


Millet Mania: The Resurgence of Ancient Grains in Indian Agriculture

+ Kalp Das and *Safina Ismail

 Ph.D. Scholar, Department of Vegetable Science, P.A.U Ludhiana)

 Ph.D. Scholar, Department of Agricultural Microbiology, I.G.K.V Raipur)

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Introduction

Millets are a group of small-seeded grasses that have been cultivated for thousands of years in many parts of the world, particularly in Africa and Asia. They are known for their tolerance of dry and high-temperature conditions, making them well-suited for cultivation in regions with limited water resources.

Taxonomically, millets belong to the family Poaceae and the subfamily Panicoideae. The most widely cultivated millets include pearl millet (*Pennisetum glaucum*), finger millet (*Eleusine coracana*), foxtail millet (*Setaria italica*), proso millet (*Panicum miliaceum*), and barnyard millet (*Echinochloa utilis*). In terms of nutritional value, millets are a good source of carbohydrates, protein, and dietary fiber. They also contain a range of vitamins and minerals, including B vitamins, magnesium, and iron. Millets are gluten-free, making them a good option for people with celiac disease or gluten sensitivity. In addition to being a staple food in many parts of the world, millets have also been traditionally used for medicinal purposes. They have been known to have anti-inflammatory, antioxidant, and anti-diabetic properties.

Millets are grown in many parts of the world, but the majority of production occurs in developing countries, particularly in Africa and Asia. According to data from the Food and Agriculture Organization (FAO), the top millet-producing countries in the world include India, Nigeria, China, and Niger. In 2019, India alone accounted for over 50% of the global millet production. In terms of consumption, millets are mostly consumed in the regions where they are grown. However, there has been a growing interest in millets in recent years, particularly in developed countries where they are being promoted as a gluten-free alternative to wheat. In terms of trade, millet exports are relatively low compared to other cereal crops such as wheat and rice. However, there has been a steady increase in millet exports in recent



years, with countries such as India and Nigeria being major exporters. In 2019, the total value of global millet exports was around \$200 million.

Here, the statistics show that millet is a staple crop in many parts of the world, particularly in Africa and Asia, but it is not as widely traded as other cereal crops. However, the interest in millets has been growing in recent years, particularly in developed countries where they are being promoted as a gluten-free alternative to wheat.

Current Scenario in India

In India, millets have been an important staple food for centuries, particularly in the semi-arid regions of the country where other cereal crops are not well-suited to the conditions. However, in recent decades, there has been a decline in millet cultivation and consumption in India, due to a variety of factors including the increased availability of cheaper and more convenient food options, and government policies that have favored the cultivation of other cereal crops such as rice and wheat. Despite this decline, millets continue to be an important source of food and nutrition for many people in India, particularly in rural and tribal communities. According to data from the National Sample Survey Office (NSSO), millets were the primary source of food for around 31% of rural households in India in 2011-12.

In recent years, there has been a renewed interest in millets in India, driven by growing concerns about food security and the impact of climate change on agriculture. The government of India has launched several initiatives to promote millet cultivation and consumption, including the National Food Security Mission and the National Millet Development Programme. Additionally, there has been an increasing awareness and interest among the urban population of the country towards millets as a healthier and more sustainable food option. Many health-conscious consumers are turning to millets as a gluten-free alternative to wheat, and the market for millet-based products is growing.

Thus millets continue to play an important role in the food security and nutrition of many people in India, despite the decline in cultivation and consumption in recent decades. There is also a growing interest and awareness towards millets as a healthier and more sustainable food option.

Health benefits from millets



Millets are a group of small-seeded grasses that have been cultivated for thousands of years and have many health benefits. Some of the key health benefits of millets include:

1. **Gluten-free:** Millets are naturally gluten-free, making them a safe and healthy option for people with celiac disease or gluten sensitivity.
2. **Rich in nutrients:** Millets are a good source of carbohydrates, protein, and dietary fiber. They also contain a range of vitamins and minerals, including B vitamins, magnesium, and iron.
3. **Low glycemic index:** Millets have a low glycemic index, which means they are absorbed slowly into the bloodstream and do not cause a spike in blood sugar levels. This makes them a good option for people with diabetes or those trying to manage their blood sugar levels.
4. **Heart-healthy:** Millets contain magnesium, which helps to relax blood vessels and lower blood pressure, and potassium, which helps to regulate heart rhythm.
5. **Promote weight loss:** Millets are high in fiber and protein which can help to keep you feeling full for longer and promote weight loss.
6. **Good for digestion:** Millets are rich in dietary fiber which can help to promote regular bowel movements and prevent constipation.
7. **Anti-inflammatory properties:** Millets contain antioxidants and phytochemicals that have anti-inflammatory properties and can help to reduce the risk of chronic diseases such as cancer and heart disease.
8. **Lower cholesterol:** Millets have been found to have a cholesterol-lowering effect, which can help to reduce the risk of heart disease.
9. **May improve diabetes management:** Millets have been found to have a beneficial effect on blood sugar and insulin levels, which may make them a good option for people with diabetes.

