



Millets – Miracle grain

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Abstract: Millets being rich in magnesium is good for the heart and effectively reduce blood pressure and risk of stroke. Being rich in calcium and phosphorus it's good for bones and body repair. Also helps in the level of insulin and in type 2 diabetes. Being rich in fibre it helps in reducing bad cholesterol and aid in digestion and bowel movement. It also helps in diseases related to liver and kidney. Being gluten free it helps people suffering from gastrointestinal issues and gluten insensitivity. It also helps in weight loss due to low glycemic index and has a higher satiety value. It can be combined with other nutritional foods like flaxseeds, red or black rice, lentils, *Makhana* or mixed seeds like sunflower seeds, pumpkin seeds, chai or melon seeds etc.

Millets are a group of highly variable small-seeded grasses, widely grown around the world as cereal crops or grains for fodder and human food. Millets were widely grown as fodder for out birds and animals until we realized its other health benefits. Since they can easily withstand dry and high temperature with less irrigation or electricity, therefore, less or no pesticides or fertilizers are required for it to grow.



Over the past few years there has been a healthy food revolution. Especially, with the increasing health consciousness among people, there has been a rise in the demand of nutrient rich cereals and exotic berries. No wonder why millets have grown as fad among millennials for its umpteen health benefits.

In fact, India is known as the second largest diabetes capital of the world and this has led to the surge in the demand of millets. Moreover, these gluten free millets can play a pivotal role in preventing and curing several health issues. Enriched with the goodness of nature, millets are a rich source of fibre, minerals like magnesium, phosphorus, iron, calcium, zinc and potassium.

Millet's in India : Millets in India enjoy prime importance that is because India is one of the largest producers clocking 11 million tonnes every year followed by Africa and



China. So let us know a bit more about the types of millets grown in India and millet nutrition that will convince you to stock them.

Sorghum (Jowar):

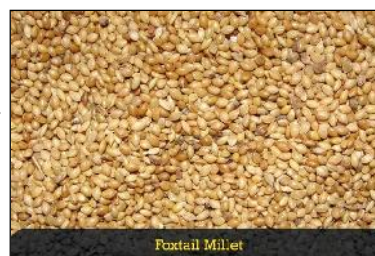
Well, it is one of the most popular, much-researched millet for weight loss. Due to *Jowar roti* benefits, many grandmas prefer it over regular wheat



Rotis. The calcium content in *Jowar* is closely similar to the content in wheat and rice. It also packs in a neat iron, protein and fibre punch. Researches have found that a typical sorghum wax is rich in policosanols which helps in reducing the levels of cholesterol. Being a *gluten-free grain*, it is also much preferred by those who can't tolerate wheat-based products. And also millets solve nutrition-related problems, as a rich source of micronutrients. Sorghum grain contains about 10-12 per cent protein, 3 per cent fat and 70 per cent carbohydrates.

Foxtail millet: Foxtail millets are available in the form of rice, semolina (like rava) or as fine textured flour.

Like other millets, foxtail millet is rich in smart carbohydrates, the kind which doesn't increase the blood sugar levels immediately but slowly releases glucose into the bloodstream. It is rich in dietary fibre and minerals like iron and copper. Due to this, it helps to reduce the levels of bad cholesterol and keeps the immune system strong



as well.

Finger millet (ragi):

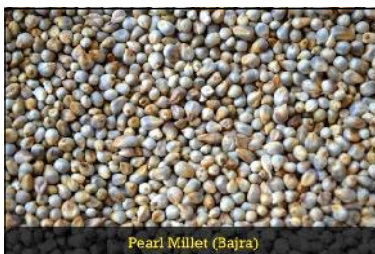
Due to ragi's nutrition, it can be considered a good replacement for rice and wheat. The most notable nutritional feature is that it is a rich



source of calcium and other minerals. It is a storehouse of protein and amino acids that make it a good inclusion in porridges and even wheat flour. Studies have suggested a beneficial role of finger millet on blood glucose level and hence, its positive effect on diabetics patients. Ragi contains 9.2 per cent protein, 1.29 per cent fat, 76.32 per cent carbohydrate, 2.24 per cent minerals, 3.90 per cent ash and .33 per cent calcium. This millet is good for brain development in growing kids.

