**Constraints and Suggestions Opined by Grape Export farmers in Production, Marketing, and Export from Marathwada Region of Maharashtra,India**

**ABSTRACT**

The study investigates the constraints and suggestions related to the establishment, cultivation, marketing, and export of grapes from Marathwada region of Maharashtra as opined by grape growers of different farm sizes (small, medium, and large). Data were collected using well constructed questionnaires and analyzed to identify key challenges and proposed solutions. Across all farm sizes, high cost of inputs emerged as the most severe constraint (100% respondents across all categories). Other major cultivation challenges included heavy rains and winds during flowering, lack of technical guidance, labour shortages with high wages, non-availability of quality grafts, and high pest and disease incidence. In marketing and export, the exploitation by middlemen was the most significant issue (96.66% overall), followed by lack of cold storage, high commission charges, delayed payments, insufficient post-harvest knowledge, lack of processing units, and unavailability of refrigerated vans. Suggestions opined byfarmers, To mitigate cultivation constraints, farmers across all groups emphasized that inputs should be provided at lower costs (98.33% overall), along with compensation for climate-related damages, training for pest and disease control, improved nurseries, mechanization, and technical support from experts. Similarly suggestions opined for marketing and export, the most frequent suggestion was that the government should declare grape prices (99.16%), followed by reduction in commission charges, quick sales payments, improved access to refrigerated vans, affordable cold storage, post-harvest training, and development of processing industries.

**KEYWORDS: grape,** **commission charges,** **industries,** **cold storage, post-harvest training**

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**Introduction**

India is one of the leading producers of grapes in the world, with grapes playing a significant role in the country's economy. Maharashtra is the major grape growing state of India and enjoys the proud privilege of recording the highest acreage and per acre production of grapes. Amongst all states Maharashtra grape industry has made remarkable progress in export of fresh grapes in the most demanding markets throughout the world. (Patil, 2008.).

the grape industry in India has developed due to continuous efforts of grape growers in the country. Despite of it grape cultivation is highly input-intensive and demands careful attention to agronomic practices, infrastructure, market conditions, and export policies. Despite its potential for high returns, grape farming faces numerous challenges that differ based on the size of the farm, the location, and the prevailing climatic and infrastructural conditions. (Gotyal, et al., 2010)

Constraints faced by farmers can significantly hinder agricultural production and economic well-being, while farmer suggestions offer valuable insights into potential solutions. Understanding these constraints and incorporating farmer suggestions is crucial for improving agricultural practices and improving farmers livelihoods. Constraints can restrict farmers from adopting new farming techniques, or diversifying their income sources, limiting their ability to adapt to changing market conditions or climate variability.

Farmers' suggestions are often based on their practical experiences and can provide valuable insights into overcoming specific constraints. By understanding the constraints faced by farmers, researchers and policymakers can tailor interventions to meet their specific needs and circumstances. When suggestions are incorporated into policy and practices, it can lead to greater adoption of sustainable and efficient farming methods.

Grape growers, especially in regions with intensive grape production, encounter a range of constraints during the phases of establishment, cultivation, marketing, and export. These constraints hinder not only the productivity of the crop but also reduce profitability and competitiveness in both domestic and international markets. Understanding these barriers and identifying practical solutions is essential for policy makers, extension workers, and stakeholders in the grape value chain.

While various studies have focused on the economic aspects of grape farming, such as cost of cultivation and export potential, there is need of comprehensive studies that also evaluate the ground-level constraints faced by farmers and the suggestions they offer to overcome these issues. Analyzing the nature and extent of these constraints across small, medium, and large farm sizes provides valuable insights into the heterogeneity of challenges and possible solutions tailored to each group.

Furthermore, given the perishable nature of grapes and their sensitivity to climatic and post-harvest handling, identifying bottlenecks in marketing and export is critical. Timely policy interventions, infrastructure development, and technical support based on such a study can significantly improve the sector's performance. The present study focused on the following objective as captioned below.

**Objectives**

1.To determine the constraints in production, marketing, and export of grape in selected area.

