A study on Constraints Faced by Millet Stakeholders in Tamil Nadu, India

ABSTRACT

Millets, highly nutritious grains, are crucial for food security and nutrition due to their resilience in challenging agricultural conditions and rich nutritional content. This study investigates the constraints faced by stakeholders involved in the millet industry in Tamil Nadu, The research focuses on farmers, market intermediaries, and consumers, highlighting their challenges within the millet supply chain. A purposive sample of 90 millet-growing farmers and various market intermediaries was selected from key millet-producing districts. Data collection involved structured interviews and analysis using descriptive statistics and Garrett Ranking Technique. Results reveal significant production constraints for farmers, including price fluctuation, high seed costs, and pest and disease occurrence. Market intermediaries face challenges such as supply-demand imbalance and high transportation costs. Consumers encounter issues like limited availability and high prices of millet-based products. These findings underscore the multifaceted challenges within the millet industry, emphasizing the need for targeted interventions to address constraints and enhance the sustainability and accessibility of millets in Tamil Nadu.

Keywords: Millets; stakeholders; constraints; Garrett ranking.

1. INTRODUCTION

Millets are highly nutritious grains that have been a fundamental part of human diets for centuries. They serve as the primary cereal grain for many households[1]. In regions like Africa and Asia, millets are the mainstay food for about one third of the population (Arya and Bisht, (2022). Compared to rice, millets are rich in protein, dietary fiber, energy, and minerals. They can be processed into various food products such as flakes, quick cereals, snacks, fortified foods, cooking ingredients, malt-based items, weaning foods, and especially health foods (Hema *et al*., 2022)

Millets are seen as important crops for ensuring food security due to their ability to thrive in challenging agricultural conditions. They contribute significantly to enhancing genetic diversity in the food supply, thus improving overall food and nutrition security (Mal et al., 2010). Additionally, millets provide various health benefits and can aid in managing

conditions such as diabetes, obesity, and hyperactive lipoedema when included in daily diets (Anitha *et al*., 2021)

In India, millets are commonly used to prepare traditional foods and beverages such as idly, dosa, pappad, porridges, breads, and infant foods (Chandrasekara & Shahidi, 2011).India is the leading producer and consumer of millet crops and their value-addedproducts.Grainandfodderyielding'dual-purpose'milletsareproducedessentiallytoguarantee the food and fodder security in rainfed agriculture (Yadav *et al*., 2024)

Table1.State-WiseArea, ProductionandProductivityofCumbu,2017–18

State	Area(000'ha)	Production(000'tn)	Yield (tn/ha)
India(2017-18)	**CUMBU**		
Rajasthan	4264.30	3756.80	0.88
UttarPradesh	925.40	1795.10	1.94
Maharashtra	787.80	669.20	0.85
Gujarat	397.20	964.90	2.43
MadhyaPradesh	309.90	754.70	2.44
Karnataka	231.60	367.30	1.59
TamilNadu	63.00	143.50	2.28
AndhraPradesh	48.40	93.20	1.93
JammuandKashmir	12.60	7.40	0.59
Telangana	8.80	9.30	1.06
Others	7.30	7.30	8.97
Total	**7056.20**	**8568.80**	**24.96**

Source:DepartmentofAgricultureandCooperation,(DACNET,2018)

Cumbu in the total, Rajasthan ranked first by contributing 43 per cent of the IndianCumbu production. It is cultivated with an area of 42.64 lakh ha with 37.86 lakh tonnes ofproduction followed by Uttar Pradesh, Maharashtra, Gujarat, Madhya Pradesh, Karnataka,TamilNadu, and so on respectivelyin theyear 2017-18 (Table 2).

Table 2. State-WiseArea,ProductionandProductivityofSorghum,2017–18

State	Area(000'ha)	Production(000'Tn)	Yield (Tn/Ha)
India(2017-18)	**SORGHUM**		
Maharashtra	3464.20	2389.70	0.69
Karnataka	1088.10	1264.00	1.16
Rajasthan	516.00	300.80	0.58
TamilNadu	385.60	430.70	1.12
MadhyaPradesh	270.00	653.40	2.42

UttarPradesh	169.10	214.80	1.27
AndhraPradesh	139.70	332.70	2.38
Gujarat	91.20	125.30	1.37
Telangana	67.30	73.40	1.09
Chhattisgarh	3.70	4.70	1.26
Others	10.20	9.90	10.52
Total	**6201.50**	**5794.70**	**22.6**

Source:Departmentof AgricultureandCooperation,(DACNET,2018)

Maharashtra ranked first in the area cultivation of sorghum 34.64 lakh ha with theproduction of 23.89 lakh tonnes, followed by Karnataka, Rajasthan, Tamil Nadu, MadhyaPradesh,and so on respectivelyin theyear 2017-18 (Table 3).

