

11. Government Policies to Increase Millet Production and Consumption

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Abstract:

The cultivation of millets, derived from the French word "mille" signifying abundance, encompasses major and minor varieties crucial for food security in hot, arid regions globally. Millets saw a dramatic decrease in cultivated area in period between 1966 and 2009, a significant decrease in per capita availability of all millets and a steep fall in overall millets consumption. The emergence of new challenges such as climate change, soil degradation and nutritional deficiency led to the resurgence of millets and its importance in Indian agriculture in 2010s. Realising the potential of millets to offer food security to nation, nutritional security to consumers and financial security to farmers, and to create national and global demand for Indian millets, government of India proposed declaring of 2023 as International Year of Millets (IYoM-2023) which was accepted by United Nations General Assembly (UNGA). The governments at central and state have taken a number of initiatives to increase the area, production and productivity of millets. Furthermore, it is imperative to develop well-defined concepts for integrated sustainable farming practices that are both replicable and adaptable, while also being manageable in terms of knowledge requirements and cost.

Keywords:

Nutritional deficiency, Food Security, Integrated Farming, Millets, Policy Support.

11.1 Introduction:

Millets are commonly known as "Miracle grains" due to their ability to flourish in arid environments and their reduced dependence on irrigation compared to other agricultural crops. According to the International Crop Research Institute for the

Semi-Arid Tropics (ICRISAT, 2020), the nutritional needs of over 90 million individuals in Africa and Asia are reliant on millets. These food items provide high nutritional value and offer a multitude of health advantages to individuals who consume them. In recent years, millets have gained significance due to their high nutritional value, well-documented health advantages, adaptability to many environmental conditions, suitability for low-input agriculture, and compatibility with organic production practices. Millets provide as more than mere sustenance, as they hold a significant position within the cultural fabric of numerous communities around the nation (Saxena et al., 2018).

According to estimates, the global area cultivated with millet decreased by 25.7% between 1961 and 2018 (FAOSTAT 2018). Asia experienced the largest reduction in cultivated area (148%), while Africa observed the lowest.

This decline may be attributed to a lack of concentrated crop improvement efforts, a shift towards high-value cash crops, insufficient government policies, and low farm profitability. The sustained decrease in the global cultivated area under millets over the last decades has led to their classification as minor or underutilized grains (Meena et. al., 2021).

The global decline in millet cultivation from 1961 to 2018, particularly in Asia, underscores the need for concerted efforts to reverse this trend.

The implementation of governmental policies aimed at promoting millet farming is expected to contribute to the diversification of agricultural practices, enhance agricultural resilience, and ultimately enhance livelihoods in dry regions.

That being said there still remains multiple challenges to the shift to millet-based production system and inclusion of millets in our daily diet. This calls a need for the comprehensive and integrated development strategy that encompasses production, demand, and research on a large scale, considering location-specific factors.

11.2 Policy Initiatives by The Indian Government:

The government of India along with the state governments and research institutions have started a number of schemes and initiatives for increasing the production as well as demands for the millets with a view to tackle both the food & nutritional security and the threat of climate change. Some of the important policy incentives for supporting millets production and consumption are given below:

A. Nutri Cereals Under National Food Security Mission (NFSM):

In April 2018, the Government officially classified millets as nutri-cereals, acknowledging their significant nutritional benefits. During the year of 2018 to 2019, the Department of Agriculture and Farmers Welfare (DA&FW) implemented a SubMission on Nutri-Cereals (Millets) as part of the National Food Security Mission (NFSM). The primary objective of this initiative was to enhance the cultivation area, overall production, and productivity of millets.

The millets encompassed in this category consist of Sorghum (Jowar), Pearl Millet (Bajra), Finger Millet (Ragi), Minor Millets, namely Foxtail Millet (Kangani), Proso Millet (Cheena), Kodo Millet (Kodo), Barnyard Millet (Sawa), Little Millet (Kutki), as well as two Pseudo Millets, Buckwheat (Kuttu) and Amaranthus (Chaulai), which are cultivated across 212 districts spanning 14 states. The objective of the mission was to formulate a strategy that is market-oriented in order to address issues pertaining to production, demand, and research. This strategy aimed to increase the production of Nutri-Cereal in specific districts of the country by implementing sustainable methods of expanding the cultivation area and enhancing productivity.

