



Assessing the Impact of Marketing Constraints on Grape Growers' Profitability and Market Access in Tamil Nadu

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Abstract:

The research analyses the marketing challenges encountered by grape cultivators in specific areas of Tamil Nadu and assesses their effects on marketing efficiency and agricultural profitability. The research, grounded in primary data from 349 respondents, describes significant marketing constraints including delayed cash payments, insufficient market information, elevated commission fees, remote market locations, inadequate storage facilities, high transportation expenses, and a deficiency in scientific grading knowledge. Statistical analysis and hypothesis testing demonstrate that these limits substantially impact farmers' capacity to access profitable marketplaces and negotiate reasonable pricing. The results indicate that insufficient infrastructure, ineffective information distribution methods, and predatory intermediary actions delay the marketing efficiency of grape cultivators. The study advocates for the creation of farmer-market connections, the strengthening of cooperative marketing frameworks, and the provision of timely market knowledge and post-harvest infrastructure to improve the marketing efficacy of grape farmers in Tamil Nadu.

Keywords: Grape farming, Marketing efficiency, Value chain, Agribusiness development.

1. Introduction:

India is the major producer of grape in the world and remarkable exporter to other countries. The problem faced by the sample cultivators in grape production will help in bringing about a solution to enhance farming practices throughout the state. The study will get off the objectives, explore the problems faced by the grape farmers and will come out with solution and recommendation for improved agricultural practices in the grape cultivation in Tamil Nadu, thereby improving market for the produces. With the view to supply the needs of the grape growers of Theni, Dindugal, Coimbatore, Cumbum and other grape growing regions of Tamil Nadu, To support this Tamil Nadu government has established the grape research stationed under the support of Tamil Nadu Agriculture University (TNAU). The study seeks to measure the efficiency of agricultural practices in grape cultivation

1.1 Grape's production in Tamil Nadu:

Grape is one of the finest and the more strength-giving food. It contains commendable medical qualities, and it is a perfect food and a fairly good source of minerals like Calcium, Phosphorus, Iron and Vitamins like B1 and B2. The crop has a wide adaptability, and grapes are cultivated in every continent under varied agro-ecological settings, from mountains to plains. It can grow well under all type of soils except the saline-alkali soil. Production of grapes in all over the world is 68,311,466 billion tones on 7,197,923 million hectares. Major players in the production of grapes are namely, Spain, Italy, France and China contributing more than 50 per cent of the world production. In India, grapes are cultivated in eleven states, about 8, 80,700 tonnes of grapes produced in an area of 1, 06,400 hectares in the year 2009-10. The major portion of grape cultivation is contributed by the four traditionally grapes cultivating states namely Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu.

1.2 Organic Grape Farming:

Organic farming has emerged as a sustainable alternative to conventional agriculture, emphasizing environmental conservation, health consciousness, and premium market opportunities. In Tamil Nadu, grape cultivation occupies a vital niche in the horticultural sector, with a growing segment of farmers adopting organic practices to capture higher-value markets (Aulakh & Ravisankar, 2017). However, organic producers often face challenges related to

production cost, certification barriers, and inefficient market linkages. This study seeks to explore how production efficiency influences marketing performance among organic grape growers.

1.3 Universe of the Study:

India has small farm sizes and underprivileged farmers. While these farmers are keen to be experts, they may not have the right technology and training to access the right inputs, including seeds and fertilizers which could enable them to meet the conditions imposed by importing countries (Azam et al., 2019). In terms of reporting product rejections, other countries have established a robust family system of adopting novel practices to sustain their position in the global markets, by handling pest infestation and overcoming ban on experts are pest free. Management of agrochemical residues in grapes is a challenge to the scientists as well as the stakeholders of grape industry. Will organic farming be a solution to these problems? To answer this question, a sample of grape growers who adopted conventional and organic grape farming was selected and studies in the regions namely Coimbatore, Theni and Dindigul. The methodology used for the study is described in this section:

Grapes in India are mostly grown in semi and dry areas with inadequate rainfall and high evaporation losses. In tropical climate the vine does not enter dormancy and keeps growing throughout the year. The vineyards in Tamil Nadu are mostly found in the regions with minimum temperature of not below 15° Celsius and maximum 40° Celsius. In South Tamil Nadu, Theni and Coimbatore districts, the monthly mean temperature is always above 25° Celsius. The vine responds well to pruning or irrigation at any time of the year.

