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Sustainable Agriculture in Maharashtra– A Case Study of Satara District

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Abstract—*Nowadays there are new modern techniques implemented in traditional Agriculture. Such as bio-technology, aquaculture, sericulture, organic farming, hydroponics, tissue culture, seed development and so on. Greenhouse farming is most popular and suitable agriculture technique for better productivity. Greenhouse technique has become famous in Israel, Netherlands, Holland and California. The idea of growing plants in environmentally controlled area has existed since Roman times.*

The objective of the present study is to evaluate the growth of the greenhouses in Satara district and to analyze the opportunities of greenhouse farming in Satara district. This study has covers all the 11 Talukas of Satara district.

Satara District is well known historical place in Maharashtra. Agriculture is the main occupation of the District. There are upto 18, 71, 742 acres land well cultivated in Satara District. The main crops produced here are Rice, Sugercane, Soyabeans, Wheat, Groundnuts beans, Jowar. Satara District is also well known for floriculture Industry. The flowers like Roses. Marigold, Mogra, Lilly are produced in open- land cultivation. Satara district has now emerged as cutflower production district. Many growers should be interested to produce other cutflowers such as gladiolus, orchids, bird of paradise, Dutch rose etc. Cutflower industry in Satara district has the opportunity of capturing national and international market.

Greenhouse technology has played a vital role in development of farming in Satara district. Maximum growers are selecting this technology other than open land cultivation. Satara district is now popular for gerbera cultivation. 90% growers are producing gerbera. So there is great opportunity to growers for cultivation of cutflowers. Cutflowers are demanded by Europe, U.K., Germany, Singapore etc. So there is good availability of international market for cutflowers. By following some strategies, it can rise tremendously. It is a sunrise industry as it has creating enormous employment opportunity to unemployed people. There is a need of positive approach and efficient management in development of polyhouse technology.

1. INTRODUCTION

Nowadays there are new modern techniques implemented in traditional Agriculture. Such as bio-technology, aquaculture, sericulture Organic farming, hydroponics, tissue culture, seed development and so on. Greenhouse farming is most popular and suitable agriculture technique for better productivity. Greenhouse technique has become famous in Israel, Netherlands, Holland and California. In India greenhouse were introduced in most of the agricultural universities and institutions for research purposes. After year 1988 greenhouses were used for commercial purposes. As per 1994-95 estimates approximately, 10 lack hector of land are under greenhouse cultivation.

The idea of growing plants in environmentally controlled area has existed since Roman times. The first modern greenhouse was built in Italy in the 13th centuary.

Generally there are three types of greenhouses such as-

1. Low cost greenhouses

2. Medium tech greenhouse

3. Hi-tech Greenhouse

2. OBJECTIVES OF STUDY

The main objectives of the study are

1. To study the progress of greenhouse products in world market.

2. To evaluate the growth of the greenhouses in Satara district

3. To analyze the opportunities of greenhouse farming in Satara district.

3. AREA OF STUDY

Administratively the tahsil consists of 11 talukas namely Satara, Karad, Wai, Mahabaleshwar, Phaltan, Khatav, Maan, Javali, Koregaon, Patan and Khandala. This study has covers all the 11 Talukas of SATARA district.

4. DATA COLLECTION AND METHODOLOGY

The essential information and data is collected from primary as well as secondary sources

1. The primary data is collected by visiting District Agriculture office, Satara and Satara District Co-operative Bank.

2. Interviews of greenhouse holders and officers of marketing society

3. Secondary information and data is collected through Gazetteer of Satara District, Reports of Agriculture Department, Journals, Handbooks, News paper and as well as published and unpublished records.

5. WORLD SCENARIO FOR GREENHOUSE FARMING

Greenhouse Cultivation has become popular in world many countries accepted the technology for quality production. There are more than so countries in the world where cultivation of crops is undertaken on a commercial scale the Untied States of America has a total area of about 4000 ha under greenhouses mostly used for floriculture with a turnover of more than 2.8 billion us $ per annum and the area under greenhouse is expected to go up considerably, if the cost of transpiration of vegetables from neighboring Countries to rise.

There are many countries , who capture maximum shear in world market such as Netherlands , Span , Canada , Korea , Japan , China India united states and European countries . The area under greenhouses in Spain has been estimated to be around 25,000 ha and Italy 18,500 ha used mostly for growing vegetable crops like watermelon, Capsicum strawberries, beans, cucumbers and tomatoes.

