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Millets The sustainable Nutritious Solution for a Healthier Future

Sandhya Shinde*¹, Satya Deo Pandey²

1. Assistant Professor, Dravya Guna Dept. SAM College of Ayurvedic Sciences, Bhopal
2. Professor, Faculty of Ayurved, Desh Bhagat University Mandi Govindgarh, Punjab.

*Corresponding author: susandhya17@gmail.com

Abstract:

In the current global scenario to decrease nutritional deficiencies and lifestyle-related disorders, millets offer a sustainable and health-promoting alternative. Rich in dietary fiber, proteins, essential amino acids, and minerals, millets align with Ayurveda's dietary principles. These grains are not only gluten-free but also low in fat absorption, thereby reducing the risk of cardiovascular diseases and diabetes. Ancient scholar's texts such *Bhavaprakasha* have acknowledged the significance of millets under the classification of *Kshudradhanya*. This article explores their traditional references, nutritional composition, and their relevance in modern health contexts.

Keywords: Millets, *Kshudradhanya*, *Sukadhanya*, Nutrition, Lifestyle Disorders, Gluten-free, Ancient Texts.

Introduction

With the global shift towards healthier and traditional diets, millets have regained attention. Ayurveda, the ancient Indian system of medicine, has long advocated for a balanced and wholesome diet. Ayurveda scholars *Bhavmishra* extensively described the qualities and actions of various grains including millets. The year 2023 was declared the International Year of Millets, reinforcing their global significance. The quote "*Vasudhaiva Kutumbakam*" reflects the integrative vision of food and health. Ayurveda describes food not just for nutrition but for its physiological and therapeutic effects.

क्षुद्रधान्यं कुधान्यं च तृणधान्यमिति स्मृतम् । क्षुद्रधान्यमनुष्णं
स्यात्कषायं लघु लेखनम् ॥७४॥ मधुरं कटुकं पाके रूक्षं
चक्लेदशोषकम् । वातकृद् बद्धविट्कं च पित्तरक्तकफापहम्
॥७५॥¹

: Millets also called as *Kshudradhanya*, *Kudhanya* and *Trinadhanya*.

All Kshudradhanya are slight hot in potency, sweet and astringent in taste (*kashaya and madhur rasa*). Laghu in Guna with property. They have absorbant capacity, which pacifies *Pitta* and *Raktavikar* and reduces *Kapha* dosha. As per Ayurveda concept increase in *Kapha dosha* induces obesity. Regular consumption of *Kshudradhanya* contribute to reduction of obesity by promoting satiety.

The word *Kshudradhanya* and *Kudhanya* refers to food grains which are small in size with high nutritive value hence called as *Nutrie* cereals. The word *Trinadhanya* means all comes under umbrella of *poaceae* family. *Poaceae* monocotyledons family also known

grass family. It is of great importance due to wide distribution. Grasses are primary source of fodder for animal and also provide food grains. *Poaceae* family also plays important in maintaining ecosystem, it serves as shelter to many fair flies and also helps in conservation of soil.

Material and Methods

In this article classical and contemporary review approach adopted. Textual sources from Ayurveda were consulted, and modern nutritional research was reviewed for comparative understanding.

Observations (Nutritional & Ayurvedic Perspective) ²

Sr. No.	Sanskrit Name	Botanical Name	Family	Guna (Properties)	Karma (Actions)	Nutrients
1	<i>Kanguni</i>	<i>Setaria italica</i>	<i>Poaceae</i>	<i>Guru, Ruksha</i>	<i>Sandhankrit</i>	Protein, Iron, B1, B2
2	<i>Chinak</i>	<i>Panicum miliaceum</i>	<i>Poaceae</i>	<i>Guru, Ruksha</i>	<i>Similar to Kanguni</i>	Ca, Mg
3	<i>Shamak</i>	<i>Echinochloa frumentacea</i>	<i>Poaceae</i>	<i>Vatakarak, Ruksha</i>	<i>Kapha-Pitta Hara</i>	Micronutrients
4	<i>Kodo</i>	<i>Paspalum scrobiculatum</i>	<i>Poaceae</i>	<i>Grahi, Hima</i>	<i>Pitta-Kapha Hara</i>	Fiber, Iron
5	<i>Gavedhuk</i>	<i>Coix lacryma</i>	<i>Poaceae</i>	<i>Madhur, Katu</i>	<i>Kapha Hara</i>	Thiamine, Lysine
6	<i>Niwar</i>	<i>Hygroryza aristata</i>	<i>Poaceae</i>	<i>Shital, Grahi</i>	<i>Tridosha Shamak</i>	Minerals
7	<i>Jowar</i>	<i>Sorghum vulgare</i>	<i>Poaceae</i>	<i>Ruksha, Laghu</i>	<i>Raktavikara Hara</i>	Iron, Fiber

1. **Kanguni** (*Setaria italica*) Beauv
Foxtail Millet

Commonly known as *Kanguni*, this millet is a drought-resistant crop with high adaptability. Cultivated in Andhra Pradesh and Tamil Nadu, it is used to prepare traditional dishes like Kheer and Lapsi. *Kanguni* is off different colours. Yellow colour *Kanguni* is foremost among the all. In classics it is used to reduce intensity of labour pain. It is known for its high energy (398 kcal/100g) and nutritional density including protein (15.4g), carbohydrates (65.3g), and essential minerals. It is used as substitute to Rice (Chawal).