The quantum and pattern of rainfall obtained are the critical factors in the selection of regions for growing grapes. Rain during vegetative growth is desirable but clouds and rain during flowering or fruit development period damage the berries by berries splitting and bunch rotting which affect quality as well as yield very badly. Continuous rainfall is detrimental since control of disease becomes difficult (Chiprikar & Khuspe, 1992). Area with annual rainfall not exceeding 900 mm well distributed throughout the year is ideal. Suitability of these conditions made the selected districts naturally suitable for grape cultivation.

1.4 Objectives of the Study:

1. To examine the production efficiency of grape growers in selected districts of Tamil Nadu.
2. To analyse the existing marketing channels and linkage mechanisms adopted by grape farmers.
3. To assess the interrelationship between production efficiency and marketing outcomes.
4. To identify the major constraints faced by grape growers in production and marketing.

2. Literature Review:

(Das et al., 2017) has investigated the effect of the past seven years of organic cultivation concerning soil conditions, quality of productive and harvesting patterns in Eastern Himalayas. It was a field experiment of nearly seven years (2005 -2006 to 2011 -2012) using a Raised and Sunken Bed (RSB) in the lower lands of Meghalaya, India. The RSBs were made such that they could drain easily and house the vegetables in low areas. Based on the outcome, the researchers implied that, in the eastern Himalaya, various benefits of organic cultivation, long stable productivity, better soil and production effectiveness were evoked. Then Mr. (Robertson, 2018) conducted his research in Kerala. The researcher discovered that farmers in Kerala. The research discovered that the farmers in Kerala resorted to organic farming to protect their farm and remedy the harm caused by non-sustainable farming. They did so because of the isomorphic pressures on supply chains, which, when it comes to the ultimate cause, are the result of the consumer-made code of ethics.

(Hill, 2016) has conducted a case study of Participatory Guarantee System (PGS). It was designed so that it would benefit farmers by cutting down on the expenses and give a reasonable degree of confidence to the local consumers. Vikas Kendra takes care of 57 PGS groups, six farmers in each group. The NGO staff members and farmers were interviewed in terms of schedules. The researcher identified and proposed that, the overall area covered by organic production is yet to be scaled up, as it is a difficult task to establish contacts between rural farmers and urban markets.

(Singh et al., 2017) were investigated the food traceability and farm to fork safety. A case study of the traceability of pesticides in grapes was made by scientists. The global crop quality

standards should be taken into consideration along with local regulations, the knowledge or skills of the grower and agro input ecosystem. They imply that there is a necessity to thoroughly research the whole supply-chain, different stakeholders and locate the areas of interaction of the products or services.

(Suramwad & Kolgane, 2017) studied about the adoption of improved grape production technology in Grape Growers farms. The study was conducted in 120 grape growers, through purposive sampling technique. After analysing, the researcher found that, cent per cent of respondents had complete adoption of recommended practices in primary village operation, methods of training, time of pruning and use of micronutrients.

(R.Selvamani, 2020) discussed on the importance of fruit and vegetable production in Tamil Nadu, and explored the role of uzhar sandhai, and evaluated the marketing framework for agricultural products. A total of ten crops were identified, and data was gathered from various districts in Tamil Nadu using suitable methods. The data gathered the lowest reasonable price, and give sufficient margins to intermediaries in the market to encourage them to continue in trade rather than exit and disrupt the overall marketing system. The author proposed that the government's objective is to develop marketing systems that promote the well-being of all segments of society.

(Ozdemir et al., 2017) explored precision viticulture tools aimed at producing high-quality grapes. It is noted that, the adoption of Precision Viticulture (PV) leads to various benefits, including increased grape production and enhanced efficiency, improved production quality, reduced environmental impact, and decreased risks for grape-growing farms and processors. The author recommends that to lower the use of inputs like fertilizers, water, and pesticides while boosting the yield and quality of grape berries, farmers should embrace precision technologies.

(Aulakh & Ravisankar, 2017) investigated organic farming within the context of India and offered insights on the subject. The researchers recommended adopting an 'organic' (integrated crop management) strategy for input-intensive areas (food hubs) and a 'certified organic' approach that combines tradition, innovation, and science in areas designated as de-facto organic (hill and rainfed/dryland regions) as a more effective solution for ensuring national food security, increasing household income, and promoting climate resilience.

