

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 1.12% to the Gross State Domestic Product of Delhi at current prices (2002-2003). The share of agriculture and allied activities has declined sharply from 3.79% in 1993-94 to 1.12% in 2002-03.

LAND HOLDING PATTERN

2. As per latest 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%, 3.88% and 16.83% 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 (ref. statement 10.1)

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 Individual | Joint Institution | Total | |
| 1. | Marginal | 14376 | 6327 | 447 | 21150 | 4737 | 2608 | 159 | 7504 |
| | Below 1.0 ha | (67.97) | (29.91) | (2.11) | (100.00) | (63.13) | (34.75) | (2.12) | (100.00) |
| 2. | Small | 2904 | 3086 | 286 | 6276 | 3722 | 4191 | 339 | 8252 |
| | 1.0 – 2.0 ha | (46.27) | (49.17) | (4.56) | (100.00) | (45.10) | (50.79) | (4.11) | (100.00) |
| 3. | Semi | 1581 | 2661 | 62 | 4304 | 4245 | 7223 | 159 | 11627 |
| | Medium | (36.73) | (61.83) | (1.44) | (100.00) | (36.51) | (62.12) | (1.37) | (100.00) |
| | 2.0 – 4.0 ha | | | | | | | | |
| 4. | Medium | 860 | 1966 | 24 | 2850 | 4598 | 11090 | 138 | 15826 |
| | 4.0 - | (30.18) | (68.98) | (0.84) | (100.00) | (29.05) | (70.07) | (0.87) | (100.00) |
| | 10.00 ha | | | | | | | | |
| 5. | Large | 47 | 256 | 5 | 308 | 590 | 3714 | 74 | 4378 |
| | 10.00 & | (15.26) | (83.12) | (1.62) | (100.00) | (13.48) | (84.83) | (1.69) | (100.00) |
| | above ha | | | | | | | | |
| 6. | All sizes | 19768 | 14296 | 824 | 34888 | 17892 | 28826 | 869 | 47587 |
| | | (56.66) | (40.98) | (2.36) | (100.00) | (37.60) | (60.57) | (1.83) | (100.00) |

LAND UTILIZATION

4. The total area of Delhi is 1,47,488 hectares. As per village records, the total cropped area was 48,445 hectares (32.85%) in 2001-2002. 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 1996-97 to 2001-02 (Table 10.1), reveals that the total cropped area has decreased from 60,232 hectares in 1998-99 to 48,445 hectares in 2001-02. In percentage terms, the total cropped area, which was 40.83% of the total available area in 1998-99, dropped to 32.85% in 2001-02 (Table 10.1). 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 129% to a maximum of 166% during the period 1992-93 to 2001-02 (statement 10.2).

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 | 57,098 | 136 |
| 1998-99 | 41,496, | 60,232 | 145 |
| 1999-2000 | 41,385 | 60,885 | 139 |
| 2000-01 | 34,034 | 52,817 | 155 |
| 2001-02 | 29,116 | 48,445 | 166 |

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 2001-02 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 76.83% of total grain production in Delhi in 2001-02. The yield of different crops has fluctuated significantly during this five year period. Food-grain production increased from 1,10,343 tonnes in 1995-96 to 1,19,286 tonnes in 2001-02.

7. The farmers of Delhi are being encouraged to shift 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 5016 hectares of area has been brought under Floriculture and 40000 hect under vegetables productions.

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 2001-02 is shown in Table 10.3. 91.38% of the net irrigated area was irrigated by wells/tubewells in 2001-02.
9. During 2001-02, of the total cropped area of 48,445 hectares, the net area irrigated was 28,909 hectares, area irrigated more than once was 8326 hectares and the gross area irrigated was 37,235 hectares, which constitutes 76.86% of the total cropped area. The details are given in the statement 10.3

Statement 10.3 **IRRIGATED AREA**

(in hectares)

| Item | 1980-81 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 |
|-------------------------------|----------------|----------------|----------------|------------------|----------------|----------------|
| Total cropped area | 87,599 | 57,078 | 60,232 | 60,885 | 52,817 | 48,445 |
| Net area irrigated | 53,364 | 41,167 | 39,070 | 39,747 | 33,630 | 28,909 |
| Area irrigated more than once | 3,201 | 2,866 | 8,968 | 9,321 | 8,064 | 8,326 |
| Gross area irrigated | 56,565 | 44,033 | 48,038 | 49,068 | 41,694 | 37,235 |

Source : Development Depptt.