**Methodology**

The success of any scientific investigation depends on methodology which adopted systematic data collection, compilation and various types of scientific analysis. The methodology adopted for the present investigation is given below under different subheads

**Selection of district**

Latur and Osmanabad districts were selected for the study purposively because maximum area of grape in Marathwada region was found in Osmanabad and latur districts (i.e.960 ha and 802.96 ha respectively)

**Selection of tahsil**

Ausa, Renapur tahsil of latur district and Osmanabad, tuljapur tahsil of Osmanabad district was selected for study. The selection was based on the basis of higher area under grape and grape exporting farmers among all the tahsils of districts.

**Selection of villages**

From each tahsil six villages were selected. From Ausa tahsil, Ausa, Borgaon, Killari, kurla, Shivli ,Talni, Yelvat, were selected for study. From Renapur tahsil, Hanumantwadi, Khrolla Mohagaon, Pangaon, Ramwadi, Talni. From Osmanabad tahsil, Aalni, Jagji Kaudgaon , Keshegaon, Khanapur, , Pohner,. From Tuljapur tahsil, Apsinga, Kati, Kamta, Katgaon, Khadki, Sawargaon, villages were selected for study because of large grape production and grape exporting farmer in these villages.

**Selection of sample grape growers.**

The entire population in these selected villages was surveyed from each selected village, 5 grape exporting farmers were selected. Finally 120 grape exporting farmers selected purposively from selected villages.

**Collection of data.**

The data from the selected grape exporting farmer were collected by personal interview with respondents from time to time. Data regarding the following points were collected. Area under grapes, inputs used, cultivation and marketing cost, marketing margins and problem faced by cultivators in cultivation, marketing and export were collected. Data pertains for the year 2012-13.

**Analytical Technique**

**Tabular Analysis**

Tabular analysis comprises arithmetic mean percentages and ratio. This method was used to determine constraints and suggestions of grape growing farmer.

**Result and Discussion**

**Constrains opined by sample grower**

Farmers have to suffer from many problems in the farming the problem may vary from farmer to farmer, location, requirements, farming types and systems. Infrastructural developments etc. hence along with the study of cost of establishment, cost of cultivation, marketing and export of grape it necessary to study the constraints in the same. The information was collected with the help of questionnaires and data received were compiled and analyzed, the results are presented in Table 1. For all size groups of farmer

Table 1. reveals that for small farmer size, constraint in establishment and cultivation highest opined constraint was high cost of inputs with frequency of 40 (100 per cent) farmers followed by heavy rains winds during flowering and fruit setting time, lack of technical guidance, lack of labour with high wage rate, non availability of quality grafts and high incidence of pest and disease was Rs.38 (95 per cent), Rs.35 (87.50 per cent), Rs.32 (80 per cent), Rs.32 (75 per cent), and 25 (62.50 per cent) frequency respectively.

In case of marketing and expert highest opined constraint was exploitation by middlemen with frequency of 40 (100 per cent) farmers followed by high commission charges, lock of cold storage facility, delay in payment of sale, lack of processing units, lack of knowledge in post harvest technology and unavailability of refrigerated van on time was opined with frequency of 36 (90 per cent), 36 (90 per cent) , 33 (82.50 per cent), 28 (70.00 per cent), 26 (65 per cent) and 23 (57.50 per cent) respectively.

For medium size farmer in case of establishment and cultivation highest opined constraint was high cost of inputs with frequency of 40 (100 per cent) followed by heavy rains, winds during flowering and frit setting time, lack of technical guidance, high in cadence of pest and disease lack of labour with high wage rate and non availability of quality grafts. Was pinned with frequency of 37 (92.50 per cent), 34 (85 per cent), 30 (75 per cent), 29(72.50 per cent) and 26 (65 per cent) respectively.

