

Original Research Article

Doubling Income through Value Addition of Organic Scented Jeeraphool Rice by Tribal Farmers

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ABSTRACT

Jeeraphool is a local scented variety of Surguja region and almost every farmer cultivate this variety for their own use because of its taste and aroma. It's a small size variety sometimes give appearance of cumin (*Jeera*) hence known as Jeeraphool. Cultivation of Jeeraphool in the Surguja and its neighboring districts are since long and it's became one of the prime component in their daily food item. Basajhal is situated 35 kms away from district HQ i.e. Ambikapur and its surrounded by hills & forest from all the sides. Mostly farmers of this village cultivate Jeeraphool rice traditionally by using organic matter since long but they did not get prime price from their produce because maximum farmers were selling unprocessed rice at low rate to middleman @ Rs. 1500- 1800/ q and local milled rice only @ Rs. 40-45/kg in local market. After the intervention of KVK, a group of Jeeraphool growing farmers was formed, they were advised not to sell unmilled rice to traders. Scientists of KVK explained them economics and motivated for growing pure and quality rice through use of purified seeds, organic cultivation and other scientific measures (IPM) for pest control. Scientists also delivered training on the importance of organic production of purified Jeeraphool seed which was being grown in the area since centuries without use of chemical fertilizers, but during recent past due to less profit farmers were inclined towards other crops. Scientists from KVK visited the village repeatedly, monitored the activities of group, and encouraged the farmers for production of Jeeraphool rice by observing Field Day, Kisan Mela and other activities. District administration and KVK scientists provided Mini rice mill, attractive packets, bag closure machines, electronic weighing machines to SHG formed for the purpose, so that they will be able to prepare the scented rice packets in the village. Farmers were provided marketing avenues to sell their produce directly in attractive packets of 5 kg, gaining very encouraging response. Since then scenario has been completely changed, now Bansajhal Jeeraphool Scented Rice is a known branded rice in Chhattisgarh. Farmers have sold Bansajhal Jeeraphool Scented Rice produced by them through ATIC sale counter of IGKV Raipur, Ambikapur and being supplied on demand across the country and getting additional benefits of Rs.45/- per kg of processed rice. The area under Jeeraphool is increased by 300% in three years time, in coming years, there will be manifold increase in the area under this quality rice. Now the farmers are moving towards entrepreneurship and more number of farming groups are being formed.

Keywords

Doubling income,
Entrepreneurship,
Jeeraphool,
Scented rice,
Value addition

Introduction

Bansajhal village comes under Batauli Block and it is located 45 km away from the

District Headquarter Ambikapur. Total Population is 1637 in which 84% population

covered by Tribal farmers and almost 88% farmers belongs to marginal class. Out of which maximum farmers cultivate local scented rice variety *Jeeraphool* for their daily food purpose as well as selling to middleman for their various need. In vill-Bansajhal total geographical area is 1247.83 ha in which cultivated land is only 400 ha and out of that 289 ha comes under rice cultivation. Jeeraphool cultivation is in just only 98 ha in lowland area.. The productivity of this scented rice is very low due to use of impure and old seed with poor cultivation practices along with the quality of scented rice variety is gradually deteriorating due to continuous imbalanced use of chemical fertilizer. The demand for aroma rice is increasing day by day. Unfortunately, the aromatic rice often has undesirable agronomic characters, such as low yield, susceptibility to pests and diseases, and strong shedding (Berner and Hoff, 1986).

Possibilities of community based entrepreneurship development through value addition

Mostly tribal farmers were growing scented Jeeraphool rice on 20-25% land of their own total rice cultivated area with traditional practices and they were selling their unmilled scented rice @ of Rs. 18-25 per Kg, because of unawareness and unavailability of milling facility and marketing skill, and after milling from local mill the rate raised to Rs. 30 -35 per kg and then it was sold by farmers to middleman traders and finally in markets (retailer) @ Rs. 45-50 per kg, the margin of Rs. 20 per kg was earned by the traders whereas farmers received less profit from their high value produce. Besides this, farmers were using old Jeeraphool rice seed for cultivation with traditional practices which leads to low yield potential as well as started using

chemical fertilizers in Jeeraphool just like hybrid rice for more profit and it causes deterioration in quality of Jeeraphool. Islam *et al.*,(1996) observed that the yield of aromatic rice was low (1.5 to 2.0 t ha⁻¹) but its high price and low cost of cultivation generated higher profit margins compared to other rice cultivars. So that there are lot of possibilities to increase their profit from milled Scented Jeeraphool rice through value addition by SHGs.

