

Acceptance and Introduction of Millet Dishes in Standalone Restaurants in Bangalore

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Abstract

Millets are known as 'forgotten foods' and there is an urgent need to recognize millets as future super foods. Millets are some of the few cereal crops that can grow in arid lands, survive drought conditions, and are highly water efficient. People need to consume millets for a healthy lifestyle as they are packed with nutrients and have numerous benefits. The purpose of the study was to analyze the acceptance and introduction of millet dishes in stand-alone restaurants in Bangalore, which can be one of the benchmark sustainable practices in the hospitality sector. The objectives of the study was to examine menus of standalone millet serving restaurants, evaluating the awareness of millet products, consumption patterns of customers, and acceptability of popular millet dishes through explorative study. It also involved implementation of suggested menu which would help in the introduction of millets in non-millet serving restaurants. An explorative survey methodology was utilized, the primary tools of data collection were the questionnaire and discussions with the stakeholders. It was observed after the analysis that there was a big variance in the awareness and usage of millet products. Millet flavoured rice was the most popularly accepted dish amongst customers. Millets can be a promising alternative for wheat and rice. Promotion of millet dishes in restaurants will increase millet consumption. Increasing awareness amongst restaurant owners and consumers will lead to better acceptability of millet dishes on hotel menus and lead to sustainability of the crop and healthy lifestyle.

Keywords : Customers, forgotten foods, millets, nutrients, restaurants

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Millets are a group of highly variable small-seeded grasses, widely grown around the world as cereal crops or grains for fodder and human food. Millets are important crops in the semiarid tropics of Asia and Africa (especially in India, Mali, Nigeria, and Niger), with 97% of millet production in developing countries. The crop is favoured due to its productivity and short growing season under dry, high-temperature conditions. Millets are highly nutritious, non-glutinous, and non acid forming foods. Hence, they are soothing and easy to digest. They are considered to be the least allergenic and most digestible grains available. Millets are particularly high in minerals like iron, magnesium, phosphorous, and potassium. Finger millet (Ragi) is the richest in calcium content, about 10 times that of rice or wheat.

By eating millets, we will be encouraging farmers in dry land areas to grow crops that are best suited for those regions. This is a step towards sustainable cropping practices. By introducing diversity in our diets, we respect the biodiversity in nature rather than forcefully changing cropping patterns to grow wheat and rice everywhere. There are

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nine types of millets. These are Barnyard millet, Finger millet, Foxtail millet, Proso millet, Sorghum millet, Brown top millet, Kodo millet, Little millet and Pearl millet.

It is observed that there are very few restaurants which serve millets and many people are not aware of these products. Now a days everyone is health conscious, so it is necessary to bring awareness among consumers and introduce millet dishes in restaurants which are not serving millets.

The study paves the way to accept and introduce millet dishes in standalone restaurants. Initially, I started with literature review on introducing millets, then I examined the menus of restaurants which are serving millet dishes. After this I evaluated awareness of millet products, consumption patterns, and acceptability of popular millet dishes by customers through statistical analysis. Later on, I suggested a menu based on the survey which can be used to introduce millet dishes in non-millet serving restaurants.

Literature Review

Millets are still the staple food for millions of poor people in Africa and Asia. Like many other cereals, millets have high carbohydrate energy content and are nutritious, making them useful components of dietary and nutritional balance in foods (Amadou, I., Gounga, & Guo-Wei, 2013). It was discovered that there is a high demand of traditional dishes than what is currently served by existing suppliers. The study established that the mean prices which customers were willing and were able to pay for the various sadza based meals served with traditional sadza (\$1.51) were generally higher than those served with white sadza (\$1.17). This clearly demonstrates that there is a higher market valuation for meals served with traditional sadza. Traditional sadza based meals have a potential of charging premium prices than the white sadza options (Ramadhan & Fikri, 2011). India needs to secure its food and farming for this century; there is an urgent need to recognize millets as the future food for the country and adopt various relevant steps. It is also important to realize that for a new age crisis such as the climate crisis, millets are a new age answer. Cereal grains and millets are also called miracle grains by the millet network of India. It can accord the highest priority to the introduction of millets in India's Public Distribution System (Changmei & Dorothy, 2014). Adaptation and improvement of local varieties, knowledge and use of nutritional qualities of millets by industries, and productivity increase would surely promote the cultivation of millets.

