

## **Economic Viability of Floriculture in Kashmir Himalayas: A Geographical Study of Greater Srinagar.**

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**ABSTRACT:** Flower cultivation has emerged as a lucrative business which ensures higher economic returns as compared to other agricultural crops. The main purpose of the study is to evaluate the costs, returns and profitability of growing flowers. The study also attempts to examine the profitability of some selected flowers in comparison with their competing crops. In order to study weather floriculture is a profitable venture or not, we are required to study the costs and returns of floriculture. The study results were highly encouraging with the respect to higher economic returns of floriculture in the different physiographic divisions of study area. It was observed that the profitability of valley floor is maximum as compared to other two divisions of study area. From the study it was observed that the profitability of floriculture is more as compared to other forms of farming.

**Keywords:** Floriculture, Agriculture, Valley, profitability and farming.

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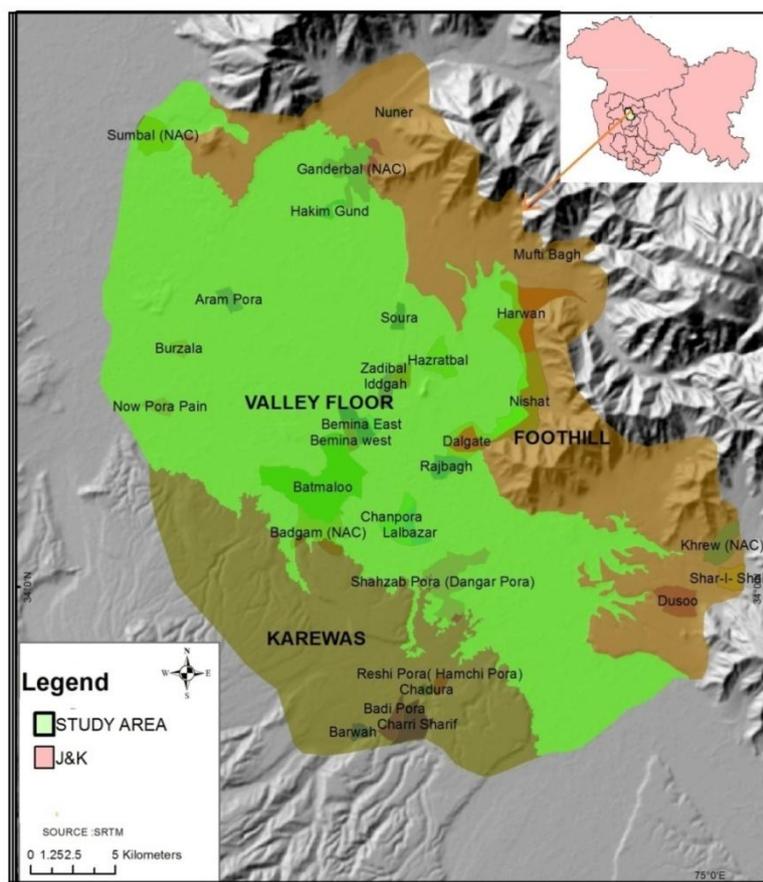
### **I. INTRODUCTION**

Floriculture is defined as “a discipline of horticulture concerned with the cultivation of flowering and ornamental plants for gardens and for floristry, comprising the floral industry” (Getu, 2009). Floriculture has become one of the important high-value agricultural industries in many countries of the world. International trade in cut-flowers is growing at a rate of 25 per cent annual growth rate. The global exports increased over 10-folds from 0.5 billion in 1995 to 5.1 billion in 2005, which again is poised to double by 2025 (Usman, 2015). Floriculture in India is being viewed as an elevated growth industry. As per National Horticulture Data base published by National Horticulture Board, during 2014-2015 the area under Floriculture production in India was 248.51 thousand hectares with a production of 1,685 thousand tones loose flowers and 472 thousand tones cut flowers. The transformation of the floriculture from being merely domestic to global has opened opportunities for multinational collaborations in the developing countries of the third world (Dadlani, 2003). Floriculture has emerged as an economically viable diversification option in the Kashmiri agribusiness and has captured the interests of many new entrepreneurs into agricultural sector in the recent times (Directorate of Economic Survey-2012-2013, J&K). This is an emerging economic field and has been in the forefront in the recent years. The high-tech floriculturists grow flowers under controlled conditions mainly to cater to the demands of the fast expanding international market. Floricultural products constitute a small but important segment of the international trade. These are high value products that are used for their beauty and elegance and they reap very high economic returns when compared to other agricultural and horticultural products.

