



Constraints of Grape Cultivators in Karnataka: A Study of Bijapur District

KEYWORDS

Constraints, cost records, elements of cost.

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ABSTRACT

Horticulture has gained importance in recent years as an important component of agriculture in India. Among all grape cultivation is given importance as fruit is used for several purposes. In recent years the Karnataka's share in total production of grapes has reduced drastically. This paper attempts to find out the major constraints faced by the farmers and provide suggestions to overcome the constraints. The majority of the farmers are illiterate and experience shortage of water for irrigation. Very high rate of interest, low price for the output, lack of co-operative marketing, non-maintenance of cost records, lack of technical knowledge are the problems face by the farmers.

Introduction

Growing Importance for Grape cultivation as commercial crop

Horticulture has gained importance in recent years as an important component of agriculture in India. The new impetus (stimulus) is given for the development of horticulture particularly for growing fruits, which constitute important segment in Indian dietary system. Of the large variety of fruits grown, grape is very important fruit as it is used for several purposes like table fruits, raisin(dry grape) , juice and cunnning.

Modern producers of grape need relevant and timely information about business activities to plan accurately for the future, to control business results and to make a proper appraisal of performances of operations. quality controlling is also one of the essential elements to concentrate.

Need for the study

As the Grape production involves heavy initial establishment and subsequent high maintenance expenses, its economic analysis is of great importance but the studies conducted on economics of grape production and investment pattern in vineries are very few. The present study is an effort in this direction of having an integrated study of all economic aspects of production of grapes and to identify the constraints faced by the vine grape producers with an overall view of exploring the possibilities for bringing about the required improvement.

Viewed from this angle, the present study "**CONSTRAINTS OF GRAPE CULTIVATORS IN KARNATAKA: A STUDY OF BIJAPUR DISTRICT**" is a modest attempt in the direction of analysing the constraints of grape growers for the purpose of improving the potential profitability of grape cultivation.

Objectives of the study:

The study was conducted in Bijapur district of Karnataka with the following specific objectives.

- 1) To study the trend in grape production in India as well as Karnataka
- 2) To study the variations in production and type of the farmers.

- 3) To identify the constraints in grape production

- 4) To offer useful suggestions for ensuring operational feasibility of grape cultivation in Bijapur district in particular and other parts of Karnataka in general.

Methodology

The present study is primarily based on primary as well as secondary data.

Primary data

The sample farmers were selected randomly from different villages of Bijapur taluk in the Bijapur district. The data needed for the study were collected from 210 respondents by personal interview method using Questionnaire. Data collected was based on the memory of the respondents. Similarly the constraints faced by grape growers were collected through opinion survey.

The secondary data required for study is collected by

1. The deputy director of horticulture Bijapur district Bijapur.
2. The district statistical officer Bijapur.

Sampling Procedure

Selection of the sample respondents

Grape cultivation is emerging trend and practiced throughout the district. Grape growers were selected purposively spread over in the district. Thus the total size of the sample selected for the study was 70.

Distribution of sample grapes cultivation

Sl. No	Name of village	Total
1	Tikota	72
2	Babanaqar	54
3	Haranal	45
4	Siddapur (K)	39
	Total	210

Limitations of the study:

1. Study is based on information provided by the Farmers is not ready to give the clear information about the study.
2. The findings have to be viewed in the specific context of the conditions prevailing in the study area.

Grape Production status in India:

Approximately 1.2 million tons of grapes are produced an-

nually in India. Karnataka and Maharashtra having more than 70% share (under 32.6 thousand hectares, its produce 936.9 thousand tons of grapes)Karnataka produce 144.1 thousand tons of grapes under 8.2 thousand hector land and other grapes producing states are Tamilnadu, Punjab, Andhra Pradesh and Jammu and Kashmir.

In India approximately 85% of the total production of grapes is consumed fresh. Rest 15% is going or processing of value added product mainly wine.

