

# Periodic Research

## Floriculture in Punjab: Trends in Area, Production and Yield of Flowers in Punjab and in Patiala District

**Shakuntla Gupta**

Professor,  
Deptt. of Economics,  
Punjabi University,  
Patiala

**Jaspreet Kaur**

Research Scholar,  
Deptt. of Economics,  
Punjabi University,  
Patiala

### Abstract

Floriculture has received considerable attention in India in recent years from the policymakers, researchers, agricultural and horticultural planners. International flower trade has increased significantly due to huge demand of floriculture products in the world. After the adoption of New Economic Policy, Indian florists began to export the modern flowers in large scale to other countries. Floriculture plays a vital role in the diversification of agriculture in India as well as in Punjab. The objectives of the present study are to find out trends in the area, production and yield in Punjab as well as in Patiala district. To fulfill these objectives secondary data have been used. An effort has also been made to suggest some policy measures. The study findings highlight that an increasing trend has been found in the area, production and yield of flowers in Punjab as well as in Patiala district over time. Main reason for increase in area as well as production is found to be better returns from flowers. On the basis of these findings, it has been felt that there is a need to increase the area as well as production of flowers in Punjab as well as in Patiala district. Therefore, it is suggested that price stability, proper government planning, regular supply of electricity, skilled labor, easy availability of getting planting material, adequate bank loan and subsidy, etc. are necessary for the growth of area, production and yield of flowers in Punjab.

**Keywords:** Flowers, Area, Production, Yield, Trends.

### Introduction

Flowers are high value commodities used in several ways in domestic and social activities and in industries such as essential oils, dry flowers, natural dye extraction etc. Cultivation of flowers can provide opportunity to farmers to establish a better livelihood and to earn more profit per unit area. Floriculture has received considerable attention in India in recent years from the policymakers, researchers, agricultural and horticultural planners. International flower trade has increased significantly due to huge demand of floricultural products in the world. Consumption of cut flowers and plants is growing at a very fast pace. A steady annual increase of 10 to 15 per cent in consumption is estimated in all importing countries (Sudhagar, 2013).

Floriculture plays a vital role in the diversification of agriculture in India as well as in Punjab. It has been considered as a big boost in the state during the past few years and has thus created awareness about its economic value and promotion of cut flower and flower-decoration culture. After the adoption of new economic policy, Indian florists began to export the modern flowers in large scale to other countries. The educated farmers of the state are taking up seed production of flowers for export purposes to European countries like Netherlands, Germany and France. The Government of India has recognized floriculture as 'Extreme Focus Thrust Area' for export during Ninth Five-year Plan. It has also identified projects of special zones for the research and development of floriculture. Under these projects, rose, carnation, chrysanthemum and gladiolus are cultivated under the area round Delhi, Uttar Pradesh and Punjab. In the VIII plan, an amount of Rs. 17 crores for the establishment of Eleven Model Floricultural Centres and another Rs. 40 crores in the Ninth Plan were allocated under the Centrally Sponsored Scheme for commercial floriculture. Eleven Model Floricultural Centres (MFCs) in public sector have been opened including Mohali in Punjab.

There is a wide scope to increase the area under cut flowers in

the districts of Patiala, Jalandhar,

There is a wide scope to increase the area under cut flowers in the districts of Patiala, Jalandhar, Ludhiana, and Fatehgarh Sahib in Punjab. Under National Horticulture Mission 2005-06, various efforts were made to engage the farmers in floriculture. The upgraded varieties of bulbous flower crops are collected from different research stations and multiplied at the government nurseries. An assistance of 50 per cent of the cost of cultivation subject to maximum Rs. 45,000 is being delivered to the small scale farmers.

Loose flowers are being promoted around Ludhiana, Patiala and Fatehgarh Sahib. An assistance of 50 per cent of the cost of cultivation subject to maximum of Rs.12,000 is being provided to the small scale farmers. Special assistance is being provided to develop the Green House Hi- tech and Green House Normal to ensure the present demand. The probable cost of construction of Hi- tech green house is Rs. 650 per square metre. An assistance of 50 per cent of the cost subject to a maximum of Rs. 325 per square metre is available to small and marginal farmers for a unit area of 1000 square metres. Emphasis is being provided on the cultivation of Carnation, Gerbera, Roses and on Horticulture Nursery Developments programmes in Ludhiana, Patiala, Hoshiarpur, Firozpur, Jalandhar, Bhatinda, Amritsar and Fatehgarh Sahib. The estimated cost of normal green house is Rs. 250 per square metres. Assistance at 50 per cent, i.e., Rs.125 per square metre is provided for a unit of 1000 square metres, per beneficiary for small and marginal farmers. The emphasis is being placed on the cultivation of Gerbera, Roses, Capsicum, Tomato, Cucumber & propagation of fruit nurseries in Ludhiana, Hoshiarpur, Firozpur, Jalandhar, Patiala, Amritsar and Fatehgarh Sahib.