In case of marketing and export highest opined constraint was exploitation by middlemen with frequency of 39 (97.50 per cent) followed by lack of cold storage, high commission charges, lack of knowledge in post harvest technology, delay in payment of sale, lack of processing units and unavailability of refrigerated van was opined with frequency of 38 (95 per cent), 34 (85 per cent), 33 (82.50 per cent), 32 (80 per cent), 27 (67.50 per cent) and 24 (60 per cent) respectively.

For large size farmer in case of establishment and cultivation, highest opined constraint was high cost of inputs with frequency of 40 (100 per cent) followed by lack of technical guidance, heavy rains, winds during flowering and fruit setting time, high incidence of pest and disease, lack of labour with high wage rate and non availability of quality grafts was opined with frequency of 39 (97.50 per cent), 39 (97.50 per cent), 32 (80 per cent), 29 (72.50 per cent) 24 (60 per cent) respectively.

In case of marketing and export, highest opined constraint was exploitation by middlemen with frequency of 37 (92.50 per cent) followed by lack of cold storage facility, high commission charges, delay in payment of sale, lack of knowledge in post harvest technology, lack of processing units and unavailability of refrigerated vans on time was opined with frequency of 35 (87.50 per cent), 33 (82.50 per cent), 28 (70 per cent), 26 (65 per cent), 25 (62.50 per cent) and 22 (55 per cent) respectively.

Similarly for over all farmer in case of establishment and cultivation highest opined constraint was high cost of inputs with frequency of 40 (100 per cent) followed by heavy rains, winds during flowering and fruit setting time, lack of technical guidance, lack of labour with high wage rate, high incidence of pest and disease and non availability of quality grafts was opined with frequency of 38(95 per cent), 36(90 per cent) of 29.33 (73.33 per cent), 28.66 (71.66 per cent) and 25 (62.50 per cent) respectively.

In case of marketing and export highest opined constraint was exploitation by middle man with frequency of 38.66 (96.66 per cent) followed by lack of cold storage facility, high commission charges, delay in payment of sale, lack of knowledge in post harvest technology, lack of processing units and unavailability of refrigerated vans on time was opined with frequency 36.33 (90.83 per cent), 34.33 (85.83 per cent), 31 (77.50 per cent), 28.33 (70.83 per cent) and 26.66 (66.66 per cent) respectively.

**Suggestions opined by sample grower**

Farmers suggest solutions or conditions which help to them tackle the constraints of establishment cost of cultivation, marketing and export of grape. It is necessary to study their suggestions. The information was collected with the help of questionnaires and data received were compiled and analyzed the results are presented in Table 2. For all size groups of farmer

From Table 2. For small farmer size suggestion in case of establishment and cultivation, highest opined suggestion was inputs should be provided at lower cost with frequency of 38 (95 per cent) farmers followed by provision of training program for pest and disease control, recovery amount given for climatic disaster, provision of nursery for improved planting material, priority given to mechanization of farm and effective technical guidance through experts was opined with frequency of 35 (87.50 per cent) 31 (77.50 per cent), 26 (65 per cent), 20 (50 per cent) and 19 (74.50 per cent) respectively.

In case of marketing and export highest suggestion opined was, government should declare the price with frequency of 39 (97.50 per cent) farmers followed by Commission charges should be minimized, quick payment of sales, availability of refrigerated vans, processing industries need to be developed, post harvest technology demonstrated by experts and availability of cold storage at cheaper rate was opined with frequency of 37 (92.50 per cent), 36 (90 per cent), 32 (80 per cent), 29 (72.50 per cent), 28 (70 per cent) and 20 (50 per cent) respectively.

For medium farmer size suggestion in case of establishment and cultivation highest opined suggestion was in puts should be provided at lower cost with frequency of 40 (100) farmer followed by recovery amount given for climatic disaster, provision of training program for pest and disease control, provision of mechanization of farm and effective technical guidance though experts was opined with frequency of 35 (87.50 per cent), 34 (85 per cent), 30 (75 per cent), 39 (72.50 per cent), and 25 (62.50 per cent) respectively.

