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RURALISATION OF BAKERY AND VALUE ADDITION INDUSTRY - A SELF SUSTAINABLE INCOME GENERATING ENTERPRISE FOR WOMEN SELF HELP GROUPS

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The Women members of Self Help Groups (SHG) from different taluks of Tumkur District were selected with the help of Karnataka State Department of Agriculture (KSDA), Women and Child Development Department (WCDD), Government of Karnataka and NGO, Tumkur District with an objective to promote them as good entrepreneurs in the field of Bakery and Value Added Products. The Women members of SHG's could be empowered to become entrepreneurs in the field of food processing and value addition including bakery industry through various extension training approaches such as hands on training and demonstrations. Further, it adds for the livelihood security of women population. Development of Women entrepreneurs makes them economically sustain for a comfortable living and acts as a livelihood security. Further, it will also provide impetus to the food processing industry to add value in terms of money and nutrition. The indirect impact of developing women entrepreneurs would improve self esteem and self confidence of women folk, which further adds for improving their attitude towards life and health. Women farmers of Self Help Groups from different taluks of Tumkur District were trained at Bakery Training and Value Addition Centre. They were provided an opportunity to practice the preparation of bakery and value added products through hands on training. A sufficient opportunity was also provided to interact with the persons who have already established bakery and value addition centers through exposure visits which helped them to gain confidence. Twenty products demonstrated during training were evaluated for sensory scores and subjected to Ranking test by the trainees. The cost economics of the products ranged from Rs. 80 to 220/- Kg of finished product. The trained women are involved in preparation of Ready-to-Eat products such as Fingermillet malt, hurrihittu, Papad, mixture, Halwa etc and bakery products such as bread, bun, various biscuits and pizza bases leading to earn additional income of Rs. 6000/- per person per month. Marketing of their products is linked to various outlets such as their own outlets, local shops, bakery outlets in town areas, selling products in various exhibitions, Krishimela and through the bakery outlet of the university. Thus, marketing of these products locally not only helped them in getting additional income but also led to Comfortable living bringing about economic and social empowerment among the members of SHG.

Keywords: SHG, Training, Bakery unit

INTRODUCTION

Entrepreneurship development in rural people is increasingly

being recognized as a means to overall development of the rural community as well as that of the country. The problem

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posing our rural masses is not so much in terms of creation of productivity and wealth as that of developing the capacities and ensuring utilization of human potential in creating wealth. It is neither recommended nor possible to distribute all needed inputs to rural folk, to take advantage of growing commercialization in the field of agriculture instead, motivational and capacity building inputs that promote value addition and entrepreneurship in the area of agriculture would go a great deal in mitigating their problems of unemployment and poverty. It is believed that ninety percent scope of developing entrepreneurship in agriculture exists, as against the present only ten percent in place in rural areas (Jhamtani, 2003).

World wide it is observed that small and medium enterprises create most of the jobs (Hangarki and Hangarki, 2012). In Indian context if full employment is to be created we need to exploit the potential of small scale industries including those directly linked with agriculture such as value addition of crops, fruits and vegetables, bakery industry, diversification and value addition in agriculture as a whole.

There are now available numbers of technologies in agriculture and allied areas that provide opportunities to farming community to take up subsidiary activities in addition to agriculture. Activities such as value addition and bakery industry could be taken up commercially, as an economically viable enterprise to add on to family income. To avail these opportunities the rural community need to be motivated and made aware of these along with grass root workers who also must comprehend the process of entrepreneurship development to help the farming community avail the opportunities for diversification and commercialization in agriculture and create viable enterprise (Devi *et al.*, 2013). The women members of SHG could utilize their leisure time and involve themselves in commercial viable enterprises to get additional income to their family.

MATERIALS AND METHODS

A survey was conducted before the implementation of the program to assess the training needs/requirements, production technologies adopted by the existing units, cleanliness and hygienic conditions prevailing in the existing bakery units and consumer preferences in the project area. Based on the survey, University of Agricultural Sciences, Bangalore has 10 districts under its jurisdiction which comprises of 66 taluks. Tumkur District (10 taluks) was selected since the district is included under Livelihood Security of rural people where in integrated

development of people is planned for social and economic empowerment. It is planned to train one selected SHG (Ten members) under the jurisdiction of selected 8 Raitha Samparka Kendra (RSK) in the district with an aim to establish one bakery and value added unit to facilitate for the production and sale of bakery and value added products by trained members of SHG. Further they were linked with already established successful bakeries in the same taluk and with SHGs and rural women entrepreneurs of this area. The basic machineries and tools required for establishing a unit of Bakery and Value added products are provided by the project as hand holding facility.

The identified women self help groups proposed by the KSDA, WCDD, Government of Karnataka and NGO, Tumkur District were selected for training in selected 8 RSK jurisdictions. The selected members of the SHG were trained for 6 days at Bakery and Value Addition Centre, UAS, Hebbal, Bangalore in preparation of various Bakery and Value Added products. Further, they were trained onsite for a period of 3 days after establishment of their own units at taluk/hobli level.