This growth is associated with the well-known "Green Revolution", which developed new high-yielding varieties of wheat, rice and other food crops, but less emphasis has been given to floriculture. Punjab has the potential to enjoy the benefits of growing market of floriculture. Area under the cultivation of flowers was estimated at 128680 hectares in India and 800 hectares in Punjab during 2005-06. Punjab contributed less than 1 per cent in the area and production of flowers during that time period. The latest data of 2013-14 showed that area of flowers had extended to 255000 hectares in India and to 2125 hectares in Punjab. The facts given by National Horticulture Board indicate that both the area and production of flowers have increased in absolute figures, however, the share of Punjab in the total area and production (loose flowers) of floriculture of India is quite less. In India, regarding the share of Punjab in the cultivation of flowers, no considerable improvement has been found.

## Review of Literature

Sharma (2000) in his study "NABARD's role-credit support to floriculture" found that "NABARD" has been playing a very crucial role regarding, improving refinance facilities to floriculture units which had to organize periodical meetings with concerned

research institutions or bankers, to circulate the model schemes of different types of flowers, to publish the quarterly document, etc.

Bhanumathy and Devi (2003) in their project report entitled "An Economic Study of Marketing Cost, Margins and Price Spread of Jasmine in Chidambaram Taluka of Cudalove District, Tamil Nadu" analyzed the marketing cost, margins and producer's share in the consumer's rupee. The study was based on primary data of 2000-01. The main players of the marketing channel were producer, commission agent cum wholesaler, retailer and consumer. Price spread analysis indicated that the producer received a gross price of Rs.650 per quintal. His share in the consumer's rupee was 45.65 per cent. Marketing cost accounted for 22.80 per cent of consumer's rupee including costs incurred by the farmer and 31.55 per cent of consumer's rupee was the marketing margin for intermediaries.

Thippaiah (2005) in his research report "Floriculture in Karnataka: Performance, Problems and Prospects" identified the trends in area, production and yield of flowers in Karnataka. The study was related to primary (2001-2002) as well as secondary (1978-79 to 2001-2002) data. The study verified that the area under the traditional flowers had increased from 0.05 lakh hectares in triennium ending 1982-83 to 0.22 lakh hectares in triennium ending 1999-2000. An increment in production was reported from 0.30 lakh tonnes in 1978-79 to 1.51 lakh tonnes in 1999-2000. In crop-wise proportion area, marigold stood first with 20.30 per cent followed by chrysanthemum with 13.19 per cent.

Singh and Upadhyaya (2007) in their article "Exploring Floricultural Potential" have asserted that the scope of floriculture in India has increased tremendously which is evident from the increase in area of production of flowers from 53000 hectares in 1993-94 to 106477 hectares in 2001-02. The article highlighted that the floricultural export had taken a quantum jump in the last decade from Rs.14.45 crores in 1991-92 to Rs.249.50 crores in 2003-04. The floriculture export almost increased to Rs.211 crores in 2004-05 from Rs.63 crores during 1996-97. The overall exports of floricultural produce from India were estimated at Rs.304.69 crores by the end of 2005-06. The authors remarked that although protected cultivation is in a limited area (5% of the total crop area), its contribution to total floricultural export is significant.

Kadam (2012), in his study entitled "An Economic Study of Floriculture in Puna District" has made an attempt to highlight the development of floriculture. The study identified that during the decade 2001-10, India exported flowers of about \$ 50 billion to international market. The study further revealed that Tamil Nadu ranked first in loose flower production in 2007-08 with 25 per cent of the total production followed by Karnataka with 19 per cent, Andhra Pradesh with 14 per cent and Punjab with 9 per cent. Puna district contributed highest in major flower growing in the state. The results showed that the cost of production varied with the farm size and floriculture

was more beneficial for the large farm-size groups rather than medium and small.

Mathur and Pachpane (2013) in their study "Floriculture- Prospects and Opportunities" found that the annual domestic demand for the flowers was increasing at a rate of over 25 per cent and international demand was about Rs.90000 crores. The study was based on secondary data provided by various national and international resources. The study depicted that flower consumption in the cities and major towns of India rose up to 40 per cent per annum and business of floricultural products had grown from Rs.8174 lakh in 2005 to Rs.14117 lakh in 2009 in India. Bihar proved to be a top leading state in the productivity per hectare in India, followed by Haryana. However, India's share was hardly 0.5 per cent in the world transaction.

