Floriculture In Chapra Village In Ranaghat-II Block, Nadia District, West Bengal.

Nirmal Kumar Biswas
Department Of Geography. University Of Kalyani, India.

Abstract: *Basically Indian economy is agro based. For proper and balanced development in this sector cultivation of those crops are needed which have more economic values. In this respect flower cultivation is more important. Chapra village in Ranaghat-II block, Nadia district, West Bengal flower is the first ranking crop. In respect of flower cultivation crop productivity Index (Enyedi, 1964) and Crop Yield Index (Jasbir Singh, 1976) has been calculated of different varieties of flowers for 2000-2001 and 2011-2012 crop calendar years. Both index values have increased remarkably in 2011-2012 respect of 2000-2001 crop calendar year. Area of flower culture has increased. Flower based industries are developing gradually. Irrigation facilities, knowledge banking, training opportunities, government subsidies, favourable agro-ecological environment is responsible for this development of floriculture in chapra village.*
Keywords: *Sunrise Industry, Yield Index, Productivity Index, NGO, NABARD.*

I. Introduction:

Flower cultivation is an important aspect of modern agriculture, means the cultivation of flowers and ornamental plants with intensive and scientific ways. Important of flower cultivation is more in national level. Largest flower based industries in the world have developed in India. Indian government has already declared flower based industry is a "SUNRISE INDUSTRY" The study has conducted in Chapra village in Ranaghat Block-ii, Nadia District, west Bengal. This village is an ideal model of floricultural development. Twelve varieties of flower are now cultivating in this village. Total number of household in this area is 756(Census of India, 2001).Total population is 3768(Census of India, 2001).90% population are directly engaged in flower cultivation.Net cropped area of flower cultivation was 21.61hectares (50.45% of total net cropped area) in 2000-2001 and it has increased to 27.11hectares (60.45% of total net cropped area) in 2011-2012 crop calendar year. In block level total net cropped area of flowers is 905 hectares and 1197 hectares in 2000-2001 and 2011-2012 respectively. Both in Block and Village level area of flower cultivation have increased .This paper is an attempt to analysis the status and progress of floriculture in chapra village. For this purpose village level field and household survey has been carried out.

Study Area: Total geographicl area of Chapra village is 297 hectares (census of India, 2001). The absolute location of this village is from $23^0 13'$ 39''North Latitude to 23^0 12' 06'' North Latitude and form 88^0 37' 33'' East to 88^0 38' 40'' East Longitude.

Objectives Of The Study: **(1)** To show temporal change of area, yield, and productivity of flower cultivation in Chapra Village.
(1) To point out how much flower cultivation is profitable than other crops.
(2) To point out the level of development of floriculture in Chapra Village.

II. Data Base And Methodology:

Total work is completed based on both primary and secondary data. Primary data has been collected through household and field survey. Secondary data has been collected from following sources.
1) Directorate of Agriculture Office, Government of West Bengal, Krishnagar, Nadia District .**2)** Assistant Directorate of Agriculture Office at Community Development Blocks in Nadia District.
Chapra village purposively selected for the study as it has maximum area under flower cultivation. Random sampling technique has been used for selection no of household. For surveying 100 numbers of house hold have been selected. The following Techniques have been used to conduct this work.
("Equation 1"). Productivity Index (Enyedi, 1964).
Productivity Index=(Y/Yn) ÷(T/Tn)
Where; **Y** is the total production of the selected crop in unit area.
Yn is the total production of the same crop on national scale.

T is the total cropped area of the unit area, and **Tn** is the total cropped area in national scale.

("Equation 2"). Yield Index (Jasbir Singh, 1976).

Yield Index$(Yi) = (Yae \div Yat) \times 100$

Where; Yi is the crop yield index,

Yae is the average yield per hectare of crop 'a' in the component enumeration unit, and

Yat is the average yield of the crop 'a' in the entire region or country.

III. Result And Discussion:

Now in chapra village flower is the 1st ranking crop. Net cropped area of flower cultivation was 21.61hectares (50.45% of total net cropped area) in 2000-2001 and it has increased to 27.11hectares (60.45% of total net cropped area) in 2011-2012 crop calendar years. Net cropped area of flower cultivation has increased 12.85% since last 10 years. Mainly five variety of flowers namely **MARIGOLD TUBEROSE, ROSE, GLADIOLUS, ZERBERA,** within twelve variety are now practicing in large scale in this area. It is seen that area, yield, productivity, of each flowers has increased in the year 2011-2012 respect of the crop calendar year 2000-2001 remarkably.