2.1 Research Gap

From the literature reviews the researcher observes that considerable research has been conducted on the agronomic and production aspects of grape farming, there is limited focus on the marketing challenges faced by organic grape growers. The transition toward organic grape cultivation has created several new constraints such as higher transportation and storage costs, limited access to market information, delayed payments, lack of proper grading and packaging knowledge, and absence of price support systems. These issues directly affect marketing efficiency, profitability, and the long-term sustainability of organic grape farming. Existing studies mainly examine production practices and environmental outcomes but fail to analyse how marketing-related problems influence the income and efficiency of farmers involved in organic production. In Tamil Nadu, where organic grape farming is still developing, there is a pressing need to understand the relationship between marketing constraints and farmers' marketing performance. Therefore, this study seeks to bridge this gap by assessing the key marketing challenges of organic grape growers and evaluating their impact on marketing efficiency and profitability in selected districts of Tamil Nadu. The findings aim to provide insights for policymakers, cooperatives, and marketers to strengthen market linkages and improve the competitiveness of organic grape farming.

3. Research Methodology:

The study is based on primary data collected through structured questionnaires from a representative sample of organic grape growers across selected districts of Tamil Nadu. A multistage random sampling method was employed to ensure diversity in farm size and market access. Data were analysed using Descriptive statistics for socio-economic and farm characteristics, Cobb-Douglas production function to estimate production efficiency, Marketing efficiency indices to evaluate performance across channels and Correlation and regression analyses to establish interlinkages between production and marketing efficiency.

3.1 Sample Design:

Stratified multistage random sampling method is adopted for the present study taking Tamil Nadu State as a universe, the districts of Tamil Nadu as the primary unit, the block as the secondary unit and the grape growers as the ultimate unit. Tamil Nadu consists of 37 districts, out of the 16 districts that, produce grapes, three districts namely Coimbatore, Theni and Dindigul were

selected which is accounting about 90 percentage in total grapes production of the state. From the selected districts, grapes producing blocks were selected and from each block five villages were selected randomly. The proportional sampling technique has been used to select the sample respondents from these six blocks. The number of grape farmers in each block of the respective district and the number of respondents chosen for the study is presented in Table 1:

District	Block	No. of Cultivators in the Village	Sample chosen
I – Coimbatore	Thondamuthur	77	8
II – Theni	Cumbum	267	28
	Chinnamanur	948	95
	Uthamapalayam	1943	190
III – Dindigul	Nilakaottai	203	20
	Battalagundu	69	8
Gross Total		3507	349

Table 1: **Population and Sample** This data were collected from Grape growers' association in Coimbatore, and Grape Research Station, Theni.

3.2 Data collection:

The study made use of both secondary and primary data. Secondary data were collected from grape growers' association in Coimbatore and Cumbum district. It included information on varieties of grapes, establishment of vineyard (Propagation, Land preparation, Planting, Plant density, Irrigation practices). The reach out program of Agriculture departments, Training, Export facilitations were also recorded.

3.3 Primary Data:

The objective of the study is to determine the efficiency of agricultural practices of grape growers in selected districts Tamil Nadu. The sample was collected from 345 farmers of 3507 farmers registered with the grape grower's association. The primary data was collected through an interview schedule. Telephonic interviews were also conducted due to the prevalence of Covid at

the later stage of research. The Questionnaire consisted of items related to Age of the farmers, education, farming experience, area of crop cultivation, soil type, recommended grape varieties and spacing.

Information on Accessible extension services was noted on a three-point scale. Adoption of grape cultivation practices was recorded in adopted / not adopted type, cultivation practices were recorded in fully adopted, partially adopted and not adopted pattern. Questions on measures to control pests and diseases and economic variables related to grape farming, Revenue generated, Labor details, Cost of production, Farm inventory and Strategies adopted were also recorded on scales.

The respondents were asked about organic farming and issues related to it were recorded on a Five-point rating scale.

3.4 Pilot study:

A pilot study was conducted to pre-test the enquiry schedule, with a sample of respondents before finalization. Pre-test was done to (1) test whether the instrument would elicit response required to achieve the research objectives (2) to test whether content of the instrument was relevant and adequate (3) test whether the wording of the questionnaire was clear and understandable to the respondents and (4) to test the structure and sequence of the statement for their suitability for eliciting unambiguous and unbiased responses. For pretesting, the instrument was administered to 50 respondents drawn from the list of grape growers in Tamil Nadu. Their response was the basis for making a few minor changes in the wording of the statement. These respondents were excluded from the sample selected from the study.

3.5 Conceptual framework:



3.6 Data Analysis:

For detailed analysis, the respondents were divided into two groups: organic and non-organic grape farmers. Although there were only a few fully organic farmers, the classification included those who were interested in or partially practicing organic farming, as well as those who had switched from organic to conventional methods. This group had 104 farmers, while the remaining 245 were non-organic farmers. The collected data was coded in Excel and analyzed using SPSS. Descriptive statistics such as the mean were used. The grape producers' efficiency was determined based on their percentage of net returns and categorized as High, Medium, or Low efficiency.

