



Policy Brief AG EXTN

Promotion of Millet cultivation and Value Added Millet Products

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Issues

India grows two types of millets: major and minor. Major millets include sorghum, bajra, and maize; minor millets include finger millet, foxtail millet, barnyard millet, and kodomillet. While small millets have a better nutritional value, major millets are grown in larger quantities in India than minor millets. Animal feed and human diet both use tiny millets because of their increased energy and nutritious value. Minor or little millets are rich in minerals such as calcium, zinc, magnesium, phosphorus, and potassium, as well as healthful fats, proteins, and fiber. 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.

The United Nations declared 2023 to be the International Year of Millets to recognize the millets significant contribution in ensuring food security for all people and in sustainable agriculture. The purpose of this project was to increase public knowledge of millets' adaptation, resilience, and nutritional value across a range of agro-ecological zones—particularly in view of climate change. Millets are vital for boosting food security and sustaining farmers' livelihoods around the world since they are not only nutrient-dense but also drought-tolerant and tolerant of a variety of environmental conditions. Globally, the International Year of Millets promoted increased investment in the study, cultivation, and use of these drought-tolerant grains, resulting in improved diets, the preservation of biodiversity, and more sustainable food systems on a global scale. Millets, which are traditionally cultivated over years, suffered a setback due to Change in food habits of the people. High nutritional content and adaptability to adverse soil and climatic conditions have necessitated the promotion of millets in a large scale. The millets provide multiple securities such as food security, fodder security, health and nutritional security and livelihood security.

Methodology and data

Secondary data on Millets area, production and productivity in India, Tamil Nadu and Madurai District was collected to know the time series and primary data obtained from 120 millets growers.

To find out the most significant constraints faced by the millet growers, Garrett's ranking technique was used. Percentage analysis also used

Time Series in Millet Cultivation Area, Production and Productivity

Time Series in Millet Cultivation Area, Production and Productivity in India

It could be observed from Table 1 and 2 that area and production over the decades showed decrease in trend but productivity shows increasing trend under millet cultivation.

Reason for declining millet production

The Green Revolution was implemented in the 1960s in an effort to combat hunger and poverty. Food grains, especially wheat and rice, were produced more extensively as a result, increasing their availability and affordability for consumers. Over time, millet consumption has decreased due to an over reliance on wheat and rice. As a result, millets have become undervalued and neglected crops as a result of a lack of public knowledge and a number of limitations, including a lack of cooking methods, taste, texture, and affordability. Rapid urbanization, shifting consumer preferences brought on by rising per capita incomes, government policies favoring other crops, such as input subsidies and output price incentives, and the rice availability in public distribution systems, are the factors causing the decline in millets' area and production.

Table 1. Area, Production, Productivity of millets in India

Year	Area (In ' 000 Hectare)	Production (In ' 000 Tonne)	Productivity (Kg/ha)
2010	800	442	553
2011	798	452	565
2012	754	436	578
2013	682	430	630
2014	590	386	654
2015	650	391	602
2016	619	442	714
2017	546	439	804
2018	454	333	734
2019	458	371	809
2020	444	347	781
2021	440	370	789

