

Original Research Article

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## Women Empowerment through Processing and Marketing of Minor Millets Value Added Products: A way for Doubling the Farmers Income

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### ABSTRACT

To uplift the livelihood and financial conditions of the rural women value addition of minor millets can offer tremendous opportunity not only to income rather it increase national productivity and generates employment but also helps to develop economic independence and personal and social upliftment. Smt. Rathamma is one such example who is from a small village named Gundamanatta in Srinivasapur Taluk of Kolar district. We have formed “Vaibhav Siridhanya Swasahaya Sanga” for processing of Minor Millets. We conducted a five days vocational on campus training programme on “Women Empowerment through Value addition, Marketing and Health benefits of Minor Millets” at ICAR-KVK, Kolar on from 3 to 7.7.2017. In training programme, learned processing of minor millets in to different value added products like Diabetic mix, Upam mix, Dosa mix, Idly mix, Minor Millets rice and Pappads and their packaging. Accordingly, we have conducted awareness programme on production technology and their value addition at Gundamanatta on 24.7.2017 and same day distributed seeds for cultivation through Department of Agriculture, Srinivasapura and progressive famers. Looking at her enthusiasm and zeal, we have approached Dept. of Agriculture, Srinivasapura and facilitated procurement of minor millets processing machine at subsidized rate for the group. We have established “Minor Millet Processing Unit” at Gundamanatta. Linked for online marketing of value added products through “Farm Setu” online portal and helped to get FSSAI and GST number for marketing. Facilitated to start Savi Ruchi canteen at DC office, Kolar weekly once serves Minor Millets food in the canteen. She was awarded “Taulk Level Best Farmers Award” by UAS Bangalore. The entrepreneur expressed income generated was Rs. 480000/- per year. This helps employment creation and income to the farm women.

### Keywords

Empowerment,  
Rural Women,  
Value Addition,  
Minor Millets etc

### Article Info

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### Introduction

Millets are nutri cereals comprising of Sorghum, Pearl millet, Finger millet (major millets) Foxtail, little, Kodo, Proso and Barnyard millet (minor millets). These are one of the oldest foods known to humanity (Gopalan C *et. Al.*). These are one of the several species of coarse cereal grasses in the

family Poaceae, cultivated for their small edible seeds. They are highly nutritious, non-glutinous and not acid forming foods. Hence they are soothing and easy to digest.

They contain high amounts of dietary fibre, B-complex vitamins, essential amino and fatty acids and vitamin E. They are particularly high in minerals, iron, magnesium,

phosphorous, potassium and release lesser percentage of glucose over a longer period of time causing satiety which lowers the risk of diabetes. These grains are high in carbohydrates, with protein content varying from 6 to 11 percent and fat varying from 1.5 to 5 percent.

Millets are typically annuals and range in height from 30 to 130 cm with the exception of sorghum and pearl millet, which has stalks 1.5 to 3 m tall and about 2.5 cm thick. The inflorescences may be spikes or racemes, in which the flowers are borne on stalks of about equal length along an elongated axis, or panicles with dense clusters of small florets. With the exception of pearl millet, seeds remain closed in hulls after threshing. Hulled seeds are usually creamy white (D Vijayalakshmi *et al.*).

In India, millets have been a staple diet and a main source of income for farmers especially in the semi-arid regions. They are important food and fodder crop in the semi-arid tropics (SAT) of the world and grows in both kharif and rabi seasons. These grains represent the major source of dietary energy and protein for more than a billion people in the semi-arid tropics.

Entrepreneurs are not only born but can also be trained and developed. Mrs. Rathnamma is one such example who is from a small village named Gundamanatta in Srinivaspur Taluk of Kolar district. She completed PUC and got married to Sri Narayaswamy who is a farmer and is blessed with two children. The family has 3 acres of land growing Mango, Ragi and rearing sericulture.

Mrs. Rathnamma was interested in Value addition of Agricultural and Horticultural produce. She is a leader for 10 SHG groups. She was interested to do own business in her home at free time. She was earlier preparing Mango pickle and supplying to different shops

in Srinivaspura Taluk. She was interested to go for minor millets processing and value added products preparation. She approached KVK and explained about her needs and looking into her interest we conducted a group discussion and formed interested farm women as a SHG group of twenty women exclusively for preparation of value added products of minor millets. We have formed “Vaibhav Siridhanya Swasahaya Sanga” for preparation value added products and marketing of minor millets.

The main objectives of this study includes, to reduce post-harvest losses in Minor Millets through skill development among women for processing and value addition. And to generate rural employment by linking women to market. Also to make the women of SHG economically independent.

