

CHAPTER 10

AGRICULTURE & RURAL DEVELOPMENT

1. Rapid urbanization and the growth of trade and industry have reduced the significance of the agriculture sector. Agriculture and allied activities contribute about 1.48% to the Gross State Domestic Product of Delhi at constant prices (1997-98). The share of agriculture and allied activities has declined sharply from 4% in 1993-94 to 1.48% in 1997-98. Only 2.85% of the total work force in Delhi was engaged in the primary sector in 1991. This is in sharp contrast to the rest of the Indian economy where more than 60% of the total work force was engaged in agriculture and related activities.

Land Utilization

2. The total area of Delhi is 1,47,488 hectares. As per village records, the total cropped area was 48,917 hectares (33.16%) in 1996-97. The remainder was being used either for non-agricultural purposes or remained as forest, fallow land, uncultivable land, etc. The land-use pattern in Delhi for the period from 1980-81 to 1996-97, (Table 10.1), reveals that the total cropped area has decreased from 87,599 hectares in 1980-81 to 48,917 hectares in 1996-97. In percentage terms, the total cropped area, which was 59.39% of the total available area in 1980-81, dropped to 51.69% in 1990-91 and reached 33.16% in 1996-97. The pace of urbanization has increased significantly in the 1990s, resulting in rapid decline in agriculture.

Crop Intensity

3. Crop intensity is an index of agricultural development and is directly related to irrigation facilities. The following statement that crop intensity in Delhi ranged from a minimum of 121% to a maximum of 143% during the period 1992-93 to 1996-97.

Statement 10.1

Cropping Intensity

Year	Net Area Sown	Gross Cropped Area	Cropping Intensity (%)
1992-93	43,874	56,713	129
1993-94	46,091	60,857	132
1994-95	47,409	68,613	143
1995-96	45,356	62,966	139
1996-97	40,575	48,917	12

Source: Delhi Statistical Hand Book-1998, Dte. of Eco. & Stat., Government of NCT of Delhi.

Cropping Pattern

4. The main crops grown in Delhi are wheat, jawar, bajra and paddy. The cropping pattern in terms of production and yield per hectare for the period 1992-93 to 1996-97 is given in Table 10.2 which shows that both in terms of production and average yield, wheat was the predominant crop in Delhi throughout the period of five years, followed by jawar, bajra and paddy. Wheat production constituted 84% of total grain production in Delhi in 1996-97. The yield of different crops has fluctuated significantly during this

five-year period. Food-grain production varied from 98,494 tonnes in 1992-93 to 1,36,280 tonnes in 1994-95 and 1,06,904 tonnes in 1996-97.

Irrigated Area

5. The three main sources of irrigation in Delhi are canals, wells, and tubewells. The area irrigated by each source for the period from 1992-93 to 1996-97 is shown in Table 10.3. 94% of the net irrigated area was irrigated by wells/tubewells in 1996-97.

6. During 1996-97, of the total cropped area of 48,917 hectares, the net area irrigated was 36,799 hectares, area irrigated more than once was 428 hectares and the gross area irrigated was 37,227 hectares, which constitutes 76% of the total cropped area. The details are given in the statement below.

Statement 10.2

Irrigated Area

Item	1980-81	1993-94	1994-95	1995-96	1996-97
Total cropped area	87,599	60,857	68,613	62,966	48,917
Net area irrigated	53,364	37,852	38,904	44,731	36,799
Area irrigated more than once	3,201	10,630	11,292	2,724	428
Gross area irrigated	56,565	48,482	50,196	47,455	37,227

Source : Delhi Statistical Handbook, Dte. of Eco. & Stat., Government of NCT of Delhi.

7. Although canals and tubewells are the two main sources of irrigation in Delhi, rainfall is the original source of water for canals and tubewells. In Delhi, rainfall is concentrated in the months of July to September. Details are given in the following statement:-

Statement 10.3

Rainfall

Month	Normal Rainfall	1993	1994	1995	1996	1997	Average Rainfall
July	211.1	348.9	482.1	46.0	180.9	57.8	223.1
August	172.9	169.2	259.1	578.9	328.8	189.9	305.1
September	149.7	250.2	1.6	51.6	151.8	84.3	107.9

(Note : Normal rainfall refers to norms of the Metrological Deptt.)

Source : Delhi Statistical Handbook, Dte. of Eco. & Stat., Government of NCT of Delhi.

Animal Husbandry

8. Animal husbandry is an important component of the agriculture sector. According to the Livestock Census of 1992, the total livestock population (excluding poultry) in Delhi was 3.06 lakh. Only provisional results for certain animals are available from the latest livestock census conducted in 1997.

The growth rate of selected categories of animals between 1992 and 1997 is indicated in the following statement

Statement 10.4

livestock census Data

Livestock	Number (Census 1992)	Provisional Number (Census 1997)	Percentage Growth
Cows/buffaloes	2,89,361	3,03,767	5
Sheep/goats	16,423	23,534	43
Total	3,05,784	3,27,301	7

Source: Animal Husbandry Department, Govt. of N.C.T. of Delhi.

