Millets: A Resurgence of Nutritional Powerhouses in Global Agriculture and Diets

November 2023
Overview

Millets, ancient small-seeded cereals that have nourished cultures for centuries, witnessed a gradual decline in prominence following the Green Revolution. However, their remarkable nutritional profile and adaptability to challenging environments are now catalyzing a resurgence, positioning millets as essential components of modern diets and sustainable agriculture.

Originating in India, millets like Jowar (Sorghum), Bajra (Pearl Millet), and Ragi (Finger millet) have been staples in semi-arid regions where conventional crops struggle due to water scarcity and poor soil quality. Additionally, small millets such as Proso (Cheena), Kodo (Kodra, Arikelu), Fox tail (Kangni/Korra), Barnyard (Varai, Sawa), and little millet (Kutki) have thrived in diverse agroecological niches. Their drought resistance, efficient water use, and low input requirements have proven instrumental in ensuring food security in resource-constrained regions.

Recognizing the potential of millets to address malnutrition and enhance food security, India proposed the declaration of 2023 as the International Year of Millets (IYoM-2023). Garnering support from 72 countries, this initiative gained traction, culminating in the United Nations General Assembly's declaration. This monumental declaration has elevated millets onto the global stage, solidifying their position as nutritional powerhouses.

ASSOCHAM has been playing a crucial role in promoting the usage of sustainable development and boosting millet cultivation, encouraging value addition, and improving farmer's income. As a part of its series of events for the promotion of the International Year of Millets (IYoM) 2023, ASSOCHAM was involved in export promotion activities for millets and raised awareness about the nutritional value of millets and their potential contributions to food security and sustainable agriculture.

Millets represent the local food system and culture in Asia and Africa and have a major contribution towards sustainable agriculture and a healthy world. As millets are climate-resilient crops and sustainable income sources for farmers, they provide economic security. Millets are resilient crops with tolerance against extreme climatic stress including drought and flood and can be considered ideal crops of the 21st Century where we face depleting natural resources and an era of climate change.

The Government of India realized the importance of millets in building Nutritional Security in the country and made a series of efforts such as gazetting millets as Nutri-Cereals. In the country, the ICAR-Indian Institute of Millets Research-led consortium has assumed the challenge of reviving millets production and has piloted several value chain interventions.

ASSOCHAM organized a nationwide series of Conference on Millets - The Future Super Food for India with an aim to provide valuable insights to the industry, stakeholders, and policymakers and identify essential steps towards reviving the lost glory of millets, raising awareness about the nutritional benefits, value addition, consumption, and export potential of millets and contributing to a more sustainable and healthy food system in India.
I. Agra Millets Mela

Uttar Pradesh is the largest producer of food grains in India and accounted for about 18.89% share (58.32 million MT) in the country’s total food grain output in 2020-21. In the year 2019-20, the state of Uttar Pradesh produced 21,71,836.00 MT millet. The different varieties of millets mainly produced in Uttar Pradesh include Sorghum, Pearl Millet, Kodo, and Barnyard Millet. In the Agra district, the millet varieties produced mainly include Sorghum and Pearl Millet. In the year 2019-20, Agra produced 99 MT of Sorghum and 2,93,964 MT of Pearl Millet. With this background, Millets Mela (Conference cum Exhibition) was organised in Agra, Uttar Pradesh by ASSOCHAM with the support of the Ministry of Food Processing Industries, Government of India (MoFPI) on 3-4 March 2023. This was the first of its kind event in the nationwide series.

The two-day conference cum exhibition was attended by over 1800 representatives from food industry across the country. The conference also saw government representation including Prof. S P Singh Baghel, Hon’ble Minister of State for Law & Justice, Govt of India & Member of Parliament, Agra; Mr. Minhaj Alam, Additional Secretary, Ministry of Food Processing Industries, Govt of India; Mr. Rakesh Garg, All India Joint General Secretary, Laghu Udyog Bharti and Vice President, Uttar Pradesh Laghu Udyog Nigam Ltd.; Mr. Navneet Singh Chahal, District Magistrate, Agra; Mr. A Manikandan, Chief Development Officer, Agra; Mr. Surendra Singh, Joint Industrial Adviser (PMFME), Ministry of Food Processing Industries, Govt. of India; Mr. Anuj Kumar, Joint Commissioner Industries, Agra; Mr. Anil Sharma, District President., Uttar Pradesh Udyog Vyapar Pratinidhi Mandal along with scientists, nutritionists, and social workers to equip the participants with conscious about Millet Based startups, and products and aware them of the Millet Revolution consumption, and sustainable farming with the main objective:

a.) To target local producers and food processors of Agra and UP area as a whole.
b.) To enable Millets as a staple food crop by increasing its production and value addition.
c.) To attract local population

