

Obstacles and Challenges in Tamilnadu Floriculture Industry

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Abstract: Floriculture is the fast emerging and high competitive industry, with the continuous introduction of new cultivators and new cultural techniques are changing and hence new products and new technologies are developing with new challenges regarding production, marketing and export. The main challenges and obstacle of flowers from Tamilnadu is quality of flowers. Even after that, Tamilnadu's share in floriculture is booming in India floriculture trade.

Index Terms - Obstacles and challenges, Floriculture Industry, Tamilnadu.

1. Introduction

Floriculture is the branch of horticulture that deals with the cultivation of flowering and ornamental plants for sales or for use as raw materials in cosmetic industry. Demands for floricultural products are steadily increasing both in the domestic as well as export markets. Tamilnadu has made significant improvement in the production of flowers, particularly cut flowers, which have good potential for export. Floriculture is important from the economic perspective as well. Commercial floriculture has been steadily increasing with increased use of protected cultivation employing greenhouse, shade nets, polyhouse etc. Commercial flowers cultivation in Tamilnadu provides an opportunity for rural development owing to its higher returns per unit area and the new employment opportunities. Tamilnadu has a scope to bridge the gap between demand and supply as global demand of floricultural products is growing at a faster rate. Tamilnadu is enriched with diverse agro-climatic conditions such as, fertile land, suitable climate, abundant water supply, low labour cost, availability of skilled manpower, etc. which are quite beneficial for growing a variety of flower plants throughout the year.

Indian floriculture Industry stands 2nd in world's production of floriculture produce after China under flower cultivation according to sources. Indian floriculture industry has been shifting from traditional flowers to cut flowers for export purposes. In India Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh and Haryana have emerged as major floriculture centers in recent times. The major flower growing states are Karnataka, Tamil Nadu and Andhra Pradesh in the South. Floriculture is a blossoming industry in Tamil Nadu. It has tremendous potential for growth in terms of production, employment, income and export. Floriculture has emerged as an important sub-sector of agriculture as a source of income for small and marginal farmers. Floriculture in India is estimated to cover an area of 2.55 lakh ha with a production of 17,54,000 MT of loose flowers and 5.43 lakh MT (NHB, 2015). The Trade of Indian flowers worth Rs.37,000 crores/annum. Nearly 77% of area under floricultural crops is concentrated in seven states comprising Tamil Nadu, Karnataka, Andhra Pradesh, West Bengal, Maharashtra, Haryana, Uttar Pradesh and Delhi. Among different states, Tamil Nadu ranks first in area followed by Karnataka, West Bengal and Andhra Pradesh. In Tamil Nadu, loose flowers are produced in an area of about 32,400 hectares with the production of 3,13,535 MT (jasmine, chrysanthemum, marigold, rose, crossandra and nerium) and cut flowers are produced in an area of 700 ha with a production of 12,900 MT of cut stems per annum.

It is constrained by lack of awareness about its potential, lack of quality planting material, weak infrastructural support, lack of postharvest facilities, lack of good markets, exploitation by middlemen, weak database, and absence of information on income generation and employment generation from different flower cultivation and export barriers. It is also viewed that a majority of the flower growers belong to small and marginal farmers' category, facing many problems. No comprehensive study has been undertaken to cover all these aspects in the state. Therefore, an attempt has been made to highlight these issues in addition to providing database for identifying the magnitude of problems and prospects of this sector and also suggesting appropriate measures for tackling the problems of the growers and improving the floricultural industry. Tamilnadu floriculture industry is facing a number of challenges related to infrastructure,

production, marketing and in export concerned. The challenges being faced by floriculture industry are enumerated here under. On the whole, the major problems faced by the producers are dearth of infrastructure, absence of technology transfer, lack of inputs, such as quality seeds and planting materials and the absence of cooperative marketing, high transport cost, import duties, and irregular power supply to modern floriculture. These have to be tackled on priority basis, if the industry wants to sustain. Apart from this, encouragement has to be given for setting up more processing units to avoid post-harvest losses as to overcome market glut, otherwise, the farmers continue to face the problems. The major challenges are classified as follows:

- a) Production Level Challenges
- b) Climate related Challenges
- c) Storage and Packing Challenges
- d) Marketing and Transportation Challenges
- e) Export Challenges

2. Production Level Challenges

The real estate business has been the centre of attraction for unscrupulous land brokers who are notorious for their speculative trade practices. They convert flower plantations into building sites which could be sold at fancy prices. Land owners who are interested on big money are prepared to sell their farms and go in for any other lucrative business with the sales proceeds. The expansion of real estate business in nearby area of cities affects the growing of floriculture farms, observed from recent studies as growers sold their farms to builders for big amount and diverted towards different industries. Hi-tech floriculture industry is facing many pre-harvest and post-harvest problems. The production related challenges are related to ground level obstacles which are unavailability of ample infrastructure, quality and improved species planting material, identical fertilizers and manures. Lack of knowledge regarding high yield varieties, soil testing and proper doses of pesticides and fertilizers is again a big obstacle in flower production. Unavailability of skilled labour for plant protection, harvesting and post harvesting of floriculture produce is affect the floriculture production. Table 1 show the opinion of production level challenges.

