

Research Paper



Feb, 2010

Spatial Distribution of Major Cash Crops in the Nashik District, (M.S.) From 1960-61 to 2000-01



*Prof. Pagar Sanjay Dagu

** Prof. Borse Nitin Bajirao

*** Dr. D.S. Surya Wanshi

* Arts, Science & Commerce College Ozar (Mig) , Nashik

** Karmaveer Abasheb Alias N.M. Sonawane Arts, Commerce & Sc. College, Satana

***V.W. Arts, Commerce & Science College, Dhule

1) Introduction:

Agriculture is the major economic activity in the Nashik district as it is with the rest of the India. Nashik district is one of the major agriculturally and industrially develop district in the North Maharashtra. Initially the farmer of this region were gave preference to the traditional crops like cereal, pulses, fodder etc. But these cash crops are not fulfilling the economic needs of the farmers. At the same time irrigation facilities were increased in the study region, so the farmer turns towards the cash crops. Cash crop is a highly specialized crop grown for the purpose of earning cash income on an otherwise subsistence farm (Lodha R.M., 1995). Cash crops are grown for sale rather than for subsistence needs. Cash crops include crops like sugarcane, onion, grapes, cotton and vegetables crops.

In Nashik district Grapes, sugarcane and onion are the major cash crops. In 1960-61 the area under these three cash crops was only 2.08 %, which increased up to 9.38 % in the study region in 2000-01. This shift in area under cash crops reflects a change from subsistence cropping to cash cropping. These cash crops are concentrated in few talukas of the Nashik district. In this paper an attempt is made to mark the major cash crop growing region of the district and to understand the reasons for the imbalance of cash crops development in the Nashik district.

2) Objectives:

The main objectives of the present paper are as follow. i] To analyses the spatial distribution of major cash crops in the Nashik district. ii] To mark the major cash crop growing region in the study region. iii] To identify the regional disparities in the major cash crop development in the study region during 1960-61 to 2000-01. iv] To know the factors responsible for regional disparities in the cash crop development in the study region.

3) Data and Methodology:

The present study is based on the primary and secondary source of data. The primary data is collected through interviews of the farmers from the study region with help of structural questionnaires. Where as secondary data obtained from socio-economic abstract of the Nashik district [1963-64, 1983-84, 2003-04], District census handbook, District Gazetteers. The Tahsil has been taken as a unit for analysis of the major cash crops distribution in the study region. Some of the simple mathematics and statistical tools like percentage, average etc have been used in the study. Data were processed and represented by using cartographic technique like Choropleth map.

4) Study Area:

Nashik District is situated partly in the Tapi basin and partly upper Godavari basin. It lies between 19° 33' to 20° 53' north latitude and 73° 15' to 75° 16' east Longitude. Nashik District has

an area of 15530 sq.k.m. and population of 49, 93,796.as per the 2001 census. Location of the study area is showed in Map No.1 There are 15 talukas included in the Nashik District. The main system of hills is the *sahyadries*, which run north-south in the western portion of the district. From the main *sahyadrian* range three prominent spurs stretch out to the east. In the extreme north is *selbari* range, which approximately forms and boundary between Nashik and Dhule district. Next is the *Satmala* range which runs right across district. *Kalsubai* range is located in the south part of the district. The district has two main rivers the *Girna* and the *Godavari*. The district is surrounded by Dhule district in the north, Jalgaon and Aurangabad districts in the east, Ahemadnager district in the south, and Thane district in the south- west and Gujarat state in the

north- west. There are four kinds of soils in the Nashik District, Black [Kali], Red [Lal], Red and Black [Koral] and Light Brown [Barad]. Rice, Sugarcane, Onions, Grapes, Jawar, Bajra and Vegetables are the dominant crops of this region. The climate of the district is generally dry except during the monsoon season. The average annual rainfall of the district as a whole is 1034.5mm. The rainfall in general decreases from west to east. The summer season is moderately hot and the temperature varies from 36° c to 43° c. The air is humid during the monsoon season and is generally dry during the rest of the year.