Millets are water saving, drought tolerant crops. Therefore, millets must be viewed as climate change compliant crops. This is the perspective from which millet cultivation and its promotion must be regarded (Swaminaidun, Ghosh, & Mallikarjuna, 2015). Value addition and value added products should be promoted. Finger millet is well comparable and even superior to many cereals in terms of mineral and micronutrient contents. Its major use as food has remained only in the area where it is cultivated and in the traditional preparations (Patel & Verma, 2015). Diabetic volunteers daily consumed 80 g of foxtail millet as part of diabetic diet. Renal panel studies also indicated desired improvements in the diabetic patients studied. The study involved different experiences of people taking medicine and millet based diet. However, the group did not differ for changes in body weight, or the other diet intake (Jali, Kamatar, Jali, Hiremath, & Naik, 2012). Thus, in the light of scientific data of the present investigation, it may be concluded that oats and finger millet flour can be used successfully in preparation of cookies at the replacement level of 30% and 40% levels without any undesirable changes in physical, chemical, and organoleptic attributes of cookies (Tongai & Vutete, 2016).

Research Problem

Millets are known as miracle foods as they have numerous nutrients, but have been forgotten. Therefore, it is necessary to bring back these foods. For doing this, it is required to know the awareness and acceptability of millet products among consumers. As there are very few restaurants in Bangalore that serve millet dishes, it is important to introduce millets in non-millet serving restaurants as well, so that people start consuming them for a healthier life style.

Method and Methodology

To examine the menus of standalone millet serving restaurants in Bangalore, an explorative study was conducted to collect the menus. Evaluation of awareness and acceptability of millet products was completed through questionnaire by conducting a survey for 100 customers and 85 customers respectively. Statistical analysis was done through hypothesis and correlation. Suggestions were made through formative analysis.

Analysis and Key Findings

Hypothesis and correlation were framed to analyze the awareness and usage of millet flour and awareness and usage of millet biscuits.

- H_0 : People are aware of millet flour and do not use it.
- H_1 : People are aware of millet flour and use it.
- H_0 : People are aware of millet biscuits and do not consume them.
- H_1 : People are aware of millet biscuits and consume them.

p -value, the significance level helps in determining the significance of results. The p -value is a number between 0 and 1. A small p -value (typically ≤ 0.05) indicates strong evidence against the null hypothesis, so the null hypothesis is rejected. A large p -value (> 0.05) indicates weak evidence against the null hypothesis, so the null hypothesis is not rejected. p -values very close to the cut-off (0.05) are considered to be marginal and could go either way. To analyze the mentioned hypothesis, Karl Pearson coefficient of correlation test was applied. Here p -value is 0.566 for millet flour and it is 0.574 for millet biscuits. As p -value is greater than 0.05, we reject the null hypothesis, and accept the alternative hypothesis, which says that people are aware and use millet products mentioned here.

Table 1. Test for Millet Flour

		Usage of Millet Flour	Awareness of Millet Flour
Usage of Millet Flour	Pearson	1	0.566**
	Correlation		0.000
	Sig (2tailed)	84	84
	N		
	Pearson	0.566**	1
Awareness of Millet Flour	Correlation	0.000	
	Sig (2-tailed)	84	84
	N		

** Correlation is significant at the 0.01 level (2-tailed)

Table 1 indicates that one variable is awareness of millet flour, which is an independent variable, and another variable is usage of millet flour, which is the dependent variable. The two variables are correlating with each other and show a positive effect. From the analysis, it can be concluded that awareness of millet flour plays a major role for usage of millet flour, so it should be considered as one of the important elements in product acquirement.

Hence, H_1 is accepted as the statistical data is showing a positive correlation between the variables with a correlation of 0.566. Usage of millet flour and awareness of millet flour is highly significant at 0.01 level. Therefore, there is a relationship between awareness and usage to acquire a product.

Table 2 indicates that one variable is awareness of millet biscuits which is an independent variable, and another variable is usage of millet biscuits which is a dependent variable. It can be seen from the analysis that the two variables

Table 2. Test for Millet Biscuits

		Usage of Millet Biscuits	Awareness of Millet Biscuits
Pearson Correlation		1	0.574**
			0.000
Usage of Miller Flour	Sig (2tailed)	84	84
	N		
	Pearson	0.574**	1
Pearson Correlation		0.000	
Awareness of Millet Flour	Sig (2-tailed)	84	84
	N		

** Correlation is significant at the 0.01 level (2-tailed)

are correlating with each other and showing a positive effect. To analyze the hypothesis, Karl Pearson coefficient of correlation test was applied. It can be concluded that awareness of millet biscuits plays a major role in usage of millet biscuits, so it should be considered as one of the important elements in acquiring a product.

Hence, H_1 is accepted as the statistical data is showing a positive correlation between the variables with a correlation of 0.574. Usage of millet biscuits and awareness of millet biscuits is highly significant at 0.01 level. Therefore, there is a relationship between awareness and usage to acquire a product.

The tables and figure show the acceptability and awareness of millet products through descriptive statistics.

