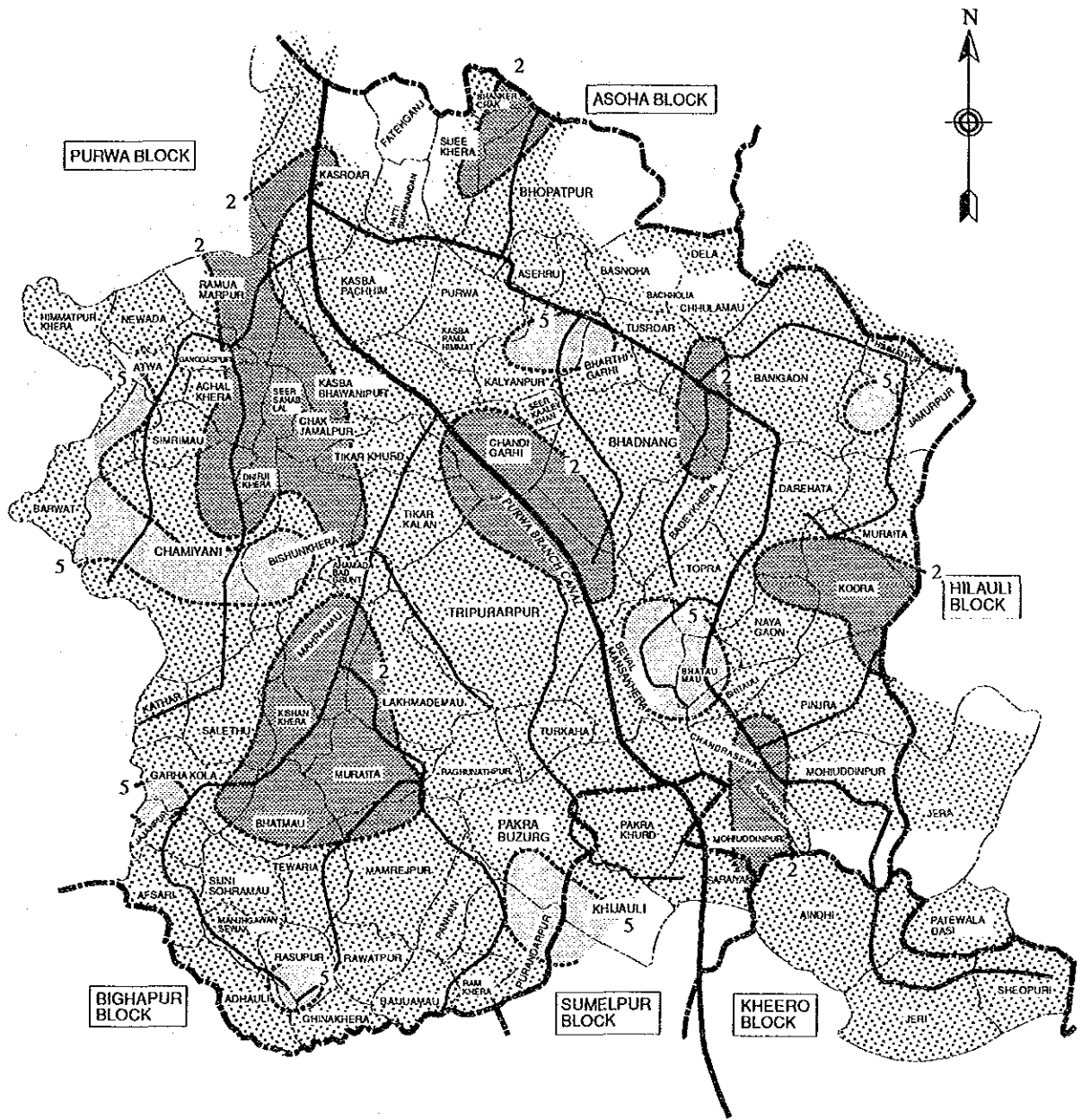


Fig.B.6 Groundwater Table Contours in Sursa Area

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Water Depth

- 0 - 2 m
- 2 - 5 m
- 5 - 10 m
- > 10 m

SCALE
0 1 2 3 4 5 km

Fig.B.7 Groundwater Table Contours in Purwa Area

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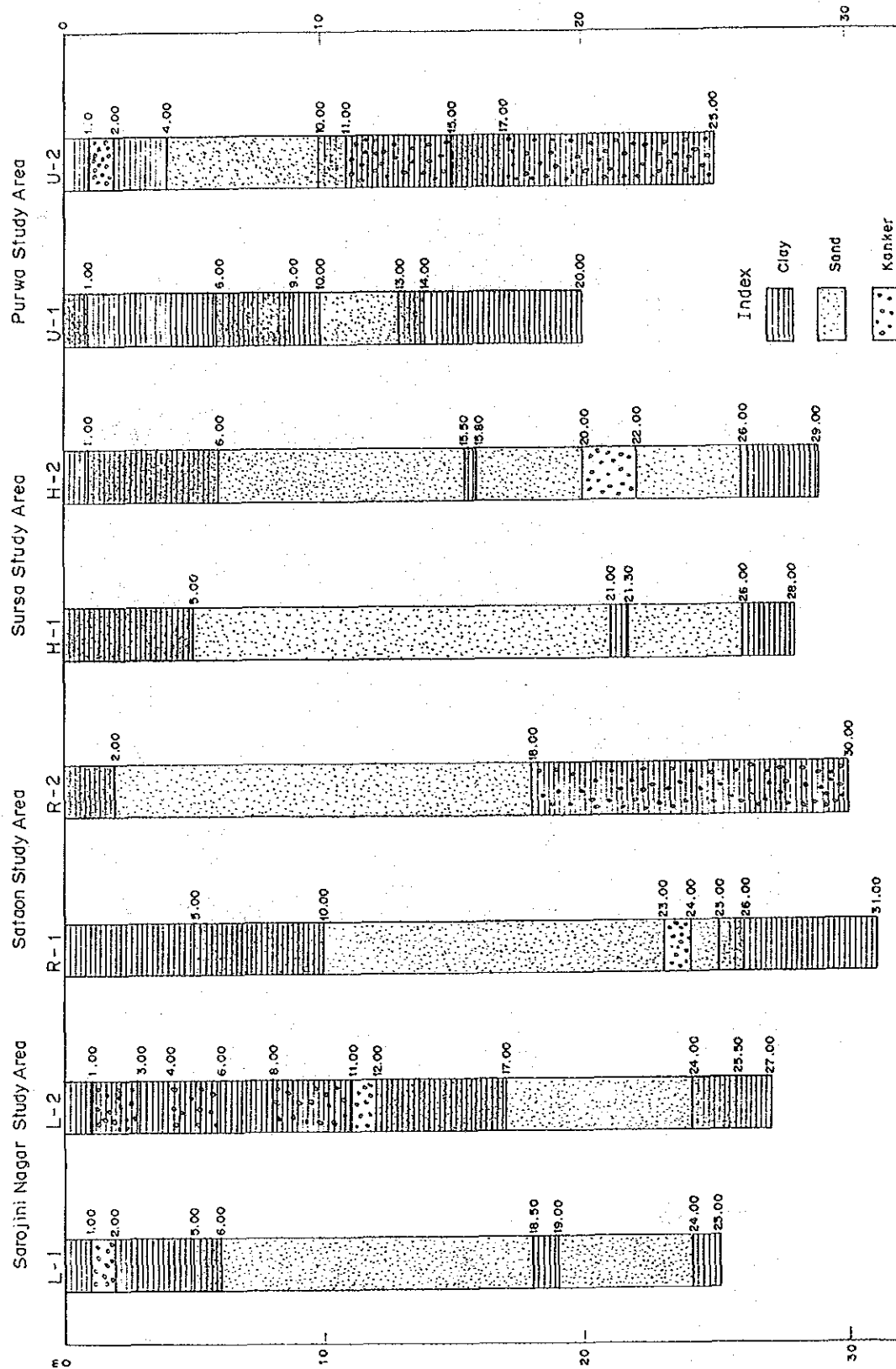


Fig.B.8 Geological Profiles of Pumping Test Wells

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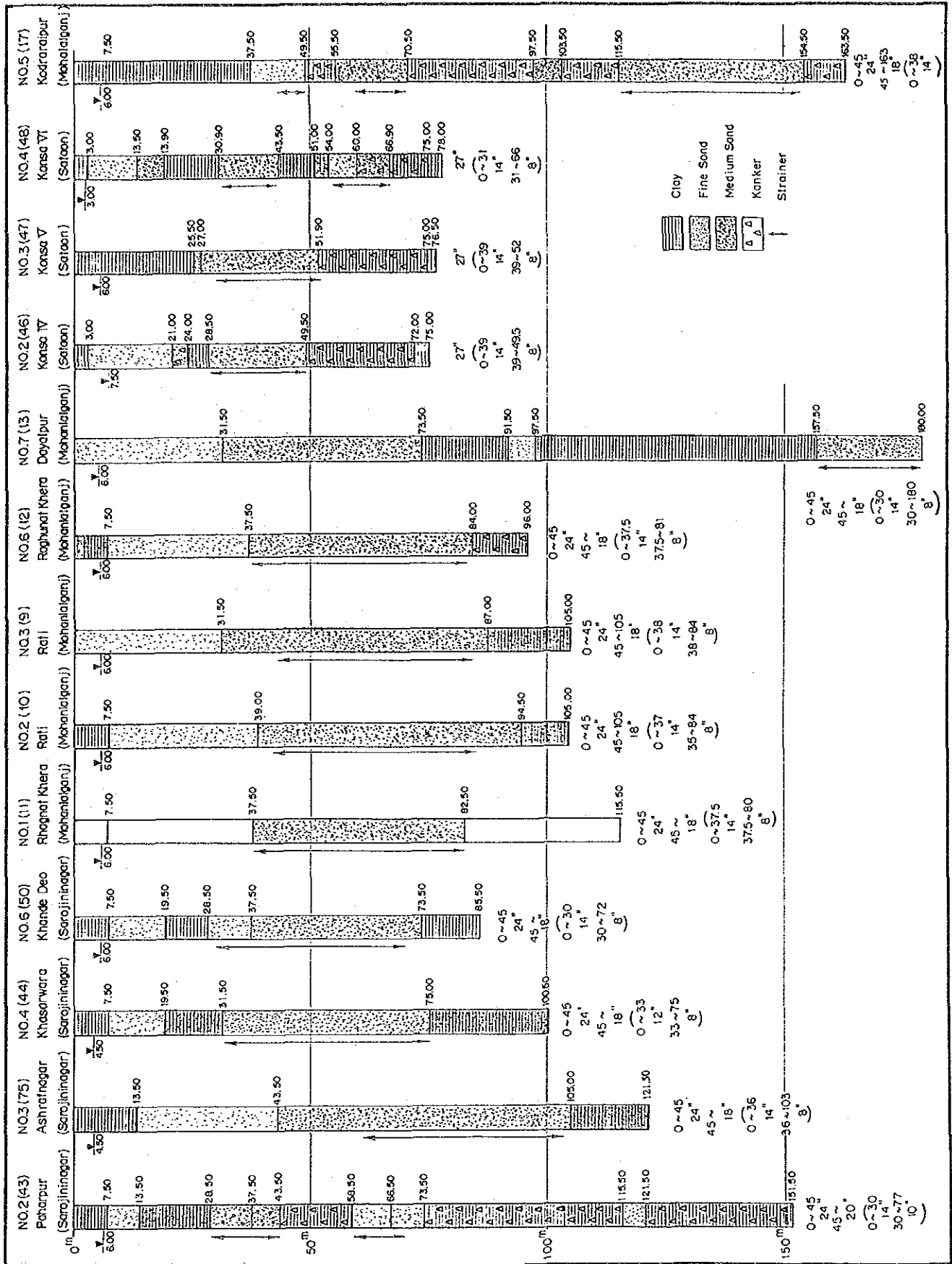


Fig. B.9 Geological Profiles of Deep Tubewells (1/2)

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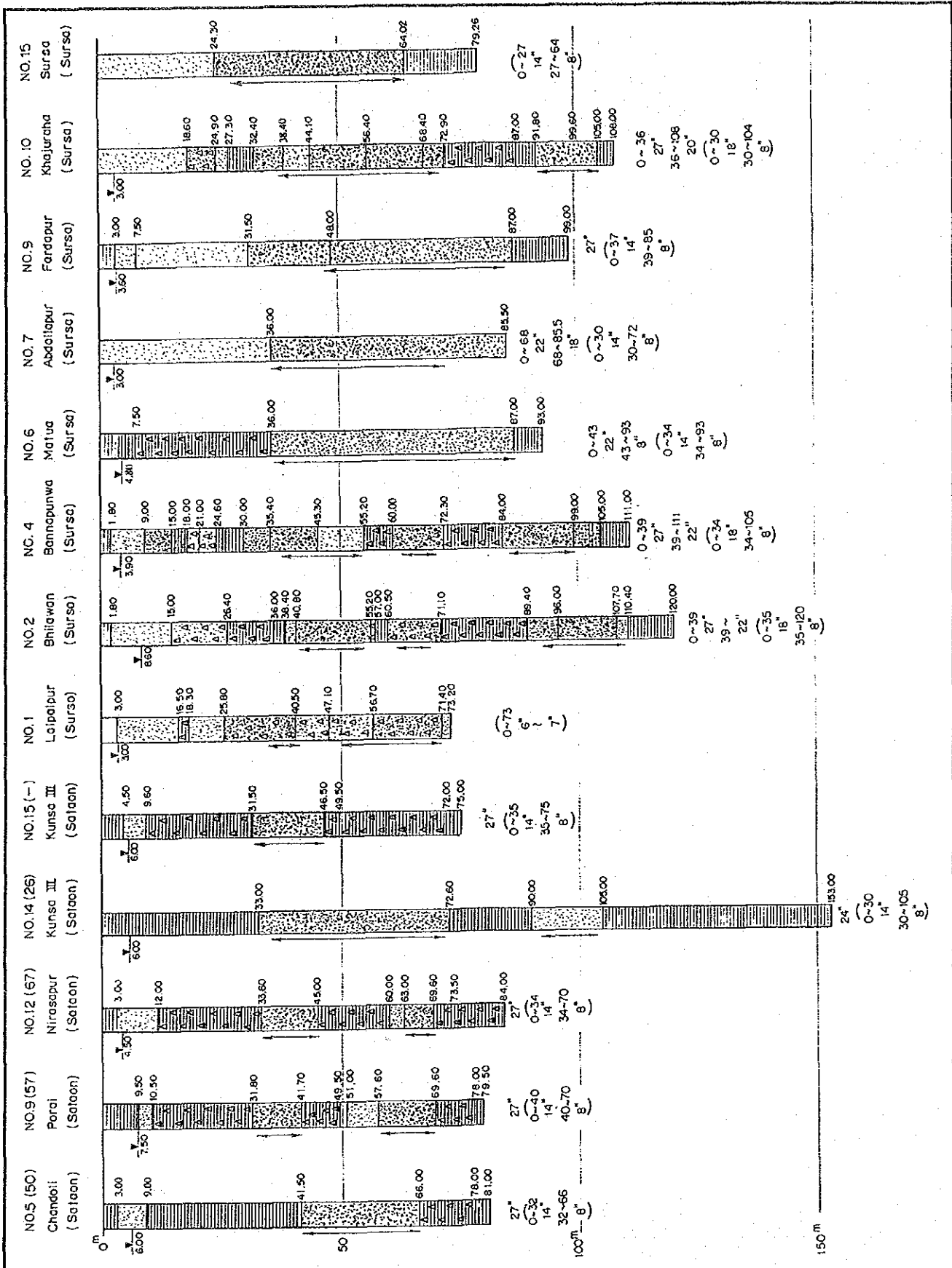


Fig.B.9

Geological Profiles of Deep Tubewells (2/2)

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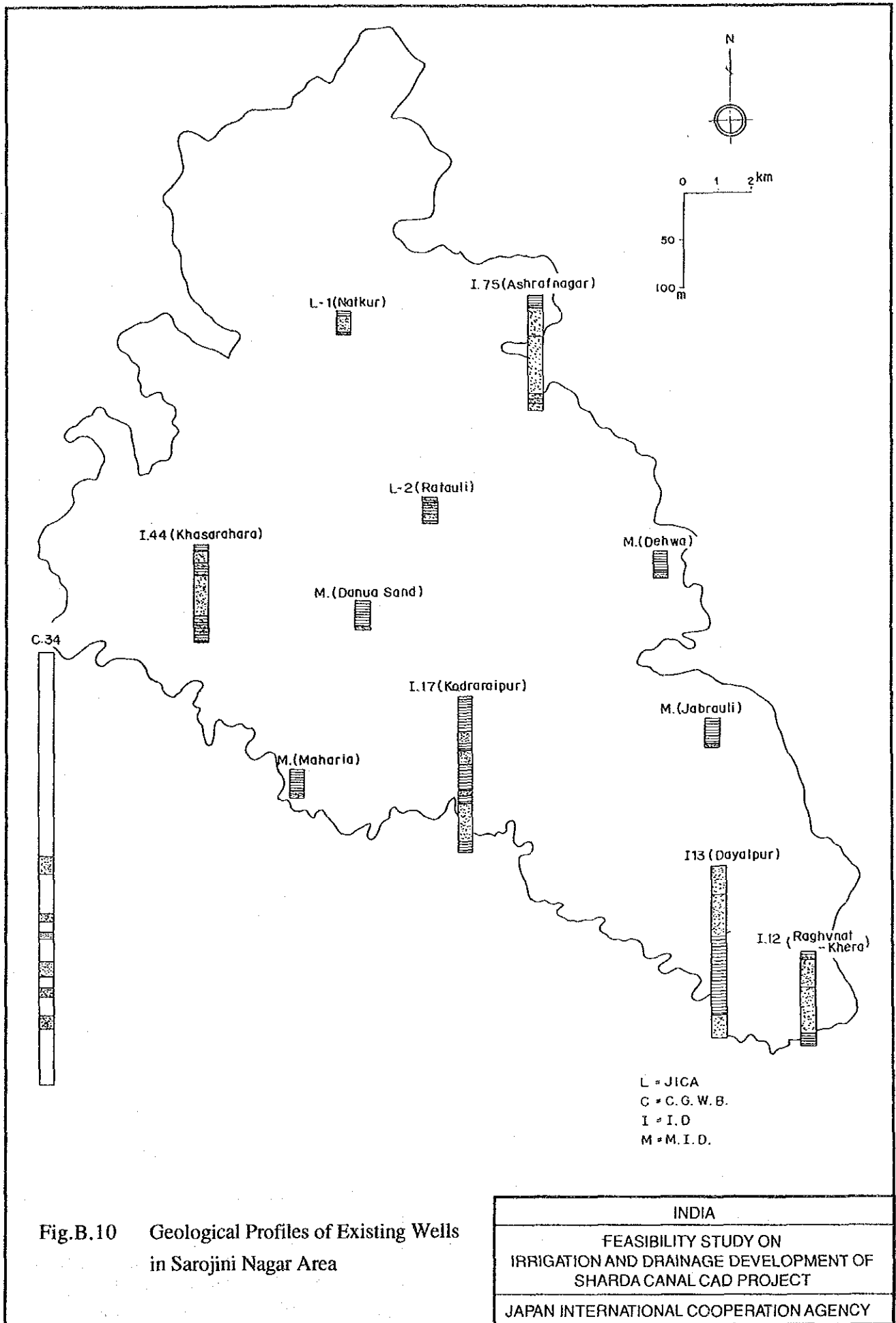


Fig.B.10 Geological Profiles of Existing Wells in Sarojini Nagar Area

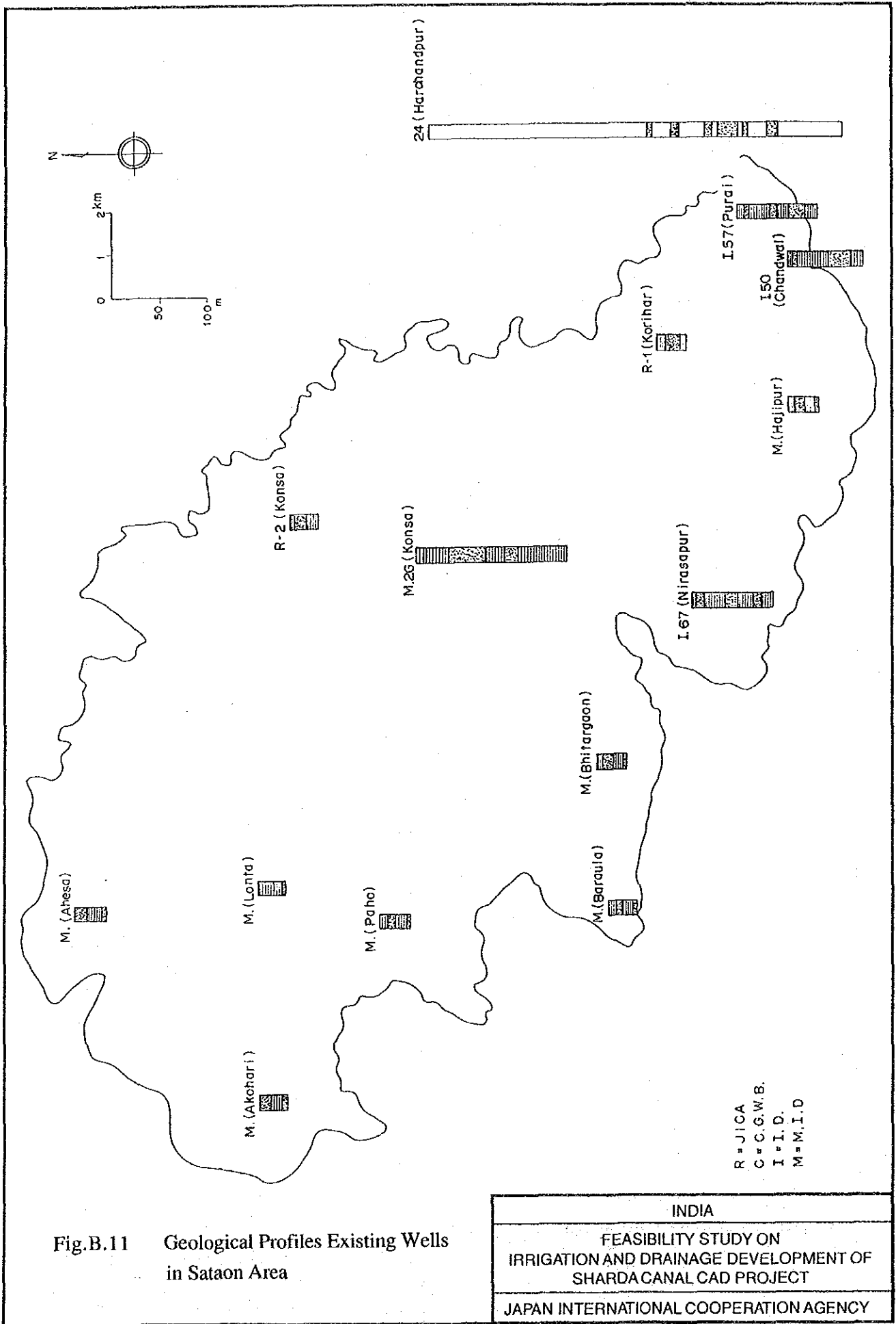


Fig.B.11 Geological Profiles Existing Wells in Sataon Area

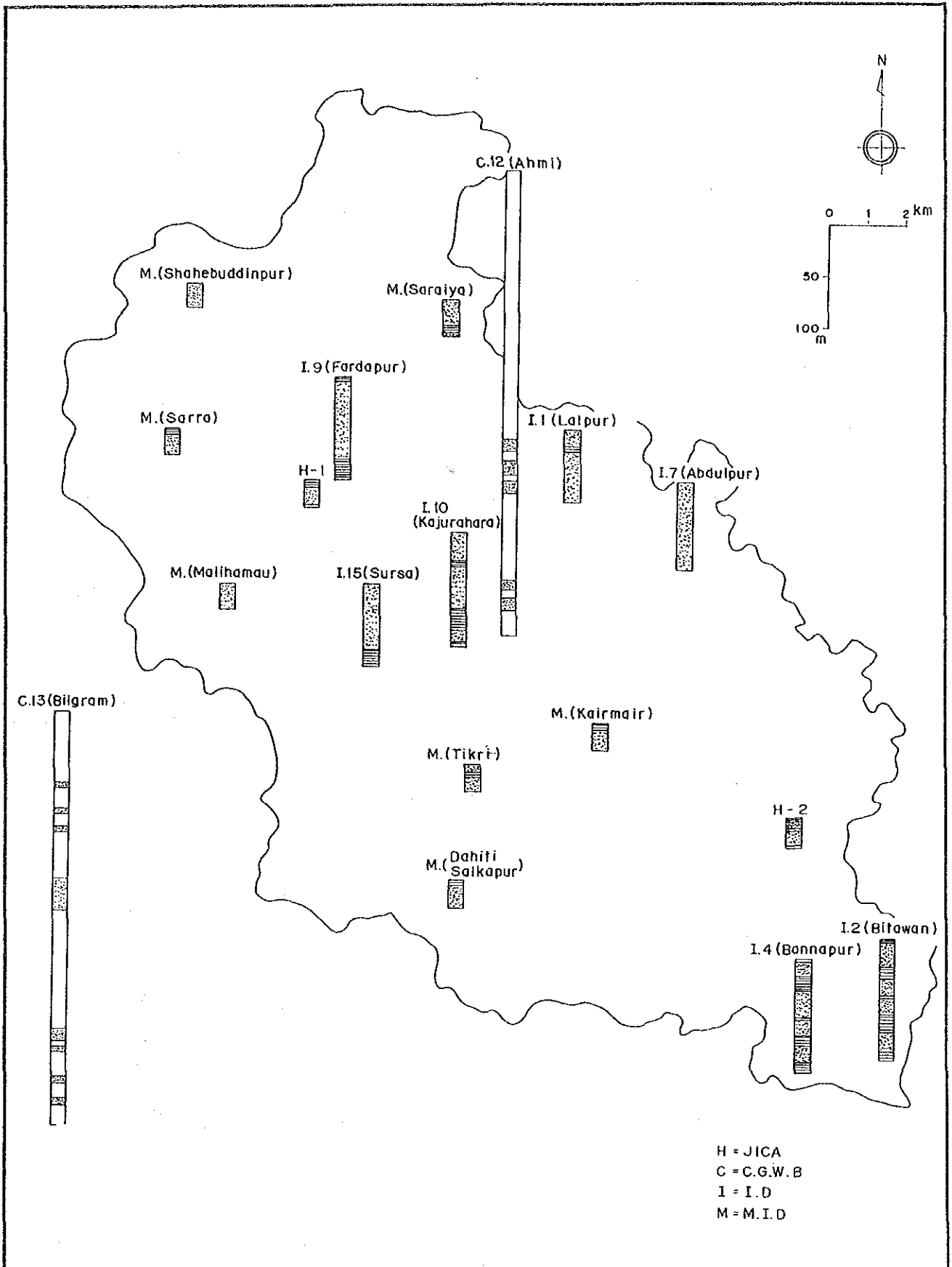


Fig.B.12 Geological Profiles of Existing Wells in Sursa Area

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| FEASIBILITY STUDY ON IRRIGATION AND DRAINAGE DEVELOPMENT OF SHARDA CANAL CAD PROJECT |
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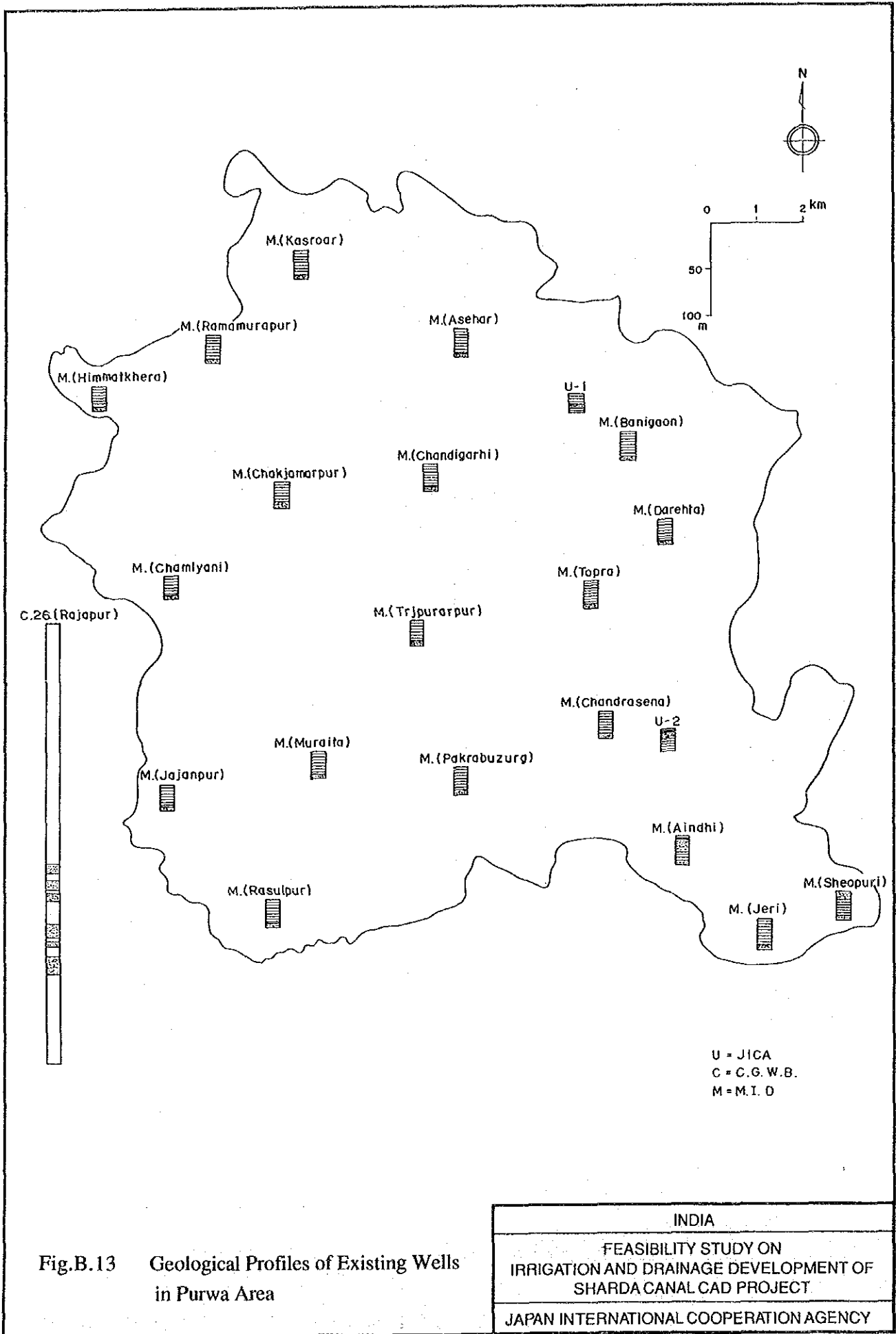


Fig.B.13 Geological Profiles of Existing Wells in Purwa Area

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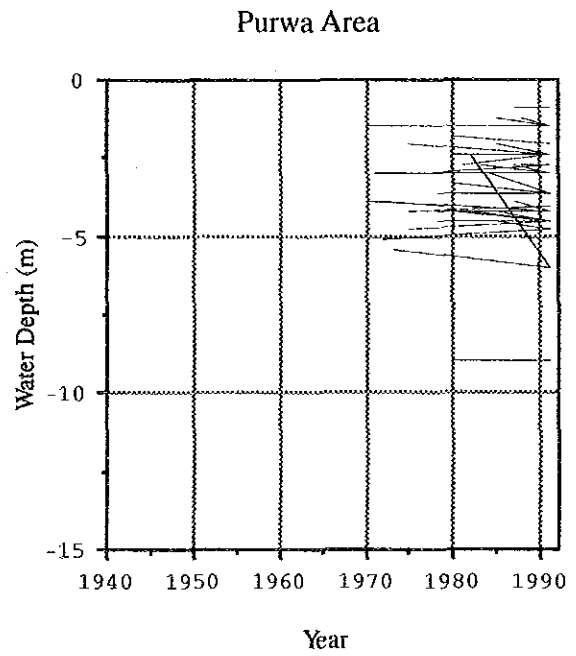
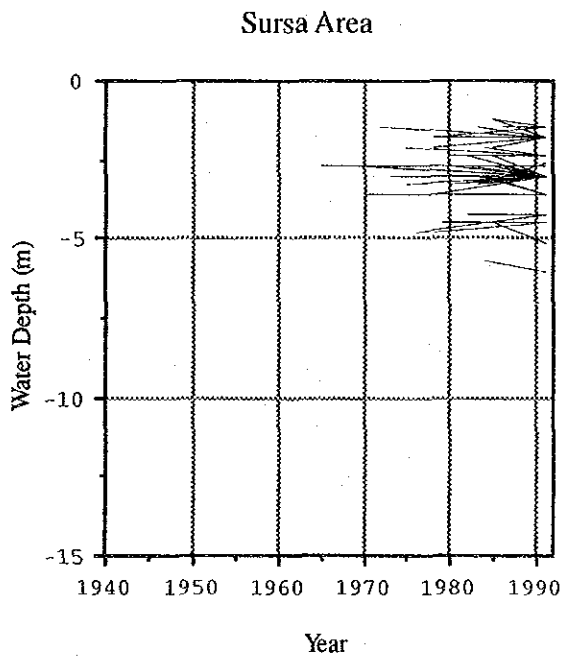
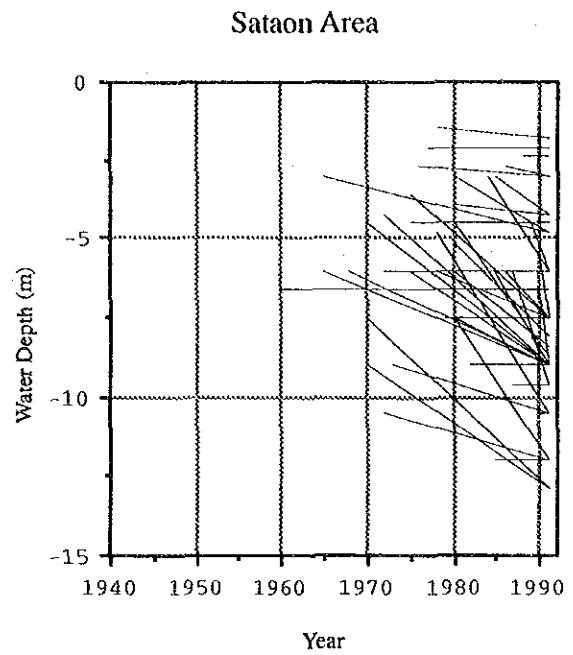
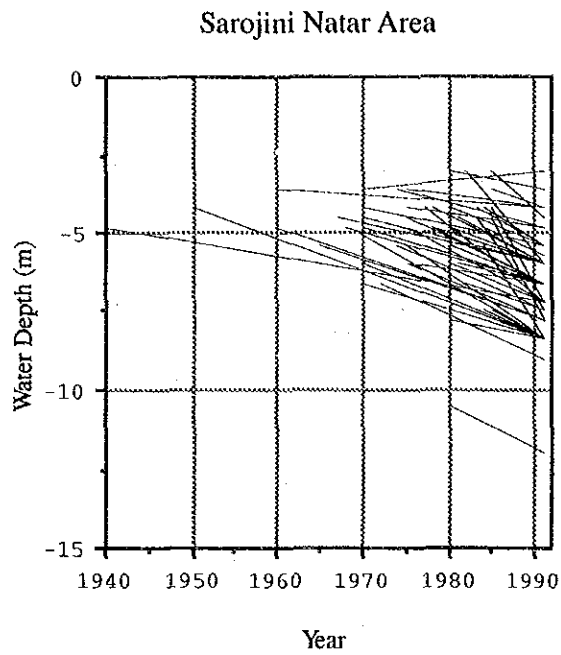