5) Spatial pattern of major cash crops:

Cropping pattern is a dynamic concept as it changes over the space and time. It changes with response to climate, topography, soil and availability water for irrigation. Cropping pattern

Table No.1) Talukawise growth in area under major cash crops in the Nashik district

Sr.No.	Name of Taluka	1960-61				1980-81				2000-01			
		Grapes	Onion	Sugr-cane	Total	Grapes	Onion	Sugr-cane	Total	Grapes	Onion	Sugr-cane	Total
1	Surgana	00	0.01	0.01	0.02	00	00	0.01	0.01	00	0.08	00	0.08
2	Kalwan	00	0.18	0.99	1.17	1.01	2.77	1.57	5.35	0.45	4.04	2.6	7.09
3	Deola	—	—	—	—	—	—	—	—	0.23	7.72	1.09	9.04
4	Baglan	00	0.14	2.26	2.4	0.05	1.36	4.33	5.74	0.8	2.34	3.9	7.04
5	Malegaon	00	0.21	2.78	2.99	0.04	2.62	2.73	5.39	0.08	2.5	0.84	3.42
6	Nandgaon	0.01	0.19	0.31	0.51	0.01	1.44	0.57	2.02	0.03	2.88	5.96	8.87
7	Chandwad	0.07	1.45	1.47	2.99	0.13	5.9	0.63	6.66	2.92	13.04	0.39	16.4
8	Dindori	0.13	0.64	0.64	1.41	0.31	2.03	0.57	2.91	1.59	00	4.22	5.81
9	Peith	00	00	0.01	0.01	00	0.02	00	0.02	00	00	0.4	0.4
10	Trambak	—	—	—	—	—	—	—	—	0.01	0.01	0.06	0.08
11	Nashik	0.28	0.9	0.07	1.25	0.61	1.68	0.74	3.03	8.79	1.73	5.4	15.9
12	Igatpuri	00	0.02	0.02	0.04	00	0.15	0.01	0.16	00	0.64	0.37	1.01
13	Sinnar	0.02	1.56	0.84	2.42	0.03	2.04	2.14	4.21	0.45	3.51	1.7	5.66
14	Niphad	0.22	3.28	1.47	4.97	0.57	4.42	12.89	17.9	11.44	6.62	19.23	37.3
15	Yeola	0.01	0.36	1.81	2.18	0.06	3.03	2.94	6.03	0.23	6.33	1.27	7.83
Total		0.06	0.8	1.22	2.08	0.16	2.24	2.76	5.16	1.97	3.8	3.61	9.38



Source: District Statistical Abstracts from 1963-64, 1983-84 & 2003-04

means the proportion of area under various crops at a point of time in a unit area (Panda S.C.,2005).When the proportion of area under different crops change, it effect on cropping pattern of area. During 1960-61 to 200-01 the area under major cash crops increased by 7.3 percentage. These major cash crops are grapes, sugarcane and onion. In this region it is observed that cropping pattern these shift from subsistence cropping to cash cropping is mainly due to higher price of cash crops. This development of cash crops is not uniform in the Nashik district. Western part of the study region is less developed in this regards. Whereas talukas of central parts like Niphad, Nashik, Chandwad,

Kalwan & Deola have shown considerable progressed in this regards. In the Nashik district traditional crops are considerably reduced in their % of area under cultivation. Table No.1 shows the changing area of cash crops from 1960-61 to 2000-01. In 1960-61 area under grapes in the study region was only .06 % of the total cropped area, which increased up to 1.97 % of the total cropped area in 2000-01. These increased in area under grapes was found only in central part of the district. There is no area under grapes in six talukas of western parts of the district in 1960-61. Much of the grapes cultivation is concentrated in Niphad and Nashik talukas of the study region in investigation periods. In Niphad it is increased from 0.22 % to 11.44 % and in Nashik it is increased from 0.28 % to 8.79 % in four decades. The higher concentration of the grapes in these talukas is due to availability of irrigation facilities, marketability and rise of winery industry. But western talukas of the study region remain as it is like 1960-61 due to rugged topography and lack of irrigation facilities.

