



MILLET MARVELS: UNVEILING NUTRITIONAL RICHES AND HEALTH POTENTIAL THROUGH THE LENS OF AYURVEDA - A COMPREHENSIVE REVIEW

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ABSTRACT

Introduction: Utilising functional foods to avoid diet-related illnesses is becoming more popular in the modern era. For their nutritional and therapeutic benefits, millets are wonderful, nutrient-dense cereals. Millets are possible dietary supplements due to their abundance of all essential elements. Many shreds of evidence show millets have functional and wellbeing-endorsing effects. Millets in *Ayurvedic* literature are described as *Kudhanya* (the inferior of grains), *Kshudra Dhanya* (little grains), and *Trina Dhanya* (grains originating from grass). **Methodology:** This review encompasses a diverse selection of ancient Ayurvedic texts and modern literature, including textbooks, research articles from databases like PUBMED and MEDLINE, and scientific journals. The focus is on millets and various small grains mentioned in Ayurveda. **Result:** Analysing ancient sources and several experiments reveals that millets have highly nutritious and health-promoting effects, specifically in diabetes mellitus, cancer, obesity, cardiovascular disease, etc. **Conclusion:** The current article suggests that modern living contributes to a rise in non-communicable diseases. Therefore, it is crucial to consume a balanced and nutritious diet consistently. Millets are among the nutrient-dense food crops essential for keeping a healthy diet and warding off numerous illnesses. Once more, raising awareness of millet's nutritional and healing benefits is necessary. The

scientific community increasingly recognises the significant potential of millets to enhance public nutrition and combat the worldwide surge in lifestyle-related illnesses.

Keywords: Ayurveda, Health benefits, Millets, Nutrition, Lifestyle Disease

INTRODUCTION

Over 5000 years ago, the Indian subcontinent began cultivating and consuming millets. Millets refer to a group of nutritious cereals comprising Bajra (pearl millet), Jowar (sorghum), Ragi (finger millet), Korra (foxtail millet), Kordusha (Kodo millet), *Sama* (little millet), *Cheenaka* (proso millet), and *Shyamaka* (barnyard millet).

Millets have a high dietary fibre content, 7–12% protein, 2–5% fat, 6–75% carbs, and 15–20% dietary fibre, according to the FSSAI. Essential amino acids, micronutrients, phytochemicals, antioxidants, and minerals can all be found in millet proteins.^[1] In contrast to rice commonly consumed in meals, studies have found that these "smart foods" can enhance growth in children and adolescents by 26–39%.^[2] India has been leading this effort for a long time, to the point where the Indian government has given millets names like 'Shrianna' and 'Nutri cereals'. It is determined to make India the world's centre for millets.

Non-communicable diseases are believed to cause almost 60% of all deaths in India, which is experiencing a rapid health movement.^[3,4] Millets may help prevent the advancement of prediabetes, improve glycaemic management, and decrease body mass index (BMI) and the likelihood of developing cardiovascular atherosclerosis disease. All millets are incredibly rich in nutrients, which makes them a viable remedy for malnutrition and obesity that affect the vast majority of the Indian population. Today's era must revive awareness of millet's medicinal and nutritional benefits.

Aim & Objectives

The present article aims to study the description of Millets in *Ayurveda* classics and analyse their therapeutic and nutritional benefits.

METHODOLOGY

The methodology employed in this study involved a comprehensive review of literature, spanning from ancient Indian *Ayurvedic* texts to contemporary textbooks and publications. An electronic search was conducted to gather research articles from various databases, including MEDLINE, PubMed, Dhara, Research Gate, Scopus, Ayush Portal, Ayu, Google Scholar, and Academia. All collected databases underwent specific analysis. The search utilised keywords such as "Millets," "Ayurveda," "*Kudhanya*," "*Kshudra Dhanya*," "*Trinadhanya*," "Nutritional benefits," and "Properties," along with combined terminologies of "Millets" and specific Latin or Sanskrit names of millets. The focus was gathering research relevant to *Kudhanya*, *Trina Dhanya*, and millets from scientific journals.