Table: 1 Net cropped area under flowers cultivation in Chapra village in 2000-2001 and 2011-2012.

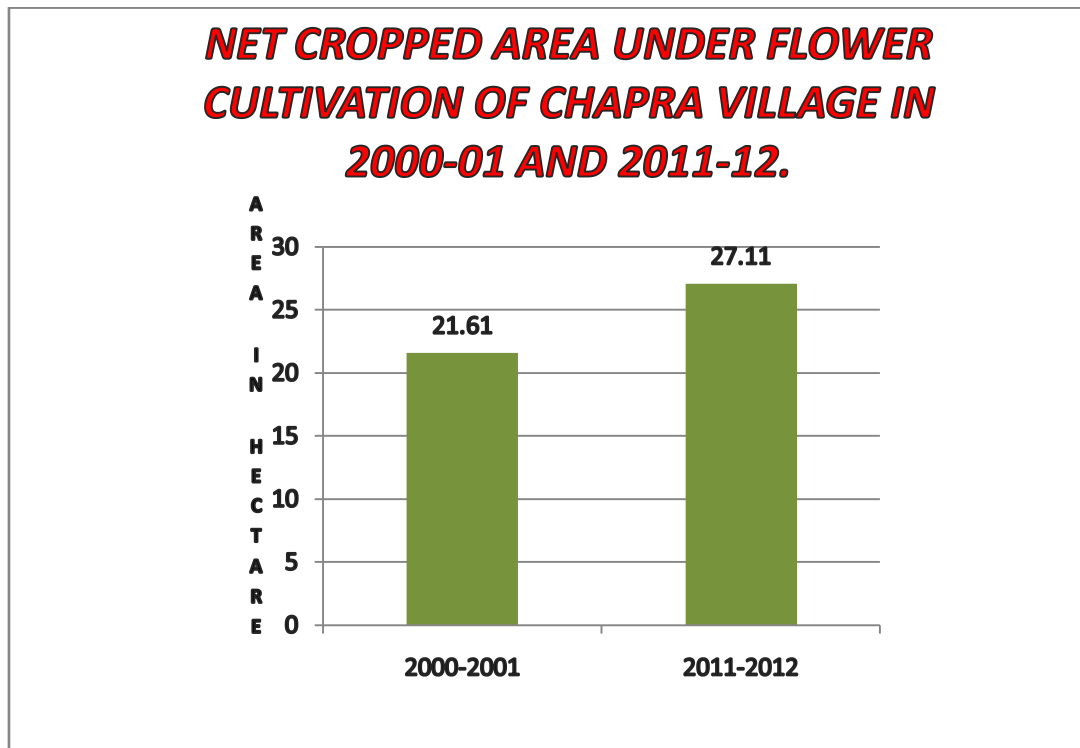| NET CROPPED AREA UNDER FLOWERS IN HECTARES(2000-2001)	NET CROPPED AREA UNDER FLOWERS IN HECTARES(2011-2012)
21.61	27.11

Source: Field survey, October 2012.

Fig-1.

Table: 2 Net cropped area and percentage of net cropped area under different crops of Chapra village (In hectares) in 2000-2001 and 2011-2012.

NAME OF CROPS	2000-2001		2011-2012	
	NET CROPPED AREA UNDER DIFFERENT CROPS IN HECTARES	PERCENTAGE OF NET CROPPED AREA UNDER UNDER DIFFERENT CROPS	NET CROPPED AREA UNDER DIFFERENT CROPS IN HECTARES	PERCENTAGE OF NET CROPPED AREA UNDER UNDER DIFFERENT CROPS
FLOWER	21.061	50.45	27.11	63.30
RICE	15.65	36.54	8.59	20.06
BIN	2.57	6.12	2.98	6.95
MUSTERD	1.56	3.64	1.95	4.55
CHILLY	.5	1.16	1.2	2.80
OTHERS	.93	2.18	.99	2.32
TOTAL	42.82		42.82	

