

## Importance of Pearl millet and its Health Benefits

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Pearl millet (*Pennisetum glaucum*), also known as bajra, is a cereal crop grown in tropical semi-arid regions of the world primarily in Africa and Asia. It is well adapted to production systems characterized by low rainfall (200-600 mm), low soil fertility and high temperature, and thus can be grown in areas where other cereal crops, such as wheat or maize, would not survive. In its traditional growing areas, pearl millet is the basic staple for households in the poorest countries and among the poorest people. It is also one of the most drought resistant crops among cereals and millets. Pearl millet is generally used as a temporary summer pasture crop or in some areas as a food crop (Suma, 2012). In India, pearl millet is primary source of dietary energy (360 kcal/kg) for rural population in drier parts of the country and 4<sup>th</sup> most important cereal after rice, wheat and sorghum. It is a rich source of protein, calcium, phosphorous and iron. Pearl millet grain contains fairly high amount of thiamine, riboflavin and niacin. A significant portion of pearl millet grain is also used for non-food purpose such as poultry feed, cattle feed and alcohol extraction (Basavaraj *et al.*, 2010). In general, bajra has more fat and protein content than sorghum. The energy level (784 cal/kg) is among the highest for whole grain cereals (Yawatkar *et al.*, 2010).

### Importance of Bajra Crop

- Pearl millet is important millet of India, second to sorghum in area and production.
- In South India, crop is called as *Sajje* or *Cumbu* and in Hindi it is known as bajra.
- It is also known as cattail millet or bulrush millet.
- It is one of the coarse grain crops and is considered to be poor man's food.
- It is an important crop in arid regions of Africa and Asia.

- In India, it is one of the important millet crops which flourish well even under adverse conditions.
- It provides staple food for the poor in a short period in the relatively dry tracts of the country.
- It is the most drought tolerant crop among cereals and millets.
- The grain of pearl millet is superior in nutritive value to sorghum grain but inferior in feeding value.
- Bajra grain contains about 11.6% protein, 5% fat, 67% carbohydrates and 2.7% minerals.
- Bajra grains are eaten cooked like rice or chapattis are prepared out of flour like maize or sorghum flour.
- It is also used as feed for poultry and green fodder or dry for cattle..

### Health Benefits of Pearl millet (Bajra)

Bajra has been attributed to having several health promoting abilities which are listed below:

**Table 1: Possible health benefits of pearl millet on various diet related diseases/ disorders and deficiency**

Disease/problem	Possible benefit	Positive factor in pearl millet
Anaemia	may Help in increasing the Hb	High iron content (8 mg/100 g) , high zinc content (3.1 mg/100 g)
Constipation	May help in dealing with constipation	High fibre (1.2 g/100 g)
Cancer	Anti-cancer property inhibits tumor development	Antioxidant property, high flavonoids
Diabetes	Help in dealing with diabetes	Has low glycemic index
Celiac	Anti-allergic	Gluten free
Diarrhoea	Probiotic treatment	Lactic acid bacteria
NCDs	Inhibits DNA scission, LDL cholesterol, liposome oxidation and proliferation of HT-29 adenocarcinoma cells	Flavonoids, phenolics, Omega 3 fatty acids



- Bajra is rich in magnesium; which helps the cardio-vascular system by lowering blood pressure, which in turn helps in reducing the chances of heart attack or stroke. It also contains certain plant lignans that get converted into animal lignans in the body. These lignans are also known for preventing heart disease. Bajra is also known for controlling your cholesterol levels. Bajra roti can be consumed by patients suffering cholesterol problem patients. This is because it contains a lot of fibre, which goes a long way in lowering the bad cholesterol in the bloodstream. This also prevents the arteries from getting clogged up and protects the heart from cardio-vascular disease.
- Bajra flour has high amounts of magnesium in it, due to which it helps in controlling the glucose receptors in the body. In the populations that have bajra or magnesium-rich foods in their diet, the occurrence of diabetes is reduced by at least 30 per cent. The foods that are rich in fibre are very good for the digestive system and helps in having regular and better bowel movements as it bulks up the stool and stimulates peristalsis, which moves it to the colon. Bajra also helps prevent a number of digestive issues like gas, stomach pain, cramping, ulcers, acidity, inflammation and even colon cancer.
- Bajra is filled with antioxidants which help in getting rid of free radicals from the body and thus help in clearing up random toxins from the body such as the ones that are present in liver and kidney.
- Bajra is also rich in vitamin B components. This means that it helps to break down the carbohydrates and fat in the body. It also has high amounts of niacin in it, which helps to increase the good cholesterol, HDL in the body and can also help in preventing haemorrhage.
- Bajra also contains high amounts of protein and thus help in cellular and muscular growth and regeneration. Furthermore, bajra also helps prevent muscular degeneration as one grows older.

### References

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