



PATHWAYS TO MAINSTREAM MILLETS IN INDIA

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Acknowledgements

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Sattva Knowledge Institute (SKI), established in 2022, is our official knowledge platform at Sattva. The SKI platform aims to guide investment decisions for impact, shedding light on urgent problems and high potential solutions, so that stakeholders can build greater awareness and a bias towards concerted action. Our focus is on offering solutions over symptoms, carefully curating strong evidence-based research, and engaging decision-makers actively with our insights. Overall, SKI aims to shift intent and action toward greater impact by influencing leaders with knowledge. All of our content proactively leverages the capabilities, experience and proprietary data from across Sattva.

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Executive Summary

Millets in India are undergoing a renaissance and we see a strategic shift to maximise their potential as the '**crops of the future**'. The central government has been attempting to revitalise the supply and demand of millets in India from 2012. India is leading the discourse on developing global awareness, and has contributed majorly towards the recognition of 2023 as the International Year of the Millets by the United Nations. States across India have also kickstarted efforts to leverage the value of their homegrown millets. The potential of millets is well understood, and the steps to realise it are being taken in the right direction.

Challenges and shortcomings

Millet production rates are still below expectations, because farmers are not properly incentivised, and they do not get beneficial returns from growing millets. Challenges in the production and promotion of millets include:

1. **Insufficient production and supply of millets** due to competition from other staple crops in terms of production, productivity and low investment in research and development.
2. **Lower per unit remuneration and incentives** for millet growers due to shortcomings in the implementation of minimum support price (MSP) and limited availability of processing facilities.
3. **Weak consumer awareness and demand.**
4. **Inadequate inclusion in government interventions like the Public Distribution System.**

States can identify best practices across Millet Missions based on support across value chain components. These can guide infrastructure development, capacity building, research and development, and marketing support.

Recommendations

The way forward to facilitate scale, innovation and demand for millets is by **strengthening support across the value chain through effective public-private partnerships.**

Scale can be achieved through focused research and development (R&D) support for local seed varieties. These could be coupled with dedicated pricing for millets through MSP, along with state-led promotion of the benefits of agricultural diversification.

Enabling scale would also require support from government and private players like agritech companies who can bring rigour to the processes. Agritech players can bring forth the value of technology to the processes, while NGOs and other community-led institutions can help drive this action efficiently at the local level.

Rural populations should be engaged through the integration of millets across all development programmes in India. Commercialisation and standardisation of millets can be enabled by homogenising their brand value at a national level, leveraging the support of standardisation authorities like Food Safety and Standards Authority of India (FSSAI) in defining nutritional limits on food composition, and conducting routine consumer surveys.

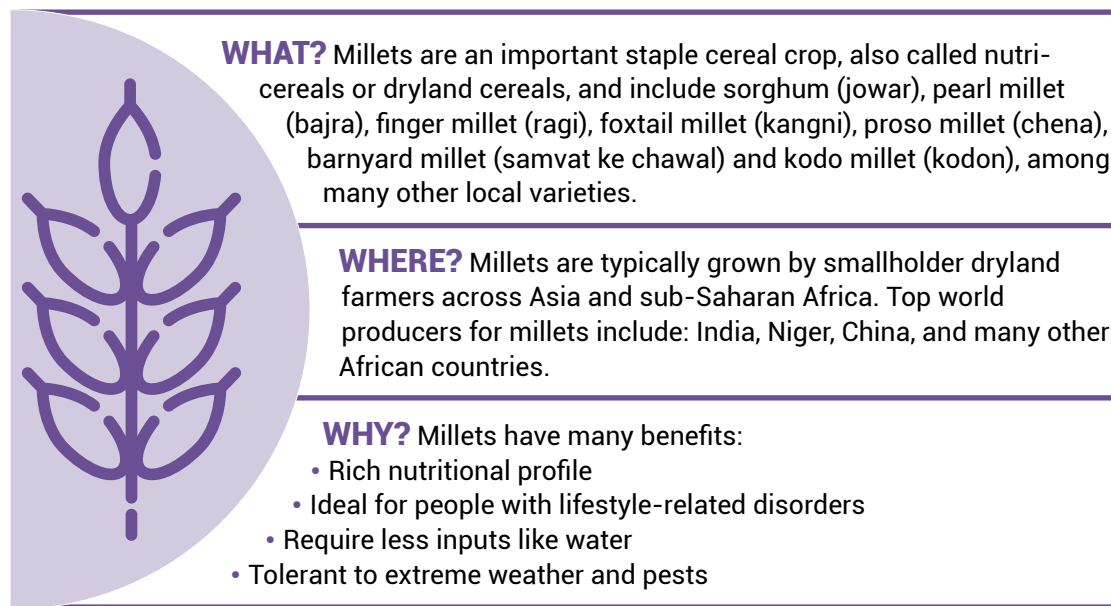
Introduction: Millets are the 'Crops of the Future'

The growing popularity of millets in India

Indian agriculture is at an interesting juncture. We are swiftly heading towards a future where there is increasing value for alternatives to conventional modes of farming, with a focus developing on climate-resilient farm solutions, sustainable food systems and technological innovations. Through the search for potential solutions to reduce risks of the impending climate and food crises, there has been increasing recognition of millets as the 'crops of the future'.