2. **Chinak** (*Panicum meliacecum*) Linn.

Panicum meliacecum is also known as Proso millet. As mentioned in *Bhavprakash Nighantu* it is small plant which can be grown in 90 days. It is draught and heat prone crop. Generally grown in Rajasthan, Karnataka, and some parts of Maharashtra. It is widely used for Nutrition purpose and also for Alcohol generation. It is used as boiled rice and also flour is made by which Rotis can be made.

3. **Shamak** (*Echinochloa frumentacea*)
Barnyard Millet

This minor millet is well-suited to degraded lands and extreme climates. It is also known as Japan Millets. It is widely used in India in fast. Also called as *Bhagar* in *Marathi*. It has a protein content of 10.1% and dietary fiber of 12.5%, making it beneficial for digestive health and metabolic disorders.

4. **Kodrav Kodo** (*Paspalum scobitolatum*)
(Kodo millets)

It is also known as Kodo millets it survives in Drought prone area in soil with acidic Ph. Kodo millets are common nutritious choice

for eating during fast. It is used in the form of boiled rice and also Masala Khichdi is made with it.

5. **Gavedhuk** (*Coix lacryma*) Linn

Also called Job's tears, it is used in dysmenorrhea. It is used in the form of rice Job's tears are used as Buddhist prayer bead in parts of India, Myanmar, Laos, Taiwan, and Korea according to Japanese researcher Yukino Ochiai who has specialized on the ethnobotanic usage of the plant.³

6. **Niwar** (*Hygrorhyza Aristata*) Nees

Hygrorhyza aristata is a free-floating grass found in Assam region with rice crops. It has long, narrow leaves that are typically green. It forms dense mats on the surface of the water. Niwar is eaten in the form of rice.

7. **Jowar** (*Sorghum Vulgare*) Linn.

Commonly Grown in Maharashtra, Karnataka region. It is used as main food source in this region. Many varieties are found which mainly used as Indian bread. In Ayurveda classics one variety yellow Jowar is used for Diabetic patient as it has very low glycaemic index. Most famous *Rotis* (Bhakri) are prepared from jowar flour. Sorghum grain is 72% carbohydrates including 7% dietary fibre, 11% protein, 3% fat, and 12% water (table). In a reference amount of 100 grams (3.5 oz), sorghum grain supplies 79 calories and rich contents (20% or more of the Daily Value DV) of several B vitamins and dietary minerals.⁴

Discussion

Ayurveda integrates food as both preventive and curative. Millets align well with its principles they are *Grahi* (absorbent), *Tridosha Shamak*, and *Ruksha*. With time rise

in non-communicable diseases (NCDs), their incorporation in daily diet can bridge tradition with contemporary health needs. Their low glycaemic index, high fibre, and easy cultivation makes them ideal for global health agendas. These grain are effective in obesity-related conditions and contains essential amino acids, phosphorus, and thiamine, Protein, Vitamin B1. Recognising the immense benefits of Millets Government of India has declared 2023 as International year of millets. Also to strengthen further efforts a new centre for excellence on Millets in collaboration ICAR (Indian Council of Agriculture Research) and IIMR (Indian Institute of Millets Research) is developed by Government of India in Hyderabad Telangana state. National food security mission of India promotes Cultivation and consumption of millets on regular basis.⁵ Poshan Abhiyaan- As millets are highly nutritious cereals, they are incorporated into various recipes and distributed through the 'Poshan Aahar' initiative to Anganwadi centers under the Integrated Child Development Services (ICDS) scheme, targeting children aged 2 to 6 years. Public Awareness campaign- Ministry of Agricultural and farmers welfare has launched campaign to educate the public

on health Millets Fair and Exhibitions. Inclusion in PDS – Millets are included in Public distribution system to ensure easy accessibility to common public.

Conclusion:

Millets are nutritional powerhouses, long acknowledged in Ayurveda and validated by modern science. Reintroducing them into the mainstream diet is a sustainable and holistic approach to tackle global nutritional deficiencies and lifestyle disorders.

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