6. GREENHOUSE CULTIVATION IN INDIA

Greenhouse cultivation has become popular in India since few decades .In just four years , since implementation of the new policies in 1991, 103 projects with foreign investment of more than Rs. 80 crores have been approved to be set up in the country at an estimated cost of more than Rs.1000 /- crores around Pune, Bangalore , Hyderabad of these projects is estimated to be around 300 ha out of which many have already commenced exports and have received very encouraging results in terms of the acceptance of the quality in major market abroad and the price obtained.

7. GREENHOUSE FARMING IN SATARA DISTRICT

Satara District is well known historical place in Maharashtra. Agriculture is main occupation of the District. There are upto 18,71,742 acres land well cultivated in Satara District. The main Crops such as Rice, Sugercane, Soyabeans, Wheat, Groundnuts beans, Jowar are produce in this district. It has also well known for floriculture Industry. About 33,000 hect. Land is cultivated under Horticulture Industry. The flowers like Roses. Marigold, Mogra, Lilly are produced in open- land cultivation.

Table 1: Number of greenhouses in Satara district

Sr. No.	Name of Talukas	Number of Greenhouses
A.	**Hilly region**	
1.	Mahabaleshwar	24
2.	Jawali	95
3.	Patan	230
4.	Khanadala	65
	Total	414
B.	**Plain region**	
1.	Satara	537
2.	Karad	52
3.	Wai	119
4.	Koregaon	116
5.	Total	824
C.	**Dry Region**	
1.	Phaltan	46
2.	Maan	92
3.	Khatav	152
	Total	290
	All Total	1526

(*Source*: Agriculture department of Satara)

Above table shows the progress of greenhouses in Satara District. Today there are 1562 greenhouses formed. Satara Taluka is contributing the upmost share in greenhouse farming. Varne village in Satara District is mainly agricultural village. Dominating Business is flower cultivation. The major crops are such as Bajara, Jowar, Wheat Rice, Gerbera, Grem. Sugercane, Groundnut Potato and Soyabean produced. Maximum numbers of greenhouses are formed in varne. Varne is famous for its fresh greenhouse flowers.

The drought- prone area in Satara District, where an average rainfall is around 450 mm has transformed itself into a major hub of greenhouses Gerbera, Carnations and Dutch roses and Colored Capsicum are produce. There are about a 320 greenhouses in Maan. Khatav and Koregaon talukas and the prospectus of higher returns on investment are encouraging to setup greenhouse.

Major Market for these flowers are Delhi, Mumbai, Banglore, Chennai and Pune. Train and air service is used. To transport the commodities as they have a short life. Many farmers are growing colored capsicum which is in great demand from luxurious hotels. A greenhouse is constructed over minimum 10 guntha land which is one fourth of one acre. A farmer can plant 3000 saplings in the 10 guntha. Piece of land which produces close to 90,000 flowers annually.

Gerbera attracts around Rs. 5 per Stem whereas carnations and Dutch roses are marked at Rs. 8 to Rs. 10 per flower. The capscicum which has higher demand from luxurious hotels, fetches around Rs. 50 to 150 per kg, such high value agriculture produce has not only increased the farmers income but also generated employment in these talukas. Every worker in the greenhouse earns around Rs. 100 to Rs 150 per day.

8. PRODUCTION OF GREENHOUSE IN SATARA DISTRICT

The Greenhouse productions have been increased from time to time as compare to open land cultivation. In open land cultivation climate, crop diseases and insects are the main

factors for lower level of production. But in controllable condition the climate and diseases do not affect the production level. Satara, Koregaon, Wai and Patan are the most for Tahsils of cut flowers production. The production from year 2011 to 2015 is as follows.

Table 2: Number of greenhouses in Satara district

Sr. No.	Tahsil Name	Total Production in (MT)	Percentage to Total (%)
1.	Satara	5400	50
2.	Koregaon	180	1.66
3.	Wai	900	8.33
4.	Patan	3600	33.33
5.	Jawali	720	66.6
	Total	10800	100.0

(*Source*: Field survey & agriculture department)

The above table shows the major cutflower produced tahsils in Satara District. Satara Tahsil has the large number of greenhouse. 90% of greenhouses are produced Gerbera. Satara are capture 50% of total production of Gerbera. Koregaon and Jawali are the produced 180mt Gerbera and 720mt respectively. Their production of Gerbera are become decreased because of number of greenhouses were closed. Patan Tahsils are also share 33% of total production of Gerbera production in district.

