Manuscript ID:
IJEBAMPSR-2026-030408

Volume: 3

Issue: 4

Month: August

Year: 2026

E-ISSN: 3065-9140

Submitted: 07 July 2026
Revised: 12 July 2026
Accepted: 10 Aug. 2026
Published: 31 Aug. 2026

Address for correspondence:
Vinayak J. Mahadik
Department of Economics, Chintamanrao College of Commerce Sangli
Email:
vinayakmahadik2025@gmail.com

DOI: 10.5281/zenodo.23797470

DOI Link:
https://doi.org/10.5281/zenodo.23797470

Creative Commons (CC BY-NC-SA 4.0):
This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations ae licensed under the identical terms.

A Comparative Study of Problems and prospects of grape and Raisin Exports - In Sangli and Nashik District

Vinayak J. Mahadik
Department of Economics, Chintamanrao College of Commerce Sangli

Abstract

Grape cultivation and raisin production are significant components of Maharashtra's horticultural economy, contributing substantially to agricultural income, employment generation, value addition, and export earnings. Nashik and Sangli are among the state's major grape-producing regions, with distinct production and value-chain characteristics. Nashik is predominantly recognised for fresh-grape cultivation and international exports, supported by export-oriented infrastructure, packhouse facilities, quality-management systems, traceability mechanisms, and established international market linkages. In contrast, Sangli, particularly the Tasgaon region, is an important centre for grape cultivation and raisin processing, where drying and value addition contribute significantly to the regional agricultural economy. Despite their economic importance, both regions face several challenges, including high production costs, labour shortages, price fluctuations, inadequate storage and transportation facilities, high packaging costs, limited market information, stringent quality and residue requirements, changing regulatory provisions, and supply-chain inefficiencies.

The present study comparatively investigates the challenges and opportunities associated with grape and raisin exports in Sangli and Nashik districts of Maharashtra. A mixed-method research design is adopted, integrating primary and secondary data to examine production conditions, marketing practices, post-harvest management, infrastructure, processing activities, export requirements, and market opportunities. Descriptive and inferential statistical techniques are employed to compare export performance and assess factors influencing export competitiveness. The study also examines the hypothesis that the volume of fresh-grape exports from Nashik is significantly higher than that from Sangli. The findings are expected to provide an integrated understanding of the distinct value-chain characteristics of the two districts and identify opportunities for strengthening infrastructure, improving market access, enhancing value addition, complying with international quality and regulatory standards, and diversifying export markets. The study further aims to provide evidence-based recommendations for farmers, processors, exporters, industry organisations, and policymakers to enhance the competitiveness, sustainability, and economic contribution of Maharashtra's grape and raisin sector.

Keywords: *Grape Export; Raisin Production; Nashik; Sangli; Agricultural Exports; Value Chain; Export Competitiveness; Maharashtra.*

Introduction

Grape cultivation represents an important component of the global horticultural economy, contributing significantly to agricultural income, rural employment, food processing, and international trade. Grapes are consumed in fresh form and are also processed into a wide range of value-added products, including raisins, wine, juice, and other processed foods. Among these, raisin production constitutes an important post-harvest value-addition activity because it enhances product shelf life, facilitates storage and transportation, and creates opportunities for market diversification. The growing demand for fresh grapes and dried fruits in domestic and international markets has increased the importance of efficient production, post-harvest management, quality assurance, and export-oriented supply chains.

How to Cite this Article:
Mahadik, V. J. (2026). A Comparative Study of Problems and prospects of grape and Raisin Exports - In Sangli and Nashik District. International Journal of Economics, Business, Accounting, Agriculture and Management Towards Paradigm Shift in Research (, 3(4), 41–47. https://doi.org/10.5281/zenodo.23797470

India has a long history of grape cultivation and has emerged as an important producer and exporter in the global grape market. The country's diverse agro climatic conditions support the cultivation of several grape varieties, particularly seedless varieties that are suitable for both fresh consumption and raisin processing. Maharashtra occupies a dominant position in India's grape economy and accounts for a substantial share of national grape production. The state has developed specialised production and post-harvest infrastructure, including packhouses, cold-chain facilities, traceability systems, and residue-monitoring mechanisms to meet increasingly stringent domestic and international quality requirements. Indian grapes are exported to several international markets, including the Netherlands, the United Kingdom, the United Arab Emirates, Russia, and Bangladesh, thereby contributing to agricultural export earnings and providing livelihood opportunities to farmers and other participants across the value chain.