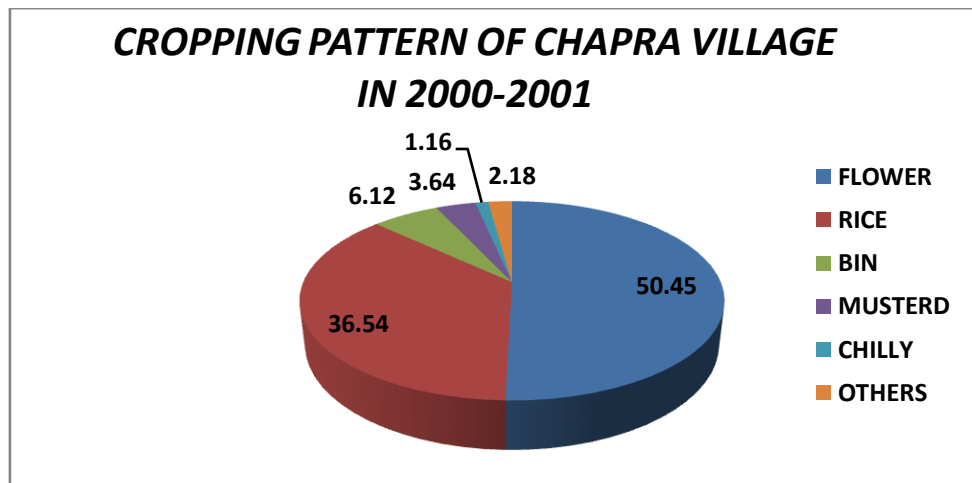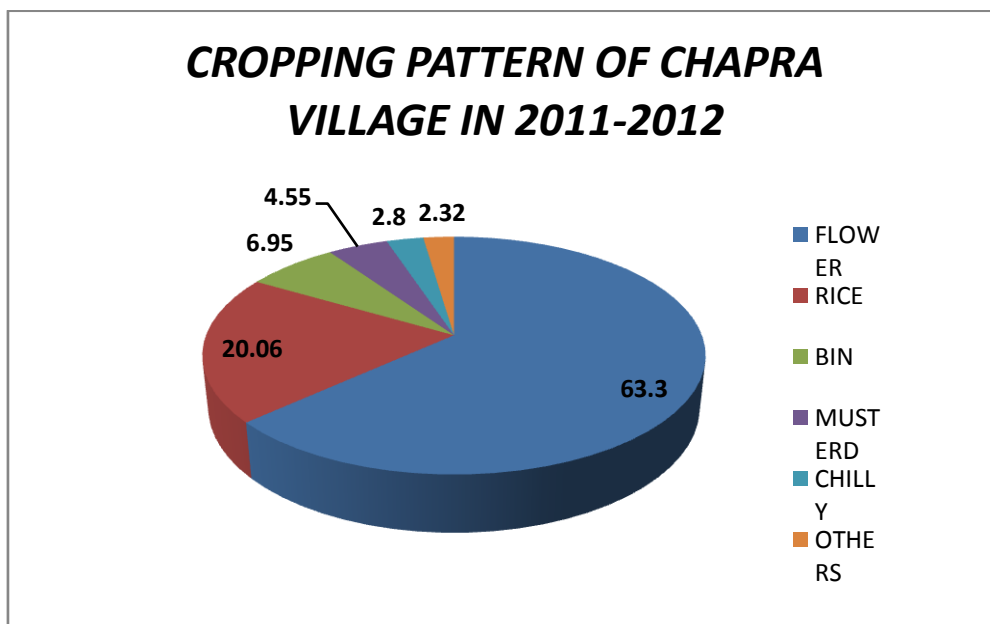**Source:** Field survey, October 2012.

Fig-2.

Fig -3.

Table-3: **Net cropped area under flowers in hectares and yield rate in kg/cut pieces of flowers in hectare of Chapra village in 2000-2001 and 2011-2012.**

YEAR	2000-2001		2011-2012	
NAME OF FLOWER	NET CROPPED AREA UNDER FLOWERS IN HECTARES	YIELD RATE OF FLOWERS IN KG/CUTPIECS IN HECTARE	NET CROPPED AREA UNDER FLOWER IN HECTARES	YIELD RATE OF FLOWERS IN KG/CUTPIECS IN HECTARE
MARIGOLD	6.2	20500	16.5	23550
TUBEROSE	10.73	15450	28.84	18450
ROSE	1.42	125500	1.75	150450
GLADIOLUS	0.75	256450	1.88	296850
ZERBERA	.35	175250	1	258500