## **Materials and Methods**

### **Technology**

Considering the importance to conduct vocational training programme on “Minor Millets value addition, Branding and marketing” improves the women’s economic security, increases employment and nutritional security. (UAS, Dharwad)

### **Interventions**

Initially we have conducted FLD on Nutritional garden at Primary school, Gundamanatta, Srinivaspura TQ. She met KVK Scientist (Home Science) to discuss opportunities of processing of agricultural crops. Scientist (Home Science) did group discussion with women farmers and selection of Leader and Group Member: Smt. Rathnamma, 45 Years, 3 acres of land growing Mango, Ragi and rearing Sericulture. Based on enthusiasm and interest on processing Smt. Rathnamma, was selected as leader for that group.

The present study was conducted a five days vocational on campus training programme on “Women Empowerment through Value addition, Marketing and Health benefits of Minor Millets” at ICAR-KVK, Kolar on from 3 to 7.7.2017 for this group. The technical sessions included specialized lectures on ‘Health benefits, value addition and opportunities in marketing value added products of minor millets’ by Dr. G.S. Chikkanna, Scientist (Home Science).

The post lunch sessions were dedicated to the hands on training on processing of minor millets in to different value added products like Diabetic mix, Upam mix, Dosa mix, Idly mix, Minor Millets rice and Papads and their packaging. The participants were given hands on training of preparation of various above mentioned products. At first different recipes were prepared in small quantities by involving the farm women and making them to understand thoroughly about the importance of standardization of ingredients, maintenance of quality of the produce and also hygiene to be maintained during preparation of products. The prepared products were packed by using LDPE and HDPE pouches.

After that we have discussed with SHG group leader Mrs. Ratnamma about raw material for processing of Minor Millets. We came to know that she was purchasing raw material from market through middle men for processing and value addition. Then we have decided to motivate the group to grow minor millets in farmer’s field at Gundamanatta and surrounding villages.

Accordingly we have conducted a training programme on production technology of miner millets and their value addition at Gundamanatta on 24.7.2017. On the same day we have distributed Same, Navane and Araka seeds in collaboration with Department of Agriculture, Srinivaspura and other two progressive farmers who have supplied Same

and Araka. More than 25 farmers have grown Minor Millets by more than 60 acres of farmer’s field. With these she was able to procure raw material within her village at a cheaper rate

## **Results and Discussion**

### **Marketing Support to beneficiaries with established agencies to market their produce**

The products prepared from minor millets by selected beneficiaries were marketed by direct selling, through established Self Help Groups, Krishi melas, Dasara Festival, Udyana Mela, Mago and Jackfruit Mela, Lalbagh Bengaluru, Flower Show organized by Dept.Horticulture, Kolar , KVK programmes.

Linked for online marketing of value added products through “Farm Setu” online portal and helped to get FSSAI and GST number for marketing. Facilitated to start Savi Ruchi canteen at DC office, Kolar weekly once serves Minor Millets food in the canteen. More than 65 farmers have started for growing Minor millets in around villages and also started consuming minor millets diet.

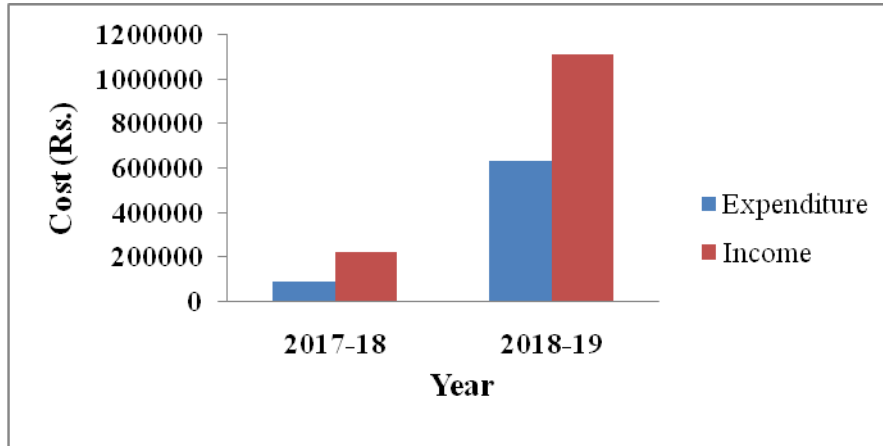
Facilitated to start Savi Ruchi canteen at DC office, Kolar weekly Twice serves Minor Millets food in the canteen (Dept. Of women and child development) The group members also got the tender for running office canteen in the District Collector Office at Tamaka, Kolar District Collectorate in 2018.

Iron enriched Minor Millets Health drink Mix was developed to combat anemia. Already nutritional analysis has completed. So in future with the approval of District Collector and Dept of Women and child Development this mix to be introduced in ten schools as pilot basis to overcome anemia.