### Objectives & Research Methodology

The objectives of the paper are to analyse the trends in area, production and yield of flowers in Punjab and in Patiala district. The data has been collected from the secondary sources, mainly from the National Horticulture Board, Department of Horticulture, Punjab and Department of Horticulture, Patiala.

The trends in area, production and yield of flowers in Punjab and in Patiala district are shown in the following tables i.e. table-1 and table-2.

**Table-1**

Year wise Area, Production and Yield of Flowers in the Punjab, 2014-15			
Year	Area In hectares	Production In metric tonnes	Yield MT per hectare
2004-05	615	3223	5.24
2005-06	800	4150	5.18
2006-07	1500	7435	4.9
2007-08	1600	7838	4.89
2008-09	1700	8283	4.87
2009-10	1800	8700	4.83
2010-11	1970	9494	4.81
2011-12	2060	10119	4.94
2012-13	2110	10444	4.94
2013-14	2125	10532	4.95

**Source: Department of Horticulture, Punjab**

As revealed by Table 1, an increasing trend has been observed in the area and production of flowers in Punjab from 2004-05 to 2013-14. A very little variation has been observed in the yield of flowers in these years. Total area cultivated under flowers was 615 hectares in 2004-05, whereas production was estimated to be 3223 metric tonnes. So far as yield is concerned, it was found to be 5.24 metric tonnes per hectare. But in the year 2006-07, area and production increased tremendously, i.e. by 700 hectares and 3285 metric tonnes, respectively. The main reason for an increase in area as well as production was better returns from flower-crops than the traditionally grown crops. As per the department of floriculture, Punjab Agriculture University (Ludhiana), net returns range from Rs 25,000 to Rs. 75,000 per hectare depending on the nature of crop, skill of management and seed collection. During 2007-08, 2008-09 and 2009-10, area under flowers increased by 100 hectares and production increased

by 403 metric tonnes, 445 metric tonnes and 417 metric tonne, respectively. Annual yield of flowers during 2007-2008 to 2010-11 was approximately found to be 4.8 metric tonnes per hectare. A huge increment of 794 metric tonnes and 625 metric tonnes was observed in 2010-11 and 2011-12 respectively, in production of flowers. A slight increment in the annual yield has been observed i.e. 4.94 metric tonnes per hectare in 2011-12 to 4.95 in metric tonnes per hectare in 2013-14. Some private companies are also taking interest in the cultivation of flowers. During the year 2005-06, out of 800 hectares of land, around 350 hectares was owned by private companies. The following table i.e. table-2 shows the trends in area, production and yield of flowers in the different blocks of Patiala district.

**Table-2**

Block wise Area, Production and Yield of Flowers in Patiala District of Punjab, 2013-14			
Block	Area In hectares	Production In metric tonnes	Yield MT per hectare
Patiala	86	355.5	4.13
Nabha	16	155.85	9.74
Bhuneheri	5	82	16.4
Sanour	17	243.25	14.30
Samana	18	155.20	8.62
Patran	3	46.5	15.5
Rajpura	10	148	14.8
Ghanour	6	96	16
Total	161	1282.3	7.96

**Source: Department of Horticulture, Patiala**

As mentioned in Table 2, in the case of Patiala district, the total area under cultivation of flowers during 2013-14 was estimated to be 161 hectares and total production was found to be 1282.3 Metric Tonnes. The share of Patiala district in the total area and production of flowers was calculated to be 7.5 per cent and 12.17 percent, respectively. The yield of flowers in Punjab was computed to be 4.95 Metric Tonnes, whereas, it was 7.96 MertricTonnes per hectare in the Patiala district. Regarding the cultivation of flowers in Patiala district, the area was highest in Patiala block, i.e. 86 hectares, followed by Samana (18 hectares) and Sanour (17 hectares). It was lowest in case of Patran block with 3 hectares. Production, alike area, was also estimated to be highest in case of Patiala block with 355.5 Metric Tonnes, followed by Sanour (243.25 Metric Tonnes) and Nabha (155.85 Metric Tonnes). Bhuneheri block was considered as the least producing block with 82 MerticTonnes. The yield of flowers was estimated to be highest in Bhuneheri block, i.e., 16.4 Metric Tonnes per hectare, followed by Ghanour and Patran. In spite of having the highest area of cultivation of flowers, Patiala block resulted in the lowest yield, i.e., 4.13 Metric Tonnes per hectare.