Fig.B.14 Long Term Tendency of Groundwater Table Drawdown

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| INDIA |
| FEASIBILITY STUDY ON IRRIGATION AND DRAINAGE DEVELOPMENT OF SHARDA CANAL CAD PROJECT |
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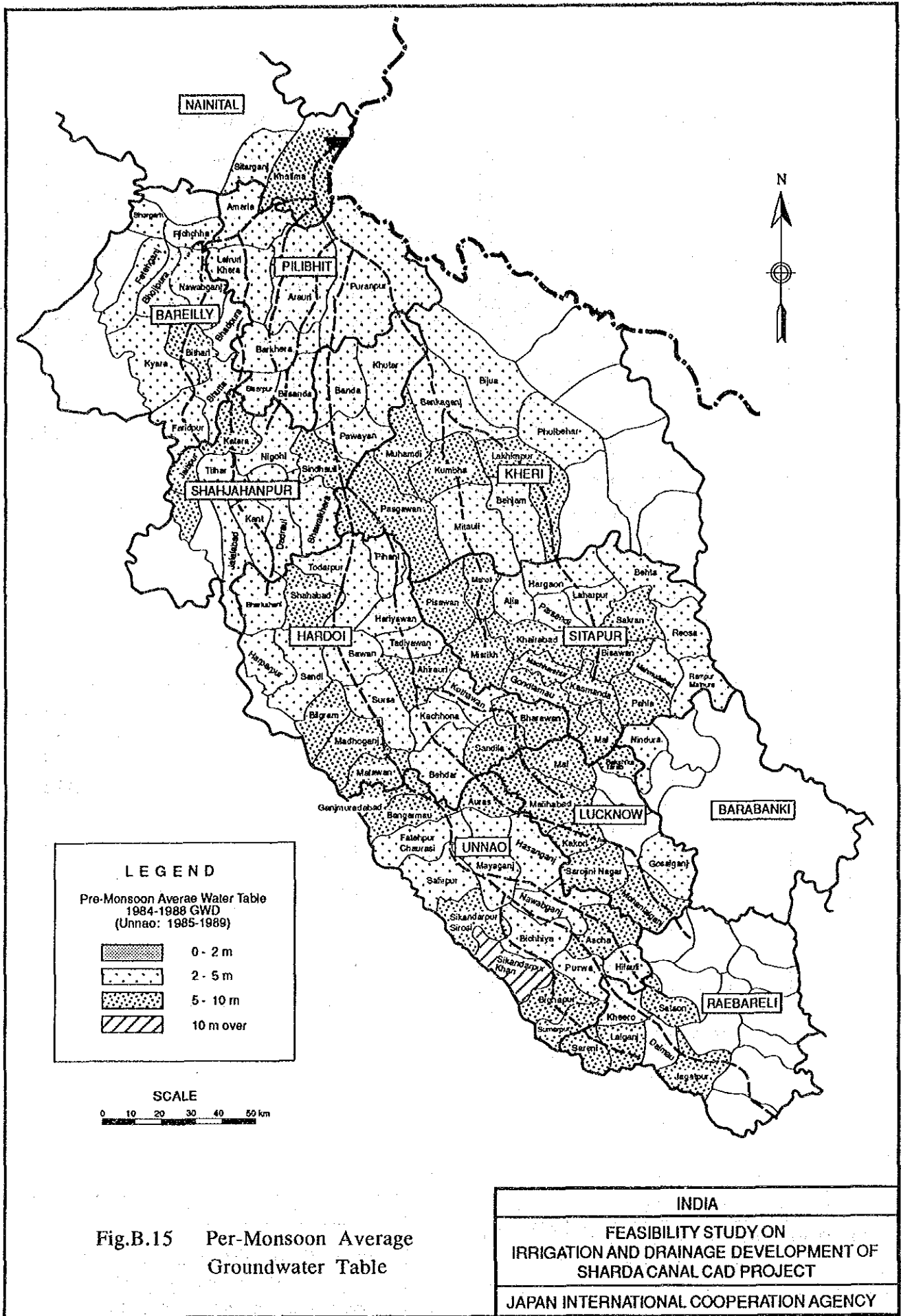


Fig.B.15 Per-Monsoon Average Groundwater Table

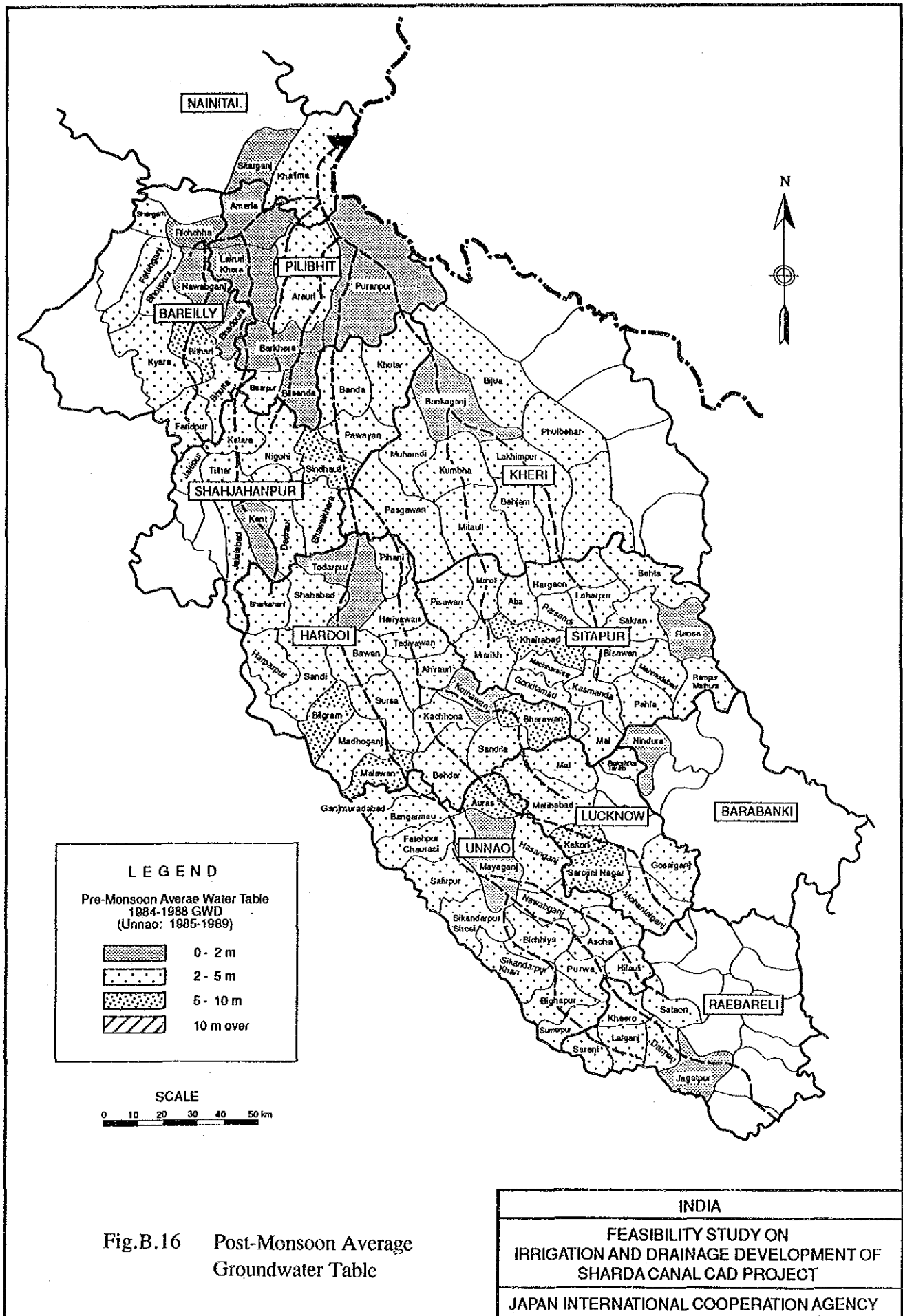


Fig.B.16 Post-Monsoon Average Groundwater Table

ANNEX-C
SOIL AND LAND CAPABILITY
CLASSIFICATION

FEASIBILITY STUDY ON
IRRIGATION AND DRAINAGE IMPROVEMENT OF
SHARDA CANAL CAD PROJECT

ANNEX C
SOIL AND LAND CAPABILITY CLASSIFICATION

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ANNEX C SOIL AND LAND CAPABILITY CLASSIFICATION

1. General

This report summarizes results of on-site soil surveys and land use surveys which were conducted during the period of September through October, 1990 and January through March, 1991.

The area surveyed is located in a vast flat plain of River Ganges. The soil consists of alluvial deposit, which varies delicately by slight sloping between dry land, moderate land and wet land. Concentration of "kankar" (concretion of calcium carbonate) in soil stratum makes the soil alkaline. Furthermore, salts are concentrated to the soil surface during Rabi season. During Kharif season, many areas were found moist due to high ground water table. Soil surveys were conducted on the basis of above mentioned knowledge. Assistance was provided by Agriculture Department of UP and CADA in conducting the soil surveys. Soil surveys in four (4) Representative Areas were accompanied by representatives of the Office of Assistant, Soil Survey Office.

Based on the results obtained by the surveys, it was possible to discuss with Agencies concerned on the soil amendment.

On the subject of present land use, strong interrelation was identified between soil and land use, and between soils and cultivated plants. Cooperation was offered by the Remote Sensing Application Center, Uttar Pradesh for mapping of land use.

2. Soil Surveys

2.1 Soil Characteristics in the Sharda Canal Command Area

Soil in the Sharda Canal Command Area are formed by alluvial deposits by the Sharda River, the Ganges River and their tributaries, which are composed of weathering materials originating sand stone, shale, lime stone in the Himalaya Range and gravel or stone are not seen in the soils. Topography is generally flat and land system is divided into three portions; a) Lowland which is located in lower portion adjacent to inland ponds and marshy area such as ox-bow lakes; b) Upland which is located on the natural levee formed along river course; and c) vast Midland which forms back plain of Upland and surround Lowland.

Coarse-textured and high permeability soils are predominant in Upland, where ground water table is deep. pH of these soils shows neutral to slight alkalinity and is utilized for cultivation most extensively because of its high fertility and productivity level. Upland crops are mainly planted on these soils and some vegetables or paddy rice are also cultivated. Drainability is very good and no major constraints are confirmed for these soils. This soil type is the most suitable for cultivation and sufficient water supply will enhance the production to the maximum level. Trees like mango (*Mangifera indica*), peepal (*Ficus religiosa*) and shisam (*Dalbergia sissoo*) grow very well on these soils. Four soil series are confirmed as Upland soil in the Sharda Command Area.

Midland has generally two typical soil characteristics as follows; i) medium texture and permeability with medium ground water level, and; ii) fine texture, low permeability with shallow ground water table.

The former soils show moderate alkalinity (pH < 8.5) to strong alkalinity (pH 8.5 - 9.0) with small concretion of calcium carbonation in its deep layers. Areas with these soils are mostly cultivated as paddy field, but the growth rate is low on the soils of strong alkalinity of about pH 9.0. However, proper drainage improvement or input of soil amendment will bring higher productivity to soils of this type. Soils located in depression has fine texture and high moisture due to poorly drained condition, which makes ploughing and/or other farming practice very difficult. Drainage improvement is indispensable particularly for these soils. Other than the above-mentioned trees, neem (*Azadirachta indica*) is seen on the soil of moderate alkalinity (pH < 8.5) and babool (*Acacia arabica*) is seen on the soils of strong alkalinity (pH 8.5 - 9.0). There are seven soil series of this type in the Sharda Command Area.

The latter soils distributed in poor drainage areas where lack of proper drainage improvement brings about shallow ground water table and partial waterlogging. So called "usar" is predominantly formed in these soils whose alkalinity is extreme (pH > 9.0). Hard concretion of calcium carbonate so-called "kankar" is accumulated in soil and some soils have extremely high content of magnesium. On the other hand, extent of soils with high content of sodium is not estimated very much. Paddy rice is the major crop cultivated on these soils because of its low permeable soil condition, but only half of the total area can be cultivated and productivity is low. Surface layer of these soils show high to extreme alkalinity and saline accumulation is also seen in Rabi season. Soil amendment and leaching for alkalinity should be applied properly for better production. There are three soil series of this type in the Sharda Command Area.

Lowland soils are composed of alluvial deposits, of which texture is generally fine. Lowland is formed around ponds or ox-bow lakes surrounded by Midland and ground water table is shallow through the year. Thus these soils show low alkalinity of pH 7.0 to 7.5. Drainability and permeability of these soils are very low. Since these soils are distributed depressed portion, they are subject to frequent flood, which hampers high productivity of crops. Intensive drainage improvement is indispensable for these soils even for paddy cultivation and plowability should be improved for upland crop cultivation as well. Three Lowland soil series are confirmed in the Sharda Canal Command Area.

Extent of soils in the Sharda Canal Command Area is summarized below:

| Land System | Area | Name of Soil Series |
|--------------------|----------------------|--|
| Upland | 816,000 ha (23.8%) | Lakhpera, Gangauli, Tanda, Amethi |
| Midland type i) | 1,534,800 ha (44.9%) | Kakari, Saidapur, Ghari, Meraura, Hasanpur, Utelwa, Kasturi |
| type ii) | 465,700 ha (13.6%) | Tamoria, Sitauli, Pokhara |
| Lowland | 220,900 ha (6.5%) | Goshainganj, Uttargaon, Bajgahani |
| Others | 382,300 ha (11.2%) | |

Soil capability of the Sharda Canal Command Area is shown in Table C.1.

2.2 Outline of the Study Areas

(1) Location and area

Soil surveys were conducted in four Representative Areas in following Districts.

- Sarojini Nagar District : Amausi distributary and its minors which are distributed by Lucknow Branch.
- Sataon District : Maurawan Distributary and its minors which are located on the downstream of Asiwani Branch.
- Sursa District : Badaicha Distributary and its minors which are located on the downstream of Hardoi Branch.
- Purwa District : Minors which are supplied by Purwa Branch.

Total area surveyed is 111,352 ha, out of which the command area of irrigation canals is 51,135 ha.

(2) Topography

In the Study Areas, the Loni Nadi and its tributaries in Purwa District, and the Sai River and its small tributaries in three other Districts flow into the Ganges River.

The basin of these tributaries is classified into eight categories by topography as follows:

- Nearly flat old alluvial plain
- Nearly flat but temporarily waterlogged old alluvial plain
- Nearly flat and permanently waterlogged old alluvial plain
- Gently sloped (3 - 5°) old alluvial plain
- Moderately sloped (5 - 10°) old alluvial plain
- Strongly sloped (10 - 15°) old alluvial plain
- Dissected uplifting old alluvial plain
- Recent alluvial flood plain

During Kharif season, flooding water from the Ganges River and its tributaries erodes, adjacent plain and depressed areas.

(3) Climate

Climate in the Study Areas belongs to semi-arid tropical monsoon. Cold days begin on November 15th and end on March 15th. Hot summer months are May and June. Monsoon begins generally in late June and lasts until the first week of October.

1) Atmospheric temperature and precipitation

Climatic condition of the Sharda Canal Command Area is summarized in Table C.2. Yearly average atmospheric temperature in the Study Areas is 25.2°C in Lucknow and Kanpur, and 25.3°C in Hardoi, without significant difference between the two.

The highest monthly temperature in May is 39.2°C in Lucknow, 40.1°C in Kanpur, and 38.7°C in Hardoi. The lowest monthly temperature is respectively

8.0°C and 8.7°C in Lucknow and Hardoi in January, and 7.9°C in Kanpur in December.

Annual average precipitation is about 870mm in Unnao, and 790mm in Hardoi, out of which about 80% in the months of July through September.

2) Evaporation

Estimated annual evapotranspiration estimated by Penman Method is about 1,820 mm in Lucknow and Kanpur, and 1,500 mm in Hardoi, which are about twice as much as annual precipitation.

3) Soil temperature

According to the information available in Lucknow, annual average soil temperature is 25.3°C, while that of summer months is 31.2°C, and winter months is 17.4°C. Soil temperature as such is relatively high and is classified as hyperthermic within the family of soil classifications.

Water balance calculated from precipitation and evaporation is negative, and it is implied that soil is deficient of moisture for 90 days or more. Moisture deficiency is more evident in the soil of higher elevation than in the soil of lower elevation.

(4) Geology

The soils of the Study Areas are formed of deposits which were carried by the Ganges River from Himalaya and belong to the Pleistocene, the Quaternary Period. The deposits originates sandstone, shale, and lime stone, and composition of the deposits is silt and sand. Depth of deposits is estimated to be 400 - 2,000 m.

(5) Agriculture

Geographical area of the Study Areas is 112,349 ha out of which net cultivated area is about 67,000 ha, equivalent to 60% of total area. Primarily cultivated plants during Kharif season is paddy-rice, occupying nearly 70% of total cultivated area. Other cultivated plants are arhar, jowar, bajara, urd, sugarcane and so on.

During Rabi season, primarily cultivated plants is wheat occupying about 80% of total cultivated area. Other cultivated plants are grams, pea, barley, mustard and various vegetables.

2.3 Soil Series and Characteristics

(1) Procedure of soil survey

Soil surveys were conducted with assistance of Department of Agriculture, UP and CADA. The surveys consisted of soil classification for confirming physical and chemical properties of soils. Also capability of soils for cultivation was evaluated. 2.5 km grids were marked on a map in a scale of 1 in 50,000, and pits for soil survey were dug. For each pit, survey was conducted with respect to every stratum for soil texture, soil structure, pH, oxidized iron mottles, soil color, concretion (ferro-manganese, calcium carbonate), stickiness and plasticity, pores and plant roots distribution, as well as total soil drainability, soil percolation, degree of moistness, and pattern of soil strata sedimentation. Those strata which are close enough to each other were classified into the same category of soil. Boundaries of those strata which are different from each other were marked on the map after having confirmed plant and arboreal vegetation by 0.5 to 1m deep test pits.

It was confirmed that, in India, elevation and sloping of land are closely interrelated with soil drainability, vegetation, and soil properties. Land system is classified into five categories, viz. Upland, Mid-Upland, Midland, Mid-lowland and Lowland to facilitate accurate survey of plain.

Soil samples were taken from representative profiles to the depth of 1.5 m. Samples of cultivated soil together with the samples of strata of approximately 25 cm depth underneath the cultivated soil were also taken from 0.5 - 1 m deep test pits. Number of pits and number of samples taken are summarized below.

(Unit: nos.)

| District | Respective Profile | | Test Pit Profile | | Total | |
|----------------|--------------------|---------|------------------|---------|-------|---------|
| | Pits | Samples | Pits | Samples | Pits | Samples |
| Sarojini Nagar | 4 | 16 | 20 | 41 | 24 | 56 |
| Sataon | 4 | 16 | 15 | 30 | 19 | 46 |
| Sursa | 4 | 16 | 39 | 80 | 43 | 96 |
| Purwa | 8 | 34 | 16 | 32 | 24 | 66 |
| Total | 20 | 82 | 90 | 183 | 110 | 264 |

(2) Soil analysis

In collaboration with Agriculture Department of UP and CADA, soil analysis was conducted for soil samples taken from representative profiles on following items.

- Texture (sand, silt, clay)
- Water holding capacity
- Organic carbon
- pH
- Electrical conductivity (E.C.)
- Cation exchangeable capacity (C.E.C.)
- Exchangeable cation (Ca^{++} , Mg^{++} , K^+ , Na^+)
- Available P_2O_5 , K_2O
- Calcium carbonate content

Samples taken from test pits were analyzed on two items, pH and E.C., by Study Team of JICA of which results are shown in Tables C.5 and C.6.

(3) Description of soil series

Soil taxonomy adopted in India is based on the soil taxonomy adopted by USDA (United States Department of Agriculture), to which the survey conforms. The names of soil series confirmed and stated in the reports of soil analysis published by Agriculture Department of UP are in conformity with the said names of soil series. However, different names were given to the soil series which are apparently different from the said soil series. After consultation with Soil Survey Offices in Lucknow and Unnao, 15 names of soil series were definitely confirmed in four districts, viz., Lucknow, Hardoi, Unnao and Rae Bareli. Soil taxonomy adopted in the soil mapping is in compliance with the Indian system which utilizes numerical expressions.

Names of soil series and numbers of soil mapping unit. in the four Districts surveyed are summarized below.

| Soil Map Unit No. | Names of Soil Series | Area (ha) | Percentage (%) |
|-------------------|----------------------|-----------|----------------|
| 1 | LAKHPERA | 1,138 | 1.0 |
| 2 | GANGAULI | 13,473 | 12.0 |
| 3 | TANDA | 3,292 | 2.9 |
| 4 | AMETHI | 2,809 | 2.5 |
| 6 | KAKARI | 9,755 | 8.7 |
| 7 | TAMORIA | 888 | 0.8 |
| 8 | SITHAULI | 15,760 | 14.0 |
| 9 | SAIDAPUR | 15,655 | 13.9 |
| 10 | GARHI | 11,151 | 9.9 |
| 16 | MERAURA | 3,325 | 3.0 |
| 11 | HASANPUR | 5,226 | 4.7 |
| 12 | UTELWA | 3,936 | 3.5 |
| 13 | POKHARA | 6,683 | 6.0 |
| 14 | GOSHAINGANJ | 5,122 | 4.5 |
| 15 | UTTARGON | 2,021 | 1.8 |
| Miscellaneous | 12,115 | 10.8 | |
| Total | 112,349 | 100.0 | |

Fig. C.1 shows boring log of representative profiles. Soil map is also attached as Figs. C.2 to C.5. Areas of each soil series in four Districts are shown in Table C.3.

Characteristics of each soil series and representative profiles are mentioned in the following.

LAKHPERA Series

i) Location of representative profile

The pedon was studied in Khasra No.115 of village Lakhpera, Goshainganj Block, in Lucknow District. The village is situated about 33km away from Lucknow on Lucknow-Sultanpur Road.

ii) General features

The Lakhpera series is shown as No.1 in the soil map. The Lakhpera belongs to mixed, hyperthermic family of Typic Ustipsamments. These soils are very deep and well to excessively drained shown on Upland. The slope varies

between 3 and 15%. The surface texture are loamy which merges into subsoils of fine sand. Both the surface color and subsurface color is brown (10YR4/4M). The ground water table fluctuates within 8 to 12 meter throughout the year. The water holding capacity is low and permeability is high.

GANGAULI Series

i) Location of representative profiles

The pedon was locally studied in village Madharmau Khurd situated on Lucknow-Sultanpur Road. Moreover, the pedon description and analytical data pertains to its original location of Gangauli, which was studied in cultivated field of village Gangauli, Tehsil Fatehpur, District Barabanki. Village is situated about 12km away from Bindaura town.

ii) General features

The Gangauli series shown as No.2 in soil map. The Gangauli series belongs to coarse, loamy mixed, hyperthermic family of Udic Ustochrepts. These soils are very deep, and well drained distributed on Upland. The slope is 1 to 10%. The surface texture is loamy to silty which merges into silty to loamy sub soils. The soil color is dull yellowish brown to brown. The ground water table fluctuates within 2 to 10 meters through out the year. The water holding capacity of the soil is medium and permeability is moderately high.

TANDA Series

i) Location of representative profile

The pedon was studied in Village Rahmat-Nagar, situated on Lucknow - Sultanpur Road. Moreover, the pedon description and analytical data pertains to its original location of Tanda, which was studied in plot no.2644 of village Tanda, Block Jagdishpur, District Sultanpur, situated on Jagdishpur - Sultanpur Road.

ii) General features

The Tanda series is shown as No.3 in soil map. Tanda series belongs to Loamy (Calcareous), mixed, hyperthermic family of Topic Ustochrepts. These soils are very deep and well drained distributed on rolling and undulating topography with mildly dissected landscape. The slope varies from 1 to 10%. The surface texture is loamy to silty which merges into gravelly silty to clayey subsoils. Both the surface and subsurface color are dull yellow orange to dull yellow brown. These soils are moderately eroded. Exposed lime Kankar are commonly found on the surface. These soils are calcareous throughout the depth. The ground water table fluctuates within 5 to 10 meters throughout the year. The water holding capacity of the soils is medium and permeability is moderate.

AMETHI Series

i) Location of representative soil profile

The pedon was studied in Khasra No.744 of village Amethi, Block Goshaingarj, District Lucknow. The Amethi Village is about 28 kms away from Lucknow on Lucknow-Sultanpur Road.

ii) General features

The Amethi series is shown as No.4 in soil map. Amethi series belongs to silty, mixed, hyperthermic family of Udic Ustochrepts. These soils are very deep and well drained distributed in Upland. The slope varies from 1 to 3%. The surface texture is loamy to silty which merges into silty to clayey sub soils. Both the surface color and sub surface color are dull yellowish brown. The ground water table fluctuates within 5 to 10 meters through out the year. The water holding capacity of soil is medium and permeability is moderate.

KAKARI Series

i) Location of representative profile

The pedon was studied in village Bahrauli, situated on Gangaganji-Nagram link road. Moreover, the pedon description and analytical data pertains to its

original location of Kakari which was studied in Kakari village of Trivediganj block, district Barabanki, situated 7 km in the south of the Lucknow-Sultanpur Road and 48km away from Lucknow city.

ii) General features

The Kakari series is shown as No.6 in soil map. Kakari series belongs to silty, mixed, hyperthermic family of Udic Ustochrepts. These soils are very deep and moderately well drained shown in Mid-upland. The slope varies between 0.1 and 3%. The surface texture is loamy to silty which merges into clayey to loam sub soils. Both the surface color and sub surface color are dull yellow orange to dull yellowish brown. The ground water table fluctuates within 5 to 10 meters throughout the year. The water holding capacity of the soil is medium and permeability is moderate.

TAMORIA Series

i) Location of representative profile

The pedon was originally studied in uncultivated lands of village Tamoria, Block Mohanlalganj, District Lucknow, which is about 40 km away from Lucknow.

ii) General features

The Tamoria series is shown as NO.7 in soil map. Tamoria series belongs to clayey (calcareous) mixed hyperthermic family of Typic Halaquepts. These soils are very deep, and moderately to well drained distributed in Mid-upland. The slope varies between 0.1 and 3%. The surface texture is silty to clayey which merges into clayey sub soils. Both the surface color and subsurface color are dull yellow orange. Ground water table fluctuates from 2 to 5 meters throughout the year. The water holding capacity of the soil is medium and permeability is moderately low.

SITHAULI Series

i) Location of representative profile

The pedon was studied in Khasra number of village Sithauli Khurd, Block Goshainganj, Tehsil Mohanlalganj, District Lucknow.

ii) General features

The Sithauli series is shown as No.8 in soil map. Sithauli series belongs to clayey, (calcareous) mixed, hyperthermic family of Typic Halaquepts. These soils are very deep, and moderately to well drained distributed in Mid-upland. The slopes varies from 0.1 to 3% and nearly flat on the old alluvial plain. The surface texture is clayey to silty which merges into clayey to heavy clayey subsoils. Both the surface color and subsurface color is dull yellow orange to dull yellowish brown. These soils show strong alkaline and are calcareous throughout the profile. The ground water table fluctuates 3-5 meters throughout the year. They are none to slightly eroded. The water holding capacity of the soils is medium and permeability is low.

SAIDAPUR Series

i) Location of representative profile

The pedon was studied in Khasra No.356 of village Saudaoyr Daydoyr. The village is situated in the south of Lucknow-Sultanpur Road at a distance of 2km from the road.

ii) General features

The Saidapur series is shown as NO.9 in soil map. The Saidapur series belongs to silty, mixed hyperthermic family of Aeric Haplaquepts. These soils are very deep and moderately to well drained distributed on the Mid-upland. The slope varies between 0 and 1%. The surface texture is silty clay loam to silty clay which merges into silty clay to silty clay loam subsoils. The surface texture is silty clay loam to silty clay which merges into silty clay to silty clay loam subsoils. The surface color is dull yellowish brown to dull yellowish or brown to dull yellow orange. These soils are calcareous throughout the

profile. The ground water table fluctuates within 0.75 to 1.80 meters throughout the year. The water holding capacity of the soil is medium and permeability is moderately low.

GARHI Series

i) Location of representative profile

The pedon was finally studied in Khasra No.1073 of village Garhi of Mohanlalganj, District Lucknow which is about 35km away from Lucknow.

ii) General features

The Garhi series is showed as No.10 in soil map. Garhi series belongs to fine clayey, mixed hyperthermic family of Aeric Haplaquepts. These soils are very deep and moderately to well drained distributed on Mid-upland. The slope varies between 0.1 and 3%. The surface texture is silty which merges into silty clay to silty clay loam subsoils. The surface color and sub-surface color are dull yellowish brown to dull yellow orange. These soils are calcareous throughout the profile. The ground water table fluctuates within 2 to 5 meters throughout the years. The water holding capacity of the soils is medium and permeability is moderately low.

MERAURA Series

i) Location of representative profile

The pedon was locally studied in the cultivated field of village Badaicha, Block Sursa, District Hardoi. The village is situated about 7.5km away from Hardoi.

ii) General features

The Meraura series is showed as No.16 in soil map. The Meraura series belongs to coarse, loamy mixed hyperthermic family of Aeric Haplaquepts. These soils are very deep, and moderately to well drained distributed on Mid-upland. The slope varies from 0.1 to 3%. The surface texture is silty to clayey which merges into silty to loamy subsoils. The surface color is dull

yellowish brown and sub-surface color varies from dull yellowish brown to yellowish brown. The ground water table fluctuates within 3 to 5 meters throughout the year. The water holding capacity of the soil is medium and permeability is moderately low.

HASANPUR Series

i) Location of representative profile

The pedon was locally studied in khasra No.3 of village Maghua. Moreover, the pedon description and analytical data pertains to its original location of Hasanpur, which was studied in Khasra No.644 of Hasanpur village, Block Ttibrfihsnj, District Barabanki. The village Hasanpur is situated about 8km.in the south of Lucknow-Sultanpur Road and about 53km away from Lucknow.

ii) General features

The Hasanpur, series is shown as No.11 in soil map. Hasanpur series belongs to fine, silty mixed hyperthermic family of Aeric Haplaquepts. These soils are very deep and imperfectly drained distributed on Midland. The slope varies 0.1 to 1%. The surface texture is silty to clayey which merges to clay sub soils. The surface color is dull yellow orange and sub-surface color varies dull yellowish brown to grayish yellow brown. These soils are calcareous throughout the profile. The ground water table fluctuates from 1 to 3 meters during the year. The water holding capacity of the soil is medium and permeability is low.

UTELWA Series

i) Location of representative profile

The pedon was locally studied in village Sarai Majhawan which is located about 32km from Lucknow. Moreover, the pedon description and analytical data pertains to its original location of Utelwa which was studied in cultivated plot No.259 on the right side of the Sultanpur-Lucknow Road.

ii) General features

The Utelwa series is shown as No.12 in soil map. Utelwa series belongs to clayey mixed hyperthermic family of Aeric Haplaquepts. These soils are very deep and imperfectly drained distributed on Midland and depression. The slope varies from 0.1 to 1%. Both the texture of surface soil and subsoils are clayey. Both the surface color and sub surface color are dull yellow orange to dull yellowish brown. These soils are calcareous throughout the profile. The ground water table fluctuates within 2 to 5 meters throughout the year. The water holding capacity of soil is medium and permeability is low.

POKHARA Series

i) Location of representative profiles

The pedon was studied in village Dand Nagar which is situated 30km away from Lucknow. Moreover, the pedon description and analytical data pertains to its original location of Pokhara which was studied at a distance of 8 km on right side of the Lucknow-Sult anpur Road.

ii) General features

The Pokhara series showed No.12 in soil map. Pokhara series belongs to clayey mixed hyperthermic family of Typic Haplaquepts. These soils are very deep and imperfectly drained distributed on Mid-lowland. The slope varies from 0.1 to 1%. The surface texture is clayey which merges to clayey to silty subsoils. The surface color is dull yellow orange and sub-surface color is dull yellow orange or dull yellowish brown to grayish yellow brown. These soils show very strong alkalinity. These soils are calcareous throughout the profile. The ground water fluctuates within 1 to 3 meters throughout the year. The water holding capacity of soil is moderate to high and permeability is moderate to low.

GOSHAINGANJ Series

i) Location of representative profile

The pedon was studied in Khasra No.272 of Goshainganj, Block Goshainganj, District Lucknow. The Goshainganj is about 23km away from Lucknow on Lucknow-Sultanpur Road.

ii) General features

The Goshainganj series is shown as No.14 in soil map. Goshainganj series belongs to clayey mixed hyperthermic family of Aeric Haplaquepts. These soils are very deep and poorly drained distributed on lowland. The slope is 0.1 to 1%. Both the surface texture and sub-surface texture are clayey. The surface color is grayish yellow brown to dull yellow orange and sub-surface color is grayish yellow brown. These soils are calcareous throughout the profile. The ground water table fluctuates within a 3 to 5 meters through out the year. The water holding capacity of the soil is high and permeability is very low.

UTTARGAON Series

i) Location of representative profile

The pedon was locally studied in village Samarathpur. Moreover, the pedon description and analytical result belong to original pedon which was studied in village Uttargaon, Tehsil Amethi, District Sultanpur. Profile was studied in Khasra No.481 of Uttargaon village.

ii) General features

The Uttargaon series showed No.15 in soil map. Uttargaon series belongs to fine, clayey mixed hyperthermic family of Aeric Haplaquepts. These soils are very deep and poorly drained distributed on Lowland. The slope is about 0.1%. Both the surface texture and sub- soils texture are clayey to heavy clayey. The surface color is grayish to yellowish brown and sub-surface color varies from grayish yellow brown to dull yellowish brown. These soils are calcareous throughout the profile. The ground water table fluctuates 1 to

3 meters throughout the year. The water holding capacity of soil is high and permeability is low.

2.4 Soil Taxonomy

Basic concept of classification of soils and mapping of soil series were as follows; viz.,

i) soils composed of similar base materials, ii) soils with similar pattern of deposits, and iii) soils with nearly the same profile, are considered to belong to the same soil series and mapping unit.

The Study Areas are characterized by; i) climate in semi-tropical monsoon belt where Kharif season and Rabi season are observed regularly, ii) extremely flat alluvial plain in the basin of the Ganges River where precipitation is concentrated during Kharif season, and habitual flood attacks Midland and Lowland due to flat topography, which shows sensitive variation of drainability by ground slope, iii) content of organic matter in the soil is less than 1% due to hyperthermic soil, which brings soil color of ochric, iv) dried-up soil condition with lower ground water table due to less rainfall and twice as much evapotranspiration as precipitation, iv) the soil turns into alkaline due to increased content of carbonates, v) concretion of calcium carbonate and ferro-manganese are observed to large extent, and vi) some soils show concentration of salts to the surface suggesting both alkaline and saline soil characteristics.

Taking above mentioned soil characteristics into account, following order was established in conformity to the USDA Soil Taxonomy and soils were classified into soil series shown in Table C.4.

Entisols

This soil series represents recent alluvial plains without strata divergence and without effects of ground water within the strata. Surface soil color is ochric, and soil texture is coarse. This series corresponds with Lakhpera soil series.

Inseptisols

Other soil series were classified into Inseptisols because;

i) they are formed in old alluvial plains, ii) they show ochric surface soil color and characteristics of alkaline soil with concretion of carbonates of lime and manganese, and iii) they are featured by existence of influence by ground water and existence of carbonates within the strata.

3. Land Capability Classification

3.1 Land Use Characteristics in the Sharda Canal Command Area

Land use in India is generally classified into eight (8) categories. Present land use in the Sharda Canal Command Area and the Hardoi Branch Command are shown in Table C.7 and summarized below.

| No. | Land Use | Sharda Area | | Hardoi Area | |
|-----|-------------------------|-------------|--------|-------------|--------|
| | | (1,000 ha) | (%) | (1,000 ha) | (%) |
| 1 | Net cultivated | 2,392.3 | 70.0 | 1,022.9 | 64.2 |
| | (1) Irrigated | (1,724.3) | (50.4) | (779.0) | (49.9) |
| | (2) Non-irrigated | (668.0) | (19.5) | (243.5) | (15.3) |
| 2 | Current fallow | 250.4 | 7.3 | 145.9 | .2 |
| 3 | Other fallow | 114.4 | 3.3 | 72.4 | 4.5 |
| 4 | Barren but arable lands | 93.9 | 2.7 | 61.6 | 3.9 |
| 5 | Garden and trees | 50.7 | 1.5 | 32.2 | 2.0 |
| 6 | Pasture lands | 16.4 | 0.5 | 12.9 | 0.8 |
| 7 | Usar/uncultivable | 93.6 | 2.7 | 57.3 | 3.6 |
| 8 | Forest | 105.3 | 3.1 | 59.7 | 3.8 |
| 9 | Others | 302.7 | 8.9 | 127.6 | 8.0 |
| | Total | 3,419.7 | 100.0 | 1,592.6 | 100.0 |

Source: 1/; Milan Khasra

70%, viz., 2,392,000 ha out of the total area of the Sharda Canal Command (3,420,000 ha) is net cultivated land, of which approximately 72% (1,724,000) is irrigated. Total fallow area occupies more than 10% (365 ha) of the total area. The main reason of being fallow is insufficient irrigation water. Not only fallow land but also great extent of "net cultivated area" can not harvest due to lack of water corresponding to sown area. Tree/garden land and pasture land occupies only 2% (67,000 ha) in total. Barren but arable land and

usar/uncultivable land occupies small area of about 3% (94,000 ha) respectively. Forest has reduced to no more than 3% (105,000 ha) due to pressure of increasing population.

Local characteristics of land use reflecting improvement level of irrigation facilities and soil characteristics are summarized as follows;

- a) "Net cultivated area" and "Irrigated area" in the southern area are lower
- b) "Fallow" and "Barren but arable land" occupy larger extent in the southern area
- c) "Usar/uncultivable land" occupies lower percentage of 1% to 3% of the total area in the northern districts, while it occupies higher percentage of 3% to 5% in the southern districts, Hardoi, Lucknow, Unnao, and Rae Bareli.

Each item of land use in the Hardoi Branch Command Area (1,593,000 ha) shows almost the same percentage as that of the Sharda Canal Command. "Net cultivated area" occupies 64% (1,023,000 ha), of which "Irrigated area" is 76% (779,000 ha). "Fallow land" is 14% (218,000 ha) of the Total area, "Garden and tree land" occupies 3% (45,000 ha) in total, while "Usar/uncultivable land" and "Barren but arable land" account for 3.9% and 3.6% respectively, which are a bit high percentage than those of the Sharda Canal Command.

Paddy rice is generally planted in the "cultivated land" where soil texture is medium to fine with high moisture holding capacity and expansion of paddy field is attempted even though soils show high pH. According to soil survey conducted in Stage 1 Study, effect of leaching by paddy cultivation was confirmed, of which pH is controlled from 8.6 to 9.0. However soils of this high pH are not suitable for paddy cultivation, which results in low growth rate and percentage of ripening in conjunction with poor farming management.