Table 3. Popular Millet Dish

Particulars	Percent	Valid Percent	Cumulative Percent	Responses
Valid Millet Khichdi	15.4	15.4	15.4	21
Ragi Balls/RagiMuddhe	23.1	23.1	38.5	27
Flavoured Millet rice	38.5	38.5	76.9	37
Jowar Roti / Jolada Rotti	23.1	23.1	100.0	31
Total	100.00	100.0		108.0

Table 4. Traditional / Innovative Millet Dish

Particulars	Percent	Valid Percent	Cumulative Percent	Responses
Valid Innovative Millet dish	34.6	34.6	34.6	47
Traditional Millet dish	65.4	65.4	100.0	61
Total	100.00	100.0		108

Table 5. Awareness / Usage of Millet Flour

Particulars	Percent	Valid Percent	Cumulative Percent	Responses
Valid Awareness	54.1	54.8	54.8	47
Used	44.7	45.2	100.0	39
Total	98.8	100.0		
Missing System	1.2			
Total	100.00			86

Table 6. Awareness/ Usage of Millet Biscuits

Particulars		Percent	Valid Percent	Cumulative Percent	Responses
Valid	Awareness	41.2	41.7	41.7	34
	Used	57.6	58.3	100.0	52
	Total	98.8	100.0		
Missing	System	1.2			
Total		100.00			86

Table 7. Popular Millet Dishes

Popular Millet Dish	
Millet Khichdi	15%
Ragi Balls/RagiMuddhe	23%
Flavoured Millet Rice	39%
Jowar Roti/JoldaRotti	23%

Table 9. Awareness/ Usage of Millet Flour

Millet Flour	
Awareness	55%
Used	45%

Table 8. Traditional/ Innovative Millet Dish

Traditional /Innovative	
Innovative Millet Dish	35%
Traditional Millet Dish	65%

Table 10. Awareness/ Usage of Millet Biscuits

Millet Flour	
Awareness	42%
Used	58%

Suggestions

(1) Workshops

As few consumers are still not aware of millets, to create that awareness we can organize more and more workshops on millets where doctors, nutritionists, dieticians, and entrepreneurs are invited. With the help of these workshops, people will know the benefits for health and the scope of opening restaurants themed on millets.

(2) Millet Yards

Consumers are unaware about locations where millets are available. There are a few yards where millets are available at wholesale rates. They are also available in retail shops at a slightly higher price. People who can afford can buy from retail shops and entrepreneurs who have their millet startups can buy from yards which are set up by government and other wholesalers.

(3) Government promotion to use millets.

(4) Suggested Menu

Introduce millet dishes in a la carte menu.

Conclusion

- Millets can be promising alternatives for wheat and rice.
- Promotion of millet dishes in restaurants will increase millet consumption.
- Increasing awareness amongst restaurant owners and consumers is leading to better acceptance of these dishes on hotel menus.
- Chefs should be encouraged to incorporate traditional millet dishes as well as innovate new dishes by substituting

other grains with millets, yet retaining the overall acceptability.

- Traditional and innovative dishes made with millets packed with nutrients.
- Chefs can experiment extensively with these extremely versatile grains.
- Millets can be added in the 'health section'/'gluten free' sections of hotel menu.
- Chefs researching on local food habits have clubbed together traditional recipes with contemporary yet healthy twists that would appeal even to the younger population.
- Menus of caterers supplying lunch boxes can also add these dishes to menus.

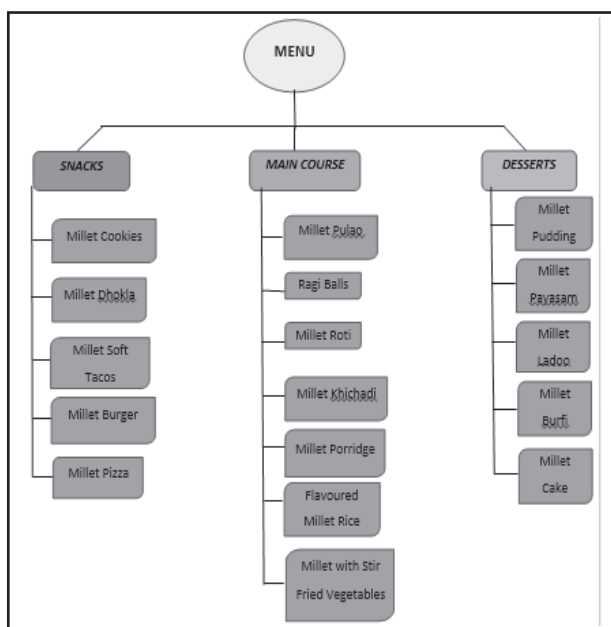


Figure 1. Millet Menu for Restaurants

- Introduce special millet dishes on daily or weekly basis. Non millet serving restaurants can put up one millet dish daily on their menu so that people are aware of millet dishes and they may be willing to change over to millets.
- Introduce one millet dish in *thali* or meal combos. Non millet serving restaurants can put up one millet dish daily on their menu so that people are aware of millet dishes and they may be willing to change over to millets.
- Introduce one millet dish in *thali* or meal combos.

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