The cultivation of sugarcane has made enormous progress in the study region after establishment of sugar factories in the study region. Then sugarcane has acquired important position in the agriculture economy of the district. The area under this cash crop in 1960-61 was only 1.22 % of the total cropped area, which increased up to 3.61 % of the total cropped area in 2000-01. It shows an increase of 2.39 % area

under sugarcane in four decades. This crop is largely grown on black soil under irrigation in the central part of the study region. The area under sugarcane was very less in western part, whereas it is maximum concentrated in central, eastern and north parts of the study region. Mostly in Niphad, Nandgaon, Nashik, Dindori and Satana talukas of the Nashik district. It is due to black soil, availability of irrigation, marketability and development of sugar factories in this region. The land lying near sugar factories has been converted from traditional crops to sugarcane cultivation. The maximum area under sugarcane is found in Niphad taluka where two sugar factories are located. In this taluka area under sugarcane was 19.23 % in 2000-01 to its total cropped area. In Dindori, Nashik & Malegaon talukas, area under sugarcane is increased due to establishment of sugar factories. Vegetables crops are extensively grown in Nashik district. This might be due to the nearness to Mumbai, where much of the produce is sold profitably. Of all the vegetables onion is the most important and is grown over wide area of the study region. It is mainly grown in Niphad, Chandwad, Yeola, Deola, Kalwan & Sinner talukas of the study region. In 1960-61 area under onion in Nashik district was only 0.8 % to its total cropping area, but it increased up to 3.8 % of its total cropping area in 2000-01. The Table No.2 indicates the groups of taluka according to their cash crops development in the study region from 1960-61 to 2000-01.

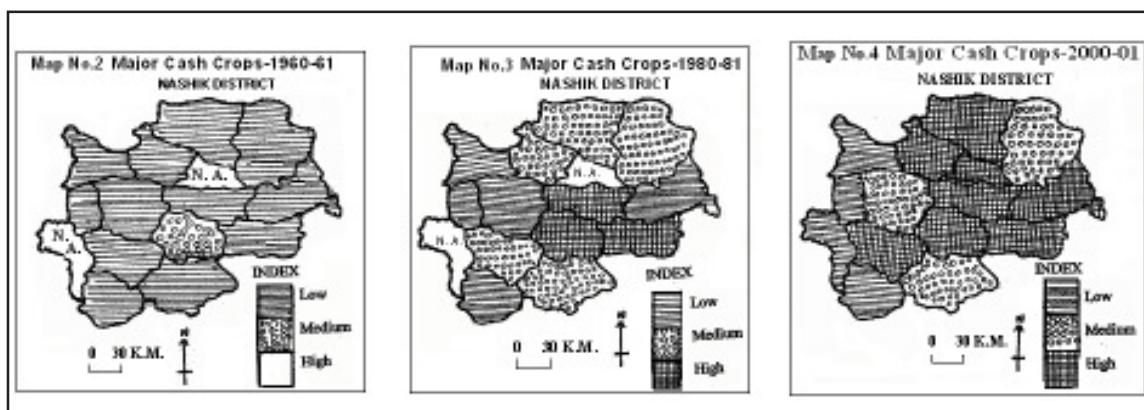


Table No.2) Cash Crop Growing Tahsils Group

Range*	Area under cash crops	(1960-61)	(1980-81)	(2000-01)
0.1 to 3.0	Low	Suragana, Kalwan, Malegaon, Chandwad, Peith, Baglan, Nandgaon, Nashik, Dindori, Sinner, Igatpuri & Yeola. Niphad.	Surgana, Dindori, Peith, Igatpuri & Nandgaon	Surgana, Peith, Trambak & Igatpuri.
3.1 to 6.0	Medium	---	Kalwan, Baglan, Malegaon, Nashik & Sinner.	Malegaon, Sinner, & Dindori.
More than 6	High	---	Niphad, Chandwad & Yeola,	Niphad, Nashik, Deola Kalwan, Baglan, Nandgaon, Yeola & Chandwad.

* = (% of area under Grapes + sugarcane + Onion to their cropped area.)

(Source: Compiled by the Author)

It is observed that the concentration of these major cash crops are found too much at central, east & north part of the Nashik district, whereas it is very less in the western parts of the study region. There are many factors responsible for such regional disparities in cash crop development in the study region. Map No.2 to 4 gives idea about cash crops concentration in the Nashik district from 1960-61 to 2000-01. Highly concentration is mainly found in Niphad, Nashik, Chandwad, Deola, Baglan, Nandgaon, Kalwan & Yeola talukas of the Nashik district.