Millets in Ayurveda^[5]

In Ayurveda, a comprehensive description of millet is available in *Dhanya Varga* (group of grains), as shown in Table No. 1. Acharya Vagbhata mentioned the group of millets as *Trina Dhanya Varga* (grains derived from grass), in *Susrutha Samhita* as *Kudhanya varga* (inferior among grains in *Bhava Prakasha Nigantu* as *Kshudra Dhanya Varga*. Millets have been referred to by different names, such as *Kudhanya* (inferior among grains), *Kshudra Dhanya* (small-sized grains), and *Trina Dhanya* (grains derived from grass).^[6,7] They have been utilised both as a dietary staple and as a therapeutic regimen in Ayurveda since ancient times, dating back to the era of *Samhita Kala*.

Types of Millets

A. Major Millets

1. Sorghum millet / *Yavanala/Sorghum bicolor*
2. Pearl millet / *Verjjan/Pennisetum typhoides*
3. Finger millet / *Madhuli/Eleusine coracana Linn.*

B. Minor Millets

1. Foxtail millet / *Priyangu/Setarai italica*

2. Kodo millet /Kodrava /Paspalum scrobiculatum
3. Barnyard millet/Shyamaka/Echinochloa frumentacea
4. Proso millet /Cheenaka/Panicum miliaceum

Table No. 1 Millets in Ayurveda Classics -

Ayurveda Classics	Sanskrit Names	Botanical Name	English name
Ashtanga Hridaya ^[8] (Trina Dhanya)	Kangu/Priyangu	Setaria italika	Foxtail millet
	Kordusha	Paspalum scrobiculatum	Kodo millet
	Nivara	Hygroryza aristate Nees.	Wild Rice
	Yava	Hordeum vulgare	Barley
	Shyamaka	Echinochloa frumentacea	Barnyard millet
Susruta Samhita ^[9] (Kudhanya Varga)	Koradusaka	Paspalum scrobiculatum	Kodo millet
	Shyamaka	Echinochloa frumentacea	Barnyard millet
	Uddhalaka,	Paspalum scrobiculatum	Kodo millet
	Priyangu	Setaria italika	Foxtail millet
	Gavedhuk	Coix lachrymal jobi	Adlay, jobs tears
	Varaka	Panicum miliaceum	Indian Millet
	Venuyava,	Bambusa arundinacea	Bamboo seeds
	Nivara	Hygroryza aristate	Wild rice
Bhavaprakasha ^[10] (Kshudra Dhanya)	Kangu	Setaria italika Linn	Foxtail Millet
	Cheenaka	Panicum miliaceum Linn	Indian Millet
	Shyamaka,	Echinochloa frumentacea Lin	Barnyard millet
	Kodrava,	Paspalum scrobiculatum	Kodo millet
	Yava	Hordeum vulgare Linn.	Barley
	Gavedhuka	Coix lachrymal jobi	Adlay, jobs tears
	Nivara	Hygroryza aristate	Wild rice
	Vamsa	Bambusa arundinacea	Bamboo seeds

Table 2: Therapeutic uses of common millets in Ayurveda ^[11,12]

S.N.	Millet	Botanical Name & Family	Synonyms	Therapeutic uses
1.	Jowar	Sorghum vulgare, Graminae	Yavnal, Raktika, Sugandhika, Jurnahwa, Krostupuccha	Nourishes the body tissues, enhances taste perception, Increases potency
2.	Bajra	Pennisetum typhoides, Gramineae	Bajranna, Sajak, Nalika, Neelkaran, Agrayadhanya	Promotes strength, Enhances Digestion, Aphrodisiac, Difficult to digest
3.	Ragi	Eleusine Coracana, Gramineae	Madhuli, Ragika, Nartaki, Madhulika	Nourishes the body tissues, Bleeding Disorder

4.	Kangu	<i>Setaria italica</i> Poaceae	Kanguni, Pitatandula, Vatal, Sukumar, Priyangu	Psoriasis Promotes fracture healing
5.	Kordush	<i>Paspalum scrobiculatum</i> , Gramineae/ Poaceae	Kodrav, Kordush, Kudyal, Uddalak, Madanagraj	Obesity, Bleeding Disorder, Cough Atherogenesis, Ascites, Psoriasis, Breastmilk vitiation
6.	Shyamak	<i>Echinochloa frumentaceae</i> , Poaceae	Shayamak, Shyam, Tribeej, Rajdhanya, Trinbeej, Uttam	Obesity, Bleeding Disorder, Cough, Vitiated breast milk, Ascites
7.	Cheena	<i>Panicum Miliaceum</i> Poaceae	Varak, Sthulkangu, priyangu, Kangubhed, Marha	Nourishes the body tissues

