

Full Length Research Paper

## Economics analysis of minor millets in Bastar district of Chhattisgarh

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Accepted 11 September, 2013

Paddy is main crop of Chhattisgarh, however, millets are important food for sustaining tribal population in Bastar region of Chhattisgarh, India. Keeping in view of livelihood importance of minor millets for Bastar tribes, the present enquiry related to its production, marketing and processing was proposed to undertaken in Bastar district of Chhattisgarh. Out of total millets grower farmers, 10% farmers were selected randomly from four purposively selected villages namely Bhataguda, Turenar, Kalcha and Kumhrawand. The details enquiry was done in the year 2008 to 2009. The major findings of this study revealed that average cropping intensity was observed to be 103.36% in the study area, the average size of holding was 2.67 ha. On an average cost of cultivation per hectare of Kodo was calculated as Rs.2866.75, kutki Rs.2751.01 and ragi Rs.3342.10 per hectare, respectively. On an average, input-output ratio in Kodo, Kutki and Ragi was 1:1.33, 1:1.28 and 1:3.25, respectively. The total marketing cost paid by the retailers was Rs.32.60 per quintal. The sale price of producer came to Rs.395.00 and Rs.400.00 in channel-I and channel-II, respectively. The study suggested that it is essential to adopt the production system approach of linking the production technology and credit system in minor millets cultivation. There is no support price for procurement for minor millets, for the survival of these crops government must declare minimum support price.

**Key word:** Minor millets, cost of cultivation, marketing, farmers.

### INTRODUCTION

Millets are the basic cereals in India and eaten by large section of the population belonging to lower income strata. Minor cereals consisting of maize, sorghum, pearl millet, finger millet and other millets constitute a little less than 25% (33.92 million tons) of the total food grain production (209.2 million tons) in India. Though they are generally regarded as "Coarse" grains, their potential for augmenting the grain supplies as also to considerably bridge the protein gap in being increasingly realized. The important small millets grown in India are finger millet, Kodo millet, little millet, foxtail millet, barnyard millet and common millets. There has been a consistent decline in

area of small millets during the period from 1949-1950 (7.63 million ha) to 1994-1995 (3.69 million ha). During the same period the production has fluctuated between 3.82 and 3.30 metric tons. The area under finger millet alone fluctuated between 2.21 million ha in 1940-1950 and 1.83 million ha in 1994-1995, but its production has increased from 1.54 to 2.43 metric tons. The increase in production is mainly due to the raise in productivity from other small millets has remained more or less stagnant at 421-466 kg/ha during the same period (Chakhiyar, 2007). Looking to declining area production of minor millets above, study was carried out with major objectives of

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**Table 1.** Economics of selected minor millets crops on the sample farms.

S/N	Particulars	Minor millets		
		Kodo	Kutki	Ragi
1	Input cost (Rs./ha)	2866.75	2751.01	3342.10
2	Output value (Rs./ha)	3826.38	3522.27	10851.00
3	Net income (Rs./ha)	959.63	771.26	7508.89
4	Family labour income (Rs./ha)	2269.09	984.66	7886.68
5	Farm business income (Rs./ha)	2289.10	1804.77	8757.10
6	Input-output ratio	1:1.33	1:1.28	1:3.25

**Table 2.** Break-up of total cost, cost concept wise income over different cost.

S/N	Particulars in Rs./ha	Minor millets		
		Kodo	Kutki	Ragi
	<b>Break-up of cost</b>			
A	Cost-A	1537.28	1717.50	2093.89
	Cost-A1	1537.28	1717.50	2093.89
	Cost-B	2357.29	2487.61	2964.31
	Cost-C	3686.76	3521.12	4212.52
	<b>Income over different cost</b>			
B	Income over cost-A	2289.1	1804.77	8757.1
	Income over cost-A1	2289.1	1804.77	8757.1
	Income over cost-B	1469.09	1034.66	7886.68
	Income over cost-C	139.62	115.24	6638.47

economic analysis of minor millets in Bastar region of Chhattisgarh, India so that more and more farmers group would cultivate millets crops in spite of paddy crop and get higher remuneration for their livelihood.