The following table shows the area, production and of grapes in India Karnataka

Table-1Grapes cultivation in India and Karnataka

YEAR	KARNATAKA		INDIA		KARNATAKAS SHARE OF PRODUCTION IN TOTAL INDIA'S PRODUCTION OF GRAPES (% age)
	AREA (in000, hect)	PRODUCTION (in 000, tons)	AREA (in 000,hect)	PRODUCTION (in 000, tons)	
2000-01	6.5	145.2	32.4	668.2	21.73002
2001-02	5.8	141.7	34.038.8	653.2	21.6932
2002-03	5.8	128.5	42.1	702.5	18.29181
2003-04	5.2	157.1 40.1		405.5	38.74229
2004-05	5.4	162.0	45.2	592.5	27.34177
2005-06	6.5	196.0	38.8	672.9	29.12766
2006-07	7.7	113.7	42.1	603.6	18.83698
2007-08	7.7	123.2	35.6	1134.6	10.85845
2008-09	12.1	307.7	42.9	1080.2	28.48547
2009-10	8.2	144.4	40.8	1082.7	13.33703
2010-11	8.5	152.3	42.6	1137.4	13.39019
2011-12	8.4	140.5	44.3	1100.0	12.77273
2012-13	12.0	154.2	60.0	1003.6	15.36469
2013-14	--	302.39	--	2585.35	11.69629

Source: Article on marketing of grapes at www.indianjournalsofmarketing.com

The above table exhibits that the share of Karnataka in terms of percentage in accordance with the aggregate grape production in India, has decreased drastically and volatile in nature. In 2001 the share of Karnataka was 21.73% in 2003-04 it was 38.74% after that showing declining trend in terms of percentage. It was only 11.69% in 2013-14.

The study is conducted in Bijapur district the following table-1.2 shows area and production of grapes in Bijapur

districts. As per 31st march 2012

Table-2 Grapes production in Bijapur district

Sl.no	Name of taluk	Grapes			
		Area (in hectare)	Production (in tons)	Yield (tons/hect)	Value (in Rs. lakhs)
1	B.Bagewadi	145.00	2175.00	15.00	152.25
2	Bijapur	7529.00	110535.00	14.68	7737.45
3	Indi	696.00	10050.00	14.44	703.50
4	Muddebihal	26.00	390.00	15.00	27.30
5	Sindagi	136.00	2040.00	15.00	142.80
	total	8532.00	125190.00	14.67	8763.30

Source: Bijapur horticulture office.

In India, Karnataka ranks second both in terms of areas and production next to Maharashtra state. The total area and production of grapes in Karnataka is 5653 hectares and 155458 tons respectively. In Karnataka, Bijapur district ranks first in terms of area and production. The total production of grapes in Bijapur 1 2541 hectares and 37980 metrics tons respectively: which account for 38.91 and 24.43 per cent of area and production of grapes in Karnataka respectively.

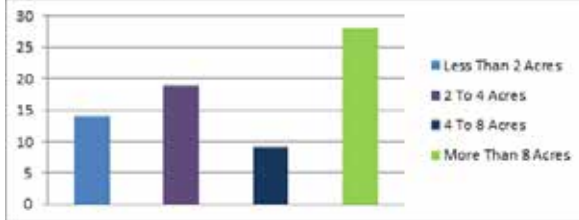
Table1.3 Education level of farmers

Education Level Of Farmers	No Of Farmers	Percentage (%)
Illiterate	84	40
Primary Education	90	43.3333
Secondary Education	27	13.3333
Higher Education	09	3.33333
Total	210	100

The data with respect to educational level of respondents showed that 44 per cent of the farmers belonged to primary educational level followed by lower educational level (illiterate) (40%) and secondary (13%) educational level, respectively. Only 3 per cent of the farmers have the higher education. This is the very lowest among all farmers.

