

MILLETS PRODUCTION AND PROCESSING

Shivani Dubey
Nirwan University Jaipur, Jaipur

INTRODUCTION

The word Millet is derived from French word “mille” which means that a handful of millet contains thousand of seed grains. millets are predominantly classified into two major groups (1) major millets, viz., Sorghum (*Sorghum bicolor*) and pearl millet (*Pennisetum glaucum*) (2) minor millets, viz., finger millet (*Eleusine coracana*), kodo millet (*Paspalum scrobiculatum* L.), foxtail millet (*Setaria italica*) barnyard millet (*Echinochloa species*) and little millet (*Panicum sumatrense*). Millets are major source of energy and protein for millions of people in Asia and Africa. Millets are good source of carbohydrates, energy and protein, fat iron, calcium dietary fiber and gluten free also, which helps to prevent from many diseases like diabetes, cataract genesis and cardiovascular diseases. In today's senior we are suffering from many environmental changes, water shortage, population increment, decreasing yields of major cereals. For this condition millets are better option for us to cultivate more and more. The top five producers of millets in the world are India, Nigeria, China, Mali, and Burkina Faso. In India, the major millet producing states are Rajasthan, Uttar Pradesh, Andhra Pradesh, Telangana, and Karnataka. Consumption of millet and its products is decreasing due to rapid rate of urbanization, the change in consumer habits, inadequate domestic structure, energy and time required to prepare the foods based on millets, processing techniques, underprivileged facilities of marketing, and relative unavailability of millets and its products, unstapled supplies, comparison of millet with other foodstuffs. The commercial processing mechanical polishing or pearling is unknown for millet but for rice, maize and wheat is well known. Large imports of rice and wheat and subsidized production policies of those crops in some countries also

affect the millets production. If technologies for millets are developed in industries for millets in future then Millets could be in great demand.

PRODUCTION OF MILLET

According to the Food and Agriculture Organization (FAO), the global production of millets in 2020 was approximately 32 million metric tons. India is the largest producer of millets, accounting for about 40% of the world's total production. Other major millet-producing countries include Nigeria, Niger, Mali, Burkina Faso, Sudan, and China.

Despite the importance of millets for food security and nutrition, their production has been declining in recent years due to a shift towards higher-yielding crops like wheat and rice. This has led to concerns about the loss of genetic diversity and the impact on food security, particularly in developing countries. However, there is growing interest in promoting the cultivation and consumption of millets as part of efforts to promote sustainable agriculture and healthy diets.

In case of India, during 1965-66 these crops were cultivated in 36.90 million ha, producing 16.4 million tones grains, but in 2017-18 cultivation area was decreased to 14.25 million ha around 61.4% of reduction which produced 16.4 million tones. However, an increase in production during 2017-18, has been noticed regardless of more than 61.4% reduction in area under Nutri-Cereals during this period.

Government of India has promoted some programs to increase the production of millets that is decreasing day by day. One such program is IYOM that includes all the practices to promote awareness regarding various benefits of millets.

INTERNATIONAL YEAR OF MILLETS (IYOM)-2023

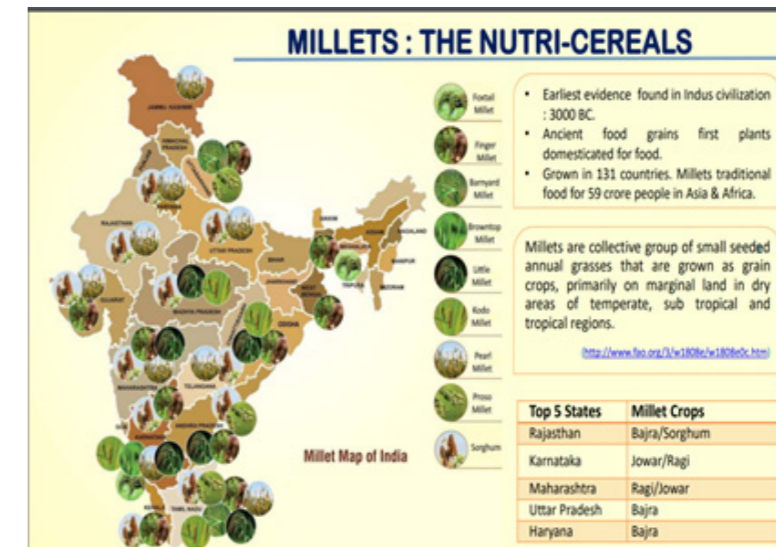
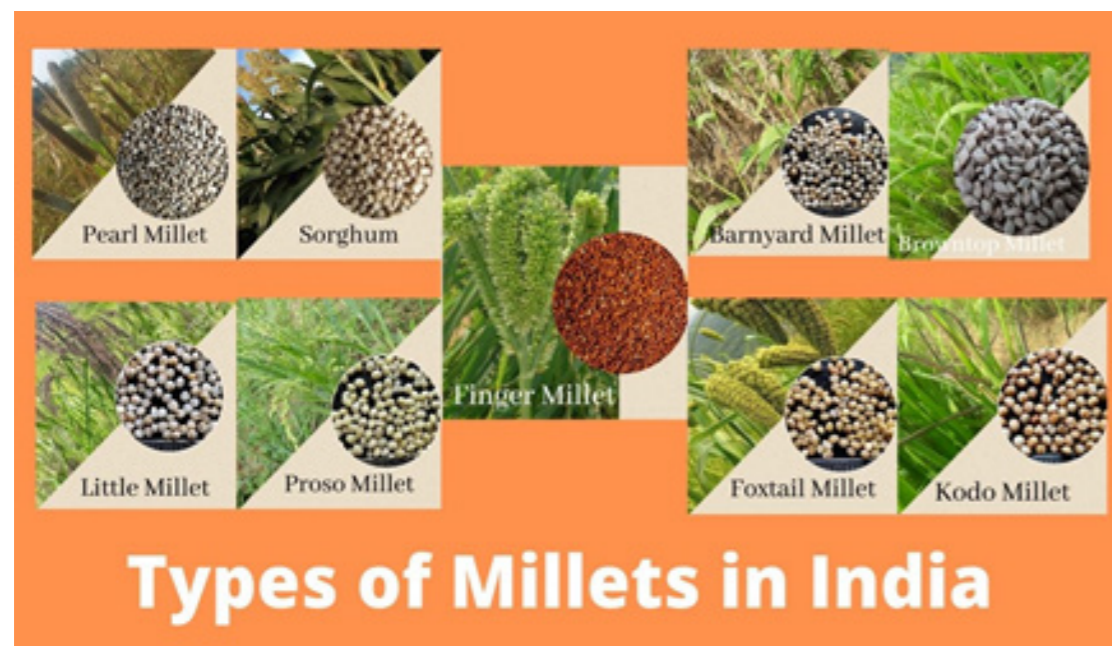
- ✓ Government of India had proposed to United Nations for declaring 2023 as International Year of Millets (IYOM). The proposal of India was supported by 72 countries and United Nation's General Assembly (UNGA) declared 2023 as International Year of Millets on 5th March, 2021.
- ✓ Now, Government of India has decided to celebrate IYOM, 2023 to make it peoples' movement so that the Indian millets, recipes, value added products are accepted globally.