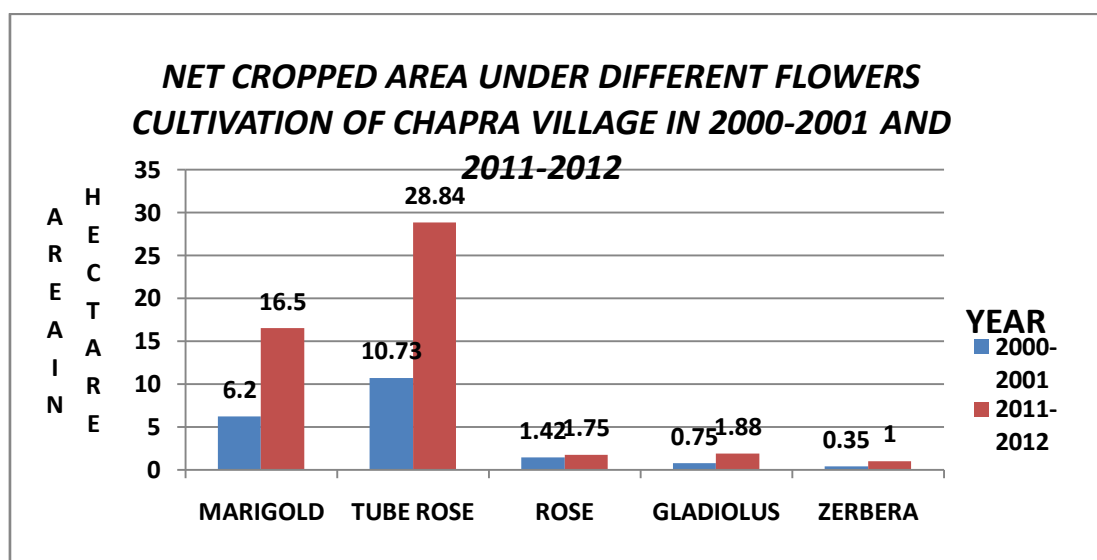**Source: Field survey, October 2012.**

Fig- 4.

Table: 4 Productivity index and yield index of different flowers of chapra village in 2000-2001 and 2011-2012.

YEAR	2000-2001		2011-2012	
NAME OF FLOWERS	YIELD INDEX OF DIFFERENT FLOWERS	PRODUCTIVITY INDEX OF DIFFERENT FLOWERS	YIELD INDEX OF DIFFERENT FLOWERS	PRODUCTIVITY INDEX OF DIFFERENT FLOWERS
MARIGOLD	102.5	0.89	104.66	1.24
TUBEROSE	103	2.86	104.53	3.21
TUBEROSE	100.4	2.11	102.69	1.47
GLADIOLUS	100.17	6.22	102.18	7.12
ZERBERA	100.14	6.52	105.51	7.01

Source: Computed by the author following the methods of (Enyedi, 1964) and (Jasbir singh, 1976).

After computing crop productivity Index (Enyedi, 1964) and crop yield Index (Jasbir Singh, 1972) on different varieties of flower this picture is clear that in 2000-2001 to 2011-2012 both(productivity and yield) Index have increased except rose hopefully. In the year 2000-2001 productivity Index of MARIGOLD,TUBEROSE,ROSE,GLADIOLUS,ZERBERA was **0.89, 2.86, 2.11, 6.22, 6.52** where in 2011-2012 crop calendar year this values are **1.24, 3.21, 1.47, 7.12, 7.01** respectively.(Table-4). On the other hand

from (table -4)it is clear that yield Index of MARIGOLD,TUBEROSE,ROSE,GLADIOLUS,ZERBERA have increased in the year 2011-2012 respect of the crop calendar year 2000-2001.So it can be concluded that in Chapra village productivity and yield rate of flowers are increasing with great expectation.
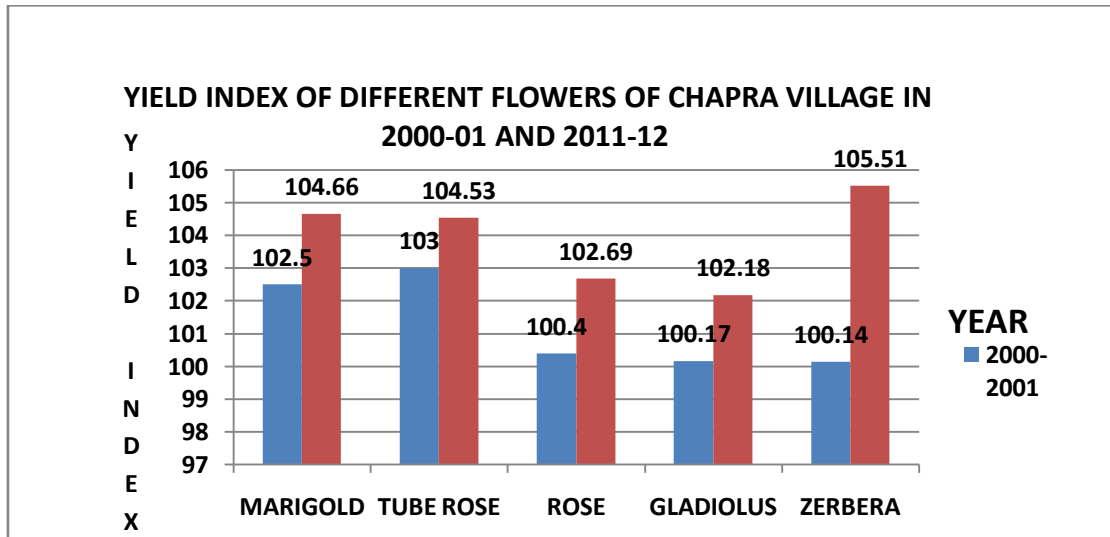