Table No.3 -Ayurveda Pharmacodynamics of Millets

S.N.	Millet	Rasa (Taste)	Guna (Attributes)	Virya (Potency)	Vipaka (Bio-transformation)	Dosha shamakata (Effect on Doshas)	Karma (Actions)
1.	Jowar ^[13]	Kashaya, Madhur	Ruksha	Sheeta	Madhur	Kapha-Pitta Shamak	Kaphapittanashak, Vrishya (aphrodisiac) Ruchya, Trishnaghna (alleviates excessive thirst), Kledaghna (reduces excessive moisture).
8.	Bajra ^[14]	Madhur, Kashaya	Ruksha	Ushna	Madhur	Kapha vata shamaka	Balya, Durjara (difficult to digest), Hrudya (beneficial for the heart)
9.	Ragi ^[15]	Kashaya, Tikta, Madhur	Laghu, Ruksha	Sheeta	Madhur	Tridoshanashaka mainly Pittanashaka	Balya, Vrishya Triptikaraka
10.	Kangu ^[16]	Madhur, Kashaya	Guru, Sheeta, Ruksha	Sheeta	Madhur	Pittahara, Vata-kara	Guru (provides a feeling of heaviness), Sangrahi, Brumhana (nourishes body tissues), Shoshana (helps in reducing excess moisture), Bhagnasandhanakrit (aids in fracture healing), Durjara, Vrishya
11.	Kodo ^[17]	Kashaya, Madhura	Ruksha	Katu	Sheeta	Kapha-Pitta Shamak	Vishahara (counteracts poisoning), Avrishya (anti-aphrodisiac), and Pathya for wound healing

12.	<i>Shyamak</i> ^[18]	<i>Madhur, Kashaya</i>	<i>Laghu, snigdha</i>	<i>Sheeta</i>	<i>Madhur</i>	<i>Vatakaraka, kaphapittanashaka</i>	<i>Vishadoshahar</i> (anti-poisonous), <i>Dhatu shoshaka</i> (dries up the tissues)
13.	<i>Cheena</i> ^[19]	<i>Madhur, Kashaya</i>	<i>Guru, Ruksha</i>	<i>Sheeta</i>	<i>Madhur</i>	<i>Vatavardhaka, Kaphashamaka</i>	<i>Brimhan</i> nourishes the body tissues), <i>Bhagnasandhankara</i> (fracture healing)

1. Sorghum (As shown in Table No.4)

Nutritional Benefits^[20] -

- I. Sorghum acts as a principal source of protein and carbohydrates.
- II. Sorghum is abundant in fibre, thiamine, riboflavin, folic acid, calcium, phosphorus, iron, and β -carotene.
- III. Sorghum is a good source of minerals and vitamins.
- IV. Other vitamins, E, K, and D are discovered to be present in sorghum grain in detectable concentrations.
- V. Sorghum is a great source of condensed tannins, flavonoids, and polyphenols, all with high antioxidant activity.

2. Pearl Millet/*Bajra*/*Pennisetum typhoides*

Nutritional Benefits^[21]

- I. Pearl millet has a very high content of lipids (4-6%) and proteins (12-16%).
- II. The amount of dietary fibre is 11.5%. As a result, food travels through the gut more slowly, lessening the risk of inflammatory bowel illness.
- III. Pearl millet contains a higher quantity of niacin.
- IV. Pearl millet contains foliate, magnesium, iron, copper, zinc, calcium and vitamins E and B- complex.

3. Finger Millet

Nutritional Benefits^[22]

- I. The highest source of calcium (300–350 mg/100g).
- II. Ragi contains the highest amount of minerals.
- III. It has lower quantities of fat (1.5-2%) and protein (6-8%).