Accordingly Eight groups from Tiptur RSK (10 women), Lakshmi sagara, Sira RSK (10 women), Gubbi RSK (10 women), Honnavalli RSK, Tiptur (10 women), Nittur RSK, Gubbi (10 women), Gopikunte, Bargur RSK, Sira (10 women), Balaenahalli, Kalambella RSK, sira (10 women) and Thovinakere, koratagere Taluk (10 women) were trained respectively for 6 days. Eight units have been established and they have also been provided with onsite training for three days.

The trainees have been imparted knowledge on bakery raw materials used for the training, product development, food safety and personal hygiene, also knowledge on product promotion through different channels of marketing conditions prevailing in the existing bakery units and consumer preferences in the area. Guest lectures and field visits were arranged during these programs. Training manuals and certificates were given to the each participant after the training.

RESULTS AND DISCUSSION

The identified 10 women members from self help groups proposed by the KSDA, WCDD, Government of Karnataka and NGO, Tumkur District were trained for six days. The details of training programs conducted for SHGs are presented in Table 1. Eight bakery and value addition units are established at different places of Tumkur District.

Table 1: Training Programmes Organised for SHG Members

S No.	Place	RSK	Duration	Organizer	No of Beneficiaries	Bakery Units Established
1	Tiptur	Tiptur	6 days	WCDD	10 rural women	Yes
2	Lakshmisgar, sira	sira	6 days	KSDA	10 rural women	Yes
3	Gubbi	Gubbi	6 days	KSDA	10 rural women	Yes
4	Honavalli, Tiptur	Honavalli	6 days	WCDD	10 rural women	Yes
5	Nittur, Gubbi	Nittur	6 days	NGO	10 rural women	Yes
6	Gopi kunte, sira	Bargur	6 days	KSDA	10 rural women	Yes
7	Ballnahalli, Sira	Kalambella	6 days	KSDA	10 rural women	Yes
8	Thovinakere	Koratagere	6 days	KSDA	10 rural women	Yes

Table 2: Knowledge Status of Participants Based on Pre and Post Evaluation Scores N = 80

Topics	Percent Correct Response	
	Before Training	After Training
Personal Hygiene	11.25	92.5
Value addition	5	82.5
Nutrition about finger millet	15	91.25
Entrepreneurial skills	20	76.25
Licensing and registration	3.75	93.75
Hygiene in production unit	17.5	91.25
Cost economics	26.25	86.25
Profitability	21.25	97.5
Sensory evaluation	32.5	88.75
Packaging	8.75	85
Labeling	9	93
Marketing channels	12.5	82.5

Table 2 represents the knowledge status of the participants based on pre and post evaluation scores. Various topics such as Personal Hygiene, Value addition, Nutrition about finger millet, Entrepreneurial skills, Licensing and registration, Hygiene in production unit, Cost economics, Profitability, Sensory evaluation, Packaging, Labeling, Marketing channels were assessed through structured evaluation Performa. This Performa was administered to the participants just before and after completion of training. The percent correct response ranged from 03.75 to 32.50 before training and the response ranged

Table 3: Sensory Evaluation Scores of the Bakery and Value Added Finger Millet Products

S. No.	Name of the Product	Sensory Parameters				
		Colour	Flavour	Taste	Texture	Over-All Acceptability
1	Finger millet Malt	4.5	4.7	4.8	4.8	4.7
2	Finger millet Chakli	4	4.1	4.1	3.8	4.2
3	Finger millet Nippattu	4.2	4.2	4.3	4.1	4.3
4	Finger millet Kodbale	3.7	3.7	3.8	3.8	3.9
5	Finger millet Papad	4	4.1	4	4.4	4.6
6	Finger millet Sandige	3.5	3.5	3.8	3.8	4
7	Finger millet Chow Chow	4.8	4.9	4.8	4.9	4.8
8	Finger millet Hurihittu	4.9	4.9	4.9	4.8	5
9	Finger millet Halwa	4.5	4.6	4.6	4.6	4.8
10	Finger millet Chat pat	3.2	3.9	3.5	3.8	4
11	Finger millet Vermicelli	3.8	3.8	4	4.1	4.1
12	Finger millet Muruku	4.1	3.9	4.2	3.9	4.2
13	Finger millet Sweet Shankerpoli	3.5	3.4	3.3	3.5	3.5
14	Finger millet Spicy Shankerpoli	3.5	3.5	3.4	3.4	3.5
15	Finger millet Biscuit	2.9	2.8	2.5	2.5	3.2
16	Bread	4.5	4.6	4.9	4.8	4.6
17	Cookies	4.1	4.2	4.4	4.3	4.5
18	Puffs	4	4.1	4	4.4	4.6
19	Pizza	4.1	3.9	4.2	3.9	4.2
20	Rusk	4.6	4.7	4.9	4.8	4.8

Note: Score Card; 5 - Excellent, 4 - Very Good, 3 - Good, 2 - Fair, 1 - Poor.