Area	No Of Farmers	Percentage (%)
Less Than 2 Acres	42	20
2 To 4 Acres	57	26.6666667
4 To 8 Acres	27	13.33333333
More Than 8 Acres	84	40
Total	210	100

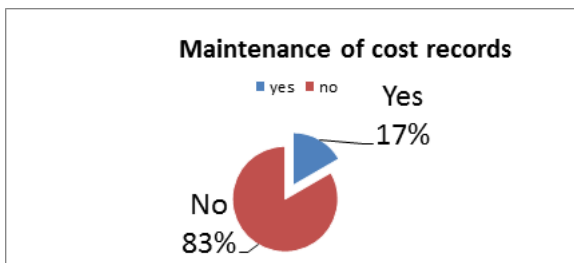
Table 4 area of grape cultivation



Overall, 40 per cent of grape growers belonged to large land holdings category (more than 8 acres of grape cultivation) followed by 26.67 per cent to medium (2 to 4 acre) and 20 per cent to marginal land holdings (below 2 acres) and 13.33 per cent farmers are small land holders.

Table 5. Maintenance of cost records

Maintenance Of Record	No Of Farmers	Percentage (%)
Yes	36	16.66667
No	174	83.33333
Total	210	100



Among the all famers 83% of famers do not maintain their cost records and only 17% of farmers are maintaining cost records. The farmers who maintain cost records are also not maintains records in systematic manner i.e. they do not follow any procedure of book keeping. The reason for not maintaining of cost records is lack of education, lack of knowledge of accounts keeping etc.

Table 6. Sources of irrigation

Source	No Of Farmers	Percentage
Drip Irrigation	141	66.6666667
Flood Irrigation	63	30
Sprinkler Irrigation	06	3.33333333
Other Sources	0	0
Total	210	100

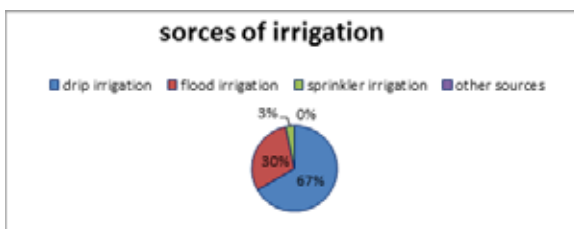


Table reveals that more farmers are adopting drip irriga-

tion, i.e. 67 per cent of the respondents. Flood irrigation constitutes only 30%. It is noticed that the district is facing water scarcity. Therefore, it is necessary to judiciously use the available water. Drip irrigation is a means by which water is applied to root zone of the plants by means of dripper. This technology prevents the wastage of water and ensures moisture with soil in the root zone at optimum level to enable plant to grow without stress.

Table 7. Sources of Funds

Source Of Funds	No Of Farmers	Percentage
Owned	69	33.33
Borrowed	141	66.67
Total	210	100

Table 7 exhibits the data relating to the sources of funds used by the famers.

From the above table it is inferred that majority of the farmers use the outside funds i.e. borrowed funds. 141 respondents out of 210 are using borrowed funds (67%). 69 respondents are using owned funds (33%). The reason for the outside funds is the low savings habit of the farmers and the heavy amount of investment required to establish vine yards.

Table 8. Sources of Loan

Source Of Loan	No Of Farmer	Percentage
Co-Operative Society	42	30
Bank	21	15
Private Individual	78	55
Other Lending Institutions	0	0
Total	141	100

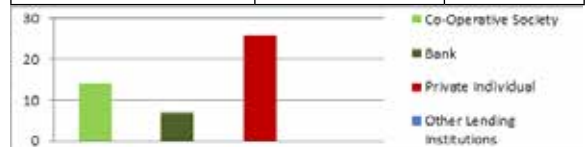


Table 8 exhibits the sources of loans taken by the farmers. It shows that the majority of the farmers depend upon the private individuals (55 per cent) followed by the loan from the co-operative banks (30 per cent) and the banks (15per-cent). The reason why the farmers more depend upon the private individuals is various tedious norms and the submission of documents to banks and the long procedure followed by the banks

Table 9. Production constraints

Constraint	No Of Sample	Percentage
Non Availability Of Planting Material In Time	42	20
Non Availability Of Fertilizers In Time	141	66.666667
Lack Of Irrigation Facility	132	63.3333333
Non Availability Of Labour	174	83.3333333

