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Miraculous Millets

Arjun Kumar Agarwal
Ph.D. Research Scholar, Department of Genetics & Plant Breeding, Ranchi Agriculture college, BAU, Ranchi-834006, (Jharkhand), India.

ARTICLE ID: 65

Introduction

Globally, the productivity of agriculture is being impacted by a rise in the average global temperature brought on by climate change. Moreover, it directly influences numerous facets of food production and processing as well as biophysical elements of life, such as the growth of plants and animals. It is crucial to assess the effects of global climate change and apply new tools and strategies to lessen their influence if agricultural productivity is to be maximised in order to meet the expanding population's demands for food. Millets serve as the most useful crop in this context as they are nutritionally superior, climate change-tolerant, and have a significant potential to produce more economic advantages in adverse environments than other grains, even during the case of extreme rising temperatures.

What are Millets

Millets are a class of small-seeded cereal grains which have been cultivated for hundreds of years in different parts of the globe, notably in dryland and rainfed regions. Millets are a significant crop in India because farmers can grow them despite the country's tough climate and frequent droughts. Numerous individuals in India rely on them as a major food and nutrition source, particularly in rural regions where they are a staple diet.Millets are classified into two categories based on seed size; major and minor millets. Sorghum, Pearl millet and finger millet are major millets while minor millets include little millet, proso millet, kodo millet, foxtail millet, barnyard millet, and browntop millet. In India millets are cultivated mainly in Rajasthan, Karnataka, Maharashtra, Uttar Pradesh, Madhya Pradesh, Gujarat etc.

Millets are healthy for both individuals and the environment. Because of global warming and the resulting food instability, millets have returned to prominence. The necessity to feed the expanding population adequately and concerns about the status of the soil's health also played a significant role. Millets are an useful crop because of their

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adaptability, ability to thrive in a variety of soil types and weather patterns, and need for little inputs while still delivering the necessary nutrients for nutrition and growth.

Role in environment health

Mllets are a typical food source of the drought - prone areas all over the globe. Millets are produced on roughly 17 million acres in India, producing 18 million tonnes annually and making about 10% of the nation's total grain production. Millets are a perfect way for nations to boost domestic production and lessen their dependence on imported cereal crops. They require less input, have higher disease and insect resistance, and use fewer chemical pesticides and herbicides. Moreover, compared to other cereals, they are more resistant to climatic changes. Millets can improve incomes for small farmers, particularly women, locally and nationally in addition to diversifying the food chain.

Millets' Nutritional Value

These are nutri-cereals, which are noted for their high nutritional content and high protein, essential fatty acid, dietary fibre, B-Vitamin, and mineral content, including calcium, iron, zinc, potassium, and magnesium. The minerals found in millets are abundant and vital for optimum health. Due to their high dietary fibre content, they aid in digestion, decrease cholesterol levels, and guard against constipation. Moreover, millets are a strong source of amino acids, which is necessary for the body's development and repair of tissues.Millets also include a lot of minerals and vitamins. They are an excellent source of B - complex vitamins, which are necessary for both brain and energy generation. Moreover, millets include nutrients like iron, magnesium, and phosphorus that are vital for strong bones and healthy muscles.Yet, during the past three decades, the direct consumption of millets as food has dramatically decreased.

The main reasons for the fall in consumption include a lack of understanding of the nutritive benefits, difficulties in preparing food, a lack of processing methods, as well as regulatory frameworks that restrict the usage of millets and promote the availability of cereals at lower prices. Hence, it is essential to shift attention back to the millets in order to boost demand through value-addition of processed meals employing a range of processing techniques, nutritional analyses, and awareness-raising campaigns backed by supply chain.

Millets provide a number of health advantages, including:

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- **Helps to prevent chronic diseases :-**Millets are a good source of antioxidants and phytonutrients, which can help fend against chronic illnesses including diabetes, heart problems, and tumors.Millets include antioxidants that aid in the body's defence against free radicals, which can harm cells and advance the onset of chronic illnesses.
- **Aids in encouraging weight reduction:-**Millets are a fantastic meal for weight reduction since they are high in fibre and low in calories. Millets' fibre supports fullness, curbs appetite, and guards against overeating. The low fat and cholesterol content of millets can aid in the fight against weight gain and coronary disease.
- **Aids in controlling blood sugar levels:-** Since millets have a relatively low glycemic index, their gradual rate of digestion prevents a sudden rise in the level of sugar in the blood. They are therefore the perfect diet for those who have diabetes or are at risk of getting it.
- **Promotes better digestion:-** Dietary fibre, which is abundant in millets, aids in digestion, prevents constipation, and improves bowel motions. Also, they are an excellent supplier of prebiotics, which support the development of healthy bacteria in the stomach and enhance gut health.
- **Encourages heart health:-** Magnesium, which is crucial for heart health, is present in millets in sufficient amounts. Magnesium aids in maintaining blood pressure, shielding against heart attacks, and lowering the chance of stroke. Moreover, millets are a strong potassium source, which aids in cardiac activity regulation and heart disease prevention.

Conclusion

When it relates to environmentally friendly agriculture, human nutrition, and wellbeing, millets are a diverse crop with numerous valuable applications. Millets will probably play an increasingly significant role in supplying wholesome food to communities all over the world as global food demands continue to rise.

Although having substantial benefits for both the consumer and the farmer, millets are not extensively consumed, mostly due to not being widely recognised. At a time when the globe is battling a pandemic, rising temperatures, as well as a big problem of food availability, nutri-cereals may, nevertheless, play a key role if effectively-marketed, concentrating on their high nutritional content, minimal input and maintenance demands, and

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climate-resilient character.In order to achieve their full potential for increasing farmer incomes, providing livelihoods, and assuring the safety of food and nourishment, it is also important to address concerns with a shortage of high-quality seeds, restricted cultivation, brief grain shelf life, insufficient research, a scarcity of manufacturing techniques, and market imbalances.

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