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Development of entrepreneurship in agro-processing activities among rural women

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Abstract

The present study on entrepreneurship development among rural women was conducted in selected villages of Bangalore Davanagere district in Karnataka state. The selected villages were Nittur of Harihara taluk and Thurchagatta of Davanagere taluk during the year 2019-20. The data was collected from the 200 rural women using semi structured interview schedule. The collected data was analysed using appropriate statistical tools. The results of the study revealed that, the total production of finger millet malt for two years was 12,266 kg, followed by hurihittu 3,556 kg and malt chocolate 156 kg. The cost for finger millet malt at household level was Rs. 4,84,146 (Rs. 37.6/kg), hurihittu Rs. 3,28,420 (Rs. 94/kg) and malt chocolate Rs. 38,565 (Rs. 276/kg). The total selling cost of finger millet malt was Rs. 9,84,020 (Rs. 82/kg), hurihittu Rs. 5,18,300 (Rs. 154/kg) and malt chocolate 64,800 (Rs. 450/kg), with net profit of Rs. 35,961 from the three products. Majority of the SHG members marketed the value added products through retail shops, medical shops, Krishimela, field days, exhibitions and by direct sales. Initially majority of the rural SHG women were in medium income group (52%) followed by 38 per cent in low income group and only 10 per cent were in high income group. Noticeable improvements was observed after the intervention programme i.e., 64 per cent of them were in medium income group, 20 per cent in high income group and only 16 per cent were low income group (Rs. <2,000).

Keywords: entrepreneurship, finger millet, self-help groups and value addition

Introduction

Processing of agricultural commodities is very much essential and important step in value addition. Majority of rural women are still depending on traditional method of processing which is time consuming, labour intensive, resulting in inferior quality output. These manual physical methods like cleaning, sorting, separating, sieving and milling etc, involve drudgery to women besides their other farming and family activities. SHG women are lacking in value addition, improved processing technology and machinery usage within easy reach, even for basic cleaning and milling facilities and transport to far places. Rural women are very poor in value addition activities even today most of the food grains sold to local market without scientific cleaning for soil, mud and stones, choppy grains and glums and getting poor price. The uneven size grading and milling leads to poor milling recovery and inferior output. Graded foods grains and their end products fetch better price in market. In this scenario, the farmer and farm women needs to be educated in value addition before processing, marketing or consuming.

Entrepreneurs play a pivotal role in economic development. However, the women entrepreneurs are considered to be the most important economic agents for the economic augmentation of any country. It is a well-known fact that women have played and continued to play key role in conservation of basic life support systems. Hence, entrepreneurship development is a possible approach to empower women. A women as an entrepreneur is economically more powerful than as mere worker, because ownership not only confers control over assets but also gives her the freedom to take decision. This would also uplift her social status in society. The Self Help Groups(SHG) in rural India are causing a silent revolution not only in terms of providing micro credit but also by contributing in other forms to make the agriculture sustainable (Savitha *et al.*, 2009) [5].

Empowering women needs a holistic approach to encourage their participation in decision making in the household, community and local domestic sectors and prepare women to take up leadership position in agricultural activities. In this backdrop, the present study was undertaken to know the Entrepreneurship development among rural women in Bangalore rural district of Karnataka in value addition and processing of agricultural products for sustainable income and development.

Methodology

The present study on socio-economic characteristics, food habits and dietary intake of rural women was conducted in selected villages of Bangalore rural district in Karnataka state. The selected villages were Nittur of Harihara taluk and Thurchagatta Davanagere taluk during the year 2019-20. Ninety rural women from Nittur village and 110 rural women from Thurchagatta village were selected randomly for the study, thus making a total sample of 200 respondents.

A pilot study was conducted to determine the feasibility of the study and validity of the questionnaire. The pilot study was conducted on 10 per cent of the sample Size. The study used both qualitative and quantitative assessment measures. The data was collected from the respondent rural women using semi structured interview schedule developed for the study. The collected data was tabulated and analysed using appropriate statistical tools like frequency, parentage, mean, standard deviation, correlation etc., to draw valid conclusions.

Results and Discussion

Cost of production of finger millet products (per kg)

Starting of small scale agro-processing unit in a village requires lot of inputs in terms of machinery, raw materials,

technical support, human resources, packaging and labelling as well as marketing channels are very important. In the present study training programme on finger millet processing and value addition was imparted to make rural women self-employed with small scale production, for this purpose essential equipments like milling unit, weighing balance, sealing machine, gas stove and utensils were provided by the project and duration of the economic life of the essential equipments was eight years (Table 1).