In case of marketing and export highest suggestion opined was government should declare the price with frequency of 40 (100 per cent) farmer followed by commission charges should be minimized, quick payments of sales, availability of refrigerated vans, post harvest technology demonstrated by experts, availability of cold storage at cheaper rate and processing industries needs to be developed was opined with frequency of 39 (97.50 per cent), 36 (90 per cent), 30 (75 per cent), 30 (75 per cent), 28 (70 per cent) and 25 (62.50 per cent) respectively.

For large farmer size suggestion in case of establishment cultivation highest opined suggestion was. Inputs should be provided at lower cost with frequents of 40 (100 per cent) farmers followed by recovery amount given for climatic disaster, priority

**Table 1. Constraints in establishment, cultivation, marketing and export of grape as opined by the grape grower**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr.no. | Farm size | Particulars | No. | Percentage |
| 1. | Small | 1. **Establishment and cultivation** |  |  |
| Non availability of quality grafts | 25.00 | 62.50 |
| Lack of labour with high wage rate | 30.00 | 75.00 |
| High incidence of pest and disease | 32.00 | 80.00 |
| Lack of technical guidance | 35.00 | 87.50 |
| High cost of inputs | 40.00 | 100.00 |
| Heavy rains, winds during flowering and fruit setting time | 38.00 | 95.00 |
| 1. **Marketing and Export** |  |  |
| High commission charges | 36.00 | 90.00 |
| Unavailability of refrigerated vans on time | 23.00 | 57.50 |
| Lack of cold storage facility | 36.00 | 90.00 |
| Exploitation by middle man | 40.00 | 100.00 |
| Delay in payment of sale | 33.00 | 82.50 |
| Lack of knowledge in post harvest technology | 26.00 | 65.00 |
| Lack of processing units | 28.00 | 70.00 |
| 2. | Medium | 1. **Establishment and cultivation** |  |  |
| Non availability of quality grafts | 26.00 | 65.00 |
| Lack of labour with high wage rate | 29.00 | 72.50 |
| High incidence of pest and disease | 30.00 | 75.00 |
| Lack of technical guidance | 34.00 | 85.00 |
| High cost of inputs | 40.00 | 100.00 |
| Heavy rains, winds during flowering and fruit setting time | 37.00 | 92.50 |
| 1. **Marketing and Export** |  |  |
| High commission charges | 34.00 | 85.00 |
| Unavailability of refrigerated vans on time | 24.00 | 60.00 |
| Lack of cold storage facility | 38.00 | 95.00 |
| Exploitation by middle man | 39.00 | 97.50 |
| Delay in payment of sale | 32.00 | 80.00 |
| Lack of knowledge in post harvest technology | 33.00 | 82.50 |
| Lack of processing units | 27.00 | 67.50 |
| 3. | Large | 1. **Establishment and cultivation** |  |  |
| Non availability of quality grafts | 24.00 | 60.00 |
| Lack of labour with high wage rate | 29.00 | 72.50 |
| High incidence of pest and disease | 32.00 | 80.00 |
| Lack of technical guidance | 39.00 | 97.50 |
| High cost of inputs | 40.00 | 100.00 |
| Heavy rains, winds during flowering and fruit setting time | 39.00 | 97.50 |
| **B .Marketing and Export** |  |  |
| High commission charges | 33.00 | 82.50 |
| Unavailability of refrigerated vans on time | 22.00 | 55.00 |
| Lack of cold storage facility | 35.00 | 87.50 |
| Exploitation by middle man | 37.00 | 92.50 |
| Delay in payment of sale | 28.00 | 70.00 |
| Lack of knowledge in post harvest technology | 26.00 | 65.00 |
| Lack of processing units | 25.00 | 62.50 |
| 4. | Overall farm size | 1. **Establishment and cultivation** |  |  |
| Non availability of quality grafts | 25.00 | 62.50 |
| Lack of labour with high wage rate | 29.33 | 73.33 |
| High incidence of pest and disease | 28.66 | 71.66 |
| Lack of technical guidance | 36.00 | 90.00 |
| High cost of inputs | 40.00 | 100.00 |
| Heavy rains, winds during flowering and fruit setting time | 38.00 | 95.00 |
| 1. **Marketing and Export** |  |  |
| High commission charges | 34.33 | 85.83 |
| Unavailability of refrigerated vans on time | 23.00 | 57.50 |
| Lack of cold storage facility | 36.33 | 90.83 |
| Exploitation by middle man | 38.66 | 96.66 |
| Delay in payment of sale | 31.00 | 77.50 |
| Lack of knowledge in post harvest technology | 28.33 | 70.83 |
| Lack of processing units | 26.66 | 66.66 |