Cultivated area where upland crops planted in Kharif has medium textured soils and ground water table is low. Paddy field where upland crops are planted in Rabi has high productivity with desirable condition of soil with high porosity and low ground water table. However, unit yield becomes low in some part where pH is high due to increasing cations.

Mango which is tolerable against alkalinity is predominantly cultivated in "Garden and tree area" regardless of alkalinity. In the area where ground water table is high and pH of soil is generally high, soil dressing is carried out aiming at increasing depth of workable soil layer, but growth rate seemed to be affected by pH more or less.

3.2 Land Use Characteristics in the Representative Areas

(1) Land use characteristics by soil and land system

Cropping pattern or land use pattern largely depends on soil condition. Upland soil series is easy-to-plough and widely cultivated because of its high productivity. Major crops in Kharif in Upland are jowar, arhar, urd, bajara, groundnuts and maize. Paddy is not planted in Upland due to its high permeability. In Rabi season, wheat is major crop and pea, gram, barley, mustard and vegetables are cultivated.

In Mid-upland, major crops in Kharif are arhar, Maize and bajara, while in Rabi, wheat, mustard and vegetables are cultivated. Paddy rice or sugarcane are also planted on Tamoria and Sithauli soil series, which are regarded as usar.

In Midland, soils possess low productivity because of its high alkalinity and low permeability. Consequently, Paddy rice is planted in Kharif if irrigation water is supplied. Otherwise this area is remained as fallow land. In Rabi season, wheat is principal crops but growth rate is rather low.

In Mid-lowland and Lowland, paddy rice is planted in Kharif. Productivity is very low. Mid-Lowland soil series, Pokhara is almost remained uncultivated as usar or babul tree is afforested scatteringly. In Rabi season, wheat is planted predominantly.

(2) Trend in land use

In order to obtain last decade's trends in land use and water resources, and agricultural inputs and outputs, data for related blocks in respective Study Area were collected. They are shown in Table C.8 to C.11.

Some of the important trends in last 10 year data can be summarized as below:

- Decline in the net sown area, ranging from 0.9 to 1.0 percent per annum in 4 blocks, excluding Sarojini Nagar under an effect of urbanization, probably due to a combination of factors including waterlogging, usar and related problems;
- Significant decline in the net irrigated area in Sursa and Sataon blocks; suggesting that increase of water logging area and/or usar area in Sursa block and that

decreasing water supply volume in the light of deepening ground water table in Sataon block;

- Rapid increase in the growth rates of private pump sets with boring and private tubewells; and
- Increasing trend of utilization for food grain production in irrigated land.

(3) Present land use by Study Area

According to land use classification which is generally adopted in India, present land use of the four Study Areas was classified based upon "Milan Khasra (cadaster)" by village (Tables C.12 to C.15). Land use of the four Study Areas in 1989/1990 and that of Hardoi Branch Command are summarized as follows:

| No. | Land Use | Sarojini Nagar | | Sataon | | Sursa | | Purwa | | All Hardoi Branch | |
|-----|------------------------|----------------|--------|----------|--------|----------|--------|---------|--------|-------------------|--------|
| | | (ha) | (%) | (ha) | (%) | (ha) | (%) | (ha) | (%) | (ha) | (%) |
| 1 | Net cultivated | 18,807 | 55.9 | 14,713 | 57.1 | 20,255 | 65.1 | 13,492 | 64.8 | 10,299 | 64.2 |
| | Irrigated | (13,117) | (39.0) | (10,028) | (38.9) | (15,313) | (49.2) | 10,958 | (52.6) | (7,790) | (48.9) |
| | Non-irrigated | (5,740) | (17.1) | (4,685) | (18.2) | (5,171) | (16.6) | (2,457) | (11.8) | (2,435) | (15.3) |
| 2 | Current fallow | 4,532 | 13.5 | 4,166 | 16.2 | 3,482 | 11.2 | 2,295 | 11.0 | 1,459 | 9.2 |
| 3 | Other fallow | 760 | 2.3 | 498 | 1.9 | 273 | 0.9 | 741 | 3.6 | 724 | 4.5 |
| 4 | Barren but arable land | 1,286 | 3.8 | 1,329 | 5.2 | 2,140 | 6.9 | 923 | 4.4 | 616 | 3.9 |
| 5 | Timber | 773 | 2.3 | 636 | 2.5 | 227 | 0.7 | 327 | 1.6 | 322 | 2.0 |
| 6 | Permanent pasture | 297 | 0.9 | 244 | 0.9 | 152 | 0.5 | 66 | 0.3 | 129 | 0.8 |
| 7 | Usar/uncultivable | 992 | 2.9 | 640 | 2.5 | 817 | 2.6 | 669 | 3.2 | 573 | 3.6 |
| 8 | Forest | 2,192 | 6.5 | 73 | 0.3 | 1,318 | 4.2 | 17 | 0.1 | 597 | 3.8 |
| 9 | Miscellaneous | 4,021 | 11.9 | 3,464 | 13.4 | 2,441 | 7.8 | 2,294 | 11.0 | 1,276 | 8.0 |
| | Total | 33,660 | 100.0 | 25,763 | 100.0 | 31,105 | 100.0 | 20,824 | 100.0 | 15,926 | 100.0 |

Source: Milan Khasra by published by Tehsil Office

In general, 60% of total land is cultivated area and 60% to 80% of cultivated land is irrigated. Rate of irrigated land is low in Sataon and Sarojini Nagar Study Area which were selected as "irrigation problem area". Comparing to other areas in the Hardoi Branch Command, rate of current fallow land is high. Particularly in Sarojini Nagar and Sataon Study Area, current fallow land occupies higher extent, which can be considered due to low availability of irrigation water. Also in Sarojini Nagar and Sataon Study Area, tree crops

which require less water is cultivated to larger extent comparing to other Areas. This is also caused by scarcity of irrigation water.

Usar itself does not occupy higher rate as a whole comparing with all the Hardoi Command Area. Parts of the Areas where usar is predominant are, middle reach of Amausi Distributary in Sarojini Nagar Study Area, northern of part of Sataon Study Area., southern part along Marsa Distributary in Sursa Study Area and eastern part of Purwa Study Area, that is; in/around Basha Depression. Rate of forest land is extremely low in Sataon and Purwa Study Area.

3.3 Land Capability Classification

(1) Criteria of land capability classification

On the basis of the results of soil survey, land capability was classified by kind and degree of intrinsic limiting factors, inhibition factors, and possibilities of soil capability deterioration and so on.

Criteria of soil capability classification are as follows:

- I:** The land which is capable of yielding sufficient harvest, and has almost no limitations for proper soil management and no possibility of soil capability deteriorating, and is therefore considered a good arable land.
- II:** The land which is capable of yielding sufficient harvest, and has almost no limiting and inhibition factors for proper soil management, but may have certain possibilities of deterioration of soil capability .
- III:** The land which is capable of yielding sufficient harvest, but has considerable limiting or inhibition factors for proper soil management and considerable possibilities of soil capability deterioration. Further classification into III₁ and III₂ is made for the land which is classified into III showing certain differences in limiting factors and inhibition factors.
- IV:** The land which has extremely strong limiting and inhibition factors for yielding sufficient harvest and for proper soil management, and is therefore considered to provide extreme difficulty for cultivation. Further classification

into IV₁ and IV₂ is made for the land which is classified into IV showing certain differences in limiting factors and inhibition factors.

Land capability was assessed synthetically based upon possibility of improvement by means of; i)proper input such as fertilizer, ii)soil amendment, iii)irrigation and drainage, and iv)present soil conditions. Land capability classes are shown in Table C.16.

Furthermore, existing constraints and proper management for each class is summarized in Table C.17.

TABLES

Table C.1 Soil Characteristics of the Sharda Canal Command Area (1/8)

| No. | District | Block | Geographical Area (ha) | Name of Soil Series | | | | | | | | | | | | | | | | | | | |
|-----|--------------|-------|------------------------|---------------------|--------------|-----------|------------|-----------|-------------|------------|--------------|----------|-------------|----------|-------|----------|--------|----------|--------|--------|-------|--------|--------|
| | | | | LAKHPERA(LP) | GANGAULI(GI) | TANDA(TD) | AMETHI(AM) | KAKAR(KK) | TAMORIA(TM) | SITALI(SI) | SAIDAPUR(SD) | GARI(GR) | MERAURA(MR) | | | | | | | | | | |
| | | | | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | | | | |
| 1 | Nainital | | | 68,522 | (9.5) | 7,361 | (10.7) | 0 | (0.0) | 3,621 | (5.3) | 4,383 | (6.4) | 0 | (0.0) | 8,866 | (12.9) | 5,100 | (7.4) | 0 | (0.0) | 14,758 | (21.6) |
| | | | | 35,210 | (10.0) | 3,653 | (11.0) | 0 | (0.0) | 2,491 | (7.5) | 1,661 | (5.0) | 0 | (0.0) | 4,982 | (15.0) | 1,993 | (6.0) | 0 | (0.0) | 7,771 | (23.4) |
| | | | | 35,312 | (9.0) | 3,708 | (10.5) | 0 | (0.0) | 1,130 | (3.2) | 2,719 | (7.7) | 0 | (0.0) | 3,884 | (11.0) | 3,107 | (8.8) | 0 | (0.0) | 7,027 | (19.9) |
| 2 | Pilibhit | | | 309,372 | (4.9) | 39,864 | (12.9) | 3,526 | (1.1) | 10,813 | (3.5) | 18,488 | (6.0) | 0 | (0.0) | 24,776 | (8.0) | 27,745 | (9.0) | 10,380 | (3.4) | 50,451 | (16.3) |
| | | | | 121,574 | (7.7) | 13,373 | (11.0) | 0 | (0.0) | 2,675 | (2.2) | 4,498 | (3.7) | 0 | (0.0) | 7,416 | (6.1) | 6,687 | (5.5) | 4,863 | (4.0) | 19,452 | (16.0) |
| | | | | 29,645 | (0.0) | 2,638 | (8.9) | 0 | (0.0) | 889 | (3.0) | 2,283 | (7.7) | 0 | (0.0) | 2,965 | (10.0) | 3,380 | (11.4) | 652 | (2.2) | 7,115 | (24.0) |
| | | | | 40,984 | (2.5) | 9,057 | (22.1) | 615 | (1.5) | 2,172 | (5.3) | 1,844 | (4.5) | 0 | (0.0) | 2,787 | (6.8) | 3,320 | (8.1) | 1,803 | (4.4) | 5,533 | (13.5) |
| | | | | 22,969 | (1.48) | 3,721 | (16.2) | 637 | (2.0) | 1,433 | (4.5) | 2,420 | (7.6) | 0 | (0.0) | 1,952 | (8.5) | 2,067 | (9.0) | 1,034 | (4.5) | 2,825 | (12.3) |
| | | | | 31,845 | (1.46) | 3,662 | (11.5) | 395 | (1.1) | 2,013 | (5.6) | 3,308 | (9.2) | 0 | (0.0) | 3,595 | (10.0) | 3,300 | (12.5) | 792 | (3.0) | 4,119 | (15.6) |
| | | | | 35,954 | (0.0) | 3,452 | (9.6) | 395 | (1.1) | 2,013 | (5.6) | 3,308 | (9.2) | 0 | (0.0) | 3,595 | (10.0) | 3,300 | (12.5) | 792 | (3.0) | 4,119 | (15.6) |
| | | | | 26,401 | (6.86) | 3,960 | (15.0) | 845 | (3.2) | 1,056 | (4.0) | 2,640 | (10.0) | 0 | (0.0) | 2,508 | (9.5) | 3,300 | (12.5) | 792 | (3.0) | 4,119 | (15.6) |
| | | | | 260,465 | (11.613) | 43,436 | (16.7) | 4,721 | (1.8) | 11,499 | (4.4) | 25,442 | (9.8) | 0 | (0.0) | 20,018 | (7.7) | 30,480 | (11.7) | 6,834 | (2.6) | 31,735 | (12.2) |
| 3 | Bareilly | | | 32,985 | (1.319) | 9,335 | (28.3) | 726 | (2.2) | 1,649 | (5.0) | 2,507 | (7.6) | 0 | (0.0) | 2,903 | (8.8) | 1,979 | (6.0) | 660 | (2.0) | 4,552 | (13.8) |
| | | | | 26,309 | (1.868) | 8,814 | (33.5) | 395 | (1.5) | 1,579 | (6.0) | 1,263 | (4.8) | 0 | (0.0) | 1,315 | (5.0) | 2,236 | (8.5) | 0 | (0.0) | 2,762 | (10.5) |
| | | | | 27,295 | (2.429) | 7,179 | (26.3) | 0 | (0.0) | 2,129 | (7.8) | 1,146 | (4.2) | 0 | (0.0) | 1,638 | (6.0) | 2,866 | (10.5) | 628 | (2.3) | 2,566 | (9.4) |
| | | | | 20,056 | (1.324) | 3,450 | (17.2) | 903 | (4.5) | 1,203 | (6.0) | 1,484 | (7.4) | 0 | (0.0) | 1,504 | (7.5) | 1,685 | (8.4) | 301 | (1.5) | 2,808 | (14.0) |
| | | | | 19,661 | (4.33) | 1,789 | (9.1) | 0 | (0.0) | 295 | (1.5) | 2,549 | (15.0) | 0 | (0.0) | 1,907 | (9.7) | 2,871 | (14.6) | 590 | (3.0) | 2,458 | (12.5) |
| | | | | 20,805 | (1.186) | 2,559 | (12.3) | 0 | (0.0) | 666 | (3.2) | 1,914 | (9.2) | 0 | (0.0) | 2,663 | (12.8) | 2,289 | (11.0) | 541 | (2.6) | 1,456 | (7.0) |
| | | | | 25,238 | (3.3) | 3,786 | (15.0) | 757 | (3.0) | 555 | (2.2) | 3,281 | (13.0) | 0 | (0.0) | 1,514 | (6.0) | 4,063 | (16.1) | 1,010 | (4.0) | 2,524 | (10.0) |
| | | | | 32,234 | (1.322) | 2,579 | (8.0) | 645 | (2.0) | 774 | (2.4) | 3,707 | (11.5) | 0 | (0.0) | 2,546 | (7.9) | 4,255 | (13.2) | 967 | (3.0) | 4,835 | (15.0) |
| | | | | 24,198 | (2.66) | 1,887 | (7.8) | 726 | (3.0) | 1,065 | (4.4) | 2,565 | (10.6) | 0 | (0.0) | 1,956 | (8.0) | 3,485 | (14.4) | 871 | (3.6) | 3,751 | (15.5) |
| | | | | 31,684 | (6.34) | 2,059 | (6.5) | 570 | (1.8) | 1,584 | (5.0) | 4,626 | (14.6) | 0 | (0.0) | 2,091 | (6.6) | 4,753 | (15.0) | 1,267 | (4.0) | 4,024 | (12.7) |
| 4 | Shahjahanpur | | | 396,539 | (16.037) | 53,084 | (13.4) | 12,323 | (3.2) | 15,796 | (4.0) | 47,988 | (12.1) | 0 | (0.0) | 25,629 | (6.5) | 61,229 | (15.4) | 13,982 | (3.5) | 46,334 | (11.7) |
| | | | | 46,545 | (2.607) | 7,913 | (17.0) | 1,862 | (4.0) | 1,164 | (2.5) | 5,353 | (11.5) | 0 | (0.0) | 2,420 | (5.2) | 4,794 | (10.3) | 2,327 | (5.0) | 6,516 | (14.0) |
| | | | | 46,891 | (1.547) | 5,721 | (12.2) | 938 | (2.0) | 2,251 | (4.8) | 6,143 | (13.1) | 0 | (0.0) | 2,767 | (5.9) | 7,084 | (15.0) | 1,454 | (3.1) | 7,757 | (16.5) |
| | | | | 30,601 | (1.683) | 5,845 | (19.1) | 796 | (2.6) | 1,930 | (5.0) | 2,938 | (9.6) | 0 | (0.0) | 1,316 | (4.3) | 4,059 | (13.2) | 1,499 | (4.9) | 4,713 | (15.4) |
| | | | | 29,168 | (1.867) | 4,871 | (16.7) | 1,167 | (4.0) | 729 | (2.5) | 3,238 | (11.1) | 0 | (0.0) | 1,458 | (5.0) | 5,046 | (17.3) | 642 | (2.2) | 3,033 | (10.4) |
| | | | | 25,449 | (6.11) | 2,112 | (8.3) | 636 | (2.5) | 1,069 | (4.2) | 1,603 | (6.3) | 0 | (0.0) | 1,680 | (6.6) | 4,886 | (19.2) | 1,043 | (4.1) | 4,606 | (18.1) |
| | | | | 24,955 | (1.198) | 4,068 | (16.3) | 499 | (2.0) | 1,497 | (6.0) | 2,096 | (8.4) | 0 | (0.0) | 1,472 | (5.9) | 4,866 | (19.5) | 624 | (2.5) | 2,446 | (9.8) |
| | | | | 31,928 | (2.618) | 4,949 | (15.5) | 1,277 | (4.0) | 1,596 | (5.0) | 4,630 | (14.5) | 0 | (0.0) | 1,980 | (6.2) | 5,204 | (16.3) | 830 | (2.6) | 2,299 | (7.2) |
| | | | | 34,790 | (0.0) | 2,435 | (7.0) | 686 | (2.0) | 1,392 | (4.0) | 6,019 | (17.3) | 0 | (0.0) | 3,549 | (10.2) | 6,123 | (17.6) | 1,252 | (3.6) | 3,905 | (9.5) |
| | | | | 32,745 | (0.0) | 2,194 | (6.7) | 0 | (0.0) | 982 | (3.0) | 5,960 | (18.2) | 0 | (0.0) | 1,637 | (5.0) | 6,975 | (21.3) | 1,310 | (4.0) | 3,667 | (11.2) |
| | | | | 24,580 | (0.0) | 2,261 | (9.2) | 1,229 | (5.0) | 1,696 | (6.9) | 3,589 | (14.6) | 0 | (0.0) | 1,475 | (6.0) | 4,547 | (18.5) | 1,426 | (5.8) | 3,122 | (12.7) |
| | | | | 29,453 | (1.858) | 5,161 | (17.5) | 1,770 | (6.0) | 590 | (2.0) | 2,948 | (10.0) | 0 | (0.0) | 2,212 | (7.5) | 4,129 | (14.0) | 590 | (2.0) | 2,948 | (9.5) |
| | | | | 39,394 | (2.048) | 5,555 | (14.1) | 1,655 | (4.2) | 1,300 | (3.3) | 3,467 | (8.8) | 0 | (0.0) | 3,664 | (9.3) | 3,585 | (9.1) | 985 | (2.5) | 2,088 | (5.3) |

Table C.1 Soil Characteristics of the Sharda Canal Command Area (2/8)

| No. | District | Block | Geographical Area (ha) | Name of Soil Series | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|--------------|---------------|------------------------|---------------------|-------------|--------------|--------------|-----------|--------------|-------------|-------------|---------------|-------------|---------------|--------------|---------------|-------------|---------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|--------------|---------------|----------------|--------------|----------------|-------------|--------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|-----------|--------------|
| | | | | HASANPUR(Hs) | | UTELWAO(U) | | POKHRA(P) | | KASTURI(Ks) | | GOSHAINGAN(G) | | UTTARGAON(U) | | BAJGAHANI(Bg) | | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | | | | | | | | | | | | | | | | | | | | |
| 1 | Nainital | 101 Sitarganj | 68,522 | 3,080 (4.5) | 706 (1.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,522 (5.1) | 2,670 (3.9) | 1,688 (2.5) | 1,985 (2.9) | 1,130 (1.6) | 3,152 (4.6) | 33,210 | 996 (3.0) | 0 (0.0) | 0 (0.0) | 1,827 (5.5) | 1,328 (4.0) | 664 (2.0) | 996 (3.0) | 0 (0.0) | 1,528 (4.6) | | | | | | | | | | | | | | | | | |
| | | | 2 | Pithorot | 102 Khatima | 35,312 | 2,083 (5.9) | 706 (2.0) | 0 (0.0) | 0 (0.0) | 1,695 (4.8) | 1,342 (3.8) | 1,024 (2.9) | 989 (2.8) | 1,130 (3.2) | 1,589 (4.5) | 305,372 | 21,038 (6.8) | 12,677 (4.1) | 7,019 (2.3) | 4,863 (1.6) | 8,041 (2.6) | 3,647 (1.2) | 11,185 (3.6) | 28,384 (9.2) | 201 Purnapur | 121,574 | 9,847 (8.1) | 7,538 (6.2) | 0 (0.0) | 4,863 (4.0) | 3,647 (3.0) | 2,431 (2.0) | 3,647 (3.0) | 11,185 (9.2) | 10,091 (8.3) | | | | | |
| | | | | | | 3 | Bareilly | 202 Arain | 29,643 | 2,668 (9.0) | 443 (1.5) | 1,482 (5.0) | 0 (0.0) | 0 (0.0) | 1,364 (4.6) | 563 (1.9) | 0 (0.0) | 0 (0.0) | 3,202 (10.8) | 40,984 | 1,844 (4.5) | 820 (2.0) | 1,557 (3.8) | 0 (0.0) | 1,230 (3.0) | 1,148 (2.8) | 0 (0.0) | 0 (0.0) | 4,303 (10.5) | 204 Lalrunkher | 22,969 | 643 (2.8) | 1,057 (4.6) | 1,194 (5.2) | 0 (0.0) | 597 (2.6) | 850 (3.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,779 (12.1) |
| | | | | | | | | | 205 Barkhera | 31,845 | 2,611 (8.2) | 637 (2.0) | 1,274 (4.0) | 0 (0.0) | 0 (0.0) | 1,592 (5.0) | 1,274 (4.0) | 1,115 (3.1) | 0 (0.0) | 0 (0.0) | 2,548 (8.0) | 206 Bisarda | 35,954 | 2,555 (7.1) | 1,654 (4.6) | 719 (2.0) | 0 (0.0) | 1,654 (4.6) | 1,115 (3.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,768 (7.7) | 207 Bisapur | 26,401 | 871 (3.3) | 528 (2.0) | 792 (3.0) | 0 (0.0) | 950 (3.6) | 660 (2.5) |
| 4 | Shahjahanpur | 301 Nawabganj | 260,465 | 12,295 (4.7) | 8,347 (3.2) | 10,986 (4.2) | 0 (0.0) | 0 (0.0) | 9,020 (3.5) | 5,986 (2.3) | 5,986 (2.3) | 0 (0.0) | 0 (0.0) | 28,082 (10.8) | 32,585 | 825 (2.5) | 1,220 (3.7) | 660 (2.0) | 0 (0.0) | 858 (2.6) | 396 (1.2) | 0 (0.0) | 0 (0.0) | 3,397 (10.3) | 302 Richehla | 26,309 | 816 (3.1) | 1,105 (4.2) | 474 (1.8) | 0 (0.0) | 816 (3.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,868 (10.9) | | | | | |
| | | | 303 Shergarh | 27,295 | 1,092 (4.0) | 682 (2.5) | 819 (3.0) | 0 (0.0) | 0 (0.0) | 546 (2.0) | 328 (1.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,248 (11.9) | 304 Fateganj | 20,056 | 702 (3.5) | 742 (3.7) | 822 (4.1) | 0 (0.0) | 642 (3.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,487 (12.4) | 305 Projipura | 19,661 | 2,702 (11.2) | 393 (2.0) | 708 (3.6) | 0 (0.0) | 786 (4.0) | 551 (2.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,750 (8.8) | | | |
| | | | 306 Kyara | 20,805 | 936 (4.5) | 312 (1.5) | 2,247 (10.8) | 0 (0.0) | 0 (0.0) | 624 (3.0) | 853 (4.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,559 (12.3) | 307 Bithan | 25,238 | 1,262 (5.0) | 0 (0.0) | 1,262 (5.0) | 0 (0.0) | 505 (2.0) | 833 (3.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,054 (12.1) | 308 Faridpur | 37,234 | 1,451 (4.5) | 1,193 (3.7) | 1,999 (6.2) | 0 (0.0) | 1,934 (6.0) | 806 (2.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,223 (10.0) | | |
| | | | 309 Bhadpura | 24,198 | 920 (3.8) | 1,210 (5.0) | 1,016 (4.2) | 0 (0.0) | 0 (0.0) | 726 (3.0) | 1,016 (4.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,759 (11.4) | 310 Bhuta | 31,684 | 2,091 (6.6) | 1,489 (4.7) | 951 (3.0) | 0 (0.0) | 1,584 (5.0) | 1,204 (3.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,757 (8.7) | 401 Khutar | 396,539 | 18,853 (4.8) | 9,565 (2.4) | 15,216 (3.8) | 1,164 (0.3) | 13,098 (3.3) | 7,796 (2.0) | 1,303 (0.3) | 5,147 (1.3) | 31,800 (8.0) | | | |
| | | | 402 Banda | 46,891 | 1,876 (4.0) | 891 (1.9) | 1,547 (3.3) | 0 (0.0) | 0 (0.0) | 1,164 (2.5) | 1,862 (4.0) | 1,443 (3.1) | 1,303 (2.8) | 0 (0.0) | 3,165 (6.8) | 403 Pawayan | 30,601 | 1,683 (5.5) | 306 (1.0) | 673 (2.2) | 0 (0.0) | 826 (2.7) | 337 (1.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,142 (6.7) | 404 Sindhaul | 29,168 | 1,138 (3.9) | 671 (2.3) | 1,223 (4.2) | 0 (0.0) | 875 (3.0) | 583 (2.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,625 (9.0) | | |
| | | | 405 Nigohi | 25,449 | 1,578 (6.2) | 1,171 (4.6) | 1,272 (5.0) | 0 (0.0) | 0 (0.0) | 254 (1.0) | 636 (2.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,290 (9.0) | 406 Katara | 24,955 | 1,173 (4.7) | 824 (3.3) | 649 (2.6) | 0 (0.0) | 449 (1.8) | 230 (1.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,845 (11.4) | 407 Bhawaliker | 31,928 | 894 (2.8) | 543 (1.7) | 958 (3.0) | 0 (0.0) | 766 (2.4) | 415 (1.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,969 (9.3) | | |
| | | | 408 Dadraul | 34,790 | 2,401 (6.9) | 974 (2.8) | 1,566 (4.5) | 0 (0.0) | 0 (0.0) | 1,252 (3.6) | 765 (2.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,062 (8.8) | 409 Kant | 32,745 | 3,111 (9.5) | 1,605 (4.9) | 1,081 (3.3) | 0 (0.0) | 786 (2.4) | 1,179 (3.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,259 (6.9) | 410 Tilhar | 24,580 | 983 (4.0) | 737 (3.0) | 1,103 (4.5) | 0 (0.0) | 541 (2.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,868 (7.6) | | |
| | | | 411 Jaitipur | 29,493 | 1,121 (3.8) | 1,003 (3.4) | 1,003 (3.4) | 0 (0.0) | 0 (0.0) | 885 (3.0) | 383 (1.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,868 (7.6) | 412 Jalaiabad | 39,394 | 1,221 (3.1) | 867 (2.2) | 4,136 (10.5) | 0 (0.0) | 1,694 (4.3) | 867 (2.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,033 (7.7) | | | | | | | | | | | | | | |

Table C.1 Soil Characteristics of the Sharda Canal Command Area (4/8)

| No. | District | Block | Geographical Area (ha) | Name of Soil Series | | | | | | | | | | | | | | | | | | | | |
|-----|-----------|-------|------------------------|---------------------|-----------|------------|-------------|---------------|--------------|---------------|---------------|---------------|--------|----------|--------|----------|-------|----------|--------|--------|--------|--------|-------|--------|
| | | | | HASANPUR(Hn) | UTELWA(U) | POKHRA(Pt) | KASTURI(Ks) | GOSHAINGAN(G) | UTTARGAON(U) | BAJGAHANI(Bg) | Mixd Alluvial | Miscellaneous | | | | | | | | | | | | |
| | | | | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | Area(ha) | (%) | | | | | |
| 5 | Kheri | 501 | Buna | 364,632 | 17,128 | (4.7) | 8,720 | (2.4) | 10,035 | (2.8) | 3,700 | (1.0) | 10,137 | (2.8) | 11,224 | (3.1) | 3,821 | (1.0) | 13,083 | (3.6) | 36,463 | (10.0) | | |
| | | 502 | Phulbehar | 59,083 | 1,182 | (2.0) | 827 | (1.4) | 0 | (0.0) | 2,363 | (4.0) | 1,182 | (2.0) | 1,891 | (3.2) | 2,363 | (4.0) | 7,858 | (13.3) | 8,508 | (14.4) | | |
| | | 503 | Bankaganj | 40,504 | 648 | (1.6) | 405 | (1.0) | 0 | (0.0) | 1,337 | (3.3) | 486 | (1.2) | 891 | (2.2) | 1,438 | (3.6) | 5,225 | (12.9) | 4,253 | (10.5) | | |
| | | 504 | Lakhipur | 38,535 | 1,927 | (5.0) | 424 | (1.1) | 1,016 | (2.6) | 1,541 | (4.0) | 0 | (0.0) | 745 | (2.2) | 1,185 | (3.5) | 0 | (0.0) | 0 | (0.0) | 3,182 | (9.4) |
| | | 505 | Behjan | 28,999 | 1,566 | (5.4) | 725 | (2.5) | 1,044 | (3.6) | 1,496 | (4.1) | 0 | (0.0) | 696 | (2.4) | 899 | (3.1) | 0 | (0.0) | 0 | (0.0) | 3,074 | (10.6) |
| | | 506 | Muthandi | 42,653 | 1,314 | (3.1) | 1,194 | (2.8) | 1,706 | (4.0) | 1,496 | (4.1) | 0 | (0.0) | 1,241 | (3.4) | 1,824 | (5.0) | 0 | (0.0) | 0 | (0.0) | 2,559 | (6.0) |
| | | 507 | Kumha | 36,488 | 1,486 | (4.1) | 1,857 | (5.1) | 1,337 | (3.6) | 1,895 | (4.0) | 0 | (0.0) | 1,709 | (4.6) | 1,152 | (3.1) | 0 | (0.0) | 0 | (0.0) | 3,083 | (8.3) |
| | | 508 | Mitauli | 37,148 | 1,486 | (4.0) | 1,857 | (5.0) | 1,337 | (3.6) | 1,895 | (4.0) | 0 | (0.0) | 1,709 | (4.6) | 1,152 | (3.1) | 0 | (0.0) | 0 | (0.0) | 3,083 | (8.3) |
| | | 509 | Paragawan | 47,370 | 3,600 | (7.6) | 1,516 | (3.2) | 1,895 | (4.0) | 3,017 | (5.0) | 0 | (0.0) | 2,369 | (5.0) | 1,042 | (2.2) | 0 | (0.0) | 13,310 | (2.2) | 4,981 | (7.5) |
| | | 510 | Hardoi | 598,817 | 31,296 | (5.2) | 20,681 | (3.5) | 30,017 | (5.0) | 1,684 | (0.3) | 0 | (0.0) | 1,448 | (0.2) | 2,156 | (0.4) | 0 | (0.0) | 0 | (0.0) | 2,762 | (0.5) |
| 6 | Hardoi | 601 | Phani | 33,685 | 1,482 | (4.4) | 707 | (2.1) | 1,684 | (5.0) | 0 | (0.0) | 1,317 | (4.3) | 1,531 | (5.0) | 0 | (0.0) | 0 | (0.0) | 2,327 | (7.5) | | |
| | | 602 | Todarpur | 30,621 | 612 | (2.0) | 398 | (1.3) | 919 | (3.0) | 0 | (0.0) | 0 | (0.0) | 763 | (2.2) | 2,427 | (7.0) | 0 | (0.0) | 0 | (0.0) | 2,566 | (7.4) |
| | | 603 | Shahabad | 34,673 | 1,144 | (3.3) | 971 | (2.8) | 693 | (2.0) | 0 | (0.0) | 0 | (0.0) | 1,188 | (2.8) | 3,394 | (8.0) | 0 | (0.0) | 0 | (0.0) | 2,715 | (6.4) |
| | | 604 | Bharkhani | 42,427 | 2,121 | (5.0) | 1,782 | (4.2) | 636 | (1.5) | 0 | (0.0) | 0 | (0.0) | 1,452 | (5.0) | 1,016 | (3.5) | 0 | (0.0) | 0 | (0.0) | 2,236 | (7.7) |
| | | 605 | Haryawan | 29,035 | 2,323 | (8.0) | 1,452 | (5.0) | 958 | (3.3) | 0 | (0.0) | 0 | (0.0) | 1,574 | (4.4) | 1,874 | (6.0) | 0 | (0.0) | 0 | (0.0) | 2,374 | (7.6) |
| | | 606 | Tadiyawan | 31,235 | 1,874 | (6.0) | 562 | (1.8) | 843 | (2.7) | 0 | (0.0) | 0 | (0.0) | 1,116 | (3.4) | 1,773 | (5.4) | 0 | (0.0) | 0 | (0.0) | 2,659 | (8.1) |
| | | 607 | Bawan | 32,827 | 1,379 | (4.2) | 525 | (1.6) | 657 | (2.0) | 0 | (0.0) | 0 | (0.0) | 821 | (2.6) | 1,074 | (3.4) | 0 | (0.0) | 4,231 | (13.4) | 2,179 | (6.9) |
| | | 608 | Sandi | 31,575 | 1,579 | (5.0) | 316 | (1.0) | 1,042 | (3.3) | 1,236 | (4.0) | 0 | (0.0) | 1,606 | (5.2) | 1,853 | (6.0) | 0 | (0.0) | 2,533 | (8.2) | | |
| | | 609 | Harpapur | 30,891 | 927 | (3.0) | 958 | (3.1) | 1,236 | (4.0) | 490 | (1.3) | 0 | (0.0) | 1,018 | (2.7) | 1,621 | (4.3) | 0 | (0.0) | 0 | (0.0) | 2,865 | (7.6) |
| | | 610 | Ahiraun | 37,703 | 2,074 | (5.5) | 1,508 | (4.0) | 490 | (1.3) | 3,531 | (10.5) | 0 | (0.0) | 673 | (2.0) | 2,320 | (6.9) | 0 | (0.0) | 0 | (0.0) | 2,623 | (7.8) |
| 7 | Barabanki | 611 | Sursa | 33,628 | 2,018 | (6.0) | 2,051 | (6.1) | 3,531 | (10.5) | 0 | (0.0) | 0 | (0.0) | 1,252 | (3.7) | 1,726 | (5.1) | 0 | (0.0) | 3,432 | (10.2) | 2,064 | (6.1) |
| | | 612 | Bigraun | 33,839 | 1,624 | (4.8) | 1,692 | (5.0) | 1,624 | (4.8) | 0 | (0.0) | 0 | (0.0) | 1,209 | (4.1) | 1,327 | (4.5) | 0 | (0.0) | 0 | (0.0) | 2,241 | (7.6) |
| | | 613 | Kothawan | 29,485 | 2,064 | (7.0) | 1,002 | (3.4) | 1,474 | (5.0) | 2,611 | (8.5) | 0 | (0.0) | 423 | (1.7) | 771 | (3.1) | 0 | (0.0) | 0 | (0.0) | 2,138 | (6.6) |
| | | 614 | Kachhona | 24,864 | 796 | (3.2) | 646 | (2.6) | 2,611 | (10.5) | 1,446 | (4.9) | 0 | (0.0) | 925 | (3.2) | 0 | (0.0) | 0 | (0.0) | 2,169 | (7.5) | 1,957 | (6.7) |
| | | 615 | Madhoganj | 28,916 | 1,908 | (6.6) | 1,417 | (4.9) | 1,446 | (5.0) | 0 | (0.0) | 0 | (0.0) | 746 | (2.4) | 1,585 | (5.1) | 0 | (0.0) | 0 | (0.0) | 2,299 | (7.4) |
| | | 616 | Bharawan | 31,069 | 2,672 | (8.6) | 1,367 | (4.4) | 1,522 | (4.9) | 3,607 | (11.5) | 0 | (0.0) | 1,568 | (5.0) | 1,380 | (4.4) | 0 | (0.0) | 0 | (0.0) | 2,540 | (8.1) |
| | | 617 | Sandia | 31,362 | 1,505 | (4.8) | 878 | (2.8) | 3,607 | (11.5) | 3,007 | (10.8) | 0 | (0.0) | 694 | (3.0) | 486 | (2.1) | 0 | (0.0) | 926 | (4.0) | 1,527 | (6.6) |
| | | 618 | Behdar | 27,842 | 1,782 | (6.4) | 1,615 | (5.8) | 3,007 | (10.8) | 2,036 | (8.8) | 0 | (0.0) | 694 | (3.0) | 486 | (2.1) | 0 | (0.0) | 0 | (0.0) | 2,827 | (9.4) |
| | | 619 | Malawan | 23,140 | 1,412 | (6.1) | 833 | (3.6) | 2,036 | (8.8) | 0 | (0.0) | 8,451 | (28.1) | 0 | (0.0) | 0 | (0.0) | 1,684 | (5.6) | 0 | (0.0) | 2,827 | (9.4) |
| | | 701 | Nindura | 30,074 | 0 | (0.0) | 6,616 | (22.0) | 0 | (0.0) | 8,451 | (28.1) | 0 | (0.0) | 6,616 | (22.0) | 0 | (0.0) | 1,684 | (5.6) | 0 | (0.0) | 2,827 | (9.4) |

