

FLORICULTURE SCENARIO IN DISTRICT UDHAMPUR, JAMMU & KASHMIR

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Abstract—Jammu & Kashmir has a rich floral diversity including the Shivalik hills. Floriculture is the growing of cut flowers, potted flowering and foliage plants, and bedding plants in greenhouses or in fields. About two decades back or so, the floriculture was just a pastime of rich people and hobby of flower lovers. The importance of flowers has been realized throughout the world and today flower cultivation has become an integral and intensive form of agriculture and now it has opened a new vista in agri-business or commercial floriculture. World trade on floriculture produces like cut flowers, ornamental plants, flowering plants, flower seeds and plantlets is gaining tremendous momentum. Floriculture is seen in few villages of districts Udhampur. There are many different species of flowers and plants that are grown as commercial crops. Cut flowers include such crops as Marigold, Roses, Gladiolus and Chrysanthemums. For unemployed youth and poor farmers floriculture has become an effective risk management tool that reduces their input costs, diversifies their production and caters to the local demand besides sustaining their livelihood. For rural communities it improves income, better resource management and more labour opportunities. The agro-climatic conditions of the region hold good scope for the commercial floriculture. But, for all these we have to develop package of practices and post-harvest technologies so that the quick dispatch of produce to domestic and foreign markets will be ensured.

Keywords: greenhouse, trade, agro-climatic conditions, post-harvest technologies.

INTRODUCTION

Plants and flowers have engaged the attention of humanity since time immemorial all over the world including India. India has a long tradition of floriculture. References to flowers and gardens are found in ancient Sanskrit classics like the Rigveda (3000-2000 B.C), Ramayana (1200-1300 B.C), Mahabharata (prior to 4th century B.C), Shudraka (100 B.C), Ashvagoda (100 A.D), Kalidasa (400 A.D) and Sarangdhara (1200 A.D). Flowers have always remained an integral part of the social fabric of human life due to their essence and fragrance being essential in all social, cultural and religious functions of any society since time immemorial. There is ample reference of flowers in mythology and Puranas signifying their importance. Flower symbolizes beauty, purity, tranquility, honesty and divinity. Offering of flowers is a sign of reverence. In older days, flowers were not of much economic importance. Floriculture, which was considered a

gardener's activity till recently, is now fast emerging as an important and innovative commercial venture. The importance of flowers has been realized throughout the world and today flower cultivation has become an integral and intensive form of agriculture. Flowers have become a symbol of expression in any occasion, be it birthdays, anniversaries, Valentines' Day, Mother's Day, religious festivals, official functions, home decoration or any other celebration. With changing lifestyles and increased urban affluence, floriculture has assumed a definite commercial status in recent times and during the past 2 to 3 decades particularly. Appreciation of the potential of commercial floriculture has resulted in the blossoming of this field into a viable agri-business option earning foreign exchange, providing employment to youth and sustainability to the small and marginal farmers particularly in rural areas. The objective of the study was to examine the floricultural farms operating in the area, flowering species under cultivation, cultivation techniques employed, marketing areas, storage facilities, problems and constraints faced by the growers and suggest the suitable policy measures for further development of commercial floriculture in the area of study.

MATERIALS AND METHODS

A list of farmers cultivating flowers was prepared which constituted the total sample of commercial flower growers. The samples of flowering plant species were collected, preserved, photographed and identified through consultations with experts from floriculture. The samples were collected, systematically pressed, dried and stored for identification. The plant specimens were also identified by applying taxonomic keys and reference to the local floras. The identification was also facilitated by way of consultations with experts in the field of taxonomy. Online identification system and ISSG database were also used to identify the specimens. The floriculture farms were visited different times of the year to estimate the yields of different varieties under cultivation. The marketing pattern of the respondents was studied by asking them to indicate the nature of marketing which included where, when, to whom and through which channel they sell their produce of loose flowers of Marigold, Roses and Chrysanthemums. Responses obtained from the farmers were

expressed in frequencies and percentages. The soil samples were collected for further analysis.