Additionally, the mission aimed to strengthen the Nutri-Cereals system by improving the supply of seeds and adding value to the post-harvest process, ultimately leading to better price realization for farmers through efficient market connections (MoA&FW, 2021).

B. PLI Scheme on Millet:

The Government, on March 31, 2021, granted approval for a central sector program known as the "Production Linked Incentive (PLI) Scheme for Food Processing Industry," which has been allocated a budget of INR 10,900 crores. The initiative will be executed over a span of seven years, commencing from the academic years 2021-2022 and concluding in 2026-2027. The primary objectives encompass fostering the cultivation of global leaders within the food manufacturing sector and advancing the visibility and recognition of Indian food product brands in international markets. The devised plan aims to enhance the promotion of particular food product sectors, particularly those centered around millet-based items, which exhibit significant prospects for expansion. The Production Linked Incentive Scheme for Millet-Based Goods (PLISMBP), initiated by the Ministry of Food Processing Industries, aims to provide incentives to the large-scale food industry in order to promote the use of millet-based products (MoA&FW, 2022).

The primary goal of the initiative is to promote the manufacturing of millet-based goods that are conveniently prepared for consumption or cooking. Support is offered to start-ups and entrepreneurs in the development of recipes and value-added products that promote the consumption of millets.

C. Promoting Millets in Public Distribution System (PDS):

The Government has incorporated millets into the Public Distribution System with the aim of enhancing their accessibility and affordability. Furthermore, in order to facilitate the transportation of millets, the Government has implemented revisions to the regulations governing the inter-state transportation of surplus millet production. In order to fulfill the pre-procurement, need of the consuming State, the Food Corporation of India (FCI) has included the transportation of surplus millets across state borders (MoFPI, 2022).

D. Promotion of Millet by MWCD in Supplementary Nutrition Program (SNP):

The Ministry of Women and Child Development (MoW&CD) has issued recommendations to all States and Union Territories (UTs) to incorporate millets into their culinary preparations with the aim of enhancing the nutritional content of the meals provided under the Anganwadi Services' Supplementary Nutrition Program.

According to the Ministry of Women and Child Development (MoW&CD, 2022), the Supplementary Nutrition Program component of Mission Saksham Anganwadi & Poshan 2.0 requires the inclusion of a millet-based dish in the Take Home Ration distributed to beneficiaries on a weekly basis.

E. Support to Millets Research:

Funding has been provided by the government to establish the Indian Institute of Millet Research (IIMR), based in Hyderabad, as a Center of Excellence for the exchange of millets-related technology, research, and best practices. The primary objective of the IIMR is to facilitate the conversion of millets cultivation from a subsistence farming practice to a globally competitive industry. This transformation is to be achieved by the use of cost-effective agricultural crop rotation methods, environmentally sustainable production processing techniques, and the adoption of value addition technologies and efficient supply chain networks.

The Nutri hub incubator, established by the Indian Institute of Millets Research, offers financial support to entrepreneurs in the nutri cereal sector during the early stages of idea conceptualization and prototype development. Additionally, the incubator provides comprehensive training programs to enhance the skills and knowledge of these individuals. The Indian Council of Agricultural Research (ICAR) provides support to 45 collaborating Centers situated in different State Agricultural Universities and ICAR Institutes. These centers are dedicated to the advancement of new millet varieties as part of the All India Coordinated Research Project (AICRP) focused on small millets, Sorghum, and Pearl millet.

Several national agricultural research institutions are currently engaged in efforts to develop hybrid and high-yielding varieties of millets, together with suitable equipment for hulling, grading, and processing these millets into high-value products. These initiatives aim to cater to emerging urban consumption trends and potentially facilitate their exportation.

F. Support to States:

The Department of Agriculture (MoA&FW) helps the States through the Centrally Sponsored Scheme known as "Support to State Extension Programme for Extension Reforms." This scheme encompasses a range of extension activities, such as Farmers' Training, Exposure visits, Demonstrations, Kisan Mela Kisan Goshthi, farmers-scientists interaction, mobilization of Farmers Interest Groups, and Setting up of Farm Schools. These activities primarily focus on engaging awardee/progressive farmers in the field.

