

An Economic Study on Jasmine cultivation in Ettarai Village in Tiruchirappalli District

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ABSTRACT

Floriculture has become an important commercial trade in agriculture. Flowers are not only beautiful to look at, growing them in a large scale can be a good business proposition. Flowers are highly perishable in nature. This paper is mainly concentrates on the study area of flower cultivators, who are mostly cultivate Jasmine, Rose, Ixora, Chrysanthemum, Tuberose, Kanagambaram, Marigold and Sunflower. Most of the cultivators are highly focus on the Jasmine flower cultivation. Jasmine is one of the oldest fragrant flowers that is cultivated by man. So this study is an attempt to analyse the economic status of Jasmine cultivation in Ettarai village in Tiruchirappalli district agriculture.

Keywords: Commercial, Floriculture, Perishable, Jasmine, Economic study.

Introduction

The term "Floriculture" is very popular in the discipline of Horticulture. It is the art and knowledge of growing flowers to excellence. Floriculture includes the cultivation of flowering and ornamental plants for sales or use as raw material in cosmetic, perfume industry and the pharmaceutical sector. The flower cultivation today has grown too much larger proportions and offers a wide scope of growth with profits. The person associated with this field is called floriculturist. It also includes production of planting materials through seeds, cuttings, budding, grafting and marketing of flowers for flower produce.

The flower cultivation in India has huge potential for generating income, employment and enhancing export earnings. Flowers occupy a significant place on the social culture of our country. Jasmine cultivation is increasingly regarded as viable diversification from the traditional field crops due to higher returns per unit and the increasing of 'saying it with flowers' during all the occasions. The flower is used for various purposes like making garlands, decorating hair of women, religious offering and so on. It is also used for production of Jasmine concrete which is used in cosmetic and perfumery industries. More than 80 species are found in India, of which only three species are used for commercial cultivation.

Jasmine is known in India as the "Queen of the Night" because of its intoxicating perfume that is released at night. Jasmine symbolize purity, beauty, love, passion and tranquillity. Although flowers are mute beauties, they convey best message of love, joy and affection, conveys purity, fancy thoughts and narcissism egoism. They are highly esteemed for their holiness. Even the birth and death of a human being is associated with flowers. The steam of Jasmine is the reproduced parts of Jasmine plants.

The Jasmines are highly prized for their fragrant flowers which are used for the preparation of perfume. They are grown commercially in our country for the extraction of the essential oil for perfume and cut flowers which are commonly used to make garlands and veni, the latter being used for adornment of hair by women, particularly in the southern parts of the country. In the states of TamilNadu, Karnataka, Maharashtra and Andhra Pradesh, Jasmine is cultivated as an economic crop for cut flowers. In the garden the jasmine is raised as a dwarf-growing shrub and a few species are grown as climbers. In the home garden, they are generally planted near the house, particularly adjoining the bedroom and along paths. So that the fragrance of their flowers may be best enjoyed from close quarters.

Uses of Jasmine flowers

Jasmine is used for a variety of medicinal purpose. It has been used for liver disease, liver pain due to cirrhosis and abdominal pain due to acute diarrhoea. It is aid in the treatment of headaches, sunburns and rashes, irritability, pain, anxiety, depressions and urine problems. The scent of the flower is said to help as a relief who suffers of depression. Jasmine as an essential oil has many beneficial uses. It is also wonderful oil for massage. The restorative effects of jasmine on the skin are widely the benefits by using jasmine massage oil. It is used in the beauty and healthcare industries. In foods, jasmine is used to flavour beverages, frozen dairy desserts, candy, baked goods, gelatines and pudding. Jasmine tea which seems to be a great medicine for a variety of health issues. The Jasmine Tea has been decreased the blood pressure, and strengthened the

immune system and regulated aging processes in our bodies. Drinking Jasmine tea regularly prevents strokes and heart attacks. It also fights against cold, flu, antiviral and antibacterial properties. The Jasmine flower plays a vital role in Ayurvedic medicine. It is good for treating intestinal boils and ulcers. Jasmine is produced commercially for the perfume industry. In manufacturing, jasmine is used to add fragrance to creams, lotion and perfumes. Tropical remedies include the fresh juice squeezed from the plant. It is good for healing corns that appear on the foot.

Jasmine cultivation in TamilNadu

In Jasmine cultivation, TamilNadu ranks first in India. Jasmine flower cultivation is very popular in TN. Majority of small and medium farmers dependent on the jasmine cultivation. In TamilNadu, Jasmine is produced mainly in Madurai District and is transported to Mumbai for export to other countries. The Madurai is called “Malligai Managar” that is city of Jasmine. Jasmine cultivation has provided good employment opportunity throughout year. Madurai is the second largest city in TamilNadu is mainly famous for Temples and Madurai Malli. The price of Madurai malligai will be higher between the Tamil months of chithirai and Aadi.

