

# VALUE ADDED PRODUCTS OF MILLETS

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## ABSTRACT

*This article explores the burgeoning interest in millets and their value-added products, highlighting their nutritional richness, culinary versatility, and contribution to sustainable food systems. Millets, ancient grains once relegated to the sidelines, are experiencing a revival due to their numerous health benefits and sustainability credentials. The article provides an overview of millets' nutritional profile, emphasizing their role as gluten-free, nutrient-dense staples. It then delves into the diverse array of value-added products derived from millets, including flour, flakes, pasta, snacks, beverages, and mixes. Each product category is examined in terms of its culinary versatility, health benefits, and contribution to sustainable food systems. The article concludes by underscoring the importance of embracing millets and their value-added products as a means to promote health, sustainability, and cultural heritage in global food systems.*

**Keywords:** Nutrition, Versatility, Credential, Millets, Sustainability, Heritage

## MILLETS: A BRIEF OVERVIEW

Millets are a group of small-seeded grasses cultivated in arid and semiarid regions of the world. They include various species such as pearl millet (Bajra), finger millet (Ragi), sorghum (Jowar), foxtail millet (Kangni), and others. Historically, millets have been staple foods in many parts of Africa and Asia, prized for their resilience to adverse environmental conditions and nutritional richness. Despite their decline in popularity with the advent of modern agriculture, millets are now experiencing a renaissance due to their numerous health benefits and sustainability credentials.

## NEED FOR VALUE ADDITION OF MILLETS

1. To cater to consumer preferences.
2. Diverse Millet products can meet our food requirements as climate change progresses.

3. Enhancing the consumption of Millet products can help fight malnutrition.
4. Millet farmers will benefit from improved post-harvest technology, increasing the economic value of Millet and enhancing the status of farmers.

## VALUE-ADDED MILLET PRODUCTS

1. Composite flours are a combination of millet grains and pulses.
2. Extruded products refer to food items that are formed by pushing the dough or batter through a die or nozzle to create a particular shape. These products include cakes, pasta, macaroni, vermicelli, noodles, spaghetti, flakes, and so on.
3. Puffed/popped and flaked products: millet flakes.
4. Millet-based bakery products: millet cookies/bread and cake; ready-to-eat products.

5. Fermented food products: idli, dosa, etc.  
Malt: ex. finger millet malt; infant feeding.

### **BRANDING STRATEGIES**

- The millet business poses a challenge in making customers aware of the advantages of millet. To address this challenge, it is important to expand your local customer base, increase your supply, and establish your brand name.
- You can achieve this by leveraging branding collateral such as posters, banners, flyers, and websites. Additionally, using online shopping portals, social media channels, and other platforms can help spread information about the ingredients and nutritional benefits of millet.
- Running health awareness campaigns in metros is also a good way to promote your business.
- Establishing links with different entities in your supply chain such as hotel chains, restaurants, schools, and educational institutions can also help boost your business.

### **GOVT INITIATIVES**

As part of the International Year of Millets (IYoM), the government is leveraging both domestic and international channels to promote Indian millets and value-added products globally, with the aim of turning it into a popular movement. The Indian Institute of Millets Research (IIMR) and the Agricultural and Processed Food Products Export Development Authority (APEDA) are also actively contributing to this cause.

### **Nutritional Superiority of Millets**

Millets, encompassing a group of small-seeded grains, are rich sources of nutrients essential for human health. They are naturally gluten-free, making them suitable for individuals with gluten intolerance or celiac disease. Millets are abundant in complex carbohydrates, dietary fibre, protein, vitamins (such as B-complex vitamins), minerals (including calcium, iron, magnesium, and phosphorus), and antioxidants. Compared to refined grains, millets have a lower glycaemic index, which helps in regulating blood sugar levels and reducing the risk of diabetes. Additionally, millets contain phytochemicals with potential health-promoting properties, such as lignans and phenolic compounds.

### **Importance of Millets in our Daily life**

Overall, millets have been an underestimated, yet essential part of many people's daily life. Millets contain vitamins, fiber and minerals which, when combined, qualify them as a well-balanced nutrient. Millets also do not include gluten and have a low glycemic index, which may help control blood sugar and maintain a healthy heart. This crop is environmentally friendly and may be grown with fewer fungicides and water resources, and therefore is a step that aids in the conservation of the environment. Due to the cereal's wide range of applications, millets are grown mostly for the usages of porridges and bread. In addition, through supporting farmers, people may increase the diversity of grain consumption and contribute to reducing food insecurity.