The cost of production of different ingredients of finger millet products are depicted in Table 2. The ingredients used were green gram, wheat, soya, skim milk powder, butter, cocoa powder, vanilla and labour and flour mill charges. The cost of production of finger millet malt was Rs. 37.6 /kg, followed by hurihittu Rs. 94/kg and maximum cost of production was recorded Rs. 276 for the production of one kg of malt chocolate. The differences in cost of production for one kg of finger millet malt, hurihittu and malt chocolate was difference in cost of per kg is attributed to difference in the raw material, production cost and their required inputs including packaging and labelling which was very high in malt chocolate. Similar observations were reported by Rekha Rani (2002) [3] for iron enriched food products.

Table 1: Cost estimation for establishment of small scale agro-processing unit

Essential equipments	Price(Rs)	Economic life (Years)	Depreciation/ Year	Depreciation/ Month	Depreciation/ Day
Milling unit	12,000	8	1500	125	4.16
Electronic balance	5,000	8	625	52	1.73
Vessels	3,000	8	375	31.25	1.04
Sealing machine	2,500	8	312	26	0.86
Gas stove	3,000	8	375	31.25	1.04
Total	25,500		3187	265.5	8.83

Depreciation/Year	= Price of essential equipment x 0.02
Depreciation/Month	= (value of Depreciation/year) /12
Depreciation/Day	= (value of Depreciation/month) /30
Interest on investment @ 10.5%	= 25,500 x 0.105
	= 2,677.5/Year
	= 223.12/Month
	= 7.35/Day
Total investment / day	= Depreciation/day + Interest on Investment
	= 8.83 + 7.35
Total investment	= 16.18/day.

Table 2: Cost of production of finger millet products (per kg)

Sl. No.	Finger millet malt		Hurihittu		Malt chocolate	
	Ingredients	Cost(Rs)	Ingredients	Cost(Rs)	Ingredients	Cost(Rs)
1	Finger Millet	3.60	Finger millet	15.00	Finger millet malt	50.00
2	Green gram	6.00	Butter milk	25.00	Skimmed milk powder	5.00
3	Wheat	2.50	Coconut powder	10.00	Cocoa powder	28.00
4	Defatted soya flour	2.50	Defatted soya flour	4.00	Vanilla	12.00
5	Skimmed milk powder	2.50	Sugar	15.00	Sugar	50.00
6	Cardamom	1.50	Cardamom	2.00	Butter	60.00
7	Gas	2.00	Gas	2.00	Gas	12.00
8	Labour charges	14.00	Labour charges	14.00	Labour charges	14.00
9	Flour mill charges	1.00	Flour mill charges	4.00	Ghee / Vanaspathi	5.00
10	Packaging & Labelling	2.00	Packaging & Labelling	3.00	Packaging & Labelling	40.00
	Total(Rs)	37.6		94		276

Overall cost of production, returns and profit of finger millet products

Table 3 reveals that, the total production cost was Rs. 4,84,146, Rs. 3,26,420 and Rs 38,565 for finger millet malt, hurihittu and malt chocolate respectively and the total selling cost was Rs. 9,84,020 for finger millet malt, Rs. 5,18,300 for hurihittu and Rs. 64,800 for malt chocolate with a yield of

12,266 kg, 3,556 kg and 148 kg respectively. With respect to profit there was Rs. 5,99,924, Rs. 1,91,880 and Rs. 25,344 for finger millet malt, hurihittu and malt chocolate respectively. The profit per member was Rs. 15,897 for finger millet malt, Rs. 15,840 for hurihittu and malt chocolate was Rs. 4,224. Finger millet is a major staple food crop in the area and is consumed in the form of finger millet ball (dumpling) and

roti, for which finger millet flour is main raw material. There was a surplus production in the area which could be marketed by processing and value addition to get higher profit. Value addition technology was better and easy for women belonging to higher income and they used their own available facilities.

The similar findings were reported by RBRC project (2010), where the women SHG groups produced totally 400 kg finger millet malt and marketed at rural and Bengaluru urban for Rs. 80/kg with the earning of Rs. 32,000/month.

Table 3: Overall cost of production, returns and profit of finger millet products

Sl. No.	Parameters	Finger millet malt(kg)	Hurihittu (kg)	Malt chocolate(kg)
1	Total production	12,266	3,556	148
2	Total production cost	4,84,146 (Rs.37.6/kg)	3,26,420 (Rs.94/kg)	38,565 (Rs.278/kg)
3	Total selling cost (Rs.)	9,84,020 (Rs.80/kg)	5,18,300 (Rs.150/kg)	64,800 (Rs.450/kg)
4	Profit in Rs.			
a.	Net profit (3-2)	4,99,924	1,91,880	26,235
b.	Per member (for 2 years)	15,897	15,840	4,224
c.	Per member (for one year)	7,948	7,920	2,112

Marketing strategies used for value added products

Marketing of value added products is a big challenge being faced by the small scale production units. In the present study products like finger millet malt, hurihittu and malt chocolate were marketed using different channels (Table 4). There was a multiple response for marketing of these products. Malt was marketed through agents (16%) and it was also sold on Krishimela, field days and exhibitions (40%) and direct sale (10%). The malt was also sold on request to the extent of 10 per cent. Same trend was observed for sale of hurihittu and malt chocolate.