RESULTS AND DISCUSSION

The Himalayas is an enchantment territory of the nature where the magnificence of the world's highest mountains is mirrored in the rugged beauty and unique culture of the people who live in their shadow. The district Udhampur has main regions like Ramnagar, Majalta, Dudu Basantgarh, Ghordi and Chenaini. The congenial agro-climatic conditions of the Shiwalik region are not even found in other parts of the country that are dominating the trade in floriculture. The prevailing agro-climatic conditions favour promotion of less water intensive crops like floriculture. The presence of fertile soil, cheap labour and congenial climatic conditions provide ample scope for the development of floriculture industry. The agriculture sector which is the backbone of the economy is facing challenges of increase in cost effective production and value additions. There is need of renewed focus on identifying high value low voluminous crops to steeping up growth of allied and non-farm activities to improve value additions. The farmers in the area generally possess small land holdings and a holder of very small farm could derive benefits from flower cultivation as compared to other traditional crops. The cultivation of ornamental plants require a number of operations to be done sequentially. The main garden operations include selection of site, soil and seed sterilization, raising of permanent beds, seed sowing, pricking, watering, manuring and mulching. Propagation techniques involve seed sowing and through vegetative propagules like bulbs, corms, rhizomes, cutting etc. sexual propagation takes place by sowing the mature seeds at the appropriate time and under appropriate climatic and soil conditions. On the other hand vegetative propagation involves various methods like bulbs, corms, rhizomes, cutting, layering, budding and tissue culture. Floriculture is basically a labour intensive industry since the plants require 24 hours-a-day care and attention. There is no dearth of labour in the Shiwalik region especially rural areas. The demand of floricultural products has been increasing over the period of time across the region. The cultivation of flowers in the area is very dismal owing to reluctance in the shifting from traditional cropping pattern, lack of awareness, lack of training, market access and unsupportive response from the State Horticulture and Floriculture department. There are no large farms engaged in the organized floriculture. Only few open small farms are operating in the area. The data on the area under floriculture and the production generated is highly inadequate. All the small floriculture farms operating in the area are solely devoted to the cultivation of marigold and to a small extent to the roses. The farmers do not have any storage facilities. There is no any hi-tech indoor cultivation in the area which requires proper training of the youth particularly the unemployed and support by the concerned department. The educated unemployed youth particularly those having nursery and gardening skills can avail of benefits through this lucrative hi-tech indoor as well as open loose and cut flower cultivation.

There seem a good potential for the cultivation of marigold, rose, chrysanthemum, gaillardia, gladiolus, aster, jasmine, tulips and even orchids. The nearest market survey for the selling of both loose and cut flowers revealed that the produce is procured from neighboring states of Punjab, Haryana and Himachal Pradesh besides from the valley of Kashmir. Most of the domestic consumption requirement in the neighbouring market of Jammu is catered by Harayana. Marigold ranks first in the domestic consumption throughout the year and followed by rose and gladiolus. Some of the ornamental species under cultivation in the region are discussed as under.

