



ORIGINAL RESEARCH PAPER

Agricultural Science

Hi-Tech Cultivation Of Floriculture Is A Lucrative Business For Farmers In Vidarbha".

KEY WORDS: Floriculture, Hi-Tech Cultivation, breakeven quantity, Marginal Farmers.

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ABSTRACT

Floriculture industry is booming in the world. Most of the farmers adopt floriculture as a primary source of income with traditional cropping system. The study is about to summarize my student Ms. Shilpa Kalmegh's research on Hi-Tech floriculture in Vidarbha region of Maharashtra state in India. The research will be greatly help farmers in the region for improving the economic status as well as survive them significantly. The study conclude that the Hi-Tech cultivation of floriculture gives almost 6 to 22 times more income than the traditional crops and open cultivation of floriculture. The study will be really very helpful for the marginal farmers in the Vidarbha region the farmer's suicide prone area. The research study concluded by breakeven quantity and sensitivity analysis of cut flower and work out the economics of floriculture plants under Hi-tech vis-à-vis open condition cultivation. So that, the cultivators analyze the net returns from these crops and motivate towards adoption of floriculture cultivation as a primary source of income in Vidarbha region.

Introduction:

Maharashtra is one of the leading flower producing state in the India. The state has varying soil types and agro-climatic conditions, which offer tremendous scope for floriculture. District like Pune, Nasik, Aurangabad, Sangli, Satara, Kolhapur, Thane and Nagpur are well known for flower cultivation. Pune, Satara, Sangli, Kolhapur and Nasik are well developing hi-tech floriculture district. Whereas. Pune, Thane, Nasik, Ahmednagar, Nagpur and Nanded are famous for open flower cultivation. The principal flowers grown in Maharashtra are marigold, rose, tuberose, chrysanthemum, gladiolus, Marigold, jasmine, kagda, mogra, gerbera, carnation etc. In her study Shilpa Kalmegh select 3 districts in Vidarbha region that are Nagpur, Amravati & Yavatmal. The district Yavatmal was in news around the globe due to farmer's suicide. The reason behind she conclude in her thesis is that less irrigation (Only about 16.8 per cent of its cultivable land being irrigated as compared to the national average of 33 per cent) and more than 70% farmers are marginal farmers (farmers having less than 1 hectare area under cultivation). Vidarbha's agro-climatic condition feverous promotion of less water intensive crops like horticultural crops mainly fruits. Progressive farmers adopted micro irrigation system with hi- technique.

The alternative to sustain agriculture and enable this sector to make a positive contribution to the state as the nation income is to diversity the cropping pattern into high value crops. The idea that agricultural export expanded through greenhouse floriculture is desirable and identified it is successful. Many studies found that, the floriculture production, domestic consumption and export increased continuously. According to references she used in her study, the past studies concluded that, even a holder of very small land holding could derive benefits from flower cultivation as compare to other ordinary crops.

Maharashtra state is having highest number of green houses in the country but mostly in western Maharashtra districts like Pune & Ahmadnagar. In Vidarbha region the Hi-tech cultivation of floriculture is below 5% that is very less as compared to other regions of Maharashtra. Most of the flowers have been cultivated in open cultivation and according to area Rose has been the important one followed by Marigold, Tubeose, Gillardia & Chrysanthemum while in Hi-tech cultivation Rose is followed by Gerbera and Gladiolus. Her research Intends to study the Profitability, break even cost of production and sensitivity analysis of these flowers. So, that proper planning could be done for growth and sustainability in this sector. In this view, Khadwa, Darwha, Karalgaon & Bhari villages have been chosen from Nagpur, Yavatmal, Amravati districts respectively for her research.

Objectives of the study:

- Her research objectives are to, determine the profitability of flower cultivated under Hi-Tech cultivation vis-à-vis flowers

grown under open cultivation.

- To study the breakeven quantity and sensitivity analysis of selected floriculture plants. To work out the economics of selected commercial flowers in open & Hi-Tech cultivation.
- To motivate the farmers in Vidarbha for floriculture production in Hi-Tech cultivation.

