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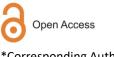


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Ancient Wisdom : The Millets

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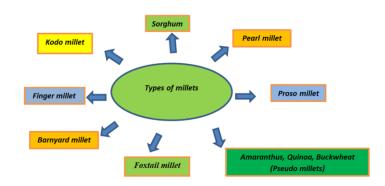
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INTRODUCTION

Now a days cereal grain like rice and wheat contribute major portion of our daily diet with this we lack large portion of dietary fibres, minerals, vitamins and antioxidants in our daily routine diet. So keeping in the view year 2023 is considered as international millets year with the concept of inclusion of millets in our daily diet. Millets are ancient small seeded grain are commonly consumed worldwide by all the people and it is consider as Nutri-cereal with high nutritional content as compare to other cereal crops as well as it can be the better way to fight with chronic disease incidence such as diabetes, cardiovascular disease cancer and it became more alarming during Covid-19. Millets are the first to be domesticated and as a traditional staple crop in sub Saharan Africa and Asia and known to be super food ,rich in dietary fibres, calcium, iron and phosphate and many more.

Cancer incidence (Per 100,000 people)

| Cancer incidence (Per 100,000 people) | | | | |
|---------------------------------------|-----|--|--|--|
| USA | 362 | | | |
| Singapore | 233 | | | |
| World | 201 | | | |
| India | 106 | | | |
| Source: WHO, Globocan 2020 | | | | |





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According the WHO report about 820 million people in the world suffer from chronic hunger. In this direction to overcome, millets are the best option or can say it has the

potential to food and nutritional security to the nation along with shifting in dietary pattern and life style changes.

| Types | of millets: | | | | | |
|-------|--------------------------------|------------------|--|--|--|--|
| | There are two types of millets | | | | | |
| | A. Millets | B. Pseudomillets | | | | |
| | Sorghum | Amaranthus | | | | |
| | Pearl millet | Quinoa | | | | |
| | Proso millet | Buckwheat | | | | |
| | Finger millet | | | | | |
| | Fox tail millet | | | | | |
| | Barnyard millet | | | | | |
| | Kodo millet | | | | | |

Sorghum: Scientific name sorghum bicolor

It is an ancient cereal with high nutritive value also known as Great millet. This millets finds its origin in Africa and 5th most important cereal crop after rice, wheat, maize and barley. It has been found that it is rich in fibre, protein, iron, vitamin, Magnesium, calcium, potassium, zinc and policosanols which is very helpful in managing cholesterol. Good source of animal feed also. It can grow on a wide range of soil one of the most drought resistant crop.

Pearl millet: Scientific name-Pennisetum glaucum

Pearl millet is also known as magical millet popularly used and consumed in N-W part of Haryana after wheat . It is the most widely grown type of millet and consume in winter for various health benefits. Due to non- glutinous nature it is a healthy option for those who having gluten allergy, slowly digested carbohydrate help to maintain stable level, glucose prevent constipation and provide rich amount of energy, high in Phosphorus content help in making bones stronger. This millet can grow in less fertile soil with high temperature.

Proso millet: Scientific name-Panicum miliaceum

Also known as Cheena, broom corn millet, common millet, hog millet, red millet etc. Its origin from about 10,000 years ago in North China. Have short life span of about 60 days. It also has a low glycemic index and rich in fibre, protein, mineral, vitamins, amino acids and very helpful in repairing of neural health system.

Finger millet: Scientific name-Eleusine coracana

Ragi is also known as Finger millet, place of origin is East African region These are rich in vitamin B, mineral and dietary fibre. Consumption of finger millets gives many health benefits such as reduce the risk of anaemia women. bone in strengthening, due to high in fibre it is slowly digestable. Having malting properties too, so it is widely used in the food processing industry to prepare baking products.

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Foxtail millet: Scientific name-Setaria italica

It is also known as Kangani and 2nd most planted species of the millet family, originated in china. It is an important crop of arid and semi- arid region. Due to high magnesium content it is good for heart disease. Rich source of nutritive properties and can be used in preparing various item like noodles, pancake, soup , cereal porridge etc.

Barnyard millet: Scientific name-Echinochloa esculenta

Commonly known as Sawan, originated in tropical Africa. Well adaptive in nature and can grow in area where the land is unsuitable for other crops. Rich source of calcium, iron, Potassium, Magnesium and zinc with more other health benefits.

Kodo millet: Scientific name-Paspalum scrobiculatum

Also known as Ditch millet, originated in tropical Africa. Hardy, drought tolerant crop and can survive where other cereal crop find difficult to survive. It can be consumed as floor as best substitute to rice. Kodo millet is rich in lecithin which have beneficial role in proper functioning of the nervous system also contain polyphenols an antioxidant compound.

B. Pseudomillets: Amaranthus, Quinoa, Buckwheat:

These are the cereals but other than the Poaceae family but have similar chemical composition as the other millets and also have high nutritive value. But due to lack of extension support, market disposal but able to grow on low poor marginal land.

The nutritive of different types of millets is mentioned below:

| | Nutrients (mg/100g) | | | | | | | |
|-----------------|---------------------|-----|------------------|--------|------|---------|--|--|
| Name of millet | Protein | Fat | Dietary Fibre | Starch | Iron | Calcium | | |
| Sorghum | 11.0 | 3.2 | 11.8 | 73.8 | 3.4 | 13 | | |
| Pearl millet | 14.5 | 5.1 | 7.0 | 60.5 | 16.9 | 38 | | |
| Proso millet | 11.0 | 3.5 | 8.5 | 56.1 | 0.8 | 14 | | |
| Finger millet | 7.3 | 1.3 | 19.1 | 59.0 | 3.9 | 344 | | |
| Fox tail millet | 11.7 | 3.9 | 19.1 | 59.1 | 2.8 | 31 | | |
| Barnyard millet | 10.5 | 3.6 | 16.1 | 60.5 | 15.2 | 11 | | |
| Kodo millet | 8.3 | 1.4 | 37.8 | 72.0 | 0.5 | 27 | | |

Health Benefits:

- Millets are more healthier as compare to other cereal like rice and wheat.
- Good source of micronutrient like iron, zinc and calcium
- Rich in dietary fibres and antioxidants
- They are good source of protein, carbohydrate, fibres along with various amino acids
- Having low glycaemic index and with gluten free properties

- Rich in polyphenols and phytoharmones
- They also contribute to animal health also

Millets also consider as a organic food with less use of chemical fertilizer which directly and indirectly help to protect soil health and status too. Thus it can be called as ancient wisdom with the potential to provide many health benefits in present scenario. This is not new but it is our ancient wisdom which have been lost or faded from our nutrithali due to life style changes. The contribution of



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millets in our life not only improving our health but also enhancing soil status with environment too by contributing towards sustainable agriculture. The large land area which is unsuitable for cereals production and abrrent rise in temperature, the millets can grow easily with minimum cost, effort, maintance, low water requirement. So by adopting our Ancient wisdom –The millets, environment, soil, human and animal health can be improve in a positive way.