- ***Tegetes erecta***: Compact, stout, erect, branching annual, about 60 cm high, with angular, hairless stems. Leaves pinnate, to 10 cm long, leaflets 11-17 narrowly-lanceolate, 5 cm long, pointed, sharply toothed, all with a few large glands near the margins,. Flower heads large, terminal, pompon-like, densely double, to 12 cm across, yellow to orange, rays 5-8 or more, long clawed, disc florets many. Flowering: July to November.
- ***Tagetes patula***: Bushy annual to 45 cm high, stem hairless, purple-tinged, branched from near the base. Leaves pinnate, to 10 cm long, leaflets about 12, lanceolate or oblong, toothed, to 3 cm long. Flower heads solitary, long pedunculate, usually double, to 5 cm across, rays few to many, red-brown, yellow, orange or yellow with red markings, disc florets many and with wide range of colours. Flowering: July to November.
- ***Tegetes tenuifolia***: Upright branching annual, to 60 cm high, with cylindrical stems. Leaves pinnate, to 12 cm long, with about 12 linear or narrowly lanceolate, toothed leaflets, to 2 cm long, each leaflet with two rows of large glandular dots. Flower heads in cyme-like inflorescences, single, to 2.5 cm across, rays few, usually 5, yellow or orange, disc florets many. Flowering: July to December.
- ***Chrysanthemum grandiflorum***: Stout perennial, 0.6 to 1.5 m high, with grey-pubescent herbage. Leaves parted nearly to midrib, often toothed, up to 7.5 cm long. Flower-heads clustered, vary in size, variously coloured, rays usually exceeding disc, outer involucre scales herbaceous, with only scarious margins. Flowering: October-December.
- ***Gaillardia grandiflora***: Bushy, often short lived perennial herb, upto 90 cm high. Leaves alternate, oblanceolate, grey-green, entire, simple or lobed. Flower heads large, about 13 cm across, ray florets yellow, ringed red at base, disc florets yellow-brown. Flowering: April to November.
- ***Gaillardia pulchella***: Erect, bushy, hairy, branching annual herb, up to 60 cm high. Leaves oblong, spatulate or oblanceolate, 8 cm long, entire or coarsely toothed, grey-green and nearly sessile. Flower heads about 8 cm across, single or double, ray florets yellow or red, disc florets purple. Flowering: April to November.

- **Zinnia elegans:** An upright, bushy annual, up to 90 cm high. Leaves ovate to lanceolate, up to 10 cm long, sessile, more or less clasping. Flower heads up to 12 cm across, rays broad and showy, becoming reflexed, white, yellow, orange, red, pink, purple, greenish and lilac.

The ornamental flowering plant species with potential of cultivation in the area include *Gaillardia grandiflora*, *Gaillardia aristata*, *Chrysanthemum cinerariifolium*, *Chrysanthemum grandiflorum*, *Chrysanthemum carinatum*, *Tagetes erecta*, *Tagetes patula*, *Tagetes tenuifolia*, *Lilium auratum*, *Lilium regale*, *Gladiolus* sp., *Tulipa lanata*, *Rosa multiflora*, *Rosa damascena*, *Jasminum multiflorum*, *Jasminum sambac*, *Jasminum nudiflorum*, *Rudbeckia hirta*, *Gazania rigens*, *Salvia splendens*, *Delphinium ajacis*, *Ranunculus asiaticus*, *Phlox drummondii*, *Cosmos sulphureus*, *Gerbera jamesonii*, *Zinnia elegans*, *Zinnia angustifolia*, *Dianthus barbatus*, *Dianthus caryophyllus*, *Dianthus deltoides*, *Dianthus plumarius*, *Kerria japonica*, *Coreopsis tinctoria*, *Coreopsis grandiflora*, *Dahlia pinnata*, *Dahlia coccinea*, *Begonia* sp., *Gazania rigens*, *Campsis grandiflora* and *Lagerstroemia indica*.

CONCLUSION

The agro-climatic conditions in the Shivalik hills of Udhampur are favourable to many species of ornamental plants like marigold, rose, chrysanthemum, gaillardia, gladiolus, tulips, jasmine, aster, carnation and many more. Flowers, if grown properly can yield 15-20 times more returns than cereals and other traditional crops. The flower cultivation can be undertaken even on small land holdings. These enterprises being labour intensive provide gainful employment to educated unemployed skilled youth, marginal farmers, rural artisans and others seeking employment. People of the area are less inclined to floriculture due to a number of constraints like training, access to quality seeds and propagules, technical and financial support, storage facilities, market access and like. Erroneously the impetus to floriculture is given to the valley of Kashmir where the production is restricted to only four months of the year. Given the opportunity some quality floricultural produce can be raised throughout the year in the area under study.

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