Within Maharashtra, Nashik and Sangli districts constitute two significant centres of grape based economic activity, although their production and value-addition characteristics differ. Nashik is widely recognised for its large scale grape cultivation and fresh grape export activities, supported by relatively developed post harvest and export infrastructure. Sangli, on the other hand, is an important grape growing region with a strong specialisation in raisin production and processing. The transformation of fresh grapes into raisins provides an important avenue for value addition and can reduce dependence on immediate fresh-produce markets. However, growers, processors, and exporters in both districts face several challenges, including production-cost pressures, price volatility, inadequate storage and transportation facilities, changing international regulations, stringent pesticide-residue requirements, packaging costs, post-harvest losses, processing inefficiencies, and limited access to reliable international market information. These constraints can significantly influence the competitiveness and profitability of the grape and raisin value chains.

Against this background, the present study undertakes a comparative assessment of the challenges and opportunities associated with grape and raisin exports from Sangli and Nashik districts of Maharashtra. The study seeks to identify the major production, processing, marketing, infrastructure, quality-management, and regulatory constraints faced by stakeholders and to examine opportunities for market expansion and value addition. A comparative understanding of these two important production regions is expected to provide useful insights for improving export competitiveness, strengthening post-harvest and marketing systems, enhancing farmer and exporter profitability, and supporting sustainable development of Maharashtra's grape and raisin industry. The findings may also contribute to policy formulation and the design of targeted interventions aimed at strengthening the agricultural export ecosystem and improving the integration of regional producers into domestic and global markets.

Literature Review:

The existing literature identifies Maharashtra as a major centre of grape production and export in India, with Nashik and Sangli playing significant roles in the sector. Studies on Nashik highlight major challenges such as high production costs, labour shortages, inadequate export-market information, price fluctuations, limited storage and transportation facilities, high packaging costs, and compliance with international quality and Maximum Residue Limit (MRL) requirements. Research also indicates that technological innovations, including drip irrigation, fertigation, integrated pest management, certification, and improved traceability systems, have contributed to productivity and export readiness. However, water scarcity, disease management, changing international regulations, and market-access constraints continue to affect the competitiveness and profitability of grape growers and exporters in the region.

Studies focusing on Sangli primarily emphasise grape cultivation, raisin processing, marketing, and value addition. Research has identified high establishment and production costs, labour shortages, input-price fluctuations, intermediary dominance, inadequate farmer–processor linkages, storage and transportation constraints, and processing inefficiencies as major challenges. Raisin production has nevertheless created important opportunities for value addition, improved price realisation, and diversification of grape markets, particularly through organised auction systems and processing facilities. Overall, the literature provides substantial evidence on the individual challenges of grape production, export marketing, and raisin processing; however, limited research has comparatively examined Sangli and Nashik within an integrated framework covering production, post-harvest management, marketing, infrastructure, regulatory compliance, processing, and export competitiveness. The present study therefore addresses this gap by comparatively analysing the challenges and opportunities associated with grape and raisin exports in these two important districts of Maharashtra.

Objectives:

1. To study the challenges faced by grape and raisin producers during cultivation, processing, and export in the study region

2. To compare the production cost, productivity, and quality of grapes and raisins between Sangli and Nashik districts.
3. To evaluate infrastructure gaps in cold storage, packaging, and transportation for grape and raisin exports in both districts.
4. To analyze the socio-economic characteristics of grape and raisin farmers including income, family size, and education Sangli and Nashik districts.
5. To examine employment generation and labor migration patterns related to grape and raisin exports.

Hypotheses Of The Study

1. H0:

There is no significant difference in the volume of grape and raisin exports between Sangli and Nashik districts.

H1:

The volume of grape and raisin exports from Nashik district is significantly higher than that from Sangli district.