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 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------------|--------|-------|-------|-------|-------|-------|-------|
| Rainfall | | | | | | | |
| July | 192.3 | 57.8 | 138.1 | 114.1 | 295.8 | 129.7 | 7.2 |
| August | 192.4 | 189.9 | 234.2 | 64.6 | 151.4 | 233.1 | 115.2 |
| September | 139.6 | 84.3 | 286.7 | 75.7 | 272.0 | 47.4 | 202.6 |

(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 |
| Total | 3,05,784 | 3,34,746 | 9.47 |

Source: Development Deptt.

12. The main livestock products are milk, eggs and meat. Production estimates of these three products for the period between 1998-99 to 2002-2003 are presented in Table 10.4. Milk production has increased from 289.36 thousand tonnes in 1998-99 to 296 thousand tonnes in 2002-03 registering a growth of 2.29% during the period of five years. The total production of eggs has fallen by 41.54% from 46.29 million in 1998-99 to 27.06 million in 2002-03. Meat production has decreased by 13.27% from 33609 tonnes in 1998-99 to 29148 tonnes in 2001-02 and increased to 32380 tonnes in 2002-03.
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 3,81,529 in 1998-99 to 3,76,734 in 200-03 (Table 10.5).

FORESTS

14. The tree cover of Delhi has increased to 111 Sq.Km. as per 2001 assessment of Forest Survey of India, which was 88 Sq.Km. in 1999 assessment. It is 7.5 percent of State's geographical area, which was earlier 5.9 percent. Forest Survey of India in their report of 2001 has assessed 40 sq.km outside forest area. The total forest and tree cover of Delhi is 151 sq. km which is 10.2 percent of state's geographical area. Further details are given below:-

(A) ASOLA-BHATTI WILDLIFE SANCTUARY

Asola-Bhatti Wildlife Sanctuary is in South Delhi district all along Delhi-Haryana boundary of District Faridabad & Gurgaon. The sanctuary is spread over an area of 6872.28 acres of land (4707 acres of Asola notified during 1986 and 2167 acres of Bhatti notified during 1991). The entire Sanctuary is a part of the northern terminal of Aravali hills and biogeographically represented oldest mountain system of the world.

Some of the important works carried out in the sanctuary are:

- i) For protection of the sanctuary a boundary wall of 52 kms has been constructed all around.
- ii) Degraded areas of Bhatti sanctuary are being rehabilitated through Eco-Task force. The Force started its work in 2001-02. So far over 130000 indigenous trees have been planted over 800 acres land and the work is under progress. There is vast improvement in the area ever since Eco Task Force started its work. During the recent survey conducted by the Forest Research Institute, they have noticed over 30 floral species that were not seen earlier. This has been possible because of the various protection measures undertaken.

- iii) More than 200000 indigenous tree species have been planted in Asola area to improve the habitat. Due to the protection given to the area, native Aravali species like Dhoy (*Anogeissus pendula*), Dhak, etc. are coming up profusely.

To being with the improvement of forest Greening Delhi, Action Plan has been constituted which annually affix target for various greening agencies viz Forest Department , MCD, NDMC, CPWD, DDA, PWD and army etc. The following tables show the achievement done during last 5 years:-

| Year | Plantation done in Lakhs | Free distribution of seedling in Lakhs |
|-------------|---------------------------------|---|
| 1998-99 | 3.31 | 3 |
| 1999-00 | 3.20 | 3.61 |
| 2000-01 | 3.35 | 3.25 |
| 2001-02 | 3.39 | 1.85 |
| 2002-03 | 2.69 | 2.46 |

During 2003-04, the target for plantation fixed by the department as 2.95 Lakhs and for free destitution of seedling 2.50 Lakhs besides raising of plantation by ECO task force in Bhatti Mines area as 1.5 Lakhs in degraded forest area.

