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Custard Apple Value Chain in Beed District of Maharashtra, India: A Case Study

Amit Kumar Singh[*] and Himanshu Kumar[**]

ABSTRACT

Agriculture, with its allied sectors, is the largest source of livelihoods in India where 70% of its rural households still depend primarily on agriculture for their livelihood, with 82 percent of farmers being small and marginal (FAO). The majority of small and marginal farmers as well as the landless peasants depend on the other livelihood activity such as livestock and non-timber forest products for sustenance in states like Jharkhand, Andhra Pradesh, Odisha, Maharashtra, etc. Some of the non-timber forest products are a catalyst for their income, and custard apple (also called *Sitafal*/*Sarifa* in some regions) is one of them. Many communities are involved in the cultivation of custard apple in different states. One such community called Banjara is significantly engaged in cultivating custard apples in Maharashtra's Beed district. In this paper, the readers can get a holistic view of the value chain of the custard apple. The case study demonstrates how a small tribal community-driven enterprise turns profitable by processing custard apples in the Beed district of Maharashtra. Taking cue from the case, the government can promote cultivation

[*]Alumnus of Development Management Institute, Development Professional involved in Social Sector in India **E-mail:** amitdmi18@gmail.com

[**]Alumnus of Development Management Institute, Development Professional involved in Social Sector in India **E-mail:** hk250193@gmail.com

and processing of custard apples among the tribal community as an alternative means of livelihood and income augmentation.

Keywords: Entrepreneurship, Sustainability, Women's Empowerment, Beed, Maharashtra, India

INTRODUCTION

The custard apple is a drought-tolerant fruit plant. It can remain healthy even in worse atmospheric conditions. The plant does not need much water and pesticide too. In other words, custard apple needs less attention, low-maintenance cost, and low investment. It also includes a pleasant aroma and taste and is also a source of medical benefits in which it is used as an antioxidant anti-diabetic medicine. Further, the custard apple has good acceptability in various value-added products viz., juice, ice cream, toffee, milkshake, vinegar, Ready to serve the beverage, jam, and nectar etc. with 10 to 55% contribution. According to The Agricultural and Processed Food Products Export Development Authority (APEDA), yearly yield of custard apple in India was over 298 thousand tons in 2018.

Beed custard apple grown in the Balaghat ranges of the Beed district has a phenomenal, sweet taste. The high potassium content and micronutrients in the rocky terrain with shallow, gravelly, well-drained soil of Balaghat range around the Beed district, especially in Dharur, Ambajogai, Ashti is more prominently responsible for Dharur custard apple's unique and distinct taste. The yield of Beed custard apple is 10.89 Kg/Plant. The perfectly round shape, attractive shiny green external fruit colour with pleasant texture and flavour, and the distinct creamy white or yellowish colour with wide space appearing on maturity are the key features to identify the custard apple from Dharur. The Beed custard apple is heavy and produces a high quantity of pulp. The pulp is juicy, white creamy, granular, edible, soft and fleshy, with a mild flavour and slight acidity (0.24%) (Balaghat Sitaphal Sangh, 2016). Maharashtra leads the country in custard apple production, with 92,320 tons, followed by Gujarat, Madhya Pradesh and Chhattisgarh. Custard apples are also grown in Assam, Bihar, Odisha and Rajasthan.

METHODOLOGY

Research Design	Quantitative Research
Sampling Technique	Random Sampling
Sampling Frame	Custard Apple Selling women
Sample Size	40
Primary Data Collection Technique	Survey, FGD
Data Collection Tools	Questionnaire
Secondary Data	Published document from the Internet
Visualization Tools	Excel

FINDINGS

The flow diagram (Figure 1) provides an understanding of how the custard apple pulp is processed.

