

Growth of Floriculture and its Role in Promoting Socio-Economic Status of Floriculturists of Panskura and Kolaghat Blocks, Purba Medinipur

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KEY WORDS

Floriculture
Soil Properties
Price Index
Socio-economic Impact.

ABSTRACT

Floriculture has become a highly specialized and intensive form of agriculture in Purba Medinipur district of West Bengal. Two Blocks namely Panskura I and Kolaghat (Formerly Panskura II) have emerged as important flower growing region of the district. During the past few decades growth of floriculture in this region has assume national importance in terms of increase in production and variety, thus occupies a line share of the flower market of W.B. and India as well. This has a tremendous bearing on the socio economy of the region and has opened a new avenue towards economic prosperity of the region. The present paper deals basically with the pattern of growth of floriculture in this region since 1990 and tries to assess its economic impact on education, use of consumer's goods ,power of access to basic facilities etc. among the floriculturist .It explores the Block level species wise time series production data of the flowers and analyses the electrification, irrigation, transport facilities of the floriculturists .Finally the study reveals that per capita income has increased by 215.67 percentage in respect to 1990 year. It also emphasizes that though floriculture has immense potentialities for economic prosperity of the region but problems like lack of cold storage, market facilities, sufficient road, transport facility etc. are the major hindrances in floricultural activities.

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1. Introduction

Though the history of flower production started from 1950 but, during 1990s, floriculture began to emerge as a reliable economic option in Panskura I and II Block of Purba Medinipur District (formerly undivided Medinipur District). In its early stage of development, floriculture used to be practiced in combination with

agriculture along infertile banks of river Kasai and Khirai (a tributary of River Kasai). Later the practice gradually spread over the neighbouring Block of Panskura I as the farmers become attracted to floriculture due to its lucrative return. Major types of flower produced are Jasmine, Chrysanthemum, Aster, Tuberos, Gladiolus, Jarbera, Juhi, Beli, and Marigold etc., which have large demand in national and international market. Before 1990 percentage of floriculturist among the farmers was negligible but

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now more than 70% of the farmers in Panskura I and Kolaghat Blocks are practicing flower cultivation along with paddy. This tremendous growth of floriculture in these two Blocks has strengthened the economic base and quality of life of the farmer's. The present treatise is an humble attempt to trace the pattern of growth of floriculture over the years. Temporal data sets related to production of each of the flower types have been analysed and presented through graphs. The study also traces to explain the role of extension of irrigation and transport facilities in augmenting floriculture on the basis of secondary data collected from official sources. Primary data base has also been generated through questionnaire survey for assessing the impact of floricultural growth on income, educational achievement and use of sophisticated goods among the cultivators.

2. Study Area

The study area (Fig. No.1) comprises the two Blocks namely Panskura (I) and Kolaghat (Formerly Panskura II) of Purba Medinipur situated between 22°18' N to 22°31' N and 87°37' E to 87°51' E, covering a land area of 37855 sq.km. This area is composed of alluvium rocks. The newer alluvial soil

from the river Hugli and its tributaries enrich the region. The region is characterized by hot and humid climate. The yearly mean maximum and minimum temperature being 31.40°C and 20.80°C and the average annual rainfall is 100-150cm. Kansabati river in Panskura and Rupnarayan river in Kolaghat blocks are the major supplier of irrigational water to the floricultural fields. Medinipur main canal traverses the Blocks from west to east to join the Rupnarayan river. Major productions are Jasmine, Chrysanthemum, Aster, Tuberose, Gladiolus, Jarbera, Juhi, Beli, and Marigold etc. Laskardighi, Aror villages are specialized for rose; Laskardighi, Raniara, Haur, Purul, Zanabar villages produce only gladiolus; Mahatpur is specialized for chrysanthemum and other season flowers, Haur, Aror,

3. Methodology

A well defined methodology has been followed. Investigations were carried out to assess economic and social changes among the farmers using standard question. For collection of primary data, 25 villages from each Block and 60% of flower growers from each village have been selected at random where flowers are cultivated on regular basis. Various secondary data have been represented using appropriate cartographic techniques. Test of significance has been used to test the hypothesis that income of the farmers have increased after introduction of floriculture in this region. Change in value of money has also been considered to calculate the farmers real income. Soil samples were collected from five points from each Mouza to prepare a sample for each mouja. The samples were taken from a depth of 15cm. Then the samples were subsequently analyzed in the laboratory to assess some important physical and chemical properties i.e. pH, organic matter, N,P,K and the Base Exchange capacity.