### **II. STUDY AREA**

The Srinagar city along with its Rural - Urban Fringe is selected for the present study. The study area is located between the co-ordinates 33° 53' 49" N to 34° 17' 14" N Latitude and 74° 36' 16" E to 75° 01' 26" E Longitude. It is situated at an altitude of 5200 feet above mean sea level. The Greater Srinagar covers an area of 1068.72 sq. kms with a population of 931282 (Census of India, 2011).

**Fig: 1 Location Map of Study Area with Physiographic Regions and Sample Sites**



### OBJECTIVES

To analyze the cost-benefit scenario on the economic viability of floriculture in Greater Srinagar.

### III. MATERIALS AND METHODS

On the basis of altitude of the study area is divided into three physiographic divisions i.e. Valley floor, Karawas and Foot hill with valley floor occupying an area of 598.61 sq.kms and accounts 56 percent of total geographic area of Greater Srinagar and the foot hill and karawas comprising an area of 278.58 sq.kms and 192.49 sq. kms accounts 26 percent and 18 per cent of total area respectively. Lists of registered flower growers were taken from the directorate of Floriculture. Total number of registered growers in the study area were 192 and 62 (32 Per cent) growers were selected in all, out of which 38 growers were from the valley floor, 14 growers were from foot hills and 10 were from karawas through purposive sampling method for in-depth study. The data were collected from the private flower nursery owners and in every site two households were selected. In the study area, The Primary data was collected from the floriculturists in the study area through combination of structured and non-structured questionnaires. The information was collected regarding economic viability of floriculture. Then the collected set of information was classified, tabulated and statistically evaluated. The information which was collected during the field survey was in unit of Kanals which is not a standard scale. The unit areas (Cost on planting material, labor cost etc.) were converted into per Hectare. In order to find out the profitability of floriculture the cost-benefit analysis method was adopted and four flowers were selected (Rose, Marigold, Gladiolus and Lillium), and the cost was divided into fixed and variable cost. In order to see whether floriculture is economically viable as compared to other farms of farming, the secondary data from the Economic Survey 2013-14 was used. The yield per hectare per year of various crop in Kashmir were analyzed and after that the profitability of these crops were find out and were compared with the profitability of the selected flowers in the study area.

### IV. RESULTS AND DISCUSSIONS

The information on cost and return were collected from the sample population. For the Cost-benefit analysis only four flowers were selected. The cost benefit analysis of floriculture was done in order to work out the overall scenario of the economic viability of floriculture. The cost referred were worked out by assessing

total cost on labor, planting material, plant protection material etc. similarly the output referred includes spikes, seeds bulbs, oil etc., were converted into monetary terms to evaluate the economic efficiency of floriculture in different physiographic regions

**TABLE 1 CULTIVATION COST OF FLORICULTURE IN DIFFERENT PHYSIOGRAPHIC DIVISIONS IN GREATER SRINAGAR (PER HECTARE/YEAR IN RS)**

Physiographic Divisions	Types of Flowers	Fixed Cost	Variable Cost				Total cost(Fixed + Variable cost) (Rs)
		Planting Material cost(Rs)	Labor Cost (Rs)	Fertilizer cost(Rs)	Plant protection material cost(Rs)	Miscellaneous cost(Rs)	
Valley Floor	Rose	229500 (51)	109340 (24)	62660 (14)	41620 (9)	9520 (2)	452640 (100)
	Marigold	111520 (35)	111180 (35)	51760 (16)	37060 (12)	7060 (2)	318580 (100)
	Gladiolus	278700 (53.2)	114260 (22)	58780 (11.2)	64060 (12.2)	7740 (1.4)	523540 (100)
	Lillium	270000 (52)	106320 (20.4)	74320 (14.2)	61880 (12)	8120 (1.4)	520640 (100)
Karewas	Rose	107800 (46)	46360 (20)	38180 (16)	21540 (9)	20720 (9)	234600 (100)
	Marigold	51200 (32)	45600 (28)	33200 (21)	15700 (10)	15000 (9)	160700 (100)
	Gladiolus	96260 (40)	54000 (22)	34500 (14)	40880 (17)	17500 (7)	243140 (100)
	Lillium	87300 (40)	47300 (22)	32580 (15)	34000 (16)	16480 (7)	217660 (100)
Foot Hills	Rose	191660 (57.2)	86000 (26)	34000 (10)	15000 (4.4)	8340 (2.4)	335000 (100%)
	Marigold	111120 (48.3)	88000 (38.2)	18660 (8.1)	8880 (4)	3340 (1.4)	230000 (100)
	Gladiolus	107700 (44)	98769 (40)	17240 (7)	15380 (6)	8000 (3)	247089 (100)
	Lillium	110760 (44)	98769 (39)	21540 (8)	15380 (6)	7700 (3)	254149 (100)

