



## Millets : Health Foods for the Future

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### INTRODUCTION

The United Nations General Assembly at its 75th session in March 2021 declared 2023 the **International Year of Millets (IYM 2023)**. FAO is the lead agency for celebrating the Year in collaboration with other relevant stakeholders. Millets can grow on arid lands with minimal inputs and are resilient to changes in climate. They are therefore an ideal solution for countries to increase self-sufficiency and reduce reliance on imported cereal grains.

Millet is one of the most important drought-resistant crops and the 6<sup>th</sup> cereal crop in terms of world agriculture production. Also, millet has resistance to pests and disease, short growing season, and productivity under drought conditions, compared to major cereals. Millets are small-seeded with different varieties such as pearl millet (*Pennisetum glaucum*), finger millet (*Eleusine coracana*), kodo millet (*Paspalum setaceum*), proso millet (*Penicium miliaceum*), foxtail millet (*Setaria italic*), little millet (*Panicum sumatrense*), barnyard millet (*Echinochloa utilis*) and sorghum (*Sorghum bicolor*) (Ahmed et. al., 2013 ).

It has a tiny, pale, yellow seed with a nutty flavour that lends itself well to being cooked and eaten whole. With gradually increasing human population, millets are acquiring a status in the diet of health conscious consumers. This is the vital food crop millions of people in part of Africa and Asia. They are underutilized food resource in most developed countries, and it has considerable potential to be used as human food and beverage source. In India, millets are still the staple to large section of people in semi-arid region (Talukder and Sharma, 2015).

India is the largest producer of millets and these grains have been staple food for sustaining lives of the million of the poorest and rural people. It will continue to do so in foreseeable future due to its richness in nutrient such as carbohydrate, protein, fibre

and well balanced amino acid profile. Besides these, millets as considered as good source of several non nutrient compounds like phenols, flavonoids, phytates, tannin, glucosides etc. and playing important role in human health (Gupta et. al., 2012).

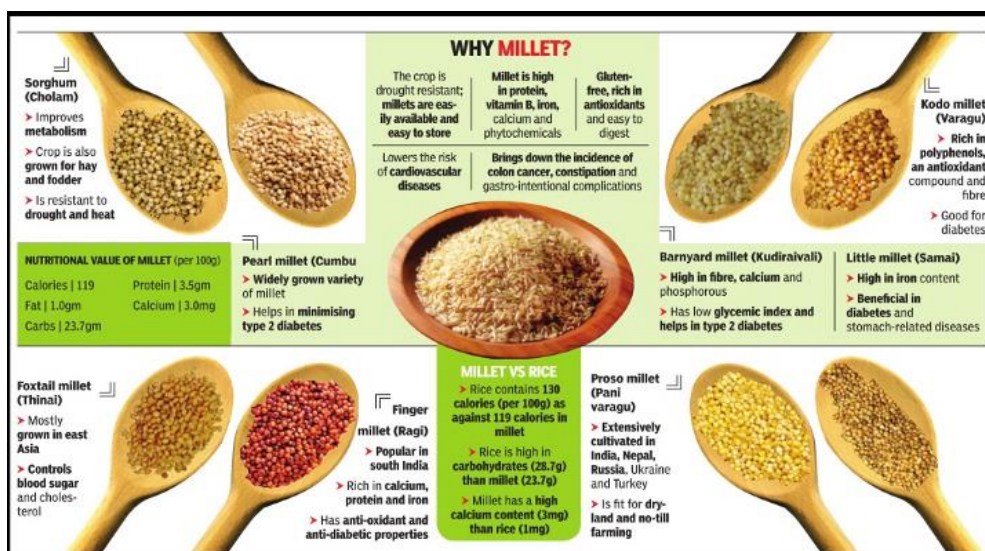


Photo 1- Different types of millets

### Millets as Climate Change Compliant Crops

All these qualities of millet farming system make them the climate change compliant crops. Climate change portends less rain, more heat, reduced water availability and increased malnutrition. If there is any cropping system that can withstand these challenges, survive and flourish, it is the millet system. It is important to note that with the projected 2 degree celsius temperature rise, wheat might disappear from our midst, since it is an extremely thermal sensitive crop. Similarly,

the way rice is grown under standing water makes it a dangerous crop under climate change conditions. Methane emanating from water-drenched rice fields, is a green house gas, that severely threatens our environment. Millets are all-season crops cultivated round the year whereas wheat is season specific. While wheat and rice might provide only food security, millets produce multiple securities (food, fodder, health, nutrition, livelihood and ecological) making them the crops of agricultural security.

Table 1- Top world millet grains producers (2010)

Country	Production (Tons)
India	334500
Niger	108798
Nigeria	59994
Mali	43878
Senegal	30995
China	26429
Burkina Faso	20428
Russian Federation	20000
Chad	14775
Uganda	11750
Sudan	11000
<b>World Total</b>	<b>762712</b>

Source: FAO (2012).

### **Millets do not demand synthetic fertilisers**

Millets do not demand chemical fertilizers. In fact, under dry land conditions, millets grow better in the absence of chemical fertilizers. Therefore, most millet farmers grow them using farmyard manure under purely eco-friendly conditions. In recent years farmers have also started using bio-fertilisers such as vermin-compost produced in their backyard and growth promoters such as panchagavya, amrit pani etc. These practices make millet production not only ecofriendly but stays under the control of farmers.

### **Millets are pest free crops**

Growing traditional local landraces and under ecological conditions, most millets such as foxtail are totally pest free and hence do not need any pesticides. Even in storage conditions, most millets such as foxtail not only not need any fumigants, but act as anti pest agents to store delicate pulses such as green gram.

### **CONCLUSION**

While single crops such as rice and wheat can succeed in producing food security for India millets produce multiple securities. They include securities of food, nutrition, fodder, fibre, health, livelihood and ecology. Most millets have edible stalks which are the most favoured fodder for cattle. Many a time, crops such as sorghum and pearl millet are grown only for their fodder value. Besides fodder, millets are storehouses of nutrition and hence produce nutrition security. Being hosts to diverse crops such as red gram, millet fields also produce fuelwood and fibre through

amaranth. The legume crops that are companion crops for millets are also prolific leaf shedders. This leaf fall acts as natural manure and maintains soil fertility. Thus, millet farms not just use soil fertility for their growth but also return this fertility to the soil.

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