4. Results and Discussion

The Development of Floriculture — Reasons Behind it

The agro climatic region of lower Gantgetic plain, characterized by the newer alluvial soil, hot and humid climate, and enormous genetic diversity, along with chief human resources, increasing demand for flowers, and emergence floriculture as a popular and profitable source of income are the favorable factors for large-scale flower cultivation. Larger demand of flower is found in urban areas for religious and social functions. Due to the increasing demand in market, river side tract, lowland areas are also used for

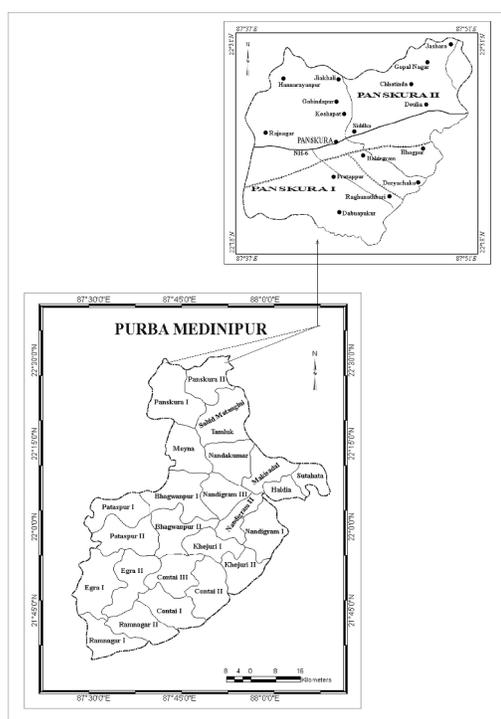


Fig. No. 1 : Location of the study area.

floriculture. The farmers in these areas even make their farming land higher by filling the lowlands up to make it suitable for floriculture. Even the land far from the river are also used for flower cultivation with the help of deep tube well. The area under flower cultivation is 1200 hectares in Panskura and 2101 hectares in Kolaghat. The results of soil sample analysis show that most of the soil is acidic in nature. Availability of N, P and K to the plants varies depending on soil pH (Table no. 1).

paddy cultivation. On the other hand farmers sell flowers in local market in the morning, so rest of the day they are free to engage themselves in other works. Flowers are transported easily by the S.E. Railway and NH-6 which traverse the region and connect the Kolkata (largest flower market of NE India) to this flower growing region. In some years severe flood and hailstorm damage the flowers. But the farmers can make up the loss in short time as they get high return.

Name of the blocks	G.P.N O.	pH	E.C.	% of organic carbon	Phosphate (kg/hect.) P ₂ O ₅	Potassium (kg/hect.) K ₂ O
PANSKURA-I						
1.KHANDAKHOLA G.P.	07	5.3	0.21	0.52	115.2	157.96
2.PURUSATTAMPUR	12	5.8	0.43	0.59	96.48	218.99
3.GOBINDANAGAR G.P.	04	5.4	0.15	0.46	182.04	314.51
4.HAUR G.P.	05	5.4	0.19	0.38	119.52	226.17
5.CHAITANYAPUR-I G.P.	01	5.2	0.11	0.63	102.24	190.27
PANSKURA-II						
1.AMALHANDA G.P.	01	5.3	0.99	0.47	156.24	251.3
2.BARINDABANCHAK	04	6	0.31	0.56	282.24	233.35
3.GOPALNAGAR G.P.	06	6.8	0.2	0.63	281.5	153.37
4.KOLA-I G.P.	08	5.6	0.36	0.39	110.16	193.86
5.SAYARBARH G.P.	11	5.5	0.28	0.41	144	237.2

Table No. 1 : Soil properties (Source : Laboratory analysis of the soil samples)

