

## Millets: Food for Future

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### Introduction

Millets are considered as “Miracle grains” as they require less water vis-a-vis other crops and can be grown in drought conditions. Millets are our traditional food but after green revolution become less popular among farmers and consumers as well. In rain fed areas, millets are major source of farmer’s income and hope. 2023 is taken as International year of millets with aim of taking “Millets to millions”. Millets are smart food as they are good for planet, good for farmer and good for health.

Millets , a group of small cereal grains belonging to grass or family Poaceae, incredibly nutritious and environmental friendly. Cereals consumed for centuries in India, are making a comeback in our diets. “Magic of Millets” can be realized as:

- **Food security:** Millets are the sustainable food source for combating hunger in changing world climate. Millets are resistant to climate stress, pests and diseases.
- **Nutritional security:** Millets are rich in micronutrients like calcium, iron, zinc , iodine etc. Rich in bioactive compounds and antioxidants and have better amino acid profile.
- **Safety from diseases:** It is gluten free , so good substitute for wheat in celiac disease. It is good for diabetic patient and can help to combat cardiovascular diseases, anaemia and calcium deficiency, help in optimizing kidney , liver ,immune system and prevents constipation etc.
- **Economic security:** Millets are climate resilient crop and provides sustainable income to farmers. Low investment needed for its production and value addition leads to economic gains.

Despite of its benefits , millets largely remain a neglected grain today. But this was not the case around 50 years ago . While during 1950-51, millets constitute almost third position among all major food grains in India but this reduced to only 15% by 2018-19. During green revolution focus was in increasing the food production through adopting



modern technologies and high yielding varieties, the production of wheat and rice was enhanced and promoted. The area under production of millets shrank. India is realizing the potential of this miracle grain again. These coarser grains were looked upon as a part of poor man's diet, thus Indian government in 2018 declared millets as "nutricereals"

Millets are in need of time as according to WMO, there is an increase in temperature by 1.5 degree C within the next five years. This will impact the productivity of cereals, threatening the food security of billions of people. Millets are hardy crops, resilient to high temperature and drought conditions, thus a good alternative. Due to the Russia-Ukraine war, major impacts on wheat and edible oils shortages are seen, majorly in Africa. Millets are productive enough to grow in Africa. In such circumstances, there is a need to decrease dependency on monocropping of Rice – Wheat system and start growing other crops according to the area's potential. Prices of cereals are also increasing, so to make nutrition pocket friendly millets are light in dark.

As India is a larger producer of millets, by creating global demand and awareness for millets, our Indian small and marginal farmers will get huge market potential in domestic as well as in international markets and get handsome profits.

Millets help to attain sustainable development goals in agriculture because of their high input efficiency and high nutritional content which helps in nutritional security of the world. Moreover, their C<sub>4</sub> pathway and resilience to various stresses make them a golden crop of the future. Millets are efficient enough to combat hidden hunger in developing countries. Cereal-legume intercropping is more popular but intercropping with small millets also gets interests due to its numerous benefits.

Many people relate millets with spiritual benefits because of their effect on body and mind, in contrast millets are believed to create synchronicity between mind and body. So consume them for a "Healthy body, mind, and soul". Various recipes are released by the International Institute of Millets to make millets consumed worldwide like Kodo millet burger, bajra tarts with fruit custard, ragi dosa, foxtail millet porridge and many more.

A complete roadmap has been prepared by the government. To make a step forward, in making millets a super food, in government schools millets are included in mid-day meals which show a 50% boost in children's growth. Different types of support will be provided for post-harvest addition and branding millet production nationally and internationally. Many non

profit organizations, farmers organization are working towards achieving greater cultivation and marketing of minor millets in India.

Some of the key government programmes and project for promotion of small millets include initiative for nutritional security through intensive millet promotion, National mission on sustainable agriculture, Rainfed area development project (RADP), National food security act 2013 etc. Also ICAR and state agriculture universities have develop technologies for making several products from millets. IIMR Hyderabad is working with a vision of Transforming millets cultivation from subsistence farming to globally competitive through cost effective and environment friendly production, processing and value addition technologies and supply chain networks. “Millets were the first crop, Millets are the future crops”.

Major millets are: pearl millet and finger millet

Nutrients(g/100g)	Pearl millet	Finger millet
Protein	11.6-11.8	7.7
Fat/ Lipids	4.5-5	1.8
Minerals	2.2-2.3	2.7
Dietary fibre	11.3	15-22