Methodology used:

Sampling technique:

A proper questionnaire is prepared for collecting data in which all questions related to farmer's family covers as well as all the aspects related to their economic status are covered.

Analytical Approach:

Cost Of Cultivation of Floriculture:-

The evaluation of the cost of cultivation of selected floriculture plants in green house and under open cultivation has been worked out by following cost considerations.

- A. Cost A = All the variable c
- B. Cost B = Cost A + Interest on fixed capital + Rental value of land.
- C. Cost C = Cost B + Imputed value of family labor.

Profitability :

The measure of profitability of cut roses has been a very important measure in agriculture business to make a comparison between the floricultural crops with roses. To arrive at the profitability of cut flowers factors like area, yield (number of cut flowers), production cost (including fixed and variable cost), returns (gross income), benefit (net income) and B/C ratio etc. have been taken. The production cost has been the sum of input and output cost.

Break-even analysis :

Break-even analysis has been taken to find the quantity where a farmer get no loss no profit situation. Here breakeven quantity (BEP) of open field cultivation has been compared with greenhouse roses. BEP quantity measure done such as below :

$$BEP(\text{quantity}) = F / (P - V) \text{-----} (1)$$

Where :

F = Per ha. Fixed investment (Rs.), P = Per flower average price (Rs.) and
V = Average variable cost per flower (Rs.).

In this methodology break-even quantity of production of flowers in open field cultivation have been done to find the no loss no profit or normal profit condition of the farmer while the higher profit in Hi-Tech cultivation .

Sensitivity analysis:

The sensitivity concept has been employed to examine the

sensitivity of the average cut flower grower towards risk and uncertainty of increase in production cost, reduction in yield and reduction in price of flowers, under existing prices, cost and price structure. Sensitivity analysis has been done to find the difference between increase or decrease and actual cost, yield (number of flowers) and price respectively for the rose and another floricultural cultivation. This has been another important measurement to check the market situation. The estimated cost, yield and price has been derived as per following :

- (i) Estimated cost = Actual yield × Actual price
- (ii) Estimated yield = Actual cost/Actual price
- (iii) Estimated price = Actual cost/Actual yield

Results & Conclusions :

In spite of the fact that rose has been the major floriculture crop in these districts its cultivation has been preferred mostly by the farmers due to its profit margin per sq.m. and production throughout the year. But most of the farmers have taken rose cultivation as a secondary occupation. Area of roses has been higher than other floricultural crops and its production and net income have higher than others. But the benefit-cost ratio of Chrysanthemum has been higher than other floriculture crops in this study, thus its profitability has been higher than rose, tuberose, marigold & Gaillardia. Break-even quantity and sensitivity analyses of cost, yield (production) and price have been positive for all crops. The net return per square meter of flowers grown under green house are Rs.400/sq.m for Gladiolus, Rs.1500/sq.m. for Gerbera and Rs.592.56/sq.m for Rose. While the net return per square meter for flowers grown under open cultivation is Rs.148.14/sq.m. for rose, Rs.79.99/sq.m. for tuberose, Rs.56/sq.m. for aster, Rs.36/sq.m. for Gaillardia, Rs.75/sq.m. for chrysanthemum .

The study is based on comparison of Hi-tech and open cultivation production of floriculture. The study concluded that while comprising net return per square meter the net return is highest in Gerbera in green house cultivation while it is highest in Rose in open cultivation , the study concluded that gerbera gives 10 times more return than that of Rose in open cultivation, Gladiolus gives 3 times more return per square meter than that of Rose in open cultivation while Rose cultivated in green house gives 4 times more return than that of open cultivation of roses. Thus the conclusion comes out of the study is that Hi-tech cultivation of flowers is 3to10 times more than that of open cultivation of flowers. And subsidies provided by government is higher in green house as compared to open cultivation of floriculture. After comparing these ratios with other cereals and traditional crops the profitability ratio is 10to22 times more in Hi-tech cultivation of floriculture.

From this study I conclude that Shilpa Kalmegh's research work is immense satisfactory and will be very helpful for the farmers not limited up to Vidarbha region but also farmers around the globe, who will adopt Hi-tech cultivation of floriculture.

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