So, the soil is more or less suitable for flower cultivation. This was a seat for the Florist since long back. The farmers sell the flowers at high profit in the local wholesale market everyday which is not possible in case of paddy cultivation or other crops due to increasing cost of production and declining returns from the market. Even if the traditional paddy production collapses due to any natural calamity then the farmers get an option to earn their livelihood from floriculture, some flower plants give flowers for few years once they are planted. This saved the amount cost of plantation which is advantageous over

Recent Trend

The area under floriculture in Panskura I increased gradually till 2004-05 but declined after wards. The Marigold flowers occupied the next position in Panskura I Block. The area under Gladiolus cultivation increased 133.33% in 2007-08 in respect to that in 1999-2000. The production shows a decreasing rate after 2004-05 though the production of rose, gladiolus, bela increased in respect to 1999-2000. The production increased by 11% in the field of bela in 2007-08 than that of 1999-2000. In Kolaghat Block, area under floriculture was maximum in 2002-03 and 2004-05

NAME OF THE FLOWERS	N ₂	P ₂ O ₅	K ₂ O
Marigold	200	100	100
Jasmine	275	400	350
Jarbera	40	80	80
Gladiolus	400	100	200
Dahlia	100	125	100
Chrysanthemum	300	200	200
Tuberose	200	200	200

Table No. 2 : N₂, P₂O₅, and K₂O of different flowers (Source : Department of Food Processing Industry and Horticulture, Purba Medinipur, 2007-2008).

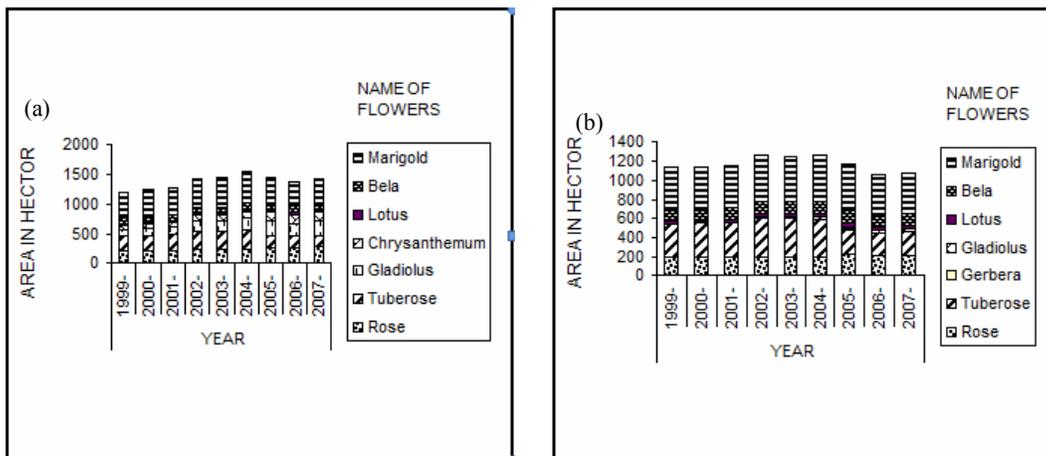


Fig. No. 2 : Area under Floriculture (a) Panskura-I, (b) Kolaghat Block, 1999–2007