Table C.1 Soil Characteristics of the Sharda Canal Command Area (5/8)

| No. | District | Block | Geographical Area (ha) | Name of Soil Series | | | | | | | | | | | | | | |
|-----|----------|--------------------|------------------------|-------------------------------|-----------------------------|---------------------------|----------------------------|----------------------------|-----------------------------|---------------------------|------------------------------|--------------------------|-----------------------------|--------------|--|--|--|--|
| | | | | LAKHIPERA(LP) Area(ha) (%) | GANGAUL(GI) Area(ha) (%) | TANDA(Tn) Area(ha) (%) | AMETHI(Am) Area(ha) (%) | KAKARI(KK) Area(ha) (%) | TAMORIA(Tm) Area(ha) (%) | SITAU(SI) Area(ha) (%) | SAIDAPUR(Sd) Area(ha) (%) | GARI(Gr) Area(ha) (%) | MERAURA(Mr) Area(ha) (%) | | | | | |
| 8 | Sitapur | | 567,164 | 12,338 (2.2) | 71,566 (12.6) | 29,156 (5.1) | 16,184 (2.9) | 64,727 (11.4) | 0 (0.0) | 0 (0.0) | 54,421 (9.6) | 96,941 (17.1) | 15,222 (2.7) | 38,413 (6.8) | | | | |
| | | 801 Behra | 36,742 | 2,866 (7.8) | 5,805 (15.8) | 735 (2.0) | 1,249 (3.4) | 4,152 (11.3) | 0 (0.0) | 0 (0.0) | 2,278 (6.2) | 3,233 (8.8) | 0 (0.0) | 2,498 (6.8) | | | | |
| | | 802 Hargoon | 27,603 | 0 (0.0) | 2,401 (8.7) | 1,159 (4.2) | 1,380 (5.0) | 2,816 (10.2) | 0 (0.0) | 0 (0.0) | 2,236 (8.1) | 5,832 (21.2) | 0 (0.0) | 4,803 (17.4) | | | | |
| | | 803 Alia | 26,713 | 0 (0.0) | 1,816 (6.8) | 935 (3.5) | 988 (3.7) | 3,393 (12.7) | 0 (0.0) | 0 (0.0) | 1,843 (6.9) | 5,743 (21.5) | 0 (0.0) | 2,778 (10.4) | | | | |
| | | 804 Maholi | 29,277 | 0 (0.0) | 2,118 (9.1) | 1,420 (6.1) | 582 (2.5) | 3,212 (13.8) | 0 (0.0) | 0 (0.0) | 2,444 (10.5) | 3,003 (12.9) | 978 (4.2) | 1,699 (7.3) | | | | |
| | | 805 Pisawat | 39,780 | 0 (0.0) | 7,797 (19.6) | 2,228 (5.6) | 0 (0.0) | 5,132 (12.9) | 0 (0.0) | 0 (0.0) | 5,808 (14.6) | 6,683 (16.8) | 2,347 (5.9) | 0 (0.0) | | | | |
| | | 806 Reosa | 43,868 | 3,685 (8.4) | 8,949 (20.4) | 3,904 (8.9) | 0 (0.0) | 1,799 (4.1) | 0 (0.0) | 0 (0.0) | 2,851 (6.5) | 5,791 (13.2) | 0 (0.0) | 3,904 (8.9) | | | | |
| | | 807 Sakran | 30,764 | 0 (0.0) | 3,015 (9.8) | 1,907 (6.2) | 1,384 (4.5) | 3,569 (11.6) | 0 (0.0) | 0 (0.0) | 2,461 (8.0) | 6,430 (20.9) | 0 (0.0) | 3,261 (10.6) | | | | |
| | | 808 Laharpur | 22,546 | 0 (0.0) | 1,826 (8.1) | 2,029 (9.0) | 721 (3.2) | 2,277 (10.1) | 0 (0.0) | 0 (0.0) | 2,300 (10.2) | 3,540 (15.7) | 0 (0.0) | 1,623 (7.2) | | | | |
| | | 809 Parsendi | 27,907 | 0 (0.0) | 1,842 (6.6) | 1,144 (4.1) | 558 (2.0) | 3,405 (12.2) | 0 (0.0) | 0 (0.0) | 2,679 (9.6) | 4,940 (17.7) | 2,909 (7.2) | 3,265 (11.7) | | | | |
| | | 810 Khairabad | 23,526 | 0 (0.0) | 2,823 (12.0) | 1,200 (5.1) | 706 (3.0) | 3,999 (17.0) | 0 (0.0) | 0 (0.0) | 2,164 (9.2) | 5,246 (22.3) | 800 (3.4) | 776 (3.3) | | | | |
| | | 811 Misrlch | 30,430 | 0 (0.0) | 3,013 (9.9) | 1,308 (4.3) | 1,674 (5.5) | 4,717 (15.5) | 0 (0.0) | 0 (0.0) | 3,956 (13.0) | 5,082 (16.7) | 1,461 (4.8) | 2,800 (9.2) | | | | |
| | | 812 Rampur Math | 35,116 | 2,528 (7.2) | 6,356 (18.1) | 1,756 (5.0) | 386 (1.1) | 1,405 (4.0) | 0 (0.0) | 0 (0.0) | 1,721 (4.9) | 4,249 (12.1) | 0 (0.0) | 3,828 (10.9) | | | | |
| | | 813 Mahnudabad | 23,431 | 0 (0.0) | 1,804 (7.7) | 1,172 (5.0) | 890 (3.8) | 2,367 (10.1) | 0 (0.0) | 0 (0.0) | 2,624 (11.2) | 4,335 (18.5) | 0 (0.0) | 2,273 (9.7) | | | | |
| | | 814 Bisawan | 35,421 | 3,259 (9.2) | 6,750 (19.0) | 2,054 (5.8) | 1,913 (5.4) | 2,373 (6.7) | 0 (0.0) | 0 (0.0) | 3,082 (8.7) | 5,207 (14.7) | 0 (0.0) | 2,338 (6.6) | | | | |
| | | 815 Machhareha | 26,739 | 0 (0.0) | 5,562 (20.8) | 1,845 (6.9) | 615 (2.3) | 4,145 (15.5) | 0 (0.0) | 0 (0.0) | 2,032 (7.6) | 4,760 (17.8) | 856 (3.2) | 668 (2.5) | | | | |
| | | 816 Pahla | 27,532 | 0 (0.0) | 1,790 (6.5) | 881 (3.2) | 1,211 (4.4) | 4,570 (16.6) | 0 (0.0) | 0 (0.0) | 2,808 (10.2) | 6,195 (22.5) | 1,900 (6.9) | 0 (0.0) | | | | |
| | | 817 Kasmanca | 27,468 | 0 (0.0) | 2,774 (10.1) | 1,318 (4.8) | 824 (3.0) | 3,846 (14.0) | 0 (0.0) | 0 (0.0) | 3,626 (13.2) | 4,697 (17.1) | 1,373 (5.0) | 0 (0.0) | | | | |
| | | 818 Gondiamau | 32,718 | 0 (0.0) | 2,356 (7.2) | 1,341 (4.1) | 589 (1.8) | 3,664 (11.2) | 0 (0.0) | 0 (0.0) | 3,926 (12.0) | 7,787 (23.8) | 2,552 (7.8) | 1,898 (5.8) | | | | |
| | | 819 Sidhault | 25,983 | 0 (0.0) | 2,789 (10.9) | 819 (3.2) | 512 (2.0) | 3,889 (15.2) | 0 (0.0) | 0 (0.0) | 3,582 (14.0) | 4,170 (16.3) | 947 (3.7) | 0 (0.0) | | | | |
| 9 | Lucknow | | 215,840 | 0 (0.0) | 39,388 (18.2) | 10,203 (4.7) | 1,462 (0.7) | 11,536 (5.3) | 4,584 (2.1) | 31,139 (14.4) | 32,186 (14.9) | 18,436 (8.5) | 1,490 (0.7) | | | | | |
| | | 901 Bakshika | 37,782 | 0 (0.0) | 3,703 (9.8) | 831 (2.2) | 0 (0.0) | 5,705 (15.1) | 0 (0.0) | 0 (0.0) | 5,667 (15.0) | 4,534 (12.0) | 3,060 (8.1) | 0 (0.0) | | | | |
| | | 902 Mal | 25,382 | 0 (0.0) | 3,401 (13.4) | 1,574 (6.2) | 0 (0.0) | 1,066 (4.2) | 0 (0.0) | 0 (0.0) | 5,838 (23.0) | 5,330 (21.0) | 1,828 (7.2) | 0 (0.0) | | | | |
| | | 903 Malihabad | 21,092 | 0 (0.0) | 3,375 (16.0) | 1,708 (8.1) | 0 (0.0) | 654 (3.1) | 0 (0.0) | 0 (0.0) | 3,923 (18.6) | 4,640 (22.0) | 801 (3.8) | 0 (0.0) | | | | |
| | | 904 Kakori | 22,594 | 0 (0.0) | 3,276 (14.5) | 1,446 (6.4) | 0 (0.0) | 1,604 (7.1) | 0 (0.0) | 0 (0.0) | 3,163 (14.0) | 4,745 (21.0) | 1,243 (5.5) | 0 (0.0) | | | | |
| | | 905 Sarojini Nagar | 38,435 | 0 (0.0) | 5,035 (13.1) | 1,230 (3.2) | 769 (2.0) | 2,229 (5.8) | 1,115 (2.9) | 3,844 (10.0) | 6,765 (17.6) | 3,844 (10.0) | 6,765 (17.6) | 0 (0.0) | | | | |
| | | 906 Mohalagani | 35,903 | 0 (0.0) | 14,361 (40.0) | 1,508 (4.2) | 0 (0.0) | 2,118 (5.9) | 3,124 (8.7) | 2,406 (6.7) | 4,739 (13.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | | |
| | | 907 Gosaganji | 34,652 | 0 (0.0) | 6,237 (18.0) | 1,906 (5.5) | 693 (2.0) | 277 (0.8) | 1,351 (3.9) | 4,138 (12.0) | 6,688 (19.3) | 0 (0.0) | 1,490 (4.3) | 0 (0.0) | | | | |

Table C.1 Soil Characteristics of the Sharda Canal Command Area (6/8)

| No. | District | Block | Geographical Area (ha) | Name of Soil Series | | | | | | | | | | | | | |
|-----|----------|--------------------|------------------------|---------------------|--------------|--------------|--------------|----------------|--------------|---------------|----------------|---------------|--------------|---------------|--|--|--|
| | | | | HASANPUR(Hn) | UTELWA(U0) | POKHRA(P) | KASTURI(Ks) | GOSHAINGANJ(G) | UTTARGAON(U) | BAJGAHANI(Bg) | Mixed Alluvial | Miscellaneous | | | | | |
| 8 | Sitapur | | 567,164 | 27,546 (4.9) | 15,939 (2.8) | 10,630 (1.9) | 13,815 (2.4) | 16,571 (2.9) | 5,531 (1.0) | 10,281 (1.8) | 772 (0.1) | 5,233 (0.9) | 10,351 (1.8) | 57,284 (10.1) | | | |
| | | 801 Beha | 36,742 | 1,543 (4.2) | 919 (2.5) | 0 (0.0) | 1,543 (4.2) | 808 (2.2) | 0 (0.0) | 772 (2.1) | 0 (0.0) | 5,233 (8.8) | 0 (0.0) | 5,107 (13.9) | | | |
| | | 802 Hargao | 27,603 | 607 (2.2) | 469 (1.7) | 0 (0.0) | 1,711 (6.2) | 524 (1.9) | 0 (0.0) | 883 (3.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,760 (10.0) | | | |
| | | 803 Alfa | 26,713 | 1,496 (5.6) | 1,149 (4.3) | 0 (0.0) | 2,057 (7.7) | 962 (3.6) | 0 (0.0) | 1,336 (5.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,217 (8.3) | | | |
| | | 804 Maholi | 23,277 | 1,024 (4.4) | 1,141 (4.9) | 1,280 (5.5) | 0 (0.0) | 419 (1.8) | 768 (3.3) | 1,117 (4.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,072 (8.9) | | | |
| | | 805 Piswan | 39,780 | 2,745 (6.9) | 716 (1.8) | 1,313 (3.3) | 0 (0.0) | 1,233 (3.1) | 955 (2.4) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,824 (7.1) | | | |
| | | 806 Reosa | 43,868 | 1,623 (3.7) | 702 (1.6) | 0 (0.0) | 1,228 (2.8) | 483 (1.1) | 0 (0.0) | 921 (2.1) | 3,378 (7.7) | 4,650 (10.6) | 0 (0.0) | 2,800 (9.1) | | | |
| | | 807 Sabran | 30,764 | 1,661 (5.4) | 800 (2.6) | 0 (0.0) | 1,815 (5.9) | 646 (2.1) | 0 (0.0) | 1,240 (5.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,438 (10.9) | | | |
| | | 808 Laharpur | 22,546 | 1,398 (6.2) | 947 (4.2) | 1,284 (4.6) | 0 (0.0) | 1,172 (4.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,512 (9.0) | | | |
| | | 809 Pareendi | 27,907 | 1,674 (6.0) | 1,423 (5.1) | 1,284 (4.6) | 0 (0.0) | 518 (2.2) | 423 (1.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,835 (7.8) | | | |
| | | 810 Khairabad | 23,526 | 1,106 (4.7) | 753 (3.2) | 1,176 (5.0) | 0 (0.0) | 1,065 (3.5) | 517 (1.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,374 (7.8) | | | |
| | | 811 Misrikh | 30,430 | 974 (3.2) | 365 (1.2) | 1,126 (3.7) | 0 (0.0) | 702 (2.0) | 386 (1.1) | 1,405 (4.0) | 2,142 (6.1) | 6,532 (18.6) | 0 (0.0) | 2,812 (12.0) | | | |
| | | 812 Rampur Math | 35,116 | 773 (2.2) | 0 (0.0) | 0 (0.0) | 948 (2.7) | 703 (3.0) | 234 (1.0) | 773 (3.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 4,038 (11.4) | | | |
| | | 813 Maimuabad | 23,431 | 1,289 (5.5) | 750 (3.2) | 0 (0.0) | 1,406 (6.0) | 602 (1.7) | 708 (2.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,925 (7.2) | | | |
| | | 814 Basawan | 35,421 | 992 (2.8) | 0 (0.0) | 1,337 (5.0) | 0 (0.0) | 1,070 (4.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,029 (11.0) | | | |
| | | 815 Machharena | 26,739 | 989 (3.7) | 401 (1.5) | 1,101 (4.0) | 0 (0.0) | 591 (3.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,802 (10.2) | | | |
| | | 816 Pahla | 27,332 | 2,203 (8.0) | 853 (3.1) | 1,101 (4.0) | 0 (0.0) | 1,154 (4.2) | 852 (3.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,238 (8.9) | | | |
| | | 817 Kasmanda | 27,468 | 2,115 (7.7) | 1,318 (4.8) | 769 (2.8) | 0 (0.0) | 1,656 (5.0) | 687 (2.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,533 (9.9) | | | |
| | | 818 Gondianau | 32,718 | 1,799 (5.5) | 982 (3.0) | 1,243 (3.8) | 0 (0.0) | 691 (2.7) | 1,049 (4.1) | 0 (0.0) | 819 (3.2) | 1,435 (0.7) | 17,409 (8.1) | 0 (0.0) | | | |
| | | 819 Sidhaul | 25,383 | 1,535 (6.0) | 2,251 (8.9) | 0 (0.0) | 2,229 (1.0) | 7,501 (3.5) | 0 (0.0) | 795 (2.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,476 (9.2) | | | |
| 9 | Ludhnow | | 215,840 | 17,401 (8.1) | 10,715 (5.0) | 7,913 (3.7) | 2,229 (1.0) | 7,501 (3.5) | 0 (0.0) | 795 (2.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,929 (7.6) | | | |
| | | 901 Bakshika | 37,782 | 1,851 (4.9) | 4,572 (12.1) | 0 (0.0) | 2,229 (5.9) | 1,360 (3.6) | 0 (0.0) | 795 (2.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,645 (7.8) | | | |
| | | 902 Mal | 25,382 | 1,650 (6.5) | 1,320 (5.2) | 761 (3.0) | 0 (0.0) | 685 (2.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,214 (9.8) | | | |
| | | 903 Malhabad | 21,092 | 2,067 (9.8) | 780 (3.7) | 591 (2.8) | 0 (0.0) | 907 (4.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,959 (7.7) | | | |
| | | 904 Kakori | 22,594 | 2,305 (10.2) | 949 (4.2) | 746 (3.3) | 0 (0.0) | 904 (4.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,621 (7.3) | | | |
| | | 905 Savojini Nagar | 38,435 | 3,190 (8.3) | 1,730 (4.5) | 2,345 (6.1) | 0 (0.0) | 1,960 (5.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,564 (7.4) | | | |
| | | 906 Mohalaganj | 35,903 | 1,906 (5.3) | 1,364 (3.8) | 1,149 (3.2) | 0 (0.0) | 610 (1.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,455 (4.2) | | | |
| | | 907 Gosaganj | 34,652 | 4,435 (12.8) | 0 (0.0) | 2,322 (6.7) | 0 (0.0) | 1,074 (3.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,564 (7.4) | | | |

Table C.1 Soil Characteristics of the Sharda Canal Command Area (78)

| No. | District | Block | Geographical Area (ha) | Name of Soil Series | | | | | | | | | | | | | | | |
|-----|---------------|----------------------|------------------------|-------------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|----------------------------|-------------------------------|---------------------------|-------------------------------|---------------|---------|---------|--|--|--|
| | | | | LAKHIPERA(LP) Area(ha) (%) | GANGAUL(Gl) Area(ha) (%) | TANDA(Ttr) Area(ha) (%) | AMETH(Aim) Area(ha) (%) | KAKAR(Ksr) Area(ha) (%) | TAMORIA(Tim) Area(ha) (%) | SITAU(Sst) Area(ha) (%) | SAIDAPUR(Ssd) Area(ha) (%) | GARU(Grt) Area(ha) (%) | MERAJIRA(Mrt) Area(ha) (%) | | | | | | |
| 10 | Uttar Pradesh | | 458,519 | 9,204 (2.0) | 70,283 (15.3) | 27,068 (5.9) | 0 (0.0) | 15,791 (3.4) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 56,312 (12.3) | 69,601 (15.2) | 57,223 (12.5) | 0 (0.0) | 0 (0.0) | | | |
| | | 1001 Auras | 25,701 | 0 (0.0) | 3,084 (12.0) | 1,696 (6.6) | 0 (0.0) | 540 (2.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 4,241 (16.5) | 5,140 (20.0) | 1,696 (6.6) | 0 (0.0) | 0 (0.0) | | | |
| | | 1002 Ganjmuradap | 23,428 | 656 (2.8) | 4,920 (21.0) | 2,109 (9.0) | 0 (0.0) | 984 (4.2) | 0 (0.0) | 0 (0.0) | 2,343 (10.0) | 3,631 (15.5) | 1,781 (7.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1003 Bangarmanu | 27,990 | 644 (2.3) | 7,137 (25.5) | 1,679 (6.0) | 0 (0.0) | 756 (2.7) | 0 (0.0) | 0 (0.0) | 2,295 (8.2) | 4,478 (16.0) | 3,499 (12.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1004 Patehapur | 27,996 | 1,064 (3.8) | 5,739 (20.5) | 1,988 (7.1) | 0 (0.0) | 988 (3.5) | 0 (0.0) | 0 (0.0) | 3,527 (12.6) | 4,227 (15.1) | 3,779 (13.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1005 Hasanganji | 32,177 | 0 (0.0) | 3,153 (9.8) | 1,866 (5.8) | 0 (0.0) | 1,448 (4.5) | 0 (0.0) | 0 (0.0) | 5,052 (15.7) | 5,824 (18.1) | 6,114 (19.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1006 Mayaganji | 27,331 | 0 (0.0) | 3,690 (13.5) | 1,804 (6.6) | 0 (0.0) | 629 (2.3) | 0 (0.0) | 0 (0.0) | 3,526 (12.9) | 4,537 (16.6) | 3,608 (13.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1007 Safipur | 25,683 | 1,567 (6.1) | 5,419 (21.1) | 848 (3.3) | 0 (0.0) | 1,156 (4.5) | 0 (0.0) | 0 (0.0) | 1,669 (6.5) | 3,159 (12.3) | 1,618 (6.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1008 Nawabganji | 27,803 | 0 (0.0) | 3,809 (13.7) | 2,141 (7.7) | 0 (0.0) | 723 (2.6) | 0 (0.0) | 0 (0.0) | 4,866 (17.5) | 3,114 (11.2) | 1,501 (5.4) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1009 Bichhiya | 33,483 | 0 (0.0) | 3,784 (11.3) | 2,344 (7.0) | 0 (0.0) | 1,607 (4.8) | 0 (0.0) | 0 (0.0) | 5,022 (15.0) | 4,755 (14.2) | 7,232 (21.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1010 Sikandarpur Sir | 33,242 | 1,496 (4.5) | 6,449 (19.4) | 1,429 (4.3) | 0 (0.0) | 1,031 (3.1) | 0 (0.0) | 0 (0.0) | 3,690 (11.1) | 3,258 (9.8) | 2,393 (7.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1011 Sikandarpurkhal | 34,889 | 1,779 (5.1) | 7,048 (20.2) | 733 (2.1) | 0 (0.0) | 558 (1.6) | 0 (0.0) | 0 (0.0) | 2,861 (8.2) | 5,233 (15.0) | 3,070 (8.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1012 Asoha | 28,899 | 0 (0.0) | 1,907 (6.6) | 1,734 (6.0) | 0 (0.0) | 1,474 (5.1) | 0 (0.0) | 0 (0.0) | 4,623 (16.0) | 4,247 (14.7) | 5,836 (20.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1013 Purwa | 23,527 | 0 (0.0) | 2,423 (10.3) | 1,270 (5.4) | 0 (0.0) | 329 (1.4) | 0 (0.0) | 0 (0.0) | 3,082 (13.1) | 3,647 (15.5) | 5,388 (22.9) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1014 Hilauli | 33,881 | 0 (0.0) | 2,473 (7.3) | 1,050 (3.1) | 0 (0.0) | 1,016 (3.0) | 0 (0.0) | 0 (0.0) | 4,743 (14.0) | 5,523 (16.3) | 6,539 (19.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1015 Bighapur | 25,556 | 894 (3.5) | 4,345 (17.0) | 2,249 (8.8) | 0 (0.0) | 1,687 (6.6) | 0 (0.0) | 0 (0.0) | 2,428 (9.5) | 5,137 (20.1) | 1,687 (6.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1016 Sumerpur | 26,999 | 1,104 (4.1) | 4,903 (18.2) | 2,128 (7.9) | 0 (0.0) | 1,266 (4.7) | 0 (0.0) | 0 (0.0) | 2,344 (8.7) | 3,691 (13.7) | 1,482 (5.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| 11 | Raebareilly | | 149,762 | 4,025 (2.7) | 29,330 (19.6) | 12,873 (8.6) | 0 (0.0) | 8,200 (5.5) | 0 (0.0) | 0 (0.0) | 24,952 (16.7) | 15,972 (10.7) | 9,088 (6.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1101 Sataon | 25,550 | 767 (3.0) | 5,493 (21.5) | 1,840 (7.2) | 0 (0.0) | 1,686 (6.6) | 0 (0.0) | 0 (0.0) | 4,727 (18.5) | 3,219 (12.6) | 1,661 (6.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1102 Kheero | 23,204 | 0 (0.0) | 3,388 (14.6) | 2,390 (10.3) | 0 (0.0) | 1,810 (7.8) | 0 (0.0) | 0 (0.0) | 4,873 (21.0) | 2,668 (11.5) | 1,415 (6.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1103 Lalganj | 22,276 | 468 (2.1) | 4,388 (19.7) | 2,049 (9.2) | 0 (0.0) | 1,381 (6.2) | 0 (0.0) | 0 (0.0) | 3,676 (16.5) | 3,074 (13.8) | 1,671 (7.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1104 Sareni | 25,511 | 1,276 (5.0) | 5,337 (21.0) | 1,862 (7.3) | 0 (0.0) | 663 (2.6) | 0 (0.0) | 0 (0.0) | 2,628 (10.3) | 2,092 (8.2) | 1,556 (6.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1105 Dalmau | 26,476 | 874 (3.3) | 5,428 (20.5) | 2,806 (10.6) | 0 (0.0) | 1,536 (5.8) | 0 (0.0) | 0 (0.0) | 4,316 (16.3) | 2,939 (11.1) | 2,250 (8.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | 1106 Jagatpur | 26,745 | 642 (2.4) | 5,296 (19.8) | 1,926 (7.2) | 0 (0.0) | 1,123 (4.2) | 0 (0.0) | 0 (0.0) | 4,734 (17.7) | 1,979 (7.4) | 535 (2.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | | |
| | | Total | 1,568,982 | 34,361 (2.2) | 226,610 (14.4) | 84,744 (5.4) | 19,243 (1.2) | 109,478 (7.0) | 6,448 (0.4) | 173,443 (11.1) | 220,596 (14.1) | 112,487 (7.2) | 46,662 (3.0) | | | | | | |

Table C.1 Soil Characteristics of the Sharda Canal Command Area (8/8)

| No. | District | Block | Geographical Area (ha) | Name of Soil Series | | | | | | | | | | | | | |
|-----|----------|----------------------|------------------------|------------------------------|----------------------------|----------------------------|-----------------------------|-------------------------------|------------------------------|------------------------------|--------------------------------|-------------------------------|--------------|-------------|--|--|--|
| | | | | HASANPUR(Hn) Area(ha) (%) | UTELWA(Ut) Area(ha) (%) | POKHRA(Pt) Area(ha) (%) | KAASTUR(Ks) Area(ha) (%) | GOSHAINGAN(G) Area(ha) (%) | UTTARGAON(U) Area(ha) (%) | BAJGAHAN(Bg) Area(ha) (%) | Mixed Alluvial Area(ha) (%) | Miscellaneous Area(ha) (%) | | | | | |
| 10 | Unnao | | 498,519 | 26,489 (5.8) | 20,725 (4.5) | 16,557 (3.6) | 0 (0.0) | 31,895 (7.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 18,710 (4.1) | 38,662 (8.4) | | | | |
| | | 1001 Atras | 25,701 | 1,542 (6.0) | 1,928 (7.5) | 1,619 (6.3) | 0 (0.0) | 2,313 (9.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,902 (7.4) | | | |
| | | 1002 Ganjmuradap | 23,428 | 1,523 (6.5) | 703 (3.0) | 515 (2.2) | 0 (0.0) | 1,051 (4.4) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,687 (7.2) | 1,546 (6.6) | | | | |
| | | 1005 Bangarmau | 27,990 | 840 (3.0) | 420 (1.5) | 980 (3.5) | 0 (0.0) | 756 (2.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,267 (8.1) | 2,259 (8.0) | | | | |
| | | 1004 Patchapur | 27,996 | 868 (3.1) | 280 (1.0) | 448 (1.6) | 0 (0.0) | 580 (2.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,408 (8.6) | 2,100 (7.5) | | | | |
| | | 1005 Husanganji | 32,177 | 1,898 (5.9) | 1,223 (3.8) | 515 (1.6) | 0 (0.0) | 2,413 (7.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,671 (8.3) | | | | |
| | | 1006 Mayaganji | 27,331 | 1,175 (4.3) | 2,405 (8.8) | 763 (2.8) | 0 (0.0) | 2,733 (10.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,460 (9.0) | | | | |
| | | 1007 Saipur | 25,683 | 1,284 (5.0) | 848 (3.3) | 1,644 (6.4) | 0 (0.0) | 950 (3.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,390 (13.2) | 2,132 (8.3) | | | | |
| | | 1008 Nawabganji | 27,803 | 4,504 (16.2) | 1,223 (4.4) | 695 (2.5) | 0 (0.0) | 2,725 (9.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,502 (9.0) | | | | |
| | | 1009 Bichniya | 33,483 | 971 (2.9) | 1,071 (3.2) | 1,479 (4.4) | 0 (0.0) | 2,746 (8.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,478 (7.4) | | | | |
| | | 1010 Sikandarpur Sir | 33,242 | 2,726 (8.2) | 1,862 (5.6) | 1,031 (3.1) | 0 (0.0) | 597 (3.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,826 (8.5) | 4,056 (12.2) | | | | |
| | | 1011 Sikandarpurkha | 34,889 | 1,251 (3.7) | 2,617 (7.5) | 1,012 (2.9) | 0 (0.0) | 2,617 (7.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3,524 (10.1) | 2,547 (7.3) | | | | |
| | | 1012 Asola | 28,893 | 953 (3.3) | 1,965 (6.8) | 1,156 (4.0) | 0 (0.0) | 2,629 (9.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,369 (8.2) | | | | |
| | | 1013 Purva | 23,527 | 988 (4.2) | 471 (2.0) | 1,153 (4.9) | 0 (0.0) | 2,729 (11.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,047 (8.7) | | | | |
| | | 1014 Hilauli | 33,881 | 2,609 (7.7) | 1,830 (5.4) | 2,101 (6.2) | 0 (0.0) | 3,422 (10.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,575 (7.6) | | | | |
| | | 1015 Bighapur | 25,556 | 1,481 (5.6) | 1,073 (4.2) | 562 (2.2) | 0 (0.0) | 1,022 (4.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,073 (4.2) | 1,968 (7.7) | | | | |
| | | 1016 Sumerpur | 26,939 | 1,886 (7.0) | 808 (3.0) | 889 (3.3) | 0 (0.0) | 1,832 (6.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,556 (5.7) | 3,071 (11.4) | | | | |
| | | 11 Saebareli | 149,762 | 6,572 (4.4) | 5,087 (3.4) | 8,276 (5.5) | 0 (0.0) | 6,409 (4.3) | 256 (0.2) | 0 (0.0) | 0 (0.0) | 5,414 (3.6) | 13,288 (8.9) | | | | |
| | | 1101 Sataon | 25,550 | 1,503 (5.1) | 588 (2.3) | 971 (3.8) | 0 (0.0) | 894 (3.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2,146 (8.4) | | | | |
| | | 1102 Kheero | 23,204 | 1,462 (6.3) | 1,485 (6.4) | 1,276 (5.5) | 0 (0.0) | 464 (2.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,972 (8.5) | | | | |
| | | 1103 Lalganj | 22,276 | 668 (3.0) | 0 (0.0) | 535 (2.4) | 0 (0.0) | 1,069 (4.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,225 (5.5) | 2,072 (9.3) | | | | |
| | | 1104 Saren | 25,511 | 1,552 (5.3) | 1,148 (4.5) | 2,296 (9.0) | 0 (0.0) | 1,556 (6.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,382 (5.2) | 2,143 (8.4) | | | | |
| | | 1105 Dalmau | 26,476 | 350 (2.0) | 609 (2.3) | 1,086 (4.1) | 0 (0.0) | 847 (3.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,324 (5.0) | 1,953 (7.3) | | | | |
| | | 1106 Jagatpur | 26,745 | 1,257 (4.7) | 1,257 (4.7) | 2,113 (7.9) | 0 (0.0) | 1,578 (5.9) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1,284 (4.8) | 3,022 (11.3) | | | | |
| | | Total | 5,127,352 | 175,109 (3.4) | 661,480 (12.9) | 207,525 (4.0) | 114,606 (2.2) | 425,668 (8.3) | 4,840 (0.1) | 439,808 (8.6) | 627,497 (12.2) | 273,466 (5.3) | | | | | |

Table C.2 (1/4) Climate in the Sharda Canal Command Area -Lucknow

| Month | Temperature (C) | | | Relative Humidity (%) | | | W.S. 3/ | ETpan 4/ | ETO 5/ | S.Hrs 6/ | Rainfall 7/ |
|--------|------------------|------|------|-----------------------|-------------|------|------------|-------------|-----------|-------------|----------------|
| | max | min | mean | 8:30 1/ | 17:30 2/ | mean | | | | | |
| Jan | 22.6 | 7.8 | 15.2 | 85.2 | 59.2 | 72.2 | 1.4 | 1.6 | 2.5 | 7.7 | 16.2 |
| Feb | 26.1 | 10.7 | 18.4 | 70.2 | 45.2 | 57.7 | 2.0 | 2.8 | 3.9 | 8.7 | 18.5 |
| Mar | 32.0 | 11.7 | 21.9 | 59.6 | 32.9 | 46.3 | 2.7 | 5.0 | 5.6 | 8.7 | 8.4 |
| Apr | 38.2 | 20.4 | 29.3 | 38.3 | 21.8 | 30.1 | 3.5 | 5.0 | 7.8 | 8.9 | 7.7 |
| May | 39.4 | 24.8 | 32.1 | 47.6 | 28.4 | 38.0 | 3.9 | 7.4 | 8.6 | 8.6 | 13.9 |
| Jun | 38.4 | 26.9 | 32.7 | 60.1 | 42.8 | 51.5 | 3.3 | 7.4 | 7.7 | 7.4 | 86.8 |
| Jul | 33.7 | 26.3 | 30.0 | 83.9 | 73.3 | 78.6 | 2.5 | 3.7 | 4.8 | 4.3 | 295.4 |
| Aug | 33.8 | 25.9 | 29.9 | 82.4 | 71.8 | 77.1 | 2.9 | 3.7 | 5.2 | 5.7 | 271.8 |
| Sep | 33.6 | 24.6 | 29.1 | 82.6 | 71.8 | 77.2 | 2.1 | 3.5 | 4.6 | 5.7 | 194.5 |
| Oct | 32.6 | 19.1 | 25.9 | 75.8 | 66.6 | 71.2 | 1.0 | 2.7 | 4.2 | 8.4 | 34.6 |
| Nov | 29.4 | 12.7 | 21.1 | 73.8 | 63.0 | 68.4 | 0.6 | 1.9 | 3.0 | 8.2 | 5.2 |
| Dec | 24.1 | 9.0 | 16.6 | 86.8 | 68.4 | 77.6 | 0.9 | 1.5 | 2.0 | 6.2 | 6.3 |
| Annual | 32.0 | 18.3 | 25.2 | 70.5 | 53.8 | 62.1 | 2.2 | 3.9 | 5.0 | 7.4 | 959.3 |

Remarks: 1/ Measured at 8:30
 2/ Measured at 17:30
 3/ Wind speed in meter/sec
 4/ Pan Evaporation in mm
 5/ Evapotranspiration estimated by Modified Penman Method
 6/ Sunshine hours in hours
 7/ Normal Rainfall in mm

Source : Aquired from India Meteorological Department, UP

Table C.2 (2/4) Climate in the Sharda Canal Command Area -Shahjahanpur

| Month | Temperature (C) | | | Relative Humidity (%) | | | W.S. 3/ | Oktas 4/ | ETO 5/ | Rainfall 6/ |
|--------|------------------|------|------|-----------------------|-------------|------|------------|-------------|-----------|----------------|
| | max | min | mean | 8:30 1/ | 17:30 2/ | mean | | | | |
| Jan | 21.9 | 7.6 | 14.8 | 84.4 | 63.8 | 74.1 | 1.6 | 5.3 | 1.8 | 16.5 |
| Feb | 25.4 | 9.3 | 17.4 | 75.7 | 50.2 | 63.0 | 2.6 | 4.1 | 2.8 | 22.2 |
| Mar | 30.6 | 14.3 | 22.5 | 64.3 | 39.4 | 51.9 | 3.7 | 5.6 | 3.7 | 11.9 |
| Apr | 36.8 | 19.8 | 28.3 | 47.7 | 29.2 | 38.5 | 5.7 | 4.5 | 5.7 | 8.1 |
| May | 38.5 | 23.7 | 31.1 | 51.4 | 33.6 | 42.5 | 5.5 | 6.2 | 5.5 | 17.2 |
| Jun | 27.3 | 26.3 | 26.8 | 63.7 | 46.9 | 55.3 | 4.5 | 6.2 | 5.3 | 119.7 |
| Jul | 33.3 | 25.4 | 29.4 | 83.0 | 71.7 | 77.4 | 3.2 | 6.0 | 4.5 | 300.0 |
| Aug | 33.1 | 25.5 | 29.3 | 83.1 | 73.6 | 78.4 | 3.0 | 5.7 | 4.4 | 284.0 |
| Sep | 32.6 | 24.0 | 28.3 | 83.3 | 72.7 | 78.0 | 2.5 | 6.3 | 3.6 | 127.0 |
| Oct | 31.6 | 18.3 | 25.0 | 77.8 | 64.2 | 71.0 | 1.1 | 4.3 | 3.4 | 41.0 |
| Nov | 28.5 | 11.7 | 20.1 | 75.1 | 62.9 | 69.0 | 0.6 | 3.1 | 2.5 | 3.6 |
| Dec | 23.5 | 8.9 | 16.2 | 84.1 | 71.2 | 77.7 | 1.5 | 5.6 | 1.7 | 8.2 |
| Annual | 30.3 | 17.9 | 24.1 | 72.8 | 56.6 | 64.7 | 3.0 | 5.2 | 3.7 | 959.4 |

Remarks: 1/ Measured at 8:30
 2/ Measured at 17:30
 3/ Wind speed in meter/sec
 4/ Oktas (Cloud cover expressed by 8 degress. ex. full cover -> 8)
 5/ Evapotranspiration estimated by Modified Penman Method
 6/ Normal rainfall in mm

