

# Rejuvenating millets through value addition

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Millets have been traditionally the main components of the food basket of the poor in India. They have been known for their rich nutrient contents and drought resistance quality. The study was conducted in Kohlar village of Bagewadi taluk of Vijayapura district, Karnataka state. Three value added products such as foxtail millet bisibelebath, Little millet paddu and finger millet malt were demonstrated to the farm women and its acceptability was tested. The overall acceptability of the products revealed that foxtail millet bisibelebath scored 4.4 compared to rice bisibelebath which obtained a score of 4.6. The comparison between little millet products revealed that little millet paddu obtained a score of 4.7 compared to rice paddu which was scored 4.4 out of 5. Further comparison of finger millet products revealed a score of 4.6 for finger millet malt compared to the ready-to-cook malt product obtained from the market which was scored 4.4 out of 5.

**Key Words :** Rejuvenation, Millets, Processing, Value addition, Acceptability

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## INTRODUCTION

Millets have been traditionally the main components of the food basket of the poor in India. Predominantly grown in the resource fragile agro-climatic regions of the country, these crops include *Jowar*, foxtail millet, finger millet, pearl millet, little millet, proso millet, barnyard millet, kodo millet and other small millets. These are cultivated more in Karnataka, Maharashtra, Tamil Nadu, Madhya Pradesh, Rajasthan and Gujarat. When it comes to research on technology and promotion, millets as a crop group have received little attention in agriculture, social sciences and also in the policy matrix. The area under millets has been declining in most of the regions and as a result this crop group is relegated as 'inferior crops'. The neglect of this crop group is also quite strong on the economic front as the relative price structure as well as the market conditions are not very favourable for it. Millets have been known for their rich nutrient contents

and drought resistance quality.

These are comparable and at times even better than wheat and rice in their calorie and other nutrient contents. As these crops tolerate longer moisture stress, they are preferred as well as predominated the cropping pattern of drought prone areas in Central India. Ecologically these are well suited to the drought prone regions of Deccan Plateau. Above all, the cost of production has also been quite low and thus, they become affordable for consumption as well as production. The crops also offer a good potential in food processing industry and as a promising exportable commodity. Hence, millets, once considered as poor man's staple food needs to be popularized in the form of health food. Also the commercialization initiatives of millets as health food will definitely help to gain higher profits by the producers *i.e.* the farmers as well as the entrepreneurs.

## METHODOLOGY

The study was conducted in kohlar village of Bagewadi taluk of Vijayapura district, Karnataka state. Seeds of three millets *i.e.* foxtail millet, Little millet and

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Finger millet were given to twenty five farmers for cultivation. After harvesting and processing, three value added products such as foxtail millet bisibelesh, Little millet paddu and finger millet malt were demonstrated to the farm women and its acceptability was tested. Foxtail millet diabetic mix bisibelesh was compared with rice bisibelesh, Little millet paddu was compared with rice paddu and finger millet malt was compared with ready-to-cook malt obtained from the market. Twenty five women i.e ten for foxtail millet product, ten for little millet product and five for finger millet were selected for evaluation of acceptability of the product. Five point scale was used to grade for the appearance, texture, flavor, colour and overall acceptability.

## OBSERVATIONS AND ASSESSMENT

Recent studies indicated that minor millets such as foxtail millet, little and finger millet are nutritionally superior to conventional food grains and exhibit hypoglycemic effect due to presence of higher proportion of complex carbohydrate, resistant starch and slow rising sugars (Krishnakumari and Thayumanavan, 1997). In addition, millets contain water soluble gum  $\beta$ -glucans which improve glucose metabolism. Therefore, the millets are suitable in diabetic diet to improve metabolic control of glucose. People use these millets only in the form of *Roti* and steamed products. They are completely unaware of its use in the novel form *i.e.* in the form of "Health food". Thus, in this study three novel products *i.e.* foxtail millet diabetic mix bisibelesh, little millet paddu and finger millet malt were standardized and demonstrated to the farmwomen through trainings and the acceptability of the products was tested.

The overall acceptability of the products revealed that foxtail millet bisibelesh obtained a score of 4.4, compared to rice bisibelesh which obtained a score of 4.6. The comparison between little millet products revealed that little millet paddu obtained a score of 4.7 compared to rice paddu which was scored 4.4 out of 5. Further comparison of finger millet products revealed a score of 4.6 for finger millet malt compared to the ready-to-cook malt product obtained from the market which was scored 4.4 out of 5 (Table 1).

A study was conducted by Itagi *et al.* (2012) to develop foxtail millet based mix and test glyco-lipemic responses among diabetics. The diabetic mix was prepared with 80 per cent foxtail along with 10 per cent both wheat semolina and black gram *Dal* and selected spices. The GI 54.39 was noted for initial foxtail millet mix and further reduced to 49.6 in modified mix. The feeding study of four weeks was conducted on nine type 2 diabetics and non-diabetics as control group. The difference in the plasma glucose of experimental diabetic and non-diabetics with control group was significant at one per cent level and after intervention the fasting blood glucose reduced upto 16-19 per cent in experimental subjects. The lipid profile of experimental subjects had improved after consumption of millet mix.

## Conclusion:

The study aimed at promoting utilization of millets in routine diet through processing and value addition because of its drought resistant and nutrient rich quality. The three novel products of millets *i.e.* foxtail millet diabetic mix bisibelesh, little millet paddu and finger millet malt demonstrated were found to be highly acceptable by the farm women.

**Table 1: Mean scores of sensory evaluation for millet products**

Parameters/product	Foxtail millet product		Little millet product		Finger millet product	
	Foxtail millet bisibelesh	Rice bisibelesh	Little millet paddu	Rice paddu	Finger millet malt	Ready-to-cook malt
Appearance	4	5	5	5	5	5
Taste	5	5	5	4	5	5
Flavour	4	4	4	4	4	4
Texture	4	5	5	4	5	4
Colour	5	4	5	5	4	4
Overall acceptability	4.4	4.6	4.7	4.4	4.6	4.4

Note: Excellent-5, Better-4, Average-3, Poor-2, Very poor-1

## LITERATURE CITED

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