#### METHODOLOGY

The present study was purposively conducted in Jagdalpur block of Bastar district of Chhattisgarh. Out of total millets farmers in the region, 10% farmers were selected randomly from four purposively selected villages namely Bhataguda, Turenar, Kalcha and Kumhrawand. Primary data was collected from selected minor millets growers. Data was collected through personal interview method with the help of pre-tested questionnaires. The growers were classified as small (up to 2 ha.), medium (2.01 to 4 ha) and large (above 4 ha.) categories. The details enquiry was done in the year 2007-2008. The cost economics was worked out for millets crops as well as paddy crop. Estimation of economics surplus of millets crops requires data on technological and economical parameters. The data pertaining to cost economics (Cost of cultivation, cost of production, marketing cost, margin and cost benefit ratio) were collected from the Participatory Rural Appraisal (PRA) technique and family survey using well structured schedules (Marothia and Gauraha, 2005).

#### RESULTS AND DISCUSSION

Millets are important food grains in the diets of a large section of population in India and Africa. But in current

decades area and production of millets crops was decline may be because of less remuneration or competitive crops, that is, paddy has higher remuneration. The results shows that in spite of paddy crops finger millets have higher remuneration and nutrient wise millets crops have highly nutritious then paddy (Kumar and Sandeep, 2005).

#### Economics of minor millets crops

It was observed that on an average input-output ratio in Kodo, Kutki and Ragi was 1:1.33, 1:1.28 and 1:3.25, respectively. It was observed that the input cost was found Rs. 2866.75, Rs.2751.01 and Rs.3342.10 for Kodo, Kutki and Ragi, respectively. Net income from these millets crops were observed Rs. 959.63, Rs.771.26 and 7508.89, respectively (Table 1). The results of economics of minor millets shows that the higher input-output ratio on an average was observed in Ragi, that is,1:3.25 in spite of paddy 1:2.29 in these region. Figure 1 clearly indicates that input cost, output value, net income and farm income of different categories of farmers in kodo, kutki and ragi crops respectively. It shows Ragi is most remunerative crop (Seetharam, 1997) among all millets crops prevailing in the Chhattisgarh region. The break-up of total cost, cost concept wise income over different cost of millets crops is presented in Table 2. The table portrays