- IV. Finger millet proteins contain sulphur-rich amino acids.
- V. The sulphur-rich amino acid composition of finger millet proteins makes them unique.
- VI. Ragi are well recognised for their usage as weaning feeds and have good malting qualities.
- VII. It has high antioxidant activity.

4. Foxtail Millet

Nutritional Benefits^[23]

- I. It has a lot of carbohydrates.
- II. It includes vitamins, calcium, protein, fibre, and other nutrients.
- III. It is a nutrient-rich food for kids and expectant mothers.
- IV. When compared to rice, it contains twice as much protein.
- V. It includes minerals like iron and copper.
- VI. It ranks as one of the grains with the highest digestibility and least likelihood of causing allergies. Offers a wealth of nutrients and tastes sweet and nutty.

5. Kodo Millet

Nutritional Benefits^[24]

- i. It contains a lot of fibre (14.3%), low fat (4.2%), and a lot of protein (11%).
- ii. *Kodo* millet is an excellent source of B vitamins, including niacin, pyridoxine, folic acid, and minerals, including calcium, iron, potassium, magnesium, and zinc.
- iii. It has a high lecithin content and is very good for bolstering the nervous system.
- iv. It is gluten-free and good for gluten-intolerant people.
- v. Regular intake of *Kodo* millet offers significant advantages for postmenopausal women

experiencing symptoms of cardiovascular illness.

7. Barnyard Millet

Nutritional Benefits ^[25]

- i. It is an excellent source of highly digested protein.
- ii. It has the most significant amount of crude fibre and iron.
- iii. The amount of carbohydrates is minimal and digested slowly.
- iv. Gamma amino butyric acid (GABA) and beta-glucan, used as antioxidants and lower lipid levels, are also present in its grains.

8. Little Millet

Nutritional Benefits ^[26]

- I. Compared to other millets, it is smaller.
- II. It contains a lot of iron.

Table No.4 -Nutrient composition of millets (per 100 g) ^[28]

Name of Millet	Protein (g)	Fat (g)	Minerals (g)	Crude Fibre (g)	Carbohydrates (g)	Energy (Kcal.)	Calcium (mg)	Phosphorus (mg)	Iron (mg)
Jowar	10.4	1.9	1.6	1.6	72.6	349	25	222	4.1
Bajra	11.6	5.0	2.3	1.2	67.5	361	42	296	8.0
Ragi	7.3	1.3	2.7	3.6	72.0	328	344	283	3.9
Madhulika	7.3	1.3	2.7	3.6	72.0	328	344	283	3.9
Kodo	8.3	1.4	2.6	9.0	65.9	309	27	188	0.5
Sanwa	6.2	2.2	4.4	9.8	65.5	307	20	280	5.0
Proso	12.5	1.1	1.9	2.2	70.4	341	14	206	0.8
Cheena	7.7	4.7	1.5	7.6	67.0	341	17	220	9.3

Source: Nutritive value of Indian foods, NIN, 2018

Table No. 5 – Evidence of Disease Prevention by Millets

S.N.	Author's	Millet	Prevention from Disease	Active compound	Mechanism
1.	Montonen J et al. 2003 ^[29]	Pearl millet Sorghum Finger millet	Diabetes	Fibre, Magnesium, Vitamins, Tannins	Due to the fibre's extended digestion, the blood's release of glucose is delayed.
2.	Lee et al. 2010 ^[30]	Finger millet, Proso millet, barnyard millet	Cardiovascular diseases and Hyperlipidaemia	Lignin	Antioxidants function to lower plasma triglycerides.
3.	Choi YY et al. 2005 ^[31]	Protein concentrates of foxtail millet	Cardiovascular diseases and Hyperlipidaemia	Lecithin and Methionine	Decreasing cholesterol and removing extra fat from the liver increased amounts of adinopectin inhibit the pro-inflammatory and hypertrophic response, protecting cardiovascular tissues.