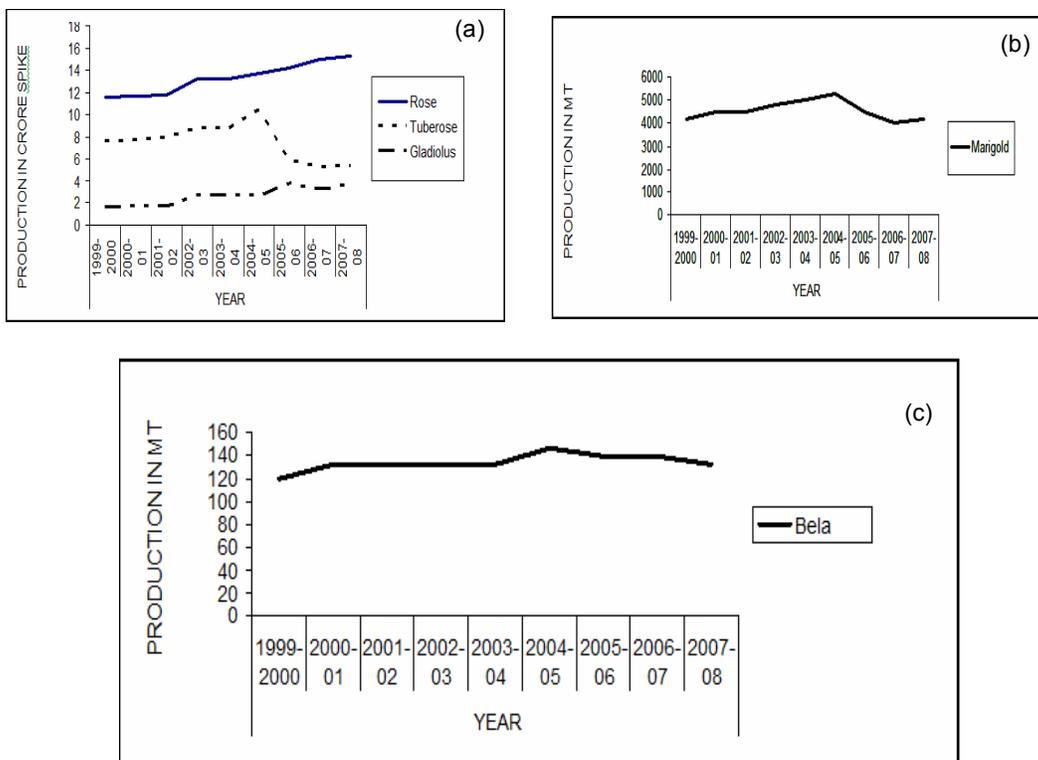


Fig. No. 3 : Production of Flowers in Panskura-I Block (1999-2008). (a) Rose, Tuberose, Gladiolus. (b) Marigold and (c) Bela.

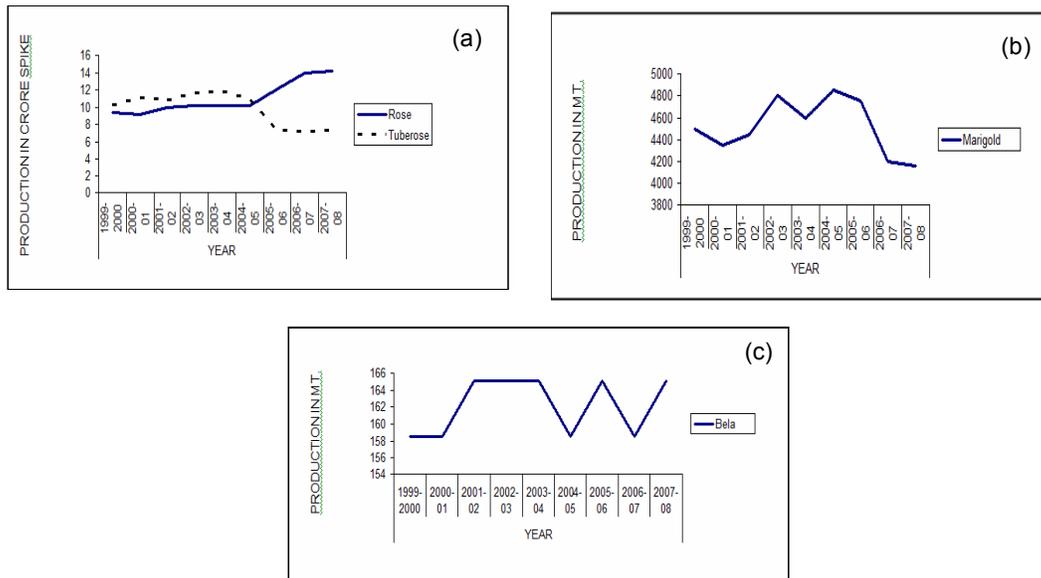


Fig. No. 4 : Production of Flowers in Kolaghat Block (1999-2008). (a) Rose, Tuberose. (b) Marigold and (c) Bela.

but declined afterwards. The highest land was occupied by Marigold flowers and Tuberose occupied the second highest area. The area and the production of rose increased 21% and 9.4% respectively in 2007-08 than that of 1999-2000. The above analysis reveals that after 2004-05 area under floriculture and production of flowers except rose exhibit declining trends due to flood. (Fig. no. 2, 3, & 4).

