

An Economics of Grapes under Horticulture in India

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Abstract— Grape is important fruit in India. The Grape (*Vitis vinifera*) is basically a sub- tropical crop but in India, grapes are cultivated for their excellence also under tropical conditions. The project studied the traditional and modern technologies used in Grapes Horticulture .Modern technologies includes Drip Irrigation, Organic Farming, Water Management i.e. Rain Water Harvesting, Temperature Inform System, Labour Training etc. It is concluded that Modern technology is highly beneficial for Horticulturists.

Keywords— Horticulture, Grapes, Modern Technology, Organic Farming, Inline Drip Irrigation.

I. INTRODUCTION

India is the seventh largest economy in the World. As measured in terms of its Gross Domestic Product (GDP).The Horticulture Sector is major contribution to the Agriculture Sector GDP. The Horticulture goods and proceeds products are very popular in national and international agriculture exports in India.

The Horticulture food product Grape is the important fruit in India. Grape (*Vitis vinifera*) is an important fruit crop of India and its commercial production is possible in temperate and sub-tropical areas of the country.

The Grape (*Vitis vinifera*) is basically a sub- tropical crop. but in India, grapes are cultivated for their excellence also under tropical conditions. In Indian region, Grapes are cultivated in an area of 111.4 thousand ha with a total production 1,234.9 thousand tons and productivity of 11.1 tons/ha. Because of special arbour training systems provided for grape cultivation in India, productivity is highest among the grape growing countries of the world.

Maharashtra is a leading state in production of grapes in the whole country. With regard to agricultural land under grape cultivation and grapes production, Nasik and Sangli districts are at forefront in the state. Apart from these, grapes are also grown in the district of Ahmednagar, Pune, Satara, Solapur and Osmanabad. Nowadays, grapes are produced in Latur district of Marathwada also. However, Nasik and Sangli districts are ahead in the production of grapes in a scientific manner.

Total Area under grapes in Maharashtra is 86 thousand ha and production is around 774 thousand tons of grapes annually. Export of grapes from India is 108.58 thousand tons during 2011-12 valuing of Rs. 602.88 crores, out of which, nearly 80% is exported from Maharashtra.

World Scenario

As per FAO data (2010), the leading grape producing countries in the world in terms of production are China (8,651.83 thousand tons), Italy (7,787.80 thousand tons), USA (6,777.73 thousand tons) and Spain (6,107.20 thousand tons). India's higher productivity in grape has made it to reach 18th position in the world as far as production (total world production 67,116.25 thousand tons) is concerned.

This Grapes Horticulture Project is being setup with objective of producing very high and export quality Grapes for international as well as domestics markets. The project input represents Modern technology application in Grape Horticulture. The project intends to be the leader in the region in Grapes cultivation and expand every year.

Finally, Research Project will conclude benefits of Modern technology in horticulture of Grapes. It will also enhance horticulture grapes production, augment farmer's income and strengthen nutritional security.

A. Objective of the Research Study-

The present study is undertaking by considering following Objectives:-

1. To study comparatively between traditional and Modern technology in Grapes Horticulture.
2. To figure out Economic details of grapes project specified.
3. To find out the benefits of Modern technology in grapes horticulture.
4. To study Backlog of traditional technology in Grapes Horticulture.
5. Improve productivity of Grapes by way of quality germplasm, planting material and water use efficiency through Micro Irrigation.
6. To enhance grapes production, augment farmers income and strengthen nutritional security.
7. To support skill development and create employment generation opportunities for rural youth in horticulture and post harvest management, especially in the cold chain sector.

B. Scope of the Study

The analytical scope covers fulfillment of the objectives set forth for the study. The functional scope is confined to

offering certain meaningful suggestions for Grapes Horticulture.

C. Methodology and Data Collection

Research Scholar completed this project by Practical Method at his own farm of Grapes .Research Scholar wants to get conclusion from the experience and statistical data of production and expenditure cost during this project. Research Scholar is doing this work Traditional Technology and Modern Technology.

