



## Millets in India: A Nutritional Powerhouse for Sustainable Agriculture and Food Security

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India, the largest producer of millets in the world, is witnessing a resurgence of interest in these ancient grains due to their health benefits, environmental sustainability, and contribution to food security. Millets, known as "nutri-cereals," are a diverse group of small-seeded grasses that have been cultivated for centuries in India. They include varieties such as Pearl Millet (Bajra), Sorghum (Jowar), Finger Millet (Ragi), Foxtail Millet, Kodo Millet, Barnyard Millet, Proso Millet, Little Millet, and more.

In this article, we will explore the nutritional benefits of millets, their role in sustainable agriculture, the current status of millet production in India, and the government initiatives aimed at promoting millets for a healthier and more sustainable future.

### Nutritional Benefits of Millets

Millets are nutritional powerhouses, packed with essential vitamins, minerals, fiber, and antioxidants. They are gluten-free, making them suitable for individuals with gluten allergies or sensitivities. Let's take a closer look at some of the key millet varieties and their nutritional profiles:

**1. Pearl Millet (Bajra):** Pearl Millet, one of the most widely cultivated millets in India, is rich in calcium, proteins, vitamin A, vitamin B, and phosphorus. It contains high dietary fiber, which aids in digestion and helps prevent constipation. Pearl Millet has also demonstrated the ability to control blood glucose levels, making it an ideal grain for individuals with diabetes.

**2. Sorghum (Jowar):** Sorghum, another popular millet variety in India, is a rich source of protein, dietary fiber, and essential minerals such as iron and zinc. It is known for its inherent drought tolerance and can be grown under diverse environmental conditions. Regular consumption of sorghum has been linked to the prevention of cardiovascular diseases and the maintenance of healthy blood pressure and cholesterol levels.



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**3. Finger Millet (Ragi):** Finger Millet, commonly known as Ragi, is extensively grown in the southern regions of India. It is a powerhouse of calcium, proteins, iron, and other essential nutrients. Ragi's high fiber content helps prevent constipation, high blood pressure, and intestinal cancer. It also has a demonstrated ability to control blood glucose levels, making it an excellent grain for individuals with diabetes.

**4. Other Millet Varieties:** In addition to Pearl Millet, Sorghum, and Finger Millet, there are several other millet varieties that offer unique nutritional benefits. Foxtail Millets are rich in dietary fiber, minerals, and protein, with a low glycemic index. Kodo Millet is high in protein, low in fat, and has excellent fiber content. Barnyard Millet is a good source of protein and dietary fiber, with higher micronutrient content compared to other major cereals. Proso Millet and Little Millet are also popular minor millet varieties in India, offering various health benefits.

### Health Benefits of Millets

In addition to their agricultural and environmental advantages, millets provide numerous health benefits:

- **Obesity Prevention:** Millets are high in dietary fiber and antioxidants, making them an effective tool in combating obesity.
- **Type 2 Diabetes Prevention:** With their low glycemic index, millets are a favorable choice for individuals aiming to manage or prevent type 2 diabetes.
- **Blood Pressure Regulation:** The consumption of millets has been linked to the reduction of blood pressure levels.
- **Gastrointestinal Health:** Millets can help alleviate gastrointestinal conditions like gastric ulcers and colon cancer.
- **Digestive Health:** Millets aid in maintaining a healthy digestive system, reducing problems like constipation, excess gas, bloating, and cramping.
- **Probiotic Support:** Millets promote the growth of beneficial microorganisms in the gut, contributing to a healthy inner ecosystem.

### Millets and Sustainable Agriculture

The cultivation of millets plays a vital role in sustainable agriculture and environmental conservation. Millets are known for their resilience and ability to grow in dry and marginal lands with minimal water requirements. They are climate-smart crops that require fewer inputs, such as fertilizers and pesticides, compared to other cereals. Millets also have a short growing season, allowing farmers to adapt to changing climatic conditions and reduce the risk of crop failure.