Table 3. District-Wise Area,ProductionandProductivityofRagi,2017–18

State/District	**Area(ha)**	**Production(tn)**	**Yield (tn/ha)**
TamilNadu(2017-18)	**RAGI**		
Krishnagiri	41272	120446	3.89
Dharmapuri	16723	62301	3.73
Sivagangai	7307	25625	3.51
Vellore	6782	23974	3.53
Erode	5488	12028	2.92
Tiruvannamalai	4839	18572	3.84
Villupuram	2261	6949	3.07
Perambalur	538	1977	3.67
Salem	330	1471	4.46
Tiruchirappalli	320	1381	4.32
Others	492	1981	66.67
Total	**86513**	**321332**	**3.71**

Source:DepartmentofAgricultureandCooperation,(DACNET,2018)

The cultivation and consumption of millets present a multifaceted landscape with diverse stakeholders facing various challenges. Farmers encounter obstacles related to agricultural practices, market intermediaries grapple with fluctuating demand and supply dynamics, and consumers contend with limited accessibility and awareness of millet-based products (Lokur *et al*., 2023). The overarching goal of ensuring food security and nutritional well-being, particularly in regions where millets serve as a primary food sources faces several challenges. In this study, we will explore the constraints faced by these stakeholders in the millet supply chain.

2. MATERIALS AND METHODOLOGY

Ragi, Sorghum and Cumbu are the most demanded millets among the consumers,becauseofitsconveniencetouseandnutritivevalue (CS Vidhya *et al*.,

2023).Hencethesethreemilletsarepurposivelyselectedforthepresentstudy.Milletisgrownlargelyinthedistrictsof Krishnagiri, Dharmapuri, Dindigul and Namakkal in Tamil Nadu. Hence the above fourdistrictsarepurposivelyselected for thepresent study.

Convenient sampling technique was used for the present study. The details of themillet growing farmers were collected from FPOs and Department of Agriculture. 90 milletgrowing farmers from the districts were selected. During the data collection from the farmers,thelistoflocaltraders,commissionagents,wholesalers,processors,andretailerswhowerein contact with the farmers were collected. Five commission agent, 10 wholesaler, 10 retailer,5processorand 40 consumers areselected forthepresent study.

Table4.Selectionofrespondents

	Farmers	Traders	Wholesalers	Processors	Retailers	Consumers
Dindigul	20	1	2	-	2	10
Namakkal	20	1	2	-	2	10
Dharmapuri	20	2	3	3	4	10
Krishnagiri	30	1	3	2	2	10
Total	**90**	**5**	**10**	**5**	**10**	**40**

A well - organized and pre-tested interview schedule was used to fetch primary data.The interview schedules for the study were designed considering the physical, cultural, andsocio-economic environment of millets production, processing, and marketing in the studyareaThe interview schedule for farmers-covered aspects such as general farm and household characteristics, details on cultivationpracticesandtechnologiesadoptedincultivationandcostofcultivation,detailsonthemarketingofmillets,andproblemsinproductionandmarketing.

2.1. DescriptiveStatistics

The percentages and averages were utilized as suitable statistical tools to evaluate the democratic and socio-economic variables such as age, education, family size, experience in farming, experience inmillets farming, farm size, income, landholding pattern, the number of millets produced, thenumberof millets marketed, etc., for thesamplefarmers.

2.2. GarrettRankingTechnique

ToidentifythemajorconstraintsencounteredbyfarmersinmilletscultivationtechniquedevelopedbyGarratt(1966)wasused.InGarrett'sscoringtechnique (Asegie *et al.*, 2022),therespondents were asked to rank the factors or problems and these ranks were converted intopercentposition byusing the formula.

$$\text{Per cent position} = \frac{100\ x\ (Rij - 0.5)}{Nj}$$

where,

Rij = Rank given to the ith constraints by the jth individualNj=Number of constraints ranked bythe jth individual.