Materials and Methods

<i>Activities</i>	<i>Details</i>
Formation of women SHG,s	<ul style="list-style-type: none"> • 100
Training Programme conducted	<ul style="list-style-type: none"> • Jaivik Kheti & • Integrated Crop Management
Cultivated area	<ul style="list-style-type: none"> • 400 ha
Cultivation Technology	<ul style="list-style-type: none"> • Use of Purified seeds • Seedlings transplanted at 20 X 20 sq. cm and • Application of vermi compost as a source of nutrient.
Value addition Technology	<ul style="list-style-type: none"> • Milling through Mini Rice Mill, • Cleaning, • Bagging, • Weighing, • knitting by farm women SHGs.
Marketing	Through <ul style="list-style-type: none"> • Krishi Vigyan Kendra, • ATIC Raipur, • Local market &. • Exhibition at Kisan Mela

Intervention for value addition by Krishi Vigyan Kendra

A group of Jeeraphool growing farmers was formed; they were advised not to sell unmilled rice to traders. Scientists of KVK explained them economics and motivated for growing pure and quality rice through use of purified seeds, organic cultivation and other scientific measures (IPM) for pest control. Scientists also delivered training on the importance of organic production of purified Jeeraphool seed which was being grown in the area since centuries without use of chemical fertilizers, but during recent past due to less profit farmers were inclined towards other crops. Scientists from KVK visited the village repeatedly, monitored the activities of group, and encouraged the farmers for production of Jeeraphool rice by observing Field Day, Kisan Mela and other activities. District administration and KVK scientists provided Mini rice mill, attractive packets, bag closure machines, electronic weighing machines to SHG formed for the purpose, so that they will be able to prepare the organic branded scented rice packets in the village. Farmers were provided marketing avenues to sell their produce directly in attractive packets of 05 kg, gaining very encouraging response. Aromatic rice varieties are playing a vital role in global rice trading. Major feature of these aromatic rice varieties is aroma which is being appreciated by many people and represents a high value added trait (Dela Cruz and Khush, 2000).

Horizontal spread of technology

Before intervention of KVK area coverage of Jeeraphool rice was just 98 ha this becomes 400 ha in just two year time span due to getting higher price of organic branded Jeeraphool rice and since then scenario has been completely changed, now

Bansajhal Jeeraphool Scented Rice is known branded rice in Chhattisgarh. It might be due to the popularization of value addition technologies beneficial as compared to the traditional one and approaching the KVK personnel to farmers of nearby villages to beneficiaries with personal contact, field days, Kishan Gosthies and other social occasions (Tandel *et al.* (2014), Chauhan and Pandya (2012) and Tiwari and Saxena (2001). Farmers have sold Bansajhal Jeeraphool Scented Rice produced by them through ATIC sale counter of IGKV Raipur, Ambikapur and being supplied on demand across the country.

Outcome

The area under Jeeraphool is increased by 300% in three years time, in coming years, there will be manifold increase in the area under this quality rice. Now the farmers are moving towards entrepreneurship and more number of farming groups are being formed. Increasing participation of farmers and attitude towards valuable Jeeraphool. There is a huge demand for this organic rice among consumers and traders across the state & country. Farmers are getting direct additional profit of Rs. 45 kg from processed rice. Area under traditional scented Jeeraphool is in increasing trend (150 - 1000 acre) SHG is working in profit and day by day more members are joining.

Impact

Impact of the technology demonstrated by KVK can be easily seen as yield of rice production increases from 18 q /ha to 25 q/ha with improved package. By adopting this technology farmers are fetching additional profit of Rs. 45.00 per kg of processed rice. There is huge demand of the organic Jeeraphool rice due to their good quality and aroma. Other villagers are also

being motivated by seeing the progress of SHG members of Bansajhal group now more numbers of SHGs from nearby villages are joining for organic production of Jeeraphool rice. District administration is also taking interest for improvisation and for that there is proposal for construction of

godown for storage of rice and also ready for establishment of automatic rice processing and packaging unit at Bansajhal. Branding of Bansajhal Jaivik Jeeraphool Rice for large scale marketing is being done with the help of District Collector under District Mineral Fund scheme.