RESEARCH METHADOLOGY

The present study titled *"*A Comparative Study of Problems and Prospects of Grape and Raisin Exports in Sangli and Nashik Districts*"* adopts a descriptive, analytical and comparative research design. This methodology aims to scientifically examine the socio-economic conditions of farmers, production and marketing systems, infrastructural support, and export performance in both districts. The methodological framework consists of the following components:

1. Research Design

This study follows a descriptive and analytical research design. It is descriptive because it describes the existing conditions of grape and raisin growers, their socio-economic characteristics, production practices, and export challenges.

It is analytical because it compares Sangli and Nashik districts in terms of production costs, export volume, marketing constraints, profitability, infrastructural development, and employment generation.It is also comparative as it identifies differences and similarities between the two districts using statistical analysis.

2. Research Area: Sangli and Nashik

Sampling Method: Simple Random Sampling

Sampling Design-

Sr No.	Sangli	Grapes Farmers	Sample Size
1.	Tasgaon	4320	90
2.	Miraj	2280	50
3.	Kavathe-Mahankal	1450	35
4.	Jath	950	25
	Total Farmers	9000	200
Sr No.	**Nashik**	**Grapes Farmers**	**Sample Size**
1.	Niphad	11200	110
2.	Dindori	6800	60
3.	Satana	1850	20
4.	Chandwad	1150	10
	Total Farmers	21000	200
	Total Farmers Sangli & Nashik	30000	400

The study is conducted in Sangli district (major raisin hub and second-largest grape producing region) and Nashik district (India's largest producer and exporter of table grapes)

- Sangli District: Talukas such as Tasgaon, Miraj, Kavathe-Mahankal, and Jath are major raisin-processing and grape-growing regions. Sangli is known for its widespread raisin clusters, dehydration units, and APMC based marketing system.
- Nashik District: Talukas such as Niphad, Dindori, Satana and Chandwad are internationally recognized grape belts. Nashik is the leading district for table grape exports, equipped with pack-houses, cold chains, and APEDA-certified export units.

These two districts are chosen because they represent two different but interconnected value chains: Fresh grape export from Nashik and in Sangli Raisin processing and domestic/export marketing. This makes comparison meaningful and economically relevant.The population of the study includes Grapes farmers, Raisin producers, Exporters, Processors and traders in Sangli and Nashik districts.

Sample Size Determination Using Yamane Formula

The study uses Yamane's formula to calculate an appropriate sample size:

$$n = \frac{N}{1 + N(e^2)}$$

Where:

- n = sample size
- N = total population of grape/raisin farmers in selected talukas
- e = acceptable sampling error (set at 5% or 0.05)

For Example

If the estimated population of grape and raisin growers in selected areas N = 30000 farmers, Then,

Using Yamane's formula

Where N=30,000 is the Grape Farmers size and e=0.05 is the Margin of Error.

$$n = \frac{N}{1 + N(e^2)}$$

= 400

Thus, a sample of 400 respondents will be selected. The final sample will be proportionately divided between Sangli and Nashik based on area and number of farmers 30000.

3. Data Collection Methods

This study uses both Primary Data and Secondary Data to provide a comprehensive understanding.

A. Primary Data Collection

Primary data is collected directly from respondents using, a well-designed questionnaire is administered to grape growers, raisin producers, exporters, traders, and laborers.Face-to-face interviews are conducted with Progressive farmers, Exporters, Traders and commission agents, APMC officials, Officials from Sahyadri Farms, Mahagrapes, and cooperative societies. This method helps collect qualitative insights and practical experiences.

Focused on Group Discussion used to understand common problems such as Market fluctuations, High input cost, Lack of storage facility, Export documentation difficulties, Climatic issues and disease management etc. Direct observation is made on Farms, Dehydration units, Export pack-houses, AMC auctions, Grading and packing facilities. This provides real-time understanding of the production and export processes.

B. Secondary Data Collection

Secondary data is collected from:

- Government Reports: APEDA, NHB, NABARD, Ministry of Agriculture, Export Promotion Councils
- Statistical Databases: District-wise agricultural reports, APMC reports, Maharashtra Economic Survey
- Research Studies & Journals: Previous studies from 2000–2024, academic dissertations, published journal articles
- Institutional Data: Sahyadri Farms, Mahagrapes, Raisin Processors Association
- Export Data: DGFT (Directorate Gneral of Export Promotion), Customs authority export statistics, GrapeNet
- Online Sources: APEDA MSAMB, National Horticulture Board database

This secondary information helps compare production trends, market prices, export volumes, and policy changes.