By referring to Garrett's table, the per cent positions estimated were converted intoscores. Thus, for each constraint, the scores of the various respondents were added and themean value was estimated. The mean thus obtained for each constraint was arranged indescending order. The constraints with the highest mean value were considered as the mostimportantones and theothers followed in that order.

3. RESULTS AND DISCUSSIONS

3.1. GeneralCharacteristicsofSampleFarmers

The General characteristics of the sample respondents such as age, educational status,income, farming experience, landholding pattern, source of seeds, etc., would serve as theprerequisite for a better understanding of farmer participation in the major millet value chain,werepresented in thefollowingtable5.

Table 5. Demographic characteristics of sample farmers

Factors	Frequency	Percentage
Age		
Lessthan 30	15	16.70
31 -40	18	20.00
41 -50	23	25.60
Above50	34	37.80
Education		
Illiterate	45	50.00
Primary	15	16.67

Highersecondary	27	30.00
Diploma/Graduate	1	1.11
PostGraduate	2	2.22
Employmentpattern		
Farming	61	67.78
Bothfarmingand non-farming	29	32.22
Income		
Lessthan 90,000	48	53.33
90,001 -2,00,000	18	20.00
2,00,001 -5,00,000	15	16.67
Morethan 5,00,000	9	10.00
Large(Above5)	4	10.00
Farmingexperience		
Lessthan 10	10	11.11
11 – 20	19	21.11
21 – 30	28	31.11
Morethan 30	33	36.67
OperationalLandHolding		
Marginalfarmer(<1Ha)	48	53.33
Smallfarmer(1to2 Ha)	22	24.44
Mediumfarmer (2to4Ha)	15	16.67
Bigfarmer(>5Ha)	5	5.56
Ownership		
Owned	86	95.56
Leasedin	4	4.44

3.2. GeneralCharacteristicsofMarketIntermediaries

The market intermediaries likecommission agent/ local trader, wholesaler/mandi,processor, retailer shows their characteristics such as age, educational status, experience,ownership,storage facility,andtheirconstraints, etc.werecollected andanalyzed.

3.2.1. Agewisedistribution ofmarketintermediaries

The age ofthe sampleintermediarieshavesignificantinfluence onthe decisionmaking to handle the market. Hence, the details were collected, analyzed and the results arepresentedin table6.

Table6.Agewisedistribution ofmarketintermediaries

Sl.No.	Age (Years)	NumberofMarketIntermediaries				Overall
		CA*	WH*	PR*	RT*	
1.	Below30	0	0	0	2 (20.00)	2 (6.67)
2.	31 – 40	3 (60.00)	4 (40.00)	2 (40.00)	3 (30.00)	12 (40.00)
3.	41 – 50	2 (40.00)	5 (50.00)	3 (60.00)	5 (50.00)	15 (50.00)
4.	Above50	0	1 (10.00)	0	0	1 (3.33)
	Total	5 (100.00)	10 (100.00)	5 (100.00)	10 (100.00)	30 (100.00)

(Figuresinparenthesesindicatepercentagetototal)

(*CA–CommissionAgent, WH-Wholesalers,PR-Processors, RT-Retailers)

It is explicit from table 6, 50 per cent of the market intermediaries were inthe age group between 41 to 50 years. About 40 per cent of the market intermediaries were inthe age group between 31 to 40 years, and 67 per cent of the market intermediaries comesunder the age group of below 30 followed by 3.33 per cent of them are in the age group ofabove 50.

3.2.2. EducationalStatusofmarketintermediaries

Education plays a major role in influencing the market intermediaries in purchasingtheoutputfromtheproducers.Theeducationlevelofmarketintermediarieswerecategorized into illiterate, primary, higher secondary, diploma and graduate. The data on theeducational status of the market intermediaries were analyzed and the results are presented inTable7.

Table7.EducationalStatusofmarketintermediaries

Sl.No.	Educational status	NumberofMarketIntermediaries				Overall
		CA	WH	PR	RT	
1.	Illiterate	1 (20.00)	3 (30.00)	0	5 (50.00)	9 (30)
2.	Primary	1 (20.00)	0	2 (40.00)	1 (10.00)	4 (13.33)

3.	Higher secondary	2 (40.00)	4 (40.00)	2 (40.00)	2 (20.00)	10 (33.33)
4.	Diploma	1 (20.00)	2 (20.00)	1 (20.00)	2 (20.00)	6 (20.00)
5.	Graduate	0	1 (10.00)	0	0	1 (3.33)
Total		5 (100.00)	10 (100.00)	5 (100.00)	10 (100.00)	30 (100.00)

(Figuresinparenthesesindicatepercentagetototal)

From table 7, majority of the intermediaries (33 per cent) had higher education followed by 30 percentof them areilliterate.