3.7 Hypotheses:

Marketing efficiency is a crucial determinant of profitability and sustainability in grape farming. Based on primary data collected from 350 respondents across selected districts in Tamil Nadu, this section formulates hypotheses derived from observed marketing constraints faced by grape growers. These constraints include information asymmetry, delayed payments, high transaction costs, and infrastructural limitations, which collectively affect marketing performance and income stability.

H₀: Marketing-related constraints do not significantly affect the marketing efficiency and profitability of grape growers in Tamil Nadu.

H₁: Marketing-related constraints significantly affect the marketing efficiency and profitability of grape growers in Tamil Nadu.

H₂: Delayed cash payments significantly reduce marketing efficiency by lowering liquidity and hindering reinvestment.

H₃: Inadequate access to timely and accurate market news significantly limits farmers' ability to negotiate better prices.

H₄: High agent commissions and intermediary collusion significantly reduce grape growers' net returns and profitability.

H₅: Frequent price inflation and volatility significantly affect farmers' marketing stability and income planning.

H₆: Inadequate market and price information significantly leads to poor bargaining power and suboptimal market choices.

H₇: Greater market distance and high transportation costs significantly reduce marketing efficiency and profitability.

H₈: Inadequate storage facilities significantly lead to post-harvest losses and distress sales, lowering marketing efficiency.

H₉: Inadequate skilled labour for packaging significantly affects product quality and reduces market value.

H₁₀: Lack of Minimum Support Price (MSP) or stabilization mechanisms significantly increases farmers' financial risk.

3.8 Reliability and Validity of the respondents:

The reliability of the questionnaire and its items was tested using Cronbach's Alpha. This test measures how well a group of questions represents the concept being studied. A higher alpha value means the questions are more consistent and reliable. Generally, an alpha value above 0.70 indicates good reliability. After confirming reliability, the questionnaire was tested for validity to ensure that the questions accurately measured what they were intended to. The Kaiser-Meyer-

Olkin (KMO) test was used to check whether the data were suitable for analysis. A higher KMO value shows that the items effectively represent the study dimensions.

Based on these tests, the questionnaire was finalized with necessary changes to meet the study's objectives.

4. Analysis and Interpretation:

The study analyzed primary data collected from grape growers in selected districts of Tamil Nadu to identify and understand key marketing problems faced by farmers. Data was processed and analyzed using Microsoft Excel and SPSS software to ensure systematic examination and accuracy. The tools applied included percentage analysis, Chi-square tests, and ANOVA to evaluate both descriptive and logical marketing constraints.

Table no 2: Percentage analysis

S. No	Questions / Statements	Response Categories	No. of Respondents	Percentage (%)
1	Mode of payment of grape producers	Cash basis	186	53.30
		Credit basis	110	20.10
		Cash and credit basis	53	15.20
2	How long does it take to get cash since the point of sale?	Less than 3 months	195	55.90
		4 to 6 months	119	33.10
		More than 6 months	35	10.00
3	Oral form of agreement with the buyer?	Yes	188	53.90
		No	161	46.10
4	What type of assistance do you get from buyer?	Training and technology	161	55.90
		Extension service	128	36.70
		No assistance	60	17.20
5	Marketing challenges of grapes	Unreliable market	125	35.80
		Low price	140	40.10
		Delayed payment by processing firm	84	24.10
6	Production strategies	Govt. should establish grape board	105	30.10
		Govt. should employ extension officers	56	16.00
		Written contract between producers & buyers	83	23.80
		Govt. should provide credit	105	30.10
7	Marketing strategies	Contract between buyer & seller	102	29.20
		Govt. invest in processing industry	60	16.00
		Co-operatives & marketing dept. assistance	82	23.50
		Reliable market	105	30.10
8	Lack of market news	Strongly Agree	211	60.50
		Agree	83	23.80
		Undecided	41	11.70