					(1) Controlling the pro-inflammatory and hypertrophic response; (2) Triggering the responses of endothelial cells
4.	Carr et al., 2005 [32]	Sorghum	Cardiovascular diseases And Hyperlipidaemia	Sterol	Lower cholesterol absorption and stop the production of cholesterol from inside
5.	Ali et al., 1982; [33] Schneeman and Tietzen, 1994 [34]	Sorghum Finger millet	Obesity Obesity	High dietary fibre content Tryptophan	Increases the time it takes for food to travel from the stomach to the intestine, which slows digestion and absorption and Decreases appetite.
6.	Gomez-Cordoves et al., 2001 [35] Shah et al. 2014 [36]	Sorghum	Cancer	Polyphenols and Tannins Phenolic extracts 35 kDa protein FMBP extracted from foxtail millet bran extract	It possesses positive melanoma activity and acts against human melanoma cells. FMBP, like peroxidase, prevents colon cancer cells from proliferating by (1) inducing G1 phase arrest in colon cancer cells, (2) Decrease in mitochondrial transmembrane potential, and (3) death reliant on caspase.
7.	Carolina et al., 2007 [37]	Sorghum, Pearl millet	Celiac Disease	Gluten-free grains	After prolonged ingestion, grain content did not affect the amount of anti-transglutaminase antibodies.
8.	Dykes and Rooney, 2006 [38]	Kodo millet, little millet, finger millet, foxtail millet, barnyard millet, sorghum	Detoxification	Antioxidants (Quercetin, Curcumin, Ellagic acid)	By scavenging radical cations, free radicals are neutralised, and cell disruption is prevented.

Scientific Evidence

1. cardiovascular disease

Rats fed treated starch from barnyard millet showed reduced blood sugar, serum cholesterol, and triglycerides compared to rice and other minor millets.^[39] Genetically obese type-2 diabetic mice showed increased plasma levels of high-density lipoprotein cholesterol and adiponectin when fed proso millet in fatty-rich environments.^[40] In hyperlipidaemic rats, finger and proso millet decreased plasma triglycerides.^[41] Table 5 shows sorghum has compounds that

could be used as dietary supplements or food additives to help people reduce their cholesterol levels.^[42]

2. Diabetes Mellitus

As shown in Table No. 5, foods high in phenolic compounds, dietary fibre, magnesium, vitamin E, and tannins lower blood glucose and insulin levels more gradually, lowering the risk of diabetes.^[43] It has been demonstrated that proso millet, when fed at high-fat levels, improves insulin and glycaemic responses in genetically obese type 2 diabetes mice.^[44] Glycaemic responses are lower in diets based on finger millet because of its high fibre content and alpha-amylase

inhibitory properties, which are known to reduce starch digestion and absorption.^[45] Foxtail millet aqueous extracts exhibit intense anti-hyperglycaemic action.^[46] It has been demonstrated that proso millet, when fed at high-fat levels, improves insulin and glycaemic responses in genetically obese type 2 diabetes mice.^[47] In streptozotocin-induced diabetic rats, Sireesha et al. showed that the aqueous extract of foxtail millet had anti-hyperglycaemic and anti-lipidemic effects.^[48] There was a substantial decrease in FBS and HbA1c, demonstrating that traditional dishes made from created millet-based food mix had a lower glycaemic index and positively impacted pre-diabetic patients. This makes them a better option for managing diabetes mellitus.^[49]

3. Gastrointestinal Disorders

Sorghum products could not alter the level of anti-transglutaminase antibodies following sustained consumption.^[50] Preservation of the probiotic and prebiotic balance that is advised for treating diarrhoea in young children.^[51] Millets are good for people with celiac disease and are gluten-free.^[52,53,54,55]

4. Cancer

Fibre of Sorghum phenolic content has been associated with a lower risk of oesophageal cancer than those who consume corn or wheat.^[56] Sorghum contains tannins and polyphenols with anti-mutagenic and anti-carcinogenic properties^[57] and can inhibit the growth of human melanoma cells and anti-melanogenic activity.^[58] As shown in table no. -5 millets have linoleic acid, which contains anti-tumour activity.^[59] In a recent study, Turner et al. found that tannic and black sorghum bran reduced the carcinogenesis of colon cancer in rats. It is possible that the antioxidant activity of the brown or black sorghum bran diets reduced the oxidative stress associated with the development of colon cancer in the rat's colon carcinogenesis.^[60]