3.2.3. Experienceofmarketintermediaries

Experienceisthemainfactordirectlyinvolvedininfluencingthedecision-making behaviour of the market intermediaries. The experience of the market intermediariesare categorized into less than 10 years, 11 to 20 years, 21 to 30 years and above 30 years. Thedataontheexperienceofmarketintermediarieswereanalyzedandtheresultsarepresentedintable 8.

Table8.Experienceofmarketintermediaries

Sl.No.	**Experience (Years)**	**NumberofMarketintermediaries**				**Overall**
		CA	**WH**	**PR**	**RT**	
1.	Lessthan 10	1 (20.00)	2 (20.00)	-	2 (20.00)	5 (16.67)
2.	11– 20	2 (40.00)	5 (50.00)	2 (40.00)	4 (40.00)	13 (43.33)
3.	21– 30	2 (40.00)	3 (30.00)	3 (60.00)	4 (40.00)	12 (40)
4.	Above30	-	1 (10.00)	-	-	1 (3.33)
	Total	5 (100.00)	10 (100.00)	5 (100.00)	10 (100.00)	30 (100.00)

(Figuresinparenthesesindicatepercentagetototal)

From table 8, it could be inferred that 43 per cent of the market intermediarieshad 11 to 20

years of experience and 40 per cent of them had 21 to 30 years of experience,followed by 16.67 per cent of them comes under the category of less than 10 years ofexperience, and 3.33 per cent of the market intermediaries were under the category of above30years of experience.

3.2.4. Storagefacilityofmarketintermediaries

Thestoragefacilityisalsoanimportantfactorinstoringthesourcedproductsfromthe producers. The produce has to be stored in a well-maintained place to avoid the spoilageand pest, fungal attack. The intermediaries like local trader/ commission agent, wholesaler,processor and retailer arecategorizedand presented in table9.

Table9.Storagefacility of marketintermediaries

Sl.No	Storagefacility	Marketintermediaries				Overall
		CA	WH	PR	RT	
1.	Owned	0	10 (100.00)	5 (100.00)	7 (70.00)	22 (88.00)
2.	Hired	0	0	0	3 (30.00)	3 (12.00)
	Total	0	10 (100.00)	5 (100.00)	10 (100.00)	25 (100.00)

(Figuresinparenthesesindicatepercentagetototal)

From table9, it evident clearly that, 88 per cent of the intermediaries were owned thestoragefacilityforstoringthesourcedproducefromtheproducers.12percentoftheintermediaries (retailers)wereusingthe hired storagefacilityfor storingthesourced produce.

3.2.5. Pricedifferencebasedonvariety

The intermediaries fix the price of the produce. The price may vary according tothe variety, quantity and quality based on certain parameters followed by them. The pricedifference can be based on the variety categorized the market intermediaries is done by themornot. Theresults werepresented in table10.

Table10.Pricedifferencebasedonvariety

Sl.No.	Pricedifference basedonvariety	Marketintermediaries				Overall
		LT/ CA	WH	PR	RT	
1.	Yes	5 (100.00)	10 (100.00)	5 (100.00)	10 (100.00)	30 (100.00)
2.	No	-	-	-	-	-

	Total	5 (100.00)	10 (100.00)	5 (100.00)	10 (100.00)	30 (100.00)

(Figuresinparenthesesindicatepercentagetototal)

It could be observed from table10, that the price difference based on the varietywas accepted by all the market intermediaries. It clearly states that the prices were variedbasedon the varietyavailable/preferred inthemarket bythe market intermediaries.

3.2.6. Valueadditionbythemarketintermediaries

The value addition is the process, done to the product to increase the value of it bychanging its form, according to the consumer's needs. The respondents were asked aboutprocessingand theresults arepresented in table 11.

Table11.Valueadditionbythemarketintermediaries

Sl.No	Isvalueadditiondone	Marketintermediaries			Overall
		CA	WH	PR	
1.	Yes	0	0	5 (100.00)	5 (25.00)
2.	No	5 (100.00)	10 (100.00)	0	15 (75.00)
	Total	5 (100.00)	10 (100.00)	5 (100.00)	20 (100.00)

(Figuresinparenthesesindicatepercentagetototal)

Fromtheabovetable11,itcouldbeinferredthatalltheprocessorswereinvolved100 per cent in the value addition process, they actively take part in changing the form of theraw millets. The Commission agent and Wholesalers are not involved in this value additionprocess.