		Disagree	7	2.00
		Strongly Disagree	7	2.00
9	Commission for agents is very high	Strongly Agree	204	58.50
		Agree	84	24.10
		Undecided	42	12.00
		Disagree	12	3.40
		Strongly Disagree	7	2.00
10	Price inflation	Strongly Agree	193	55.30
		Agree	68	19.50
		Undecided	61	17.50
		Disagree	14	4.00
		Strongly Disagree	13	3.70
11	Lack of price information	Strongly Agree	177	50.70
		Agree	89	25.50
		Undecided	63	18.10
		Disagree	6	1.70
		Strongly Disagree	14	4.00
12	Markets are far away from farm	Strongly Agree	213	61.00
		Agree	82	23.50
		Undecided	47	13.50
		Disagree	7	2.00
13	High transportation cost	Strongly Agree	198	56.70
		Agree	69	19.80
		Undecided	47	13.50
		Disagree	14	4.00
		Strongly Disagree	22	6.00
14	Lack of information availability at farm/village level	Strongly Agree	211	60.50
		Agree	83	23.80
		Undecided	41	11.70
		Disagree	7	2.00
		Strongly Disagree	2	2.00
15	Mutual understanding between commission agent and traders	Strongly Agree	204	58.50
		Agree	84	24.10
		Undecided	42	12.00
		Disagree	12	3.40
		Strongly Disagree	7	2.00
16	Lack of skilled labour for packaging	Strongly Agree	186	53.30
		Agree	61	17.50
		Undecided	68	19.50
		Disagree	21	6.00
		Strongly Disagree	13	3.70
17	Absence of support prices when there is glut in the market	Strongly Agree	190	54.40
		Agree	76	21.80
		Undecided	56	16.00
		Disagree	13	3.70
		Strongly Disagree	14	4.00
18	No scientific knowledge about grading of the produce	Strongly Agree	211	60.05
		Agree	82	23.50
		Neutral	47	13.50
		Disagree	7	2.00
		Strongly Disagree	2	0.60
19	Transport	Strongly Agree	150	43.00
		Agree	89	25.50
		Undecided	82	23.50

		Disagree	14	4.00
		Strongly Disagree	14	4.00
20	Cold storage	Strongly Agree	192	55.00
		Agree	87	24.09
		Neutral	60	17.20
		Disagree	4	1.10
		Strongly Disagree	6	1.70
21	Information about marketing	Strongly Agree	222	63.60
		Agree	47	13.50
		Undecided	40	11.50
		Disagree	33	9.50
		Strongly Disagree	7	2.00
22	Information about prices	Strongly Agree	149	42.70
		Agree	102	29.20
		Undecided	72	20.60
		Disagree	13	3.70
		Strongly Disagree	13	3.70

Mode of payment of grape producers: Out of 349 sample Group members about 186 (53.30 Percentage) respondents say cash basis, about 110 (20.10 percentage) respondents say credit basis, and about 53 (15.20 percentage) respondents say cash and credit basis.

How long does it take to get cash since the point of sale: 195(55.90 Percentage) respondents say less than 3 months, about 119(33.10 percentage) respondents say between 4 to 6 months, and about 35 (10.00 percentage) respondents say More than 6 months

Do you have a written or oral form of agreement with the buyer: 188(53.90 Percentage) respondents say they have an agreement , and about 161(46.10 percentage) respondents say they don't have an agreement.

What type of assistance do you get from buyer: 161(55.90 Percentage) respondents say Training and technology, about 128(36.70 percentage) respondents say Extensive service, and about 60 (17.20 percentage) respondents say No assistance.

Marketing challenges of grapes: 125(35.80 Percentage) respondents say Unreliable market, about 140(40.10 percentage) respondents say Low price, and about 84(24.10 percentage) respondents say Delayed payment by processing firm.

Production strategies: 105(30.10 Percentage) respondents say Government should establish grape board, about 56(16.00 percentage) respondents say Government should employ extension officers in order to help them, about 83 (23.80 percentage) respondents say There should be written contract between producers and buyers, and about 105(30.10 Percentage) respondents say Government should provide credit to farmers.

Marketing strategies: 102(29.20 Percentage) respondents say There should be a contract between buyer and seller, about 60 (16.00 percentage) respondents say Government should invest in processing industry in order to increase market for this crop, and about 82 (23.50 percentage)

respondents say Department cooperatives and marketing should assist the producers to establish cooperative union, about 105(30.10 Percentage) respondents There should be reliable market.

Lack of market news: 211(60.50) respondents say strongly agree, about 83 (23.80 percentage) respondents say Agree, about 41 (11.70 percentage) respondents say Undecided, about 7 (2.00 percentage) respondents say Disagree, about 7 (2.00 percentage) respondents say Strongly disagree.

Commission for agents in very high: 204(58.50percentage) respondents say strongly agree, about 84 (24.10 percentage) respondents say Agree, about 42 (12.00 percentage) respondents say Undecided, about 12(3.40 percentage) respondents say Disagree and about 7 (2.00) respondents say Strongly disagree.