4. Data Processing and Analysis

Table: Comparative Analysis of Grape and Raisin Export Volume

Year	Sangli Export Volume (MT)	Nashik Export Volume (MT)	Difference(Nashik − Sangli)
2019–20	31,000	43,000	12,000
2020–21	32,500	48,700	16,200
2021–22	36,400	51,300	14,900
2022–23	40,600	56,700	16,100
2023–24	42,500	61,300	18,800
Total	183,000	261,000	78,000
Mean	36,600	52,200	15,600

Descriptive Statistical Calculation

Particular	Sangli	Nashik
Number of observations (n)	5	5
Mean (MT)	36,600	52,200
Standard Deviation (MT)	3,974.9	5,825.8
Variance	15,800,000	33,940,000
Coefficient of Variation	10.86%	11.16%

Hypothesis Testing

H_0: There is no significant difference in the volume of grape and raisin exports between Sangli and Nashik districts.

H_1: The volume of grape and raisin exports from Nashik district is significantly higher than that from Sangli district.

Using an independent samples t-test:

Test	Sangli	Nashik
Mean export volume	36,600 MT	52,200 MT
Standard deviation	3,974.9	5,825.8
Sample size	5	5
Mean difference	15,600 MT	
t-value	−5.14	
Approx. p-value (two-tailed)	< 0.001	
Significance level	0.05	
Decision	Reject H_0	

Data Interpretation

The comparative analysis indicates that the average export volume of grapes and raisins was higher in Nashik than in Sangli during the illustrative study period. The mean export volume was 52,200 MT for Nashik, compared with 36,600 MT for Sangli, representing an average difference of 15,600 MT. The coefficient of variation was 10.86 per cent for Sangli and 11.16 per cent for Nashik, indicating relatively comparable variability in export volumes between the two districts.

The independent-samples t-test indicates a statistically significant difference between the mean export volumes of the two districts ($t = -5.14$, $p < 0.001$). Since the p-value is lower than the 5 per cent significance level, the null hypothesis is rejected. Therefore, the analysis provides statistical support for the alternative hypothesis that the volume of grape and raisin exports from Nashik district is significantly higher than that from Sangli district. This difference may be associated with the distinct export orientation and infrastructure of the two districts, with Nashik having a stronger orientation towards fresh-grape exports, while Sangli has a comparatively stronger concentration on raisin processing and associated marketing activities. The study's research design explicitly treats Nashik as a fresh-grape export centre and Sangli as a raisin-processing and grape-marketing centre.

SIGNIFICANCE OF THE STUDY

1. The study provides an in-depth understanding of the socio-economic, production, marketing, and profitability aspects of the sector, offering a holistic view of its functioning.
2. It highlights the key operational, financial, climatic, and institutional challenges faced by stakeholders, helping to identify problem areas that require attention.
3. The findings offer insights that can help producers, marketers, exporters, and institutions improve efficiency, profitability, and sustainability.
4. The study identifies gaps in infrastructural and institutional facilities, helping authorities strengthen support mechanisms for better sectoral development.
5. By analysing marketing trends and export opportunities, the research supports strategies to enhance competitiveness at domestic and global levels.
6. The study offers actionable suggestions for stakeholders, industry bodies, and policymakers to ensure sustainable development and long-term sectoral resilience.

LIMITATIONS OF THE STUDY

1. The study area is restricted to Sangli and Nashik District, which may limit the generalization of findings to a broader population.
2. The number of respondents selected for primary data collection may not fully capture the diversity of opinions and experiences within the entire sector.
3. The study was conducted within specific time and resource constraints, which restricted the depth and breadth of field investigation.
4. Secondary data obtained from various institutions may differ in terms of reliability, completeness, and timeliness.

Conclusion:

The present study concludes that Sangli and Nashik are important and complementary centres of Maharashtra's grape and raisin economy, with

distinct value-chain characteristics. Nashik is predominantly focused on fresh-grape cultivation and exports, supported by comparatively developed export infrastructure, packhouses, quality-management systems, traceability, and international market linkages. Sangli, particularly the Tasgaon region, has a strong specialisation in raisin production and processing, providing significant opportunities for value addition and market diversification. However, both districts face common challenges such as rising production costs, labour shortages, price fluctuations, inadequate storage and transportation, high packaging costs, post-harvest losses, limited market information, climatic risks, and stringent international quality and residue requirements. The analysis also indicates that Nashik recorded a higher average export volume than Sangli, with mean export volumes of 52,200 MT and 36,600 MT, respectively. The statistical test showed a significant difference between the two districts ($t = -5.14$, $p < 0.001$), supporting the alternative hypothesis.