There are many factors that responsible such cash crops development in this area. It is due to favorable physical environment. Its includes low slope, fertile soil, water availability & catchments areas of major rivers like Godavari and Girna. In this region irrigation facilities are well developed. In 1960-61 the study area had only 5.5 % of cultivated area under irrigation, which increased to 23.43 % in 2000-01 in Nashik district. These irrigation facilities are well developed in central part of the district. Due to this availability of water in this area farmers gave preferences to the cash crops. Marketing facilities are also well developed in this cash crops developed area of the study region. The accessibility of the market is a major consideration in decision making of the farmer (Majid Hussain, 1996). In Nashik district every talukas have one major market committees. But there are 32 sub-market committees also located in study area, in which 22(68.75 %) are located

in Niphad (6), Sinner (6), Nashik (5) & Nandgaon (5) talukas of the study region. These local market facilities gave encouragement to farmer grow cash crops in this area. In this regards nearness of Mumbai market also play important role to bring more area under these cash crops.

In Nashik district there are many agricultural credit societies, which provide easy capital to farmers. Because to cash crops cultivation capital require for many purpose like irrigation facilities, seeds, fertilizer, pesticides, labour and various agricultural equipment. In 2000-01 there were 52786 such credit societies providing capital to farmers. Development of agro-based industry also helpful to increase area under cash crops in the study region. Sugar industry, wine industry & onion processing unit are important industries located in this area. Mostly sugar industries started between 1960 to 1982 in the study area. There are 7 factories located in Nashik district; all these factories are located in this cash crops growing area. Winery industry started in 1999 in this area, now 28 wineries are located in this cash crops area. Some small units of onion processing also started at Lasalgaon in the same period. Due to this all agro-based industries demand for sugarcane, Grapes & onion is increasing day by day, therefore farmers started cash crop cultivation in this region in large scale. These all industries paid high price to farmers for their cash crops; therefore farmer gave preference to such cash crops cultivation in this area.

Transportation facilities are also well developed in this region. Nashik, Niphad, Lasalgaon, Manmad is well connected to other important cities of the country with railway and highways. Therefore these cash crops can be exported every part of the country. Mumbai airport also very near to Nashik, which is helpful to export these cash crops abroad also by airways. In other hand western part of the study region is very less developed in this regards. It includes Igatpuri, Surgana, Peith, Trambak talukas of the Nashik district. It is due to many factors like hilly & rugged topography, steep slope, poor soil, lack of irrigation, capital & transportation facilities, and lack of agro-based industries in this region.

6) Conclusion:

1. In conclusion it could be said that central, eastern & north part of the district is

comparatively developed in this regards. 2. It is mainly due to favorable physical environment & well developed agricultural infrastructure. 3. In other hand western part is remain undeveloped in this regards, due to unfavorable environment & poor agricultural infrastructure. 4. In decreasing area under cereals & pulses also became serious problem in this area. 5. Cash crops cultivation consumes more and more water, therefore ground water level decline day by day in eastern parts of the district. 6. Whereas fertile soil in central part of the study region become saline, therefore production of cash crops decline rapidly in this region. 7. Special attention should be given agriculturally backward areas by the planners, so that regional disparities could be minimized. Crop rotation is requiring in central parts of the district, where soil became saline day by day.

REFERENCE

- 1) Gazetteer of the Bombay presidency (1883) Nashik district volume No.19
- 2) Jadhav M.G. (1997) Agricultural development in Maharashtra: A spatial interpretation Trans.Inst.Indian Geographer.
- 3) Kapadnis N.R. (2002) "Impact of Environmental factor on Crop & use in Nashik District, Maharashtra State" The Deccan Geographer Vol. 40(1), Jan-June 2002.
- 4) Lodha R.M. (1995) 'Academic dictionary of Geography' Academic India Publication, New Delhi.
- 5) Maharashtra State Gazetteer (1975) Govt. of Maharashtra, Nashik District.
- 6) Majid Husain (1996) Systematic Agricultural Geography, Rawat Publication, Jaipur & New Delhi.
- 7) Negi B.S., Agricultural Geography, Kedar Nath & Ram Nath publication Meerut
- 8) Panda S.C. (2005) Agronomy, Agrobios India Publication. Jodhpur.
- 9) Shafi Mohammad (2006) Agricultural Geography, Pearson Education.
- 10) Sohal K.S. (2004) Level of agricultural development in Punjab, 1961 to 2001 National Geographer Vol.39 No.1+2 (Jan-June, July-Dec.2004).