Source : Aquired from India Meteorological Department, UP

Table C.2 (3/4) Climate in the Sharda Canal Command Area -Hardoi

| Month | Temperature (°C) | | | Relative Humidity (%) | | | W.S. 3/ | Oktas 4/ | ETO 5/ | Rainfall 6/ |
|--------|------------------|------|------|-----------------------|-------------|------|------------|-------------|-----------|----------------|
| | max | min | mean | 8:30 1/ | 17:30 2/ | mean | | | | |
| Jan | 21.4 | 8.6 | 15.0 | 86.0 | 63.3 | 74.7 | 0.2 | 3.6 | 1.9 | 16.0 |
| Feb | 25.1 | 11.5 | 18.3 | 79.9 | 54.9 | 67.4 | 0.3 | 4.3 | 2.8 | 16.5 |
| Mar | 31.0 | 15.4 | 23.2 | 67.1 | 39.8 | 53.5 | 0.4 | 2.3 | 4.2 | 9.1 |
| Apr | 37.3 | 21.8 | 29.6 | 44.1 | 30.2 | 37.2 | 0.5 | 3.2 | 5.7 | 6.1 |
| May | 38.8 | 25.2 | 32.0 | 51.4 | 32.6 | 42.0 | 0.4 | 4.0 | 6.1 | 13.4 |
| Jun | 37.9 | 27.4 | 32.7 | 60.0 | 44.7 | 52.4 | 0.4 | 4.0 | 6.4 | 83.5 |
| Jul | 33.6 | 26.0 | 29.8 | 81.9 | 71.2 | 76.6 | 0.4 | 4.8 | 5.1 | 271.5 |
| Aug | 33.5 | 26.2 | 29.9 | 82.7 | 72.5 | 77.6 | 0.4 | 4.4 | 4.9 | 249.9 |
| Sep | 33.2 | 25.2 | 29.2 | 80.9 | 68.8 | 74.9 | 0.3 | 4.6 | 4.3 | 167.0 |
| Oct | 32.3 | 20.3 | 26.3 | 75.0 | 59.9 | 67.5 | 0.1 | 3.0 | 3.6 | 35.3 |
| Nov | 28.7 | 13.8 | 21.3 | 74.7 | 54.3 | 64.5 | 0.1 | 3.7 | 2.9 | 2.8 |
| Dec | 22.9 | 9.8 | 16.4 | 86.3 | 63.5 | 74.9 | 0.1 | 3.2 | 1.8 | 7.7 |
| Annual | 31.3 | 19.3 | 25.3 | 72.5 | 54.6 | 63.6 | 0.3 | 3.8 | 4.1 | 878.8 |

Remarks: 1/ Measured at 8:30
2/ Measured at 17:30
3/ Wind speed in meter/sec
4/ Oktas (Cloud cover expressed by 8 degrees. ex. full cover -> 8)
5/ Evapotranspiration estimated by Modified Penman Method
6/ Normal rainfall in mm

Source: Acquired from India Meteorological Department, UP

Table C.2 (4/4) Climate in the Sharda Canal Command Area -Kanpur

| Month | Temperature (°C) | | | Relative Humidity (%) | | | W.S. 3/ | Oktas 4/ | ETO 5/ | Rainfall 6/ |
|--------|------------------|------|------|-----------------------|-------------|------|------------|-------------|-----------|----------------|
| | max | min | mean | 8:30 1/ | 17:30 2/ | mean | | | | |
| Jan | 22.1 | 7.9 | 15.0 | 83.8 | 62.0 | 72.9 | 1.1 | 2.2 | 2.4 | 13.8 |
| Feb | 26.2 | 10.6 | 18.4 | 74.3 | 51.1 | 62.7 | 1.1 | 2.2 | 3.4 | 16.7 |
| Mar | 31.4 | 15.4 | 23.4 | 61.1 | 39.0 | 50.1 | 1.2 | 2.0 | 5.0 | 7.7 |
| Apr | 37.9 | 20.9 | 29.4 | 39.9 | 25.9 | 32.9 | 1.2 | 2.1 | 6.5 | 6.6 |
| May | 40.4 | 25.8 | 33.1 | 48.5 | 33.6 | 41.1 | 1.3 | 2.1 | 7.4 | 9.7 |
| Jun | 39.1 | 27.8 | 33.5 | 59.2 | 44.3 | 51.8 | 1.2 | 2.3 | 7.4 | 67.8 |
| Jul | 34.1 | 27.7 | 30.9 | 80.7 | 71.4 | 76.1 | 1.1 | 2.6 | 6.5 | 262.1 |
| Aug | 33.7 | 26.4 | 30.1 | 81.7 | 71.8 | 76.8 | 1.1 | 2.6 | 6.1 | 247.3 |
| Sep | 32.6 | 23.7 | 28.2 | 81.6 | 72.5 | 77.1 | 1.3 | 2.5 | 5.3 | 165.1 |
| Oct | 32.4 | 17.4 | 24.9 | 69.9 | 59.2 | 64.6 | 1.1 | 2.2 | 4.4 | 30.3 |
| Nov | 29.1 | 11.1 | 20.1 | 67.8 | 59.2 | 63.5 | 1.0 | 1.7 | 3.1 | 4.8 |
| Dec | 23.3 | 7.8 | 15.6 | 81.3 | 65.1 | 73.2 | 1.1 | 2.3 | 2.2 | 5.9 |
| Annual | 31.9 | 18.5 | 25.2 | 69.2 | 54.6 | 61.9 | 1.2 | 2.2 | 5.0 | 837.8 |

Remarks: 1/ Measured at 8:30
2/ Measured at 17:30
3/ Wind speed in meter/sec
4/ Oktas (Cloud cover expressed by 8 degrees. ex. full cover -> 8)
5/ Evapotranspiration estimated by Modified Penman Method
6/ Normal rainfall in mm

Source: Acquired from India Meteorological Department, UP

Table C.3 Geographical Area and CCA by Soil Series in the Representative Areas

| Soil Mapping Unit No. | Soil Series | Sarojini Nagar | | | Purwa | | | Sataon | | | Sursa | | |
|-----------------------|---------------|-----------------|------------|-------|-----------------|------------|-------|-----------------|------------|-------|-----------------|------------|-----|
| | | Total Area (ha) | C.C.A (ha) | (%) | Total Area (ha) | C.C.A (ha) | (%) | Total Area (ha) | C.C.A (ha) | (%) | Total Area (ha) | C.C.A (ha) | (%) |
| 1 | LAKHPERA | 855 | 286 | 1.9 | 283 | 266 | 1.1 | 266 | 2.1 | 1,247 | 359 | 3.9 | |
| 2 | GANGAULI | 4,400 | 2,092 | 14.1 | 2,101 | 1,435 | 11.7 | 5,725 | 3,975 | 30.9 | 1,247 | 2.1 | |
| 3 | TANDA | 687 | 577 | 3.9 | 1,279 | 1,193 | 9.7 | 1,326 | 574 | 4.4 | | | |
| 4 | AMETHI | 458 | 219 | 1.5 | | | | | | | 2,351 | 7.3 | |
| 6 | KAKARI | 2,536 | 2,247 | 15.1 | 288 | 227 | 1.8 | 3,534 | 2,184 | 17.0 | 3,397 | 10.5 | |
| 7 | TAMORIA | 888 | 376 | 2.5 | | | | | | | | | |
| 8 | SITAU LI | 4,071 | 1,978 | 13.3 | 2,654 | 1,385 | 11.3 | 6,347 | 2,958 | 23.0 | 2,688 | 8.3 | |
| 9 | SAIDAPUR | 3,354 | 2,957 | 19.9 | 3,149 | 2,935 | 24.0 | 2,891 | 2,031 | 15.8 | 6,261 | 19.4 | |
| 10 | GARHI | 4,762 | 1,138 | 7.7 | 4,617 | 2,503 | 20.4 | 615 | 79 | 0.6 | 1,157 | 3.6 | |
| 16 | MERAURA | | | | | | | | | | 3,325 | 10.3 | |
| 11 | HASANPUR | 2,380 | 538 | 3.6 | 876 | 636 | 5.2 | | | | 1,970 | 6.1 | |
| 12 | UTELWA | 1,978 | 1,666 | 11.2 | 471 | 462 | 3.8 | | | | 1,487 | 4.6 | |
| 13 | POKARA | 1,702 | 460 | 3.1 | 1,029 | 524 | 4.3 | 478 | 269 | 2.1 | 3,474 | 10.8 | |
| 14 | GOSHANGANT | 1,396 | 328 | 2.2 | 2,156 | 952 | 7.8 | 972 | 311 | 2.4 | 598 | 1.8 | |
| 15 | UTTARGAON | | | | | | | 148 | 227 | 1.7 | 1,873 | 5.8 | |
| | Miscellaneous | 4,021 | | | 2,207 | | | 3,446 | | | 2,441 | 7.6 | |
| | Total | 33,488 | 14,862 | 100.0 | 20,827 | 12,252 | 100.0 | 25,765 | 12,874 | 100.0 | 32,269 | 100.0 | |
| | | | | | | | | | | | | 17,313 | |
| | | | | | | | | | | | | 100.0 | |

Table C.4 Soil Taxonomy

| Order | Great Group | | | Sub-group | | Family | | Series | Mapping symbols | |
|-------------|-------------|---------------|---------------------|--|-------------|--------|-------------|--------|-----------------|--|
| | Sub-Order | Great Group | Sub-group | Sub-group | Family | Series | Unit Number | | Mapping symbols | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| Entisols | Psamments | Ustipsamments | Typic Ustipsamments | Coarse, Loamy, mixed, hyperthermic | LAKHIPERA | 1 | Lp | | | |
| Inceptisols | Ochrepts | Ustochrepts | Udic Ustochrepts | Loamy, Silty, mixed, hyperthermic | GANGAULI | 2 | Gl | | | |
| | do | do | Typic Ustochrepts | Loamy, Silty, (Calcareous), mixed, hyperthermic | TANDA | 3 | Tn | | | |
| | do | do | Udic Ustochrepts | Loamy, Clayey, mixed, hyperthermic | AMETHI | 4 | Am | | | |
| | do | do | do | do | KAKARI | 6 | Kr | | | |
| | Aquepts | Halaquepts | Typic Halaquepts | Clayey, (Calcareous), mixed, hyperthermic | TAMORIA | 7 | Tm | | | |
| | do | do | do | do | SITAUULI | 8 | St | | | |
| | do | Haplaquepts | Aeric Haplaquepts | Silty, Clayey, (Calcareous), mixed, hyperthermic | SAIDAPUR | 9 | Sd | | | |
| | do | do | do | do | GARHI | 10 | Gr | | | |
| | do | do | do | Silty, mixed, hyperthermic | MERAURA | 16 | Mr | | | |
| | do | do | do | Silty, Clayey, mixed, hyperthermic | HASANPUR | 11 | Hn | | | |
| | do | do | do | Clayey, mixed, (Calcareous), hyperthermic | UTELWA | 12 | Ut | | | |
| | do | Halaquepts | Typic Halaquepts | Clayey, silty, (Calcareous), mixed, hyperthermic | POKARA | 13 | Pr | | | |
| | do | Haplaquepts | Aeric Haplaquepts | Clayey, mixed, (Calcareous), hyperthermic | GOSHAINGANJ | 14 | Gn | | | |
| | do | do | do | Clayey, (Calcareous), mixed, hyperthermic | UTTARGAON | 15 | Ug | | | |

Table C.5 Analytical Results of Soil Series Profiles in a part of Sharda Canal Command Area (1/6)

| Soil Mapping Unit No. | Name of soil series (2) | Name of study area (3) | Pit No. (4) | Depth in (cm) (5) | Particle size of classes (7) | Silt clay (8) | Textural classes (9) | Organic Carbon (%) (10) | CaCO ₃ (%) (11) | Water holding capacity (12) | Available P ₂ O ₅ (kg/ha) (13) | K ₂ O (14) | pH Value 1:2.5 (15) | EC mmho 1:2.5 (16) | Saturation extract (17) | Exchangeable Cation (18) | Na K (19) |
|-----------------------|-------------------------|------------------------|-------------|-------------------|------------------------------|---------------|----------------------|-------------------------|----------------------------|-----------------------------|--|-----------------------|---------------------|--------------------|-------------------------|--------------------------|-----------|
| 1 | LAKHIPERA 1/ | | | 0-7 | 81 | 10 | 9 | SL | 0.10 | 26.2 | | | 7.7 | 0.09 | 0.36 | | |
| | | | | 7-40 | 87 | 12 | 1 | LS | 0.06 | 24.2 | | | 7.8 | 0.07 | 0.28 | | |
| | | | | 40-79 | 89 | 10 | 1 | LS | 0.04 | 23.8 | | | 7.7 | 0.07 | 0.28 | | |
| | | | | 79-100 | 91 | 8 | 1 | LS | 0.04 | 20.3 | | | 7.8 | 0.08 | 0.32 | | |
| 2 | GANGAULI 1/ | | | 0-12 | 68 | 18 | 14 | SL | 0.47 | 38.6 | | | 7.5 | 0.17 | 0.68 | | |
| | | | | 12-40 | 48 | 36 | 16 | CL | 0.20 | 38.4 | | | 7.4 | 0.14 | 0.56 | | |
| | | | | 40-90 | 50 | 32 | 18 | CL | 0.12 | 39.6 | | | 7.5 | 0.15 | 0.60 | | |
| | | | | 90-145 | 66 | 16 | 18 | SCL | 0.07 | 40.2 | | | 7.5 | 0.14 | 0.56 | | |
| | | | | 145-180 | 72 | 18 | 10 | SL | 0.05 | 38.9 | | | 7.7 | 0.15 | 0.60 | | |
| | | | | 0-10 | 54 | 38 | 8 | SIL | 0.14 | 32.7 | 14.3 | 50.4 | 6.6 | 0.28 | 1.12 | 0.07 | 0.15 |
| | | | | 10-20 | 52 | 33 | 16 | CL | 0.07 | 36.6 | 23.3 | 50.4 | 7.0 | 0.06 | 0.24 | 0.09 | 0.15 |
| | | | | 20-128 | 52 | 33 | 16 | CL | 0.15 | 36.1 | 12.5 | 33.6 | 7.0 | 0.05 | 0.20 | 0.13 | 0.15 |
| | | | | 128-175 | 52 | 30 | 18 | CL | 0.08 | 43.1 | 17.9 | 50.4 | 7.0 | 0.05 | 0.20 | 0.15 | 0.18 |
| | | | | 0-010 | 41 | 43 | 17 | CL | 0.14 | 30.6 | 21.5 | 67.2 | 7.4 | 0.12 | 0.48 | 0.08 | 0.16 |
| | | | | 10-62 | 46 | 38 | 17 | CL | 0.14 | 25.7 | 17.9 | 67.2 | 7.0 | 0.08 | 0.32 | 0.05 | 0.13 |
| | | | | 62-84 | 46 | 33 | 22 | CL | 0.14 | 30.5 | 11.6 | 61.6 | 6.8 | 0.08 | 0.32 | 0.08 | 0.10 |
| | | | | 84-150 | 46 | 35 | 19 | CL | 0.08 | 30.7 | 6.3 | 39.2 | 7.1 | 0.08 | 0.32 | 0.27 | 0.13 |
| | | | | 0-18 | 76 | 1 | 23 | SCL | 0.11 | 33.0 | 28.2 | 100.8 | 7.8 | 0.30 | 0.12 | 0.74 | 0.10 |
| | | | | 18-55 | 76 | 19 | 5 | SL | 0.08 | 35.3 | 17.1 | 94.1 | 6.8 | 0.40 | 0.16 | 0.46 | 0.08 |
| | | | | 55-95 | 70 | 17 | 13 | SL | 0.10 | 39.4 | 8.5 | 98.6 | 6.7 | 0.50 | 0.20 | 0.54 | 0.08 |
| | | | | 95-130 | 70 | 17 | 13 | SL | 0.08 | 44.7 | 6.0 | 98.6 | 6.6 | 0.40 | 0.16 | 0.52 | 0.08 |

Remarks: 1/ From Detailed Soil Survey, Block Mohanlalganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No.AGRIC 101, May 1989
 2/ From Detailed Soil Survey, Block Goshainganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No.AGRIC 92, May 1989
 3/ From Detailed Soil Survey, Block Dhanpatganj, District Sultanpur, UP, Sharda Sahayak CAD Project Report No.AGRIC 125, May 1989-1990
 4/ Analytical results of different soil profiles by Laboratory of Sharda Sahayak CAD Project, February 1991
 5/ Analytical results of different soil profiles by Laboratory of Department of Agriculture, UP, February 1991

Table C.5 Analytical Results of Soil Series Profiles in a part of Sharda Canal Command Area (2/6)

| Soil Mapping Unit No. | Name of soil series | Pit No. | Depth in (cm) | Particle size of classes | Textural classes | Organic Carbon (%) | Water holding capacity | Available P2O5 (kg/ha) | PH Value 1:2.5 | EC mmho 1:2.5 | Saturation extract Na K | Exchangeable Cation | | | | | | |
|-----------------------|---------------------|---------|---------------|--------------------------|------------------|--------------------|------------------------|------------------------|----------------|---------------|-------------------------|---------------------|------|------|------|------|------|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) |
| 3 | TANDA 1/ | | 0-40 | 38 52 | 10 SIL | 0.29 | 1.0 | 38.6 | 8.4 | 0.11 | 0.44 | | | | | | | |
| | | | 40-60 | 30 58 | 12 SIL | 0.20 | 11.0 | 43.6 | 8.4 | 0.13 | 0.52 | | | | | | | |
| | | | 60-115 | 22 54 | 24 SiCL | 0.17 | 1.5 | 48.2 | 8.6 | 0.21 | 0.84 | | | | | | | |
| | | | 115-158 | 22 50 | 28 SiC | 0.14 | 14.0 | 45.6 | 8.6 | 0.19 | 0.76 | | | | | | | |
| | | | 158-180 | 36 50 | 14 SIL | 0.08 | 11.5 | 42.6 | 8.8 | 0.15 | 0.60 | | | | | | | |
| | Purwa P7 4/ | | 0-11 | 15 63 | 23 SiCL | 0.20 | 1.5 | 44.9 | 8.1 | 1.85 | 7.40 | 1.86 | | | | | | |
| | | | 11-57 | 12 63 | 25 SiC | 0.16 | 1.5 | 48.2 | 8.3 | 1.50 | 6.00 | 1.79 | | | | | | |
| | | | 57-90 | 10 70 | 20 SiCL | 0.07 | 3.0 | 52.3 | 8.2 | 1.50 | 6.00 | 2.23 | | | | | | |
| | | | 90-140 | 7 73 | 20 SiCL | 0.07 | 4.0 | 58.8 | 8.1 | 1.46 | 5.84 | 2.07 | | | | | | |
| | Sazon P7 5/ | | 0-22 | 18 65 | 17 SiCL | 0.35 | 0.1 | 45.4 | 7.2 | 0.70 | 2.80 | 0.42 | | | | | | |
| | | | 22-66 | 14 59 | 27 SiC | 0.14 | 0.1 | 37.7 | 7.3 | 0.70 | 2.80 | 0.86 | | | | | | |
| | | | 66-120 | 14 49 | 37 SiC | 0.11 | 0.1 | 42.2 | 7.8 | 0.80 | 3.20 | 3.32 | | | | | | |
| | | | 120-150 | 14 53 | 33 SiC | 0.07 | 0.2 | 58.8 | 8.1 | 0.90 | 3.60 | 22.00 | | | | | | |
| 4 | AMETH 2/ | | 0-15 | 33 52 | 15 SIL | 0.40 | | 49.2 | 7.8 | 0.13 | 0.52 | | | | | | | |
| | | | 15-35 | 31 58 | 11 SIL | 0.36 | | 46.1 | 8.1 | 0.07 | 0.28 | | | | | | | |
| | | | 35-58 | 27 50 | 23 SiCL | 0.13 | | 47.4 | 8.4 | 0.16 | 0.64 | | | | | | | |
| | | | 58-121 | 25 48 | 27 SiC | 0.10 | | 46.2 | 8.3 | 0.18 | 0.72 | | | | | | | |
| | | | 121-148 | 25 52 | 23 SiCL | 0.10 | | 40.6 | 7.9 | 0.11 | 0.44 | | | | | | | |
| | | | 148-180 | 19 62 | 19 SiCL | 0.08 | | 52.0 | 8.0 | 0.12 | 0.48 | | | | | | | |
| 6 | KAKARI 2/ | | 0-13 | 20 65 | 15 SIL | 0.43 | | 44.7 | 7.7 | 0.15 | 0.60 | | | | | | | |
| | | | 13-55 | 20 60 | 20 SiCL | 0.20 | | 42.0 | 7.9 | 0.09 | 0.36 | | | | | | | |
| | | | 55-80 | 15 55 | 30 SiC | 0.20 | | 44.7 | 7.6 | 0.12 | 0.48 | | | | | | | |
| | | | 80-110 | 12 55 | 33 SiC | 0.14 | | 44.0 | 7.7 | 0.11 | 0.44 | | | | | | | |
| | | | 110-150 | 17 55 | 23 SiCL | 0.11 | | 48.5 | 8.1 | 0.07 | 0.28 | | | | | | | |
| | | | 150-180 | 38 52 | 10 SIL | 0.07 | | 37.0 | 8.1 | 0.08 | 0.32 | | | | | | | |
| | Sarajini P3 4/ | | 0-12 | 37 45 | 18 CL | 0.16 | | 38.0 | 7.0 | 0.14 | 0.56 | 0.08 | | | | | | |
| | Nagar | | 12-30 | 29 45 | 26 LiC | 0.20 | | 48.4 | 7.5 | 0.04 | 0.16 | 0.18 | | | | | | |
| | | | 30-55 | 30 35 | 35 LiC | 0.18 | | 44.9 | 7.2 | 0.04 | 0.16 | 0.07 | | | | | | |
| | | | 55-160 | 18 38 | 45 LiC | 0.07 | | 45.8 | 7.1 | 0.04 | 0.16 | 0.17 | | | | | | |

Remarks: 1/ From Detailed Soil Survey, Block Mohanlalgaon, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 101, May 1989
 2/ From Detailed Soil Survey, Block Goshanganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 92, May 1989
 3/ From Detailed Soil Survey, Block Dhanpatganj, District Sultanpur, UP, Sharda Sahayak CAD Project Report No. AGRIC 125, May 1989-1990
 4/ Analytical results of different soil profiles by Laboratory of Sharda Sahayak CAD Project, February 1991
 5/ Analytical results of different soil profiles by Laboratory of Department of Agriculture, UP, February 1991

Table C.5 Analytical Results of Soil Series Profiles in a part of Sharda Canal Command Area (3/6)

| Soil Mapping Unit No. (1) | Name of soil series (2) | Name of study area (3) | Pit No. (4) | Depth in (cm) (5) | Particle size of classes (6) | Silt clay (7) | Textural classes (9) | Organic Carbon (%) (10) | CaCO3 (%) (11) | Water holding capacity (12) | Available P2O5 (kg/ha) (13) | K2O (14) | PH Value 1:2.5 (15) | EC mmho 1:2.5 (16) | Saturation extract Na (17) | Exchangeable Cation (m.eq/100gm) Na K (18) | (19) | |
|---------------------------|-------------------------|------------------------|-------------|-------------------|------------------------------|---------------|----------------------|-------------------------|----------------|-----------------------------|-----------------------------|----------|---------------------|--------------------|----------------------------|--|-------|------|
| 7 | TAMORIA | I/ | | 0-16 | 9 | 70 | 21 | SiCL | 0.44 | 1.0 | 38.5 | | 9.9 | 0.61 | 2.44 | | | |
| | | | | 16-48 | 4 | 57 | 39 | SiC | 0.05 | 5.0 | 32.3 | | 10.6 | 2.50 | 12.50 | | | |
| | | | | 48-78 | 4 | 53 | 43 | SiC | 0.07 | 2.5 | 35.0 | | 10.4 | 1.60 | 8.00 | | | |
| | | | | 78-98 | 4 | 50 | 46 | HC | 0.08 | 3.0 | 36.3 | | 10.2 | 1.20 | 6.00 | | | |
| | | | | 98-118 | 4 | 50 | 46 | HC | 0.54 | 2.0 | 37.6 | | 9.9 | 0.84 | 3.37 | | | |
| 8 | SITHAULI | I/ | | 0-6 | 20 | 54 | 26 | SiC | 0.20 | 8.5 | 44.9 | | 10.0 | 36.50 | 18.50 | | | |
| | | | | 6-25 | 16 | 46 | 38 | SiC | 0.16 | 1.0 | 48.8 | | 10.2 | 0.91 | 3.64 | | | |
| | | | | 25-65 | 12 | 46 | 42 | SiC | 0.14 | 1.5 | 47.8 | | 10.3 | 3.10 | 15.50 | | | |
| | | | | 65-99 | 12 | 46 | 42 | SiC | 0.07 | 2.0 | 65.6 | | 9.4 | 0.92 | 3.64 | | | |
| | | | | 99-140 | 12 | 48 | 40 | SiC | 0.05 | | 61.2 | | 9.6 | 0.42 | 1.68 | | | |
| | | | | 140-180 | 16 | 54 | 30 | SiC | 0.05 | 2.0 | 66.7 | | 9.8 | 0.32 | 1.28 | | | |
| | | | P4 | 0-12 | 13 | 63 | 25 | SiL | 0.12 | 2.5 | 41.2 | 24.9 | 257.6 | 10.6 | 2.80 | 11.20 | 10.65 | 0.54 |
| | | | | 12-32 | 10 | 50 | 40 | SiC | 0.07 | 2.5 | 55.8 | 4.5 | 207.2 | 10.1 | 0.90 | 3.60 | 7.61 | 0.46 |
| | | | | 32-58 | 15 | 50 | 35 | SiC | 0.07 | 6.5 | 66.0 | 3.5 | 117.6 | 9.7 | 0.51 | 2.04 | 2.00 | 0.31 |
| | | | | 58-125 | 13 | 43 | 45 | LiC | 0.11 | 8.5 | 56.9 | 1.8 | 100.8 | 9.3 | 0.28 | 1.12 | 0.72 | 0.26 |
| | | | P1 | 0-12 | 22 | 53 | 25 | SiC | 0.19 | 2.0 | 35.4 | 21.5 | 123.2 | 10.1 | 1.10 | 4.40 | 8.42 | 0.32 |
| | | | | 12-33 | 17 | 48 | 35 | SiC | 0.05 | 1.5 | 30.9 | 8.1 | 117.6 | 9.4 | 0.47 | 1.88 | 8.70 | 0.29 |
| | | | | 33-129 | 17 | 53 | 30 | SiC | 0.05 | 1.0 | 44.9 | 4.5 | 89.6 | 9.1 | 0.33 | 1.32 | 5.16 | 0.26 |
| | | | | 129-167 | 15 | 58 | 28 | SiC | 0.05 | 0.5 | 37.4 | 2.7 | 84.0 | 8.8 | 0.23 | 0.92 | 1.47 | 0.10 |
| | | | P1 | 0-20 | 24 | 61 | 15 | SiL | 0.40 | 0.1 | 44.2 | 12.8 | 367.4 | 8.0 | 0.40 | 1.60 | 1.58 | 0.54 |
| | | | | 20-30 | 14 | 65 | 21 | SiCL | 0.06 | 0.3 | 34.1 | 2.6 | 322.6 | 9.4 | 0.90 | 3.60 | 30.80 | 0.43 |
| | | | | 30-70 | 16 | 53 | 31 | SiC | 0.06 | 0.3 | 67.2 | 12.0 | 275.5 | 10.0 | 1.20 | 4.80 | 36.80 | 0.46 |
| | | | | 70-120 | 16 | 53 | 31 | SiC | 0.31 | 0.8 | 59.9 | 6.0 | 188.2 | 10.0 | 1.20 | 4.80 | 34.80 | 0.28 |

Remarks: 1/ From Detailed Soil Survey, Block Mohanlalganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No.AGRIC 101, May 1989
 2/ From Detailed Soil Survey, Block Goshainganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No.AGRIC 92, May 1989
 3/ From Detailed Soil Survey, Block Dhanpatganj, District Sultanpur, UP, Sharda Sahayak CAD Project Report No.AGRIC 125, May 1989-1990
 4/ Analytical results of different soil profiles by Laboratory of Sharda Sahayak CAD Project, February 1991
 5/ Analytical results of different soil profiles by Laboratory of Department of Agriculture, UP, February 1991

Table C.5 Analytical Results of Soil Series Profiles in a part of Sharda Canal Command Area (4/6)

| Soil Mapping Unit No. (1) | Name of soil series (2) | Name of study area (3) | Pt No. (4) | Depth in (cm) (5) | Particle size of classes (6) | Silt clay (7) | Textural classes (8) | Organic Carbon (%) (9) | CaCO ₃ holding capacity (10) | Water Available (kg/ha) (11) | PH Value 1:2.5 (12) | EC mmho 1:2.5 extract (13) | Exchangeable Cation Na K (14) | | | |
|---------------------------|-------------------------|------------------------|---------------|-------------------|------------------------------|---------------|----------------------|------------------------|---|------------------------------|---------------------|----------------------------|-------------------------------|------|------|------|
| 9 | SAIDAPUR 1/ | | | 0-15 | 17 | 66 | 17 SiCL | 0.41 | 44.3 | 8.3 | 0.13 | 0.52 | | | | |
| | | | | 15-60 | 21 | 62 | 17 SiCL | 0.20 | 47.3 | 8.0 | 0.11 | 0.44 | | | | |
| | | | | 60-80 | 13 | 60 | 27 SiC | 0.16 | 46.6 | 7.6 | 0.08 | 0.32 | | | | |
| | | | | 80-120 | 11 | 56 | 33 SiC | 0.15 | 47.4 | 7.8 | 0.10 | 0.40 | | | | |
| | | | | 120-150 | 11 | 60 | 29 SiC | 0.13 | 55.5 | 8.3 | 0.11 | 0.44 | | | | |
| | | | | 150-160 | 17 | 60 | 23 SiCL | 0.09 | 54.2 | 8.5 | 0.15 | 0.60 | | | | |
| | | | Purva P4 4/ | 0-15 | 11 | 65 | 24 SiCL | 0.24 | 34.1 | 11.3 | 134.4 | 7.0 | 0.15 | 0.60 | 0.33 | 0.35 |
| | | | | 15-35 | 11 | 55 | 34 SiC | 0.19 | 43.3 | 4.5 | 146.6 | 7.7 | 0.11 | 0.44 | 0.37 | 0.45 |
| | | | | 35-90 | 11 | 58 | 32 SiC | 0.24 | 42.1 | 3.5 | 162.4 | 7.8 | 0.14 | 0.56 | 0.63 | 0.45 |
| | | | | 90-105 | 13 | 48 | 39 SiC | 0.05 | 40.6 | 4.5 | 168.0 | 8.0 | 0.21 | 0.84 | 0.68 | 0.51 |
| | | | Sataon P14 5/ | 0-10 | 34 | 51 | 15 SiL | 0.31 | 38.9 | 42.7 | 425.6 | 7.2 | 0.60 | 2.40 | 0.80 | 0.95 |
| | | | | 10-85 | 34 | 35 | 31 LiC | 0.14 | 41.8 | 24.0 | 425.6 | 6.9 | 0.50 | 2.00 | 0.80 | 0.90 |
| | | | | 85-150 | 18 | 49 | 33 SiC | 0.11 | 59.6 | 6.8 | 425.6 | 6.9 | 0.50 | 2.00 | 0.82 | 0.95 |
| 10 | GARHI 1/ | | | 0-15 | 12 | 65 | 23 SiCL | 0.28 | 41.0 | 7.8 | 0.15 | 0.60 | | | | |
| | | | | 15-53 | 9 | 55 | 36 SiC | 0.12 | 42.7 | 7.5 | 0.22 | 0.88 | | | | |
| | | | | 53-85 | 7 | 52 | 41 SiC | 0.14 | 43.6 | 7.7 | 0.12 | 0.48 | | | | |
| | | | | 85-115 | 17 | 55 | 28 SiC | 0.04 | 47.7 | 8.5 | 0.17 | 0.68 | | | | |
| | | | | 115-180 | 14 | 65 | 21 SiCL | 0.04 | 47.1 | 8.6 | 0.15 | 0.60 | | | | |
| 16 | MARAURA | Sursa | P1 4/ | 0-12 | 35 | 40 | 25 CL | 0.53 | 42.6 | 21.5 | 448.0 | 6.3 | 0.08 | 0.32 | 0.08 | 0.29 |
| | | | | 12-45 | 35 | 40 | 25 CL | 0.18 | 37.2 | 14.3 | 392.0 | 7.0 | 0.11 | 0.44 | 0.16 | 0.22 |
| | | | | 45-72 | 50 | 30 | 20 CL | 0.13 | 35.1 | 5.4 | 336.0 | 6.9 | 0.15 | 0.60 | 0.16 | 0.19 |
| | | | | 72-95 | 60 | 28 | 13 L | 0.07 | 35.8 | 3.5 | 336.0 | 7.3 | 0.11 | 0.44 | 0.19 | 0.13 |
| | | | | 95-180 | 73 | 20 | 8 SL | 0.05 | 35.8 | 0.9 | 336.0 | 7.5 | 0.08 | 0.32 | 0.27 | 0.13 |
| 11 | HASANPUR 1/ | | | 0-10 | 27 | 57 | 16 SiCL | 0.63 | 58.0 | 7.7 | 0.37 | 1.48 | | | | |
| | | | | 10-43 | 27 | 55 | 18 SiCL | 0.31 | 42.5 | 7.9 | 0.16 | 0.64 | | | | |
| | | | | 43-70 | 4 | 58 | 38 SiC | 0.23 | 44.2 | 8.0 | 0.13 | 0.52 | | | | |
| | | | | 70-90 | 17 | 47 | 36 SiC | 0.18 | 47.1 | 8.0 | 0.11 | 0.44 | | | | |
| | | | | 90-135 | 17 | 47 | 36 SiC | 0.18 | 49.9 | 7.9 | 0.10 | 0.40 | | | | |
| 12 | UTELWA 1/ | | | 0-11 | 18 | 44 | 38 LiC | 0.42 | 43.8 | 7.8 | 0.13 | 0.52 | | | | |
| | | | | 11-32 | 12 | 56 | 32 SiC | 0.15 | 49.0 | 8.6 | 0.18 | 0.72 | | | | |
| | | | | 32-61 | 12 | 46 | 42 SiC | 0.11 | 51.0 | 8.9 | 0.17 | 0.68 | | | | |
| | | | | 61-99 | 22 | 40 | 38 LiC | 0.10 | 54.3 | 9.1 | 0.20 | 0.80 | | | | |
| | | | | 99-126 | 20 | 44 | 36 LiC | 0.08 | 61.4 | 9.2 | 0.22 | 0.88 | | | | |
| | | | | 126-180 | 28 | 42 | 30 LiC | 0.03 | 57.6 | 9.4 | 0.34 | 1.36 | | | | |

Remarks: 1/ From Detailed Soil Survey, Block Mohanlalganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 101, May 1989
 2/ From Detailed Soil Survey, Block Goshainganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 92, May 1989
 3/ From Detailed Soil Survey, Block Dhanpatganj, District Sultanpur, UP, Sharda Sahayak CAD Project Report No. AGRIC 125, May 1989-1990
 4/ Analytical results of different soil profiles by Laboratory of Sharda Sahayak CAD Project, February 1991
 5/ Analytical results of different soil profiles by Laboratory of Department of Agriculture, UP, February 1991