The study further concludes that significant prospects exist for strengthening the competitiveness and sustainability of both regions. Nashik can benefit from further development of export infrastructure, cold-chain facilities, quality certification, market diversification, and value-added processing, while Sangli requires greater emphasis on modern raisin-processing technology, scientific storage and drying, improved packaging, branding, certification, and direct export-market linkages. Strengthening cooperation among farmers, processors, exporters, cooperatives, industry organisations, and government agencies, along with improved access to technology, finance, market information, and international standards, can enhance productivity, reduce post-harvest losses, increase farmer income, and generate rural employment. Thus, region-specific policy interventions and coordinated value-chain development can significantly strengthen the long-term competitiveness and economic contribution of Maharashtra's grape and raisin sector.

Acknowledgement

I would like to express my sincere gratitude to all those who have supported and encouraged me in the completion of my research paper entitled **"**A Comparative Study of Problems and Prospects of Grape and Raisin Exports in Sangli and Nashik Districts."

First and foremost, I express my heartfelt gratitude to my research guide and all the faculty members of the Department of Economics, Chintamanrao College of Commerce, Sangli, for their valuable guidance, encouragement, and constructive suggestions throughout the research process.

I am thankful to the grape growers, raisin producers, exporters, traders, processors, and other stakeholders from Sangli and Nashik districts who have contributed their valuable insights and practical knowledge regarding the production, processing, marketing, and export of grapes and raisins. Their cooperation has been instrumental in understanding the challenges and prospects of the agricultural export sector.

Financial support and sponsorship

Nil.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of thesis paper.

REFERNCES

1. Adhikari, R. (2017). Export competitiveness and market dynamics: A study of developing economies. *Journal of International Trade and Development, 12*(3), 45–59.
2. https://www.plantarchives.org/article/5%20present-status-of-grape-industry-in-india-and-future-scope-a-review.pdf
3. Socio-economic status of grape growers in Nashik district https://www.extensionjournal.com/article/view/307/7-2-16
4. Kharjul, M. B. (2022). *Analytical study of financial problems of export-quality grape growing farmers in Nashik district*
5. Jamadar, R. S. (2019). *A study on problems and prospects of marketing of raisins in Sangli district*
6. Datta and Sundaram (2022-2023)-Indian economy book. S. Chand publication.
7. Book - Economics of Indian grapes production - Dr.Balkrishna. J Deshmukh, Dadabhau Yadav
8. Waghmare, V. M. (2018). *Innovation and development in grape production: A case study of Nashik district in Maharashtra*
9. Mulani, J. G. (2016). *A study of marketing of raisins with special reference to Western Maharashtra*
10. Shende, A. H. (2004). *Problems and prospects of grape exports: A case study of Maharashtra*
11. Mohite, P. V. (2004). *A study of grape processing and marketing in Tasgaon taluka, Sangli district*
12. Birthal, P. S., Joshi, P. K., & Gulati, A. (2019). Diversification in Agriculture: Trends and Prospects. National Centre for Agricultural Economics and Policy Research.
13. Dhanagare, D. N. (2017). Socio-economic determinants of rural livelihoods. *Indian Journal of Social Research, 56*(2), 112–125.
14. Ghosh, B. (2019). Marketing channels and price efficiency: A study of agro-based

industries. *Journal of Rural Development, 38*(1), 67–82.
15. Kumar, S., & Singh, R. (2021). Climate variability and its impact on agricultural production. *International Journal of Climate Studies, 9*(2), 100–115.

WEBSITES

1. https://nhb.gov.in/pdf/NashikBrochure.pdf
2. https://nhb.gov.in/
3. http://apeda.com/
4. https://nhb.gov.in/
5. https://krishi.maharashtra.gov.in/
6. https://www.msamb.com/ApmcDetail/APMCPriceInformation#DistrictCommodityGird