Patiala block ranked first in the area and production of flowers in Patiala district. This was mainly due to high demand of flowers in Patiala city. Flowers are used in hotels, restaurants, gurudwaras, mandirs, floral shops for making bouquets, etc. The District Horticulture Board in Patiala also has a positive influence on the farmers, encouraging them

to grow more flowers. However, in spite of having the highest area of cultivation of flowers, Patiala block resulted in the lowest yield, i.e., 4.13 Metric Tonnes per hectare during the year 2013-14. This is mainly because the farmers are not skilled enough to cultivate such huge area, the process being technical. The key problems associated with the floriculture in Punjab are observed to be pest and diseases attack, price variation, seasonal demand, lack of government intervention, policy implications and guidance, huge investment, irregular supply of electricity, scarcity of skilled labor, shortage of getting planting material, inadequate bank loan and subsidy, etc.

## Main Findings

An increasing trend has been observed in the area and production of flowers in Punjab from 2004-05 to 2013-14. The main reason for an increase in area as well as production was better returns from flower-crops than the traditionally grown crops. A very little variation has been observed in the annual yield of flowers in these years. It showed a marginal decline from 2004-05 to 2010-11. A slight increment in the annual yield has been observed i.e. 4.94 metric tonnes per hectare in 2011-12 to 4.95 metric tonnes per hectare in 2013-14. However, this increment is negligible.

A huge increment of 794 metric tonnes and 625 metric tonnes was observed in 2010-11 and 2011-12 respectively, in production of flowers in Punjab. The share of Patiala district in the total area and production of flowers was calculated to be 7.5 per cent and 12.17 per cent, respectively in 2013-14. The yield of flowers in Punjab was computed to be 4.95 Metric Tonnes, whereas, it was 7.96 Metric Tonnes per hectare in Patiala district in 2013-14. Thus, the yield of Patiala district was higher than Punjab. Regarding the cultivation of flowers in different blocks of Patiala district, the area was highest in Patiala block, i.e. 86 hectares, followed by Samana (18 hectares) and Sanour (17 hectares). It was lowest in case of Patran block (3 hectares). Production, alike area, was also estimated to be highest in case of Patiala block with 355.5 Metric Tonnes, followed by Sanour (243.25 Metric Tonnes) and Nabha (155.85 Metric Tonnes). Bhunerheri block was found to be the least producing block with 82 Metric Tonnes. The yield of flowers was estimated to be highest in Bhunerheri block, i.e., 16.4 Metric Tonnes per hectare, followed by Ghanour and Patran. In spite of having the highest area of cultivation of flowers, Patiala block had a lowest yield, i.e., 4.13 Metric Tonnes per hectare during the year 2013-14. This is mainly because the farmers are not skilled enough to cultivate such huge area, the process being technical.

## Conclusion & Suggestions

Punjab is a potential state blessed with agro-climatic conditions for flowers. It thus, becomes possible to produce flowers. Many growers have switched to floriculture from conventional cropping system because of its blooming scope. Therefore, farmer should be provided certain incentives in the form of subsidizing their cost of producing flowers. Export subsidy is also a need of the hour. Marketing support by the government is also very necessary. Skill formation among the farmers is a necessity to promote the cultivation of flowers.

## References

1. Annual Plan of Action Under National Horticulture Mission 2005-06., p.p 23-24
2. Bhanumathy, V.; and Devi, K.S. (2003), "An economic analysis of marketing costs, margins and price spread of jasmine in Chidambaram taluka of Cuddalore district, TamilNadu", Indian Journal of Agricultural Marketing, Vol.17, NO. 1, pp. 41-51.
3. Department of Horticulture, Patiala (2015)
4. Department of Horticulture, Punjab (2015)
5. India Horticulture Database(2008), Ministry of Agriculture, Government of India 85, Institutional Area, Sector-18, Gurgaon - 122 015, p.p 12-13.
6. Kadam (2012), "An Economic Study of Floriculture in Puna District", Maharashtra Vidyapeeth, Pune, Faculty of Social Sciences.
7. Mathur, R.; and Pachpane, P.P. (2013), "Floriculture- Prospects and Opportunities", ASM's
8. International, E-Journal of Ongoing Research in Management and IT
9. Sharma, A.R. (2000), "NABARD'S Role-Credit support to floriculture," Floriculture Today", Vol.VI, issue 5, p.20.
10. Singh, H.P.; and Upadhyaya, R.C. (2007), "Exploring floriculture potential", Indian Horticulture, Vol. 52
11. State Horticulture Mission, Department of Horticulture, Punjab, 2015
12. Sudhadgar, S.S. (2013), "Production and Marketing of Cut Flowers (Rose and Gerbera) in Hosur Taluk", International Journal of Business and Management Invention, Vol.2, pp.15-25.
13. Thippaiah, P (2005), "Floriculture in Karnataka: Performance, Problems and Prospects", Institute for Social and Economic Change". Research Report: IX/ADRT/IOS