(B) Development and Management of the Ridge area

The Delhi Ridge, an extension of the Aravali mountains acts as the green lung of the city. About 7777 ha. of the Ridge area have been notified as a Reserve Forest. The Ridge is divided in four portions as per details given below:

1. Northern Ridge 87 ha
2. Central Ridge 864 ha
3. South Central Ridge 626 ha
(near Mehrauli)
4. Southern Ridge 6200 ha

These areas are managed by various land owning agencies like the DDA, MCD, CPWD, NDMC, L&DO and the Forest Department .

(C) Development of City Forest

There are 14 City Forest all over Delhi

| S.No. | Name of City Forests | Area | Works |
|-------|----------------------------|-----------|--|
| 1 | Nasirpur City Forest | 28 hac. | Boundary wall, Fencing, Footpath, plantations, electrification, landscaping, works area on going |
| 2 | Mitraon City Forest | 100 acres | -do- |
| 3 | Sultanpur City Forest | 120 acres | -do- |
| 4 | Ghomenheda City Forest | 80 acres | -do- |
| 5 | Hauzrani City Forest | 72 acres | -do- |
| 6 | Ghoga City Forest | 26 acres | -do- |
| 7 | Shahapur Garhi City Forest | 22 acres | -do- |
| 8 | Mamurpur City Forest | 140 acres | -do- |
| 9 | Jindpur City Forest | 119 acres | -do- |
| 10 | Mukhmelpur City Forest | 133 acres | -do- |
| 11 | Bawana City Forest | 80 acres | -do- |
| 12 | Alipur City Forest | 42 acres | -do- |
| 13 | Garhi Mandi City Forest | 80 acres | -do- |
| 14 | Anand Vihar City Forest | 80 acres | -do- |

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 in statement 10.6. Due to various reasons the fishing activity is getting diminished.

Statement 10.6

PRODUCTION OF FISH AND FISH SEED

| Item | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 | 2002-03 |
|--------------------------------------|---------|---------|-----------|---------|---------|---------|
| Fish-seed production (in lakhs) | 41 | 42.5 | 32 | 35 | 32 | 23.3 |
| Fish production (thousand tonnes) | 4.2 | 4.4 | 4.3 | 4.0 | 3.2 | 2.3 |

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 138.51 lakhs, 6.82% (9.45 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 6.82%.
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 9,44,727 in 2001, the total workforce in rural areas was 3,01,064 (31.87%). There was a steep increase in the rural workforce between 1981 and 2001, from 1,28,853 in 1981 to 3,01,064 in 2001.

INTEGRATED DEVELOPMENT OF RURAL VILLAGES (IDRV)

- 18.** An amount of Rs.967.85 lakhs was sanctioned for implementing 89 Schemes during the year 2002-03 under IDRV Scheme, i.e. 42 roads/drains (65 kms.), 21 cremation grounds, 20 Ponds, 2 Grave yards/Kabristan, 1 Drain, 1 Playground and 2 Parks were taken up for construction/development. The Government of Delhi has given priority for construction of links roads, approach roads and drainage and development of ponds mainly to protect rural area from flooding.

MINI MASTER PLAN (MMP)

- 19.** Under Mini Master Plan, first phase of the Rajiv Gandhi Stadium, Bawana, biggest stadium for rural sportsperson in Delhi has been completed and inaugurated on 22/8/2003.

So far 78 Multi Purpose Community Centres (MPCCs) have been constructed and out of them 30 Community Centres have been allotted to NGO's for some community activity alongwith Government Departments of NCT of Delhi from office accomodation and field promotion activity.