YIELD INDEX OF DIFFERENT FLOWERS OF CHAPRA VILLAGE IN 2000-01 AND 2011-12

Fig - 5.

PRODUCTIVITY INDEX OF DIFFERENT FLOWERS OF CHAPRA VILLAGE IN 2000-2001 AND 2011-2012
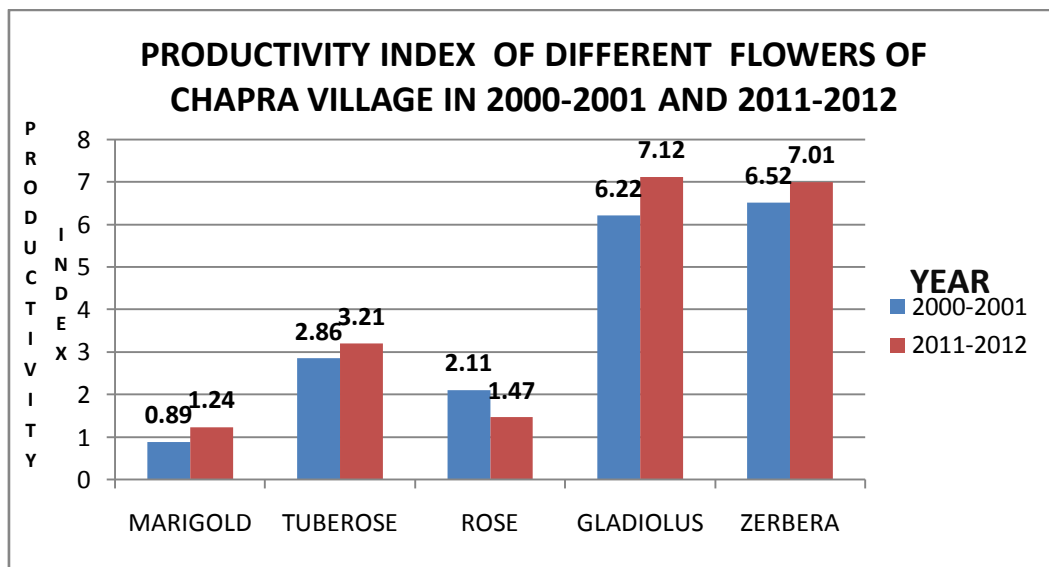
Fig -6.

For this well progress training facilities for farmers ,irrigation, hybrid varieties of flowers, intensive ways of cultivation, application of chemical and composed fertilizer, herbicides and pesticides, government subsidies, cold storage facilities ,nearest market facilities, favourable agro ecological environment, demands of flowers are playing important role.

      Flower cultivation is economically more profitable than other crops. For comparative analysis six economic crops have been selected. Total production cost of each crops per bigha, market price in rupees of each crops and profit from each crops in a season have been measured. From (table: 5) it is clear that from other five crops flowering is more profitable.

Table: 5 Total production in kg/cut pieces, coast of total production in rupees, market price in rupees and profit in rupees of each crops (Per Bigha) of Chapra Village in 2011-2012.

| NAME OF CROPS		TOTAL PRODUCTION OF DIFFERENT CROPS IN KG/CUT PIECES IN BIGHA.	TOTAL COAST OF PRODUCTION IN RUPEES	MARKET PRICE IN RUPEES	PROFIT IN RUPEES
RICE		2800	8500	8400	1500
JUTE		500	6500	10000	3500
MUSTERD		300	3000	15000	12000
BINN		2400	13500	20000	6500
CHILLY		2500	15000	37500	22500
FLOWERS	MARIGOLD	23550	20000	55000	35000
	TUBEROSE	18450	40000	80000	40000
	ROSE	150450	70000	90000	20000
	GLADIOLUS	296850	100000	150000	50000
	ZERBERA	258500	500000	700000	200000

