

An Economics of Moth bean Processing in Nagaur District of Rajasthan

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Abstract: The present study was devoted to an economics of moth bean processing in Nagaur district of Rajasthan. The processing cost and returns analysis revealed that moth bean is processed into different products such as parched moth bean, parched moth bean dal, moth bean flour (besan), milled moth bean for human beings and livestock etc. The processor purchased moth bean at the rate of Rs. 5700 q⁻¹ and sold moth bean dal at a price of Rs. 7600 q⁻¹. Broken moth bean dal which is generally used for besan making was sold @ Rs. 5000 q⁻¹ and churi which is used as livestock feed was sold @ Rs. 1600 q⁻¹. The total cost incurred by the processor was Rs. 6058.08 and returns after processing of moth bean were Rs. 6544.00. Net returns per quintal of processed moth bean were Rs. 485.92. The processors, on an average, earned a profit of 8.52% on the purchase price of moth bean. The mark-up (per cent increase) in moth bean price after processing was 33.33%. The policy implication based on the findings of the present study pulse processing is beneficial to both producers, the public and govt. in general. For farmers, processing facilities create strong markets. Farmers/processors have a natural incentive to aggressively pursue commodity supplies to keep their plants fully utilized. This will result in farmers receiving higher prices than they would get otherwise. The processing facilities create jobs, generate tax revenues, and increase economic activity to benefit many local businesses.

Key words: Moth bean, processing, policy, Nagaur.

Processing of pulses is of primary importance in improving their nutritive value. Pulses are the edible seeds of pod bearing plants are widely grown throughout the world. Pulses have a high protein content ranging from 20-30% and this makes them important in human food from the point of view of nutrition. Because of this high protein content, they are also known as "poor man's meat". Milling of pulses is removal of outer husk/hulls and splitting the grain into two equal halves. The husk/hull is more tightly held by the kernel of some pulses poses problems. The alternate wetting and drying method is used to facilitate de-husking and splitting of pulses. The traditional method of milling yields only 65-70% as compared to 82-85% potential yield (Adebayo *et al.*, 2014). Also, traditional methods results in high losses in the form of powder and broken. Therefore, it is necessary to improve the traditional methods of pulse milling to increase the total yield of de-husked and split pulses and reduce losses. Moth bean was used for preparing soup and several confectionary items like papad, bhujia, namkeen, wada, etc. which

are used as daily snacks. Moth bean is source of food, feed, fodder and green manuring. Green pods are delicious source of vegetables. Moth bean is known for higher proportion of albumin and glutamine fraction of protein along with a good source of lysine and leucine amino acids. The medical uses of moth bean, especially in reducing fever, as well as the narcotic property of its roots are well known. India is the largest producer and consumer of pulses in the world. Pulses are grown on an average of about 23 million ha area in India. The major area under pulses lies in Madhya Pradesh (20%), Maharashtra (14%), Rajasthan (17%), Uttar Pradesh (10%), Karnataka (9%), Andhra Pradesh (8%), Chhattisgarh (4%), Bihar (3%) and Tamil Nadu (3%). Agriculture in Rajasthan state is primarily rainfed. The period of monsoon is short, around three months. The cultivated area under kharif season is about 61% of the total cultivated area which, to a large extent, is dependent on rains which remains scanty and irregular. The ground water table in the state is rapidly going down. Nearly 30% of agricultural area is under irrigation. In Rajasthan, pulses occupied 4197.72 thousand hectares and production was 2471.10 thousand

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tonnes in 2013-14 (www.rajasthankrishi.gov.in). These are mainly cultivated in arid and semi-arid districts including Nagaur, Jaipur, Jodhpur, Sikar, Pali, Jhunjhunu and Ajmer. Wide fluctuations have been observed in both area and production of pulse crops in Rajasthan mainly due to change in weather and climatic conditions. It is observed that during the years with favorable weather conditions, pulse production increases to double of the average production.

Methodology

Simple tabular analysis was used to work out economics of processing of moth bean (Singh, 2012).

Results

Before consumption, moth bean is processed into different products such as parched moth

Table 1. Average purchase price of raw material, selling price of products and recovery in processing

Product	Price (Rs. q ⁻¹)	Recovery as percentage of raw material
Moth bean	5700.00	100.00
Dal	7600.00	75.00
Broken Dal	5000.00	14.00
Churi	1600.00	9.00
Other (Dust and wastage)	-	2.00

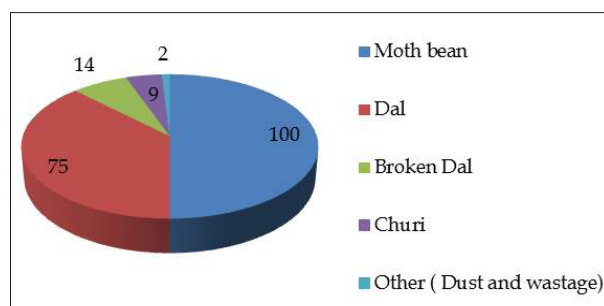


Fig. 1. Recovery as percentage of raw material in moth bean.

bean, parched moth bean dal, moth bean flour (besan), milled moth bean for human beings and livestock etc (Bhagwat and Shelke, 2012; Gulve, 2009). In this section processing of moth bean into moth bean dal has been discussed. The actual price at which raw material (moth bean) was purchased, product and by-products were disposed off by the processor and recovery in processing are shown in Table 1 and Fig. 1. The information was collected from various processing units of Nagaur district.

The processor had purchased moth bean at the rate of Rs. 5700 q⁻¹ and sold moth bean dal at a price of Rs. 7600 q⁻¹. Broken moth bean dal which is generally used for besan making was sold @ Rs. 5000 q⁻¹ and churi which is used as livestock feed was sold @ Rs. 1600 q⁻¹.

Table 2 shows cost and returns of processors of moth bean in Nagaur district. The total cost

Table 2. Cost and returns of processors of moth bean in Nagaur district of Rajasthan

Particulars	Rate (Rs. q ⁻¹)	Amount (Rs.)
Cost incurred by the miller in purchase of moth bean		
Moth bean	5700.00	5700.00
Transportation charges from Mandi to shop	4.00	4.00
Labor charges for loading and unloading	5.00	5.00
Processing cost	300.00	300.00
Interest on the value of raw material for one month @ 9.00% per annum		49.08
Total cost		6058.08
Returns after processing of moth bean		
Particulars	Quantity (q)	Amount (Rs.)
Dal	0.75	5700.00
Broken dal	0.14	700.00
Churi	0.09	144.00
Total		6544.00
Net returns per quintal of moth bean processed		485.92
Net returns as percentage of moth bean price		8.52
Mark-up over moth bean price after processing (%)		33.33

incurred by the processor was Rs. 6058.08 and returns after processing of moth bean were Rs. 6544.00. Net returns per quintal of moth bean processed were Rs. 485.92. Thus, processors, on an average, earned a profit of 8.52% on the purchase price of moth bean. The mark-up (per cent increase) in moth bean price after processing was 33.33%.

Policy implications

The policy implication based on the findings of the present study pulse processing is beneficial both producers, the public and govt. in general. For farmers, processing facilities create strong markets. Farmers/processors have a natural incentive to aggressively pursue commodity supplies to keep their plants fully utilized. This will result in farmers receiving higher prices than they would get otherwise. The processing facilities create jobs, generate tax revenues, and increase economic activity to benefit many local businesses.

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