Demand and Marketing of Flowers

Marketing of floriculture products and related services has become potential economic activities in these two blocks of this district. Kalibazar, Naskardighi, Gosainbar, Mysoramore, Kolaghat, Panskura, Deulia Bazar, Hour, Mechogram, Gobindapur, Raniyara, Highroad etc. have emerged as significant local market centres. At these centres the wholesalers buy flowers from the flower growers. Mallickghat and Jagannathghat flower market of Haora district are the regional wholeselling centres where from the products are sent to different parts of India particularly to the Metropolitan cities like Delhi, Mumbai, Ranchi, Ahmedabad and Bhubaneswar. According to their demand different varieties of flowers can be ranked in decreasing order as Marigold, rose, nightqueen, handramallica, cockscomb, Gladiolus, Aster, Dopati, Beli, Jasmine, Cheri, Aparajita, Dahlia, Champa, Chinrose. The roses have potential market in foreign countries also. Large volume of rose is exported to

Holland during January and February. Local and National demand attain maximum during festivals, ceremonies, religious and social occasion. A flower market complex has been developed at on the national highway no 6, where about 200 to 250 growers and 70 to 100 wholesalers are facilitated daily. An opinion survey revealed that export of flowers to the foreign countries is the maximum profit. 69.79% growers in Panskura I block and 74.31% farmers of Panskura II expressed their views in favour of promoting export facilities has an important measure to strengthen the floriculture based economy of region. Similarly 76.04% of surveyed flower growers of Panskura I and 76.15% in Kolaghat block have argued that Govt. intervention into the marketing system is an urgent need for protecting them from the

Months	Flower of significance	Amount sent to other states
December to January	Gladiolus	4000-5000 quintal
December to January	Marigold	5000-7000 quintal
December to January	Rose	5000,00 pices

Table No. 3 : Amount of flowers sent to other states (Source : Household survey)

exploiting hands of the middle man and thus to maximize their profit.

Socio Economic Promotion Consequent Upon Floriculture Growth

Floriculture has become a source of gainful employment in the village of Janabad, Naskardighi, Tilandupur, Sanktikri, Kantamuni, NorthPolsa and many others of Panskura and Kolaghat Blocks for both the skilled and unskilled labourers. According to the floriculturists the revolution in the flower business came in 1991. Earlier they were growing paddy and vegetables but they switched over to floriculture seeking more profits. Among the farmers interviewed 71.88% in Panskura I and 84.40% in Kolaghat expressed their opinion that their economic condition has improved since introduction of floriculture. Socio economic condition of the farmers assessed in terms of level of education, percapita income, consumption of food, use of sophisticated articles (T.V., freeze, motorcycle), access to facilities like electricity, irrigation, education level, health etc. have dramatically improved. Extension of infrastructural facilities has been instrumental in the promotion of socio-economic status of the local inhabitants who

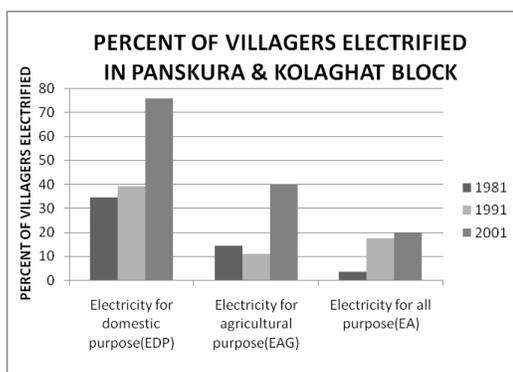


Figure No.5

are dominantly the flower growers. Presently length of the roads in Panskura and Kolaghat blocks were 123km. And 66 km. respectively in 1969-70. But by 1995 they increased by 40% and 30% respectively (Fig.No.6) Village electrification has increased considerably from 3.7% to 15.9% between the census year of 1981 and 2001 (Fig. no. 5,6) Now a day's village roads are made by P.W.D., Zila Parishad, Panchyat Samity and Gram Panchayat. So mettaled roads have been constructed in many villages. The irrigation facility has also been extended increasingly by exploiting various sources like canal, tank, High capacity deep tubewell, middle capacity deep tubewell, low capacity deep tube well, Shallow tube

well, River lift irrigation, open dug well and others (Fig No.-7 and 8).