The harvesting of the flower has required labour for everyday and required labour services only to 2-3 hours per day in the early morning. Mostly women were required for harvesting. The marketing of jasmine flower has the special type and have the highly perishable in nature, so it needs the quick marketing. The price of jasmine was fluctuating day by day and even hour to hour. The farmers were not directly sold to consumer and they highly depend on the commission agents cum wholesaler. Even some farmers get advance money from the commission agents. TamilNadu is the leading producer for jasmine in the country with an annual production of 77247 ton from the cultivated area of 9360 HA.

Objectives

1. To analyse the total cost, income and net income on Jasmine Cultivations in Ettarai village.
2. To study the production of Jasmine cultivation in the study area.

Methodology

Tiruchirappalli district is the centre place of TamilNadu. It consists of 7 Taluks Namely Tiruchirappalli Taluk, Srirangam, Manaparai, Lagudi, Mannachanallur, Musiri and Thuraiyur Taluk. Srirangam is consists of Andanallur block and Manikandam block. Andanallur block consists of 25 villages. An Ettarai village is one of the important villages of this block. This village farmers mainly depend upon the flower cultivation. Ettarai village selected at random from the population of 4330. From the population, 50 samples cultivating jasmine are selected at random. The data were collected from both primary and secondary data. The required primary data have been collected with the help of detailed questionnaire from the flower cultivators in Ettarai village. The secondary data were collected from the various books, journals, reports and records both published and unpublished sources, magazines, web portals etc. The primary data collected from the respondents have been analysed with the help of average and percentage. The period of the data is collected from 2016 to 2017.

Review of Literature

M.A.Kher (1990) in his article on “chrysanthemum; queen of the east”, stated, that the Queen of the East among flowers, the chrysanthemum is the dollar -earning flower in the United States. Wide variations in growth habit size, colour, and shape of blooms make the chrysanthemum suitable for every purpose, the erect tall growing cultivators for background planting in borders or as cut-flowers, the draft, compact-growing ones for front-row planting or pot-culture, the decorative and the fluffy bloomed small-flowered cultivators for garland-making and hair decoration, and the extra large blooms for exhibitions Diversity in the crop is largely a product of hybridization and induced mutation. A break throw in photoperiodic and genetic studies has now made the year-round cultivation of chrysanthemum possible even without cover in India.

P.K.Rajeevan and K.Sathiees babu (1996) in their research, “Cultivating bush Jasmine a promising enterprise for small holders” states that the cultivation of bush jasmine is an emerging business for small and marginal cultivators. The analyses indicate that the cultivation of bush jasmine offers promising opportunities even on small holding on sound economic lines where land is the most limiting production factor, small and marginal farmers can undertake its cultivation and marketing as a supplementary enterprise, utilizing under-employed/unemployed family labour, especially women labour. This is more

Feasible because the initial investment requirement on the project is low. It is hoped that the commercial floriculture development strategy in the country pays sufficient attention on these implications.

Manivel.R(2011) in his article, "production and marketing of Jasmine in thanjavur," Taluk pointed out that jasmine is widely cultivated. Some claim that the daily consumption of jasmine tea is effective in preventing certain cancers. Jasmine tisane is consumed in China, where it is called jasmine flower tea. (Pinyin; molihuacha). The delicate jasmine flower open only at night and is plucked in the morning when the tiny petals are tightly closed giant fans are used to blow away and remove the petals from the denser tea leaves. Flower cultivation is taken by a large number of farmers on small areas along with other crops. Individually also they cannot afford to take up direct marketing themselves. But a large number of them resort to direct marketing.

Under the circumstances marketing become costly and exploitative. The floriculture was just a part time business of rich people and hobby of flower lover, but now it has opened a new vista in agribusiness (i.e.) commercial floriculture. With the increase in buying a capacity of people, the flower lovers have how started buying them from don't have time and enough space to grow flowers particularly in urban areas and in metropolitan cities.

Shivani Sharma.S Dr.R.Chandrasekhar(2014) in their research, "Aromatherapy a healing science of flowers", state that Aromatherapy can be defined as an art and science of utilizing naturally extracted aromatic essences from plants to balance, harmonize and promote the health of body, mind and spirit. It is a holistic treatment of caring for the body with aromatic botanical oils from rose, jasmine and lavender. It is a branch of phyto-therapy which simply means treatment using scents. There are several plants in the traditional medicines of India which have been used for centuries to relax body and to reduce stress. The jasmine and rose flowers which are used for aromatherapy.