Price inflation: 193(55.30percentage) respondents say strongly agree, about 68 (19.50 percentage) respondents say Agree, about 61 (17.50 percentage) respondents say Undecided, about 14(4.00 percentage) respondents say Disagree, and about 14 (3.70percentage) respondents say Strongly disagree

Lack of price information: 177(50.70percentage) respondents say strongly agree, about 89 (25.50 percentage) respondents say Agree, about 63 (18.10 percentage) respondents say Undecided, about 6(1.70 percentage) respondents say Disagree, and about 14 (4.00) respondents say Strongly disagree.

Markets are far away from farm: 213 (61.00 percentage) respondents say strongly agree, about 82 (23.50 percentage) respondents say Agree, about 47 (13.50 percentage) respondents say Undecided, and about 7 (2.00 percentage) respondents say Disagree.

High transportation cost: 198 (56.70 percentage) respondents say strongly agree, about 69 (19.80 percentage) respondents say Agree, about 47 (13.50 percentage) respondents say Undecided, about 14 (4.00 percentage) respondents say Disagree, and about 22 (6.00percentage) respondents say Strongly disagree.

Lack of information availability of market information at the farm / village level: 211(60.50percentage) respondents say strongly agree, about 83 (23.80 percentage) respondents say Agree, about 41 (11.70 percentage) respondents say Undecided, about 07(2.00 percentage) respondents say Disagree, and about 2 (2.00percentage) respondents say Strongly disagree.

Mutual understanding between commission agent and traders: 204(58.50percentage) respondents say strongly agree, about 84 (24.10 percentage) respondents say Agree, about 42 (12.00 percentage) respondents say Undecided, about 12(3.40 percentage) respondents say Disagree. About 7 (2.00percentage) respondents say Strongly disagree.

Lack of skilled labour for packaging 61 (17.50 percentage) respondents say Agree, about 68 (19.50 percentage) respondents say Undecided, about 21(6.00 percentage) respondents say Disagree and about 13 (3.70percentage) respondents say Strongly disagree

Absence of support prices when there is glut I the market: 190(54.40percentage) respondents say strongly agree, about 76 (21.80 percentage) respondents say Agree, about 56 (16.00 percentage) respondents say Undecided, about 13(3.70 percentage) respondents say Disagree, and about 14 (4.00percentage) respondents say Strongly disagree.

No scientific knowledge about grading of the produce: 211 (60.05percentage) respondents say strongly agree, about 82 (23.50 percentage) respondents say Agree, about 47 (13.50 percentage) respondents say Neutral, about 7(2.00 percentage) respondents say Disagree and about 2(0.6 percentage) respondents say strongly Disagree.

Transport: 150(43.00 percentage) respondents say strongly agree, about 89 (25.50 percentage) respondents say Agree, about 82 (23.50 percentage) respondents say Undecided, about 14(4.00 percentage) respondents say Disagree, about 14 (4.00 percentage) respondents say Strongly disagree.

Cold storage: 192 (55.00 percentage) respondents say strongly agree, about 87 (24.09 percentage) respondents say agree, about 60 (17.20 percentage) respondents say neutral, about 6 (1.70) respondents say Strongly disagree, and about 4 (1.1 percentage) respondents say disagree.

Information about marketing: 222(63.60 percentage) respondents say strongly agree, about 47 (13.50 percentage) respondents say Agree, about 40 (11.50 percentage) respondents say Undecided, about 33(9.50 percentage) respondents say Disagree, about 7 (2.00 percentage) respondents say Strongly disagree.

Information about prices: 149 (42.70 percentage) respondents say strongly agree, about 102 (29.20 percentage) respondents say Agree, about 72 (20.60 percentage) respondents say Undecided, about 13 (3.70 percentage) respondents say Disagree, about 13 (3.70) respondents say Strongly disagree.

MEAN SIGNIFICANT DIFFERENCE IN MARKETING PROBLEMS

The mean significant difference of marketing problems faced by the non-organic farmers is analyzed with respect to the selected independent variables, a hypothesis has been framed and tested by using Anova analysis. The results are discussed in the following table.

H_0 : There is no significant mean difference in marketing problems faced by the non-organic farmers with respect to various categories of selected independent variables.