9. The main livestock products are milk, eggs and meat. Production estimates of these three products for the period between 1993-94 to 1997-98 are presented in Table 10.4. Milk production has increased from 251 thousand tonnes to 266 thousand tonnes, registering a growth of 6% during the period of five years. The total production of eggs went up by 5.7% from 64.93 million in 1993-94 to 68.62 million in 1996-97. Meat production, however, has fallen by 81% from 174.53 thousand tonnes in 1993-94 to 33.23 thousand tonnes in 1997-98.

10. While the number of veterinary hospitals in Delhi decreased from 49 in 1993-94 to 48 in 1996-97, the number of veterinary dispensaries increased from 23 to 27 in the same period. The number of animals that received treatment from the hospitals/ dispensaries increased from 3,27,180 in 1993-94 to 3,60,000 in 1997-98 (Table 10.5).

Forests

11. The area covered by forests was 10,528 hectares at the end of March 1999 (7.14% of total area). To maintain the ecological balance and check environmental pollution, the development plans of Delhi have given high priority to afforestation programmes. Plantation programmes have been taken up by various agencies on government land, private land and on land belonging to the Gram Sabha and local bodies. During 1998-99 about 3.31 lakh trees were planted and 2.70 lakh seedlings/saplings distributed to various agencies and individuals. The details of the forest cover, plantation and distribution of trees for the period 1993-94 to 1998-99 are given in Table 10.6. The notified forest area in Delhi has increased from 6,517 hectares in 1993-94 to 10,528 hectares in 1998-99. The Forest Department of the Delhi Government has set up a Bird-cum-Wildlife Sanctuary in the Asola-Bhatti Mines area on 2,733 hectares of land.

Fisheries

12. The objective of the Fisheries Unit is to regulate fishing under the Punjab Fisheries Act, 1914 and the Indian Fisheries Act, 1857 and prevent destructive practices and unscrupulous fishing. The Fisheries Unit performs the dual function of producing fish-seed as well as providing fish for consumption. Information about the production of fish-seed and fish in the last five years is presented below:

Statement 10.5

Production of Fish & Fish seed

Item	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
Fish-seed production (in lakhs)	38	39	40	41	41	42.5

Fish production (thousand tonnes)	3.8	3.9	4.0	4.0	4.2	4.4
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Source: Deputy Warden of Fisheries, Government of NCT of Delhi.

RURAL DEVELOPMENT

13. In 1991, the rural area in Delhi was 54% (797.66 sq. kms.) of the total geographical area of 1,483 sq.kms. Of the total population of 94.21 lakhs, 10.55% (9.49 lakh people) were living in the rural areas according to the 1991 census. Over time, the extension of the urban area has converted rural villages to urbanized villages. The number of rural villages has decreased from 304 in 1951 to 199 in 1991. Details of the total population of Delhi, rural population and number of villages over the period of 40 years from 1951 to 1991 are given in Table 10.7. The share of rural population declined from 18% in 1951 to 7% in 1981, but increased thereafter to 10% in 1991.

14. The distribution of the rural population by industry for the period 1971-91 is presented in Table 10.8. Out of the total rural population of 9,49,019 in 1991, the total workforce in rural areas was 2,72,864 (29%). There was a steep increase in the rural workforce between 1981 and 1991, from 1,28,853 in 1981 to 2,72,846 in 1991. There has been a significant shift in favour of the manufacturing sector. The shift in occupational structure of the rural workforce is indicated below:-

Statement 10.6

Occupational Structure of Rural Workforce

Sector	1981	1991
Primary Sector	35.60	17.00
Secondary Sector	37.80	55.80
Tertiary Sector	26.60	27.20
Total	100.00	100.00

Mini Master Plan

15. For the social, cultural and economic development of people in rural areas, the Delhi Government launched a comprehensive plan in 1994 called the 'Mini Master Plan for the Development of Rural Villages.' This plan proposes a three-tier approach to the development of rural areas by setting up 15 growth centres, 33 growth points and 147 multi-purpose community centres in rural areas. The estimated cost is Rs. 883 crore. Work has begun on setting up five growth centres in village Kanjhawala, Baprola, Chhawla Kanganheri, Alipur and Ghogha, one growth point in Smalka and 22 multi-purpose community centres. 71 multi-purpose community centres have already been constructed.

Table 10.1

LAND USE PATTERN

Sl.No.	Classification	1980-81	1985-86	1990-91	1995-96	1996-97
1	2	3	4	5	6	7
1.	Total Area available as per village record	147488	147488	147488	147488	147488
2.	Forests	1434	1562	1561	1089	1119

3.	Area not available for cultivation	52077	71330	71842	82994	83482
4.	Other uncultivated land excluding fallow land	2719	5456	12864	8190	11317
5.	Fallow-land	32707	12816	12864	8200	10995
6.	Net area sown	58551	56324	48357	45356	40575
7.	Total cropped area	87599	81377	76239	62966	48917

Source : Delhi Statistical Hand Book - 1998, Dte. of Eco. and Stat., Govt. of NCT of Delhi.