Source: Field survey, October 2012.
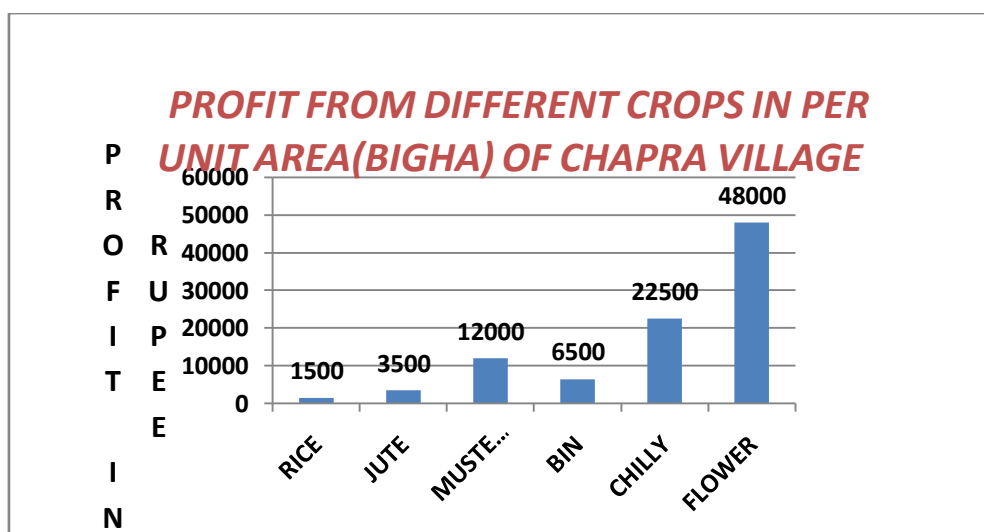
Fig-7.

 In Chapra village socio economic profile is changing based on flower cultivation. A perfume processing factory has developed .An ABIR processing factory has been developed by chapra co-operative society based on flowers. A cold store has established for storing flower. A green house model has been developed for zerbera flower cultivation. Only based on flower various types of occupations are generating day by day. So it can be said that the level of development of floriculture in Chapra Village is well expected.

FINDING PROBLEMS:
(1). There is no cold storage in this village.
(2). Government subsidy for flower cultivation is not sufficient.
(3) In Sub-Division level there is no training centre for flower cultivation.
(4). Marketing system is not well developed.
(5). There is no inter linkage between local flower market and international flower market.
6). In this Sub-Division there is no large scale flower based industry.

 REMIDIAL MEASURES:
(1) Government and Non Government Organization (NGO) should establish cold store for storing valuable flowers.

(2). More subsidies for cultivation are needed. In this respect government should take necessary steps for progress and development of floriculture in the study area.

3). For proper cultivation of flower Government Agriculture Department in Block and Sub Divisional have to arrange training system for farmers.NGO like NABARD can to arrange this system.

(4). Marketing system has to be more developed. Local development authority like MLA should take necessary steps.

(5). Knowledge banking is necessary for inter linkage between local and international flower market.

6). Private sector has to invest for development of flower based industries.

IV. Conclusion:

No doubt floriculture in Chapra village is well developed. Socio economic profile is getting change gradually based on this sector. Many secondary sectors are developing based on this sector. It is an important key factor of overall development in chapra village. Inspite of this there are some constraints in the way of more development of floriculture. Foreign trades of flowers are needed. In this stage role of Government and Non Government Organization (NGO) is very much essential. In future this village may be a role model in all over the country in respect of this sector.

Acknowledgement:

Reference:

[1] Census Report, Government of India, 2001.
[2] Dhilon, S.S and Singh. (2005). "Agricultural Geography" ,Published by Tata McGraw-Hill Publishing Company Limited, West Patel Nagar, New Delhi 110008.P-492.
[3] District Statistical Hand Book, Government of West   Bengal, 2000, 2001, 2008.
[4] Das, D. (2010). "Computational Statistics of Flowering in tomato", in 'Journal of Interacademicia' Vol-14, no-01, January, pp-121-123, Published by Rita Sarkar, A-9121; Kalyani 741235, Nadia, West Bengal.
[5] Husain M. (2009). "Systematic Agricultural Geography" ,Published by Rawat Publications, Satyam Apts., Sector 3,Jawahar Nagar,Jaipur-302004(India).P(430).