

## Value Addition and Marketing Channel for Millets Products

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Millets are traditionally grown in resource poor agro climatic regions of the country which include sorghum, pearl millet, finger millet and small millets. These nutriceals are well-known for their high nutrient content,

which includes minerals like calcium, iron, zinc, potassium, and magnesium as well as vital fatty acids, dietary fiber, protein, and B vitamins. Due to shifting eating patterns and the hassle of preparing food, millets are becoming less popular for immediate consuming as compared to fine cereals. Value addition in products made with millet, such as baked goods, pasta, traditional dishes, flaked and papad products are created and standardized by different organizations. To boost their use, little millets are used in place of the goods that farmers typically prepare using cereals.

### Value addition of Millets

Several value-added products of millet are described below.

#### Puffs:

**Sorghum puff:** Sorghum puffs are a byproduct of explosive puffing or gun puffing, in which the grain of sorghum is puffed to its highest range in accordance with its identity (same shape).

**Foxtail millet puffs:** The foxtail puffs are white and crunchy in texture, equivalent to puffed rice. The shelf life is 2 months when packed in air tight MET pouches at room temperature.

**Pearl millet puffs:** The pearl millet puffs have a crunchy texture and a greenish-creamy color. When

stored at room temperature in Sir Tight MET pouches, the shelf life is three weeks.

### Sorghum Snack

This food, which is Ready to Eat, is made with a puff gun machine. Dehulled sorghum grain is placed into the puff gun machine's revolving barrel, where it is roasted and burned to produce puffed sorghum.

### Malting foods

Malt made from millet is traditionally used to feed infants. Finger millet is widely used for malting in parts of Tamil Nadu and Karnataka due to its good malting qualities. Malting aids in greatly enhancing the nutritional composition, fiber content, crude fat content, availability of vitamins B and C, minerals, and improved nutrient bioavailability as well as the sensory qualities of the grains. For low dietary bulk and calorie-dense weaning foods, supplementary foods, health foods, and amylase-rich foods, millet malt is utilized as a cereal basis in fact.

### Millets Pasta

In the mixing compartment of the vermicelli-making machine, sorghum, finger millet, foxtail millet, pearl millet, and refined wheat semolina are combined with water and left for half an hour before being extruded through a pasta die. Since millets have less gluten, wheat is added to meet the minimum amount needed to make pasta.

### Millets Noodles

Noodles, also referred to as convenience foods, are made using a cold extrusion process and dry out to a hard, brittle texture. These noodles only take a few minutes to prepare and are incredibly convenient. There are various combinations of noodles that can be made: finger millet-only noodles, finger millet and wheat noodles in a 1:1 ratio, and finger millet blended noodles with wheat and soy flour in a 5:4:1 ratio. With a longer shelf life and significant commercial value, noodles are one of the most popular foods for people

of all ages. With a slow digestibility of 25.88%, barnyard millet has relatively low carbohydrate content (58.56%).

### Millets flour

Flour is a staple ingredient in many recipes. The millet grains (Foftail, Pearl, and Finger millet) are processed by dry milling; the process begins with cleaning the grains, which are then ground in hammer mills to separate the bran, germ, and endosperm to obtain fine flour. Four types of millet flour (atta) have been developed: ragi, bajra, and finger millet.

### Bakery products

Worldwide popularity and increased production of bakery goods can be attributed to their affordable prices, diverse flavor profiles, eye-catching packaging, and extended shelf life for effortless promotion. In addition to having a higher fiber and micronutrient content than other flours, using millets in baked goods will open up new opportunities for millets to be used in a variety of value-added products. The majority of them are created using wheat flour, although attempts are being made to substitute a small amount of it with millet to offer a substitute, lessen reliance on wheat, and create gluten-free bread. You can use finger millet and foxtail millet flour in baked goods such as cakes, muffins, chocolate, cheese, and nan-khatai.

### Traditional foods

In millet-growing regions of South India, it has become customary to add finger millet as one of the basic ingredients, to the tune of 15-20% (w/w), along with other vital ingredients like black or green gram, rice, and spices. The addition of millet and pulse proteins resulted in an improvement in protein quality despite a minor decrease in the content of nutrients. After extended storage, finger millet papad's consumer acceptability was very good, making it a viable alternative to traditional papad.

### Fermented products

In many parts of India, fermented foods like idli, upma and dosa are popular and often eaten for breakfast, as well as for dinner. Although millets are a strong source of protein, there is a rising focus on improving the quality of protein due to low levels of

tryptophan and lysine. In addition to enhancing flavor, fermentation increases food value by adding protein, calcium, fiber, B vitamins, and in vitro protein digestibility while lowering anti-nutrient levels in food grains. Higher protein digestibility (>90%) results from the ground germinated pearl millet grains fermenting.

**Idli:** Idli is a steaming product made from rice semolina and ground pulses that is traditionally eaten with chutney or a spiced vegetable filling. It is an indigenous traditional breakfast dish found predominantly in southern Indian cuisine.

**Upma:** Upma is an indigenous to the country, traditional morning dish from especially southern Indian cuisine. It is made of cooked wheat or rice semolina with spices, condiments and pulses added.

**Dosa:** A dosa is an indigenous, traditional morning dish from predominantly southern Indian cuisine. It is a pancake cooked with ground pulses and rice semolina, usually served with chutney or a spiced vegetable filling.

### Marketing Channel for Millets Products

It would be wiser to leverage the existing distribution network rather than creating a new one, as the product is in the food category and products in this category already have one in place. A new distribution network will raise the cost of the goods because both the product and the company producing it are relatively new to the market. A product's cost will also rise if it has numerous distribution channels included in its network. For the product, we recommend the following distribution channels and a maximum channel length of three levels.

1. Producer —————→ Customer
2. Producer —————→ Whole Sheller —————→ Costumer
3. Producer —————→ Whole Sheller —————→ Retailer —————→ Costumer

### Conclusion

Additionally, traditionally, these foods have only been consumed in locations where they grow. Therefore, technology that makes millet value-added goods easy to make and affordable could generate a large demand and market, especially in metropolitan areas where people are becoming more aware of the importance of eating a healthy diet. An effective marketing plan that prioritizes brand management,

price, packaging, and labeling can be crucial in boosting the sales of millet goods.

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