

Strategies & Planning's to Promoting Millets Production in India

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Introduction:

Millets are one of the oldest foods, these are the small-seeded hardy crops which can grow well in dry zones or rain-fed areas under marginal conditions of soil fertility and moisture. Millets are cultivated in low-fertile land, tribal and rain-fed and mountainous areas. These areas include Haryana, Uttar Pradesh, Chhattisgarh, Gujarat, Rajasthan, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu and Telangana. Due to their short growing season, millets can develop from seeds to ready to harvest crops in just about 65 days. This highly beneficial characteristic of the millets is of vital importance in thickly populated regions of the world. If stored properly, millets can keep well for two years or beyond. Millets can not only grow in poor climatic or soil conditions and provide nutritious grain as well as fodder, but these can also very well fit into multiple cropping systems under irrigation as well as dryland farming due to their short growing season. The prolonged and easy storability of millets under ordinary conditions has given them the status of Famine Reserves and this feature is of great importance for India, as the agriculture of our country suffers from unexpected changes in monsoon.



Types of Millets in India:

The millets commonly grown in India include Jowar (sorghum), Bajra (pearl millet), ragi (finger millet), Jhangora (barnyard millet), Barri (Proso or common millet), Kangni (foxtail/Italian millet), Kodra (Kodo millet) etc. Let us read about them in detail and also learn their regional names.

1. Barnyard Millet is a high source of iron and fibre. It is known as Kuthiravali in Tamil, Oodhalu in Kannada, Odalu in Telugu, Kavadapullu in Malayalam and Sanwa in Hindi.
2. Finger Millet is a staple that is a very good substitute for oats and cereals. It is known as Ragi in Kannada, Ragulu in Telugu, Kelvaragu in Tamil, Koovarugu in Malayalam and Mundua in Hindi.
3. Foxtail Millet is rich in minerals and vitamins. It is known as Thinai in Tamil, Kirra in Telugu, Thinna in Malayalam, Navane in Kannada and Kangni in Hindi.
4. Little Millet is also loaded with iron and fibre, the regional names are Chama in Malayalam, Same in Kannada, Samai in Tamil, Sama in Telugu and Kutki in Hindi.
5. Proso Millet is known as Barri in Hindi, Panivaragu in Tamil & Malayalam, in Kannada it is called Baragu and Varigalu in Telugu.
6. Pearl Millet is a high source of proteins, it is known as Bajra in Hindi, Sajje in Kannada, Sajjalu in Telugu, Kambu in Tamil and Kambam in Malayalam.



Sorghum



Pearl Millet



Foxtail Millet



Little Millet



Kodo Millet



Proso Millet



Barnyard Millet



Browntop Millet



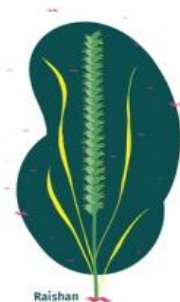
Guinea Millet



Black Fonio



White Fonio



Raishan



Job's tears



Finger Millet



Teff

Importance of Millets:

According to the Ministry of Agriculture & Farmers Welfare, in 2016 – 2017, the area under the cultivation of millet declined with 60% less coverage area (to 14.72 million hectares) due to change in consumption pattern, conversion of irrigated area for wheat and rice cultivation, unavailability of millets, low yield, dietary habits, less demand. This resulted in fall in the level of nutrients like vitamin-A, protein, iron and iodine in women and children leading to malnutrition. With regard to the Global Hunger Index – GHI, India ranks 64 among the 81 nations. It occupies second place in child malnutrition highlighting the poor plight of our country. This scenario persists when the Public Distribution System and Targeted PDS are working for nearly five decades. The reason is that the focus has been only on wheat and rice distribution while the millets have long been disregarded. Among the food crops, millets occupy a relatively lower position in Indian agriculture, though they are really important from the point of food security at the regional and household level. Bearing this in mind, below given are points that highlight the importance of millets:

1. Most of the millets are non-acid forming, non-glutinous, highly nutritious, and easily digestible foods. Due to low glycaemic index (GI) being gluten-free, it helps in a slower release of glucose over a longer period of time thus reducing the risk of diabetes mellitus. Individuals suffering from celiac disease can easily incorporate various millets in their diets.
2. Millets are rich sources of minerals like calcium, iron, zinc, phosphorus, magnesium, and potassium. It also contains appreciable amounts of dietary fibre and vitamins such as folic acid, vitamin B6, β - Carotene, and niacin. The availability of high amounts of lecithin is useful for strengthening the nervous system. Therefore, regular consumption of millets can help to overcome malnutrition.