Making a case for millet cultivation is relevant in the present context where innovative patterns of land usage, more income avenues for farmers, and healthier options for consumers are growing areas of concern. The knowledge and production of millets are not new to India. Local communities in various parts have been growing indigenous and traditional varieties of millets since ancient times (Agrawal 2017). While millets used to be a staple food crop of many local communities, due to the Green Revolution in the 1960s, the predominance of wheat and rice in the past few decades has eclipsed the popularity of millets in India.

Figure 1: Crops of the Future – Millets



(The International Crops Research Institute for the Semi-Arid Tropics [ICRISAT], The Indian Institute of Millets Research [IIMR], Tridge 2022)

Fortunately, several efforts have been made towards a resurgence in millet consumption in India. This has been propelled by the prevalence of lifestyle disorders among urban populations, and a shift to alternative dietary habits such as plant-based and gluten-free eating. This trend is also mirrored internationally, with a global trend towards healthier diets.

Evolution of millet missions at central and state levels

As the largest producer of millets in the world, India contributes to nearly 80% of millet production in Asia (NITI Aayog). India has been able to establish a case for millets highlighting the nutritional benefits (Verma 2019) and the low input-intensive systems for growing the crop. This has led to India successfully **facilitating recognition of 2023 as the International Year of Millets by the UN** (Ministry of Agriculture and Farmer Welfare [MoA&FW] 2022).

Twenty-one states in India traditionally grow millets (APEDA 2022). Owing to the increasing demand for millets, the Government of India initiated the Millets Mission at a national level in 2018. The Mission aims to produce and promote millets across India to address both domestic and global demand for the crop. It also focuses on mainstreaming consumption and the revival of millets after the Green Revolution, which drastically shifted consumer food demands to more conventional grain varieties. State governments have also been promoting the cultivation of millets in their respective geographies under the **Rashtriya Krishi Vikas Yojana (RKVY)**. As of 2022, five states (Odisha, Telangana, Chhattisgarh, Karnataka, and Tamil Nadu) have already launched their state millet missions and two states (Assam and Andhra Pradesh) are aiming to introduce them soon. These initiatives further highlight the increased focus of governments on institutionalising structures for production and promotion of millets at scale, and realising India's latent potential.

Figure 2: Evolution of Millet Missions at central and state levels

Evolution at the Central Level

2012

- Introduction of Initiative for Nutritional Security through Intensive Millets Promotion (INSIMP).
- Rainfed Area Development Programme (RADP) to provide financial assistance to millets was started which was later put under National Mission on Sustainable Agriculture (NMSA).

2018

Declaration as 'National Year for Millets'.

2022

Inclusion of Millets in National Food Security Mission (NFSM) aiding formation of Farmer Producer Organisations (FPOs) for Nutri Cereals, setting up Centres of Excellence (CoE) and seed hubs for Nutri-cereals.

2023

Declared by UN as '**International Year for Millets**' based on India's proposal. Promotion (INSIMP).

2014

Tamil Nadu sanctioned the scheme Millet Mission 2014-15 under NADP (National Agricultural Development Programme).

2017

Odisha launched its Millet Mission. **Karnataka** revised its Organic Policy in 2017 and included millets in the revision.

2018

Telangana launched its Millet Mission. **Maharashtra** initiated a millet project in Nashik in collaboration with the Tribal Development Department.

2021

Chhattisgarh launched its Millet Mission.

2022

Future of Crops are Millets! States aiming to launch **Millets Missions post 2022**: Andhra Pradesh & Assam.