The cultivation of millets promotes biodiversity, as they are less susceptible to pests and diseases, reducing the need for chemical interventions. Millets also contribute to soil health by improving soil structure and nutrient cycling. Additionally, millet farming involves traditional farming practices and indigenous knowledge, preserving cultural heritage and promoting sustainable livelihoods in rural communities.

### Millet Production in India

India has been the largest producer of millets in the world, with two major varieties, Pearl Millet and Sorghum, contributing approximately 19% of global millet production in 2020. The major millet-producing states in India include Rajasthan, Karnataka, Maharashtra, Uttar Pradesh, Haryana, Gujarat, Madhya Pradesh, Tamil Nadu, Andhra Pradesh, and Uttarakhand. These states collectively account for around 98% of millet production in India.

The area under millet cultivation in India has ranged from 12.29 to 15.48 million hectares from 2013-14 to 2021-22. Rajasthan, Karnataka, Maharashtra, Uttar Pradesh,

Haryana, and Gujarat account for more than 83% of total millet production in India. Rajasthan alone contributes 28.61% of the total millet production.

The Government of India has taken various initiatives to promote millets and enhance their production. The year 2023 is being celebrated as the International Year of Millets to raise awareness and promote the consumption of millets. Government offices and public sector enterprises have been directed to introduce and promote millets in their canteens. Minimum Support Prices (MSPs) have been fixed for millets like Ragi, Jowar, and Bajra to ensure fair remuneration for farmers.

### **Government Initiatives and Promotion of Millets**

The Indian government has recognized the importance of millets in achieving sustainable development, ensuring food security, and promoting healthy diets. To promote millets, the government has undertaken the following initiatives:

- **Millet Awareness Quizzes/Competitions and Conferences:** The Food Corporation of India and Central Warehousing Corporation conduct quizzes, competitions, and conferences to raise awareness about millets and their health benefits.
- **International Year of Millets-2023:** The year 2023 has been declared as the International Year of Millets to promote the consumption and production of millets globally.
- **Promotion in Government Canteens:** All offices and central public sector enterprises of the Department of Food and Public Distribution have been directed to introduce and promote millets in their canteens, encouraging employees to adopt healthier dietary choices.
- **Minimum Support Prices (MSPs):** The government fixes MSPs for millets like Ragi, Jowar, and Bajra, ensuring that farmers receive fair prices for their produce.
- **Inclusion in Public Distribution System (PDS):** Millets are being included in the Public Distribution System (PDS) and various welfare schemes, ensuring their availability to economically disadvantaged sections of society.
- **Research and Development:** The government is investing in research and development to improve millet production techniques, develop high-yielding varieties, and enhance their nutritional profiles.
- **Inter-State Transportation and Subsidies:** Guidelines have been modified to allow for inter-state transportation of millets and provide advance subsidies to promote the distribution and consumption of millets.
- **Through these initiatives,** the government aims to promote millets as a sustainable, nutritious, and climate-resilient food option, contributing to the betterment of farmers, the environment, and public health.

### **Conclusion**

Millets, the ancient grains of India, are making a comeback as a solution to the challenges of sustainable agriculture, food security, and nutrition. With their diverse nutritional profiles, climate resilience, and low resource requirements, millets offer a promising alternative to traditional cereals. India, as the largest producer of millets, has recognized their importance and implemented various initiatives to promote their cultivation, consumption, and availability through government schemes. The International Year of Millets-2023 and other awareness programs are expected to create a positive shift towards millets, benefiting farmers, the environment, and public health.

By embracing millets as a staple in our diets and supporting their cultivation, we can contribute to a more sustainable and resilient agricultural system while enjoying the numerous health benefits these ancient grains offer. Let us celebrate the International Year of



Millet and embark on a journey towards a healthier, greener, and more food-secure future.  
"Millets are not just grains; they are the seeds of hope for a sustainable and healthier future."  
- Unknown

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