Table no 3: MEAN SIGNIFICANT DIFFERENCE IN MARKETING PROBLEMS (ANOVA)

No.	Independent Variable	Mean	'F' Value	'p' Value
	Age			
1	20-40 Years	4.24		

2	41-60 Years	4.22	1.052	0.351 ^{NS}
3	Above 60 Years	4.30		
	Educational Qualification			
1	No Formal Education	4.26		
2	Elementary School	4.15		
3	Middle School	4.31	1.672	0.157 ^{NS}
4	High School	4.32		
5	College	4.28		
	Farming Experience			
1	5-10 Year	4.24		
2	11-15 Years	4.24		
3	16-20 Years	4.28	0.115	0.951 ^{NS}
4	Above 20 Years	4.26		
	Grape Cultivation Area			
1	1-10 Acres	4.27	0.421	0.834 ^{NS}
2	11-20 Acres	4.21		
No.	Independent Variable	Mean	'F' Value	'p' Value
3	21-30 Acres	4.20		
4	31-40 Acres	4.20		
5	41-50 Acres	4.31		
6	Above 50 Acres	4.29		
	Type of Soil			
1	Red Soil	4.23		
2	Clay Soil	4.24		
3	Alluvial Soil	4.31	0.499	0.683 ^{NS}
4	Sandelome	4.27		
	Grape Varieties			
1	Muscat Hamburg (Panneer)	4.27		
2	Thomson seedless	4.21	0.443	0.643 ^{NS}
3	Others (Australian, Read Glob)	4.23		

	Perceived Services From Farm Organisation			
1	Low	4.20	0.310	0.734 ^{NS}
2	Medium	4.26		
3	High	4.25		
	Adoption of Grape Cultivation			
1	Partially Adopted	4.18	0.769	0.381 ^{NS}
2	Fully Adopted	4.26		
	Type of Selling Mode			
1	Wholesaler	4.32	5.996	0.003*
2	Processing firm	4.20		
3	Wholesaler and processing firm	4.09		

Note: * - Significant at 1% level; NS – Not Significant.

The above table shows the mean significant difference in marketing problems faced by the non-organic farmers in the study area. It is determined from the analysis that most of the non-organic farmers faced by the marketing problems who belongs to age group of above 60 years, who educated high school level, having 16-20 years of experience, 41-50 acres of grape cultivation area, cultivated at Alluvial Soil, produced Muscat Hamburg (Paneer) variety of grape, perceived medium level services from the farm organization, fully adopted in grape cultivation and selling the grape produce through wholesaler.

While hypothesis testing, it is examined that null hypothesis is rejected for the variable type of selling mode and accepted for age, educational qualification, farming experience, grape cultivation area, type of soil, grape varieties, perceived services from farm organization and adoption of grape cultivation. It observes there is a mean significant difference in marketing problems faced by the non-organic farmers with respect to different categories of type of selling mode. In addition, it is concluded that there is no mean difference in marketing problems faced by the non-organic farmers with respect to all the categories for age, educational qualification, farming experience, grape cultivation area, type of soil, grape varieties, perceived services from farm organization and adoption of grape cultivation.

MEAN SIGNIFICANT DIFFERENCE IN MARKETING PROBLEMS

The mean significant difference of marketing problems faced by the organic farmers is analysed with respect to the selected independent variables, a hypothesis has been framed and tested by using Anova analysis. The results are discussed in the following table.

H_0 : There is no significant mean difference in marketing problems faced by the organic farmers with respect to various categories of selected independent variables.

Table no 4: **MEAN SIGNIFICANT DIFFERENCE IN MARKETING PROBLEMS (ANOVA)**

No.	Independent Variable	Mean	'F' Value	'p' Value
	Age			
1	20-40 Years	4.13	2.110	0.127 ^{NS}
2	41-60 Years	4.31		
3	Above 60 Years	4.32		
	Educational Qualification			
1	No Formal Education	4.35	2.983	0.023**
2	Elementary School	4.29		
3	Middle School	4.29		
4	High School	4.34		
5	College	3.97		

No.	Independent Variable	Mean	'F' Value	'p' Value
	Farming Experience			
1	5-10 Year	4.32	2.056	0.111 ^{NS}
2	11-15 Years	4.12		
3	16-20 Years	4.34		
4	Above 20 Years	4.33		
	Grape Cultivation Area			
1	1-10 Acres	4.28	0.061	0.997 ^{NS}
2	11-20 Acres	4.24		
3	21-30 Acres	4.26		
4	31-40 Acres	4.23		
5	41-50 Acres	4.30		