3.2.7.RetailFormatofthemarketintermediaries

The wholesalers sold the processed products to retailers. The retailers facilitated themarketingofproducebypackaging,transportationetc.Inthistheretailer's formatareclassified into departmental stores, convenience stores, specialty stores (organic) and localmarket.Theresults werepresented in table12.

Table12.RetailFormatof themarketintermediaries

Sl.No	Retailformat	Numberof retailoutlets	Percentage
1.	Departmentalstores	4	40.00

2.	Specialtystores (Organic)	5	50.00
3.	LocalMarket	1	10.00
Total		10	100.00

It could be seen from table12,that about, 50 per cent of the retail format werespecialty stores (organic) and 40 per cent of the retailer's format of selling were departmentalstores, 10 per cent of them were sell through the format of local market. It is evident thatspecialtystores (organic) werethe most usedretailformat in sellingmillet products.

3.3. DemographicFactoroftheConsumers

The general characteristics of the sample respondents included the age, educationalstatus, marital status, family type, family size, educational level, occupation, monthly income.The data on the general characteristics of the respondents were analysed to understand theirbuyingbehaviour.The end users (consumers) are also played a major role in the value chain such ascategory of millets consumed, source of awareness on health benefits of the millet products,frequencyofconsumptionofmillets,formofconsumption,placeofpurchase,factorsinfluencingthepurchaseofmillet-basedproductsetc.,whicharealltheмostinfluencingfactorson decision-making.

Table13.Demographicfactorofthesample consumers

Factors	Frequency	Percentage
Gender		
Male	14	35.00
Female	26	65.00
Age		
25andbelow	15	37.50
26-35	20	50.00
36-45	3	7.50
46-55	2	5.00
Above55	-	-
MaritalStatus		
Married	23	57.50
Unmarried	17	42.50

FamilyType		
JointFamily	19	47.50
NuclearStatus	21	52.50
FamilySize		
Small(Below3)	0	0
Medium(3-5)	36	90.00
Large(Above5)	4	10.00
EducationalLevel		
Illiterate	0	0
Elementary	0	0
HighSchool	3	7.50
HigherSecondary	2	5.00
Undergraduate	27	67.50
PostGraduate	8	20.00
Occupation		
GovernmentEmployee	9	22.50
Entrepreneur	1	2.50
Agriculture	2	5.00
Professional	3	7.50
Self–Employed	11	27.50
PrivateEmployee	15	37.50
MonthlyIncome		
Rs20000andbelow	11	27.50
Rs20001 – Rs 30000	19	47.50
Rs30001–Rs 40000	4	10.00
Rs40000-50000	4	10.00
AboveRs50000	2	5.00

The above table 13, shows the demographic profile of the respondents who havepurchased the millets and millet-based products. The Descriptive statistics reveal that most ofthe consumers are women (66 per cent) and most of them are between the age group of 25 –30 (50 per cent). While 57.5 per cent are married, 52.5 per cent are nuclear family status and90% of them are medium-sized family. In addition, 67.5 per cent of them are studied

Undergraduate, while 37.5 per cent of the respondent are Private Employee. Annual incomes of therespondents purchasing the millet and millet-based products range between Rs 20001–Rs30000/-(47.5per cent).

3.4. ConstraintsFacedbytheStakeholders

In this, constraints faced by the stakeholders were identified, ranked and the resultsarepresented in this section.

3.4.1. ProductionConstraintsfacedbythefarmers

Constraints were seen in all the sectors, to overcome that, the constraints factors mustbe known. The main reasons seen in production constraints are high cost of seeds, lack oftechnicalknowledge,occurrenceofpestanddiseases,lackofsufficientrainfall,unavailability of HYV, labor unavailability, high cost of fertilizers and high cost of plantprotectionchemicals.Garett'srankingtechniqueswasusedtoanalyzetheproductionconstraints faced by the farmers among the sample respondents. The results were presented intable14.

