

Millets: “The impact on longevity”

Review Article

Gurdev Singh*

Associate Professor SDWG Govt.College, Beetan District, Una, Himachal Pradesh, India

*Corresponding author: Gurdev Singh, Associate Professor, SDWG Govt College, Beetan District, Una, Himachal Pradesh, India

Email: guru.4702c@gmail.com

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Abstract

In the pursuit of longevity, modern science explores various factors influencing human lifespan, encompassing genetics, diet, and lifestyle. The remarkable case of Jeane Calment, whose verified life span reached 122 ½ years, stands as a testament to the potential of longevity. Vedic literature also hints at the extended lifespans of Yogis through their control over breath and disciplined living. Longevity, however, remains a statistical phenomenon, allowing for either a centenarian lifespan or a much shorter one. An intriguing aspect linked to longevity emerges through the role of millets, ancient grains like ragi, bajra, foxtail, and kodo. These grains, staples in the diets of people in semi-arid regions of Asia and Africa for centuries, have garnered attention. Designated by the United Nations as the International Year of Millets in 2023, India has launched initiatives to boost production, consumption, and awareness of millets' health benefits. The government's Shree Anna plan aims to elevate millet production and productivity throughout the year. Millets boast significant nutritional content, rich in amino acids and phytochemicals, offering health advantages such as blood pressure regulation, heart disease prevention, and diabetes management. These attributes bolster the human immune system, potentially contributing to longevity. Illustrating the global significance of millets, these grains took center stage at the G20 Summit dinner in New Delhi from September 9th to 10th. Foreign delegates relished millet-based dishes during the dinner hosted by President Droupadi Murmu at the Bharat Mandapam. This paper's primary objective is to disseminate awareness about the exceptional health qualities of millets, highlighting their potential contributions to well-being and longevity.

Introduction

Millet, an ancient grain revered for its nutritional prowess and historical significance, stands as a staple in the diets of numerous cultures across the globe. Renowned for its resilience in challenging growing conditions, this diverse group of small-seeded grasses has sustained civilizations for millennia. Millets encompass a spectrum of varieties such as ragi, bajra, foxtail, kodo, and more, each possessing unique characteristics and nutritional profiles. These grains have not only nourished populations in semi-arid regions of Asia and Africa but also emerged as a focal point in contemporary discussions on sustainable and healthy diets. From their crucial role in traditional cuisines to their resurgence in modern nutrition, millets continue to captivate attention for their exceptional health benefits, resilience, and cultural significance. This introduction aims to explore the historical, nutritional, and global significance of millets, shedding light on their multifaceted contributions to human health and sustainable food systems.

Types of Millets and Their Benefits

1. **Sorghum** (*Sorghum bicolor*): Sorghum is an ancient grain

that has been cultivated for centuries in India and Africa. It is a staple crop in these regions and is known for its nutritional benefits. Sorghum is considered a safe food grain alternative for people with celiac disease and gluten insensitivity. It is rich in natural nutrients and easy to add to your diet. Sorghum is also widely used as animal feed and as a natural and cost-effective fuel source. Sorghum is gluten-free and is a good source of vitamins and minerals. It has high content of dietary fibers and is a rich source of antioxidants. Sorghum helps in inhibiting tumor growth, natural cure for patients of diabetes, lowers blood cholesterol, helps in weight control, provides strong bones, improves mood, boosts energy levels and promotes blood circulation.

2. **Finger millet** (*Eleusine coracana*): Finger millet, also known as ragi, is a highly nutritious cereal that is easy to cook and delicious. It is rich in protein, fiber, iron, calcium, and other essential nutrients.

Finger millet is gluten-free and low in fat, making it one of the healthiest millets in the world. It is also known to help in bone strengthening, reducing the risk of heart disease, slowing down aging, managing diabetes, and providing antioxidant benefits that help protect against free radical damage and boost cardiovascular health.

3. Proso millet (*Panicum miliaceum*): Proso millet, also known as white millet, hog millet, or Kashif millet, is a highly nutritious cereal that is widely grown and consumed in India. It is sold as a health food and is known for its many health benefits. Proso millet is rich in niacin, which is also known as Vitamin B3. Niacin is essential for maintaining healthy skin, and a deficiency of niacin can lead to pellagra, a skin disorder that causes dry, scaly, and rough skin. Proso millet contains ample amounts of niacin, which helps prevent pellagra and promotes healthy skin.

4. Foxtail Millet (*Setaria italica*): Foxtail millet, also known as kangni, is a highly nutritious cereal that is widely consumed in India and other parts of the world. It is a great substitute for rice and is known for its many health benefits. Foxtail millet is a good source of essential nutrients such as carbohydrates, dietary fiber, protein, vitamins (particularly B12 vitamins), and minerals (including iron, calcium, and magnesium).

Government of India Initiatives

- Basic and strategic research to increase productivity of millets and their diversified utilization for enhancement of profitability.
- Coordination and development of improved crop production and protection technologies of millets.
- Training and consultancy on millet production and utilization.
- Dissemination of technologies and capacity building.
- Ensuring Legitimate Place for Millets in Global Food Basket

5. Pearl millet (*Pennisetum glaucum*): Pearl millet, also known as bajra, is a highly nutritious cereal that is widely consumed in India and other parts of the world. It is a good source of magnesium, which is known to help reduce the severity of asthma and frequency of migraines. Magnesium is an essential mineral that plays a vital role in many bodily functions, including muscle and nerve function, blood sugar regulation, and blood pressure control.

6. Kodo Millet (*Paspalum scrobiculatum*): Kodo millet, also known as arke or kodra, is a highly nutritious cereal that is widely consumed in India and other parts of the world. It is a great substitute for rice and is rich in phytochemicals and antioxidants. Kodo millet is a good source of essential nutrients such as dietary

Fiber, protein, vitamins (particularly B vitamins), and minerals

Table 1: Nutritional value of millets per 100gm

Millet	Protein in g	Fiber in g	Minerals in g	Iron in mg	Calcium in mg
Pearl	10.5	1.3	2.3	16.9	38
Finger	7.3	3.6	2.7	3.9	344
Foxtail	12.3	8	3.3	2.8	31
Proso	12.5	2.2	1.9	0.8	14
Kodo	8.3	9	2.6	0.5	27
Barnyard	11.2	10.1	4.4	15.2	11

(including calcium, iron, magnesium, and zinc).

Source: Indian Institute of Millet Research (IIMR) Hyderabad Telegana

Health benefits of millets

Small millets are highly nutritious and renders various health benefits. The nutritional facts of small millet are listed below. Helps control Blood sugar levels when consumed on regular basis. It showed lowered triglyceride levels, LDL/VLDL Cholesterol and increase in HDL Cholesterol. It is known for its Low Glycemic index- gradual increase in blood sugar after food intake when compared to rice. Ideal food for people suffering from Diabetes & Gastric problems. Reduces risk of Heart Attack. Helps in the development of Body Tissue and Energy Metabolism. Rich in Anti-oxidants.

Conclusion

Millets are a group of small-seeded grains that have many benefits for human health, agriculture, and the environment. We all across the world are facing many health challenges because of fiber-less diet. All lifestyle diseases may be made to disappear just by eating millets in breakfast, lunch and dinner. The Indian Government has recognized millets as smart food and are being promoted through various schemes and policies. The rich content of Nutrients like fiber helps in controlling metabolic disorders like Diabetes, cardiovascular diseases etc. The protein and calcium contents help in bone strength and overall growth of children.

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