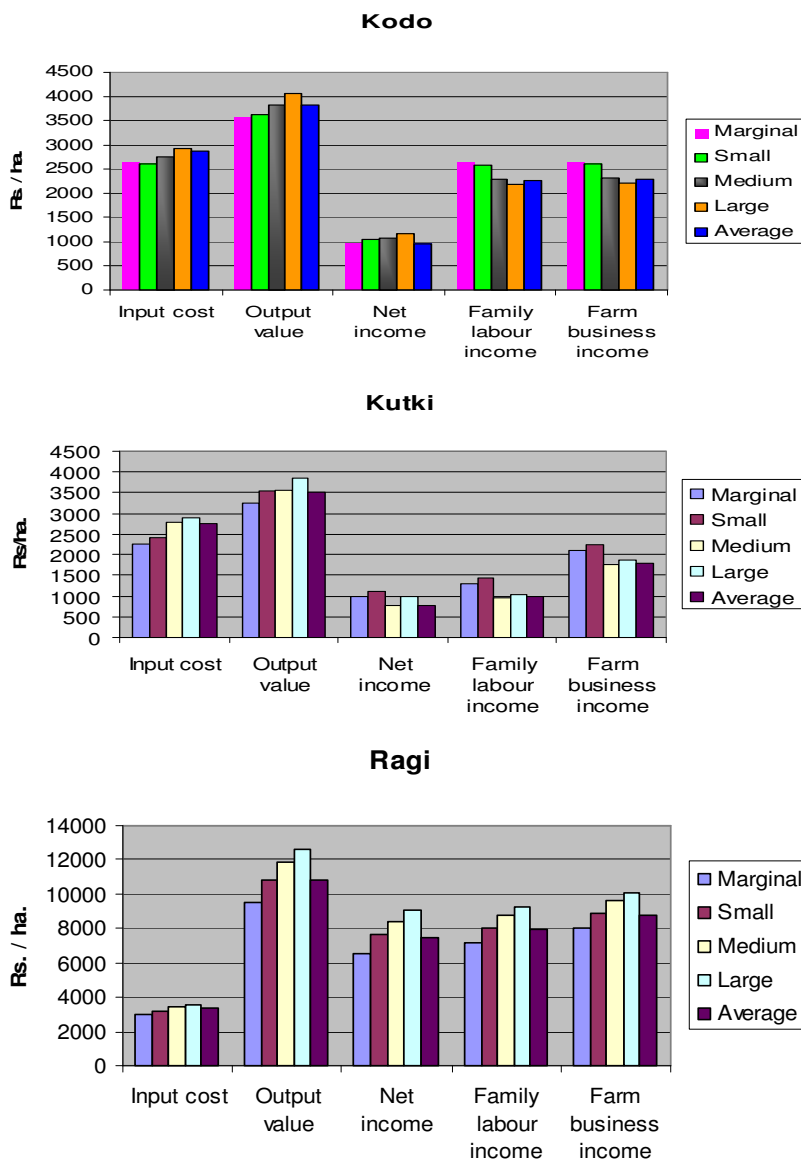


Figure 1. Economics of minor millets crops on the sample farms

that on an average, cost-A, cost-B and cost-C were worked out to Rs.1537.28, 2357.29 and 3686.76, respectively, on the sample farms. The incomes over different costs were also worked out. The average income over cost-A, cost-B, and cost-C were calculated as Rs.2289.10, Rs.1469.09 and Rs.139.62 per hectare, respectively. The cost and returns on the basis of cost concept of Kutki on the sample farms of different size groups presented in Table 2 shows that, on an average, cost-A, cost-B and cost-C, came to Rs.1717.50, Rs.2487.61 and 3521.12 per hectare, respectively on the sample farms. The average income per hectare over cost-A, cost-B and cost-C were worked out to Rs.1804.77, Rs.1034.66 and Rs.115.24, respectively. For Ragi crop table reveals that, on an average, cost-A, cost-B and cost-C came to Rs.2093.89, Rs.2964.31 and

Rs.4212.52/ha, respectively, on the sample farms. All these costs increased with the increase in the size of farms. The average income over cost-A, cost-B and cost-C was worked out to Rs.8757.10, Rs.7886.68 and Rs.6638.47 per hectare, respectively on the sample farms.

### Marketing channels

There were two marketing channels found for minor at Bastar region which are given below (Kumar, 1996):

Channel-I: Producer – consumers.

Channel-II: Producer –retailers of minor millets – consumers.

**Table 3.** Producer's share in the consumer's rupee.

S/N	Particular in Rs./quintals	Channels	
		I	II
01	Retailer of minor millets		
	Marketing cost	-	32.60(6.10)
	Net margin	-	101.40(18.98)
02	Producer		
	Marketing cost	-	
	Net price received	395.00	400.00
03	Producer share in consumer rupee (%)	(100.0)	(74.90)
04	Price paid by consumer	395.00(100.0)	534.00(100.00)

Figures in parentheses indicate percentage to the price paid by consumers.

### Price spread

It is found that the sale price of producer came to Rs.395.00 and Rs.400.00 in channel-I and channel-II, respectively. Net price received by producer was being Rs.400.00 in channel-II, which came to 74.90% to consumer price. Net margin received by the retailer was Rs. 101.40 per quintal, that is, 18.98% to consumer purchase price.

### Producer's share in the consumer rupee

Table 3 shows that the price paid by consumers for per quintal of minor millets products was calculated Rs.534.00 in Channel-II. Producer's share in consumer rupee was 74.90% in Channel-II of the minor millets.

### CONCLUSION and SUGGESTIONS

The results of economics of minor millets shows that the higher input-output ratio on an average was observed in Ragi, that is, 1:3.25 followed by Kodo 1:1.33 then Kutki, that is, 1:1.28 and in paddy crop it becomes 1:2.29 in this region. Economic analysis may help researcher and farmers to turn the ethics of millets "poor man food" to "Rich man food". Suitable extension services regarding new technology of production disposal and extension workers should extend utilization of minor millets to the minor millets growers without any delay and other agencies involved in the extension, communication in their respective zones.

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