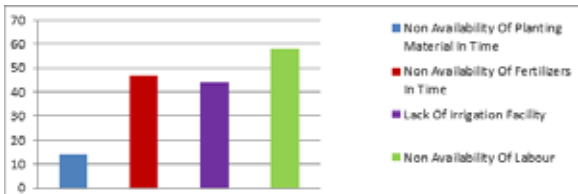
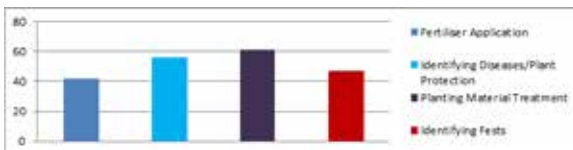


Table 9 exhibits the information relating to the production constraints faced by the sample farmers. Most of the farmers facing the problem of non-availability of skilled labour in time (83.33 per cent), Grape growers were facing shortage of water during summer coupled with irregular and insufficient power supply for irrigation (63.33 per cent), non-availability of fertilisers in time (66.66 per cent) and non-availability of planting material in time (20 per cent). 63.33 per cent farmers are having more than two constraints and 80 per cent farmers have more than one constraint.

Table 10. Technical constraints

Constraint	No of Farmers	Total farmers	Percentage
Fertiliser Application	126	70	60
Identifying Diseases/Plant Protection	168		80
Planting Material Treatment	183		86.66666667
Identifying Pests	141		66.66666667

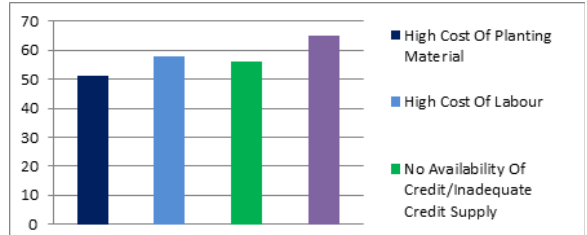
Chart 10 Technical Constraints



The major constraints perceived by the grape growers were non-availability of grape experts within the district which was expressed by cent per cent farmers. Other technical constraints perceived by the grape growers were, unaware of fertiliser application (60%), identification of diseases (80.00%), lack of competency in planting material treatment (86.66%), lack of knowledge regarding identification of pesticides (66.66%), high susceptibility of grape crop, and lack of information on demand and supply.

Table 11. Economic constraints

Constraint	No Of Farmers	Percentage
High Cost Of Planting Material	153	73.33333333
High Cost Of Labour	174	83.33333333
No Availability Of Credit/ Inadequate Credit Supply	168	80
High Cost Of Borrowing	195	93.33333333



Very high rate of interest (High cost of borrowing) 73.33%, non-availability of credit in time/ inadequate guidance on credit availability by financing institutions (80 %), high cost of labour (75.00%) and lengthy and tedious procedure in advancing loan (71.00%), inadequate credit support for expansion of area under grape cultivation were the problems faced by the grape growers with respect to finance.

Table 12. Marketing constraints

Constraint	No of Farmers	Percentage (%)
Fluctuation In Market Price	210	100
Absence Of Regulated Market	189	90
Lack Of Storage Facility	168	80
Timely Payment For Sale	84	40



Among the various marketing constraints perceived by farmers' low price for grape, domination of middle man (100%), no scientific criteria for grape price and lack of regulated or organized market (90.00%), lack of storage facility (80%), were the major ones. The other constraints were inadequate processing units within the district, high cost of cold storage units and lack of co-operative marketing, non-coverage of grape under crop insurance, lack of support price, high transportation cost and less encouragement.

Table 13 Major Element In Production Cost.