5. Antimicrobial activity

Another study looked at how well seed protein extracts from foxtail, proso, pearl, sorghum, barnyard, and sama millet could stop *Rhizoctonia solani*, *Macrophomina phaseolina*, and *Fusarium oxysporum* from growing in vitro. All three of the studied phyto-

pathogenic fungi had their growth considerably slowed by pearl millet protein extracts. The results demonstrated that the inflorescence and seeds of pearl millet were where 23-kDa thaumatin-like proteins (TLPs) were most abundant.^[61]

6. Obesity

As shown in Table 5, A study on arabinoxylan, a polysaccharide found in finger millet, demonstrated that it can stop obesity in rats given a high-fat diet.^[62] According to a different study, eating millet twice daily for dinner and breakfast can aid in weight loss. The diet includes foxtail millet, barnyard millet, small millet, and kodo millet. After consuming these millets for 4 weeks, 1.2 kg of weight was lost weekly. Reduced from 28.8 to 26.6 Body Mass Index (BMI).^[63]

7. Malnutrition

Because *Kodo* millets include dietary fibre, proteins, carbs, vitamins like riboflavin and niacin, and minerals like calcium, iron, and phosphorus, they are incredibly nourishing. Additionally abundant in phenolic compounds and antioxidants, such as ferulic acid, gallic acid, vanillic acid, and tannins, are *Kodo* millets.^[64]

DISCUSSION

Millets include all the necessary nutritional components for proper health development. When considering millet's general characteristics and effects, it becomes clear that *kaphaja roga*, *pittaja roga*, and *rakta dushti* are the situations in which millets are recommended. Millets must always be avoided in *vataja roga* because they worsen the disease. This understanding leads to the following gross indications for using millets: obesity, skin diseases, diabetes, diarrhoea, hyperlipidaemia, and lifestyle disorders.^[65] Millets are beneficial for treating long-term conditions, including diabetes mellitus and obesity.^[66]

Table No. 3 shows the Ayurveda pharmacodynamics of millets, which state that millets are dry and heavy, which suggests they are harder to digest than other cereals since they are higher in protein and dietary fibre and lower in carbs. But in addition to their long-lasting satiety benefits, these attributes also can

scrape and dry off extra moisture, which can help reduce obesity [67],[68]

As described in Table No.2, different therapeutic actions of millets like foxtail millet are indicated for diarrhoea and irritable bowel syndrome, which is *Sangrahi* (absorbs excess fluids, aids in the normal formation of stools, and promotes digestion). *Kangu* can be utilised to lessen obesity and diabetes mellitus since it has nourishing properties and dries excess moisture. [69] A study found that using multi-millet reduced blood glucose levels. [70] *Shyamaka* possesses the qualities of *Sangrahi* and *baddha vitkara* (compactness of stools), it can be used to treat irritable bowel syndrome and diarrhoea. Its actions reduce unctuousness, dry up extreme fluid, and promote normal urine formation, which is beneficial in treating obesity and diabetes mellitus. [71] *Koradusha* is suggested for irritable bowel syndrome because of its *Paramgrahi*, *Badda Vitkara* and *Vranya* property. Millets have been demonstrated to help reduce cardiovascular illnesses. [72]

Cheenaka is recommended for diseases caused by overeating because of its *ruksha* (reduces unctuousness), *Kaphahara* (pacifies kapha), and *Brimhana* (nourishing) qualities. According to Jundy et al., proapoptotic and anti-adipocyte activities are advantageous in cases of obesity. [73] Proso millet may significantly protect against the risk of coronary heart disease. [74]

Finger millet has a bitter-sweet, astringent taste, incredible potency, and unctuousness properties. These qualities also make it excellent in the treatment of obesity and diabetes. According to Murtaza et al. [75], it plays a part in preventing the oxidative stress brought on by obesity. [76] Another study [77] discovered that *Nartaki* is beneficial for diabetes mellitus. According to a survey, finger millet is a nutritional storage that aids in producing energy when consumed. [78] Sorghum is advised for bleeding disorders, skin disorders, gastric disturbances, diabetes mellitus, and obesity because it is *pittaghna* (pacifies pitta), *kaphahara* (pacifies kapha), *rakta shamaka* (blood purifier) properties and *tikka-kashaya* in rasa in taste. Sorghum has been shown to have anti-

obesity and anti-diabetic effects in a study by Shen RL et al. [79]

