

Nutritional Importance of Millets

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Abstract: *Millets are a group of highly variable small-seeded grasses, which were widely grown around the world as cereal crops. Millets are tiny in size and round in shape, and it can be multi-colour like white, grey, yellow or red. Millets are highly nutritious. The millets are three to five times nutritionally superior to rice and wheat in terms of proteins, minerals and vitamins. Millets are rich in vitamin B, calcium, iron, potassium, magnesium, zinc, also gluten-free and has low GI (Glycemic index) thus millets are suitable for people allergies/intolerance of wheat and diabetic. Pearl millet is grown largely for its ability to produce grain under hot, dry conditions on infertile soils of low water-holding capacity, where other crops generally fail completely. The combination of poverty and severe environmental conditions makes it difficult to improve productivity in pearl millet. While yields are growing in Asia, many African producers are unable to raise yields because of the Continuing expansion into even drier and harsher agroecologies and poor adoption of “improved” technologies in these environments. A major reason for poor adoption is that some of these technologies are expensive or otherwise inappropriate for these harsh environments.*

Keywords: Millets, Nutritional Value, Pearl Millet

I. INTRODUCTION

Millets are a group of highly variable small-seeded grasses, which were widely grown around the world as cereal crops. Millets are tiny in size and round in shape, and it can be multi-colour like white, grey, yellow or red. Millets are highly nutritious. The millets are three to five times nutritionally superior to rice and wheat in terms of proteins, minerals and vitamins. Millets are rich in vitamin B, calcium, iron, potassium, magnesium, zinc, also gluten-free and has low GI (Glycemic index) thus millets are suitable for people allergies/intolerance of wheat and diabetic. Worldwide, millets are regarded as a Nutri-cereals, however, they are the least exploited. Millet grain is copious in nutrients and health-beneficial phenolic compounds, making it suitable as food and feed. For thousands of years, millets has been growing such as Pearlmillet, Barnyard millet, Sorghum, Foxtail millet, Little millet, Kodo millet, Proso millet and now ANI (Millet Network of India) promotes millets as Nutri-cereals instead of Coarse Cereals. The Millet Network of India supports millet farmers. It was created by one hundred women who realized the qualities and benefits of the traditional crops. The group have helped village farmers to grow millet with low water usage and organic fertilizer while highlighting the injustice of government subsidies which encourage competitor crops like rice.

Types of Millets

Pearl millet (*Pennisetum glaucum*) – pearl millet originated in Central tropical Africa and is widely distributed in the drier tropics and India. it was introduced into the Western state in the 1850’s and become established as minor forage in the Southeast and Gulf coast States. the plant was probably domesticated as a food crop some 4000 to 5000 years ago along the southern margins of the central Highlands of the sahara.

Finger millet (*Eleusine coracana*) - finger millet is a serial grass grown mostly for its grain finger millet is a robust tufted during annual grass . up to 170 cm high (FAO ,2012 ,De Wet ,2006 ,Quattrocchi ,2006). The inflorescence is a panicle with 4-19 finger- like spikes that resembles a first when mature, hence the name finger millet.

Proso millet (*Panicum miliaceum*) –proso millet is a annual grass, growing form each year is origin goes back in history at least as far as 2000 B..C. when it is reported to have been grown in the central reason of Europe this plant is especially well suited to dry climate such as Central Russia, the Middle East Northern India, Africa Manchuria and the great planes area of North America . Proso millet was first introduced to Canada in the 17th century and was used in a limited way as a forage crop in the early 1900’s.

Foxtail millet (Setaria italica) – Foxtail millet is regarded as a native of China, it is one of the world's oldest cultivated crops foxtail millet ranks second in the total world production of millet and continue to have an important place in the world agriculture providing approximately 6 million tons of food too million of people mainly on poor or marginal soils in southern Europe and in temperate , Sub tropical and tropical Asia.

Little millet (Panicum sumatrense) – little millet was domesticated in India. it grown throughout India to a limited extent up to altitude of 2100 m, but is of little importance elsewhere. the seeds of little millets are smaller than those of common millet .these species of serial is similar in habit to the proso millet except that it is smaller.

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Millets and sorghum namely, pearl millet (*Pennisetum glaucum*), Finger millet (*Eleusine coracana*), Kodo millet (*Paspalum scrobiculatum*), proso millet (*Panicum miliaceum*) , Foxtail millet (*Setaria italica*) , little millet (*Panicum sumatrense*) and Barnyard millet (*Echinochloa crusgalli*) are important staples to million of people worldwide . Generally, these are rain fed crops grown in areas with low rainfall and thus assume greater importance for sustained Agriculture and food security. Almost all the millets are used for human consumption in most of the developing countries but their use has been primarily restricted to animal feed in developed countries. Millets are nutritionally comparable to major cereals and serve as good source of protein, micronutrients and phytochemicals. Processing methods like soaking, malting, decortication, and cooking affect the anti-oxidant content and activity.

II. CONCLUSION

Pearl millet is grown largely for its ability to produce grain under hot, dry conditions on infertile soils of low water-holding capacity, where other crops generally fail completely. Correspondingly, it is produced mainly in outlying areas peripheral to the major production and population centres of the developing world. Yields are low, averaging only three-quarters of sorghum yields in Africa and Asia. Most farmers who rely on this crop are quite poor and frequently experience food shortfalls. Little of the millet production enters the commercial market; most never leaves the farm on which it is grown. Rather, many millet farmers are more likely to be food buyers than sellers. The combination of poverty and severe environmental conditions makes it difficult to improve productivity in pearl millet. While yields are growing in Asia, many African producers are unable to raise yields because of the continuing expansion into even drier and harsher agroecologies and poor adoption of “improved” technologies in these environments. A major reason for poor adoption is that some of these technologies are expensive or otherwise inappropriate for these harsh environments.

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