It is interesting to note that there is wide difference between the farmer's income before 1990 and after 1990. This has been shown by following bar graphs (Fig. No. 9)

't' test was carried out to find the significance of the difference between mean income of sampled farmers in 1990 and their mean income in 2006. It shows that the calculated value of 't' with d.f. 13 is 6.08, while the critical value at 5% level is 2.048. This clearly suggests that mean income of the farmers has increased significantly after the introduction of floriculture.

Also consumer price index and relative percentage change in income from 1990 to 2006 prove that over the time period 1990-2006 the average nominal income of floriculturist has gone up by 215.67%. Over the same time period the price level has gone up by 170.68%. Clearly, from these observations it can infer that the income of the floriculturists has increased in this period in both real and nominal terms.

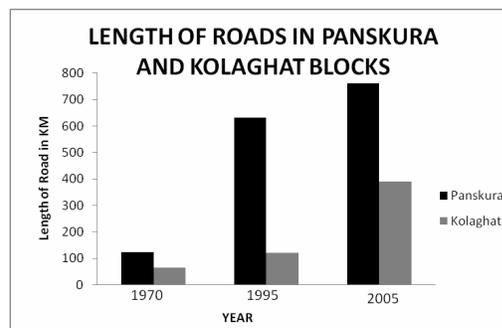


Figure No.6

Major Problems

Household survey in Panskura and Kolaghat Blocks have helped to identify the following problems that have come in the way of floricultural practices in the area and have been responsible for the recent declining trend.

(a) The major problem is inadequacy of cold storage and preservation facility. Flower being a perishable item needs to be stored in proper storage system if not sold. There is only one air conditioned room in the sole flower complex in the area which is insufficient for preservation. When the demand of flower decreases then only 12.36% farmer in Panskura I and

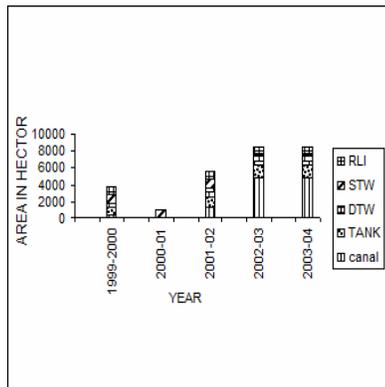


Fig. No. 7 : Source of irrigation and area irrigaed by different sources in the Block of Panskura-I

