respondents followed two times ploughing and used improved varieties. About 50 per cent of respondents applied FYM in *badi* and only 38.44 per cent of respondents applied fertilizer as a basal dose and 25 per cent of respondents applied fertilizer during intercultural practices. 76.35 per cent of respondents applied irrigation within one week.

Keywords: *Badi* farming, Inter culture, Irrigation

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Introduction

The concept of sustainable rural livelihoods is increasingly central to the debate about rural development, poverty reduction and environmental management. Households combine their livelihood resources within the limits of their context and use their institutional connections to pursue several different livelihood options. Such options can include various types of production and income-generating activities. Thus, each household can have several possible sources of entitlement, which constitute its livelihood. These entitlements are based on the endowments that a household has and its position in the legal, political and social fabric of the society. The sustainable livelihood approach assumes that any developmental intervention for the rural people should be congruent with their existing livelihood options and ability to adapt to the technology. A livelihood security analysis should determine the livelihood options portfolios that different individuals pursue and the factors that determine them. The livelihood options of the respondents were also studied [1].

Bastar is situated in the southern part of Chhattisgarh. It is spread on a 39.06 lakh hectare area. About 63% area is under forest and the tribal community dominates in this biodiverse region. The people are very poor and the livelihood depends on subsistence agriculture, collection of non-timber forest produce (NTFP), labour and small ruminants.

The tribes of Bastar region are known for their unique and distinctive tribal culture and heritage in India and all over the world. Each tribal group in Bastar has its own distinct culture and enjoys its own unique traditional living styles. Each tribe has developed its dialects and differs from each other in their costume, eating habits, customs, and traditions and even worships the different forms of God and Goddess.

The tribals of Bastar were also amongst the earliest to work with metal and have expertise in making beautiful. The first livelihood security of the farming community depends on agriculture and the second one depends upon forest and non-timber forest produce. It focused more on the net income of farm families rather than the million tonnes of farm commodities produced.

The government also showed serious concern for the farmer's problems and gave special emphasis on the development of rainfed and irrigated agriculture for augmenting food supply and generating employment in rural areas. Urines of local goats, votive animals, oil lamps, carts and animals [2]. A kitchen garden is more than just a vegetable garden. It has vegetables but it also has flowers, fruits and herbs, all fresh and convenient to the nearby mainly kitchen.

Homestead gardening or backyard cultivation is common in India. The majority of kitchen gardening is done for beautification around the home and to meet domestic requirements. In Chhattisgarh, some area is left mostly on the backside of the home and used for the cultivation of vegetables. This space is also used for other domestic requirements like cleaning utensils, bathing, keeping agriculture equipment, fuel and animal drinking water. The excess water after use is diverted towards vegetables that grow without extra care and no separate time devoted to management. Thus, what so ever produced shall act as a supplement in family food. This kitchen garden or backyard cultivation is locally known as *Badi* cultivation in Chhattisgarh. *Badi* cultivation has tremendous potential for improving the livelihood of tribes. Farmers are growing vegetables and some small units of enterprise viz. poultry, goatry, piggery etc. are maintained for self-consumption as well as selling purposes.

The *Badi* farming situation covers 5% area of the total region of Bastar. The soils of *Badi* are Entisols and Inceptisol, fenced, upland and sloppy. To increase the income and livelihood from *Badi*, the various integrated farming system is applied by the tribal farmer. Maximum *Badi* cultivation was seen in Baster plateau of Chhattisgarh, there were many people engaged in *Badi* farming and received additional income.

Materials and Methods

The study was conducted in the Bastar plateau zone of Chhattisgarh state. Bastar plateau comprises of seven districts. Out of this, four districts were selected purposively based on the maximum availability of *badies*.

