

Finger Millet: A ‘Certain’ Crop for an ‘Uncertain’ Future: Food Security

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Malnutrition: The condition that develops when the body does not get the right amount of vitamins, minerals and other nutrients, being one of the universal public health issues affecting populations worldwide.

Crops that have been failed to remember over the course of the past century are being rediscovered. Researchers and policymakers are presently starting to perceive the worth of supposed ‘vagrant’ crops, asserting what neighbourhood network has known for ages. Millets also known as ‘dismissed and underutilized’, minor or ‘promising’ crops, orphan crops have been overlooked by researchers, extension services and policy makers, government rarely allocate resources for their promotion and development. That outcome in ranchers establishing them on rare occasions, diminished admittance to top notch seeds, and loss of conventional information. However these ignored and underutilized crops can help to increase the diversification of food production, adding new species to our diet that result in the better supply of particular nutrients, i.e. fundamental amino acids, fibre, proteins.

In addition, millets have economic and environmental benefits in addition to varying dietary consumption. In order to preserve and improve agro-biodiversity at the field level, farmers can cultivate them alone, as a component of crop rotation system, or by interplanting them with other crops. Farmers can have a more sustainable production system by having a greater variety of species to choose from in a crop rotation system. The cycle of some pest and diseases is disturbed and the probability of infestation is decreased by changing the species used in a crop rotation system.



The generic name *Eleusine* is derived from the Greek goddess of cereals, “*Eleusine*” while the common name finger millet indicates “finger-like” branching of the panicle. Finger millet is now more referred as a nutri-cereal or a nutraceutical crop and is viewed as a potential global solution to malnutrition and unrecognised hunger. It is essential for the diet of pregnant and lactating mothers and children as well as for the economy of marginal farmers. Its grains are rich in protein, vitamins, mineral, fibre content and energy as compared to other cereals (Vadivoo et al., 1998). Additionally, it is fortified with useful amount of copper, manganese, phosphorus and iron as well as comparatively greater levels of chromium, magnesium, molybdenum, zinc and selenium (Shashi et al., 2007 Tripathi and Platel, 2010). With up to 60% digestible nutrients, finger millet straw is good as animal feed. Its seed coat is rich in phytochemical like dietary fiber and polyphenols and is also very high in minerals especially calcium (Devi et al., 2014). The seed coat also show anti-cancer and anti-diabetic activities, mainly due to its high polyphenol content that indicates anti-oxidant activity and high fibre that promote slow digestion and blood sugar stability (Devi et al., 2014). Therefore, finger millet has maintained socio- economic importance in the context of subsistence farmers of the India semi- arid tropic regions (Gull et al., 2014). The finger millet grains are even superior to rice and wheat as it contains essential amino acid such as methionine and tryptophan, (Fernandez et al., 2003)

Finger millet is highly nutritious as its grains contain 65-75% carbohydrates, 5-8% protein, 15-20% dietary fibre and 2.5-3.5% mineral (Chetan and Malleshi, 2007). It is gluten free and hence can be a beneficial for patient suffering from celiac disease (Pagano, 2006) as a strict gluten free diet is currently the only treatment for this disease. Also, the risk of diabetes and gastrointestinal tract ailments could be efficiently reduced with regular consumption of finger millet. In addition to its superior nutritional value, it make a great model for investigating large genetic and genomic potential due to its resilience to a variety of abiotic condition and resistance to infections. As a result, it might be one of Africa’s oldest native domesticated tropical cereals. It is a very productive crop that can survive in a wide range of challenging environmental circumstances. It is a boon for the vast arid and semi-arid regions because it can be produced soils and on low fertility soils and doesn’t require the use of chemical fertilizer.