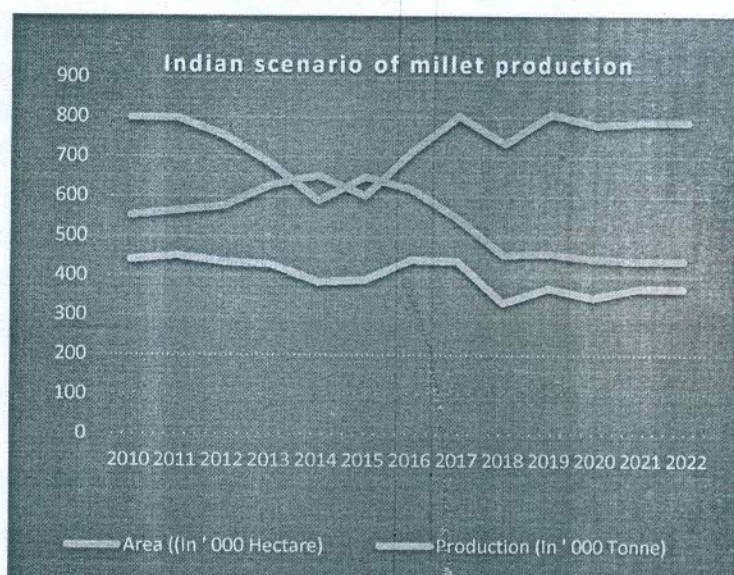


Table 3. Constraints faced by the millet growers

(n=120)

S. No.	Challenges faced by the millet growers	Percent position	Garrett Score	Rank
1.	Animal menace	5.56	8253	I
2.	Lack of knowledge on improved varieties	16.67	7483	II
3.	Uncertainty of rainfall	27.78	7302	III
4.	Unable fetch remunerative price	38.89	6158	IV
5.	Middleman involvement	50.00	5701	V
6.	Weeds problems (Kongra vali, peacock grass, Malla)	61.11	5321	VI
7.	Lack of skills on value addition of small millet produces	72.22	5097	VII
8.	Lack of access to millet processing unit	83.33	5077	VIII
9	Non availability of improved seeds	94.44	4448	IX

It could be observed that among all the constraints animal menace in millet cultivation (8253) got first rank followed by lack of knowledge on improved varieties (7483) as second rank, uncertainty of rainfall (7302) as third and unable fetch remunerative price (6158) as fourth rank as per Garrett's score Marketing through local agent (5701), weeds problems (5321), lack of skills on value addition of small millet produces (5097), lack of access to millet processing unit (5077) and non-availability of improved seeds (4448) obtained as fifth, Sixth, Seventh, Eighth and ninth rank respectively

Millet processing

Millet processing provides a significant opportunity to boost off-farm livelihood opportunities for local women and men. Placing processing units closer to production sites reduces the factory gate pricing of millet products. Off-farm opportunities ensure that cultivators also get a chance to integrate value-addition in their scope of work and reap better monetary benefits.

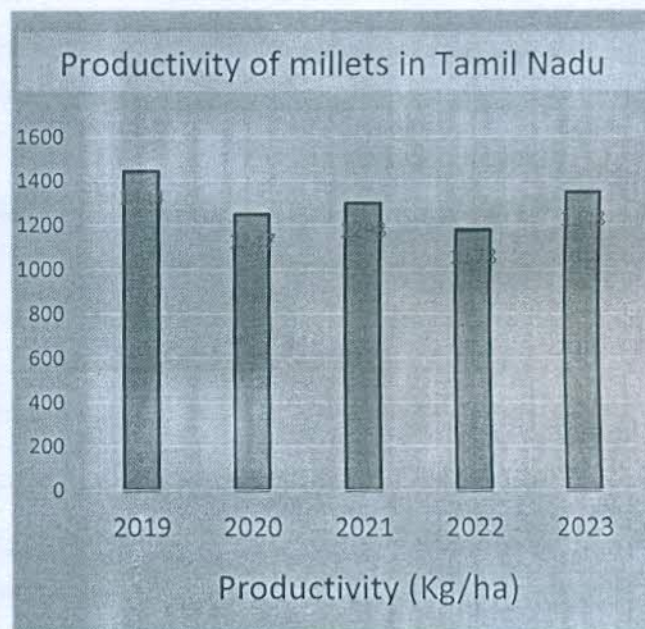
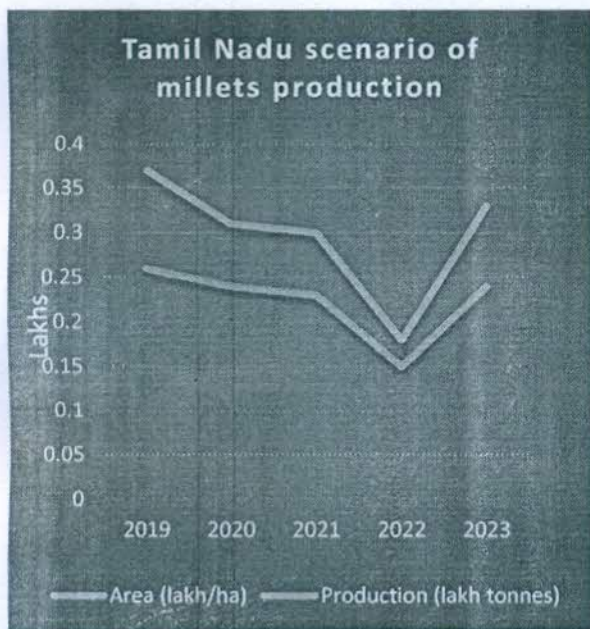
2022	440	370	789
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Source: DA&FW