Pearl millet (Bajra):

The study has shown that pearl millet or *Bajra* is said to be a miracle millet with iron content which 8 times higher than that present in rice. Other facts



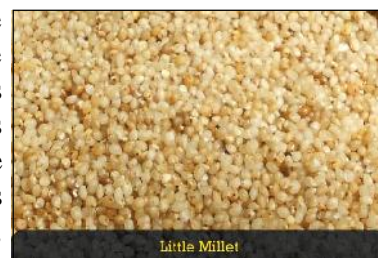
about pearl millet nutrition are that it is also rich in protein, fibre and minerals such as calcium and magnesium. Consumption of pearl millet will help ease constipation issues and any problems with the digestion as well. Because of the nutritional line-up, it can also make for a good lactagogue. Therefore, induces lactation and help in efficient milk secretion. *Bajra* grains contain about 12.4 per cent moisture, 11.6 per cent protein, 5 per cent of fat, 67 per cent carbohydrates and about 2.7 per cent minerals. Packed with the goodness of iron, protein, fibre and minerals such as calcium and magnesium; the daily consumption or inclusion of this millet can work wonders.

Barnyard millet (Sawan): Barnyard millet, with its nutritional profile, has a considerable amount of fibre that helps maintain satiety. Apart from this, millet is rich sources of bone-building minerals calcium and phosphorus. Its good antioxidant profile helps in improving the complications of non-communicable diseases and degenerative disorders like diabetes, cardio-vascular diseases, etc. Therefore, it can be considered as an ideal replacement for rice in dosa/idli/dhokla batters. Sawan grain contains 6.2 per cent protein, 9.8 per cent crude fibre, 65.5 per cent carbohydrate, 4.4 per cent ash.

Kodo millet: Kodo millet closely resembles rice, It is

easy to digest and is rich in phytochemicals and antioxidants, all of which helps prevent the occurrence of major lifestyle diseases. For weight loss enthusiasts, this is the millet that will assist in healthy weight loss. Cook it like rice once in a while and relish without any guilt. Kodo millet has shown to reduce knee and joint pain, helps regularize menstruation in women among others. This is attributed to high mineral content like calcium, magnesium and iron.

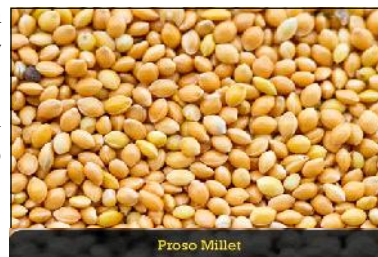
Little millet : The little millet may be called little but in no means its nutritional content is little. It is a rich source of B-vitamins, minerals like calcium, iron, zinc, potassium among



others. Little millet contains around 5.2 g of fat with a good content of unsaturated fats that ensures healthy metabolism and subsequently, a healthy weight loss. Its high fibre content is yet another positive making it an ideal part of pongal or even *Kheer* instead of rice.

Proso millet (Cheena): Like it's millet cousins,

proso millet is rich in protein and low glycemic index carbs. The developed world cultivates this millet to use it as bird feed. It is yet to be consumed as mainstream millet.



Also, because of the high content of antioxidants and minerals like magnesium, potassium and phosphorus, it helps in preventing conditions like osteoporosis. It contains 12.5 per cent protein, 1.1 per cent fat, 68.9 per cent carbohydrate, 2.2 per cent crude fibre and 3.4 per cent ash.

Millet – for all age groups:

Toddlers/infants : Since it's a rich source of calcium and iron best food for toddlers/infants acts as a boost for mental and physical growth.

