

MILLETS COULD HELP INDIA MITIGATE MALNUTRITION AND CLIMATE CHANGE

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We should incentivize the production of these versatile crops to enhance our food security and score gains on climate resilience

This year, the United Nations General Assembly adopted a resolution declaring 2023 the International Year of Millets, as proposed by India to the Food and Agriculture Organization (FAO). Millets possess immense potential in our battles against climate change and poverty, and provide food, nutrition, fodder and livelihood security. Being hardy crops, they can withstand extreme temperatures, floods and droughts. They also help mitigate the effects of climate change through their low carbon footprint of 3,218-kilogram equivalent of carbon dioxide per hectare, as compared to wheat and rice, with 3,968kg and 3,401kg, respectively, on the same measure.

The Indian government launched its Millet Mission in 2018 as part of the National Food Security Mission, which has led to the promotion of technological interventions, improvement in seed quality and a minimum support price (MSP) for what are popularly called bajra and jowar in India. Millet Network of India and the M.S. Swaminathan Research Foundation were involved in collective formation efforts to boost the domestic growth of millets. But the crop faces several market and economic barriers. Their demand has been low, especially in urban markets. Unjust pricing and value wringing by intermediaries have led to farmer distress. The huge potential of millets in bolstering India's food and nutritional security and reducing hunger deserves top-level attention.

Barriers to growth: Market dynamics need to favour the growth of millets. India is their largest global producer, with a 41% market share, and a compound annual growth rate of 4.5% is projected for the global millet market in the coming decade. But a rise in incomes and urbanization, together with inadequate government policies, has led to millets being used for various purposes other than for consumption. Over the years, several farmer organizations have been set up to help small and marginal farmers overcome hindrances in millet production and marketing. A study conducted to map the driving factors of millet demand showed that Indian age and education-level trends went against this cereal grain. The prevalent market instability calls for policies that protect the livelihood of farmers. Incentivizing the adoption of inter-cropping (two or more crops planted side by side) and providing crop insurance and support for storage facilities will foster income and food security. Millet marketing policies need to be broadened as well.

A cultural connection: The cultivation of millets is deep-rooted in Indian culture. So it should not surprise anyone that the re-introduction of cultural associations and festivals, such as the North-East Network in Nagaland organized in 2020 and Mandukiya in Vishakhapatnam celebrated annually in June/July, has helped promote the growth of millets. Organizations like Deccan Development Society have formed women's collectives in Telangana and are promoting millets through a culture-centric approach. Such crop sensitization has filtered into urban settings too. In 2018, the #LetsMilletCampaign in Bengaluru saw the avant-garde use of millets in dishes such as risotto and pizza by restaurateurs. In the same year, food delivery startups such as FreshMenu rolled out millet-intensive menus that recorded swift orders.

Restoration of ecosystems and sustainability: In line with goals of the United Nations Decade of

Ecosystem Restoration (2021-30), local practices can support rural economies. An estimate from 2019 suggests that the restoration of 350 million hectares of land globally could result in massive gains. Land degradation has been a major problem in India, causing massive economic losses year after year. Drought-tolerant crops with low dependence on chemical inputs would put far less pressure on ecosystems. The inter-cropping of millets with other crops is especially beneficial because the fibrous roots of millet plants help in improving soil quality, keep water runoff in check and aid soil conservation in erosion-prone areas, thereby restoring natural ecosystems.

Biofuel and climate resilience: In June 2021, Prime Minister Narendra Modi announced that the deadline for achieving 20% ethanol blending with petrol has been set for 2025, a measure aimed at the reduction of carbon emissions from the combustion of fossil fuels. Most bio-ethanol in India is produced using sugar molasses and maize. However, a study conducted among farmers in Madhya Pradesh showed that bio-ethanol can be created using sorghum (jowar) and pearl millet (bajra), and that this fuel could bring down carbon emissions by about half.

Estimates also suggest that millets can deliver greater returns than maize, while using 40% less energy in processing. Millets also offer a significant cost advantage over maize as a feedstock for bio-ethanol production.

Millet cultivation clearly needs state support. The Odisha Millet Mission, for example, has reportedly managed to motivate about 70,000 farmers to take up millet farming as part of this programme. Incentives such as these need to be deployed across India for the country to bring its sustainability goals closer within reach.

Addressing SDGs: Millets can play a role in India's sustainability policy interventions. Contemporary research developments have shed light on the influence of millets on energy optimization, climate resilience and ecosystem restoration. Millet farming has led to women's empowerment, too. The Odisha Millet Mission, for example, saw 7.2 million women emerge as 'agripreneurs'.

The value of millets is evident in their relevance to the sustainable development goals (SDGs) of food security, nutrition and poverty eradication. Brimming with potential, millets can act as a vital cog in the country's sustainable development wheel if backed by policies that promote their production, incentivize farmers and strengthen market linkages.

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