Table C.5 Analytical Results of Soil Series Profiles in a part of Sharda Canal Command Area (5/6)

| Soil Mapping Unit No. (1) | Name of soil series (2) | Name of study area (3) | Plot No. (4) | Depth in (cm) (5) | Particle size of classes | | | Textural classes (9) | Organic Carbon (%) (10) | CaCO ₃ (%) (11) | Water holding capacity (12) | Available P ₂ O ₅ (kg/ha) (13) | K ₂ O (14) | PH Value (15) | EC mmho (16) | Exchangeable | | | | |
|---------------------------|-------------------------|------------------------|--------------|-------------------|--------------------------|----------|----------|----------------------|-------------------------|----------------------------|-----------------------------|--|-----------------------|---------------|--------------|--------------------------|---------|--------|-------|------|
| | | | | | Sand (6) | Silt (7) | clay (8) | | | | | | | | | Satur-ation extract (17) | Na (18) | K (19) | | |
| 13 | POKHARA 1/ | | | 0-4 | 39 | 51 | 16 | SiCL | 0.17 | 3.5 | 43.4 | 13.4 | 156.8 | 10.1 | 0.93 | 3.72 | 10.87 | 0.51 | | |
| | | | | 4-13 | 28 | 52 | 30 | SiC | 0.11 | 1.0 | 33.4 | 10.1 | 1.30 | 6.50 | | | | | | |
| | | | | 13-34 | 20 | 50 | 30 | SiC | 0.09 | | 34.2 | 9.8 | 0.70 | 2.80 | | | | | | |
| | | | | 34-60 | 22 | 50 | 28 | SiC | 0.08 | | 54.6 | 9.3 | 0.38 | 1.52 | | | | | | |
| | | | | 60-92 | 28 | 52 | 20 | SiCL | 0.05 | | 54.4 | 9.1 | 0.23 | 0.92 | | | | | | |
| | | | | 92-115 | 30 | 52 | 18 | SiCL | 0.04 | | 50.4 | 9.0 | 0.23 | 0.92 | | | | | | |
| | | | | 0-14 | 15 | 55 | 30 | SiC | 0.05 | | 41.1 | 3.5 | 50.8 | 10.8 | 140.0 | 9.8 | 0.71 | 2.84 | 16.85 | 0.58 |
| | | | | 14-25 | 12 | 58 | 30 | SiC | 0.08 | | 50.8 | 2.5 | 53.6 | 9.0 | 128.8 | 9.4 | 0.47 | 1.88 | 8.70 | 0.48 |
| | | | | 25-66 | 12 | 53 | 35 | SiC | 0.09 | | 53.6 | 3.5 | 45.5 | 5.4 | 39.2 | 9.3 | 0.22 | 0.88 | 1.55 | 0.13 |
| | | | | 66-98 | 2 | 65 | 33 | SiC | 0.08 | | 45.5 | 29.5 | 34.3 | 33.2 | 184.8 | 10.6 | 5.40 | 21.60 | 17.39 | 0.67 |
| | | | | 0-3 | 18 | 65 | 18 | SiCL | 0.30 | | 4.0 | 18.0 | 52.9 | 9.9 | 280.0 | 9.9 | 1.80 | 7.20 | 10.87 | 1.09 |
| | | | | 3-26 | 18 | 53 | 30 | SiC | 0.12 | | 18.0 | 36.5 | 45.1 | 14.3 | 229.6 | 9.7 | 0.83 | 3.32 | 6.52 | 0.90 |
| | | | | 26-66 | 30 | 38 | 33 | SiC | 0.11 | | 36.5 | 41.5 | 43.6 | 11.6 | 84.0 | 8.5 | 0.12 | 0.48 | 0.73 | 0.38 |
| 66-110 | 30 | 35 | 35 | LiC | 0.14 | | 41.5 | 29.0 | 36.1 | 13.4 | 39.2 | 8.5 | 0.12 | 0.48 | 0.43 | 0.26 | | | | |
| 110-150 | 30 | 48 | 23 | SiCL | 0.05 | | 29.0 | 4.4 | 43.7 | | | | | | | | | | | |
| 14 | GOSHAIN GANJ 1/ | | | 0-10 | 24 | 48 | 28 | SiC | 0.44 | | 41.3 | 7.7 | 0.11 | 0.44 | | | | | | |
| | | | | 10-38 | 19 | 46 | 35 | SiC | 0.10 | | 39.6 | 1.5 | 0.15 | 0.60 | | | | | | |
| | | | | 38-68 | 23 | 40 | 37 | LiC | 0.09 | | 49.2 | 2.0 | 0.25 | 1.00 | | | | | | |
| | | | | 68-89 | 23 | 44 | 33 | LiC | 0.07 | | 46.2 | 1.5 | 0.47 | 23.50 | | | | | | |
| | | | | 89-121 | 23 | 48 | 29 | SiC | 0.06 | | 45.6 | 4.0 | 0.51 | 2.04 | | | | | | |
| | | | | 121-180 | 7 | 64 | 29 | SiC | 0.05 | | 48.3 | 1.0 | 0.16 | 0.64 | | | | | | |
| | | | | 0-10 | 4 | 50 | 46 | HC | 0.46 | | 47.2 | 1.0 | 0.22 | 0.88 | | | | | | |
| | | | | 10-45 | 4 | 40 | 56 | HC | 0.23 | | 57.2 | 1.5 | 0.22 | 0.88 | | | | | | |
| | | | | 45-82 | 4 | 43 | 53 | HC | 0.11 | | 55.6 | 2.5 | 0.21 | 0.84 | | | | | | |
| | | | | 82-150 | 4 | 50 | 46 | HC | 0.07 | | 40.7 | 4.5 | 280.0 | 8.0 | 0.25 | 1.00 | 0.76 | 0.83 | | |
| | | | | 0-10 | 2 | 41 | 57 | HC | 0.56 | | 41.5 | 1.5 | 0.52 | 2.08 | | | | | | |
| | | | | 10-27 | 2 | 41 | 57 | HC | 0.18 | | 43.0 | 1.5 | 0.73 | 2.92 | | | | | | |
| | | | | 27-130 | 6 | 30 | 64 | HC | 0.67 | | 48.0 | 1.7 | 190.4 | 9.2 | 0.49 | 1.96 | 1.60 | 0.61 | | |
| 130-150 | 11 | 30 | 59 | HC | 0.12 | | | | | | | | | | | | | | | |

Remarks: 1/ From Detailed Soil Survey, Block Mohamalganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 101, May 1989

2/ From Detailed Soil Survey, Block Goshainganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 92, May 1989

3/ From Detailed Soil Survey, Block Dhanpatganj, District Sultanpur, UP, Sharda Sahayak CAD Project Report No. AGRIC 125, May 1989-1990

4/ Analytical results of different soil profiles by Laboratory of Sharda Sahayak CAD Project, February 1991

5/ Analytical results of different soil profiles by Laboratory of Department of Agriculture, UP, February 1991

Table C.5 Analytical Results of Soil Series Profiles in a part of Sharda Canal Command Area (6/6)

| Soil Mapping Unit No. | Name of soil series | Name of study area | Pit No. | Depth in (cm) | Particle size of classes | Sand (6) | Silt (7) | clay (8) | Textural classes (9) | Organic Carbon (10) | CaCO ₃ (%) (11) | Water holding capacity (12) | Available P ₂ O ₅ (kg/ha) (13) | K ₂ O (14) | pH Value 1:2.5 (15) | EC mmho 1:2.5 extract (16) | Saturation (17) | Exchangeable Cation Na K (18) (19) |
|-----------------------|---------------------|--------------------|---------|---------------|--------------------------|----------|----------|----------|----------------------|---------------------|----------------------------|-----------------------------|--|-----------------------|---------------------|----------------------------|-----------------|------------------------------------|
| 14 | GOSHAIN GANJ I/ | P6 4/ | (4) | 0-13 | 2 | 63 | 35 | SiC | 0.67 | 0.52 | 8.1 | 179.0 | 8.0 | 3.40 | 13.60 | 10.87 | 0.45 | |
| | | | | 13-18 | 2 | 58 | 40 | SiC | 0.72 | 0.5 | 6.3 | 201.6 | 9.5 | 2.80 | 11.20 | 12.50 | 0.45 | |
| | | | | 18-50 | 2 | 48 | 50 | HC | 0.07 | 0.5 | 5.4 | 201.6 | 9.6 | 1.60 | 6.40 | 11.96 | 0.48 | |
| | | | | 50-126 | 5 | 48 | 48 | HC | 0.11 | 1.5 | 5.53 | 179.2 | 9.4 | 1.25 | 5.00 | 10.87 | 0.45 | |
| 15 | UTTAR GAON 3/ | | | 0-10 | 21 | 44 | 36 | LiC | 0.30 | 0.91 | 43.3 | 7.2 | 0.91 | 3.60 | | | | |
| | | | | 10-45 | 13 | 29 | 58 | HC | 0.29 | 0.11 | 49.2 | 7.2 | 0.11 | 0.44 | | | | |
| | | | | 45-85 | 8 | 44 | 53 | HC | 0.15 | 0.20 | 48.6 | 7.3 | 0.20 | 0.80 | | | | |
| | | | | 85-120 | 18 | 44 | 38 | LiC | 0.15 | 2.0 | 51.4 | 7.8 | 0.19 | 0.75 | | | | |
| | | | | 120-160 | 18 | 44 | 38 | LiC | 0.14 | 2.0 | 51.2 | 8.1 | 0.20 | 0.80 | | | | |
| | | | | 160-180 | 31 | 44 | 27 | LiC | 0.11 | 2.0 | 53.2 | 8.2 | 0.21 | 0.84 | | | | |
| | | Sursa | F3 4/ | 0-20 | 13 | 55 | 33 | SiC | 0.45 | 1.0 | 49.9 | 3.5 | 145.6 | 8.5 | 0.42 | 1.68 | 1.49 | 0.45 |
| | | | | 20-46 | 13 | 53 | 35 | SiC | 0.25 | 0.18 | 43.4 | 13.4 | 134.4 | 8.5 | 0.18 | 0.72 | 0.27 | 0.13 |
| | | | | 46-72 | 14 | 45 | 41 | SiC | 0.15 | 0.15 | 36.4 | 12.5 | 145.6 | 8.0 | 0.15 | 0.60 | 0.65 | 0.19 |
| | | | | 72-93 | 14 | 48 | 39 | SiC | 0.18 | 1.0 | 39.4 | 16.1 | 84.0 | 7.8 | 0.12 | 0.48 | 0.27 | 0.19 |
| | | | | 93-126 | 16 | 55 | 29 | SiC | 0.12 | 5.5 | 38.2 | 9.9 | 67.2 | 8.0 | 0.14 | 0.56 | 0.46 | 0.32 |
| | | | | 126-170 | 26 | 48 | 26 | SiC | 0.05 | 0.16 | 36.0 | 4.5 | 61.6 | 7.7 | 0.16 | 0.64 | 0.22 | 0.10 |

Remarks: 1/ From Detailed Soil Survey, Block Mohamalganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 101, May 1989
 2/ From Detailed Soil Survey, Block Goshainganj, District Lucknow, UP, Sharda Sahayak CAD Project Report No. AGRIC 92, May 1989
 3/ From Detailed Soil Survey, Block Dhanpatganj, District Sultanpur, UP, Sharda Sahayak CAD Project Report No. AGRIC 125, May 1989-1990
 4/ Analytical results of different soil profiles by Laboratory of Sharda Sahayak CAD Project, February 1991
 5/ Analytical results of different soil profiles by Laboratory of Department of Agriculture, UP, February 1991

Table C.6 Analytical Results of PH and E.C. for Soils in the Representative Areas (1/5)

| Soil Mapping Unit No. | Name of Soil Series | Study Area | Pit No. | Depth(cm) | PH value (1:2.5) | EC (mmho) (1:2.5) |
|-----------------------|---------------------|----------------|---------|-----------|------------------|-------------------|
| 1 | LAKHPERA | | | | | |
| 2 | GANGAULI | Sarojini Nagar | 17 | 0-10 | 6.8 | 0.23 |
| | | | | 10-40 | 7.0 | 0.03 |
| | | do | 18 | 0-16 | 6.7 | 0.04 |
| | | | | 16-45 | 6.4 | 0.02 |
| | | do | 19 | 0-10 | 7.3 | 0.09 |
| | | | | 10-40 | 7.3 | 0.06 |
| | | do | 20 | 0-12 | 8.2 | 0.14 |
| | | | | 12-37 | 8.5 | 0.09 |
| | | do | 21 | 0-16 | 8.0 | 0.11 |
| | | | | 16-40 | 8.3 | 0.09 |
| | | do | 22 | 0-15 | 7.3 | 0.05 |
| | | | | 15-40 | 7.5 | 0.03 |
| | | do | 23 | 0-20 | 7.7 | 0.13 |
| | | | | 20-40 | 8.2 | 0.11 |
| | | do | 24 | 0-14 | 7.9 | 0.08 |
| | | | | 14-40 | 8.4 | 0.11 |
| | | | | 40-50 | 7.7 | 0.34 |
| | | Purwa | 13 | 0-12 | 6.8 | 0.29 |
| | | | | 12-40 | 7.2 | 0.14 |
| | | do | 15 | 0-12 | 7.4 | 0.21 |
| | | | | 12-30 | 7.6 | 0.19 |
| | | do | 16 | 0-13 | 7.1 | 0.14 |
| | | | | 13-35 | 7.6 | 0.15 |
| | | Sataon | 2 | 0-15 | 7.4 | 0.09 |
| | | | | 15-45 | 7.4 | 0.07 |
| | | do | 3 | 0-10 | 6.9 | 0.09 |
| | | | | 10-45 | 7.4 | 0.06 |
| | | do | 4 | 0-15 | 7.1 | 0.07 |
| | | | | 15-45 | 7.3 | 0.04 |
| | | Sursa | 8 | 0-15 | 8.6 | 0.46 |
| | | | | 15-40 | 7.8 | 0.37 |
| 3 | TANDA | Purwa | 12 | 0-15 | 9.5 | 1.96 |
| | | | | 15-40 | 9.3 | 0.90 |
| | | do | 17 | 0-12 | 8.2 | 1.85 |
| | | | | 12-45 | 9.5 | 1.90 |
| | | Sataon | 6 | 0-15 | 8.5 | 0.09 |
| | | | | 15-45 | 8.5 | 0.07 |

Remarks:

pH Ranges

1. 6.6-7.3(Neutral)
2. 7.4-7.8(Mildly alkaline)
3. 7.9-8.4(Moderately alkaline)
4. 8.5-9.0(Strongly alkaline)
5. 9.1- (Very strongly alkaline)

E.C.

1. 0-2 (Non saline)
2. 2-4 (Slightly saline)
3. 4-8 (Moderately saline)
4. 8-16(Strongly saline)
5. 16- (Very strongly saline)

Table C.6 Analytical Results of PH and E.C. for Soils in the Representative Areas (2/ 5)

| Soil Mapping | Name of | Study Area | Pit No. | Depth(cm) | PH value | EC (mmho) |
|--------------|-------------|----------------|---------|-----------|----------|-----------|
| Unit No. | Soil Series | | | | (1:2.5) | (1:2.5) |
| 4 | AMETHI | Sarojini Nagar | 3 | 0-15 | 7.5 | 0.05 |
| | | | | 15-40 | 7.2 | 0.04 |
| | | do | 4 | 0-15 | 6.7 | 0.03 |
| | | | | 15-40 | 6.5 | 0.03 |
| | | Sursa | 4 | 0-14 | 8.3 | 0.34 |
| | | | | 14-34 | 8.1 | 0.28 |
| | | do | 7 | 0-8 | 8.9 | 0.25 |
| | | | | 8-30 | 8.7 | 0.22 |
| | | do | 16 | 0-12 | 7.5 | 0.12 |
| | | | | 12-45 | 7.7 | 0.12 |
| 6 | KAKARI | Sarojini Nagar | 10 | 0-15 | 7.8 | 0.08 |
| | | | | 15-40 | 7.6 | 0.09 |
| | | do | 12 | 0-15 | 8.3 | 0.09 |
| | | | | 15-40 | 8.3 | 0.06 |
| | | Purwa | 9 | 0-13 | 8.1 | 0.12 |
| | | | | 13-24 | 8.4 | 0.10 |
| | | Sataon | 8 | 0-10 | 7.6 | 0.09 |
| | | | | 10-55 | 7.7 | 0.08 |
| | | Sursa | 14 | 0-15 | 8.1 | 0.30 |
| | | | | 15-45 | 7.7 | 0.21 |
| do | 34 | 0-12 | 7.4 | 0.42 | | |
| | | 12-45 | 7.6 | 0.38 | | |
| 8 | SITHAULI | Sarojini Nagar | 1 | 0-15 | 9.8 | 0.61 |
| | | | | 15-45 | 10.2 | 1.10 |
| | | do | 2 | 0-15 | 7.9 | 0.08 |
| | | | | 15-45 | 9.7 | 0.39 |
| | | do | 8 | 0-16 | 9.7 | 0.66 |
| | | | | 16-35 | 10.0 | 1.03 |
| | | do | 13 | 0-10 | 8.7 | 0.65 |
| | | | | 10-37 | 10.0 | 1.63 |
| | | do | 15 | 0-9 | 9.5 | 0.42 |
| | | | | 9-35 | 10.1 | 0.90 |
| Purwa | 8 | 0-12 | 9.4 | 0.99 | | |
| | | 12-35 | 9.2 | 1.96 | | |
| do | 18 | 0-11 | 8.9 | 1.14 | | |
| | | 11-45 | 9.2 | 1.23 | | |

Remarks:

pH Ranges

1. 6.6-7.3(Neutral)
2. 7.4-7.8(Mildly alkaline)
3. 7.9-8.4(Moderately alkaline)
4. 8.5-9.0(Strongly alkaline)
5. 9.1- (Very strongly alkaline)

E.C.

1. 0-2 (Non saline)
2. 2-4 (Slightly saline)
3. 4-8 (Moderately saline)
4. 8-16(Strongly saline)
5. 16- (Very strongly saline)

Table C.6 Analytical Results of PH and E.C. for Soils in the Representative Areas (3/5)

| Soil Mapping | Name of Study Area | Pit No. | Depth(cm) | PH value (1:2.5) | EC (mmho) (1:2.5) | |
|--------------|--------------------|----------------|-----------|------------------|-------------------|------|
| Unit No. | Soil Series | | | | | |
| 8 | SITHAULI | Sataon | 12 | 0-19 | 10.3 | 3.20 |
| | | | | | 19-45 | 10.4 |
| | | do | 13 | 0-10 | 9.9 | 0.33 |
| | | | | 10-45 | 9.7 | 0.29 |
| | | Sursa | 2 | 0-12 | 8.4 | 0.21 |
| | | | | 12-45 | 9.7 | 0.85 |
| | | do | P.5 | 0-15 | 10.1 | 0.91 |
| | | | | 15-47 | 10.5 | 2.30 |
| | | do | 9 | 0-14 | 9.3 | 0.39 |
| | | | | 14-45 | 10.0 | 0.97 |
| 9 | SAIDAPUR | Sarojini Nagar | 5 | 0-15 | 7.8 | 0.10 |
| | | | | | 15-45 | 7.1 |
| | | do | 11 | 0-18 | 8.6 | 0.13 |
| | | | | 18-45 | 8.7 | 0.13 |
| | | Purwa | 22 | 0-12 | 8.2 | 0.23 |
| | | | | 12-40 | 8.4 | 0.20 |
| | | do | 23 | 0-9 | 8.0 | 0.36 |
| | | | | 9-30 | 8.3 | 0.41 |
| | | Sursa | 10 | 0-12 | 8.1 | 0.29 |
| | | | | 12-45 | 8.0 | 0.23 |
| do | 21 | 0-13 | 8.1 | 0.23 | | |
| | | 13-45 | 7.9 | 0.12 | | |
| do | 27 | 0-15 | 8.2 | 0.40 | | |
| | | 15-45 | 8.2 | 0.14 | | |
| 10 | GARHI | Sarojini Nagar | 6 | 0-15 | 6.7 | 0.08 |
| | | | | | 15-45 | 7.1 |
| | | do | 10 | 0-13 | 7.3 | 0.22 |
| | | | | 13-24 | 8.7 | 0.66 |
| | | do | 14 | 0-12 | 7.5 | 0.24 |
| | | | | 12-30 | 8.7 | 0.30 |
| | | do | 19 | 0-9 | 8.0 | 2.20 |
| | | | | 9-35 | 8.7 | 0.57 |
| | | Sataon | 9 | 0-10 | 7.9 | 0.15 |
| | | | | 10-40 | 8.3 | 0.67 |
| Sursa | 5 | 0-15 | 8.1 | 0.29 | | |
| | | 15-45 | 8.0 | 0.26 | | |

| Remarks: | pH Ranges | E.C. |
|----------|----------------------------------|-------------------------------|
| | 1. 6.6-7.3(Neutral) | 1. 0-2 (Non saline) |
| | 2. 7.4-7.8(Mildly alkaline) | 2. 2-4 (Slightly saline) |
| | 3. 7.9-8.4(Moderately alkaline) | 3. 4-8 (Moderately saline) |
| | 4. 8.5-9.0(Strongly alkaline) | 4. 8-16(Strongly saline) |
| | 5. 9.1- (Very strongly alkaline) | 5. 16- (Very strongly saline) |

Table C.6 Analytical Results of PH and E.C. for Soils in the Representative Areas (4/5)

| Soil Mapping | Name of | Study Area | Pit No. | Depth(cm) | PH value | EC (mmho) |
|--------------|-------------|----------------|---------|-----------|----------|-----------|
| Unit No. | Soil Series | | | | (1:2.5) | (1:2.5) |
| 16 | MARAURA | Sursa | 1 | 0-13 | 8.3 | 0.21 |
| | | | | 13-43 | 7.8 | 0.10 |
| | | do | 6 | 0-14 | 8.2 | 0.30 |
| | | | | 14-36 | 8.3 | 0.22 |
| | | Sursa | 11 | 0-12 | 8.1 | 0.39 |
| | | | | 12-45 | 7.8 | 0.19 |
| do | 26 | 0-18 | 8.3 | 0.31 | | |
| | | 18-45 | 8.2 | 0.27 | | |
| 11 | HASANPUR | Sarojini Nagar | 16 | 0-13 | 7.3 | 0.05 |
| | | | | 13-45 | 7.2 | 0.04 |
| | | Purwa | 21 | 0-10 | 7.9 | 0.26 |
| | | | | 10-32 | 8.2 | 0.19 |
| | | Sursa | 12 | 0-12 | 7.7 | 0.24 |
| | | | | 12-45 | 8.3 | 0.24 |
| | | do | 28 | 0-15 | 7.9 | 0.32 |
| | | | | 15-45 | 7.8 | 0.16 |
| | | do | 33 | 0-13 | 7.4 | 0.13 |
| | | | | 13-45 | 7.7 | 0.08 |
| 12 | UTELWA | Sarojini Nagar | 7 | 0-15 | 9.4 | 0.38 |
| | | | | 15-45 | 10.1 | 0.79 |
| | | do | 14 | 0-11 | 7.4 | 0.10 |
| | | | | 11-42 | 7.2 | 0.05 |
| | | Purwa | 11 | 0-15 | 8.4 | 0.55 |
| | | | | 15-41 | 9.6 | 1.46 |
| | | do | 17 | 0-12 | 8.2 | 1.85 |
| | | | | 12-21 | 9.5 | 1.90 |
| | | do | 20 | 0-12 | 9.0 | 0.73 |
| | | | | 12-30 | 9.5 | 1.15 |
| Sursa | 24 | 0-10 | 8.8 | 0.58 | | |
| | | | 10-45 | 8.4 | 0.42 | |

| | | |
|----------|----------------------------------|-------------------------------|
| Remarks: | <u>pH Ranges</u> | <u>E.C.</u> |
| | 1. 6.6-7.3(Neutral) | 1. 0-2 (Non saline) |
| | 2. 7.4-7.8(Mildly alkaline) | 2. 2-4 (Slightly saline) |
| | 3. 7.9-8.4(Moderately alkaline) | 3. 4-8 (Moderately saline) |
| | 4. 8.5-9.0(Strongly alkaline) | 4. 8-16(Strongly saline) |
| | 5. 9.1- (Very strongly alkaline) | 5. 16- (Very strongly saline) |

Table C.6 Analytical Results of PH and E.C. for Soils in the Representative Areas (5/5)

| Soil Mapping Unit No. | Name of Soil Series | Study Area | Pit No. | Depth(cm) | PH value (1:2.5) | EC (mmho) (1:2.5) | |
|-----------------------|---------------------|----------------|---------|-----------|------------------|-------------------|------|
| 13 | POKHARA | Sursa | P.6 | 0-11 | 9.0 | 0.44 | |
| | | | | 11-45 | 9.8 | 0.82 | |
| | | do | 3 | 0-13 | 8.4 | 0.16 | |
| | | | | 13-30 | 8.3 | 0.37 | |
| | | do | 7 | 0-15 | 8.9 | 0.25 | |
| | | | | 15-35 | 8.7 | 0.22 | |
| | | do | 13 | 0-10 | 8.6 | 1.38 | |
| | | | | 10-35 | 8.2 | 0.47 | |
| | | do | 18 | 0-15 | 10.6 | 9.00 | |
| | | | | 15-35 | 10.1 | 1.26 | |
| | | do | 19 | 0-15 | 8.9 | 0.41 | |
| | | | | 15-41 | 9.3 | 0.85 | |
| | | do | 20 | 0-16 | 10.4 | 6.20 | |
| | | | | 16-41 | 10.2 | 1.70 | |
| do | Sursa | 25 | 0-10 | 9.1 | 0.47 | | |
| | | | 10-45 | 8.7 | 0.31 | | |
| do | do | 29 | 0-14 | 9.6 | 0.54 | | |
| | | | 14-45 | 9.2 | 0.31 | | |
| do | do | 32 | 0-15 | 8.8 | 0.36 | | |
| | | | 15-45 | 9.6 | 0.55 | | |
| 14 | GOSHAINGAN | Sarojini Nagar | 9 | 0-10 | 9.8 | 0.95 | |
| | | | | 10-38 | 10.3 | 1.68 | |
| 15 | UTTARGAON | Sataon | 15 | 0-15 | 7.8 | 0.12 | |
| | | | | 15-48 | 8.1 | 0.14 | |
| | | do | Sursa | 8 | 0-15 | 8.6 | 0.46 |
| | | | | | 15-40 | 7.8 | 0.37 |
| | | do | do | 15 | 0-14 | 8.0 | 0.44 |
| | | | | | 14-50 | 8.0 | 0.19 |
| | | do | do | 17 | 0-12 | 8.2 | 0.20 |
| | | | | | 12-35 | 8.0 | 0.19 |
| | | do | do | 22 | 0-15 | 8.1 | 0.27 |
| | | | | | 15-20 | 8.0 | 0.38 |
| | | do | do | 23 | 0-15 | 8.1 | 0.49 |
| | | | | | 15-45 | 8.1 | 0.16 |
| | | do | do | 31 | 0-15 | 7.4 | 0.13 |
| | | | | | 15-43 | 7.7 | 0.08 |
| do | do | 35 | 0-12 | 7.7 | 0.21 | | |
| | | | 12-45 | 7.2 | 0.31 | | |

| Remarks: | pH Ranges | E.C. |
|----------|----------------------------------|-------------------------------|
| | 1. 6.6-7.3(Neutral) | 1. 0-2 (Non saline) |
| | 2. 7.4-7.8(Mildly alkaline) | 2. 2-4 (Slightly saline) |
| | 3. 7.9-8.4(Moderately alkaline) | 3. 4-8 (Moderately saline) |
| | 4. 8.5-9.0(Strongly alkaline) | 4. 8-16(Strongly saline) |
| | 5. 9.1- (Very strongly alkaline) | 5. 16- (Very strongly saline) |

Table C.7 Blockwise Present Land Use in the Sharda Command Area (3/3)

| No. | Name of Block | (A) Geographical Area | | (B) Lands of Net Area Sown | | (C) Irrigated Area | | (D) Current Fallow | | (E) Other Fallow | | (F) Culturable Waste | | (G) Tree-garden | | (H) Pasture | | (I) User & Unculturable Lands | | (J) Forest Lands | | (K) Other Lands | |
|---------|---------------------|-----------------------|-----------|----------------------------|-------|--------------------|------|--------------------|-----|------------------|-----|----------------------|-----|-----------------|-----|-------------|-----|-------------------------------|-----|------------------|------|-----------------|-----|
| | | ha | % | ha | % | ha | % | ha | % | ha | % | ha | % | ha | % | ha | % | ha | % | ha | % | ha | % |
| * 9.04 | KAKORI | 22,594 | 64.0 | 14,380 | 99.4 | 1,007 | 4.5 | 1,710 | 5.9 | 18,006 | 3.7 | 7,910 | 1.7 | 253 | 1.0 | 1,491 | 6.3 | 447 | 2.0 | 2,224 | 9.8 | 3,586 | 7.7 |
| * 9.05 | SARJINI NAGA | 38,435 | 47.8 | 18,382 | 100.0 | 7,080 | 18.4 | 3,542 | 9.2 | 1,301 | 3.4 | 706 | 1.8 | 146 | 0.4 | 3,586 | 9.3 | 717 | 1.9 | 2,975 | 7.7 | 2,510 | 7.3 |
| * 9.06 | MOHANALGAJ | 35,903 | 50.7 | 21,187 | 100.0 | 1,010 | 2.8 | 1,231 | 3.4 | 2,417 | 6.7 | 1,553 | 4.3 | 1,302 | 3.6 | 1,692 | 4.7 | 2,921 | 8.1 | 2,510 | 7.3 | 2,552 | 7.4 |
| * 9.07 | GOSAIGANNI | 34,652 | 50.7 | 17,563 | 100.0 | 8,666 | 25.0 | 991 | 2.9 | 1,445 | 4.2 | 942 | 2.7 | 617 | 1.8 | 1,469 | 4.2 | 407 | 1.2 | 2,552 | 7.4 | | |
| | UNNAO | 458,519 | 287,014 | 203,917 | 71.0 | 40,121 | 8.8 | 27,040 | 5.9 | 18,006 | 3.7 | 7,910 | 1.7 | 3,531 | 0.8 | 20,641 | 4.5 | 15,585 | 3.4 | 38,671 | 8.4 | 2,451 | 9.5 |
| * 10.01 | AURAS | 25,701 | 56.7 | 12,741 | 87.4 | 1,876 | 7.3 | 1,462 | 5.7 | 959 | 3.7 | 430 | 1.7 | 274 | 1.1 | 1,768 | 6.9 | 661 | 2.8 | 1,599 | 7.4 | 661 | 6.6 |
| * 10.02 | GANMURADAI | 23,428 | 16,091 | 10,940 | 68.0 | 2,164 | 9.2 | 826 | 3.5 | 830 | 3.5 | 261 | 1.1 | 267 | 1.1 | 787 | 3.4 | 54 | 0.2 | 1,594 | 6.6 | 1,511 | 8.0 |
| * 10.03 | BANGARMAU | 27,990 | 18,517 | 10,458 | 56.5 | 1,802 | 6.4 | 2,085 | 7.4 | 688 | 2.5 | 403 | 1.4 | 78 | 0.1 | 1,511 | 5.4 | 721 | 2.6 | 2,235 | 8.0 | 830 | 3.0 |
| * 10.04 | PATEHAPUR | 27,996 | 19,545 | 10,791 | 55.2 | 3,227 | 11.5 | 1,408 | 5.0 | 388 | 1.4 | 173 | 0.6 | 74 | 0.3 | 830 | 3.0 | 252 | 0.9 | 2,099 | 7.5 | 640 | 2.0 |
| * 10.05 | HASANGANJ | 32,177 | 20,916 | 17,083 | 81.7 | 2,088 | 6.5 | 1,702 | 5.3 | 117 | 0.4 | 852 | 2.6 | 279 | 0.9 | 640 | 2.0 | 2,917 | 9.1 | 2,666 | 8.3 | 900 | 3.3 |
| * 10.06 | MAYAGANNI | 27,531 | 17,778 | 13,990 | 78.7 | 1,685 | 6.2 | 1,383 | 4.2 | 1,306 | 5.1 | 462 | 1.7 | 306 | 1.1 | 900 | 3.3 | 1,068 | 3.9 | 2,470 | 9.0 | 2,340 | 9.1 |
| * 10.07 | SATIPUR | 25,683 | 15,064 | 12,285 | 81.4 | 3,184 | 12.4 | 1,083 | 4.2 | 647 | 2.3 | 295 | 1.1 | 373 | 1.3 | 738 | 2.7 | 1,091 | 3.9 | 2,498 | 9.0 | 1,739 | 5.2 |
| * 10.08 | NAWARGANJ | 27,803 | 18,054 | 12,702 | 70.4 | 2,460 | 8.8 | 1,647 | 5.9 | 1,533 | 4.6 | 223 | 0.7 | 689 | 2.1 | 1,739 | 5.2 | 1,985 | 5.9 | 2,470 | 7.4 | 1,158 | 3.5 |
| * 10.09 | BICHHIYA | 33,483 | 18,709 | 18,125 | 96.9 | 3,488 | 10.4 | 2,647 | 7.9 | 1,533 | 4.6 | 223 | 0.7 | 689 | 2.1 | 1,739 | 5.2 | 1,985 | 5.9 | 2,470 | 7.4 | 1,158 | 3.5 |
| * 10.10 | SEKANDARPUR | 33,242 | 21,120 | 10,644 | 50.4 | 2,992 | 9.0 | 1,405 | 4.2 | 962 | 2.9 | 155 | 0.5 | 183 | 0.6 | 1,158 | 3.5 | 1,220 | 3.7 | 4,047 | 12.2 | 1,490 | 4.3 |
| * 10.11 | SEKANDARPURI | 34,889 | 21,212 | 12,651 | 59.6 | 3,030 | 8.7 | 2,917 | 8.4 | 1,262 | 3.6 | 605 | 1.7 | 153 | 0.4 | 1,490 | 4.3 | 1,669 | 4.8 | 2,551 | 7.3 | 1,292 | 4.5 |
| * 10.12 | ASOHA | 28,893 | 17,880 | 12,562 | 70.3 | 2,916 | 10.1 | 1,895 | 5.9 | 1,460 | 5.1 | 706 | 2.4 | 284 | 1.0 | 1,292 | 4.5 | 281 | 1.0 | 2,379 | 8.2 | 1,282 | 5.4 |
| * 10.13 | PURWA | 23,527 | 14,190 | 13,918 | 98.1 | 1,745 | 7.4 | 1,156 | 4.9 | 1,290 | 5.5 | 687 | 2.9 | 95 | 0.4 | 1,282 | 5.4 | 1,032 | 4.4 | 2,050 | 8.7 | 2,376 | 7.0 |
| * 10.14 | HILAJLI | 33,881 | 19,892 | 11,105 | 55.8 | 2,783 | 8.2 | 3,153 | 9.3 | 2,043 | 6.0 | 825 | 2.4 | 240 | 0.7 | 2,376 | 7.0 | 0 | 0.0 | 2,569 | 7.6 | 663 | 2.6 |
| * 10.15 | BIGHAPUR | 25,556 | 16,463 | 11,463 | 69.6 | 2,443 | 9.6 | 1,308 | 5.1 | 1,779 | 7.0 | 900 | 3.5 | 33 | 0.1 | 663 | 2.6 | 0 | 0.0 | 1,967 | 7.7 | 1,127 | 4.2 |
| * 10.16 | SUMERPUR | 26,939 | 16,991 | 12,459 | 73.3 | 2,238 | 8.3 | 1,163 | 4.3 | 1,463 | 5.4 | 757 | 2.7 | 107 | 0.4 | 1,127 | 4.2 | 32 | 0.1 | 3,081 | 11.4 | 686 | 5.1 |
| | RAEBARELI | 149,762 | 92,040 | 91,151 | 99.0 | 12,033 | 8.0 | 8,288 | 5.5 | 8,624 | 5.8 | 6,470 | 4.3 | 662 | 0.4 | 7,653 | 5.1 | 886 | 0.5 | 13,306 | 8.9 | 144 | 0.6 |
| * 11.01 | SATAON | 25,550 | 18,067 | 18,067 | 100.0 | 1,582 | 6.2 | 819 | 3.2 | 949 | 3.7 | 1,186 | 4.6 | 240 | 0.9 | 408 | 1.6 | 207 | 0.9 | 1,970 | 8.5 | 869 | 3.7 |
| * 11.02 | KHEERO | 23,204 | 14,917 | 14,917 | 100.0 | 2,057 | 8.9 | 1,624 | 7.0 | 1,087 | 4.7 | 346 | 1.5 | 127 | 0.5 | 869 | 3.7 | 34 | 0.2 | 2,074 | 9.3 | 1,827 | 7.2 |
| * 11.03 | LALGANJ | 22,276 | 13,523 | 13,523 | 100.0 | 2,182 | 9.8 | 1,240 | 5.6 | 1,321 | 5.9 | 1,028 | 4.6 | 55 | 0.2 | 1,827 | 7.2 | 19 | 0.1 | 2,154 | 8.4 | 1,834 | 6.9 |
| * 11.04 | SARENI | 25,511 | 13,592 | 13,577 | 99.9 | 4,384 | 17.2 | 958 | 3.8 | 1,008 | 4.0 | 1,503 | 5.9 | 66 | 0.3 | 1,834 | 6.9 | 16 | 0.1 | 1,926 | 7.3 | 1,896 | 7.1 |
| * 11.05 | DALMAU | 26,476 | 17,592 | 16,718 | 95.0 | 158 | 0.6 | 1,873 | 7.1 | 1,769 | 6.7 | 1,188 | 4.5 | 120 | 0.5 | 1,896 | 7.1 | 266 | 1.0 | 3,077 | 11.3 | 54 | 0.2 |
| * 11.06 | JAGATPUR | 26,745 | 14,349 | 14,349 | 100.0 | 1,670 | 6.2 | 1,774 | 6.6 | 2,490 | 9.3 | 1,219 | 4.6 | 54 | 0.2 | 1,896 | 7.1 | 266 | 1.0 | 3,077 | 11.3 | 54 | 0.2 |
| | Sharda Command Area | 3,419,706 | 2,397,317 | 1,724,323 | 72.1 | 250,355 | 7.3 | 114,363 | 3.3 | 93,891 | 2.7 | 50,729 | 1.5 | 16,403 | 0.5 | 93,598 | 2.7 | 105,374 | 3.1 | 302,706 | 8.9 | 59,727 | 3.8 |
| | Hardoi Command Area | 1,592,625 | 1,022,861 | 779,362 | 76.2 | 145,993 | 9.2 | 72,435 | 4.5 | 61,615 | 3.9 | 32,201 | 2.0 | 12,919 | 0.8 | 57,314 | 3.6 | 59,727 | 3.8 | 127,620 | 8.0 | | |

Note
: Blocks in Hardoi Command Area
: Reporting Area According to the Cadastral Survey

Table C.8 Past Trend of Land Use in Sarojini Nagar Study Area (1/2)

| Sarojini Nagar Block | | 87-88 | 86-87 | 85-86 | 84-85 | 83-84 | 82-83 | 81-82 | 80-81 | 79-80 |
|----------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Total Area of Land in Hectares | 21,200 | 21,200 | 21,200 | 21,200 | 21,200 | 21,200 | 21,200 | 21,200 | 21,200 |
| 2 | Net Sown Area in Hectares | 18,382 | 19,769 | 20,219 | 20,242 | 20,082 | 20,240 | 23,080 | 22,632 | 21,064 |
| 3 | Net Irrigated Area in Hectares | 13,571 | 13,226 | 13,669 | 13,130 | 12,391 | 12,534 | 13,260 | 12,812 | 11,999 |
| 4 | Total Irrigated Land for Main Crop by Development Block | | | | | | | | | |
| | A - Rice | | | | | | | | | |
| | Total : | 5,635 | 7,823 | 7,796 | 7,883 | 8,962 | 8,092 | 11,950 | 8,101 | 10,998 |
| | Irrigated : | 3,205 | 4,356 | 3,640 | 3,815 | 2,334 | 2,026 | 4,883 | 1,565 | 2,772 |
| | B - Wheat | | | | | | | | | |
| | Total : | 12,496 | 12,464 | 12,456 | 11,241 | 12,015 | 11,173 | 11,210 | 11,867 | 11,752 |
| | Irrigated : | 12,151 | 11,848 | 11,914 | 10,644 | 10,831 | 11,155 | 10,715 | 10,988 | 10,429 |
| | C - Cereals | | | | | | | | | |
| | Total : | 21,285 | 23,388 | 23,448 | 22,243 | 23,943 | 22,759 | 27,127 | 23,150 | 29,261 |
| | Irrigated : | 15,669 | 16,473 | 15,835 | 14,679 | 13,372 | 13,459 | 15,879 | 12,976 | 13,817 |
| 5 | Total Irrigated Land for Pulses by Development Block | | | | | | | | | |
| | A - Total Pulses | | | | | | | | | |
| | Total : | 3,898 | 4,019 | 3,962 | 3,649 | 3,537 | 3,404 | 4,138 | 3,125 | 4,779 |
| | Irrigated : | 326 | 294 | 336 | 239 | 170 | 222 | 187 | 317 | 248 |
| | B - Total Food Grain | | | | | | | | | |
| | Total : | 25,183 | 27,407 | 27,410 | 25,892 | 27,480 | 26,163 | 31,265 | 0 | 29,261 |
| | Irrigated : | 15,995 | 16,767 | 16,171 | 14,918 | 13,542 | 13,681 | 16,066 | 0 | 13,817 |
| 6 | Irrigated Land for Oilseed by Development Block | | | | | | | | | |
| | Total : | 210 | 158 | 216 | 236 | 201 | 162 | 242 | 233 | 1,360 |
| | Irrigated : | 88 | 56 | 85 | 92 | 45 | 48 | 45 | 0 | 35 |
| 7 | Irrigated Land for Sugarcane by Development Block | | | | | | | | | |
| | Total : | 80 | 72 | 90 | 125 | 149 | 137 | 132 | 71 | 186 |
| | Irrigated : | 65 | 62 | 80 | 111 | 120 | 122 | 117 | 69 | 180 |
| 8 | Number of Private Pumpset | | | | | | | | | |
| | A - With Boring | 2,809 | 2,539 | 2,239 | 1,905 | 1,905 | 1,858 | 1,209 | 882 | 0 |
| | B - Without Boring | 215 | 215 | 215 | 215 | 132 | 0 | 313 | 0 | 0 |
| 9 | Number of Private Tubewells | 2,110 | 2,042 | 1,972 | 1,881 | 1,798 | 1,780 | 1,759 | 1,609 | 1,527 |
| 10 | Distribution of Fertilizer by Development Block | 864 | 1,256 | 1,505 | 2,449 | 2,731 | 2,521 | 2,299 | 2,126 | 1,677 |

Source: Sankhyakya Patrika of the U.P. State Planning Institutue.