It is important to note that more research is needed to fully understand the health benefits of millets. Also, a balanced diet and regular physical activity are important for overall health.

Factors for millets Decline

There are a number of reasons for the decline in millet cultivation and consumption in recent decades. Some of the key factors include:

- 1. Government policies:** Government policies in many countries, including India, have favored the cultivation of other cereal crops such as rice and wheat. This has led to a decline in millet cultivation and a shift towards these other crops.
- 2. Economic factors:** The cost of producing millets is often higher than other cereal crops, and the returns from millet cultivation are often lower. This has led to a decline in millet cultivation as farmers have shifted to other crops that are more profitable.
- 3. Changes in consumer preferences:** The availability of cheaper and more convenient food options has led to a decline in millet consumption. Many people have shifted to other cereal crops such as rice and wheat, which are more widely available and easier to prepare.
- 4. Lack of research and development:** There has been a lack of research and development into millet cultivation, leading to a lack of new and improved varieties of millets, and a lack of information on the best practices for millet cultivation.
- 5. Lack of awareness:** There is a lack of awareness among consumers and farmers about the nutritional and health benefits of millets, and their role in food security.
- 6. Climate change:** The changing climate has led to an increase in the frequency and severity of droughts and floods in many regions, making it more difficult to grow millets.

Future scope

The future of millets looks promising, as there is a growing interest in the crop due to its potential to address food security and nutrition challenges, as well as its potential to adapt to changing climate conditions. Some of the key areas of work and future scope for millets include:

- 1. Research and Development:** There is a need for more research and development into millet cultivation, including the development of new and improved varieties of millets that are more tolerant to changing climate conditions and more productive.
- 2. Promotion of millets:** There is a need to promote millets to farmers, consumers, and policy-makers, highlighting the nutritional and health benefits of millets, and their role in food security.



3. **Climate-resilient agriculture:** Millets have been recognized as an important crop in the context of climate-resilient agriculture, due to its ability to adapt to changing weather patterns and its ability to grow in low-fertility soils.
4. **Increasing productivity:** There is a need to increase productivity of millets through better agronomic practices, to make it more economically viable for farmers.
5. **Processing and value addition:** There is a need to develop methods for processing and value-addition of millets, to increase the shelf life of millets, and to make them more convenient to use.
6. **Market development:** There is a need to develop markets for millets, both domestically and internationally, to increase demand for the crop, and to ensure that farmers are able to sell their millets at a fair price.
7. **Nutritional and health benefits:** Millets are a great source of nutrition and health benefits, there is a need to conduct more research to understand the health benefits of millets, and to create awareness among consumers about the nutritional benefits of millets.

Recent activities to promote millets in India

In recent years, there have been a number of activities in India aimed at promoting millets and increasing their cultivation and consumption. Some of the key activities include:

1. **Government policies:** The Indian government has implemented a number of policies aimed at promoting millets, including the National Food Security Mission (NFSM) and the National Millet Mission (NMM). These policies aim to increase millet production and consumption, and to make millets more accessible to the poor and vulnerable.
2. **Research and Development:** The Indian Council of Agricultural Research (ICAR) and other research institutions have been conducting research on millet cultivation and developing new varieties of millets that are more tolerant to changing climate conditions and more productive.
3. **Promotion of millets:** A number of organizations and NGOs have been promoting millets by highlighting their nutritional and health benefits, and by working with farmers to improve their productivity and profitability.

4. **Market development:** The Indian government has been working to develop markets for millets, both domestically and internationally, to increase demand for the crop and to ensure that farmers are able to sell their millets at a fair price.
5. **Millet festivals:** A number of states in India have started organizing millet festivals to promote millets and to create awareness about their nutritional and health benefits.
6. **Processing and value addition:** The government and private companies are also trying to develop methods for processing and value-addition of millets, to increase the shelf life of millets, and to make them more convenient to use.
7. **Nutritional and health benefits:** The government has been promoting millets as a great source of nutrition and health benefits, and is conducting research to understand the health benefits of millets.

Conclusion

Despite their nutritional and ecological advantages, millets have been largely replaced by other cereal crops such as wheat, rice, and maize in many parts of the world. However, there has been a renewed interest in millets in recent years due to their potential to improve food security and adapt to climate change. Overall, millets are a valuable crop with a wide range of uses and benefits. They are a nutritious and resilient food source that can help to improve food security and adapt to changing environmental conditions.

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