From each selected district two blocks were selected randomly. In this way, a total of eight blocks was selected for this study. Four villages from each selected block were selected randomly because of the maximum tribal farmers engaged in *badi* cultivation. Ten farmers from each selected village were selected randomly as respondents. In this way total, 320 respondents were selected for the study. The data were collected through a well-structured and pre-tested interview schedule; an interview schedule consisting of various types of questions related to the objectives of the study was, therefore developed. Initially, the schedule was developed in English and was then translated to the local language i.e., Hindi. The schedule was pre-tested and as per the experience gained during pre-testing the language of some of the questions was suitably worded and was made more understandable and clearer and the schedule was then finalized. The data were collected by personal interview method by contacting the respondents (farmers) at their homes. The respondents did hesitate to give the required information in the beginning. To get the authentic information the help of local leaders, sarpanch, members of gram panchayat, Kisan Mitra, and Rural Agricultural Extension Officers (RAEOs) were sought and the rapport was developed with the respondents [3-7].

Results

Existing cultivation practices of *badi* farming by the farmers

The data presented in [Table-1] reveals that regarding ploughing of land, the majority of the tribal farmers (62.13%) ploughing of land two times, followed by 37.81 per cent of them ploughing of land in one time.

Table-1 Distribution of the respondents according to existing cultivation of *badi*

SN	Practices	Frequency	Percentage
1	Ploughing of land		
	1 time ploughing	121	37.81
	2 times ploughing	199	62.19
2	Varieties		
	Desi	108	33.75
	Improved	149	46.56
	Hybrid	63	19.69
3	Transplanting of seedling		
	15 to 20 days after seedling	48	15.00
	21 to 25 days after seedling	186	58.13
	26 to 30 days after seedling	86	26.88
4	Application of manures		
	No application	99	44.80
	1 to 2 tonnes	74	33.48
	More than 2 tonnes	48	21.72
5	Application of fertilizers (N: P: K:)		
	No application	89	27.81
	Basal dose	123	38.44
	During intercultural operation	80	25.00
	Before flowering	28	8.75
6	Intercultural operations		
	1 time	96	30.00
	2 times	161	50.31
	More than 2 times	63	19.69
7	Irrigation schedule		
	In between 1 week	184	76.35
	In between 2 week	57	23.65
8	Plant protection measures		
	No use of any control methods	87	27.19
	Traditional methods	47	14.69
	Chemical methods	186	58.13

In respect to varieties, most of the tribal farmers (46.56%) adopted improved variety, followed by 33.75 per cent had adopted desi variety and 19.69 per cent of them had adopted hybrid variety for *badi* farming. As regards the transplanting of seedlings, 58.13 per cent of the tribal farmers had transplanted seedlings after 15 to 20 days, followed by 26.88 per cent had transplanted seedlings after 21 to 25 days and only 15.00 per cent of them had transplanted seedlings after 26 to 30 days. In the case of application of FYM, 44.80 per cent of the tribal farmers had applied one to two tones FYM, followed by 33.48 per cent had not applied FYM and 21.72 per cent of them had applied more than two tonnes of FYM. Similarly, in the case of application of fertilizers, 38.44 per cent of the tribal farmers had applied a basal dose of fertilizers, followed by 27.81 per cent had not applied any

fertilizers and 25.00 per cent of the tribal farmers had applied fertilizer during the intercultural operation. About only 8.75 per cent of the tribal farmers had applied fertilizers during the flowering stage. As regards intercultural operation, 50.31 per cent of the tribal farmers adopted intercultural operation two times, followed by 30.00 per cent had adopted one time and 19.69 per cent of them had adopted more than two times of intercultural operation. Regarding irrigation interval, 76.35 per cent of the tribal farmers had applied irrigation between one week and 23.65 per cent of them had applied irrigation between two weeks. In the case of plant protection, 58.13 per cent of the tribal farmers had used chemical methods for plant protection, followed by 27.19 per cent had not used any chemical methods and 14.69 per cent of them used traditional methods as plant protection.

Conclusion

The research concluded that all respondents adopted different practices for the *badi* farming, respondents have done all practices which were already spread amongst respondents. Majority of respondents applied FYM. Fertilizers and pesticides are also slightly adopted. Need more technological intervention

Application of research: Study of cultivation practices of *badi* farming

Research Category: *Badi* Farming System

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Study area / Sample Collection: Bastar plateau zone of Chhattisgarh

Cultivar / Variety / Breed name: *Badi*

Conflict of Interest: None declared

Ethical approval: This article does not contain any studies with human participants or animals performed by any of the authors.

Ethical Committee Approval Number: Nil

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