Table C.8 Past Trend of Land Use in Sarojini Nagar Study Area (2/2)

Mohanlalganj Block

| Sr. No. | | 87-88 | 86-87 | 85-86 | 84-85 | 83-84 | 82-83 | 81-82 | 80-81 | 79-80 |
|---------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Total Area of Land in Hectares | 26,000 | 26,000 | 26,000 | 26,000 | 26,000 | 26,000 | 26,000 | 26,000 | 26,000 |
| 2 | Net Sown Area in Hectares | 21,187 | 19,471 | 19,914 | 25,470 | 22,378 | 22,691 | 22,759 | 16,226 | 21,561 |
| 3 | Net Irrigated Area in Hectares | 14,139 | 13,307 | 14,282 | 16,423 | 12,949 | 13,672 | 13,433 | 10,439 | 11,392 |
| 4 | Total Irrigated Land for Main Crop by Development Block | | | | | | | | | |
| | A - Rice | | | | | | | | | |
| | Total : | 4,159 | 12,160 | 10,625 | 11,157 | 10,781 | 10,368 | 7,627 | 10,979 | 7,587 |
| | Irrigated : | 3,730 | 9,121 | 5,769 | 5,845 | 4,076 | 4,711 | 3,058 | 2,178 | 3,023 |
| | B - Wheat | | | | | | | | | |
| | Total : | 12,705 | 12,321 | 11,124 | 11,375 | 11,224 | 12,182 | 11,966 | 11,960 | 7,813 |
| | Irrigated : | 12,333 | 11,963 | 10,750 | 10,722 | 10,335 | 11,311 | 11,034 | 11,030 | 6,470 |
| | C - Cereals | | | | | | | | | |
| | Total : | 18,576 | 26,270 | 23,856 | 25,095 | 24,641 | 25,205 | 23,091 | 25,342 | 19,218 |
| | Irrigated : | 16,277 | 21,229 | 16,702 | 16,791 | 14,785 | 16,415 | 14,494 | 13,594 | 10,112 |
| 5 | Total Irrigated Land for Pulses by Development Block | | | | | | | | | |
| | A - Total Pulses | | | | | | | | | |
| | Total : | 2,893 | 3,155 | 3,396 | 3,968 | 4,236 | 3,861 | 3,086 | 3,594 | 4,148 |
| | Irrigated : | 403 | 278 | 318 | 234 | 314 | 191 | 150 | 216 | 313 |
| | B - Total Food Grain | | | | | | | | | |
| | Total : | 21,469 | 29,425 | 27,252 | 29,063 | 28,877 | 29,066 | 26,177 | 0 | 19,218 |
| | Irrigated : | 16,680 | 21,567 | 17,020 | 17,025 | 15,099 | 16,606 | 14,644 | 0 | 10,112 |
| 6 | Irrigated Land for Oilseed by Development Block | | | | | | | | | |
| | Total : | 391 | 250 | 243 | 355 | 299 | 254 | 1,034 | 250 | 933 |
| | Irrigated : | 237 | 122 | 104 | 168 | 145 | 87 | 63 | 0 | 30 |
| 7 | Irrigated Land for Sugarcane by Development Block | | | | | | | | | |
| | Total : | 104 | 96 | 102 | 126 | 259 | 145 | 630 | 146 | 630 |
| | Irrigated : | 104 | 95 | 101 | 125 | 259 | 144 | 630 | 140 | 630 |
| 8 | Number of Private Pumpset | | | | | | | | | |
| | A - With Boring | 2,338 | 2,111 | 1,957 | 1,737 | 1,737 | 1,706 | 1,557 | 1,283 | 0 |
| | B - Without Boring | 304 | 301 | 289 | 288 | 285 | 108 | 0 | 97 | 0 |
| 9 | Number of Private Tubewells | 1,741 | 1,726 | 1,711 | 1,701 | 1,688 | 1,675 | 472 | 447 | 0 |
| 10 | Distribution of Fertilizer by Development Block | 1,973 | 3,013 | 3,563 | 1,475 | 2,570 | 2,410 | 1,379 | 1,240 | 1,106 |

Source: Sankhyakya Patrika of the U.P. State Planning Institute.

Table C.9 Past Trend of Land Use in Sataon Study Area (1/2)

| Sataon Block | | 87-88 | 86-87 | 85-86 | 84-85 | 83-84 | 82-83 | 81-82 | 80-81 | 79-80 |
|--------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Total Area of Land in Hectares | 23,517 | 23,517 | 23,517 | 23,517 | 23,517 | 23,517 | 23,517 | 23,517 | 23,517 |
| 2 | Net Sown Area in Hectares | 18,167 | 16,450 | 16,450 | 15,306 | 15,936 | 17,972 | n.a. | 18,390 | 18,166 |
| 3 | Net Irrigated Area in Hectares | 8,753 | 10,543 | 10,543 | 9,566 | 11,026 | 11,247 | n.a. | 10,499 | 11,219 |
| 4 | Total Irrigated Land for Main Crop by Development Block | | | | | | | | | |
| | A - Rice | | | | | | | | | |
| | Total : | 2,450 | 3,910 | 3,910 | 5,127 | 4,872 | 4,516 | 3,168 | n.a. | 3,829 |
| | Irrigated : | 1,809 | 2,565 | 2,565 | 3,971 | 3,739 | 3,218 | 1,815 | n.a. | 1,479 |
| | B - Wheat | | | | | | | | | |
| | Total : | 8,410 | 8,496 | 9,496 | 8,383 | 9,567 | 9,323 | 7,345 | n.a. | 7,536 |
| | Irrigated : | 8,184 | 8,223 | 8,223 | 8,244 | 9,252 | 9,002 | 6,743 | n.a. | 5,494 |
| | C - Cereals | | | | | | | | | |
| | Total : | 13,755 | 15,363 | 16,271 | 16,303 | 17,439 | 16,996 | 1,484 | n.a. | 13,970 |
| | Irrigated : | 10,340 | 14,473 | 14,217 | 12,510 | 13,252 | 12,678 | 8,275 | n.a. | 8,106 |
| 5 | Total Irrigated Land for Pulses by Development Block | | | | | | | | | |
| | A - Total Pulses | | | | | | | | | |
| | Total : | 4,185 | 3,946 | 3,946 | 3,661 | 4,127 | 3,552 | n.a. | 3,456 | 3,582 |
| | Irrigated : | 464 | 413 | 413 | 375 | 274 | 208 | n.a. | 373 | 599 |
| | B - Total Food Grain | | | | | | | | | |
| | Total : | 17,940 | 19,309 | 19,309 | 19,964 | 21,566 | 20,548 | n.a. | n.a. | 17,552 |
| | Irrigated : | 10,804 | 11,886 | 11,886 | 12,885 | 13,526 | 12,886 | n.a. | n.a. | 8,705 |
| 6 | Irrigated Land for Oilseed by Development Block | | | | | | | | | |
| | Total : | 1,590 | 1,939 | 1,939 | 1,983 | 2,185 | 2,510 | n.a. | 2,031 | n.a. |
| | Irrigated : | 325 | 228 | 228 | 227 | 220 | 263 | n.a. | 245 | n.a. |
| 7 | Irrigated Land for Sugarcane by Development Block | | | | | | | | | |
| | Total : | 353 | 360 | 360 | 303 | 562 | 658 | n.a. | 339 | 265 |
| | Irrigated : | 352 | 360 | 360 | 300 | 557 | 647 | n.a. | 336 | 267 |
| 8 | Number of Private Pumpset | | | | | | | | | |
| | A - With Boring | 672 | 624 | 573 | 499 | 481 | n.a. | 476 | 419 | n.a. |
| | B - Without Boring | 61 | 100 | 100 | 99 | 95 | n.a. | 81 | n.a. | n.a. |
| 9 | Number of Private Tubewells | 2,968 | 2,799 | 1,660 | 2,603 | 2,275 | n.a. | 2,473 | 1,673 | n.a. |
| 10 | Distribution of Fertilizer by Development Block | 1,436 | 1,587 | 1,327 | 1,368 | 1,361 | n.a. | 1,072 | 888 | n.a. |

Source: Sankhyakya Patrika of the U.P. State Planning Institue.

Table C.9 Past Trend of Land Use in Sataon Study Area (2/2)

| Hilauli Block | | 87-88 | 86-87 | 85-86 | 84-85 | 83-84 | 82-83 | 81-82 | 80-81 | 79-80 |
|---------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sr. No. | | | | | | | | | | |
| 1 | Total Area of Land in Hectares | 26,200 | 26,200 | 26,200 | 26,200 | 26,200 | 26,200 | 26,200 | 26,200 | 26,200 |
| 2 | Net Sown Area in Hectares | 17,436 | 19,714 | 19,513 | 19,790 | 19,802 | 20,185 | n.a. | n.a. | 21,247 |
| 3 | Net Irrigated Area in Hectares | 10,972 | 11,105 | 9,858 | 11,066 | 10,172 | 9,215 | n.a. | n.a. | 8,223 |
| 4 | Total Irrigated Land for Main Crop by Development Block | | | | | | | | | |
| | A - Rice | | | | | | | | | |
| | Total : | 2,614 | 6,342 | 6,588 | 4,328 | 5,998 | 5,384 | n.a. | n.a. | 6,163 |
| | Irrigated : | 1,684 | 3,182 | 2,992 | 2,975 | 2,366 | 2,156 | n.a. | n.a. | 1,442 |
| | B - Wheat | | | | | | | | | |
| | Total : | 9,600 | 7,916 | 8,164 | 7,554 | 8,151 | 8,205 | n.a. | n.a. | 5,906 |
| | Irrigated : | 9,018 | 7,365 | 7,398 | 7,109 | 7,414 | 7,484 | n.a. | n.a. | 4,583 |
| | C - Cereals | | | | | | | | | |
| | Total : | 15,006 | 17,904 | 18,989 | 15,700 | 18,136 | 17,315 | n.a. | n.a. | 17,887 |
| | Irrigated : | 11,232 | 10,939 | 11,085 | 10,798 | 10,480 | 10,273 | n.a. | n.a. | 7,585 |
| 5 | Total Irrigated Land for Pulses by Development Block | | | | | | | | | |
| | A - Total Pulses | | | | | | | | | |
| | Total : | 3,458 | 3,956 | 4,621 | 4,030 | 3,980 | 3,632 | n.a. | n.a. | 4,394 |
| | Irrigated : | 465 | 296 | 345 | 373 | 372 | 311 | n.a. | n.a. | 386 |
| | B - Total Food Grain | | | | | | | | | |
| | Total : | 18,464 | 21,860 | 23,610 | 19,730 | 22,116 | 20,947 | n.a. | n.a. | n.a. |
| | Irrigated : | 11,697 | 11,235 | 11,430 | 11,179 | 10,852 | 10,584 | n.a. | n.a. | n.a. |
| 6 | Irrigated Land for Oilseed by Development Block | | | | | | | | | |
| | Total : | 510 | 475 | 559 | 609 | 501 | 547 | n.a. | n.a. | n.a. |
| | Irrigated : | 84 | 66 | 44 | 117 | 50 | 52 | n.a. | n.a. | n.a. |
| 7 | Irrigated Land for Sugarcane by Development Block | | | | | | | | | |
| | Total : | 82 | 124 | 146 | 120 | 174 | 189 | n.a. | n.a. | 177 |
| | Irrigated : | 80 | 124 | 138 | 120 | 165 | 183 | n.a. | n.a. | 176 |
| 8 | Number of Private Pumpset | | | | | | | | | |
| | A - With Boring | 2,555 | 2,358 | 2,199 | 2,036 | n.a. | n.a. | n.a. | n.a. | n.a. |
| | B - Without Boring | 140 | 140 | 140 | 135 | n.a. | n.a. | n.a. | n.a. | n.a. |
| 9 | Number of Private Tubewells | 535 | 505 | 493 | 478 | n.a. | n.a. | n.a. | n.a. | 1,050 |
| 10 | Distribution of Fertilizer by Development Block | n.a. | 1,130 | 1,233 | 665 | 771 | n.a. | n.a. | n.a. | 526 |

Source: Sankhyakya Patrika of the U.P. State Planning Institute.

Table C.10 Past Trend of Land Use in Sursa Study Area

| Sr. No. | | 87-88 | 86-87 | 85-86 | 84-85 | 83-84 | 82-83 | 81-82 | 80-81 | 79-80 |
|---------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Total Area of Land in Hectares | 32,300 | 32,300 | 32,300 | 32,300 | 32,300 | 32,300 | 32,300 | 32,300 | 21,200 |
| 2 | Net Sown Area in Hectares | 20,333 | 20,496 | 20,671 | 18,572 | 20,605 | 20,460 | 21,177 | 20,739 | 21,064 |
| 3 | Net Irrigated Area in Hectares | 12,058 | 11,629 | 13,382 | 14,087 | 13,777 | 13,182 | 12,026 | 13,819 | 11,999 |
| 4 | Total Irrigated Land for Main Crop by Development Block | | | | | | | | | |
| | A - Rice | | | | | | | | | |
| | Total : | 2,176 | 6,095 | 6,184 | 5,395 | 5,768 | 3,835 | 6,117 | 4,361 | 10,998 |
| | Irrigated : | 1,380 | 3,590 | 614 | 589 | 217 | 112 | 218 | 58 | 2,772 |
| | B - Wheat | | | | | | | | | |
| | Total : | 13,406 | 11,366 | 12,898 | 12,795 | 13,129 | 12,887 | 11,835 | 13,904 | 11,752 |
| | Irrigated : | 12,813 | 11,182 | 11,849 | 11,952 | 12,237 | 11,713 | 10,185 | 12,319 | 10,429 |
| | C - Cereals | | | | | | | | | |
| | Total : | 21,370 | 22,516 | 25,459 | 23,414 | 23,704 | 20,976 | 22,237 | 20,933 | 29,261 |
| | Irrigated : | 14,704 | 15,025 | 12,695 | 12,785 | 12,714 | 12,144 | 10,684 | 12,719 | 13,817 |
| 5 | Total Irrigated Land for Pulses by Development Block | | | | | | | | | |
| | A - Total Pulses | | | | | | | | | |
| | Total : | 3,694 | 3,310 | 4,059 | 2,833 | 2,817 | 3,168 | 4,391 | 3,168 | 4,779 |
| | Irrigated : | 397 | 193 | 135 | 149 | 144 | 159 | 171 | 176 | 248 |
| | B - Total Food Grain | | | | | | | | | |
| | Total : | 25,064 | 25,826 | 29,518 | 26,317 | 26,521 | 24,144 | 26,628 | n.a. | 29,261 |
| | Irrigated : | 15,101 | 15,218 | 12,834 | 12,934 | 12,863 | 12,303 | 10,855 | n.a. | 13,817 |
| 6 | Irrigated Land for Oilseed by Development Block | | | | | | | | | |
| | Total : | 626 | 775 | 766 | 1,379 | 1,859 | 1,845 | 1,569 | 964 | 1,360 |
| | Irrigated : | 362 | 206 | 197 | 265 | 106 | 107 | 85 | 180 | 35 |
| 7 | Irrigated Land for Sugarcane by Development Block | | | | | | | | | |
| | Total : | 1,146 | 1,012 | 825 | 876 | 1,054 | 1,216 | 1,163 | 678 | 186 |
| | Irrigated : | 808 | 679 | 513 | 519 | 577 | 598 | 988 | 493 | 180 |
| 8 | Number of Private Pumpset | | | | | | | | | |
| | A - With Boring | 2,583 | 2,453 | 2,290 | 90 | 1,869 | 55 | 43 | n.a. | 0 |
| | B - Without Boring | 192 | 190 | 180 | 170 | 156 | 1,918 | 1,603 | n.a. | 0 |
| 9 | Number of Private Tubewells | 100 | 95 | 94 | 2,435 | 56 | 2,342 | 2,330 | n.a. | 1,527 |
| 10 | Distribution of Fertilizer by Development Block | 1,261 | 1,474 | 1,917 | 1,568 | 1,864 | 1,662 | 1,501 | 1,378 | 1,677 |

Source: Sankhyakya Patrika of the U.P. State Planning Institute.

Table C.11 Past Trend of Land Use in Purwa Study Area

| Sr. No. | | 87-88 | 86-87 | 85-86 | 84-85 | 83-84 | 82-83 | 81-82 | 80-81 | 79-80 |
|---------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Total Area of Land in Hectares | 34,800 | 34,800 | 34,800 | 34,800 | 34,800 | 34,800 | 34,800 | 34,800 | 34,800 |
| 2 | Net Sown Area in Hectares | 14,665 | 14,161 | 14,088 | 18,035 | 14,676 | 14,490 | n.a. | n.a. | 14,949 |
| 3 | Net Irrigated Area in Hectares | 11,918 | 13,918 | 12,355 | 11,987 | 11,093 | 9,962 | n.a. | n.a. | 10,874 |
| 4 | Total Irrigated Land for Main Crop by Development Block | | | | | | | | | |
| | A - Rice | | | | | | | | | |
| | Total : | 6,172 | 8,744 | 8,530 | 7,988 | 7,595 | 7,922 | n.a. | n.a. | 6,458 |
| | Irrigated : | 3,379 | 7,818 | 6,765 | 6,618 | 6,003 | 6,704 | n.a. | n.a. | 5,861 |
| | B - Wheat | | | | | | | | | |
| | Total : | 9,469 | 9,239 | 9,070 | 9,546 | 9,226 | 9,313 | n.a. | n.a. | 8,035 |
| | Irrigated : | 9,385 | 9,196 | 8,997 | 8,714 | 9,026 | 9,039 | n.a. | n.a. | 7,351 |
| | C - Cereals | | | | | | | | | |
| | Total : | 17,201 | 19,685 | 19,365 | 19,329 | 18,497 | 18,343 | n.a. | n.a. | 17,078 |
| | Irrigated : | 13,215 | 17,311 | 16,093 | 15,682 | 15,382 | 16,100 | n.a. | n.a. | 13,995 |
| 5 | Total Irrigated Land for Pulses by Development Block | | | | | | | | | |
| | A - Total Pulses | | | | | | | | | |
| | Total : | 1,944 | 2,058 | 2,016 | 1,938 | 1,981 | 1,873 | n.a. | n.a. | 2,320 |
| | Irrigated : | 322 | 105 | 104 | 127 | 110 | 992 | n.a. | n.a. | 177 |
| | B - Total Food Grain | | | | | | | | | |
| | Total : | 19,145 | 21,743 | 21,174 | 21,267 | 20,478 | 20,216 | n.a. | n.a. | n.a. |
| | Irrigated : | 13,537 | 17,416 | 16,238 | 15,809 | 15,492 | 16,192 | n.a. | n.a. | n.a. |
| 6 | Irrigated Land for Oilseed by Development Block | | | | | | | | | |
| | Total : | 254 | 204 | 223 | 212 | 103 | 213 | n.a. | n.a. | n.a. |
| | Irrigated : | 12 | 86 | 80 | 91 | 29 | 35 | n.a. | n.a. | n.a. |
| 7 | Irrigated Land for Sugarcane by Development Block | | | | | | | | | |
| | Total : | 217 | 303 | 207 | 243 | 287 | 300 | n.a. | n.a. | 200 |
| | Irrigated : | 214 | 302 | 207 | 228 | 285 | 297 | n.a. | n.a. | 199 |
| 8 | Number of Private Pumpset | | | | | | | | | |
| | A - With Boring | 2,586 | n.a. | 2,214 | 2,051 | 1,829 | n.a. | n.a. | n.a. | n.a. |
| | B - Without Boring | 93 | 93 | 93 | 88 | 84 | n.a. | n.a. | n.a. | n.a. |
| 9 | Number of Private Tubewells | 155 | n.a. | 135 | 120 | 114 | n.a. | n.a. | n.a. | 1,157 |
| 10 | Distribution of Fertilizer by Development Block | n.a. | 1,300 | 1,427 | 865 | 1,309 | 1,247 | n.a. | n.a. | 981 |

Source: Sankhyakya Patrika of the U.P. State Planning Institute.

Table.C.12 Village-wise Present Land Use in Sarojini Nagar Study Area (1/3)

| Sl. No. | Village Name | Geographical Area (ha) | Total (ha) | Net Cultivated Area | | Current Fallow Lands (ha) | Other Fallow/Arable Lands (ha) | Barren but Timber Lands (ha) | Permanent Pasture Lands (ha) | Usar/Uncultivable Lands (ha) | Forest Lands (ha) | Others Lands (ha) | Total (ha) |
|--|----------------------|------------------------|------------|---------------------|-------------------------|---------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|-------------------|-------------------|------------|
| | | | | Irrigated Area (ha) | Non-Irrigated Area (ha) | | | | | | | | |
| A. SAROJINI NAGAR BLOCK (LUCKNOW DISTRICT) | | | | | | | | | | | | | |
| 1. | Khande Dev | 521 | 403 | 267 | 136 | 53 | 1 | 8 | 0 | 8 | 0 | 48 | 521 |
| 2. | Kasarwara | 176 | 117 | 83 | 34 | 36 | 0 | 5 | 0 | 2 | 0 | 16 | 176 |
| 9. | Paharpur | 180 | 125 | 81 | 44 | 30 | 0 | 5 | 4 | 2 | 0 | 14 | 180 |
| 10. | Banhra | 696 | 468 | 280 | 188 | 83 | 4 | 6 | 12 | 8 | 0 | 109 | 696 |
| 11. | Bani | 181 | 137 | 101 | 36 | 12 | 0 | 4 | 0 | 2 | 0 | 26 | 181 |
| 22. | Sarai Shahzadi | 250 | 156 | 108 | 48 | 71 | 0 | 9 | 1 | 3 | 0 | 10 | 250 |
| 1. | Kamlapur Ahmadpur | 121 | 68 | 49 | 19 | 33 | 1 | 1 | 0 | 7 | 0 | 11 | 121 |
| 2. | Asraf Nagar | 255 | 139 | 92 | 47 | 78 | 3 | 1 | 0 | 8 | 0 | 26 | 255 |
| 4. | Amausi | 1,645 | 647 | 359 | 288 | 96 | 17 | 108 | 11 | 0 | 155 | 611 | 1,645 |
| 5. | Anaura | 324 | 179 | 93 | 86 | 24 | 16 | 0 | 0 | 13 | 65 | 27 | 324 |
| 7. | Andhpur Dev | 260 | 168 | 117 | 51 | 21 | 0 | 4 | 2 | 51 | 0 | 14 | 260 |
| 8. | Alinagar Sunnara | 499 | 216 | 132 | 84 | 212 | 0 | 0 | 0 | 23 | 0 | 48 | 499 |
| 9. | Alinagar Khurd | 126 | 32 | 22 | 10 | 60 | 0 | 1 | 0 | 20 | 0 | 13 | 126 |
| 11. | Aurawan | 241 | 149 | 109 | 40 | 17 | 0 | 3 | 2 | 16 | 40 | 14 | 241 |
| 13. | Kurauri | 719 | 331 | 269 | 62 | 44 | 5 | 9 | 52 | 74 | 163 | 41 | 719 |
| 14. | Kishanpur Kaudiya | 149 | 86 | 27 | 59 | 23 | 1 | 2 | 0 | 30 | 0 | 7 | 149 |
| 17. | Khatola | 464 | 58 | 58 | 40 | 141 | 1 | 8 | 0 | 21 | 180 | 15 | 424 |
| 20. | Gauri | 337 | 171 | 157 | 14 | 57 | 0 | 2 | 5 | 0 | 0 | 102 | 337 |
| 21. | Gahrui | 619 | 216 | 212 | 4 | 75 | 1 | 6 | 4 | 0 | 189 | 128 | 619 |
| 23. | Chandrawal | 239 | 136 | 89 | 47 | 40 | 0 | 9 | 0 | 30 | 0 | 19 | 239 |
| 24. | Jahanabad | 43 | 33 | 13 | 20 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 42 |
| 25. | Jaiti Kheta | 558 | 372 | 332 | 40 | 27 | 32 | 0 | 0 | 65 | 6 | 56 | 558 |
| 26. | Dhawapur | 111 | 59 | 48 | 11 | 24 | 1 | 7 | 0 | 0 | 3 | 17 | 111 |
| 27. | Naukur | 661 | 455 | 367 | 88 | 82 | 10 | 6 | 0 | 0 | 0 | 96 | 661 |
| 28. | Nurmagar Bhadarsa | 321 | 219 | 150 | 69 | 39 | 0 | 0 | 1 | 39 | 0 | 23 | 321 |
| 29. | Neewan | 512 | 276 | 232 | 44 | 116 | 8 | 32 | 1 | 0 | 0 | 79 | 512 |
| 31. | Parvar Paschim | 910 | 410 | 280 | 130 | 114 | 0 | 65 | 12 | 171 | 0 | 138 | 910 |
| 32. | Parvar Purab | 515 | 220 | 167 | 53 | 34 | 77 | 27 | 2 | 0 | 0 | 155 | 515 |
| 35. | Farukhabad Chillaava | 341 | 96 | 55 | 41 | 87 | 20 | 7 | 1 | 0 | 0 | 130 | 341 |
| 36. | Bijnaur | 752 | 375 | 232 | 143 | 159 | 25 | 18 | 14 | 0 | 0 | 161 | 752 |
| 39. | Behlava | 115 | 66 | 27 | 39 | 5 | 3 | 0 | 0 | 28 | 0 | 13 | 115 |
| 40. | Behsa | 395 | 5 | 5 | 0 | 0 | 361 | 0 | 0 | 3 | 0 | 26 | 395 |

Source: Miran Khasra, Lucknow & Unnao District THEESIL Concerned

Table.C.12 Village-wise Present Land Use in Sarojini Nagar Study Area (2/3)

| Sl No. | Village Name | Geographical Area (ha) | Net Cultivated Area | | Current | | Other Fallow/Arable Lands (ha) | Barren but Lands (ha) | Forest for | | Usar/Uncultivable Lands (ha) | Forest Lands (ha) | Others Lands (ha) | Total (ha) |
|---|-------------------|------------------------|---------------------|-------------------------|-------------------|-----------|--------------------------------|-----------------------|-------------------|--------------------|------------------------------|-------------------|-------------------|------------|
| | | | Irrigated Area (ha) | Non-Irrigated Area (ha) | Fallow Lands (ha) | Area (ha) | | | Timber Lands (ha) | Pasture Lands (ha) | | | | |
| A. SAROJINI NAGAR BLOCK (LUCKNOW DISTRICT) | | | | | | | | | | | | | | |
| 41. | Bitipur | 289 | 110 | 25 | 97 | 2 | 9 | 0 | 0 | 0 | 21 | 0 | 25 | 289 |
| 42. | Bhagukhera | 170 | 68 | 14 | 50 | 2 | 1 | 0 | 0 | 0 | 11 | 0 | 20 | 170 |
| 44. | Mati | 1,187 | 289 | 84 | 464 | 15 | 26 | 24 | 0 | 0 | 0 | 239 | 46 | 1,187 |
| 46. | Makidumpur Kaithi | 349 | 172 | 50 | 12 | 5 | 2 | 2 | 0 | 0 | 46 | 3 | 107 | 349 |
| 47. | Memaura | 360 | 170 | 146 | 24 | 73 | 0 | 3 | 0 | 0 | 36 | 27 | 51 | 360 |
| 50. | Meeranpur Pinwat | 301 | 128 | 111 | 17 | 76 | 1 | 58 | 0 | 4 | 17 | 0 | 17 | 301 |
| 51. | Ratauli | 165 | 103 | 90 | 13 | 24 | 7 | 1 | 0 | 0 | 18 | 0 | 12 | 165 |
| 52. | Rahimabad | 381 | 231 | 163 | 68 | 37 | 41 | 21 | 2 | 0 | 0 | 0 | 49 | 381 |
| 55. | Rasulpur Ithuria | 130 | 18 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 67 | 130 |
| 55. | Shahpur Majhgawan | 130 | 71 | 63 | 8 | 26 | 0 | 1 | 0 | 3 | 17 | 0 | 12 | 130 |
| 58. | Saraiya | 154 | 323 | 293 | 30 | 43 | 0 | 7 | 0 | 0 | 25 | 0 | 12 | 410 |
| | Sub-Total | 16,852 | 8,394 | 6,077 | 2,357 | 2,799 | 660 | 483 | 152 | 37 | 813 | 1,111 | 2,618 | 17,067 |
| B. MOHANLAL GANJ BLOCK (LUCKNOW DISTRICT) | | | | | | | | | | | | | | |
| 1. | Uttar Gaon | 540 | 353 | 225 | 128 | 45 | 0 | 42 | 27 | 7 | 0 | 14 | 52 | 540 |
| 9. | Bhasanda | 493 | 287 | 200 | 87 | 45 | 5 | 58 | 12 | 17 | 22 | 13 | 34 | 493 |
| 13. | Bhiliampur | 97 | 60 | 45 | 15 | 5 | 2 | 2 | 3 | 4 | 1 | 0 | 20 | 97 |
| 14. | Paraspur Thatha | 343 | 125 | 73 | 52 | 25 | 0 | 27 | 1 | 2 | 1 | 139 | 23 | 343 |
| 18. | Jabrauli | 1,000 | 456 | 400 | 56 | 75 | 0 | 20 | 9 | 71 | 31 | 239 | 99 | 1,000 |
| 22. | Sirs | 522 | 327 | 258 | 69 | 23 | 6 | 35 | 20 | 4 | 2 | 70 | 35 | 522 |
| 24. | Bhaundari | 682 | 513 | 433 | 80 | 28 | 0 | 38 | 36 | 14 | 0 | 3 | 50 | 682 |
| 25. | Gautamkhara | 216 | 63 | 38 | 25 | 32 | 0 | 3 | 1 | 5 | 2 | 95 | 15 | 216 |
| 28. | Govindpur | 650 | 314 | 205 | 109 | 30 | 0 | 201 | 16 | 9 | 12 | 49 | 19 | 650 |
| 37. | Dayapur | 730 | 501 | 211 | 290 | 122 | 2 | 18 | 9 | 14 | 2 | 17 | 45 | 730 |
| 39. | Rati | 434 | 333 | 236 | 97 | 41 | 4 | 1 | 7 | 3 | 0 | 0 | 45 | 434 |
| 40. | Raghunath Khara | 285 | 201 | 181 | 20 | 6 | 0 | 15 | 0 | 4 | 27 | 0 | 32 | 285 |
| 41. | Sisendi | 754 | 293 | 216 | 77 | 53 | 0 | 66 | 234 | 5 | 0 | 0 | 103 | 754 |
| 42. | Salsamau | 538 | 437 | 330 | 107 | 35 | 0 | 3 | 4 | 4 | 8 | 0 | 47 | 538 |
| 43. | Kusmaura | 416 | 265 | 150 | 115 | 136 | 0 | 0 | 0 | 3 | 0 | 0 | 12 | 416 |
| 44. | Kodar Raipur | 339 | 269 | 200 | 69 | 26 | 0 | 1 | 4 | 9 | 3 | 0 | 27 | 339 |
| 45. | Madarikhera | 90 | 44 | 24 | 20 | 27 | 0 | 0 | 0 | 4 | 0 | 5 | 10 | 90 |
| 46. | Mangtaiya | 489 | 337 | 143 | 194 | 44 | 8 | 7 | 7 | 0 | 1 | 0 | 40 | 489 |
| 47. | Meeranpur | 287 | 195 | 122 | 73 | 49 | 1 | 6 | 3 | 3 | 1 | 0 | 29 | 287 |
| 48. | Meeranpur | 216 | 128 | 100 | 28 | 12 | 1 | 5 | 5 | 7 | 0 | 0 | 58 | 216 |