Another important thing to remember is that millets are never listed among the *Nitya Sevaniya Ahara* (foods to be ingested regularly) in Ayurveda, highlighting that millets shouldn't be consumed daily. This is also implied by the name *Kudhanya*, which describes millet and denotes its inferiority to other cereals. Another research revealed that when pearl millet is regularly consumed, particularly in places with an iodine deficiency, it has been shown to have anti-thyroid and goitrogenic effects. This indicates that millet must be eaten in limited amounts and frequently, even by healthy persons. [80]

CONCLUSION

In conclusion, the collective evidence from various studies establishes that millet grains stand on par with significant cereals, boasting comparable quantities of fibre, essential minerals, vitamins, and beneficial phytochemicals, notably phenolic compounds, all promoting overall health. Beyond their nutritional prowess, millets unfold a multitude of potential health benefits. In a world grappling with malnutrition and nutrient deficiencies, it becomes imperative to reconsider and reshape our dietary choices. Millets emerge not only as a solution to nutritional gaps but also as a means of preserving India's rich heritage of indigenous food grains. Acknowledging that the future of nutrition lies in embracing millet, this article advocates a paradigm shift towards increased millet consumption. By altering our dietary habits, we safeguard our health and contribute to the preservation and resurgence of these native grains. In essence, the article proposes that the path to wellness and longevity is paved with the inclusion of millet in our daily diet.

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परिचय: आहार संबंधी बीमारियों से बचने के लिए कार्यात्मक खाद्य पदार्थों का उपयोग आधुनिक युग में अधिक लोकप्रिय हो रहा है। अपने पोषण और चिकित्सीय लाभों के लिए, बाजरा अद्भुत, पोषक तत्वों से भरपूर अनाज है। सभी आवश्यक तत्वों की प्रचुरता के कारण बाजरा संभावित आहार अनुपूरक है। कई सबूतों से पता चलता है कि बाजरा में कार्यात्मक और स्वास्थ्यवर्धक प्रभाव होते हैं। आयुर्वेदिक साहित्य में बाजरा को कुधान्य (अनाज से निम्न), क्षुद्र धान्य (छोटे अनाज), और त्रिन धान्य (घास से उत्पन्न अनाज) के रूप में वर्णित किया गया है। कार्यप्रणाली: इस समीक्षा में आयुर्वेदिक क्लासिक्स और समकालीन पाठ्यपुस्तकों, प्रकाशनों, PUBMED, MEDLINE डेटाबेस के शोध लेखों और बाजरा और कुधान्य, क्षुद्रधान्य और त्रिनाधान्य से संबंधित वैज्ञानिक पत्रिकाओं में प्रकाशित शोध की एक विस्तृत श्रृंखला शामिल है। परिणाम: प्राचीन स्रोतों और कई प्रयोगों के विश्लेषण से पता चलता है कि बाजरा अत्यधिक पौष्टिक और स्वास्थ्यवर्धक प्रभाव रखता है, विशेष रूप से मधुमेह, मेलेटस, कैसर, मोटापा, हृदय रोग आदि में। निष्कर्ष: वर्तमान लेख से पता चलता है कि जीवन जीने का आधुनिक तरीका वृद्धि में योगदान दे रहा है गैर संचारी रोगों में। इसलिए, लगातार संतुलित और पौष्टिक आहार लेने पर ध्यान देना महत्वपूर्ण है। कुधान्य सहित धान्य वर्ग पोषक तत्वों से भरपूर खाद्य फसलों में से हैं, जो स्वस्थ आहार रखने और कई बीमारियों को दूर रखने के लिए आवश्यक हैं। बाजरे के पोषण और उपचार संबंधी लाभों के बारे में एक बार फिर जागरूकता बढ़ाना आवश्यक है। जनसंख्या पोषण में सुधार और जीवनशैली से जुड़ी बीमारियों की वैश्विक महामारी को रोकने के लिए बाजरा की विशाल क्षमता के बारे में वैज्ञानिक दुनिया अधिक से अधिक जागरूक हो रही है।