Table 4: Ranking Test for the Demonstrated Products

S. No.	Name of the Product	Ranking
1	Finger millet Chow Chow	I
2	Finger millet Hurihittu	II
3	Finger millet Halwa	III
4	Bread	IV
5	Finger millet Malt	V
6	Finger millet Papad	VI
7	Cookies	VII
8	Finger millet Nippattu	VIII
9	Rusk	IX
10	Finger millet Kodbale	X
11	Finger millet Chakli	XI
12	Puffs	XII
13	Finger millet Muruku	XIII
14	Finger millet Sandige	XIV
15	Pizza	XV
16	Finger millet Chat Pat	XVI
17	Finger millet Vermicelli	XVII
18	Finger millet Biscuit	XVIII
19	Finger millet Sweet Shankerpoli	XIX
20	Finger millet Spicy Shankerpoli	XX

from 76.25 to 97.50 after training which showed significant difference. The results of a study conducted by Meenakshi and Vyas (2003) indicated about 30% gain in knowledge by comparing the scores of pre-test and post test.

Around 20 products were introduced to the members of SHG along with hands on training. Table 3 represents the sensory scores of the standardized value added finger millet and bakery products. The participants were trained with regard to the objectives of sensory evaluation. The scores ranged from 2.6-5.0 for the sensory attributes such as colour, flavor, taste, texture and over all acceptability. According to the results the products such as Hurihittu (5), Chow chow (4.8), Halwa (4.8), Rusk (4.8), Malt (4.7), Papad (4.6), Bread (4.6) and Puff (4.6) scored where as fingermillet biscuit (3.2), fingermillet spicy shankerpoli (3.5) and Fingermillet sweet shankerpoli (3.5) scored the least. The products were also subjected to a ranking test and the results are presented in Table 4. According to this table finger millet Chow chow ranked first followed by Hurihittu, Halwa, Malt and Papad, where as Spicy shankerpoli was ranked the least.

The Table 5 shows the cost economics of the demonstrated finger millet products and bakery products. The cost of production of each product included the actual ingredients cost and the production cost (30% of the ingredients cost which includes labour, fuel and machinery maintenance cost) and a profit of 30% of cost of production was added to get the sale cost. This sale cost was then equated to the marketing cost depending upon the prices existing in the market. According to this table the products cost ranged from Rs. 80 to 220/- Kg. Thus representing that the cost is very affordable for the nutrient densed finger millet products with as much as 30-40% profit.

Table 5: Cost Economics of the Bakery and Finger Millet Products

S. No.	Name of the Product	Ingredients Cost Rs./Kg A	Production Cost Rs./Kg B	Total Cost Rs./Kg C= (A+B)	Profit - 30% Rs./Kg D	Sale Cost Rs./Kg E=(C+D)	Market Cost Rs./Kg F
1	Finger millet Chow Chow	86	26	122	37	159	180
2	Finger millet Hurihittu	76	23	99	30	129	160
3	Finger millet Halwa	69	21	90	27	117	150
4	Finger millet Malt	72	22	94	28	122	150
5	Finger millet Papad	63	19	82	25	107	120
6	Finger millet Nippattu	81	24	105	32	137	160
7	Finger millet Kodbale	75	23	98	29	127	160

Table 5 (Cont.)

8	Finger millet Chakli	70	21	91	27	118	150
9	Finger millet Muruku	70	21	91	27	118	150
10	Finger millet Sandige	56	17	73	22	95	120
11	Finger millet Chat Pat	70	21	91	27	118	150
12	Finger millet Vermicelli	41	12	53	16	69	80
13	Finger millet Biscuit	86	26	122	37	159	180
14	Finger millet Sweet Shankerpoli	65	20	85	26	111	150
15	Finger millet Spicy Shankerpoli	68	20	88	26	114	150
16	Bread	70	21	91	27	118	160
17	Cookies	98	35	133	42	175	220
18	Puffs	95	28	123	37	165	200
19	Pizza	93	32	125	35	160	190
20	Rusk	90	26	116	37	153	180

CONCLUSION

The rural women have high potential for entrepreneurship but lack the necessary understanding of personal traits that help in making them entrepreneurial. Their family members too need to understand the importance of entrepreneurship and provide necessary moral and financial support to encourage them to take the entrepreneurship. The entrepreneurial orientation of these women could be enhanced through appropriate training interventions using various training approaches. Hence in this study, eight production units were established at selected villages of Tumkur District. The production of various value added finger millet products and bakery products have been started. The members are earning Rs. 6000/- on an average per person per month. Thus, marketing of the nutritious finger millet products and Bakery products as an income generating activity by the SHG for the health conscious community is promoted which in turn helped the economic empowerment of members of SHG for sustained growth.

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