**Table 2. Suggestions in establishment, cultivation, marketing and export of grape as opined by the grape grower**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr.no. | Farm size | Particulars | No. | Percentage |
| 1. | Small | 1. **Establishment and cultivation** |  |  |
| Provision of nursery for improved planting material | 26.00 | 65.00 |
| Priority given to mechanization of farm | 20.00 | 50.00 |
| Provision of training program for pest and disease control | 35.00 | 87.50 |
| Effective technical guidance through experts | 19.00 | 47.50 |
| Inputs should be provided at lower cost | 38.00 | 95.00 |
| Recovery amount given for climatic disaster | 31.00 | 77.50 |
| 1. **Marketing and Export** |  |  |
| Commission charges should be minimized | 37.00 | 92.50 |
| Availability of refrigerated vans | 32.00 | 80.00 |
| Availability of cold storage at cheaper rate | 20.00 | 50.00 |
| Government should declare the price | 39.00 | 97.50 |
| Quick payments of sales | 36.00 | 90.00 |
| Post harvest technology demonstrated by experts | 28.00 | 70.00 |
| Processing industries needs to be developed | 29.00 | 72.50 |
| 2. | Medium | 1. **Establishment and cultivation** |  |  |
| Provision of nursery for improved planting material | 30.00 | 75.00 |
| Priority given to mechanization of farm | 29.00 | 72.50 |
| Provision of training program for pest and disease control | 34.00 | 85.00 |
| Effective technical guidance through experts | 25.00 | 62.50 |
| Inputs should be provided at lower cost | 40.00 | 100.00 |
| Recovery amount given for climatic disaster | 35.00 | 87.50 |
| 1. **Marketing and Export** |  |  |
| Commission charges should be minimized | 39.00 | 97.50 |
| Availability of refrigerated vans | 30.00 | 75.00 |
| Availability of cold storage at cheaper rate | 28.00 | 70.00 |
| Government should declare the price | 40.00 | 100.00 |
| Quick payments of sales | 36.00 | 90.00 |
| Post harvest technology demonstrated by experts | 30.00 | 75.00 |
| Processing industries needs to be developed | 25.00 | 62.50 |
| 3. | Large | 1. **Establishment and cultivation** |  |  |
| Provision of nursery for improved planting material | 32.00 | 80.00 |
| Priority given to mechanization of farm | 36.00 | 90.00 |
| Provision of training program for pest and disease control | 34.00 | 85.00 |
| Effective technical guidance through experts | 28.00 | 70.00 |
| Inputs should be provided at lower cost | 40.00 | 100.00 |
| Recovery amount given for climatic disaster | 38.00 | 95.00 |
| 1. **Marketing and Export** |  |  |
| Commission charges should be minimized | 32.00 | 80.00 |
| Availability of refrigerated vans | 28.00 | 70.00 |
| Availability of cold storage at cheaper rate | 36.00 | 90.00 |
| Government should declare the price | 40.00 | 100.00 |
| Quick payments of sales | 35.00 | 87.50 |
| Post harvest technology demonstrated by experts | 26.00 | 65.00 |
| Processing industries needs to be developed | 25.00 | 62.50 |
| 4. | Overall farm size | 1. **Establishment and cultivation** |  |  |
| Provision of nursery for improved planting material | 29.33 | 73.33 |
| Priority given to mechanization of farm | 28.33 | 70.83 |
| Provision of training program for pest and disease control | 34.33 | 85.83 |
| Effective technical guidance through experts | 24.00 | 60.00 |
| Inputs should be provided at lower cost | 39.33 | 98.33 |
| Recovery amount given for climatic disaster | 34.66 | 86.65 |
| 1. **Marketing and Export** |  |  |
| Commission charges should be minimized | 36.00 | 90.00 |
| Availability of refrigerated vans | 30.00 | 75.00 |
| Availability of cold storage at cheaper rate | 28.00 | 70.00 |
| Government should declare the price | 39.66 | 99.16 |
| Quick payments of sales | 35.66 | 89.15 |
| Post harvest technology demonstrated by experts | 28.00 | 70.00 |
| Processing industries needs to be developed | 26.33 | 65.83 |