Eminent Speakers including Prof. S P Singh Baghel, Hon’ble Minister of State for Law & Justice, Govt of India and Member of Parliament, Agra; Mr. Minhaj Alam, Additional Secretary, Ministry of Food Processing Industries, Govt of India; Mr. Rakesh Garg, All India Joint General Secretary, Laghu Udyog Bharti and Vice President, Uttar Pradesh Laghu Udyog Nigam Ltd.; Mr. Navneet Singh Chahal, District Magistrate, Agra; Mr. A Manikandan, Chief Development Officer, Agra; Mr. Surendra Singh, Joint Industrial Adviser (PMFME), Ministry of Food Processing Industries, Govt. of India; Mr. Anuj Kumar, Joint Commissioner Industries, Agra; Mr. Anil Sharma, District President., Uttar Pradesh Udyog Vyapar Pratinidhi Mandal at the Inaugural Session
II. National Conference on Millets: The Future Super Food for the World

ASSOCHAM in association with Ministry of Food Processing Industries, Government of India, ICRISAT, ICAR – NAARM, ICAR – IIMR and ICMR - National Institute of Nutrition organised a National Conference on Millets: The Future Super Food for the World on 24 March 2023 in Hyderabad. The conference marked the presence of Mr. Singireddy Niranjan Reddy, Hon'ble Minister for Agriculture, Co-operation and Marketing, Government of Telangana; Dr. Jayesh Ranjan, IAS, Principal Secretary, Industries & Commerce, Information Technology, Electronics & Communications Department, Government of Telangana; senior representation from ICAR - National Academy of Agricultural Research, Management (NAARM), NABARD and SBI.

Globally, millet demand has increased as health-conscious individuals acknowledge their wellness virtues. Millet's protein and fiber competence, coupled with gluten-free attributes, render them optimal choices for gluten-sensitive populations. Over time, the millet panorama has undergone remarkable shifts, reflecting evolving dietary preferences, agrarian practices, and market dynamics. The conference aimed to engage stakeholders from domestic and international level and continue to promote and support the growth of millets, in order to create a more sustainable and equitable food system for all.

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III. Eat Right Millet Mela – SATARA

ASSOCHAM in collaboration with FSSAI, Satara Mega Food Park and Rayat Shikshan Sanstha, organised an Eat Right Millet Mela preceded by a Walkathon on 13 April 2023 in Satara. More than 1,500 people participated in the walkathon. At the millet mela, activities were conducted to create awareness about the health and nutritional benefits of millets including panel discussion, drawing, poster making, rangoli, quiz, recipe competition and cultural evening. The event also featured millet-based gaming kiosks, food company operators, and students displaying their products for sale and awareness. Padma Shri Awardee Rahibai Popare, popularly known as ‘Seed Mother’, also graced the programme.

![Padma Shri Awardee Ms Rahibai Popare (extreme right) along with other dignitaries graced the Inaugural Session](image)

IV. Millet Ulsavam - Millet Festival

ASSOCHAM in collaboration with the Ministry of Food Processing Industries (MOFPI), the Government of Kerala, and National Bank for Agriculture and Rural Development (NABARD) organised a conference cum exhibition on Millet Ulsavam - Millet Festival with a theme Millet Farming - Strengthening Value Chain of Millets on 12-13 May 2023 in Kochi. The conference aimed to spread the knowledge of millets, their cultivation, processing, and value addition including business and market opportunities encompassing the entire value chain.
The Inaugural session had the presence of Mr. P. Prasad, Hon'ble Minister for Agriculture, Government of Kerala; Mr. Hibi Eden, Hon'ble M.P, Ernakulam, Kerala; Dr. B Ashok, IAS, Agriculture Production Commissioner & Principal Secretary, Government of Kerala along with other senior officials and industry members. The session discussed India as a global leader in the production of millets with an area of about 12.5 million hectares and a share of more than 15 per cent of the world’s total production. As per the 2021-22, 4th advance estimates, Kerala ranks 20th in millet production in India. Millets of 364.57 MT has been exported from Kerala in the financial year 2021-22 & Kerala ranks 10th among states of India in export of Millets to world. Millet production in Kerala is concentrated majorly in 2 districts i.e., majorly in Palakkad and to an extent in Idukki. With the Attappady tribal village as an illustration, Kerala sees a large opportunity in millet cultivation and subsequently enhancing farmer incomes.

The Conference and Exhibition of around 40 Stalls were supported by NABARD Kerala, Central Food Technological Research Institute (CFTRI), National Institute of Food Technology Entrepreneurship (NIFTEM), National Institute for Interdisciplinary Science and Technology (NIIST), Indian Institute of Millets Research (IIMR), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).

V. Almora Millets Mela

ASSOCHAM hoisted its flag of Millet Awareness and Entrepreneurship Development in Food Processing Industries on 17-18 May in Almora, Uttarakhand by organizing Millets Mela. The hilly regions of India are best suited for some of the Millet cultivars and are nutritionally sound whilst also laden with prominent agronomic qualities. These varieties are famous for their use in the local cuisine and are the source of sustenance for the indigenous people.
The main aim of the conference cum exhibition was to enthuse people for opting more Millet Based cropping systems; to promote Millet as a healthy alternative and enhance the infrastructure of Processing in the Almora region. The exhibitors demonstrated a wide range of millet-based processed food products with local crops grown in hilly areas. There was a footfall of around 1500 people on the two days of the conference cum exhibition.