Table 1: Production level challenges

<i>Problem</i>	<i>V. High</i>	<i>High</i>	<i>Normal</i>	<i>Low</i>	<i>V. Low</i>
Cultivation	88	59	55	62	36
Planting	54	68	71	63	44
Watering	36	86	87	31	60
Fertilizer	90	49	45	70	46
Plucking	32	38	42	74	114

Source: Primary Data

Table 1 shows the details of problems faced by 300 sample respondents for production level challenges of flowers. Analysis shows that cultivation problem is very high and high for 147 respondents where as it is low and very low for 98 respondents. Planting problem is very high and high for 122 respondents and is low and very low for 107 respondents. Watering problem is very high and high for 122 respondents and is low and very low for 91 respondents. Fertilizer problem is very high and high for 139 respondents and is low and very low for 116 respondents and plucking problem is very high and high 70 respondents and is low and very low for 188 respondents.

3. Climate Related Challenges

Flower production is inherently sensitive to variability in climate. Temperature is a major determinant of the rate of plant development and, under climate change, warmer temperatures that shorten development stages of determinate crops will most probably reduce the yield of a given variety. Earlier crop

flowering and maturity have been observed and documented in recent decades, and these are often associated with warmer (spring) temperatures. Tamilnadu is rich in bio-diversity and varied agro-climatic regions. There is great impact of climate change on flowering plants particularly in commercial production under open field conditions. The impact of excessive heat, cold, continuous or unpredictable rain fall with storm damage the flower production in the blooming span. Indigenous species in the natural habitat may not be proliferate and will be under threat of unfavorable agro-climatic conditions. Unseasonal monsoon may deprive the western hilly regions and its surrounding regions of normal precipitation, affecting the species required high humidity and water. The plain regions also affected either by drought or flood and abrupt seasonal variations. Due to drastic changes in climate onset of new diseases, pest or even altered resistance to the existing pathogen is also expected resulting in low production or low quality of flowers. Drought could become a challenge in areas supposed to have high temperature and low rain fall, resulting in petals losses, color fed in blooming flowers. The production in open cultivation of floriculture affects mainly due to these factors. Diseases, pests, nematodes and crops do co-exist in the cropping in the environment always challenges the successful cultivation and post-harvest handling of crops. Changing climate scenario increased incidence of soil borne pathogens, viral and phytoplasmal infection, nematodes, foliage and flower pests and reemergence once of controlled pest and pathogens affecting the quantity as well as quality of production. Table 2 show the opinion of climate related challenges.

Table 2: Climate related challenges

<i>Physical Problems</i>	<i>Very High</i>	<i>High</i>	<i>Normal</i>	<i>Low</i>	<i>Very Low</i>
Warm humid	50	55	57	73	65
Climate Change	36	55	76	70	63
Warmer Temperature	49	65	69	65	52
Rainfall	76	50	58	50	66
Wind	89	75	40	42	54

Source: Primary Data

Table 2 shows the details of problems faced by 300 sample respondents for climate related challenges of flowers. Analysis shows that the warm humid problem is very high and high for 105 respondents and it is low and very low for 138 respondents. Climate change problem is very high and high for 91 respondents and it is low and very low for 133 respondents. Warmer temperature problem is very high and high for 114 respondents and it is low and very low for 117 respondents. Rainfall problem is very high and high for 126 respondents and it is low and very low for 116 respondents and wind problem is very high and high for 164 respondents and it is low and very low for 96 respondents.

4. Storage and Packing Challenges

Storage facilities are pre-requisite for maintaining the freshness of the flowers particularly the modern flowers. However, the flowers covered in the study are traditional varieties which do not require this facility. The reason being that the farmers grow only a small quantity and dispose them quickly. However, a small proportion of the traditional flower producers expressed that they did not have sufficient place even to keep their small quantity of produce. Cold storage facilities are very essential for the flowers to maintain freshness, quality, texture and life-span. However, none of the flower growers had either possessed these facilities or the Government had provided such facilities. Even then a majority of them were of the opinion that they did not require this facility as they grew in small quantities and disposed it as quickly as possible. They were also of the opinion that such facilities on co-operative basis might help them to keep their flowers in cold storage to overcome price fluctuations.

The growers' impressions on packing material availability indicated that a majority of the growers did not face any problem. There was lack of improved packing materials and high cost of materials. The observation in the field shows that a majority of the farmers were packing their produce in polythene bags or gunny bags for marketing, which they already possessed. Table 3 show the opinion of storage and packing challenges.

