

## CHAPTER 10

# AGRICULTURE & RURAL DEVELOPMENT

Rapid urbanization and the growth of trade and industry have reduced the significance of the agriculture sector in Delhi. Agriculture and allied activities contributed about 1.71% to the Gross State Domestic Product of Delhi at current prices (1998-99). The share of agriculture and allied activities has declined sharply from 4% in 1993-94 to 1.71% in 1998-99. Only 2.61% of the total work force in Delhi was engaged in agriculture and allied activities 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 HOLDING PATTERN

2. As per Agricultural Census, 1995-96, the NCT of Delhi had a total of 34,888 agricultural holdings. This includes 19,768 individual holdings, 14,296 joint holdings and 824 institutional holdings. Out of individual and joint holdings totalling to 34,064, a majority number of 30,346 were managed by males and remaining 3,718 were managed by females. While the holdings managed by males accounted for 43,864 hectares of operated area, females managed 2,854 hectares of operated areas. Out of individual holdings totalling 19,768 a majority number of 16,774 were held by males and remaining 2,994 were held by females. While the individual holding held by males accounted for 15,991 hectares of operated area, individual female operated 1,901 hectares area.
3. The total area operated by all social groups in Delhi declined by 3.27% from 49,197 hectares during 1990-91 to 47,587 hectares during 1995-96. During the same period, the area operated by marginal and small holding increased by 1.20%. On the other hand, area operated by semi-medium, medium and large holdings declined by 2.29%, 3.89% and 16.81% respectively. The number of holdings in all the categories has also indicated a decline. The comparative statistics on number and area of holding corroborate the trend of urbanization of Delhi and consequent conversion of agricultural land to non-agricultural uses.

**Statement – 10.1**

**NUMBER AND AREA OF OPERATIONAL HOLDINGS - ALL SOCIAL GROUPS**

SL No.	Size Groups	No. of operational Holdings				Area operated (in ha)			
		Individual	Joint	Institution	Total	Individual	Joint	Institution	Total
1.	Marginal Below 1.0 ha	14376 (67.97)	6327 (29.91)	447 (2.11)	21150 (100.00)	4737 (63.13)	2608 (34.75)	159 (2.12)	7504 (100.00)
2.	Small 1.0 – 2.0 ha	2904 (46.27)	3086 (49.17)	286 (4.56)	6276 (100.00)	3722 (45.10)	4191 (50.79)	339 (4.11)	8252 (100.00)
3.	Semi Medium 2.0 – 4.0 ha	1581 (36.73)	2661 (61.83)	62 (1.44)	4304 (100.00)	4245 (36.51)	7223 (62.12)	159 (1.37)	11627 (100.00)
4.	Medium 4.0 - 10.00 ha	860 (30.18)	1966 (68.98)	24 (0.84)	2850 (100.00)	4598 (29.05)	11090 (70.07)	138 (0.87)	15826 (100.00)
5.	Large 10.00 & above ha	47 (15.26)	256 (83.12)	5 (1.62)	308 (100.00)	590 (13.48)	3714 (84.83)	74 (1.69)	4378 (100.00)
6.	All sizes	19768 (56.66)	14296 (40.98)	824 (2.36)	34888 (100.00)	17892 (37.60)	28826 (60.57)	869 (1.83)	47587 (100.00)

**LAND UTILIZATION**

4. The total area of Delhi is 1,47,488 hectares. As per village records, the total cropped area was 60,885 hectares (41.28%) in 1999-2000. 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 1995-96 to 1999-2000 (Table 10.1), reveals that the total cropped area has decreased from 62,966 hectares in 1995-96 to 48,917 hectares in 1996-97. Further total cropped area has been increased to 60,885 hectares in 1999-2000 having a growth of 24.46% as comparison to 48,917 hectares in 1996-97. In percentage terms, the total cropped area, which was 42.69% of the total available area in 1995-96, dropped to 31.17% in 1996-97 and reached 41.28% in 1999-2000. The pace of urbanization has increased significantly in the 1990s, resulting in rapid decline in agriculture's share both in GDP and employment.

## CROP INTENSITY

5. Crop intensity is an index of agricultural development and is directly related to irrigation facilities. The following statement shows that crop intensity in Delhi ranged from a minimum of 121% to a maximum of 147% during the period 1992-93 to 1999-2000.

**Statement 10.2**

*(in hectares)*

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	121
1997-98	41,701	57,078	136
1998-99	41,496,	60,232	145
1999-2000	41,385	60,885	147

Source: Delhi Statistical Hand Book / Development Deptt.

## CROPPING PATTERN

6. 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 1995-96 to 1999-2000 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 paddy, bajra and Jawar. Wheat production constituted 87.54% of total grain production in Delhi in 1999-2000. The yield of different crops has fluctuated significantly during this five year period. Food-grain production varied from 1,10,343 tonnes in 1995-96 to 1,94,206 tonnes in 1999-2000.
7. The farmers of Delhi have shifted from traditional agriculture to high value commercial agriculture. The Agriculture /Horticulture Unit of Development Department is encouraging farmers to take up vegetable, floriculture production, Mushroom cultivation etc. About 4145 hectares of area has been brought under Floriculture.

## IRRIGATED AREA

8. The three main sources of irrigation in Delhi are canals, wells, and tubewells. The area irrigated by each source for the period from 1994-95 to 1998-99 is shown in Table 10.3. 92.55% of the net irrigated area was irrigated by wells/tubewells in 1998-99.