3. Although Millets are rich in phytochemicals like tannins, phytosterols, polyphenols and antioxidants, they do contain some anti-nutritional factors which can be reduced by certain processing treatments.
4. Millets have a wide capacity for adaptation because they can grow from coastal regions of Andhra Pradesh to moderately high altitudes of North-eastern states and hilly regions of Uttarakhand. Millets can withstand variations in moisture, temperature and the type of soils ranging from heavy to sandy infertile lands.

Government Measures to Increase Millet Production:

Despite numerous qualities, utilization of millets as food is confined to the traditional consumers i.e. tribal populations. This is mainly because of the non-availability of consumer-friendly ready-to-eat millet-based products. Recently, millets have gained attention and efforts are underway to obtain their convenient and value-added processed products. Since many households in dry land and hilly regions depend on millets to meet their food needs, It has now been proposed to enlarge the food basket and include millets like jowar, bajra, ragi etc in the Public Distribution System. Government has recognized the role of millets in the food chain. Under the National Food Security Mission – NFSM of the preliminary targets for enhancing food grain production by an additional 25 Million Tonnes, the share allocated for millets is 2 Million Tonnes i.e. 8% of the enhanced food grain production. The Indian policymakers refocused their attention towards millet farming systems and enacted policies to create an enabling environment for the farmers. With respect to millets production, some of the existing schemes by the Government of India include:

1. Integrated Cereals Development Programmes in Coarse Cereals ICDP-CC based Cropping Systems Areas under Macro Management of Agriculture -MMA.
2. Initiative for Nutritional Security through Intensive Millet Promotion – INSIMP a part of Rashtriya Krishi Vikas Yojana” – RKVY which is the only comprehensive initiative to support millet production.
3. RainfedAreaDevelopment Programme–RADP: a component of the Rashtriya Krishi Vikas Yojana – RKVY.



Advantages of Millet production:

Millets have often been called the coarse grains, however, because of their nutritional contributions they are now being referred to as ‘nutria-millets or nutria-cereals’. Given below are some of the advantages of Production of Millets in India.

1. Millets are termed as the ‘miracle grains’ or ‘crops of the future’ as they can not only grow under harsh circumstances but are drought-resistant crops that require fewer external inputs.
2. Millets are dual-purpose crops. It is cultivated both as food & fodder, thus providing food/livelihood security to millions of households and contributing to the economic efficiency of farming.
3. Millets contribute to mitigating climate change as it helps reduce the atmospheric carbon pressure CO₂. On the contrary, Wheat being a thermally sensitive crop and Paddy is a major contributor to climate change through methane emission.
4. Production of millets does not depend on the use of chemical fertilizers. The millet crops do not attract pests and are not affected by storage.
5. Millets are remarkable in their nutritive value be it vitamins, minerals, dietary fibre or other nutrients. It is nearly 3 to 5 times nutritionally superior to wheat and rice. Sorghum (Jowar) is an important source of polyphenols, antioxidants, and cholesterol-lowering waxes.
6. Millets help in curbing obesity, lowers the risk of hypertension, CVDs, T2DM, cancers as well as helps in preventing constipation due to their high dietary fibre content coupled with low glycaemic index.

Summary & Conclusion:

Apart from creating business opportunities, Millets also aid in the prevention of numerous non-communicable lifestyle diseases such as diabetes, hypertension, and cardiovascular disease and are considered to be a potential choice or solution to lessen the negative effects of rising malnutrition and to improve the food and nutrition security of the nation. Due to their adaptability to a wide range of temperatures and moisture regimes as well as their low input requirements, millets are resistant to climate change. They are resilient crops with small water and carbon footprints. Millets can withstand droughts and can even survive on 350–400 mm of rain making them an ideal crop for production. Therefore, to ensure food and



nutrition security for our country, it is important to increase the production of these crops and simultaneously revert the control of production, distribution and consumption back to the people.