given to mechanization of farm, provision of training program for pest and disease control, provision of nursery for improved planting material and effective technical guidance through experts was opined with frequency of 38 (95 per cent), 36 (90 per cent), 34(85 per cent), 32 (80 per cent) and 28 (70 per cent) respectively.

In case of marketing and export highest suggestion opined was government should declare the price with frequency of 40 (100 per cent) farmers followed by availability of cold storage at cheaper rate, quick payments of sales, commission charges should be minimized, availability of refrigerated vans, post harvest technology demonstrated by experts and processing industries needs to be developed was opined with frequency of 36 (90 per cent), 35 (87.50 per cent), 32 (80 per cent), 28 (70 per cent), 26 (65 per cent) and 25 (62.50 per cent) respectively. (Patil,2008)

Similarly for over all farmers in case of establishment and cultivation highest opined suggestion was inputs should be provided at lower cost with frequency of 39.33 (98.33) farmers followed by recovery amount given for climatic disaster, provision of training program for pest and disease control, provision of nursery for improved planting material, priority given to mechanization of farm and effective technical guidance through experts was opined with frequency of 34.66 (86.65 per cent), 34.33 (85.33 per cent), 29.33 (73.33 per cent), 28.33 (70.83 per cent) and 24 (60 per cent) respectively.

In case of marketing and export highest opined suggestion was government should declare the price, with frequency of 39.66 (99.16 per cent) farmers, followed by commission charges should be minimized, quick payments of sales, availability of refrigerated vans, availability of cold storage at cheaper rates, post harvest technology demonstrated by expert and processing industries reeds to be developed was opined with frequency of 36 (90 per cent), 35.66 (89.15 per cent), 30 (75 per cent), 28(70 per cent), 28 (70 per cent) and 26.33 (65.83 per cent) respectively.

**Policy Implications**

1. In general, production of superior quality grapes can be increased by adopting standard package of practices supplementing it with an additional expenditure on maintenance of orchard.
2. The efforts should be made by state agricultural department and agricultural universities to train the grape growers regarding cultural and management practices for adoption of standard package of practices.
3. There is scope to increase farm mechanization in grape orchards.
4. The cost of crucial inputs especially insecticides, pesticides and growth regulators should be reduced by monitoring their use.
5. The number of market intermediaries should be reduced.
6. The domestic markets and people should provide attention to the exportable grapes. Which helps in creating the demand of more quantity and quality of exportable grapes in domestic markets.
7. Grape growers should export their produce by self or through co-operating agency of farmer to achieve maximum share in consumer rupee.
8. Farmers should pay their attention to processing of grape which was not exported, for value enrichment
9. Constraints in grape production can be solved be providing training and attention by governments.

**Conclusion**

Grape grower were mostly facing constraints incase of small farm size highly faced constraints in establishment and cultivation was high cost of inputs, heavy rains , winds during flowering and fruit setting time, lack of technical guidance, high incidence of pest and disease, quality of grafts . Constraints in marketing and export was exploitation by middle man, lack of cold storage facility, high commission charges, delay in payment of sale, lack of processing units, lack of knowledge in post harvest technology and unavailability of refrigerated van on time. These constraints are same for medium, large and overall farm size with less or more frequencies.

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