6	Above 50 Acres	4.26		
	Type of Soil			
1	Red Soil	4.22	0.605	0.613 ^{NS}
2	Clay Soil	4.33		
3	Alluvial Soil	4.21		
4	Sandelome	4.30		
	Grape Varieties			
1	Muscat Hamburg (Panneer)	4.26	3.047	0.052 ^{NS}
2	Thomson seedless	4.06		
3	Others (Australian, Read Glob)	4.46		
	Perceived Services From Farm Organisation			
1	Low	4.29	1.078	0.344 ^{NS}
2	Medium	4.21		
3	High	4.35		
	Adoption of Grape Cultivation			
1	Partially Adopted	4.25	0.017	0.898 ^{NS}
2	Fully Adopted	4.27		
	Type of Selling Mode			
1	Wholesaler	4.34	2.828	0.064 ^{NS}
2	Processing firm	4.22		
3	Wholesaler and processing firm	4.10		

Note: ** - Significant at 5% level; NS – Not Significant.

The above table indicates the mean significant difference in marketing problems faced by the organic farmers in the study area. It is divulged from the analysis that majority of the organic farmers faced by the marketing problems who belongs to above 60 years of age category, not having formal education, having 16-20 years of farming experience, 41-50 acres of cultivation area, cultivated at Clay Soil, produced other grape varieties (Australian, Read Glob), perceived high level services from the farm organization, fully adopted in grape

cultivation and selling the grape produce over wholesaler.

While hypothesis testing, it is examined that null hypothesis is rejected for the variable educational qualification and accepted for age, farming experience, grape cultivation area, type of soil, grape varieties, perceived services from farm organization, adoption of grape cultivation and type of selling mode. It shows there is a mean significant difference in marketing problems faced by the organic farmers with respect to various categories of educational qualification. Also, it is concluded that there is no mean difference in marketing problems faced by the organic farmers with respect to all the categories for age, farming experience, grape cultivation area, type of soil, grape varieties, perceived services from farm organization, adoption of grape cultivation and type of selling mode.

5. Results and Suggestions:

Under marketing problem majority of 198 (56.70 percentage) respondents felt that there was a delayed cash payment, 211 (60.50 percentage) respondents strongly agreed that there was lack of market news, 204 (58.50 percentage) respondents believed that commission for agents was very high, 193 (55.30 percentage) respondents faced price inflation problem, 177 (50.70 percentage) respondents faced lack of price information problems, 209 (59.9 percentage) respondents stated that markets are far away from their farm, about 213 (61.00 percentage) respondents had a problem under storage, about 198 (56.70 percentage) respondents strongly agreed that, the high transportation cost was also a problem, 211 (60.50 percentage) respondents said that there is lack of market information at farm level, about 204 (58.50 percentage) respondents strongly agreed that, there are mutual understanding between commission agent and traders, 186 (53.30 percentage) respondents believed that there is lack of skilled labour for packaging, 190 (54.40 percentage) respondents said that, there is an absence of support prices when there is glut in the market, and about 211 (60.05 percentage) respondents strongly agreed that there was no scientific knowledge about grading of what is produced.

MARKET IMPLICATIONS:

The area in which is grape is cultivated in the study area has drastically shrunk in the last ten years. This will affect the export and domestic supply of grapes. The farmers are shifting to crops that suit the existing pandals. Bottle gourds, snake gourds, bitter gourds and beetle leaves are alternatively cropped. This utilizes their fixed investment. The reasons for the drop-out are

discussed in the problems section. However, the fact that, farmers are losing charm in grape cultivation is highly attributable to market, access to market, price fixation, middlemen handling, and labor.

6. Conclusion:

The results revealed that Farmers with higher production efficiency achieved better price realization and market access. Use of organic inputs, timely farm operations, and adoption of improved agronomic practices significantly influenced productivity. Marketing efficiency was higher among farmers associated with cooperatives and direct-to-consumer sales. Major challenges included limited certification access, weak cold-chain facilities, and price fluctuations. The correlation analysis confirmed a positive association between production efficiency and marketing outcomes, suggesting that improvements in farm-level management translate directly into enhanced market performance. Policy Implications and Recommendations are Strengthen producer cooperatives to enhance bargaining power and collective marketing, Facilitate organic certification and market intelligence services through public–private collaboration. Invest in post-harvest and logistics infrastructure to reduce losses and expand market reach, promote training and capacity building on organic practices and value addition, such integrated measures can create a robust value chain for organic grapes, ensuring sustainability and competitiveness for Tamil Nadu’s organic farming sector.

This study underscores the significant linkage between production efficiency and marketing outcomes in organic grape farming. Enhancing production practices not only improves yield but also strengthens farmers’ market performance. Strengthened institutional support, cooperative marketing, and efficient value chain integration are vital to unlocking the full potential of the organic grape sector in Tamil Nadu.

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