Source:Field survey (2013-14)

The Table 1clearly shows that the cultivation cost of various flowers among the three physiographicregions of the Greater Srinagar. Among these cultivations costs the planting material cost is maximum and the miscellaneous cost includes the transport charges, packing charges is minimum in the Greater Srinagar.

**TABLE 2 TOTAL COST, GROSS RETURN AND PROFITABILITY OF FLORICULTURE IN DIFFERENT PHYSIOGRAPHIC DIVISIONS IN GREATER SRINAGAR (PER HECTARE/YEAR IN RS)**

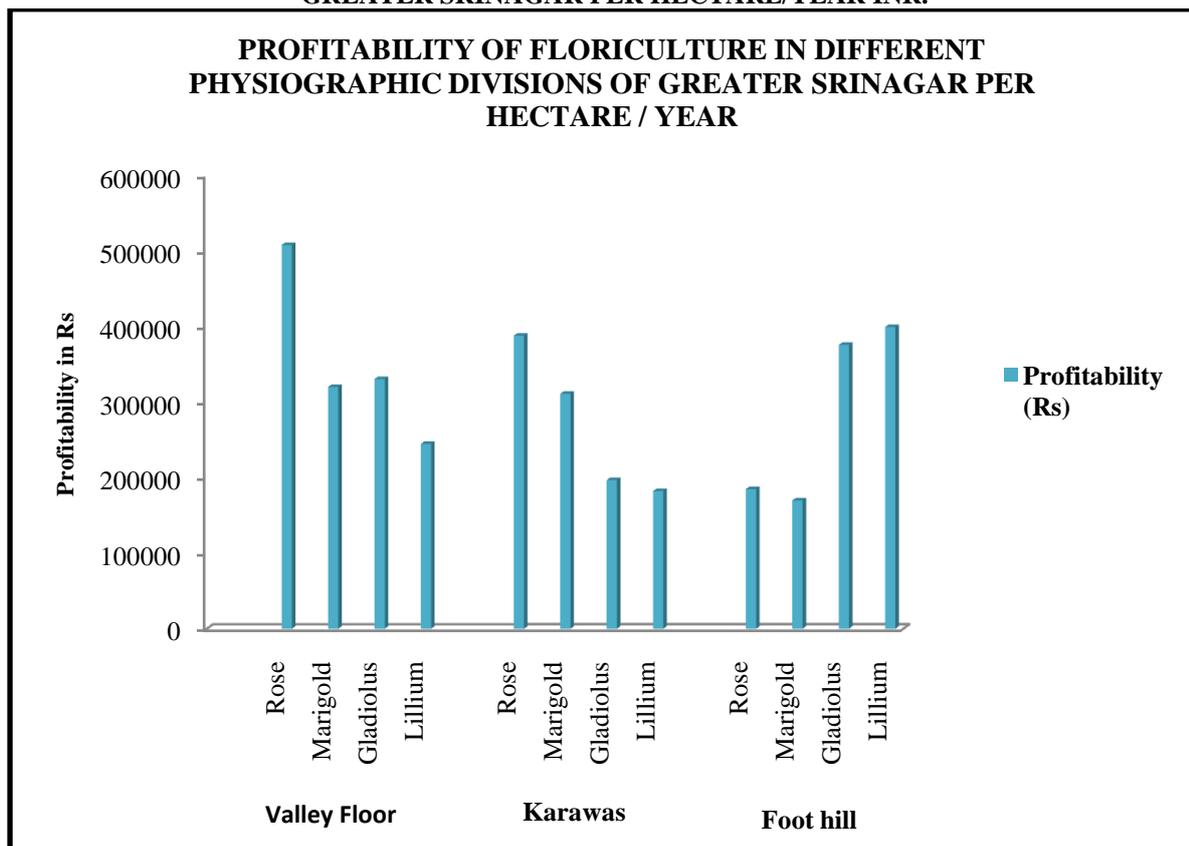
Physiographic Divisions	Flowers	Total Cost/hect./year (Rs)	Gross Return/hect./year (Rs)	Profitability/hect./year (Rs)
Valley Floor	Rose	452640	960960	508320

