MAINSTREAMING MILLETS

POLICY BRIEF NO. 5

A Case for Strengthening Millet Value Chain through Value Added Millet Products

What is the Issue?

India is among the biggest producers of millets in the world. Considered a climate resilient crop, millets have substantial potential to expand dietary diversity in food baskets. Millets are used in several traditional foods; however, the lack of large-scale industrial demand discourages farmers from cultivating them. The hard seed coat of millets increases their storage value but makes it difficult to process and cook quickly. Among the major limiting factors to millet consumption is the limited availability of ready-to-cook (RTC), ready-to-eat (RTE) and value-added millet products that have longer shelf life and have higher palatability.

Key Challenges?

1. **Limited credit channels for private entrepreneurs for RTE/RTC processing:** Millets are gluten-free and thus have lower elasticity, affecting their utilization as a base grain for RTE/RTC products.[1] However, there is substantial literature on varied techniques for treating and converting millets into value-added products. RTE/

Overview

Millets are classified as “coarse grains” and are a part of staple diet in some parts of rural India. While millets are nutritionally superior to cereals, their consumption is skewed to subsistence farmers or families belonging to lower income strata. There has been newfound demand in urban markets, however it is yet not significant to accelerate movement across value-chain.

[1] Saleh, Zhang et al (2013), “Millet grains: nutritional quality, processing, and potential health benefits”, Comprehensive Reviews in Food Science and Food Safety, Vol 1 2.

There is a need to encourage mechanization and create a conducive environment for pivoting research & development efforts to the private sector, with government support, identifying RTE/RTC processing as part of the MSME sector creating employment opportunities, especially for women.

"There are many reasons why millets are not a regular product in the consumer basket. One of the reasons is the fact that not many processing technologies have been developed yet. It's not enough to just brand a commodity and take it to the market, an entire value chain is needed."

- Dr B Dayakar Rao,
Principal Scientist,
Indian Institute of Millets Research

RTC millet products are not recognized as a specific MSME intervention and therefore lose out on credit access through various government schemes.

2. **Significant price spread in the value-addition chain:** Lack of decentralized production units leads to movement of most millets from production regions to distant processing regions such as Nashik, Maharashtra, crowding out local production and inflating the cost of processed millet products.
3. **Limited marketing of millets:** The lack of investment in processing facilities impacts marketing of millets vis-à-vis other cash crops, with no encouragement (through advance credit/ guaranteed buyers) from intermediaries or producers. It is cultivated for subsistence reasons only and does not translate into income generation for the farmer, despite lower input costs and it being an easy crop to grow.

Why is this Important?

Demand for RTE/ RTC millet products can boost incomes for small farmers through a crowding-in effect in the backward market linkages with the farming sector. Further the highly nutritious nature of millets along with the low glycemic index and high calcium and iron content can positively impact India's nutrition landscape. The addition of milled millet flour (foxtail, barnyard, finger millets) to wheat flour increases protein, fat and ash[2] concentration while reducing the carbohydrate concentration. Composite flour can be used as nutrition-dense option for supplementary feeding programs[3]. Grown largely in tribal areas, and with significant labor participation of women, local level millets processing can play a substantial role in enhancing tribal incomes and provide economic opportunities to women farmers.

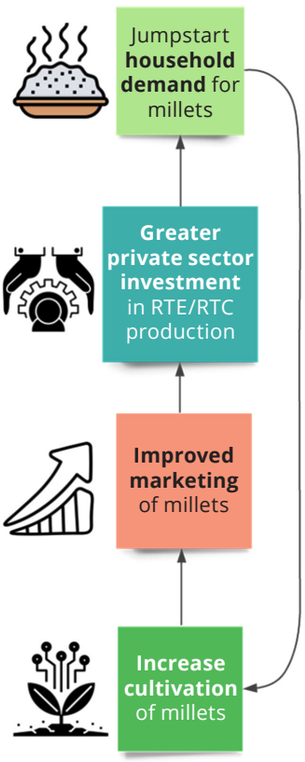
What should Policy Makers Do?

1. **Invite investments in millets processing R&D from the private sector:** Strengthening research & development initiatives through the private sector will accelerate the invention of cost-effective, large-scale processing techniques for millets. Policymakers can encourage innovation by subsidizing R&D efforts and sharing

[2] https://people.umass.edu/~mcclemen/581Ash&Minerals.html

[3] Singh, P. and Raghuvanshi, R.S. (2012) Finger millet for food and nutritional security. African Journal of Food Science, 6 (4). pp. 77-84.

intellectual property rights (IPR) with successful private ventures.



- The Government of India upgraded the Directorate of Sorghum Research to the status of the **Indian Institute of Millets Research (IIMR)**[4] in 2014 to transform millets from a subsistence crop to a climate-resilient nutri-cereal enterprise for equitable prosperity. Under the incubation services offered by IIMR, RTE/ RTC technologies developed in-house are shared with entrepreneurs for three years, extendable for two more years. An example of this is nutri-hub, the Department of Science & Technology (DST), Govt. of India supported Technology Business Incubator. It is a unique and first of its kind innovation to cater start-ups needs in the Nutri-cereals sector in the country, encouraging budding Entrepreneurs to promote the growth of Millets.
- Entrepreneurs should be encouraged to develop their technologies and provided need-based government loans/ subsidies after technical vetting of the concept. Private partners should be given a limited-period Intellectual Property Right to recover costs. This will enable the optimized use of allocated funds towards promising RTE/ RTC processing technologies developed through private seed capital.

2. **Incentivize private sector participation in RTE/RTC segment:** Participation of private sector entrepreneurs will aid in flexibly responding to consumer demands (such as for ragi cookies, pizza bases, noodles, jowar flour etc.) and facilitate better price discovery for value-added products.
   - IIMR offers various incubation services for start-ups ranging from technology consultancy, go-to-market strategies, mentoring and funding access through accelerator programs under its “Nutrihub” initiative. However, allocations in its parent Ministry of Agriculture and Farmers’ Welfare are spread across various segments (crop, horticulture, animal husbandry etc.); the exact fund set aside for the Nutrihub is unclear. Agricultural engineering attracts less than 2% of the total funds allocated to this Ministry[5].
   - The Ministry of Micro, Small & Medium Enterprises has a plethora of credit generating