To enhance the income of rural women for selling value added products different channels were used such as advertisement, branding and enhancement of consumer preferences through awareness programmes. The findings reported by other researcher are in line with the present findings.

Ravichandran and Narayanarajan (2004) ^[1] found that advertisement played a vital role in influencing the purchase decision of particular brand. Socio-economic factors such as sex, age, education, occupation and income influence the brand preference motivated the buyer to choose a particular brand. Quality of product also largely determines the buyer market.

The most important and difficult thing in a business is to satisfy a customer. Therefore, selling the first production batches was not easy. The customers will subject the products to all sorts of tests. They also tend to develop preferences for particular brands and need a lot of persuasion to change. Deciding the pricing of the product is another challenge. Price plays an important role in determining how the product performs. If it is too low, customers may perceive the quality as inferior. If it is too high, it may cause hurdles in terms of inadequate buying power and also scepticism to back the product and its cost (Sabikhi, 2005) ^[4].

Economic status of the rural women before and after training programme is presented in Table 5. It was evident that before training programme 54 per cent of the entrepreneurs belonged to middle income group (Rs. 2,000-3,000) followed by 38 per cent in low income group (<Rs. 2,000) and only 10 per cent women had income above Rs.3,000. However there was a drastic change in their annual income through processing and value addition of finger millet products. After the training programme, majority of (64%) women were raised to middle income group followed by 20 per cent in high income group and low income group got reduced from 38 per cent to 16 per cent. The difference in the income level was due to introduction of processing and value addition activities. Similar observations was made by Vinaykumar (2008) ^[7] on production and regular consumption of finger millet malt at households instead of coffee and tea, he also reported that SHG members started production of finger millet malt on large scale and developed marketing network to generate more income among the members. A project report on rural bio resource complex funded by DBT Government of India reveals that appropriate strategies are necessary for different categories of people to improve the standard of living and livelihood opportunities. Vijaylakshmi *et al.* (2008) ^[6] reported that impact of training in improving the livelihood security for rural women such as value addition helped in exposure, enhanced skill, knowledge level and encouraged women to come forward and take up value addition to generate income which directly impacted by creating opportunities for SHG families to consume finger millet based products and to enhance their livelihood by improving health, income and employment opportunities besides market linkages using different channels.

Thus, the entrepreneurial activities contributed towards the reduction of poverty and unemployment of the rural SHG women.

Table 4: Mode of marketing of products through different channels

Value added products	Request by individual (n)	Percent	Agents (n)		Direct sale by the women (n)		Others (retail shops and medical shops) (n)		UAS Krishi Mela, field days and exhibitions (n)	
			Agents (n)	Percent	Direct sale by the women (n)	Percent	Others (retail shops and medical shops) (n)	Percent	UAS Krishi Mela, field days and exhibitions (n)	Percent
Finger millet malt	5	10	8	16	5	10	12	24	20	40
Hurihittu	4	8	7	14	6	12	18	36	15	30
Malt chocolate	5	10	2	4	3	6	8	16	32	64

Table 5: Economic status of SHG rural women before and after training programme

Classification	Entrepreneurs			
	Before		After	
Income group	Number	Per cent	Number	Per cent
Low (Rs.<2000)	19	38	8	16
Medium (Rs.2000-3000)	26	52	32	64
High (Rs.>3000)	05	10	10	20
Total	50	100	50	100

Summary and implications

The value added finger millet products in the present study being nutrient dense with good acceptability and storage stability could serve as a good substitute to fulfil the nutrient needs of vast population. The cost of the developed products would also ensure its affordability by all class of people. Transfer of these technologies through training programme play an important role in rural areas to help women develop socially, economically and could serve as a tool to bring the rural women to the main stream through timely guidance, updated information and supervision. Along this line, there has to be support system comprising of family, finance, market linkages and updated research development to achieve the dreams of good health through finger millet based empowerment. Therefore from the present study it could be concluded that, rural women were able to generate substantial income, which was used towards the family welfare. There is a need for continued follow up action for sustainability. There is an imminent need to establish long term market linkages with large super markets for successful popularization of the products on commercial scale.

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