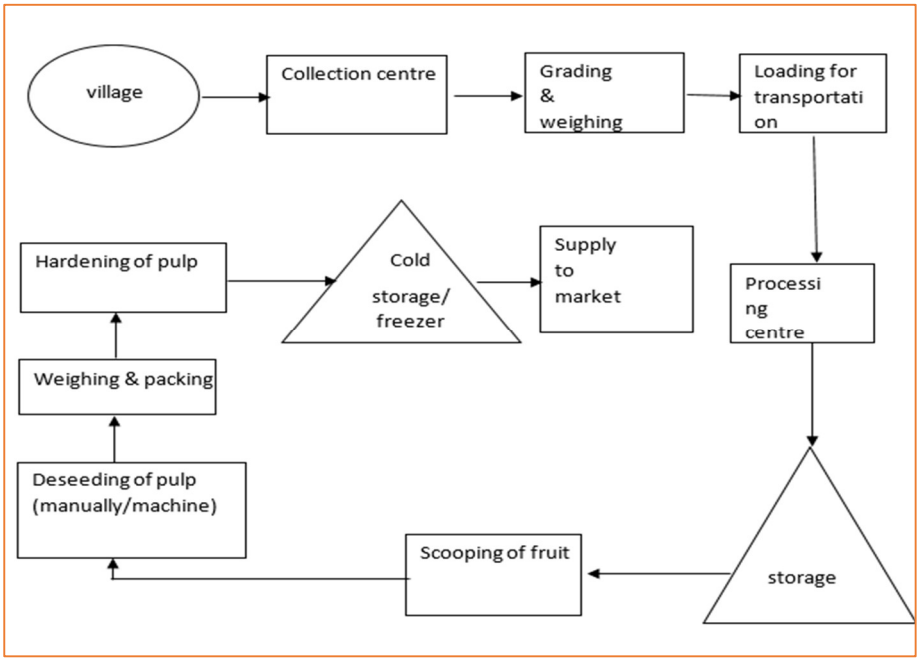


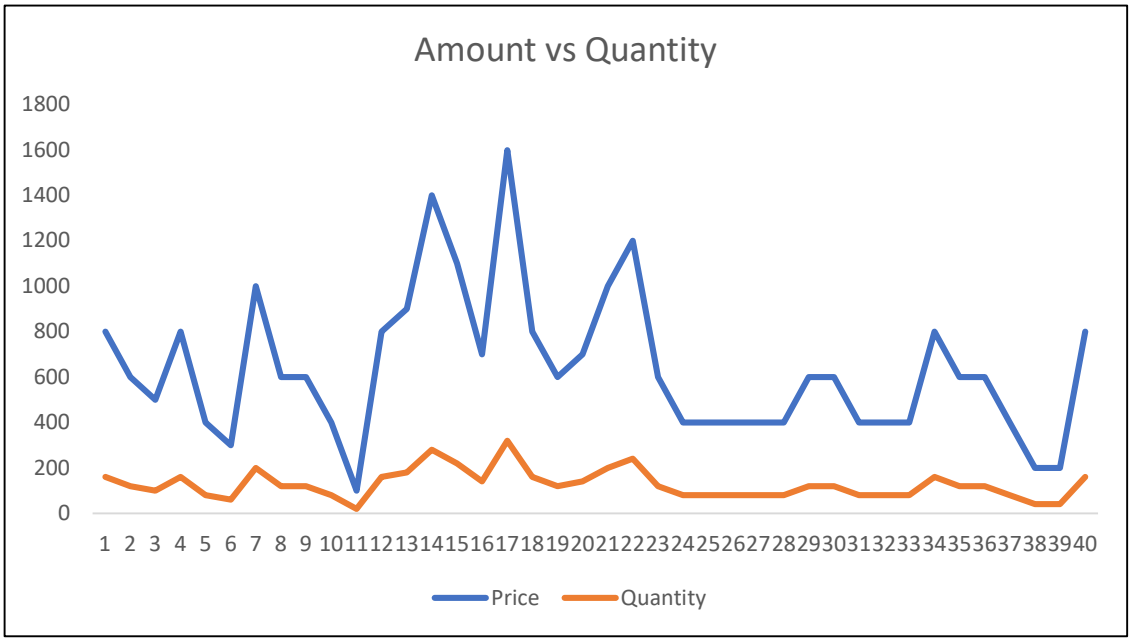
Figure 1: Custard Apple Pulp Processing

The authors had facilitated village organization women to start a custard apple processing unit to make them sustainable and make an example of entrepreneurship in Dharur block of Beed district (Maharashtra). Earlier, they were involved in cotton harvesting as labourers and got ₹100 wages per day. The government gave a grant of approximately ₹5 lakhs to start a processing unit. The processing output result details have been given in Table 1.

Table 1: Output of Processing Unit in 1 Month

Pulp Made by VO (Kg)	856
Total pulp sold (Kg)	727
Net quantity available (Kg)	129
Total sales value	₹ 137,404.98
Gross Profit	₹ 40190

It may also be noted that it is a perishable commodity and is available for a very short period of 1-2 months. An average of 10 women were involved in the whole process including procurement, processing, and market linkage. The technical agency facilitated their endeavours. The targeted customers for the processed pulp of custard apples were the ice cream industries, local juice vendors among others.



Previously, the tribal women of Beed district depended on the local aggregator who in turn had a monopoly in this region. Hence the custard apple farmers in the district were not able to get good prices for their yields. The aggregators used to buy custard apples from the local farmers at rate of ₹4-5₹/kg and sell the same at the rate of ₹80 or more in the city markets. After the setting up of the custard apple pulp processing unit as part of government intervention, the local farmers were able to get ₹12-14 per kg.

Figure 2: Custard Apple farmers having an interactive meeting on setting up processing unit

Figure 3: A custard apple farmer involved in processing of the fruit

CONCLUSION

The case is based on a small unit of extracting the pulp and selling them at local market. Only 10 women are involved in the processing. More than 50 tribals women sell the custard apples to the processing unit. Also, the processing unit is engaged in extracting the pulp only. However, there are several opportunities available to the local micro entrepreneurs. They can get involved in converting custard apple pulp into powder and sell the same on various online platforms. Thus, a seasonal venture can be converted into a round-the-year enterprise for the tribal women. For example, custard apple can also be used for making jam, fruit-flavoured yoghurt, fruit drinks and syrups, with fruit extracts from custard apple (Hoyos, 1980), juices (Sinthiya and Poornima, 2017), candies, and wines (Kadam (2001), ice-cream (Yadav et al., 2010)), squash (Sravanthi et al., 2014), milkshake (Bakane, 2016), vinegar (Raichurkar and Dadagkhair, 2017) or nutritional flour (Souza et al., 2018).

Involvement of the technical agency to provide their expertise to the tribal women is limited for a short period. Once the processing unit takes off, the technical agencies exit the scene. Hence the village-level processing units are under constant threat from the big players. Hence, it is imperative for the government to also create safeguards for the tribal women who come forward to start their own small ventures in the form of custard apple pulp processing units. Further, the government can increase financial support to make such ventures sustainable. Moreover, such endeavours can be gainfully integrated with self-help groups. Also, the government can make concerted efforts to promote the non-farm sector in the country to help small and marginal farmers in supplementing their income during lean seasons when there is no work in the farms.

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