The table.4 shows that she spent total of Rs. 94,250/- on purchase of raw material in the year 2017-18 and Rs. 6,35,780/- in the year

2018-19. After established Minor Millets Processing unit she can able to process large quantity of minor millets.

**Fig.1** Economic of Minor Millets Value added products



**Table.1** Training methods preferred by SHG women

Training method	Percentage of preference
Demonstration	98
Lecture with projected aids	91
Video film	90
Exhibition	80
Field visit	75

**Table.2** Socio – demographic profile of women members of SHG group

Variables	Category
Age	26-35/36-40 Years
Education	Illiterate/ High School/ TCH
Occupation	Housewife/Labourer
Type of family	Nuclear/ joint
Family size	2-4 members/ 5-7 members
Number of children	One /Two

**Table.3** Survey on knowledge about minor millets among the Women farmers

Variables	Before training	After training
Awareness	Yes	Yes
Consumption	No	Yes
Cultivation	No	Yes
Value addition	No	Yes

**Table.4** Amount Spent on purchase of raw material

Sl.No	Raw material	2017-18 (Cost.Rs)	2018-19 (Cost.Rs)
1	Foxtail Millet	15500/-	165000/-
2	Proso millet	13200/-	146000/-
3	Little millet	19800/-	45000/-
4	Barnyard millet	11500/-	75000/-
5	Kodo millet	12700/-	34000/-
6	Masala Products	13750/-	145000/-
7	Packaging Material	7800/-	25780/-
<b>Total</b>		94,250/-	6,35,780/-

**Table.5** Net Profit from Minor Millets value added products

Sl.No	Raw material	2017-18 (Cost.Rs)	2018-19 (Cost.Rs)
1	Minor Millets Dosa Mix	32450/-	195000/-
2	Minor Millets Idly Mix	43200/-	167000/-
3	Minor Millets Heath Malt	23200/-	175000/-
4	Minor Millets Payasam Mix	12000/-	85000/-
5	Minor Millets Upam Mix	22700/-	76000/-
6	Minor Millets Pappad	33750/-	77000/-
7	Minor Millets Rice	56800/-	340780/-
<b>Total</b>		224100/-	1115780/-
		224100- 94250	1115780-635780
<b>Net Profit</b>		129850/-	480000/-
<b>B:C ratio</b>		1:1.72	1:2.32



Vocational Training programme conducted at ICAR-KVK, Kolar



Awareness programme on “Production technology and their value addition of Minor Millets” at Gundamanatta on 24.7.2017



Minor Millers processing unit have established at Guddamanatta



Display and sale of Value Added products at different places like Exhibitions and Melas



Savi Ruchi Canteen at DC Office, Kolar







Training programmes has conducted at Gundamanntha, Srinivasapura TQ



District level Award received at Minor millets and Best Farmers Award by UAS,GKVK, Bangalore flower show Organized by Department of Horticulture



Super Star Raitha award from Vijay Karnataka

### **Economic gains**

The entrepreneur had expressed the details of income generated was Rs. 224100/-. This results in the net profit of Rs. 1,29,850/- and B:C ratio was 1:1.72 in the year 2017-18. The entrepreneur had expressed the details of income generated was Rs. 1,11,5780/-. This results in the net profit of Rs. 4,80,000/- and B:C ratio 1:2.32 in the year 2018-19.

Master trainee for conducting Minor Millets value addition results as we have identified her as master trainee to conduct hands on training programme on processing ,value addition and marketing of minor millets value added products. She has been conducting training programme to SHG and adolescent girls.

### **Awards recognition**

She was awarded first prize in food show organized by Department of Women and child development, Kolar and minor millets and flower show arranged by Department of Horticulture, Kolar. She was awarded best farmers award taulk level by UAS Bangalore.

### **Future Prospects**

Promotion of Nutri cereal for consumption among the people is need the hour India have more than 20000 ha area of fallow land  
Scope for research is more in production of fortified foods by using nutri cereal  
This is one of the promising means for achieving the goal of doubling the farmers income.

Significant Achievements made under the

Vocational training:

Under the Vocational training total 20 SHG members from Gundamantha Srnivasapura Tq have been trained for preparing different value added products from Minor Millets.

- One processing unit of Minor Millets have been established at Gundamantha Srnivasapura Tq and she earned Rs. 480000 per year.
- Marketing of products being prepared by beneficiaries, under the project have been done through Krishi melas, Dasara Festival, Udyana Mela, Mago and Jackfruit Mela, Lalbagh Bengaluru, Flower Show organized by Dept.Horticulture, Kolar ,and KVK programmes. Thus good market has been provided to the beneficiaries.
- This unit creates good employment generation in the villege for SHG members.

This project given an opportunity to rural as well as urban consumer to purchase good quality Minor Millets value added products at reasonable price.

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