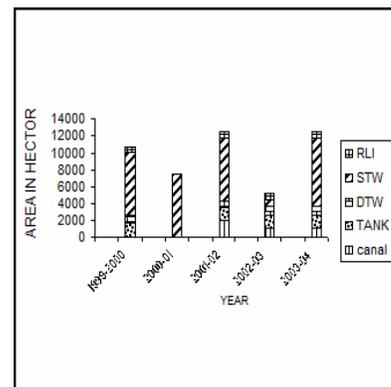
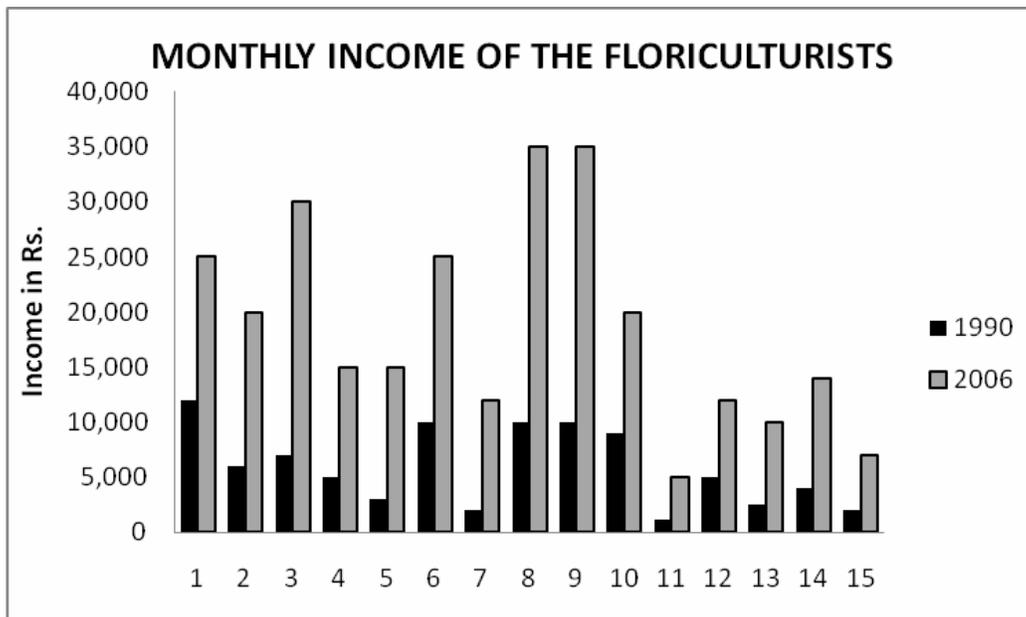


Fig. No. 7 : Source of irrigation and area irrigaed by different sources in the Block of Kolaghat



10.08% farmer in Kolaghat can store the flower in cold storage, rest of the flower spoil in market. Only 1.46% farmer in Panskura I and 2.75% in Kolaghat have the ability to use the Spoiled flowers for preparing of colour and compost.

(b) Village roads are in very poor conditions.

(c) Fly ash from Kolaghat Thermal Power Plant most often damages the buds and petals to a great extent. About 52.29% of the surveyed farmers identified fly ash as a problem resisting healthy flower grown.

(d) According to 83.33% farmers in Panskura I and 96.33% farmer in Panskura II no help is extended from Panchyat and most of them blamed there is no

training facility for farmers engaged in floriculture.

(e) Sufficient toilets and lodging facilities in Deulia Bazar and Kolaghat Bazar are the another problem for wholesale marketing

(f) Frequent fluctuation in the demand and price, lack of good seeds, fertilizer, etc. are also responsible for losses to farmers.

(g) Hazards like flood, hailstorm, fog; drought vastly damages the flower garden. Among these flood plays very significant role in damaging the flower. In the event of floods farmers are to establish a new garden, which is a costly affair.

(h) Farmers are put in trouble due to damage of crop

by plant diseases and pests.

(i) All local farmers are not in a position to sell their flower directly and are dependent upon the Middlemen who earn a major share depriving the farmers.

5. Conclusion

There should be a good coordination among farmers, at the local, panchayat and block level so as to make floriculture economically sustainable as well as profitable even under the threats of environmental hazards.

(a) Floriculture should not be practiced on lands prone to flood.

(b) Water application should be done preferably using drip irrigation or low level micro sprinklers. Water should be applied at a rate matched to soil moisture and seasonal evapotranspiration loss.

(c) Farmers should be covered under crop insurance against crop damage by pest, disease and natural calamities.

(d) Sufficient cold storage facilities be provided to safeguard the farmers during lean season.

(e) Pollution Control Board should take necessary steps to control the flyash emission from Kolaghat Thermal Power Station to minimize damage to floricultural produces.

(f) Training facilities for the farmers should be arranged by Govt. and Panchayat to update the knowledge of the farmers on modern techniques of Floriculture.

(g) Floriculture industry should be built up. Because it is one of the expanding and dynamic enterprises in India. It refers to the large scale production of various types of flowers. Commercialization of the marketing strategies, extraction of colours, essence from them or using the various chemical substances obtainable from flowers etc. are the potential avenues for development of floriculture in this region.

(h) Sufficient communication, transport facilities should be provided because flowers grown in the area needs to be transported to larger markets as fast as possible due to their perishable nature.

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