## VALUE-ADDED MILLET PRODUCTS

### *Millet Flour:*

Millet flour is a versatile ingredient used in baking, cooking, and food processing. It can be used as a substitute for wheat flour in various recipes, including bread, pancakes, cookies, and noodles. Millet flour retains the nutritional benefits of whole millets and enhances the sensory attributes of food products.

### *Millet-Based Snacks:*

Millet-based snacks, such as puffed millets, roasted millets, and millet chips, are gaining popularity as healthier alternatives to conventional snacks. These snacks are rich in fiber and protein, making them satisfying and nutritious options for consumers seeking healthier snack choices. Innovative flavourings and seasonings enhance the appeal of millet snacks, catering to diverse consumer preferences.

### *Millet Breakfast Cereals:*

Morning meal options made from millets are both nutritious and convenient. Enjoy a wholesome breakfast experience with millet flakes, granola bars, and instant porridges, perfect for busy lifestyles. These products can be enriched with vitamins and minerals to boost their nutritional value and cater to specific dietary needs.

### *Millet Beverages:*

Embraced by the beverage industry, millet-based beverages such as malted millet drinks, millet milk, and millet-based smoothies are gaining popularity. Providing plant-based alternatives to dairy and soy-based drinks, millet beverages are a great choice for health-conscious consumers. Rich in vitamins, minerals, and phytochemicals, millet beverages offer health-promoting properties.

### *Millet Pasta and Noodles:*

Millet pasta and noodles offer gluten-free options to conventional wheat-based pasta and noodles. These alternatives are popular among individuals with gluten intolerance or those adhering to gluten-free diets for health reasons. Millet pasta and noodles bring a distinct texture and flavour, enhancing culinary variety and gastronomic experiences.

## Environmental And Economic Advantages

- Cultivating millet requires reduced water and fertilizer usage compared to other cereal crops, promoting environmental sustainability.
- Millets demonstrate resilience to unfavourable growing conditions like drought and low soil fertility, thus enhancing food security and farmer incomes.
- The increasing need for millet-derived products offers prospects for small-scale farmers and agribusinesses, fostering rural development and income generation.

## PROMOTING FOOD SECURITY AND DIVERSITY

- Introducing millets into diets helps improve food security by broadening food sources and decreasing reliance on a few primary crops.
- Millets are well-suited for agroecological systems and can thrive in less fertile lands, contributing to sustainable agriculture and resilience to climate change.
- Encouraging the growth and consumption of millets can aid in addressing malnutrition and advancing

dietary diversity, garnering support from policymakers, researchers, and stakeholders.

### **CULINARY INNOVATION AND CULTURAL HERITAGE**

- Millets have a rich culinary heritage in many cultures and cuisines around the world.
- Culinary innovation and experimentation with millets contribute to preserving traditional food knowledge and promoting cultural identity.
- Chefs, food entrepreneurs, and culinary enthusiasts are exploring creative ways to incorporate millets into diverse dishes, revitalizing culinary traditions and promoting Culinary Versatility of Millet Products:
- One of the defining features of millet value-added products is their culinary versatility. Millet flour can be used as a substitute for wheat flour in a wide range of recipes, offering a distinctive flavour and texture. Millet flakes and pasta serve as excellent bases for savoury and sweet dishes alike, accommodating diverse culinary preferences and dietary requirements. Additionally, millet snacks and beverages provide innovative options for healthy snacking and hydration, catering to the modern consumer's desire for convenience without compromising on nutrition.

### **SUSTAINABILITY OF MILLET VALUE-ADDED PRODUCTS**

- In addition to their nutritional benefits and culinary versatility, millet value-added products contribute to sustainability across various dimensions.

- Millets are inherently resilient crops, requiring minimal water and inputs compared to conventional grains like wheat and rice. Their cultivation promotes biodiversity and soil health, making them environmentally friendly choices for agricultural systems. Furthermore, millet-based value-added products support local economies and small-scale farmers, fostering food security and rural development in regions where millets are traditionally grown. gastronomic tourism.

### **CONCLUSION**

The value-added products of millets represent a paradigm shift in the way we perceive and utilize these ancient grains. From nutritious flours and snacks to innovative beverages and pasta, millets offer a wealth of culinary possibilities. Embracing millets as value-added products not only promotes health and sustainability but also celebrates cultural heritage and fosters economic development. As consumer awareness grows and demand for nutritious, environmentally friendly foods increases, millets are poised to play a pivotal role in shaping the future of food.

### **REFERENCES**

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