Tamasi koley (2015)in his article, "Moonlit garden". A different concept in Modern garden", states that a moonlight garden is a garden which is designed to be enjoyed at night, under the light of the full moon. It is a garden that comes to life at dark, precisely at the moment when the intense red, orange, blue, purple and other colours of flower begin fade. At one time, there was a moonlight garden know as MahtabBagh attached to the Taj Mahal. When the sun sets, most of us abandon our gardens and return indoors until it rises again to light the brightly coloured plants. We have carefully selected for gardens. Moonlight gardens may include fountains and pools with water which will reflect available light as well as sounding pleasant. Addition of artificial fireflies would complete the magical scene. All kinds of plants ranging from herbs to high rise tree but all bearing pale blooms are preferred. Motia and others jasmynes, pagoda tree, champa, murraya, magnolia, gardenia and cestrum.

I. Merlin kamala and M.Suganty(2016) in their article "Pest management in Jasmine" states that Jasmine called in person assassin "Gift of God", is one of the oldest fragrant flowers of India. It symbolized deep affection, happiness and elegance. More than 80 Jasmine species are found in India, of which only three species are used for commercial cultivation. The damage symptom are the caterpillar built the elaborate network of webbing of leaves, especially in the lower portion causing severe injury, then the eggs are laid singly on the leaf lamina and the larvae are greenish yellow in colour during initial stages and later turn dark green. They attain maturity in 14-16 days after passing through five instars. The management bud worm and leaf weeber by spray thiadoprid 240 sc @ 625 ml /ha or spin sad 45sc @200ml/ha or protenophos 50ec @750ml/ha or chlorpyriphos 20ec@625ml/ha or neem seed kernel extract 5%.Drenching the soil surface with chlorpyriphos 20 Ec at 5ml / 1 will kill the pupae in the soil. However in Tamil Nadu is attacked by a number of pests which cause extensive harm. Pest management strategy may from a meaningful solution to avoid the ill-effects caused by synthetic chemical insecticides especially as environmental contaminants.

The water body can be lined with ophiopogon grass,a white green light coloured grass. Addition of tiny wind chimes and a garden bench would give a look of the perfect moonlight sanctuary to enjoy on summer night.

T.Janakiram(2017) in his article, "At IHR, Bangalore.... Floricultural research and development" states that the production and trade of floriculture has increased consistently over the last 10 years. In India, Floriculture industry comprises flower trade, production of nursery plants and potted plants, seed and bulb production, micro propagation and extraction of essential oils. Though the annual domestic demand for the flowers is growing at a state of over 25% and international demand at around Rs 90,000 crores. Research work on floriculture is being carried out at several research institutions under the ambit of Indian council of agricultural Research and council of scientific and Industrial Research, in state Agricultural Universities and under the All India coordinated Floriculture Improvement Project with a network of about twenty centers. The institute has brought out a large number of improved varieties considering the

prevailing drawbacks of the leading commercial varieties in many flower crops viz., rose, tuberose, carnation, chrysanthemum, crossandra, jasmine, marigold, etc...

Suresh k malhotra(2017) in his study found that emerging floriculture industry in India. Floriculture has become a part of modern lifestyle and is being utilized in floral decorations, floral craft, interior-scaping and commercial premises. Development of floriculture has provided not only opportunities for floriculture farming but also for improving livelihood compared to other crop. The development in this sector also provides very good business opportunities in other allied sector like specialized transport services and production of supply of allied products, nursery bags, pot, potting media, tools, plant protection and other equipments etc. Globally more than 145 countries are involved in floriculture trade is estimated to be at us \$70 billion at present.

Traditional flowers total quantity of 22.3 lakh ton of flowers which includes both loose and cut flowers are produced every year (2015-16). Growing traditional flowers for worship and decorations is the main stay of Indian Floriculture which occupies about 2,43,000 ha area during 2015-16 with a production of 15.45 lakh metric ton. India produced about 6.91 lakh ton cut flowers per annum (2015-16) for domestic and export markets. He also pointed that the Dry flowers constitute more than two-third of total floricultural exports. The demand for dry flowers is increasing at an impressive rate of 8-10% and therefore there is a great scope for the Indian entrepreneurs.