The objectives of the International Year of Millets 2023 include:

1. Raising awareness about the importance of millets for food security, nutrition, and sustainable agriculture.
2. Encouraging the cultivation and consumption of millets to promote healthy diets and combat malnutrition.
3. Promoting research and innovation to enhance millet production, processing, and value addition.
4. Strengthening the capacity of farmers, especially smallholders, to cultivate millets sustainably and improve their livelihoods.
5. Facilitating partnerships and collaborations among stakeholders to promote the production and consumption of millets globally.

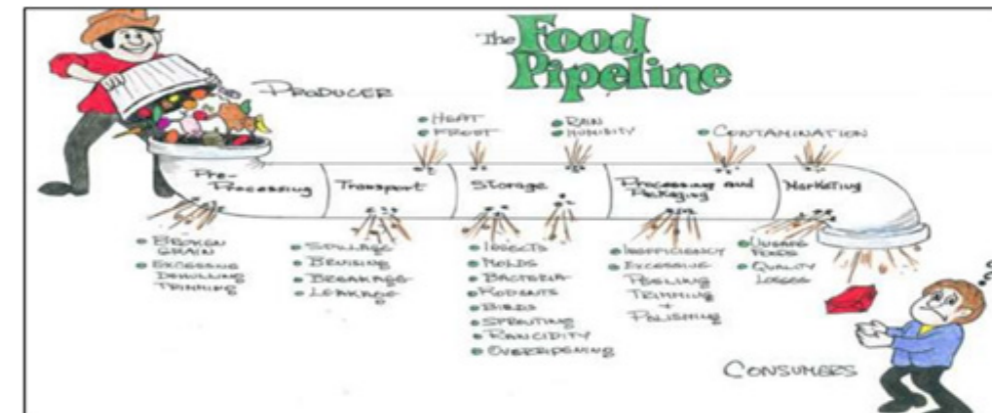
The International Year of Millets 2023 presents a unique opportunity to raise awareness about the potential of millets to contribute to sustainable development and promote healthy diets. It is hoped that this initiative will lead to increased investments in millet production, research, and development, and ultimately contribute to achieving the United Nations Sustainable Development Goals.

TYPES OF MILLETS IN INDIA



POST HARVEST PROCESSING OF MILLETS

Post-harvest processing is a crucial step in the production of millets, as it helps to increase their self life, improve their quality, and increase their value. The following are some common points.



- ✓ **Drying** - to reduce moisture content and prevent spoilage.
- ✓ **Cleaning** - to remove foreign material and impurities.
- ✓ **Hulling** - to remove the outer layer of the grain and increase the overall quality of the product.
- ✓ **Grading** - to sort the grains based on size and weight to produce uniform products.
- ✓ **Milling** - to convert the grains into flour or other products.
- ✓ **Packaging** - to protect the processed millets from moisture, light, and other environmental factors, and to make them more convenient to transport and store.
- ✓ **Fortification** - To add micronutrients to the processed millets to enhance their nutritional value. These post-harvest processing techniques help to ensure the quality, safety, and marketability of millets, making them more attractive to consumers and increasing their potential for use in a wide range of food products.