Evolution at the State Level

(Union Budgets by Government of India, and State Budgets by respective states)

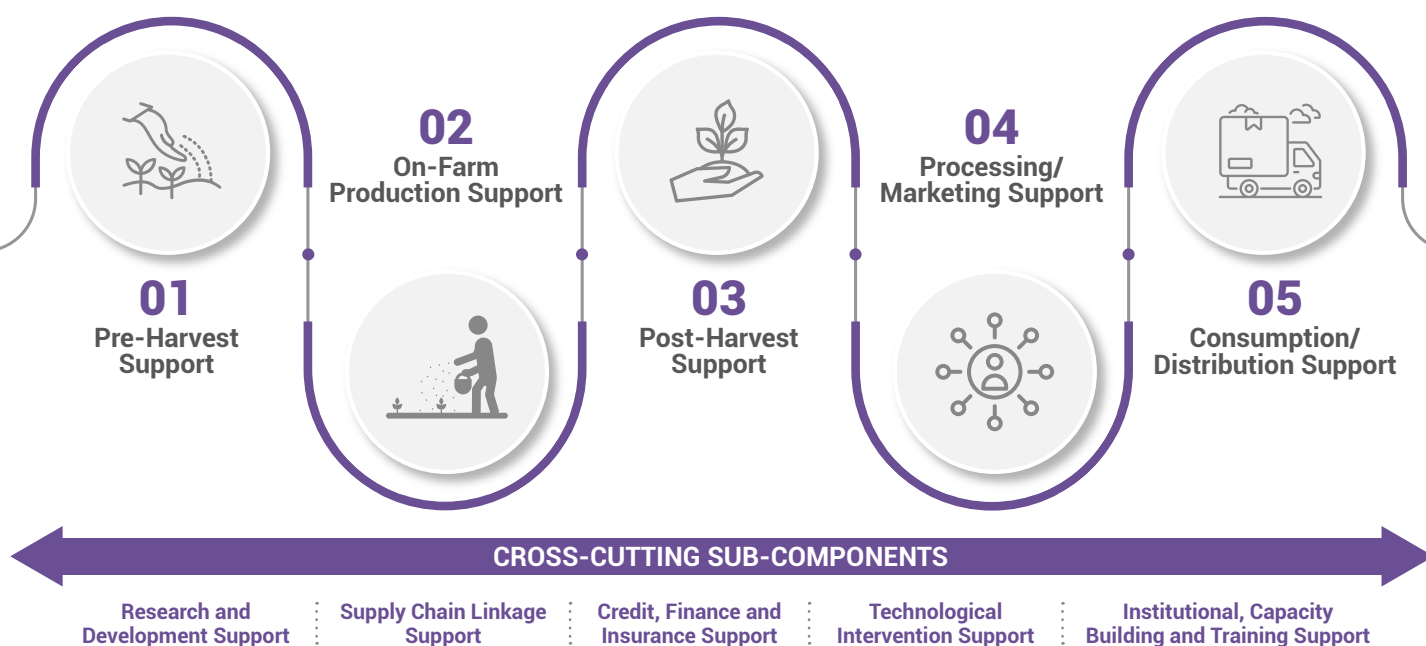
The Key Challenges to Mainstream Millets

The transformation required to achieve this potential is not so straightforward. For India to effectively utilise current tailwinds to effectively promote millets, the required interventions need focused and rigorous efforts to generate sustainable and long-term impact (Singh & Sisodia n.d.).

A value chain-based approach to comparing practices and identifying actionable gaps across Millet Missions could offer a holistic view of existing support interventions.

Sattva conducted an internal study to understand the government support landscape around the most active millet-promoting states across India. This involved conversations with other stakeholders working with state missions to understand the implementation barriers. **Sattva** conducted qualitative research on support interventions and incorporated a value chain approach to make the assessment holistic.

Figure 3: Crop value chain parameters considered for qualitative analysis



(The International Crops Research Institute for the Semi-Arid Tropics [ICRISAT], The Indian Institute of Millets)

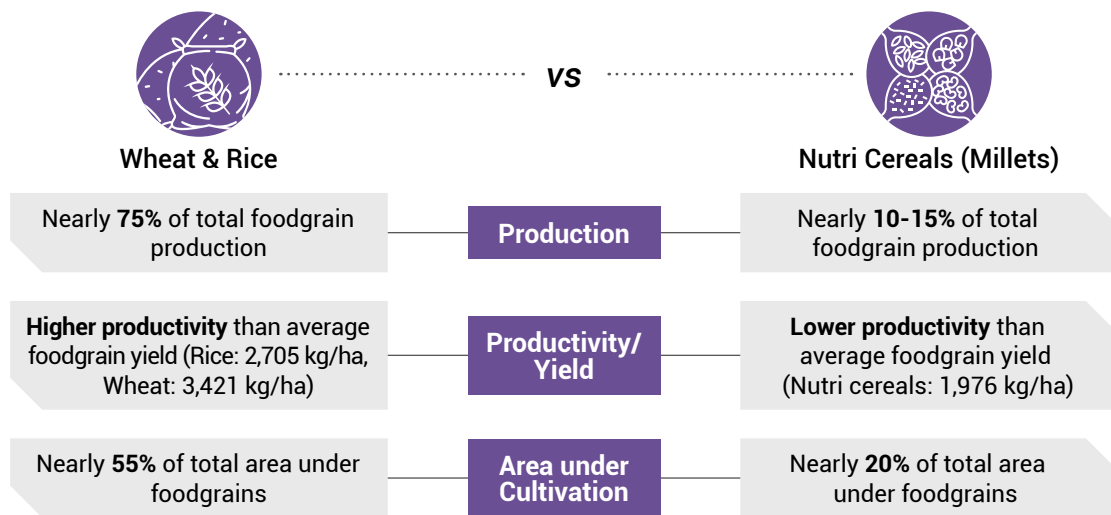
The analysis highlighted that there are several challenges in scaling up both production and consumption of millets owing to both the specific nature of the crop and weak institutional support for millets across value chain components. These include:

Insufficient production and supply of millets

Over the years, India has witnessed a more than 50% decrease in the area (usually measured in hectares) under millets by farmers since the 1950s. Much of this is a result of the shift to wheat, rice and other high-value crops following the Green Revolution. After years of

decreasing trends in production, millet output has shown a marginal increase, from 14.52 million tonnes in 2015-16 to 17.96 million tonnes by 2020-21 (PIB 2022). This was majorly due to a brief enhancement in productivity. Nevertheless, this output is still negligible in the current scenario, as compared to the other competitor food crops. Out of the total food grain production in India, around 300 million tonnes of millets or 'nutri-cereals' contribute to a negligible 5%, while wheat and rice command more than a 75% share of food grain production (PIB 2022). As millets are predominantly grown in marginal and sub-marginal dry lands by poor farmers, the **fluctuations in area, production and productivity** not only bring hardship to farmers, but could also create instability in food and nutritional security. The major states that grow millets include Rajasthan, Karnataka, Andhra Pradesh, Odisha,

Figure 4: Understanding the need to ramp up millet production in competition with wheat and rice



(Data as per latest government estimates in the Agriculture Budget by Department of Agriculture & Farmers' Welfare)
Note: Foodgrains include – Wheat, Rice, Nutri Cereals and Pulses.

Tamil Nadu, Madhya Pradesh, and Maharashtra. Unfortunately, even the high-yielding states do not contribute in proportion to their potential. Rajasthan, which is the highest producer of millets in absolute terms, experiences average losses of around 15-18% post-harvest with millets, highlighting much scope for production and value-addition improvement. For example, climate-resilient technologies and activities have been gaining traction within the Indian agricultural context. Therefore, shifting from resource-draining and emission-intensive crops like rice and promoting a switch to climate-smart crops like millets and combining this with the information on the nutritional benefits of 'nutri-cereals' is encouraged.

Additionally, low surplus production of millets has led to states missing out on export opportunities as well. India accounts for nearly 20% of all export value for millets, indicating that the country has the potential to lead as a supplier of global demand. However this can only be realised when domestic production is scaled, and India shifts into producing a feasible surplus.

Lower per-unit remuneration and incentives for millet growers

Millet growing communities, which are mostly local, indigenous and small-scale rural farm households, constitute the poorest 60% of the Indian population (MINI 2022). However, not being able to realise effective returns on their produce often leaves producers with no choice but to shift to other crops. Procurement for farmers' produce happens through two channels: government and private actors, like middlemen and traders.

In public procurement, farmers are disincentivised to grow millets since there is an insufficient realisation of MSPs set by the government for millets, as compared to the higher value crops. Farmers get low returns for millets, which forces them to grow other crops instead to earn a better income. Additionally, they do not have the proper knowledge or awareness about effective new seed varieties, highlighting the need to encourage investments for not only seed and equipment, but also towards increasing knowledge availability. New, hybrid local millet varieties can be bolstered through research and development and provided at a subsidised cost to farmers as an incentive to grow. Also, while the momentum around introducing biofortified and climate-resilient seed varieties of millets has been increasing, more efforts are needed to promote them consistently and encourage farmers to adopt them at scale.

Procurement and processing of millets by the private sector is also highly scattered. Millets are coarse and dry cereals that require transformation through mechanised processing activities like dehulling, fermentation, roasting and grinding. These processes help to enhance their taste, and quality and increase the shelf life of the final product (Niyogi 2018). Due to the great variance in different types of millets and the yield generated across regions, processors also find it difficult to set up their centres to uniformly manufacture various categories of millets.