The staff report (2018)that as per its name Arabian jasmine is rich in smell and good in shape. This plant grows in all types of soil which has irrigation facility, specially grow well in red soil and black soil. 1800 to 2000 plants can be planted per acer. The spacing between the plants should be four feet to four feet. Right from the first month of plantation neem cake and groundnut cake should be used. During the seventh month this should be stopped and natural urea and potash should be used as per growth. As there are chances for leaf lice disease to attack the flowers pesticides or insecticides should be sprayed. Arabian jasmine grows well even in salt water and little amount of water is enough. As the plants get defect in their growth of its flower which increase and gives good gain.

Manimaran P., Ganga M., and Kannan M (2018) in article, “ The place of jasmine in floriculture”, have analysed commercial floriculture in India comprises of both the modern and the traditional groups of flowers. Among the traditional flowers, jasmine occupies a very significant place. It is a popular fragrant loose flower and a highly preferred garden plant. India is one of the countries of origin of jasmine. India exports jasmine flowers to countries like Singapore, Malaysia, Japan, United Kingdom, United States of America and the Gulf countries. TamilNadu is the leading producer of jasmine. The major jasmine producing district of TamilNadu are Madurai, Erode, Coimbatore, Dindigul, Salem, Tirunelveli, Virudhunagar and Trichy of which Madurai and Erode are predominant district. Among the large number of species existing, only three species J.Sambac, J.Grandiflorum, J.auriculatum have attained importance in commercial cultivation. However these three species do not produce flowers during the off season from December to March. The above species have the added merit of flowering throughout the year.

Analysis of Data

The present study deals with the economic study on jasmine cultivation in Ettarai village, Tiruchirappalli district. The sample size of 50 respondents who are cultivating jasmine were selected and the necessary data were collected through interview schedule.

Table 1

Types of flower cultivation in Ettarai village

S.No	Flower	No.of Respondents	% age
1	Jasmine	36	72
2	Ixora	5	10
3	Rose	6	12
4	Chrysanthemum	3	6
	Total	50	100

Source: Primary data

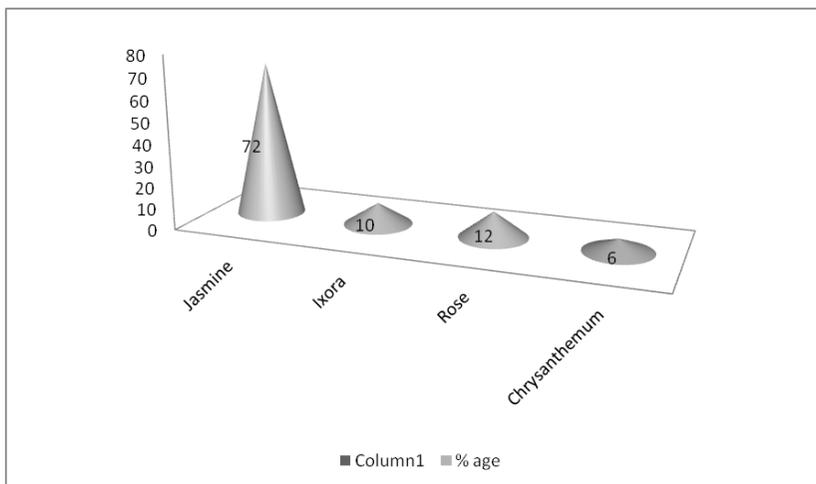


Fig.1: Flower cultivation in Ettarai village

The above table reveals that 72% of respondents are cultivating jasmine flower. It is identified that 10% of the respondents are chosen Ixora flower. The respondents are cultivating of the Rose flower is 12% and 6% of Chrysanthemum flower.

Table 2

Total Income, Total cost and Net Income of jasmine cultivation in Ettarai village

S.No	Types of flower	Total Revenue (Rs.)	Total cost (Rs.)	Net Income (Rs.)
1	Jasmine	2,48,56,000	3846100	2,10,09,900
2	Ixora	15,41,000	4,35,300	11,05,700
3	Rose	25,65,000	6,76,800	18,88,200
4	Chrysanthemum	9,57,500	464600	492900