	<b>Marigold</b>	318580	638820	320240
	<b>Gladiolus</b>	523540	854200	330660
	<b>Lillium</b>	520640	765620	244980
<b>Karewas</b>	<b>Rose</b>	234600	622720	388120
	<b>Marigold</b>	160700	472000	311300
	<b>Gladiolus</b>	243140	440000	196860
	<b>Lillium</b>	217660	400000	182340
<b>Foot Hills</b>	<b>Rose</b>	335000	520000	185000
	<b>Marigold</b>	230000	400000	170000
	<b>Gladiolus</b>	247089	623080	375991
	<b>Lillium</b>	254149	653840	399691

Source:Field Survey (2013-14)

In the Table 1.2 total cost, gross returns and profitability were analyzed. The total cost among the three regions is highest in valley floor and the productivity of the various flowers is also highest in this division. Analization of profitability of floriculture gives the contrasting figures different flowers have shown varying profitability trends during the period of study. In foot hills highest profit is shown by the flower gladiolus and lillium and the marigold shows the least profit. In valley floor the highest profit is shown by the flower rose and least by marigold. In karewas again the rose flower shows the maximum profit and least is shown by the lillium flowers.

**FIG 2 PROFITABILITY OF FLORICULTURE IN DIFFERENT PHYSIOGRAPHIC DIVISIONS OF GREATER SRINAGAR PER HECTARE/YEAR INR.**



Source:Field survey (2013-14).

The profitability per hectare of the various crops in the Kashmir Valley is compared with the profitability of the flowers in the study area. Profitability per hectare of flowers ranges high as has revealed from the present study. However if appropriate measures are taken for its growth and development, the industry can flourish well and can prove a prospective industry in future.

**TABLE 3 YIELD PROFITABILITY PER HECTARE PER YEAR (INR) OF VARIOUS CROPS IN KASHMIR.**

S.No.	Various Crops	Yield (Qt/Ha/ year)	Profitability/ hect./ year (Rs)
1	Rice	34	81600
2	Maize	12	18000
3	Pulses	10	10000

Source: Economic Survey (2013-14).

**TABLE 4 PROFITABILITY PER HECTARE PER YEAR (RS) OF THE FLOWERS IN THE STUDY AREA.**

S.No	Flowers	Profitability/ hect./ year (Rs)		
		Valley floor	Karewas	Foot hill
1	Rose	508320	388120	185000
2	Marigold	320240	311300	170000
3	Gladiolus	330660	196860	375991
4	Lillium	244980	182340	399691

Source: Field Survey (2013-14).

From the Table 3 and 4 the conclusion that the floriculture is more economically viable activity as compared to other farms of farming. The profitability per hectare per year of the floriculture crop is more as compared to other farms of farming.

## V. CONCLUSION

During the past few years growth of floriculture in this region has assumed national importance in terms of increase in production and variety and has become highly specialized and intensive form of agriculture in Kashmir region. Floral business is in progress though on limited scale but growing demand of flowers has resulted in need to explore potential for expansion of this business. The study results were highly encouraging with the respect to higher economic returns of floriculture in the different physiographic regions of study area. As far as the input structure is concerned, the planting material is the most expensive item in three physiographic regions of the study area. This study shows that flower cultivation is a prospective business which ensures higher profitability. It can not only play a vital role in employment generation and poverty reduction but also can contribute in the national economy through earning foreign currency. But the commercial development of the business is still at very early stage. After analyzing the cost benefit ratio of the floriculture in the study area shows that the floriculture is economically viable crop. The physiographic region of the study area shows the different result. Gladiolus and lillium flower gives the maximum profit in foothill while in valley floor and karewas the rose flower shows the maximum profit. After comparing the profitability of floriculture with the other crops the result came that the floriculture is economically viable crop. For increasing the production of the floriculture we should use the hybrid planting material and should avoid the recycling use of the planting material.

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