Table 10.2

FOODGRAIN PRODUCTION IN DELHI

Sl. No.	Name of the Crop	1992-93		1993-94		1994-95		1995-96		1996-97	
		Production (MT)	Yield (Kg/Ha)	Production (MT)	Yield (Kg/Ha)	Production (MT)	Yield (Kg/Ha)	Production (MT)	Yield (Kg/Ha)	Production (MT)	Yield (Kg/Ha)
1	2	3	4	5	6	7	8	9	10	11	12
1.	Wheat	88282	3188	103900	3331	107779	3668	84955	2795	90102	3456
2.	Bajra	3123	981	3490	1241	4784	1345	5686	1837	2236	1036
3.	Jawar	5268	460	4706	473	4727	458	3974	450	2619	454
4.	Paddy	1515	2500	1815	3361	18700	3418	15532	2508	11807	3049
5.	Other Crops	306		683		290		196		140	
	Total	98494		114594		136280		110343		106904	

Source : Delhi Statistical Hand Book, 1998, Dte. of Eco. and Stat., Govt. of NCT of Delhi.

Table 10.3

AREA IRRIGATED BY DIFFERENT SOURCES

Sl.No	Source of Irrigation	1992-93	1993-94	1994-95	1995-96	1996-97
1	2	3	4	5	6	7
1.	Canals	2467	2238	2304	2425	2102
		(7)	(6)	(6)	(5)	(6)
2.	Wells	33493	35614	36600	42306	34698
		(93)	(94)	(94)	(95)	(94)
3.	Net area irrigated	35960	37852	38904	44731	36799
		(100)	(100)	(100)	(100)	(100)

Source : Delhi Statistical Hand Book, 1998, Dte. of Eco. and Stat., Govt. of NCT of Delhi

Table 10.4

LIVESTOCK PRODUCTION

Sl.No.	Item	Unit	1993 - 94	1994-95	1995-96	1996-97	1997-98
1	2	3	4	5	6	7	8
1.	Milk	000	251.43	257.24	260.76	264.42	266.28
		Tonnes					
2.	Eggs	No. in million	64.93	65.47	66.69	67.41	68.62
3.	Meat	Tonnes	174573	58822	32967	25383	33235

Table 10.5

VETERINARY SERVICES IN DELHI

Sl.No	Item	Unit	1993 - 94	1994-95	1995-96	1996-97	1997-98
1	2	3	4	5	6	7	8
1.	Veterinary Hospitals	No.	49	48	48	48	48
2.	Veterinary Dispensaries	No.	23	24	24	27	27
3.	Animals treated	No.	327180	335924	355650	358000	360000
4.	Laboratories /Research Centres.	No.	1	1	1	1	1

Source : Animal Husbandry Department, Govt. of NCT of Delhi.

Table 10.6**DETAILS OF FOREST AREAS AND PLANTATION**

Sl.No	Item	Unit	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8	9
1.	Total Geographical area	Hect.	147488	147488	147488	147488	147488	147488
2.	Area under Forest	Hect.	6517	10528	10528	10528	10528	10528
3.	Plantation of trees on Govt. land	No. in Lakh	5.98	6.67	3.60	2.40	3.56	3.31
4.	Distribution of seedlings/ saples to agencies/indiviuals	No. in lakh	2.25	3.74	3.80	3.69	3.70	2.70
5.	Value of Forest Products	Rs. in lakh	1.39	1.28	0.07	—	—	—
6.	Revenue generated through raids, fines etc.	Rs. in lakh	1.45	0.09	0.29	2.20	4.98	7.40

Source : Forest Department, Govt. of NCT of Delhi.

Table 10.7**GROWTH OF RURAL POPULATION IN DELHI**

Sl.No	Year	No. of inhabited Villages	Total Population in Delhi	Rural Population	Percentage of Rural Population
1	2	3	4	5	6
1.	1951	304	17,44,072	3,06,938	18
2.	1961	276	26,58,612	2,99,204	11
3.	1971	243	40,65,698	4,18,675	10
4.	1981	214	62,20,406	4,52,206	7
5.	1991	199	94,20,644	9,49,019	10

Source : Delhi Statistical Hand Book, 1998, Dte. of Eco. and Stat., Govt. of NCT of Delhi.

Table 10.8**SECTORAL DISTRIBUTION OF RURAL POPULATION**

Sl.No	Item	1971	1981	1991
1	2	3	4	5

1.	Total Rural Population	418675	452206	949019
2.	Total Work Force	111460	128853	272864
3.	Population Engaged in			
(i)	Agricultural & Allied Activities	42986	45895	46468
(ii)	Population Engaged in Industrial Activities	39896	48713	152220
(iii)	Population engaged in Other Services	28578	34245	74176

Source : Delhi Statistical Hand Book, 1998, Dte. of Eco. and Stat., Govt. of NCT of Delhi.