VI. Surat Millets Mela

Surat is a business hub for textiles, but also has an abundance of production of millet, it is also a state contributing to the export of the said crop. The Surat Millet Mela Conference and Exhibition, a two-day Millet Festival was organized in the Land of Gujarat (Surat) on 6-7 June 2023. The focus of the conference cum exhibition was to increase the export value of the millets; to establish the local supply chain for manufacturing millet-based food products and to strengthen the local enterprises and promote Millets among the people of the region. The inaugural session was graced by Mr. NP Savaliya, Deputy Collector & DSO, Surat District, Mr. Satish Gamit, District Agriculture Officer, Department of Agriculture & Farmer Welfare, Government of Gujarat along with industry and academia personnel.

Incorporating millets into diets offers an array of benefits – streamlined digestion, holistic nutrition, chronic disease deterrence, and overarching well-being. As the lead of the millet movement, India is the globe's premier millet producer, accounting for a substantial 20% of worldwide output. The Indian culinary landscape abounds with millet varieties, from jowar and bajra to ragi and barnyard millet, deeply interwoven into traditional fare and ancient healing traditions.
VII. Millet Festival, Harnessing & Strengthening the Value Chain of Millets

ASSOCHAM in collaboration with the Ministry of Food Processing Industries (MOFPI) organised a conference cum exhibition on Millet Tiruvizha, Millet Festival with the theme ‘Harnessing & Strengthening the Value Chain of Millets’ on 16-17 June in Coimbatore.

According to Tamil Nadu government figures, 65% of food grain cultivated in the state was rice, 15% maize, 14% sorghum, 3% finger millet (ragi), 2% pearl millet (kambu) and 1% minor millets). The state government initiatives have greatly boosted the cultivation area. The conference featured panel discussions on millet farming, strategy for area expansion and yield enhancement, exploring opportunities to harness consumer demand and promoting millets as source of essential nutrients in Tamil Nadu, State millet missions, and best practices across States.
VIII. Chandigarh Millets Mela

Chandigarh the Union Territory and the capital of two important states of India - Punjab and Haryana are ruled by the agrarian economy and showcase the strong resilience of crop production, processing, and consumption. Both states are popular for the production of Millets and to harness the opportunity of millet value addition, and value chain development ASSOCHAM with the support of the Ministry of Food Processing Industries organised Millets Mela on 7 July in Chandigarh.

The conference deliberated on enhancing the production, value addition, and entrepreneurship of Millets and Food Processing Industries with a focus on motivating farmers to turn into entrepreneurs and generating awareness of the environmental and health benefits of Millets.

practices across States.

Eminent guest speakers at the Inaugural Session with Chief Guest Mr. Preet Pal Singh, IFS, Joint Secretary, Ministry of Food Processing Industries, Govt of India (3rd from the left)
The nutritional abundance of millets is multifaceted, some listed below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Dietary Fiber and Digestive Health</strong></td>
<td>Millets excel as dietary fiber sources, fostering efficient digestion, satiety, and blood sugar regulation. Their consumption engenders a robust digestive system, thwarting constipation and gastrointestinal woes.</td>
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<tr>
<td><strong>Plant-Powered Protein</strong></td>
<td>A treasure trove of protein, millets stand tall as a critical plant-based protein source. Essential amino acids, notably methionine and cysteine, often scarce in other grains, are abundant in millets, making them a vital resource for vegetarians and vegans.</td>
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<tr>
<td><strong>Essential Minerals</strong></td>
<td>Millets boast an array of indispensable minerals – iron, magnesium, phosphorus, potassium, and zinc. These elements orchestrate diverse bodily functions, spanning bone health, energy production, immune fortification, and cellular rejuvenation.</td>
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<tr>
<td><strong>Vitamin B</strong></td>
<td>Enriched with B vitamins – niacin (B3), thiamine (B1), riboflavin (B2), and folate (B9) – millets champion energy metabolism, cognitive acumen, red blood cell synthesis, and holistic vitality.</td>
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<tr>
<td><strong>Gluten-Free Glory</strong></td>
<td>A gluten-free alternative, millets usher in a new era of culinary inclusivity for individuals grappling with gluten sensitivities or celiac disease. This gluten exemption enhances nutritional accessibility.</td>
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<tr>
<td><strong>Balanced Glycemic Index</strong></td>
<td>With a low glycemic index, millets orchestrate a gradual glucose release, fostering blood sugar equilibrium and diminishing diabetes risks.</td>
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<tr>
<td><strong>Antioxidants and Phytochemicals</strong></td>
<td>Laced with antioxidants and phytochemicals, millets combat chronic diseases, spanning cardiovascular disorders, cancer, and inflammation, preserving holistic well-being.</td>
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<td><strong>Weight Management</strong></td>
<td>Millet fiber ability curbs hunger pangs, facilitating weight management. Their lower caloric content, relative to counterparts, makes them a preferred choice for weight-conscious individuals.</td>
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