So Satara district has now emerged as cutflower production district. Many growers should be interested to produce other cutflowers such as gladiolus, orchids, bird of paradise, dutch rose etc. Cutflower idustry in Satara district has the opportunity of capturing national and international market. The employment rate is also increasing. Growers and their family has also received self-employment opportunity. So Greenhouse technology has become a golden chance to growers.

9. OPPORTUNITIES BEFORE GREENHOUSE GROWERS IN SATARA DISTRICT

There are many challenges and problems before growers. But there is great opportunity available before growers. This is discussed as follows

1. Employment opportunities

Greenhouse technology has given opportunity to employment. So there is increased rate of employment. In small size greenhouses family members are totally engaged in day-to-day working of greenhouse. It brings self employment chances to growers as well as the medium size and large size unit has required minimum 4 or maximum 8 labors for their working. Total 12000 to 15000 people are engaged in greenhouse farming.

2. Increasing productivity

The productivity of the products is increased twice than open land farming. So growers are gained more income from greenhouse farming.

3. Demand from national and international market

The demand of cutflowers is increased day by day. The cutflowers are dispatched to Delhi, Mumbai, Pune, Hyderabad market. There is great demand from UK, Germany, Italy and Singapore. So growers will receive great opportunity of capturing international market.

4. Increasing productivity

This technology has responsible for increasing productivity of land. Growers are cultivating various types of products in one year. So productivity is increased than open land cultivation.

5. Enhance the marketing condition

The local national and international market has captured by greenhouse products. So greenhouse has enhanced the local marketing conditions. Cut flowers and vegetables are also demanding in local market. Suitable marketing conditions are available to growers.

6. Changing the life style of growers

The greenhouse industry in India is emerging as the economic evolution of society. So it is suitable to growers an increase in household income and working women segment. This affects on growth of Polyhouse in India.

7. Use of communication channels

The growers are now using modern communication channels for marketing their products. They are prepared website for their groups. They are directly communicated with wholesaler and retailer by using online system. So growers in rural areas must be learned modern techniques and methods of agriculture.

8. Opportunity of export

Cutflowers are demanding by Europe, U.K., Germany, Singapore etc. So there is good availability of international market for cutflowers. Netherlands has captured the 80% of cutflower market in international market. Occasion like valentine day, mother's day, x-mas etc. there are great demanding of cutflowers. In previous year 400000 Dutch roses are exporting to Europe on the occasion of valentine day.

9. Variety of Products

Growers are available chance to take tower there types of products in their polyhouse. They will produced cutflowers like gerbera, carnation, gladiolus, dutch roses. They can produce vegetables like colored capsicum, Chinese cabbage, cucumber etc. and also ornamental and medicinal plants

10. Improved the technology of farming

Growers are accepting new emerging technology in farming such as hydroponics, tissue-culture, sericulture etc. So ordinary farmers are also well known about new techniques of farming.

10. SUGGESTIONS

1. Greenhouse technology should be brings new technology in farming. So growers should be properly introduced this technology.

2. New techniques and new methods of farming emerged in modern agriculture, So productivity should be increased rapidly.

3. Government should be proper attention in development of infrastructural facilities which will helpful in development of retailing in India.

4. Growers should be maintain proper quality of products

5. Government should be increased amount of subsidy.

6. Proper training program should be arranged at district level for convenience of growers.

7. Cold storage facility and cold van should necessary for storage of products.

8. To improve the marketing channels and marketing facility in district.

11. CONCLUSION

Greenhouse technology has played a vital role in development of farming in Satara district. Maximum growers are selecting this technology other than open land cultivation. Satara district is now popular for gerbera cultivation. 90% growers are producing gerbera. So there is great opportunity to growers for cultivation of cutflowers. Cutflowers are demanded by Europe, U.K., Germany, Singapore etc. So there is good availability of international market for cutflowers. By following some strategies, it can rise tremendously. It is a sunrise industry as it has creating enormous employment opportunity to unemployed people. There is a need of positive approach and efficient management in development of polyhouse technology.

REFERENCES

1. Tiwari G. H. and Gajal R. K. – Greenhouse technology's narose publication house, Panchasheel Park, New delhi.
2. K. Radha Manohar and C. Ignttinathane : Greenhouse technology and management, B. S. publication, Hyderabad.
3. Growing under class (2009) Hilery Hixon- Booksurge publicating, Charleston, South Carlin.
4. Government reports of agriculture department (2012)
5. Prakash Sawant (2009) Agriculture geography, Phadake publication, Kolhapur.
6. K. A. Khatin (1991) Agriculture geography of India. Mehta publication house, Pune.