



Branned Millets for Health Benefits

[Source: TH](#)

Why in News?

Recently, a study titled '**Impact of debranning** (the process of removing the outer bran layers from a cereal grain) **on the nutritional, cooking, microstructural characteristics** of five Indian small millets' was published.

What are the Key Highlights of the Study?

- **Nutritional Impact of De-branning:** Removing the bran from millets **reduces protein, dietary fibre, fat, mineral, and phytate** content while **increasing carbohydrates and amylose** content.
 - This diminishes their health benefits and increases their **glycemic load**.
- **Reasons for De-branning Millets:** De-branning and polishing millets **extends their shelf life** and **reduces cooking time** by making them softer.
 - However, **vacuum-sealing** can extend the **shelf life** of whole-grain millets without removing the bran.
- **Millets' Health Benefits:** Millets contain minerals like **iron, zinc, and calcium** and have **bioactive flavonoids** that support health.
 - They help **prevent diabetes, manage hyperlipidemia, reduce weight, and lower blood pressure**, with positive effects on cardiovascular disease (CVD).
 - They are **gluten-free** and have a **low glycemic index**, beneficial for people with **celiac disease or diabetes**.

What are the Key Facts About Millet?

- **About:** It is a collective term referring to a number of **small-seeded grasses** that are cultivated as **grain crops**, primarily on marginal lands in dry areas in **temperate, subtropical and tropical regions**.
 - Some of the common **millets** available in India are **Ragi** (Finger millet), **Jowar** (Sorghum), **Sama** (Little millet), **Bajra** (Pearl millet), and **Variga** (Proso millet).
- **Global and Indian Production:** India is the **largest producer and exporter** of millets, followed by **Niger and China**.
 - Global millet production stood at **28 million metric tons in 2020**, with major consumption in **Africa and Asia**.
- **Millet Promotion:** 2023 was recognized as the **International Year of Millets** by the **Food and Agriculture Organization (FAO)**.
 - The Indian government promotes millet production under the **National Food Security Mission**.
- **Ecological and Economic Advantages:** Millets are **drought-tolerant**, thrive in arid and semi-arid regions, and require minimal water, fertilisers, and pesticides.
 - It serves dual purposes, used as both **food and fodder**, increasing farming efficiency.

Millets

About

- Small-grained cereals also known as **coarse grains**
- Often referred to as **'Superfood'**
- Among the **first crops to be domesticated** - evidence of millet consumption dates back to the **Indus Valley Civilisation (3,000 BC)**

Climatic Conditions

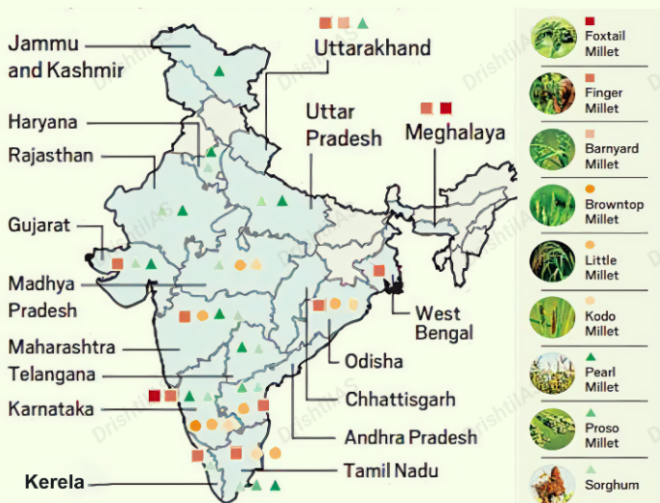
- **Mainly a Kharif crop in India**
- **Temperature:** 27°C - 32°C
- **Rainfall:** Around 50-100 cm
- **Soil Type:** Inferior alluvial or loamy soil

India and Millets

- **Global Largest Millet Producer:**
 - 20% of global production, 80% of Asia's production
- **Common Millets:**
 - **Ragi** (Finger millet), **Jowar** (Sorghum), **Sama** (Little millet), **Bajra** (Pearl millet), and **Variga** (Proso millet)
 - **Indigenous varieties** (small millets) - **Kodo, Kutki, Chenna and Sanwa**
- **Top Millets Producing States:**
 - Rajasthan (largest), Karnataka, Maharashtra, Madhya Pradesh and Uttar Pradesh
- **Govt. Initiatives:**
 - Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP)
 - **'India's Wealth, Millets for Health'**
 - Millet Startup Innovation Challenge
 - **Hiked MSP** for Millets
 - Agriculture Ministry declared millets as **"Nutri Cereals"** in 2018

Significance

- Less expensive, **nutritionally superior**
- High protein, fibre, minerals, iron, calcium and a **low glycemic index**
- Help **tackle lifestyle problems and health** (obesity, diabetes etc.)
- Photo-insensitive, **resilient to climate change & water efficient**



International Year of Millets - Year 2023

Proposed by India, declared by UNGA



UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. Which of the following are the objectives of 'National Nutrition Mission'? (2017)

1. To create awareness relating to malnutrition among pregnant women and lactating mothers.
2. To reduce the incidence of anaemia among young children, adolescent girls and women.
3. To promote the consumption of millets, coarse cereals and unpolished rice.
4. To promote the consumption of poultry eggs.

Select the correct answer using the code given below:

- (a) 1 and 2 only
(b) 1, 2 and 3 only
(c) 1, 2 and 4 only
(d) 3 and 4 only

Ans: (a)

Q. With reference to 'Initiative for Nutritional Security through Intensive Millets Promotion', which of the following statements is/are correct? (2016)

1. This initiative aims to demonstrate the improved production and post-harvest technologies, and to demonstrate value addition techniques, in an integrated manner, with cluster approach.
2. Poor, small, marginal and tribal farmers have larger stake in this scheme.
3. An important objective of the scheme is to encourage farmers of commercial crops to shift to millet cultivation by offering them free kits of critical inputs of nutrients and micro irrigation equipment.

Select the correct answer using the code given below:

- (a) 1 only
(b) 2 and 3 only
(c) 1 and 2 only
(d) 1, 2 and 3

Ans: (c)