

MILLETS: A “NUTRITIONAL MINES”

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ABSTRACT

The millets are a group of highly variable small seeded grasses widely grown around the world as cereal crops or gains for both human food and fodder. It is an important staple food in parts of eastern and central Africa, Indian and Northern Hills of Nepal. Millets are high in nutrition and dietary fibre and also has numerous health benefits. Resilient cereals like millets provide an affordable and nutritious option, and efforts need to be scaled-up to promote their cultivation. Greater millet production can support the livelihoods of smallholder farmers and can provide decent jobs for women and youth.

INTRODUCTION

UN dedicates 2023 to greater efforts in producing millets given their nutritional properties and resilience in adapting to climate change and declare the International Year of Millets: Unleashing the potential of millets for the well-being of people and the environment. As the global agrifood systems face challenges to feed an

ever-growing global population, resilient cereals like millets provide an affordable and nutritious option, and efforts need to be scaled-up to promote their cultivation. Greater millet production can support the livelihoods of smallholder farmers and can provide decent jobs for women and youth. The revenue created can boost economic growth. With the possibility of a health cereal alternative with millets, the risks associated with production shocks can be mitigated.

What are millets?

Millets are collective group of small seeded annual grasses that are grown as grain crops, primarily on marginal land in dry areas of temperate, sub-tropical and tropical regions. Millet is a whole grain. It's considered a “good” carb, so it's easily digestible. And since it's also gluten-free, it's a great alternative for people living with celiac disease or gluten sensitivity. Additionally, millet has a high nutritional value. It's also called as THE NUTRI-CEREALS.

The different types of millet include:

- Pearl millet
- Foxtail millet
- Finger millet
- Little millet
- Barnyard millet
- Bown top millet
- Kodo millet
- Jowar

India produces >170 lakh ton (80% of Asia's & 20% of global production) millet crops

Top 5 States Producing Millet Crops in India

- Rajasthan: Bajra/Sorghum
- Karnataka: Jowar/Ragi
- Maharashtra: Ragi/Jowar

- Uttar Pradesh: Bajra
- Haryana: Bajra



Nutritional qualities

Millets are high in nutrition and dietary fibres. They serve as good source of protein, micronutrients, and phytochemicals. The millets contain 7-12% protein, 2-5% fat, 65-75% carbohydrates and 15-20% dietary fiber.

- Kodo millets contains quercetin & vanillic syringic acid helps in blood sugar control
- Foxtail millet helps in maintaining bone and muscle health
- Amaranth millets contains phytosterols with cholesterol lowering properties.
- Pearl millets reduces the risk of inflammatory bowel diseases.
- Sorghum millets helps to provide strong bones.
- Proso millets reduces cholesterol levels and also reduces the risk of heart diseases.
- Buck wheat contains rutin a bioflavonoid that control blood pressure.
- Finger millets contains a high amount of lecithin and is an excellent for strengthening the nervous system.

Health benefits of Millets

1. Celiac disease- Millets are gluten-free used for celiac patients.
2. Reduction of oxidative stress: Free-radicals are removed by the phenolic compounds present in millet grains which reduces oxidative stress.
3. Anti-hypertensive: millets prevent the oxidation of low-density lipoproteins reducing lipase activity which reduces the occurrence of hypertension.
4. Coronary heart disease (CHD): regular consumption of whole millet grains (40g/day) reduces the risk of CVD and thus reduces the risk of CHD by 20%.
5. Anti-diabetic properties: millets consumption lower blood glucose response and glycosylated haemoglobin thus rendering glycaemic index, helps in reducing the risk of diabetes.
6. Anti-cancer properties: millets extracts have anti-proliferative effects on cancer cell line. Inhibit DNA damage and induce the production of phase-2 detoxifying enzymes.
7. Obesity: intake of high dietary fiber (present in millets) provides hunger satisfaction and increases satiety. Hence decreases incidence of obesity.
8. Preventing allergic reactions: pearl millet especially has a low probability of causing allergic reactions, due to the hypo-allergic property.

CONCLUSION:

Due to increasing global population there is need to feed the balanced food to all the people across the globe for that millets play an important role because millets are

used locally and low-income people can easily afford it in developing countries like Africa and India. Millets have potential that help to reduce the under-nutrition or over-nutrition because it contains all the nutrient that is required for our body. Therefore, millets called functional food for prevention of malnutrition.

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