11.3 Recent Initiatives:

The Government of India is celebrating the year 2023 as 'International Year of Millets' to make it peoples' movement so that the Indian millets, recipes, value added products be promoted globally. Millets were promoted during G20 presidency in India, Millet Culinary carnival, International Trade Events, Chef's Conference, exhibition of Farmers Producer Organizations (FPOs), road shows, kisan melas, Chef's training for paramilitary forces, ASEAN India Millet Festival at Indonesia etc.

A key event organized towards International Year of Millets was the Global Millets (Shree Anna) Conference, held from 18th – 19th March 2023 at IARI Pusa campus, New Delhi which was inaugurated by the Hon'ble Prime Minister.

To make India a global hub for 'Shree Anna', the Indian Institute of Millets Research (IIMR), Hyderabad has been declared as the Global Centre of Excellence for sharing best practices, research and technologies at the national and international level.

The Indian Institute of Millet Research (IIMR), Hyderabad is also providing training to the farmers, women farmers, home makers, students and young entrepreneurs on manufacturing of value-added millet food products, daily recipes etc., and supporting them to establish self-enterprise.

The institute has also developed value-added technologies include “Ready to Eat” and “Ready to Cook” for millet foods, branding of millet foods under “Eatrite” tag, organized awareness programmes, agri-business incubator, technology business incubators etc.

During 2014 to 2023, a total of 229 Millets varieties comprising 67 of Sorghum, 68 of Pearl millet; 19 of little millet; 7 of Proso millet; 11 of Kodo millet; 40 of Finger millet; 10 of Foxtail millet, 1 of Brown top millet and 6 of Barnyard millet have been released by Central Variety Release Committee (CVRC) for cultivation in different agro-ecologies of country.

The new Regional Research Centre for Bajra at Gudamalani, near Barmer, Rajasthan has been inaugurated on 27th September 2023. To strengthen the research collaboration and public awareness of millets globally, a new initiative viz., “Millets and OtHer Ancient GRains International ReSearch Initiative (MAHARISHI) has been adopted during the G20 Presidency. Ministry of Food Processing Industries (MoFPI) has approved the Production Linked Incentive Scheme for Food Processing Industry for Millet-based products (PLISMBP) for implementation during 2022-23 to 2026-27 with an outlay of Rs. 800 crores. Millets are also included under the Poshan Abhiyan of the Ministry of Women and Child Development.

Further, the Ministry of Food and Public Distribution has revised its guidelines to increase the procurement of millets under the Targeted Public Distribution System (TPDS), Integrated Child Development Services (ICDS) and Mid-Day Meal.

An Export Promotion Forum dedicated to promotion of millets in the international market has been set up to facilitate promotion, marketing and development of millets exports from India. Under the Eat Right campaign, the Food Safety and Standards Authority of India (FSSAI) is creating awareness to promote the use of millets as

part of a healthy and varied diet. In continuation to the efforts towards mainstreaming millets, a ‘Millets Experience Centre (MEC)’ has been opened at Dilli Haat, INA, New Delhi with an aim to raise awareness on Millets and encourage its adoption among general public.

To encourage consumption of Shree Anna among government employees, all Government offices have been advised to include Shree Anna snacks in departmental trainings/meetings and Shree Anna based food items in departmental canteens.

In order to increase the production & productivity of millets (Shree Anna), the Department of Agriculture and Farmers Welfare (DA&FW) is implementing a Sub-Mission on Nutri-Cereals (Millets) under National Food Security Mission (NFSM) in all districts of 28 States & 2 Union Territories viz. Jammu & Kashmir and Ladakh.

The Nutri-Cereals (millets) such as Sorghum (Jowar), Pearl Millet (Bajra), Finger Millet (Ragi/Mandua), Minor Millets i.e., Foxtail Millet (Kangani/Kakun), Proso Millet (Cheena), Kodo Millet (Kodo), Barnyard Millet (Sawa/Sanwa/ Jhangora), Little Millet (Kutki) and two Pseudo Millets Buck-wheat (Kuttu) and Amaranthus (Chaulai) are covered under NFSM programme.