Local producers are forced to transport their produce to distant places as suitable processing units are typically not close to millet fields, creating a barrier for farmers to scale millet production. Also, private sector innovation has been limited and due to the absence of effective market linkages, post-harvest activities have not matured or benefitted from their input. This further affects the ability of farmers to generate sufficient revenue by producing millets. Even for successful missions like Odisha Millets Mission (OMM), input costs such as transportation swallow a significant portion of the income generated from millet sales. Before government procurement was established, middlemen would also buy produce for considerably lower rates (Satpathi et al. 2019). Even if millets require less inputs for harvest, other significant costs involved in post-harvest activities means farmers are vulnerable to lower margins.

There is weak consumer awareness and demand for millets

Overall, due to factors like taste, texture and size, millets are not the popular grain of choice in India. This means there is lower demand for millets in comparison to other high-value crops. Knowledge about the health benefits of millets is also restricted to niche

consumer markets. Even though post-COVID there has been an increase in consumer demand for more nutritious and healthy food options, lack of awareness around the benefits of millets has led to certain producers missing out on the demand potential. Additionally, high product prices in comparison with staple grains are a barrier to penetrate the urban food market.

Consumers are also less aware of the various forms in which millets can be consumed. For example, there is a lack of know-how on ways to use small millets in a daily staple diet across the country and households mostly consume millets in basic forms in large parts of India. This does not incentivise producers to grow, market and brand millet varieties as an appetising food option for a growing target market. This challenge can be linked to the lack of investment in millet product development, promotion and advertisements. In order to encourage this, cultivating an image for millets through claims backed by science and strong research will strengthen millet branding and drive consumer demand. However, it will be challenging and costly to conduct this kind of extensive research on the wide variety of millets grown across India.

Overcoming the general consumer perception on millets is also a key challenge to mainstreaming millets. Generating demand for new recipes and varieties for a product to cater to these consumers is a daunting task and will require consistent effort. There have been a few innovative offerings, like Tata Soulfull, Wholsum Foods etc., offering a range of innovative millet-based products for the modern Indian consumer, but the lack of efforts in marketing and promoting millets will continue to hamper attitudinal and preference-related consumption, impeding the revival of millets.

Inadequate inclusion of millets in government interventions

Research has also highlighted that millets are not endorsed in the Public Distribution Systems (PDS) of many states, including Rajasthan. Rice, wheat and sugar are the only items under the ambit of PDS, and those items are exported from other states while homegrown millets are not given weightage under the PDS. By subsidising the supply of fine cereals through the PDS there has been a shift from the production of millets, jowar in particular, to wheat, rice, pulses, etc. This has meant food habits have evolved over time, even for the rural population, away from traditional local millets (Singh et al. 2022). Easy availability of conventional grains, due to the enabling PDS network, makes it that much more challenging to develop demand for millets in India.

A deeper dive into existing interventions highlighted that there is still considerable scope for improvement, and rigorous work needs to be done on the production and promotion of millets in India. With the absence of integrated support across all components of the millet production value chain, bottlenecks are inevitable in the medium to long term.

Leveraging Best Practices across States in India

State-level missions by Odisha, Karnataka, Kerala, and Tamil Nadu have already generated learnings that can be applied to other millet-producing regions of India. Other states can identify best practices from these interventions to bridge gaps in their policy strategies.

States would, however, need to tailor their efforts to address specific needs at the local level, while they also learn from other states. Although the type of millet grown in various states may not be the same due to local geographic differences and climatic conditions, end-level challenges like cost ineffectiveness and the lack of institutional support for branding are shared barriers for scale. Issues at the institutional level further highlight similarities in terms of how administrative units are set up and local implementation is done.