Table14.Constraintsfacedbythefarmers

Sl.No	Constraints	AverageScore	Rank
1.	Pricefluctuation	108.83	1
2.	Highcostofseeds	104.73	2
3.	Occurrenceofpest anddiseases	101.32	3
4.	LackOfSufficientRainfall	98.93	4
5.	Lackofmarketinformation	96.05	5
6.	Laborunavailability	94.15	6
7.	Highcostof fertilizer	86.83	7
8.	Transportation	85.76	8
9.	Lackoftechnicalknowledge	83.95	9

From the above table 14, it states that, the farmers see the first main factor as theproduction constraint were price fluctuation, high cost of seeds, followed by the occurrence ofpest and diseases, lack of sufficient rainfall also plays a major in the production constraintsdue to the insufficientrainfall affects theyieldof thecrops.Lack of market information,labor

unavailability, high cost of fertilizer and transportation and lack of technical knowledgealsowerethefollowed constraints faced bythefarmers and the results were supported by Pushpa and Kumar, (2023).

3.4.2. Constraintsfacedbytheintermediaries

The market intermediaries in transferring the product from one place to the end placealsofaceconstraints.Imbalanceinsupplyanddemand,labourscarcityandhightransportation costs are the major constraints faced by them. The results are presented in table15.

Table15.Constraintsfacedbytheintermediaries

Sl.No	Reasons	AverageScore	Rank
1.	Imbalancein supplyanddemand	120.00	I
2.	Unavailableofskilledlabour,forprocessing	100.58	II
3.	Hightransportationcosts	100.52	III
4.	StrikesandCurfew	98.65	IV
5.	MarketCompetition	97.68	V
6.	Fluctuationinrawmaterials	88.84	VI
7.	FinancialSupportrequiredtoscaleup	87.10	VII
8.	Duringproduction, more electricityisneeded for dryingpurpose.	76.97	VIII

From the above table 15, it states that, majority of the market intermediaries felt thatimbalance in supply and demand were the major constraints followed by labour scarcity, hightransportation costs, and strikes, curfew. Market competition, Fluctuation in raw materials,financial support required to scale up, during production, more electricity is needed fordryingpurpose, weretheconstraints faced bythe intermediaries.

3.4.3. Problemsfacedbythemilletconsumers

The consumers were asked about the problems faced in consumption of millet-basedproductsand theresults werepresented in table16.

Table16.Problemsfacedbythemilletconsumers

Sl.No	Statements	AverageScore	Rank
1.	Lackof availability	101.27	1
2.	Highprice	104.05	2
3.	Brandunavailability	87.37	3

From table 16, majority of theconsumersfeltthatlackof availability (millets are notavailable inallthestores) and price of the products high. Brand unavailability also a major problem faced by therespondents and the results were supported by Shah *et al*., (2024).

4. CONCLUSION

The study delved into the multifaceted constraints faced by stakeholders involved in the millet industry in Tamil Nadu. Farmers encounter challenges such as price fluctuations, high seed costs, pest and disease outbreaks, and inadequate rainfall, which hinder production. Market intermediaries grapple with issues like supply-demand imbalances, labor scarcity, and high transportation costs, affecting the efficient transfer of products. Consumers, on the other hand, encounter problems including limited availability of millet-based products, high prices, and a lack of diverse brands in the market. These constraints intersect with the overarching goal of ensuring food security and nutritional well-being, highlighting the need for targeted interventions and policy measures to address them effectively. Our findings underscore the importance of collaborative efforts among stakeholders to overcome these challenges and foster a more resilient and inclusive millet value chain in Tamil Nadu. Some efforts should be made to enhance market transparency and information dissemination to empower farmers and market intermediaries with timely and accurate data on demand, supply, and pricing dynamics. Interventions are needed to improve infrastructure and logistics to address transportation bottlenecks and reduce post-harvest losses.There is a crucial need to invest in skill development programs to address labor shortages and enhance the capacity of market intermediaries in processing and value addition.

5. LIMITATIONS OF THE STUDY

The study aims to shed light on the constraints faced by stakeholders involved in the millet industry in Tamil Nadu, it's important to acknowledge certain limitations. Firstly, the study's scope is confined to a specific geographical area, potentially limiting the generalizability of

findings to other regions. Additionally, the sample size of stakeholders, including farmers, market intermediaries, and consumers, though carefully selected, may not fully represent the diverse perspectives within each group. Moreover, the study relies primarily on self-reported data obtained through interviews, which could be subject to biases or inaccuracies. Furthermore, the study predominantly focuses on production and marketing constraints, potentially overlooking other important factors influencing the millet supply chain, such as policy interventions or cultural practices.

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