Under NFSM–Nutri Cereals, the incentives are provided to the farmers, through the States/UTs, on crop production and protection technologies, cropping system based demonstrations, production & distribution of certified seeds of newly released varieties/hybrids, Integrated Nutrient and Pest Management techniques, improved farm implements/tools/resource conservation machineries, water saving devices, capacity building of farmers through trainings during cropping season, organizing events/workshops, distribution of seed minikits, publicity through print and electronic media etc.

In addition, Government of India also provides flexibility to the states for state specific needs/priorities under Rashtirya Krishi Vikas Yojana (RKVY). The states can promote Millets (Shree Anna) under RKVY with approval of State Level Sanctioning Committee (SLSC) headed by Chief Secretary of the State.

In addition, states such as Assam, Bihar, Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttarakhand and Uttar Pradesh have initiated Millet Missions in the States to promote millets. (c) to (e): The production of Nutri-Cereals (Shree Anna) and bajra during 2022-23 was 173.20 lakh tonnes and

114.31 lakh tonnes respectively compared to 160 lakh tonnes and 97.81 lakh tonnes during 2021-22 which is 8% and 17% increase in production over the previous year. The upward trend has been seen in case of bajra in comparison to other millets during 2022-23 over the previous years except during 2021-22.

Table 11.1: The details of millets production including Pearl millet (Bajra) during 2021-22 and 2022-23 is as under

Sr. No.	Nutri-Cereals (Shree Anna)	Production (in Lakh Tonnes)	
		2021-22	2022-23
1	Bajra	97.81	114.31
2	Jowar	41.51	38.14
3	Ragi	17.01	16.91
4	Small millets	3.67	3.84
Total		160.00	173.20

11.4 Policy Measures for Promoting Millet Farming in India:

- a. **National Mission on Sustainable Agriculture (NMSA):** The National Mission on Sustainable Agriculture (NMSA) focuses on promoting sustainable agricultural practices for long-term environmental and economic viability. In the context of millet farming, the mission supports practices such as organic farming, efficient water use, and soil health improvement. By encouraging these sustainable approaches, NMSA contributes to the resilience of millet farming systems.
- b. **Pradhan Mantri Krishi Sinchai Yojana (PMKSY):** The Pradhan Mantri Krishi Sinchai Yojana (PMKSY) is a comprehensive scheme aimed at improving water use efficiency in agriculture. Given the water-efficient nature of millet crops, PMKSY is relevant for millet farmers, especially in regions facing water scarcity. The scheme facilitates the creation of water infrastructure, promotes efficient irrigation practices, and supports sustainable water management in millet cultivation.
- c. **Rashtriya Krishi Vikas Yojana (RKVY):** The Rashtriya Krishi Vikas Yojana (RKVY) is designed to support states in planning and executing their agricultural development strategies. Few States can utilize RKVY funds to promote millet cultivation, invest in infrastructure development related to millet farming, and implement innovative practices that enhance millet productivity.

- d. National Food Processing Policy:** The National Food Processing Policy plays a pivotal role in adding value to agricultural produce that including millets. By encouraging the processing of millets into various food products, the policy aims to reduce post-harvest losses, create new avenues for income generation among millet farmers, and meet the growing demand for millet based processed foods.
- e. Paramparagat Krishi Vikas Yojana (PKVY):** The Paramparagat Krishi Vikas Yojana (PKVY) focuses on promoting organic farming methods. Millets, being traditionally grown with minimal use of chemicals that align well with the objectives of PKVY. The scheme should encourage farmers to adopt organic practices in millet cultivation, preserving the natural ecosystem and enhancing the nutritional quality of millet produce.
- f. Millet Mission:** Some states in India have already initiated specific missions or schemes dedicated only to millet cultivation. These missions mainly involve targeted interventions such as awareness campaigns, training programs for farmers, subsidies on inputs, and efforts to create a conducive ecosystem for the growth of millet farming. These state-level initiatives aim to position millets as a key component of sustainable agriculture and food security.

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