Table.1 Branded Bansajhal Jeeraphool rice production system through value addition status before and after intervention

S. No.	Particulars	Status Before Intervention during 2015	After Intervention in 2017
1	Total Rice area (ha)	289	1847
2	Total Jeeraphool area (ha)	98	400 (more no. of villages included)
3	Total Jeeraphool production (q)	900	10000
4	Use of Jeeraphool paddy for Milling (q/year)	585	6500
5	Rice Mill	00	01
6	Packaging facility	Nil	Available
7	Sealing machine	Nil	Available
8	Marketing Rate of Rice	Rs 45-50 /kg	Rs 70 /kg
9	Marketing Rate of Paddy	15-20Rs/kg	25-30 Rs/kg
10	No. of SHGs	15	100

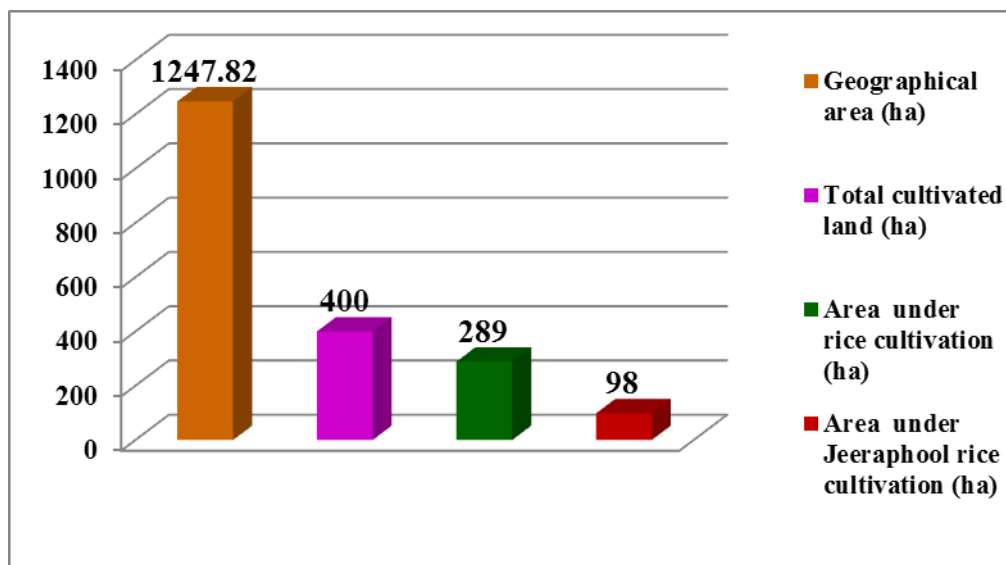
Table.2 Status of technology before and after intervention of entrepreneurship development among the tribal farmers for branded organic Jeeraphool rice production through value addition

S.No.	Particulars	2015	2017
1	Village coverage	Bansajhal	Bansajhal, Saliyadh, Bilaspur, Tirang & Boda
2	Area under Jeeraphool (ha)	98	400

Table.3 Economic analysis for profitability of organic Bansajhal Jeeraphool rice production

Particulars	Traditional practices	KVK intervention
Production Yield of Paddy (q/acre)	06	10
Production Yield of Rice (q/acre)	3.9	6.5
Income (Rs/acre) Rice@ Rs1800.00 / per quintal (FP) Rs2500.00 / per quintal (RP)	10800.00	25000.00
Income (Rs/acre) Processed Rice@ Rs 4500.00/ per quintal (FP) Rs7000.00 / per quintal (RP)	17550.00	45500.00
Income of Rice@ Rs/ per kg	18.00	25.00
Income of Processed Rice@ Rs/ per kg	45.00	70.00
Net income of Processed Rice@ Rs/ per kg	25.00	45.00

Fig.1 Rice production scenario at Bansajhal



From the above findings it can be concluded that the use of integrated crop management system for cultivation of organic scented Jeeraphool rice can not only reduce the technology gap to a considerable extent leading to increased productivity of organic

scented Jeeraphool rice but also doubling the farmers income through value addition by farm women SHGs in villages of Surguja District. Moreover, extension agencies in the district need to provide proper technical support to the farmers through different

educational and extension methods to overcome the extension gap for better production in the district. Finally, value addition is a effective tools of increasing the marketing value of farmers produce. It encourages farmers to accept and adopt the value addition technology by farm women for getting higher returns with minimum investment. Present works shows that the feasibility of the technology has depicted good performance and this can be replicated in more villages of the district.

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