9. During 1999-2000, of the total cropped area of 60,885 hectares, the net area irrigated was 39,747 hectares, area irrigated more than once was 9321 hectares and the gross area irrigated was 49,068 hectares, which constitutes 80.59% of the total cropped area. The details are given in the statement below.

**Statement 10.3**

**IRRIGATED AREA**

*(in hectares)*

Item	1980-81	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
Total cropped area	87,599	60,857	68,613	62,966	48,917	57,078	60,232	60,885
Net area irrigated	53,364	37,852	38,904	44,731	36,799	41,167	39,070	39,747
Area irrigated more than once	3,201	10,630	11,292	2,724	428	2,836	9,968	9,321
Gross area irrigated	56,565	48,482	50,196	47,455	37,227	44,033	48,038	49,068

Source : Development Deptt.

10. 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 10.4**

**RAINFALL**

*(in mm)*

Month	Normal	1995	1996	1997	1998	1999	2000	Average
	Rainfall							Rainfall
July	231.5	46.0	180.9	57.8	138.1	114.1	295.8	166.54
August	258.7	578.9	328.8	189.9	234.2	64.6	151.4	257.97
September	127.8	51.6	151.8	84.3	286.7	75.7	272.0	153.68

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

Source : Delhi Statistical Handbook.

**ANIMAL HUSBANDRY**

11. Animal husbandry is an important component of the agriculture sector. According to the Livestock Census of 1997, the total livestock population (excluding poultry) in Delhi was 3.35 lakh. The growth rate of selected categories of animals between 1992 and 1997 is indicated in the following statement:

## Statement 10.5

### LIVESTOCK CENSUS DATA

Livestock	Number (Census 1992)	Number (Census 1997)	Percentage Growth
Cows/buffaloes	2,89,361	2,98,714	3.23
Sheep/goats	16,423	36,032	119.4
<b>Total</b>	<b>3,05,784</b>	<b>3,34,746</b>	<b>9.47</b>

**SOURCE: DEVELOPMENT DEPTT.**

12. The main livestock products are milk, eggs and meat. Production estimates of these three products for the period between 1996-97 to 2000-2001 are presented in Table 10.4. Milk production has increased from 264.42 thousand tonnes in 1996-97 to 292 thousand tonnes in 2000-01 registering a growth of 10.43% during the period of five years. The total production of eggs has fallen by 38.41% from 67.41 million in 1996-97 to 41.52 million in 2000-01. Meat production has increased by 32.40% from 25383 tonnes in 1996-97 to 33609 tonnes in 1998-99 and further fallen to 33175 tonnes in 2000-2001.
13. The number of veterinary hospitals and dispensaries in Delhi is 48 and 27 respectively. The number of animals that received treatment from the hospitals/ dispensaries increased from 3,58,000 in 1996-97 to 3,81,529 in 1998-99 ( Table 10.5).

### FORESTS

14. The area covered by forests was 10,528 hectares at the end of March 2001. This is 7.14% of Delhi's total area of 1,47,488 hectares. According to the latest report of Forest Survey of India, released in 2000, the forest cover of Delhi has increased from 26 sq.km in 1997 to 88 sq.km in 2000. 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 2001-2002 about 3.92 lakh trees will be planted and 1.4 lakh seedlings/saplings distributed to various agencies and individuals. The details of the forest cover, plantation and distribution of trees for the period 1996-97 to 2001-2002 are given in Table 10.6. The notified forest area in Delhi is now 10528 hectares. 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

15. 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 and likely of current year 2001-02 is presented below:

### Statement 10.6

#### PRODUCTION OF FISH AND FISH SEED

Item	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02 likely
Fish-seed production (in lakhs)	41	41	42.5	32	35	32
Fish production (thousand tonnes)	4.0	4.2	4.4	4.3	4.0	3.5

Source : Development Deptt.

## RURAL DEVELOPMENT

16. In 2001, the rural area in Delhi was 37.50% (556.17 sq. kms.) of the total geographical area of 1,483 sq.kms. Of the total population of 137.83 lakhs, 6.98% (9.63 lakh people) were living in the rural areas according to the 2001 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 165 in 2001 Census. Details of the total population of Delhi, rural population and number of villages over the period of 50 years from 1951 to 2001 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 and further decreased in 2001 Census to 7%.
17. 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 2,72,864 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 10.7

#### OCCUPATIONAL STRUCTURE OF RURAL WORKFORCE

(Percentage)

Sector	Year 1981	Year 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

18. 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. For developing the three growth centres namely Kanjhawla, Baprola and Ghogha land has been acquired. DSIDC is the executing agency but DSIDC has not been able to coordinate their activities with DDA & NCR Planning Board with the result not much progress has been made in Growth Centres Scheme. Similarly, for another two growth centres namely Alipur and Chhawla Kanganheri and one growth point at Smalkha, PWD was appointed as nodal agency for execution of the work, but land has not been made available till date. So far 78 multi-purpose community centres have been constructed and out of them 30 multi purpose community centres have been allotted partly for various Government Deptt. of NCT of Delhi.
19. In addition to Mini Master Plan for development of Rural Villages, the Govt. of Delhi has given priority for construction of link road, approach road, and drainage mainly to protect rural area from flooding under the Plan scheme 'Integrated Development of Rural Villages'.