Figure 5: Representation of best practices learnt from millet missions

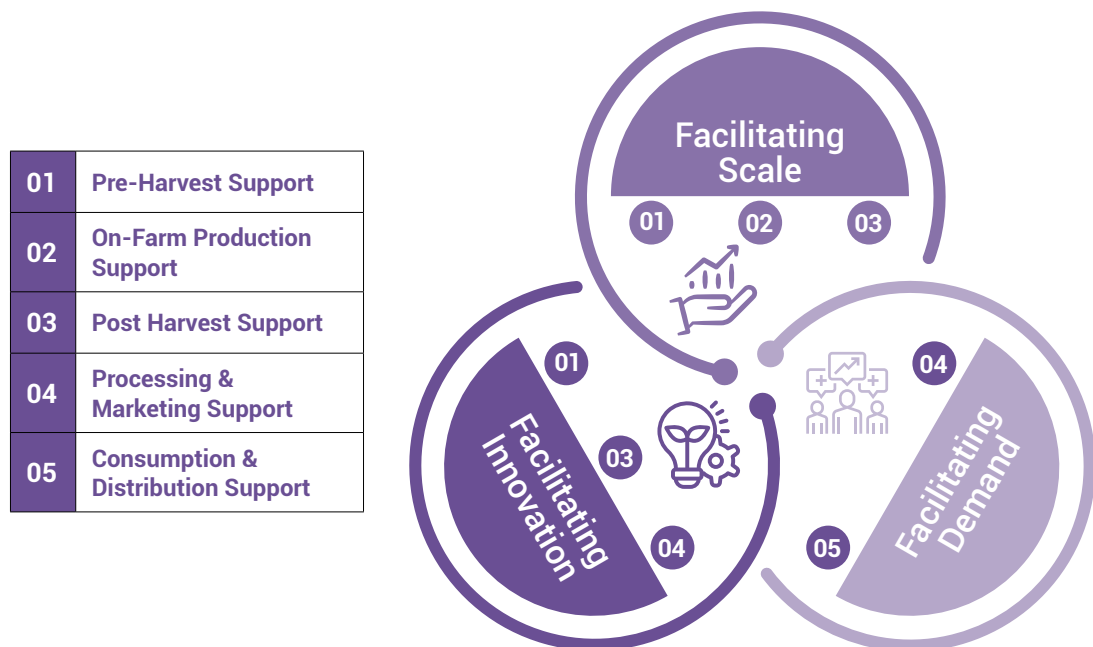
Type of Support	Identification of some best practices based on learnings from existing state interventions
Pre-Harvest Support	<ul style="list-style-type: none"> • Setting up rural infrastructure - Locally setup seed centres, storage and warehousing facilities and processing centres for millets • R&D internships - Urban internships to research on local millet varieties - biofortified or high yield varieties specific to certain geographies and soil types • Providing financial incentives like cover sums, loans, blended finance products like irrigation loans
On-Farm Production Support	<ul style="list-style-type: none"> • Trainings and Workshops - Dedicated courses and workshops for knowledge building of farmers around seed varieties, farm practices
Post Harvest Support	<ul style="list-style-type: none"> • Monitoring Mechanisms - Frequently updating quality standards and assessing produce after every crop cycle • Providing risk mitigation incentives like deficit payment schemes to ensure realisation of MSP • Providing grants to private startups and SMEs - Establishing network and access to various seed funds
Processing & Marketing Support	<ul style="list-style-type: none"> • Uniform hologram labelling for millet products • Setting up trade fairs and festivals, setting awareness kiosks and forums encouraging agro-tourism
Consumption & Distribution Support	<ul style="list-style-type: none"> • Setting up urban infrastructure - Setting urban retail stores to provide easy access • Inclusion of technological innovations - Use of social media, interactive platforms and mobile applications to raise consumer demand • Market assistance through enabling buy-back options for creating demand

(Sattva 2022)

Developing Innovation and Scaling the Consumption of Millets

There has never been a more fortuitous time to implement these best practices, and if effective and concerted action can be taken now, the potential of scaling millets and all of its benefits is an exciting prospect. There are ways in which government support can be strengthened, along with specific actions from philanthropy and the private sector, to drive investments. These interventions can be made on three levers to remove bottlenecks across the value chain. These are as follows:

Figure 6: Three key levers for interventions across the value chain



(Sattva 2022)

Facilitating scale

Conducting participatory variety trials to promote local seed varieties of millets

It has been witnessed that states have been focusing attention on the ragi millets exclusively due to the easy availability of high-quality seeds and comparatively better remuneration (Niyogi 2020). However, to address large-scale issues of hunger and climate change, the scope has to cover more than the mainstream forms of millets being produced currently. Participatory variety trials could help revive a large number of millet varieties across various states. This could make it more conducive for local millet producers to produce their specific varieties at scale, additionally catering to more local consumers whose millet preferences are difficult to shift or homogenise for the entire nation.

Utilising the 'seed village concept' to maintain a steady supply of location-specific quality millet seeds at a minimum cost

A seed village concept is used to promote quality seed production among local farmers, by creating pools where trained farmers of the concerned geographies and neighbouring villages get together and share best practices among each other. This approach will be useful for millets since it is suitable for cultivating a particular variety of a single crop in a selected area (Shahid et al. 2020).

Introducing dedicated pricing for millets with MSPs along with tax benefits

A remunerative price for farm produce should be assured to the farmers through dedicated pricing systems for all varieties of millets, including minor millets. This can also be enabled through proper buy-back arrangements from farmers. Currently, raw forms of millets are exempted from the Goods and Services Tax (GST), and providing tax and GST benefits to value-added millet products would further incentivise farmers.