Time Series in Millet Cultivation Area, Production and Productivity in Tamil Nadu

Table 2. Area, Production and Productivity of Millet production in Tamil Nadu

	2019	2020	2021	2022	2023
Area (lakh/ha)	0.26	0.24	0.23	0.15	0.24
Production (lakh tonnes)	0.37	0.31	0.3	0.18	0.33
Productivity (Kg/ha)	1444	1247	1298	1178	1348



Source: Ministry of Agriculture and Framers Welfare

KEY CHALLENGES IN MILLET CULTIVATION

Challenges faced by the millet growers

Based on the garret ranking the constraints faced by the millet growers arranged hierarchically

Challenges faced by the processing units holders

Interacted with the millet processing unit runners in the millet growing areas and listed out the important challenges faced by them (Table4)

Based on the garrett ranking the constraints faced by the millet processing units arranged in hierarchically and are given in Table 4.

Table 4. Challenges faced by the millet processing units (no. of units=10)

S. No.	Challenges faced by the millet processing units	Percent position	Garrett Score	Rank
1.	Millet polish machine needs to be included	8.33	696	I
2.	Lack of cooperation among members of processing unit	25.00	533	II
3.	Lack of flexibility to operation on various phase of electricity	41.67	499	III
4.	Lack of storage facilities and drying yard	58.33	488	IV
5.	Lack of safety measures	75.00	400	V
6.	Store dehuller unable to process small quantity less than 50 kg of store dehuller	91.67	364	VI
7.	Limited credit channels for private entrepreneurs for RTE/RTC processing	75.00	400	V

Among all the constraints millet polish machine needs to be included (696) in the processing unit got first rank followed by lack of cooperation among members of processing unit (533) got second rank and lack of flexibility to operation on various phase of electricity (499) got third rank. Based on the garrett ranking core .Majority of the millet consumers preferred polished millets than semi polished millets even though it is nutritious one. The lack of investment in processing facilities impacts marketing of millets visà-vis other cash crops, with no encouragement (through advance credit/ guaranteed buyers) from intermediaries or producers

Lack of storage facilities and drying yard (488), lack of safety measures (400) and store dehuller unable to process small quantity less than 50 kg of store dehuller (364) got fourth, fifth and sixth rank respectively.

POLICY RECOMMENDATION

- It is recommended that Minimum support price for millets, supply through PDS system and Govt. Procurement centers are the need of the hour to increase the demand and to get better remuneration by the millet growers and millet processing units
- It is suggested that supply of improved millets seed /hybrid at subsidised rate to the farmers in time through Govt Extension Service Center
- Animal menace needs to be controlled by panchayat level cooperative efforts in the millet growing area.
- **Value-Added Processing:** Millet processing provides a significant opportunity to increase-farm livelihood opportunities for farm women. Placing more number of processing **units closer to production sites** reduces the factory gate pricing of millet products. Off-farm opportunities ensure that cultivators also get a chance to integrate value-addition in their scope of work and reap better monetary benefits
- 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. Hence its need to promote RTC and RTE through imparting various skill training and providing credit facilities to promote entrepreneurs.