Children/teenagers: It's a rich source of fibre, calcium and nutrient dense and balanced, not only providing a good source of energy or feeling of satiety but keeping weight under control and meeting nutritional requirements for growing up years. It is also a healthy replacement for junk foods.

Adults: Being rich in minerals like magnesium, phosphorus, potassium or fibre etc. makes it a healthy substitute for

lifestyle-related disorders and helps in weight management.

Women: It also meets the requirements of calcium, iron and vitamin B which are essential for women's health.

Elderly: Since they are easy to digest and are nutritionally dense it helps to have a smooth bowel movement as well as management of disease like cholesterol, blood pressure or diabetes etc.

Health benefits of millet grain:

Millets help to fight type-2 diabetes: Millets are all a rich source of magnesium, a mineral which is extremely important for starch digestion. Magnesium makes many carbohydrate-digesting enzymes, even the ones which manage insulin's action. Researchers find that magnesium-rich whole grain consumption can help lower the risk of type-2 diabetes. In addition to this, due to the presence of complex carbs, the glucose release in the bloodstream is also well-regulated. So have a good morning with a bowl of millets cooked in milk for health. This is impressive millet nutrition.

Millet's are as nutritious as fruits and vegetables: Scientists from Cornell University have found that millets are not any lesser than fruits or vegetables in their antioxidant activity. According to their research, most of the studies have explored the 'free' forms of antioxidants seen amply in fruits and vegetables. But the difference is that these antioxidants in millets are in the bound form which needs to be released on fermentation by bacteria. Thus, the health benefits of millets are at par with vegetables.

Millet's fight heart diseases: One of the phytonutrients amply present in millets is lignans. Lignans are known to be prebiotic fibre which is fermented in our gut by bacteria. As per the studies, upon fermentation, they yield enterolactone, a product which is known to protect against heart disease and also some forms of breast cancers. These little grains are a powerhouse of nutrition, which help in improving heart health and can effectively reduce coronary blockage. It is enriched with the goodness of magnesium, which can effectively reduce blood pressure and risk of stroke and heart attacks.

Millet's help to prevent gallstones: Studies have shown that consuming foods high in insoluble fibre has the ability to prevent the occurrence of gallstones. According to a study by Canadian Society of Intestinal Research, people eating both soluble and insoluble fibre reported 13 per cent lower risk of undergoing gallbladder surgery. However, those who ate more of insoluble fibre reported a greater risk reduction of surgery for gallstones that is around 17

per cent. So you can eat the millet grain to prevent gallstones in the future.

Millets promote digestion: Rich in fibre, millets make for a healthy cereal, which can help in digestion and can relieve bowel issues. It helps in gastrointestinal problems and can ease in other diseases related to the liver and kidney. It can also help in reducing the risk of colon cancer. Adding noni juice and black grapes in your daily diet can prevent cancer.

Helps in detoxification: Millets are loaded with the components such as curcumin, ellagic acid, Quercetin and catechins, which further help in removing foreign agents and free radicals and balance the enzymatic reactions in the body. These can naturally detoxify the blood.

Helps in slowing down muscle degradation: Millets are high protein grains and contain lysine, an amino acid which slows down muscle degradation and helps to build leaner muscles.

Aids in sleep: Tryptophan in millet raises the serotonin level in the body which helps in reducing stress. A cup of millet porridge every night can help to get sound and peaceful sleep.

Helps in relieving menstrual cramps: Because of its high level of magnesium, millet is a great food for women who suffer from unbearable pain and cramps during their menstrual cycle.

Aids breast milk production: Pregnant and lactating women are advised to consume Ragi in high amounts to increase the production of breast milk in their body. This enables the mother to feed the child for a longer period of time.

Improves skin elasticity: Millet is rich in amino acids called L-lysine and L-proline. These help to create collagen in the body, a substance which gives structure to the skin's tissue. Thus, eating millet fortifies the collagen level to improve skin's elasticity and makes it less prone to wrinkles.