Leveraging support from Farmer Producer Organisations (FPO) to build local processing units close to farms harvesting millets

Locally driven farmer associations like FPOs can enable scale through the aggregation of low-cost inputs, providing institutional assistance to individual farmers, and helping them get better access to the market. These institutions can leverage their size to help farmers achieve more bargaining power in terms of access to procurement facilities and subsidised costs for inputs. FPOs can build local processing units with support from the National Bank for Agriculture and Rural Development (NABARD) and financial institutions with technical assistance from non-profits, to deliver immediate value addition in millets, and reduce wastage and post-harvest losses. Enabling farm gate processing facilities, and creating strong processing infrastructure, will facilitate timely post-harvest activities and can also open up new employment opportunities for the rural youth.

Promoting agricultural diversification across all states through millet intercropping

Even if some states do not grow millets locally, the minimal amount of inputs and requirements to grow crops can be leveraged to promote sustainable activities like crop diversification across farms that are highly endowed. Currently, cropping patterns in India are characterised by monoculture, that is, cultivating one crop at a time. This leads to large crop failures and resource drainage. Intercropping suitable varieties of millets along with resource-intensive crops like wheat, rice and oilseeds can provide additional benefits to farmers, while also balancing soil quality.

Facilitating innovation

Facilitating R&D support from the private sector around new and better varieties of millets

The private sector can most effectively provide the thrust towards innovation. R&D support on new age crop varieties, machinery, value addition and increasing shelf life of millets can be provided. The building of a knowledge base around the seed potential of millets can be facilitated by the inclusion of more open market ideas and research initiatives to understand

specific technical challenges around millets like the bioavailability and efficacy of millet seeds. Biofortification of millets, which is also emerging as a promising solution towards significantly increasing the nutritional profile of millets, can be aided through research support from private players (Vinoth & Ravindran 2017).

Involving agritech players to help bring technological innovations and decrease costs for farmers

The future of Indian agriculture is increasingly dependent on technology and innovations, where agri-tech startups and FPOs have a crucial role to play in terms of facilitation and enabling market access for producers. Agritech startups which have been experiencing increasing market share can bring end-to-end solutions to the farms, and minimise overall costs by using efficient technological and IT-based systems like geospatial mapping, blockchain tracing and digital feedback mechanisms (Anand & Raj 2019).

Leveraging private players for costly post-production activities, such as processing

Market-facing aspects of the value chain, like processing and marketing, can derive tremendous support from private sector entities. Holistic strengthening of the value chain can be effectively facilitated by private entrepreneurs. This kind of support can connect millet farmers to procurers and buyers directly through online marketing platforms, such as the Electronic Agricultural National Market (e-NAM).

Leveraging the value and reach of NGOs and other locally-led interventions, to train and disseminate knowledge to farmers about the benefits of millets and innovative support technologies

A proper systematic channel for the timely distribution of improved agronomic practices and other technical assistance to farmers can be enabled by leveraging the expansion and outreach capabilities of local community organisations to millet producers. Additionally, farmers can be encouraged to become entrepreneurs, increase self-sufficiency, and employ innovative procedures on farms.

Facilitating demand and consumption

Integrating millets across all development programmes of India

Stakeholders across development programmes in India, especially those in cross-cutting government development programmes across ministries (Ministry of Agriculture and Farmers' Welfare, Ministry of Health & Family Welfare, Ministry of Women and Child Development, Ministry of Consumer Affairs, Food and Public Distribution, and Ministry of Food Processing Industries), need to make millets an integral part of their approach. This would help improve the visibility of millets and also mainstream them effectively. Providing financial incentives would then become a natural next step and support to farmers at scale, possible through integrated interventions.

Standardising nutrition requirements for millet products through food standard authorities like Food Safety and Standards Authority of India (FSSAI)

Currently, most standards are applicable only for raw forms of millets like raw grains

and flour. Food standard authorities like FSSAI and ISO (International Organization for Standardization) could contribute to the promotion of millets by setting regulatory or standard requirements and permissible limits for nutrient content across processed food products. Standardisation ensures consistency in quality across states. This would promote producers to blend millets with recipes and food products to leverage brand value.

Elevating the brand value of millets through effective commercialisation

India needs to build a brand for Indian millets as a whole, while also providing variety. This will also help tap into the considerable export potential of millets as shared earlier. Traders should be supported to build inroads into new markets and also utilise the variety of millets produced across the states of India. Certified, quality export produce could establish credibility for Indian millets in the global market and form the base for higher volumes of trade in the future (PIB 2021).

Conducting surveys to capture evolving trends in consumer demand

Consumer demands are ever-evolving, but also sticky when it comes to daily food options. To build on the demand for millets, timely surveys need to be conducted to effectively assess the demands and perceptions of consumers. This will enable research institutions and NGOs to cater to, or influence, evolving needs across demographics.