Traditional Methodology	Modern Technology
1. Open Farm	i. Inline Drip Irrigation System
2. Regular Soil	ii. Sprinkler Irrigation
3. Traditional Irrigation System	iii. Mulching Paper
4. Chemical & Organic Manure	iv. Organic Farming/Liquid Fertilizer
5. Without Mulching	v. Pesticides
6. Uncontrolled Temperature	vi. Music Method
	vii. Water Management- Rain Water Harvesting
	viii. Soil and Water Testing
	ix. Farm Pond
	x. Temperature Inform System
	xi. Trained Labour

D. Data Collection

Particulars	Traditional Methodology	Modern Technology
Production Production=Quantity produced xRate per quantity Rate per Kilogram	Rs. 375000/-	Rs. 950000/-
Recurring Expenditure Includes: Manure, Pesticides, Harvesting, Sorting, Grading, Packing, etc	Rs. 268250/-	Rs. 277000/-

E. Project Cost-Modern Technology

Sr. No.	Particulars	Cost
1	Drip Irrigation	Rs.90000/-
2	Land Development	Rs. 122550/-
3	Pack House	Rs. 78300/-
4	Organic Farming	Rs. 82000/-
5	Vermi Compost, Vermi Wash	Rs. 56000/-
6	Music System Method	Rs. 47500/-
7	Labour Training	Rs. 43500/-
8	Water Management	Rs. 63450/-
	TOTAL	Rs. 583000/-

F. Means of Finance- Modern Techno

Sr. No.	Means	Amount
1	Loan-Bank	Rs. 431000/-
2	Own Contribution	Rs. 152300/-
	TOTAL	Rs. 583300/-

G. Projected Return of Loan To Bank

(Rs. in Lakhs)

Sr. No.	Unit	Yr.-1	Yr.-2	Yr.-3	Yr.-4	Yr.-5
1.	Open Balance	4.31	3.45	2.59	1.73	0.86
2.	Return	0.86	0.86	0.86	0.86	0.86
3.	Close Balance	3.45	2.59	1.73	0.86	00

H. Projected Profitability Statement-

Modern Techno

(Rs. in Lakhs)

Unit	Year-1	Year-2	Year-3	Year-4	Year-5
Annual Sales	9.50	10.00	8.80	9.00	10.50
Annual Expenditure	2.77	3.12	2.84	2.60	2.90
Gross profit	6.73	6.88	5.96	6.40	7.60
Return	0.86	0.86	0.86	0.86	0.86
Net Profit	5.87	6.02	5.10	5.54	6.74

I-1. Comparative Profitability Statement (First 5 Years)

(Rs. in Lakhs)

Sr. No.	Particulars	Traditional	Modern
1.	Annual Sales	5.55	9.50
2.	Recurring Expenses	2.68	2.77
3.	Interest	--	0.86
4.	NET PROFIT	2.87	5.87

I-2. Comparative Profitability Statement (After 5 Years)

Sr. No.	Particulars	Traditional	Modern
1.	Annual Sales	5.55	9.50
2.	Recurring Expenses	2.68	2.77
3.	Interest	--	--
4.	NET PROFIT	2.87	6.73

II. RESULTS AND DISCUSSION

The research Scholar concluded the Research Paper here including Results and Discussions about project.

At the end, Result says that there is increase in the production of Grape by huge value because the use of Modern Technology. It is very inspiring news for our Indian Economy leading towards Superpower in the world. This project will definitely augment farmers income and make them well settled in the Global World of Horticulture. The project will be Guidance Path for farmers who want to turn towards Modern Horticulture.

Finally, Research Scholar concluded that the project will lead towards development of Horticulture, Horticulturist and indirectly whole India.

III. CONCLUSIONS

Research Project concluded benefits of Modern technology in horticulture. It also enhanced horticulture grapes production, augmented farmer's income and strengthened nutritional security.

This project is very surprising news for Indian Grapes, Indian Horticulture & Indian Economy.

IV. SUGGESTIONS

Grape Growers should turn towards ne modern methods in Grapes Horticulture.

Government should enhance farmers to use most advanced technologies by giving subsidies.

PHOTOGRAPHS



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The researcher done this project by practical method at his own grapes Farm in INDIA.

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