Table 3: Storage and packing challenges

<i>Problem</i>	<i>V. High</i>	<i>High</i>	<i>Normal</i>	<i>Low</i>	<i>V. Low</i>
Preserving	90	85	40	35	50
Storage	35	55	83	67	60
Packing	49	65	72	68	46
Collection	85	50	58	41	66
Other	41	45	47	89	78

Source: Primary Data

Table 3 shows the details of problems faced by 300 sample respondents for storage and packing challenges of flowers. Analysis shows that the preserving problem is very high and high for 175 respondents and it is low and very low for 85 respondents. Space problem is very high and high for 90 respondents and it is low and very low for 127 respondents. Packing problem is very high and high for 114 respondents and it is low and very low for 114 respondents. Collection problem is very high and high for 135 respondents and it is low and very low for 107 respondents and other problem is very high and high for 86 respondents and it is low and very low for 167 respondents.

5. Marketing and Transportation Challenges

The market related challenges is the main obstacle in improving economic status of floriculture producers from small growers to large. There are various market related challenges faced by floriculturist which are non-availability of market, difficulties in transportation due to high perishable produce, commission agents, delayed in payment after sell of flowers, inadequate arrangements for grading and storage due to such factors growers have to sell their produce at very cheap prices to the wholesalers or commission agents. With regard to market, the growers expressed single or combination of constraints that they faced in market. The prominent single constraint expressed was more commission followed by middlemen problem and deduction of more charges. Some sample farmers mentioned that the agents did not take the consent of the farmers while selling the produce to a particular price.

A good network of roads from the village to market places is essential for the overall development of the villages. It is equally important and necessary for the quick disposal of highly perishable flowers. But, in the field area, the farmers expressed that they have been deprived of proper approach roads. Table 4 show the opinion of marketing and transportation challenges.

Table 4: Marketing and transportation challenges

<i>Problems</i>	<i>Very High</i>	<i>High</i>	<i>Normal</i>	<i>Low</i>	<i>Very Low</i>
Marketing	73	88	28	39	71
Space	24	92	84	56	43
Transport	84	36	75	66	39
Labour	69	53	47	47	84
Consumer Behaviour	49	32	66	92	62

Source: Primary Data

Table 4 shows the details of problems faced by 300 sample respondents for marketing and transportation challenges of flowers. Analysis shows that the marketing problem is very high and high for 161 respondents and it is low and very low for 110 respondents. Space problem is very high and high for 116 respondents and it is low and very low for 99 respondents. Transport problem is very high and high for 120 respondents and it is low and very low for 115 respondents. Labour problem is very high and high for 122 respondents and it is low and very low for 133 respondents and consumer behaviour is very high and high for 81 respondents and it is low and very low for 154 respondents.

6. Export Challenges

In Tamilnadu, these facilities are inadequate. There are no direct flights to international markets. The exporters have to transport flowers through Mumbai or Chennai airports, where connection to international flights is available. Even, in the available flights, adequate space is not accommodated for

flowers. Several tones of flower in airport were stranded in the airport for lack of space in flights. Again, there were several instances of diverting the flowers to domestic market on account of insufficient plights. All these led to delays in exports and deterioration in the quality of the flowers. The high freight charges are affecting the viability of the floricultural units. To ease the matter, subsidy on airfreight rates are provided to the exporters. But the airline rates are much higher than the IATA (International Air Transport Association) rates. The exporters are required to book space in the flight one month in advance. Even after booking, there were instances of cancellation of booking and some times cancellation of flights caused heavy losses to the exporters. There were also instances of cancellation of flight and cancellations of advance booking. There was lack of post-harvest infrastructure such as cold storage facilities at Airports. This led to the exposure of the flowers to open conditions. The procedure followed at the airport in checking the quarantine element before transit was taking lot of time. This lead to delays in exports and affected the quality of the product. At the destination also, some countries conducted phyto-sanitary tests for flowers.

7. Suggestion:

- * There is an urgent need the intervention of government and private agencies for the introduction of new and innovative methods in the production marketing of flowers.
- * New technologies like shade-net cultivation and the green house technology that have been used effectively.
- * Only rose is being exported from India. Indian growers should diversify their flower cultivation in terms of export and grow varieties of cut flowers depending upon the demand in the International market.
- * Greater research efforts are also needed for integrated pest management, development of location specific package of practices for flowers, value addition of flowers, produce good quality flowers for both domestic and international markets etc.

8. Conclusion:

In spite of export potential, the performance of the Indian floriculture sector has not been encouraging. The floriculture exports dropped marginally in value terms during the recent years. The industry also facing by several challenges at the production level related to small size land holding day by day, unavailability of basic inputs and skilled manpower for harvesting and post –harvesting techniques. Pirated seeds and planting material are further adding to the woes of the flower producers. Inadequate cold chain management is not only affecting the future of floriculture but also having a negative impact on it. At marketing stage, major challenges faced by Indian flower exporters are related to product diversification, differentiation, vertical integration and innovation, quality and environmental issues. With increasing involvement of supermarkets in flower trade, organizing logistic is also becoming a critical factor for the flower exporters. Considering the past experience, it is indigenizing greenhouse technology for commercial production. Product diversification and value addition like extraction of oil, pigments, production of dry flowers should be encouraged. Some more agro export zone should be introduced by the Govt. of India for promoting export of floriculture. By adopting modern techniques with future sight by the floriculture growers and exporters definitely overcome this challenges and obstacles in the Indian Floriculture Industry in future.

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