Conclusion

States share a common set of ground-level challenges, and local governments can learn from each other by incorporating some of these best practices. Philanthropy and the private sector also have an important role to play here, supporting innovation while simultaneously working on scaling profitable solutions. Focusing on the three key levers of scale, innovation, and demand and working on actionable recommendations across them would be the most sustainable approach to mainstream millets in India. The vigorous confluence of all stakeholders working on these recommendations can help address existing challenges, and realise the potential of millets in combating the effects of climate change, as well as food and nutritional insecurity in India. In turn, by progressing the adoption of millets internally, India can be poised on the global stage to lead, educate and enable impact with this crop of the future.

References

- Agrawal, V 2021, *Bringing Back Millets – The Super Crop of Our Ancestors*, Social Story, viewed on 1st July 2022.
- Anand, A, Raj, S 2019, *Agritech Startups: The Ray of Hope in Indian Agriculture*, National Institute of Agricultural Extension Management (MANAGE).
- Dayakars BR, Tonapi, VA, Krishnaveni, K, Suneel, V, & Sangappa, VS 2018, *Millet Recipes – A Healthy Choice*, ICAR – Indian Institute of Millets Research, Rajendranagar Hyderabad, pp 168.
- Food Safety and Standards Authority of India, 2019, *Guidance Note – Millets The Nutri Cereals*, viewed on 1st July 2022.
- ICAR - Indian Institute of Millets Research 2018, *Feed the Future India Triangular Training (FTF ITT) Program: Report*.
- Kane-Potaka, J, Anitha, S, Tsusaka, TW, Botha, R, Budumuru, M, Upadhyay, S, Kumar, P, Mallesh, K, Hunasgi, R, Jalagam, AK 2021, 'Assessing Millets and Sorghum Consumption Behaviour in Urban India: A large-scale Survey', *Frontiers in Sustainable Food Systems*, ICRISAT.
- Tridge 2022, *Millet Global Exports and Top Exporters*, viewed on 1st July 2022.
- Ministry of Agriculture & Farmers Welfare, *National Conference on Kharif Campaign, 2022*, viewed on 1st July 2022.
- NITI Aayog Session on Millets, YouTube.
- Niyogi, DG 2018, *India's Millets Policy: Is it Headed in the Right Direction?*, Mongabay, viewed on 1st July 2022.
- Niyogi, DG 2018, 'Millet Processing Units in Andhra Pradesh, Madhya Pradesh to give Impetus to Farmers', *Down To Earth*, viewed on 1st July 2022.
- B. Dayakar Rao, Raj Bhandari, and Tonapi, VA, K., 2021 *White Paper on Millets – A Policy Note on Mainstreaming Millets for Nutrition Security*, ICAR-Indian Institute of Millets Research (IIMR).
- Paliath S 2022, *What is a Digital AgriStack and Why Indian Farmers are Opposed to it*, *Business Standard News*, viewed on 1st July 2022.
- Press Information Bureau Delhi 2021, *Creating Awareness Among Farmers for Nutri Cereals (Millets)*, viewed on 1st July 2022.
- Press Information Bureau Delhi 2022, *Exports of Millets to Increase Exponentially as Indian Exporters Find new Markets*, viewed on 1st July 2022.
- Press Information Bureau 2022, *Budget Series #6 International Year of Millets: India Leading the Way*.
- Raju, S, Rampal, P, Bhavani, RV, Rajshekar, SC 2018, 'Introduction of Millets into the Public Distribution System: Lessons from Karnataka', *Review of Agrarian Studies*, July-December 2018, viewed on 1st July 2022.
- Satpathi, S, Saha, A, & Basu, S 2019, *Millets as a Policy Response to the Food and Nutrition Crisis – Special Reference to the Odisha Millets Mission*, *Bharat Rural Livelihoods Foundation*.
- Shahid, M, Nayak, AK, Mohanty, S, Tripathi, R, Mohapatra, SD, Panda, BB, Meher, J, Saha, S, Sarangi, DR, Priyadarsani, S, Nayak, PK, Kumar, GAK, Rajkumar, R, Tesfai, M, Nagothu, US & Pathak, H 2020, 'Rice Seed Self-sufficiency with Farmerto-Farmer (F2F) Seed Village Model', *NRRI Research Bulletin No. 25*, ICAR National Rice Research Institute (NRRI), Cuttack, Odisha, India, pp. 1-14.
- Singh, A, Sisodia P n.d., *Reviving Millets, Reconnecting to Cultures*, Leisa India, viewed on 1st July 2022.
- *The Agricultural and Processed Food Products Export Development Authority*, 2022, viewed 1st July 2022.
- Singh, S 2020, *Agriculture Warehousing in India – Data, Statistics and Opportunities*, *MoneyMint*, August 8, 2020, viewed on 1st July 2022.