Cost Element	No of Farmers	Percentage
Labour Cost	90	43
Input Cost	84	40
Processing Cost	15	07
Marketing Cost	21	10
Total	210	100

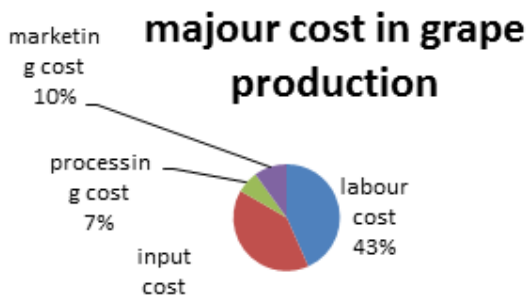


Table 4.13 exhibits that 30 farmers(43 per cent) agree that labour cost is the major element in the total production cost followed by 28 farmers(43.33 per cent) agrees input / material cost, marketing cost(10 per cent), processing cost (07 per cent) is major element of cost in total cost.

Finding and suggestions:

Grape cultivation which requires heavy investments for the establishments of vineyard and high annual maintenance cost, in Bijapur district is characterised by variations in production cost, marketing cost, grape yield, method of training the vines etc. The present research is regional and empirical in nature. It is based on both primary and secondary data collected from 70 farmers of different categories engaged in grape cultivation operations in Bijapur district of Karnataka by adopting different methods of training grape plants.

The main findings emerged from this study are as under:

1. Comparative analysis of labour used by different farmers indicates that small farmers have used lesser labour days under both methods of training system.
2. Cent per cent farmers adopted drip irrigation to their vine yards. Majority of farmers (90%) experienced water shortage for irrigation, so majority of all the categories of farmers adopted mulching while cent per cent of the farmers had not used anti transpirants.
3. Very high rate of interest, non-availability of credit in time and inadequate credit support for expansion of area under grape, inadequate guidance on credit availability, high cost of production and lengthy and tedious procedure in advancing loan were the important credit constraints expressed by majority of grape growers in grape production and marketing.
4. Non availability of grape experts within the district and shortage of water during summer were the prime constraints as expressed by cent per cent of the grape growers. Grape growers were facing shortage of water during summer coupled with irregular and insufficient power supply for irrigation.
5. In marketing of grape, the important constraints were low price, domination of middleman, no scientific criteria for price and lack of regulated/organized market. high cost of cold storage units and lack of co-operative marketing were the other constraints experienced by the grape growers.
6. The major constraints perceived by the grape growers were non-availability of grape experts within the district, unaware of fertiliser application, lack of compe-

tency in planting material treatment etc.

7. Educational level of respondents showed that 44 per cent of the farmers belonged to primary educational level followed by lower educational level (illiterate) (40%) and secondary (13%) educational level, respectively. Only 3 per cent of the farmers have the higher education. This is the very lowest among all farmers.

Suggestions:

In the light of the above findings, the following suggestions are made for improved method of grape cultivation:

1. Conduct of feasibility study: it is imperative on the part of the farmers to get the feasibility studies prepared by the experts in the field of economics of grape.
2. Maintenance of cost records: it is suggested that the farmers have to keep the records relating to the pre-bearing and bearing period operations enable them to evaluate the efficacy and effectiveness of their cultivation.
3. Extensive productive training for grape cultivators: there must be extensive training program for farmers to understand the cost benefit implications.
4. Adoption of cost management techniques: cost management techniques like co-operating farming, co-operative marketing, combined bulk purchase of raw material inputs, mechanising the trilling and drilling operations etc., may be adopted to control the costs.
5. Effective utilisation of labour: the farmers must utilise effectively the available labour force as the major cost of production is labour cost.
6. Effective utilisation of material inputs by applying them only in respect of orchard which generates more yield.
7. Periodic cost-benefit analysis: farmers to have the cost-benefit analysis in respect of cultivation operations of each year of bearing period of 15 years.

Conclusion:

Grape production needs heavy initial investment and needs intensive maintenance; hence the grape production will be profitable only with the knowledge of crop and management constraints and periodical maintenance pre-harvesting and post harvesting period. Otherwise it will lead to heavy operating costs and leads to burden of loan as the more percentage of farmers rely on financing from the lenders.

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