Millet side effects: Do not consume too many millets:

Millets are known to possess goitrogens, the anti-nutritional factor if you have thyroid problems. Hence, it would be advisable to include them in batters and not eat it every day like rice or wheat. Millets contain goitrogen, a substance that interferes with the production of thyroid hormones and inhibits iodine uptake and utilization by the thyroid gland. Deficiency of iodine is a significant health problem which leads to the development of enlarged thyroid gland, known as goitre. Goitre causes dry skin, anxiety, depression and slow thinking.

Conclusion: Millets being rich in magnesium is good for

the heart and effectively reduce blood pressure and risk of stroke. Being rich in calcium and phosphorus it's good for bones and body repair. Also helps in the level of insulin and in type 2 diabetes. Being rich in fibre it helps in reducing bad cholesterol and aid in digestion and bowel movement. It also helps in diseases related to liver and kidney.

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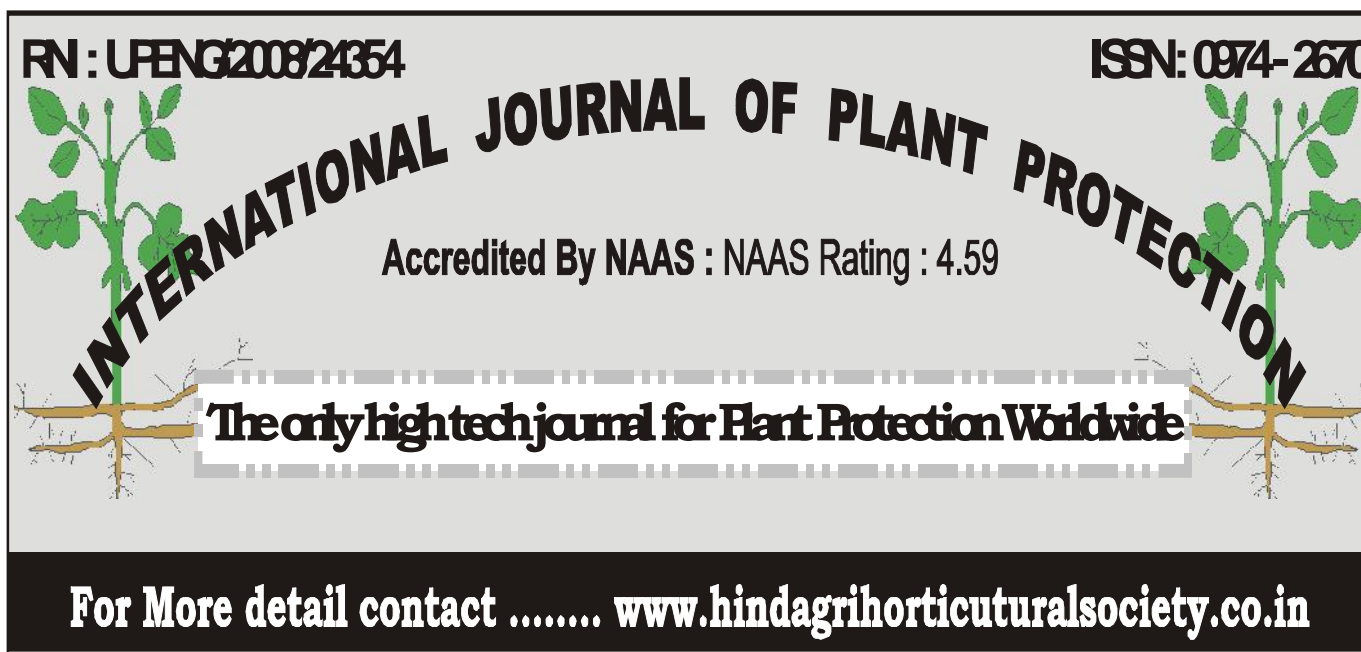
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