Source: Primary data

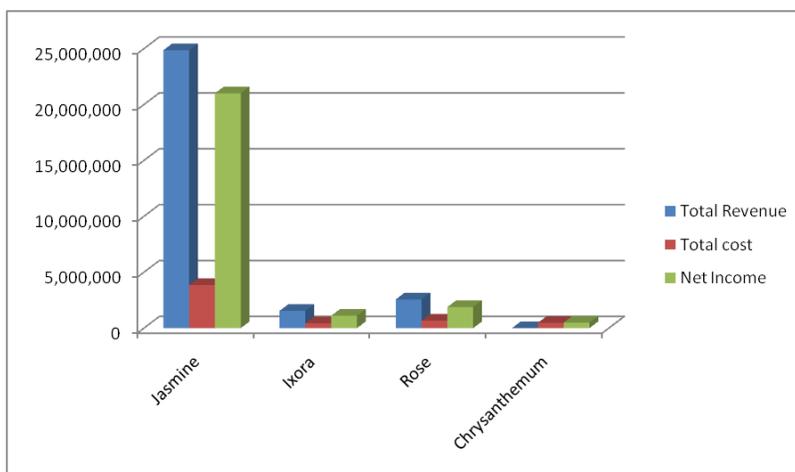


Fig.2: Income in Flower cultivation

The above table explains that the Net income from Jasmine cultivation was Rs. 2,10,09,900/- in Ettarai village and the Net Income from Ixora, Rose and chrysanthemum was Rs.11,05,700/-, Rs.18,88,200/- and Rs.4,92,900/- respectively. So, in this study are net income from Jasmine cultivators was very high when compared with other flowers.

Table 3

Production of Jasmine cultivation in Ettarai village

S.No	Land (in acre)	Total production (in tons)	Percentage
1	0.25	16700	6%
2	0.50	107800	38%

3	0.75	37600	13%
4	1.00	103400	36%
5	1.50	20000	7%

Source: Primary data

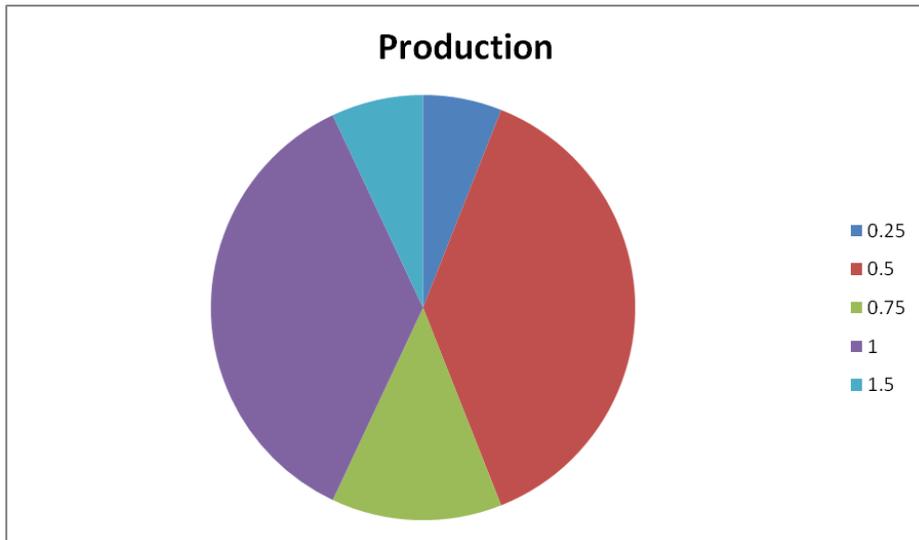


Fig.3: Jasmine Production

The above table shows that 6 percent of jasmine was cultivated in 0.25 acres. Majority of the farmers are cultivating the land size in 0.50 acres. They are yielding 38 percent of total production. The Land size of 0.75, 1.00 and 1.50 acres of total production was 13 percent, 36 percent and 7 percent respectively.

Findings

- It is observed that the respondents of Ettarai village have given more importance to the jasmine cultivations was 72% than compare to other flower cultivation like Ixora, Rose and Chrysanthemum.
- Jasmine shows the highest net returns of Rs 2,10,09,900/-. The second net returns from Rose flowers was Rs 18,88,200.
- The study area identified that 38 percent of production are yield in 0.50 acre. In 1.00 acre, the production was 37 percent in Ettarai village.

Suggestions

- More facilities should be provided to poor flower cultivators.
- Training programmers should be conducted at village level.
- Wholesaler retailer of flowers should be provided with modern storage facilities through financial institution.
- To help farmers for large scale jasmine cultivation, they could be provided liberal loans to meet out the initial cost.

Conclusion

Jasmine cultivation has given profitable income to the flower cultivators. The cultivators spend less cost for production and earn more income in jasmine cultivation. They are produce more production also. Most of the cultivators are cultivate high level of jasmine cultivation than compare to other flowers. Because people need jasmine for many purpose by using jasmine flower like adornment of hair for women, various occasion, festivals and so on. Finally the cultivators are selected the jasmine for cultivation in the study area.

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