Source : Miran Khasra, Lucknow & Unnao District THESIS Concerned

Table.C.12 Village-wise Present Land Use in Sarojini Nagar Study Area (3/3)

| Sl No. | Village Name | Geographical Area (ha) | Total (ha) | Net Cultivated Area | | Current Fallow Lands (ha) | Other Fallow/Arable Lands (ha) | Barren but Timber Lands (ha) | Permanent Pasture Lands (ha) | Usar/Uncultivable Lands (ha) | Forest Lands (ha) | Others Lands (ha) | Total (ha) |
|--|--------------------|------------------------|------------|---------------------|------------------------|---------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|-------------------|-------------------|------------|
| | | | | Irigated Area (ha) | Non-irigated Area (ha) | | | | | | | | |
| B. MOHANLAL GANJ BLOCK (LUCKNOW DISTRICT) | | | | | | | | | | | | | |
| 50. | Akbar Beniganj | 201 | 147 | 90 | 57 | 34 | 0 | 2 | 1 | 0 | 4 | 13 | 201 |
| 52. | Virsinghpur | 313 | 208 | 65 | 143 | 39 | 0 | 10 | 0 | 1 | 2 | 35 | 313 |
| 53. | Baraulia | 423 | 286 | 200 | 86 | 38 | 0 | 7 | 25 | 1 | 2 | 41 | 418 |
| 54. | Bhajanmau | 86 | 65 | 39 | 28 | 7 | 1 | 0 | 0 | 0 | 0 | 11 | 84 |
| 55. | Bhadeswa | 643 | 371 | 297 | 74 | 114 | 16 | 20 | 1 | 11 | 55 | 44 | 643 |
| 56. | Dewaria Bharosava | 403 | 257 | 187 | 70 | 74 | 0 | 10 | 1 | 0 | 0 | 46 | 403 |
| 57. | Dhanuwa Saand | 444 | 283 | 214 | 69 | 34 | 0 | 6 | 2 | 23 | 66 | 30 | 444 |
| 80. | Dehawa | 370 | 93 | 56 | 37 | 36 | 6 | 15 | 2 | 7 | 0 | 35 | 207 |
| 103. | Gaura | 1,055 | 384 | 300 | 84 | 115 | 3 | 131 | 21 | 5 | 304 | 82 | 1,055 |
| | Sub-Total | 13,009 | 7,595 | 5,238 | 2,359 | 1,350 | 55 | 749 | 244 | 161 | 1,077 | 1,132 | 12,839 |
| C. ASOHA BLOCK (UNNAO DISTRICT) | | | | | | | | | | | | | |
| 65. | Vilaura | 324 | 218 | 124 | 94 | 57 | 11 | 1 | 0 | 3 | 0 | 29 | 324 |
| 67. | Chaupai | 533 | 311 | 165 | 146 | 153 | 2 | 2 | 0 | 8 | 0 | 37 | 533 |
| 68. | Chilauti | 218 | 143 | 92 | 51 | 17 | 12 | 7 | 0 | 0 | 0 | 15 | 208 |
| 69. | Darehata Achli | 89 | 72 | 33 | 39 | 8 | 0 | 1 | 0 | 0 | 0 | 7 | 89 |
| 70. | Derehata Mahant | 73 | 56 | 36 | 20 | 7 | 0 | 1 | 1 | 0 | 0 | 7 | 73 |
| 71. | Dundiathar | 162 | 111 | 83 | 28 | 24 | 4 | 6 | 2 | 0 | 0 | 10 | 162 |
| 72. | Gyanpur | 139 | 108 | 71 | 37 | 14 | 0 | 3 | 0 | 0 | 0 | 11 | 139 |
| 74. | Gomapur | 170 | 133 | 72 | 61 | 0 | 7 | 1 | 6 | 2 | 0 | 10 | 170 |
| 75. | Gondwa | 103 | 74 | 41 | 33 | 16 | 0 | 6 | 2 | 1 | 0 | 3 | 103 |
| 79. | Keelpur | 70 | 58 | 41 | 17 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 70 |
| 80. | Kshipur | 159 | 132 | 93 | 39 | 4 | 0 | 5 | 0 | 0 | 0 | 9 | 159 |
| 81. | Majharia | 142 | 88 | 61 | 27 | 12 | 0 | 1 | 0 | 0 | 0 | 18 | 142 |
| 82. | Gaddipur | 65 | 39 | 16 | 23 | 19 | 0 | 1 | 0 | 0 | 0 | 4 | 65 |
| 83. | Makhdumpur | 41 | 31 | 25 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 6 | 41 |
| 86. | Neemlikar | 164 | 138 | 86 | 52 | 4 | 3 | 0 | 0 | 1 | 0 | 14 | 164 |
| 87. | Paharpur | 164 | 143 | 102 | 41 | 4 | 0 | 0 | 0 | 0 | 0 | 10 | 164 |
| 88. | Padmanpur | 63 | 48 | 22 | 26 | 7 | 0 | 3 | 0 | 0 | 0 | 5 | 63 |
| 92. | Ograpur | 209 | 168 | 109 | 59 | 0 | 0 | 3 | 0 | 2 | 0 | 11 | 209 |
| | Sub-Total | 2,888 | 2,071 | 1,272 | 799 | 348 | 40 | 42 | 11 | 17 | 0 | 213 | 2,878 |
| D. NAWANGANJ BLOCK (UNNAO DISTRICT) | | | | | | | | | | | | | |
| 16. | Tenduva Hirankuadi | 198 | 187 | 114 | 73 | 4 | 0 | 4 | 0 | 0 | 4 | 23 | 226 |
| 23. | Paraura | 103 | 93 | 66 | 27 | 11 | 0 | 2 | 3 | 0 | 0 | 10 | 121 |
| 30. | Balhemau | 242 | 226 | 154 | 70 | 9 | 5 | 4 | 0 | 0 | 0 | 10 | 255 |
| 32. | Bendua | 33 | 45 | 22 | 23 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 51 |
| 59. | Shekhpur | 163 | 196 | 174 | 32 | 6 | 0 | 2 | 2 | 1 | 0 | 14 | 223 |
| | Sub-Total | 739 | 747 | 530 | 225 | 35 | 5 | 12 | 5 | 1 | 4 | 58 | 876 |
| | Grand-Total | 33,488 | 18,807 | 13,117 | 5,740 | 4,532 | 760 | 1,286 | 297 | 992 | 2,192 | 4,021 | 33,560 |

Data Source : Miran Khasara, Lucknow & Unnao District THE SIL Concerned

Table.C.13 Village-wise Present Land Use in Sataon Study Area (1/2)

| Sl No. | Village Name | Geographical Area (ha) | | Net Cultivated Area | | Current | | Other | | Forest for | | Permanent | | Usar/Uncultivable Lands | | Forest Lands | | Other Lands | | Total (ha) |
|--|--------------------|------------------------|-------|---------------------|-------------|---------|--------|--------|--------|------------|--------|-----------|---------|-------------------------|--------|--------------|--------|-------------|-------|------------|
| | | Area | Total | Irrigated | n-Irrigated | Fallow | Arable | Fallow | Arable | Barren but | Timber | Timber | Pasture | Usar/Uncultivable | Forest | Other | Forest | Other | | |
| A. SATAON BLOCK (RAE BARELI DISTRICT) | | | | | | | | | | | | | | | | | | | | |
| 5 | Onai Paharpur | 386 | 254 | 195 | 59 | 60 | 16 | 3 | 2 | 5 | 2 | 0 | 0 | 0 | 44 | 386 | 0 | 0 | 44 | 386 |
| 6 | Konsa | 2,870 | 2,395 | 1,437 | 898 | 109 | 0 | 50 | 0 | 18 | 0 | 0 | 0 | 0 | 37 | 2,870 | 0 | 0 | 37 | 2,870 |
| 7 | Korihar | 1,536 | 1,095 | 735 | 360 | 112 | 0 | 40 | 0 | 30 | 70 | 0 | 0 | 0 | 0 | 1,536 | 0 | 0 | 0 | 1,536 |
| 10 | Khusrupur | 106 | 92 | 61 | 31 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 9 | 106 | 0 | 0 | 9 | 106 |
| 11 | Garhi Dula Rai | 208 | 122 | 94 | 28 | 1 | 12 | 1 | 6 | 0 | 9 | 0 | 0 | 5 | 0 | 208 | 0 | 0 | 0 | 208 |
| 13 | Gamhipur | 80 | 62 | 39 | 23 | 1 | 1 | 1 | 6 | 0 | 6 | 0 | 0 | 0 | 9 | 80 | 0 | 0 | 9 | 80 |
| 14 | Gauri Sataon | 76 | 50 | 25 | 25 | 10 | 1 | 0 | 5 | 1 | 5 | 0 | 0 | 0 | 9 | 76 | 0 | 0 | 9 | 76 |
| 15 | Chaknasirpur | 16 | 13 | 5 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 1 | 16 |
| 16 | Chardwal | 117 | 93 | 69 | 24 | 8 | 0 | 2 | 5 | 0 | 7 | 0 | 0 | 0 | 7 | 117 | 0 | 0 | 7 | 117 |
| 29 | Domapur | 198 | 157 | 101 | 56 | 10 | 1 | 9 | 5 | 1 | 5 | 0 | 0 | 0 | 15 | 198 | 0 | 0 | 15 | 198 |
| 33 | Nirashapur | 130 | 110 | 81 | 29 | 8 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 9 | 130 | 0 | 0 | 9 | 130 |
| 38 | Purai | 797 | 434 | 297 | 137 | 171 | 0 | 91 | 26 | 0 | 26 | 0 | 0 | 0 | 48 | 797 | 0 | 0 | 48 | 797 |
| 45 | Bardar | 1,028 | 734 | 380 | 354 | 131 | 1 | 28 | 10 | 0 | 10 | 0 | 0 | 0 | 124 | 1,028 | 0 | 0 | 124 | 1,028 |
| 46 | Bankat | 114 | 65 | 29 | 36 | 28 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 114 | 0 | 0 | 10 | 114 |
| 47 | Manpur | 118 | 100 | 57 | 43 | 2 | 0 | 4 | 3 | 0 | 3 | 0 | 0 | 0 | 9 | 118 | 0 | 0 | 9 | 118 |
| 48 | Malikmau Chianbara | 395 | 210 | 147 | 63 | 105 | 1 | 22 | 13 | 2 | 13 | 2 | 0 | 0 | 42 | 395 | 0 | 0 | 42 | 395 |
| 50 | Raula | 202 | 125 | 89 | 36 | 35 | 5 | 6 | 3 | 2 | 3 | 2 | 0 | 0 | 25 | 202 | 0 | 0 | 25 | 202 |
| 56 | Shekhpapur | 123 | 93 | 71 | 22 | 2 | 0 | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 21 | 123 | 0 | 0 | 21 | 123 |
| 58 | Sataon | 1,180 | 800 | 588 | 212 | 194 | 15 | 0 | 41 | 13 | 41 | 0 | 9 | 0 | 108 | 1,180 | 0 | 0 | 108 | 1,180 |
| 68 | Husepur | 65 | 55 | 47 | 8 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 7 | 65 | 0 | 0 | 7 | 65 |
| 69 | Hajipur | 783 | 657 | 353 | 304 | 15 | 0 | 0 | 13 | 3 | 13 | 0 | 2 | 0 | 93 | 783 | 0 | 0 | 93 | 783 |
| 70 | Hardaurpur | 72 | 45 | 29 | 16 | 12 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 7 | 72 | 0 | 0 | 7 | 72 |
| | Sub-Total | 10,600 | 7,701 | 4,929 | 2,772 | 1,044 | 53 | 288 | 225 | 78 | 225 | 0 | 18 | 68 | 1,125 | 10,600 | 0 | 0 | 1,125 | 10,600 |
| B. KHEERO BLOCK (RAE BARELI DISTRICT) | | | | | | | | | | | | | | | | | | | | |
| 27 | Chandemau | 172 | 141 | 92 | 49 | 16 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 172 | 0 | 0 | 13 | 172 |
| 45 | Naugava | 122 | 86 | 67 | 19 | 24 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 122 | 0 | 0 | 8 | 122 |
| 47 | Paho | 866 | 504 | 329 | 175 | 149 | 12 | 18 | 17 | 13 | 17 | 0 | 62 | 0 | 91 | 866 | 0 | 0 | 91 | 866 |
| 52 | Baraula | 195 | 145 | 102 | 43 | 4 | 0 | 8 | 4 | 0 | 4 | 0 | 0 | 0 | 34 | 195 | 0 | 0 | 34 | 195 |
| 57 | Basigava | 224 | 106 | 60 | 46 | 93 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 224 | 0 | 0 | 8 | 224 |
| 60 | Bhitargaon | 1,318 | 866 | 578 | 288 | 79 | 80 | 54 | 64 | 0 | 64 | 0 | 27 | 0 | 148 | 1,318 | 0 | 0 | 148 | 1,318 |
| 72 | Rampur Majara | 139 | 124 | 89 | 35 | 2 | 0 | 6 | 2 | 0 | 2 | 0 | 0 | 0 | 5 | 139 | 0 | 0 | 5 | 139 |
| | Sub-Total | 3,036 | 1,972 | 1,317 | 655 | 367 | 92 | 109 | 87 | 13 | 87 | 0 | 89 | 0 | 307 | 3,036 | 0 | 0 | 307 | 3,036 |

Data Source : Miran Khasra, Rae Bareli & Unnao District THESIL Concerned

Table.C.13 Village-wise Present Land Use in Saton Study Area (2/2)

| Village Name | Geographical Area (ha) | Net Cultivated Area | | Current | | Other | | Forest for | | Permanent | | Usar/Uncultivable | | Forest | | Other | | Total (ha) |
|--|------------------------|---------------------|-----------|-------------------|-------------------------|------------------------------|-------------------|--------------------|------------------------------|-------------------|------------------|-------------------|--------|--------|--|-------|--|------------|
| | | Irrigated Area (ha) | Area (ha) | Fallow Lands (ha) | Other Fallow Lands (ha) | Barren but Arable Lands (ha) | Timber Lands (ha) | Pasture Lands (ha) | Usar/Uncultivable Lands (ha) | Forest Lands (ha) | Other Lands (ha) | | | | | | | |
| C. HILAUDI BLOCK (UNNAO DISTRICT) | | | | | | | | | | | | | | | | | | |
| 1. Athesa | 636 | 367 | 42 | 22 | 5 | 28 | 10 | 0 | 156 | 0 | 48 | 0 | 636 | | | | | |
| 2. Akohani | 2,584 | 721 | 62 | 923 | 38 | 308 | 0 | 133 | 323 | 0 | 138 | 0 | 2,584 | | | | | |
| 8. Basari | 496 | 298 | 37 | 24 | 35 | 12 | 13 | 0 | 0 | 0 | 114 | 0 | 496 | | | | | |
| 11. Gulariha | 2,768 | 935 | 269 | 642 | 169 | 344 | 108 | 0 | 0 | 0 | 550 | 0 | 2,768 | | | | | |
| 13. Indaura | 241 | 142 | 18 | 23 | 3 | 4 | 5 | 0 | 0 | 0 | 64 | 0 | 241 | | | | | |
| 14. Jaisingkhara | 272 | 136 | 100 | 59 | 0 | 3 | 5 | 3 | 0 | 0 | 66 | 0 | 272 | | | | | |
| 19. Lotna | 526 | 265 | 33 | 44 | 0 | 0 | 6 | 7 | 0 | 0 | 204 | 0 | 526 | | | | | |
| 23. Mavai | 2,708 | 771 | 422 | 800 | 90 | 196 | 146 | 0 | 0 | 0 | 705 | 0 | 2,708 | | | | | |
| 25. Nari Chak | 521 | 370 | 331 | 57 | 0 | 6 | 2 | 0 | 41 | 0 | 45 | 0 | 521 | | | | | |
| 50. Chhipipur | 53 | 31 | 8 | 19 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 53 | | | | | |
| 56. Galitpur | 361 | 267 | 171 | 68 | 2 | 1 | 0 | 0 | 1 | 5 | 17 | 0 | 361 | | | | | |
| 60. Kharpur | 211 | 155 | 110 | 29 | 0 | 4 | 0 | 3 | 2 | 0 | 18 | 0 | 211 | | | | | |
| 65. Rajwada | 515 | 409 | 213 | 4 | 6 | 13 | 26 | 4 | 8 | 0 | 45 | 0 | 515 | | | | | |
| 66. Sarai Mubarak | 235 | 153 | 125 | 41 | 5 | 13 | 2 | 3 | 2 | 0 | 16 | 0 | 235 | | | | | |
| Sub-Total | 12,127 | 5,040 | 3,782 | 2,755 | 353 | 932 | 324 | 153 | 533 | 5 | 2,032 | 5 | 12,127 | | | | | |
| Grand-Total | 25,763 | 14,713 | 10,038 | 4,166 | 498 | 1,329 | 636 | 244 | 640 | 73 | 3,464 | 73 | 25,763 | | | | | |

Data Source : Miran Khasra, Rae Bareli & Unnao District THESISIL Concerned

Table.C.14 Village-wise Present Land Use in Sursa Study Area (1/3)

| Sl. No. | Village Name | Geographical Area (ha) | Net Cultivated Area | | Current | | Other | | Barren but Arable Lands (ha) | Forest for Timber Lands (ha) | Permanent Pasture Lands (ha) | Uncultivable Lands (ha) | Forest Lands (ha) | Other Lands (ha) | Total (ha) |
|---|-----------------|------------------------|---------------------|-------------------------|-------------------|-------------------------|-------|----|------------------------------|------------------------------|------------------------------|-------------------------|-------------------|------------------|------------|
| | | | Irrigated Area (ha) | Non-Irrigated Area (ha) | Fallow Lands (ha) | Other Fallow Lands (ha) | | | | | | | | | |
| A. SURSA BLOCK (HARDOI DISTRICT) (1/3) | | | | | | | | | | | | | | | |
| 1 | Achramau | 298 | 188 | 20 | 0 | 0 | 0 | 0 | 10 | 2 | 3 | 0 | 12 | 23 | 258 |
| 2 | Andhara | 693 | 145 | 93 | 233 | 233 | 1 | 1 | 29 | 8 | 0 | 116 | 40 | 28 | 693 |
| 3 | Umrapur | 541 | 131 | 102 | 13 | 13 | 0 | 0 | 43 | 4 | 1 | 54 | 72 | 21 | 441 |
| 4 | Ainchamau | 451 | 154 | 5 | 143 | 143 | 1 | 1 | 60 | 0 | 0 | 61 | 6 | 21 | 451 |
| 5 | Odra Pachlail | 1,062 | 435 | 72 | 191 | 191 | 58 | 58 | 143 | 17 | 6 | 10 | 73 | 57 | 1,062 |
| 6 | Aragapur | 346 | 140 | 97 | 43 | 43 | 0 | 0 | 13 | 1 | 0 | 6 | 9 | 37 | 346 |
| 7 | Kamrauli | 249 | 100 | 71 | 29 | 29 | 0 | 0 | 12 | 1 | 2 | 6 | 45 | 26 | 249 |
| 8 | Tiki | 270 | 136 | 29 | 20 | 20 | 0 | 0 | 20 | 2 | 0 | 3 | 46 | 14 | 270 |
| 9 | Dhinni Tasaara | 378 | 133 | 36 | 91 | 91 | 0 | 0 | 17 | 1 | 0 | 2 | 17 | 38 | 378 |
| 10 | Turipur | 794 | 346 | 62 | 95 | 95 | 0 | 0 | 198 | 1 | 0 | 14 | 36 | 42 | 794 |
| 11 | Tundwal | 706 | 307 | 56 | 124 | 124 | 4 | 4 | 16 | 1 | 17 | 67 | 108 | 62 | 706 |
| 12 | Dahigawan | 219 | 162 | 122 | 28 | 28 | 1 | 1 | 8 | 1 | 4 | 4 | 0 | 11 | 219 |
| 13 | Dalepur | 427 | 161 | 138 | 23 | 78 | 0 | 0 | 18 | 0 | 0 | 103 | 46 | 21 | 427 |
| 14 | Newada | 150 | 96 | 10 | 4 | 4 | 5 | 5 | 34 | 1 | 0 | 0 | 0 | 6 | 156 |
| 17 | Daheti Salkupur | 381 | 181 | 12 | 97 | 97 | 0 | 0 | 54 | 0 | 1 | 22 | 0 | 18 | 385 |
| 18 | Barauwa | 278 | 152 | 65 | 3 | 3 | 0 | 0 | 10 | 4 | 1 | 1 | 9 | 31 | 276 |
| 19 | Baharaiya | 271 | 114 | 63 | 47 | 47 | 4 | 4 | 0 | 1 | 13 | 3 | 13 | 13 | 271 |
| 21 | Bikapur | 634 | 229 | 109 | 75 | 75 | 37 | 37 | 34 | 8 | 4 | 40 | 30 | 67 | 633 |
| 22 | Bausara | 461 | 213 | 162 | 51 | 97 | 0 | 0 | 45 | 0 | 8 | 6 | 44 | 47 | 460 |
| 23 | Bhataura | 138 | 102 | 86 | 16 | 8 | 0 | 0 | 1 | 3 | 0 | 0 | 17 | 7 | 138 |
| 24 | Bhitha | 124 | 32 | 29 | 46 | 46 | 0 | 0 | 4 | 0 | 0 | 4 | 25 | 13 | 124 |
| 25 | Marsa | 907 | 481 | 337 | 49 | 49 | 1 | 1 | 275 | 3 | 0 | 44 | 0 | 54 | 907 |
| 26 | Meoni | 814 | 527 | 472 | 55 | 63 | 0 | 0 | 83 | 7 | 0 | 2 | 28 | 98 | 808 |
| 27 | Matrakalan | 365 | 184 | 153 | 31 | 45 | 0 | 0 | 2 | 3 | 6 | 54 | 47 | 24 | 365 |
| 31 | Sarsaiya | 328 | 203 | 161 | 42 | 23 | 0 | 0 | 12 | 1 | 0 | 10 | 50 | 29 | 328 |
| 32 | Sauntera | 927 | 491 | 432 | 59 | 1 | 0 | 0 | 23 | 7 | 0 | 97 | 132 | 71 | 822 |
| 33 | Hosiapur | 562 | 296 | 228 | 68 | 51 | 9 | 9 | 19 | 2 | 0 | 4 | 128 | 53 | 562 |
| 36 | Dholia | 256 | 198 | 171 | 20 | 20 | 0 | 0 | 14 | 3 | 0 | 0 | 0 | 21 | 256 |
| 37 | Deoria | 128 | 102 | 76 | 8 | 8 | 8 | 8 | 3 | 1 | 0 | 0 | 0 | 6 | 128 |
| 38 | Naramau | 37 | 25 | 10 | 15 | 4 | 0 | 0 | 3 | 0 | 5 | 0 | 0 | 0 | 37 |
| 39 | Faridapur | 110 | 88 | 76 | 12 | 1 | 3 | 3 | 1 | 3 | 0 | 0 | 0 | 14 | 110 |
| 40 | Asauli | 381 | 329 | 242 | 87 | 26 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 24 | 381 |

Data Source : Miran Khasara, Hardoi District THE SIL Concerned

Table.C.14 Village-wise Present Land Use in Sursa Study Area (2/3)

| Sl. No. | Village Name | Geographical Area (ha) | Total Area (ha) | | Net Cultivated Area | | Current Fallow Lands (ha) | | Other Arable Lands (ha) | | Barren but Arable Lands (ha) | | Forest for Timber Lands (ha) | | Permanent Pasture Lands (ha) | | Usar/Uncultivable Lands (ha) | | Forest Lands (ha) | | Other Lands (ha) | | Total (ha) | |
|--|------------------|------------------------|-----------------|-------|---------------------|------|---------------------------|------|-------------------------|------|------------------------------|------|------------------------------|------|------------------------------|------|------------------------------|------|-------------------|------|------------------|------|------------|-------|
| | | | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | Area (ha) | (ha) | | |
| A. SURSA BLOCK (HARDOI DISTRICT) (2/3) | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Odranewaliya | 470 | 379 | 326 | 53 | 18 | 5 | 9 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 470 |
| 42 | Kasrajan | 682 | 473 | 319 | 154 | 44 | 2 | 20 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 602 |
| 43 | Khajurahara | 2,132 | 1,647 | 1,313 | 334 | 217 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,132 |
| 44 | Jura | 708 | 442 | 343 | 99 | 118 | 12 | 33 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 708 |
| 45 | Bhadiacha | 863 | 656 | 469 | 187 | 91 | 15 | 14 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 863 |
| 46 | Malihamau | 753 | 96 | 83 | 13 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 753 |
| 47 | Madhopur | 180 | 156 | 122 | 34 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 180 |
| 48 | Sursa | 257 | 195 | 183 | 12 | 5 | 2 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 257 |
| 49 | Akhnapur | 135 | 104 | 68 | 36 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 |
| 50 | Kauthalia | 168 | 125 | 101 | 24 | 23 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 167 |
| 51 | Gurra | 27 | 26 | 16 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 52 | Ghamoiya | 65 | 31 | 14 | 17 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| 53 | Peng | 368 | 274 | 170 | 104 | 45 | 1 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 368 |
| 54 | Marhia | 48 | 30 | 24 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
| 55 | Shabuddinpur | 646 | 414 | 280 | 134 | 135 | 0 | 43 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 646 |
| 56 | Sarra | 590 | 384 | 343 | 41 | 121 | 4 | 32 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 590 |
| 57 | Sathra | 518 | 405 | 296 | 109 | 37 | 0 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 518 |
| 58 | Sikandarpur | 165 | 109 | 88 | 21 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 165 |
| 59 | Kehtamau | 150 | 117 | 81 | 36 | 9 | 0 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |
| 61 | Gangapur | 333 | 206 | 100 | 106 | 19 | 25 | 51 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 333 |
| 62 | Ghosar | 279 | 195 | 101 | 94 | 19 | 12 | 22 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 279 |
| 63 | Pachkohra | 331 | 267 | 201 | 66 | 10 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 331 |
| 64 | Bannapur | 683 | 397 | 245 | 152 | 121 | 0 | 20 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 683 |
| 65 | Baholi | 195 | 121 | 77 | 44 | 27 | 0 | 30 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 195 |
| 66 | Bhawanipur | 133 | 110 | 76 | 34 | 13 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 |
| 67 | Bhilawan | 324 | 199 | 133 | 66 | 63 | 2 | 16 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 324 |
| 68 | Bhainamau | 430 | 357 | 280 | 77 | 13 | 0 | 22 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 430 |
| 69 | Mehuna Maheshpur | 274 | 232 | 166 | 66 | 4 | 6 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 274 |
| 70 | Lajpur | 576 | 450 | 331 | 119 | 23 | 7 | 9 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 576 |
| 71 | Sehrama | 44 | 39 | 24 | 15 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| 72 | Saraya | 150 | 122 | 95 | 27 | 7 | 2 | 3 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |
| 73 | Singhwama | 340 | 291 | 220 | 71 | 8 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 340 |
| 74 | Sohniya | 853 | 494 | 402 | 92 | 65 | 6 | 196 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 850 |
| 75 | Harha | 217 | 153 | 104 | 49 | 28 | 0 | 2 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 217 |
| 76 | Hathai | 157 | 130 | 92 | 38 | 9 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 157 |
| 77 | Manwa | 269 | 192 | 126 | 66 | 30 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 268 |
| 78 | Abdulpur | 168 | 122 | 61 | 61 | 16 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 168 |

Data Source : Miran Khasara, Hardoi District THE SIL Concerned

Table.C.14 Village-wise Present Land Use in Sursa Study Area (3/3)

| Sl. No. | Village Name | Geographical Area (ha) | Total Area (ha) | | Net Cultivated Area (ha) | | Current Fallow Lands (ha) | Other Fallow Lands (ha) | Barren but Arable Lands (ha) | Forest for Timber Lands (ha) | Permanent Pasture Lands (ha) | Usar/Uncultivable Lands (ha) | Forest Lands (ha) | Other Lands (ha) | Total (ha) |
|---|--------------|------------------------|-----------------|-----------|--------------------------|-------------------------|---------------------------|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------|------------------|------------|
| | | | Area (ha) | Area (ha) | Irrigated Area (ha) | Non-Irrigated Area (ha) | | | | | | | | | |
| A. SURSA BLOCK (HARDOI DISTRICT) (3/3) | | | | | | | | | | | | | | | |
| 79 | Tashkhera | 123 | 93 | 71 | 22 | 6 | 0 | 17 | 1 | 1 | 0 | 0 | 0 | 6 | 123 |
| 80 | Barbatapur | 48 | 35 | 32 | 3 | 5 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 5 | 48 |
| 81 | Rajeapur | 131 | 83 | 64 | 19 | 26 | 0 | 9 | 1 | 1 | 3 | 0 | 0 | 9 | 131 |
| 83 | Kairmair | 177 | 117 | 47 | 70 | 17 | 0 | 6 | 6 | 0 | 0 | 2 | 21 | 12 | 175 |
| | Sub-Total | 28,846 | 17,824 | 13,484 | 4,340 | 3,278 | 239 | 1,964 | 205 | 130 | 805 | 1,309 | 2,170 | 27,924 | |
| B. AHLOLI BLOCK (HARDOI DISTRICT) | | | | | | | | | | | | | | | |
| 18. | Karahi | 275 | 228 | 181 | 42 | 10 | 1 | 3 | 3 | 3 | 3 | 0 | 2 | 30 | 280 |
| 20. | Khajurmai | 329 | 25 | 179 | 80 | 9 | 5 | 4 | 6 | 2 | 2 | 0 | 1 | 39 | 91 |
| 34. | Jarera | 47 | 36 | 18 | 18 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 47 |
| 37. | Dannandi | 132 | 91 | 64 | 27 | 17 | 6 | 7 | 1 | 0 | 0 | 4 | 0 | 6 | 132 |
| 50. | Punniyan | 315 | 223 | 200 | 23 | 26 | 0 | 8 | 0 | 16 | 1 | 1 | 5 | 36 | 315 |
| 51. | Faridapur | 802 | 577 | 382 | 195 | 53 | 8 | 107 | 6 | 1 | 1 | 0 | 0 | 45 | 797 |
| 60. | Wallipur | 760 | 666 | 404 | 262 | 30 | 8 | 7 | 1 | 0 | 0 | 1 | 0 | 44 | 757 |
| 61. | Pipona | 354 | 277 | 178 | 99 | 15 | 3 | 27 | 1 | 0 | 0 | 2 | 1 | 28 | 354 |
| 62. | Vaishpur | 59 | 46 | 36 | 10 | 5 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 5 | 59 |
| 63. | Daudpur | 125 | 86 | 50 | 36 | 23 | 0 | 2 | 1 | 0 | 0 | 4 | 0 | 9 | 125 |
| 65. | Bamhna Khera | 110 | 79 | 51 | 28 | 7 | 1 | 8 | 1 | 0 | 0 | 0 | 0 | 13 | 109 |
| 74. | Anuwan | 115 | 97 | 86 | 11 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 115 |
| | Sub-Total | 3,423 | 2,431 | 1,829 | 831 | 204 | 34 | 176 | 22 | 22 | 22 | 12 | 9 | 271 | 3,181 |
| | Grand-Total | 32,269 | 20,255 | 15,313 | 5,171 | 3,482 | 273 | 2,140 | 227 | 152 | 817 | 1,318 | 2,441 | 31,105 | |

Data Source : Miran Khasara, Hardoi District THESSIL Concerned

Table.C.15 Village-wise Present Land Use in Purwa Study Area (1/3)

| Sl. No. | Village Name | Geographical Area (ha) | | Net Cultivated Area (ha) | | Current Fallow Lands (ha) | Other Fallow Lands (ha) | Barren but Arable Lands (ha) | Forest for Timber Lands (ha) | | Permanent Pasture Lands (ha) | Usar/Un-cultivable Lands (ha) | Forest Lands (ha) | Other Lands (ha) | Total (ha) |
|--|-------------------|------------------------|---------------------|--------------------------|-------------------------|---------------------------|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|-------------------|------------------|------------|
| | | Total Area (ha) | Irrigated Area (ha) | Total Area (ha) | Non-Irrigated Area (ha) | | | | Forest for Timber Lands (ha) | Forest for Timber Lands (ha) | | | | | |
| A. PURWA BLOCK (UNNAO DISTRICT) (1/3) | | | | | | | | | | | | | | | |
| 1 | Beval Mansa Khera | 308 | 155 | 147 | 8 | 93 | 0 | 7 | 0 | 0 | 0 | 51 | 0 | 2 | 308 |
| 2 | Bhatmau | 230 | 168 | 161 | | 22 | 6 | 3 | 4 | 0 | 0 | 8 | 0 | 19 | 230 |
| 3 | Chamiyani | 1,075 | 825 | 589 | 236 | 35 | 20 | 41 | 50 | 0 | 0 | 27 | 0 | 77 | 1,075 |
| 4 | Garha Kola | 171 | 144 | 129 | 15 | 0 | 3 | 5 | 0 | 0 | 0 | 7 | 0 | 12 | 171 |
| 5 | Jajampur | 96 | 73 | 56 | 17 | 5 | 6 | 4 | 2 | 0 | 0 | 1 | 0 | 5 | 96 |
| 6 | Kishan Khera | 151 | 119 | 118 | 1 | 8 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 20 | 151 |
| 7 | Lakshmade Mau | 328 | 238 | 235 | 3 | 30 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 55 | 328 |
| 8 | Mahra Man | 289 | 178 | 175 | 3 | 37 | 41 | 2 | 0 | 0 | 0 | 0 | 0 | 31 | 289 |
| 9 | Majgawan Sewak | 113 | 79 | 52 | 27 | 13 | 1 | 1 | 1 | 0 | 0 | 7 | 0 | 11 | 113 |
| 10 | Muraita | 246 | 162 | 143 | 19 | 22 | 15 | 16 | 1 | 0 | 0 | 0 | 0 | 30 | 246 |
| 11 | Rasapur | 128 | 111 | 59 | 52 | 3 | 0 | 2 | 0 | 0 | 0 | 8 | 0 | 4 | 128 |
| 12 | Sijnisohra mau | 262 | 151 | 114 | 37 | 32 | 11 | 22 | 4 | 0 | 0 | 0 | 0 | 42 | 262 |
| 13 | Tewaria | 150 | 96 | 95 | 1 | 32 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 16 | 150 |
| 14 | Saletu | 345 | 282 | 254 | 28 | 21 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 36 | 345 |
| 16 | Barwat | 163 | 105 | 68 | 37 | | 6 | | 1 | 0 | 0 | 9 | 0 | 8 | 163 |
| 35 | Achal Khera | 145 | 104 | 100 | 4 | 26 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 8 | 145 |
| 36 | seer Sahab Lal | 11 | 10 | 10 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 3 | 11 |
| 37 | Ahmadabad Grunt | 78 | 70 | 58 | 12 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 8 | 78 |
| 38 | Atwa | 55 | 40 | 36 | 4 | 2 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 8 | 55 |
| 39 | Badley Khera | 190 | 130 | 130 | 0 | 0 | 2 | 0 | 8 | 0 | 0 | 26 | 14 | 10 | 190 |
| 40 | Banigaon | 754 | 547 | 509 | 38 | 74 | 0 | 38 | 0 | 0 | 0 | 48 | 0 | 47 | 754 |
| 41 | Bhadnang | 575 | 299 | 285 | 14 | 131 | 0 | 48 | 0 | 8 | 8 | 40 | 0 | 49 | 575 |
| 42 | Bishun Khera | 362 | 259 | 258 | 1 | 3 | 35 | 27 | 0 | 0 | 0 | 25 | 0 | 13 | 362 |
| 43 | Chak Jamalpur | 104 | 103 | 0 | 26 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 108 |
| 44 | Dhiji Khera | 93 | 76 | 56 | 20 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 9 | 93 |
| 46 | Fategarj | 160 | 88 | 67 | 21 | 52 | 0 | 2 | 6 | 1 | 1 | 1 | 0 | 10 | 160 |
| 48 | Cangdaspur | 100 | 65 | 58 | 7 | | 0 | | 0 | 0 | 1 | 6 | | 10 | 100 |
| 49 | Himmatpur Khera | 185 | 139 | 113 | 26 | | 1 | | 0 | 0 | 0 | 0 | | 64 | 185 |
| 50 | Kasrao | 556 | 245 | 235 | 10 | 147 | 3 | 76 | 4 | 0 | 0 | 17 | 0 | 0 | 556 |
| 53 | Newada | 171 | 135 | 95 | 40 | | 0 | | 0 | 0 | 0 | 15 | | 0 | 171 |
| 54 | Kasba Pachhim | 418 | 257 | 211 | 46 | 16 | 12 | 3 | 25 | 0 | 0 | 7 | 0 | 98 | 418 |
| 55 | Pati Sukhmandan | 109 | 65 | 62 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 5 | 0 | 32 | 109 |
| 56 | Kasba Ramahimmat | 458 | 257 | 229 | 28 | | 67 | 14 | 2 | 18 | 0 | 0 | 0 | 100 | 458 |
| 57 | Kasba Bhawanipur | 362 | 219 | 209 | 10 | 66 | 29 | 10 | 0 | 1 | 17 | 0 | 0 | 20 | 362 |
| 58 | Chardi garhi | 127 | 74 | 70 | 4 | 15 | 3 | 11 | 0 | 0 | 0 | 21 | 0 | 3 | 127 |
| 60 | Kalyanpur | 59 | 28 | 28 | 0 | 14 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 59 |

Data Source : Miran Khasra, Unnao & Rae Bareilly District THESSIL Concerned

Table.C.15 Village-wise Present Land Use in Purwa Study Area (2/3)

| Sl. No. | Village Name | Geographical Area | | Net Cultivated Area | | Current | | Other | | Barren out | | Forest for | | Permanent | | Usar/Unculti- | | Forest | | Other | | Total |
|---------------------------------------|------------------|-------------------|-----------|---------------------|---------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|--------------------|-----------------|-------------------------|-------------------|------------------|-------------------|------------------|-------|-------|
| | | Area (ha) | Area (ha) | Total Area (ha) | Irrigated Area (ha) | Non-Irrigated Area (ha) | Fallow Lands (ha) | Arable Lands (ha) | Fallow Lands (ha) | Arable Lands (ha) | Timber Lands (ha) | Pasture Lands (ha) | Timber Lands (ha) | Pasture Lands (ha) | Usar Lands (ha) | Uncultivable Lands (ha) | Forest Lands (ha) | Other Lands (ha) | Forest Lands (ha) | Other Lands (ha) | | |
| A. PURWA BLOCK (UNNAO DISTRICT) (2/3) | | | | | | | | | | | | | | | | | | | | | | |
| 61 | Bharthi Garhi | 57 | 29 | 28 | 1 | 12 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 1 | 57 | |
| 62 | Seer Kaaley Khan | 21 | 18 | 18 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 21 | |
| 63 | Ranuamapur | 358 | 188 | 178 | 10 | 90 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 2 | 2 | 6 | 142 | |
| 64 | Simi Mau | 142 | 40 | 10 | 30 | 16 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 142 | |
| 65 | Suee Khara | 194 | 97 | 81 | 16 | 6 | 37 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 307 | |
| 66 | Tikar Kalan | 307 | 213 | 212 | 1 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 9 | 206 | |
| 67 | Tikar Khurd | 206 | 137 | 127 | 10 | 9 | 7 | 170 | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 263 | 1,059 | |
| 68 | Tripurapur | 1,059 | 534 | 501 | 33 | 2 | 2 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 221 | |
| 69 | Tusroar | 221 | 173 | 148 | 25 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 39 | |
| 70 | Bachholia | 39 | 27 | 19 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 291 | |
| 72 | Asehru | 291 | 227 | 209 | 18 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 488 | |
| 75 | Bhopatpuk | 491 | 313 | 184 | 129 | 111 | 0 | 5 | 10 | 1 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | |
| 76 | Shanker Chak | 16 | 11 | 9 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | |
| 77 | Basnoha | 135 | 105 | 68 | 37 | 4 | 3 | 3 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 12 | 135 | |
| 78 | Chinulamau | 169 | 106 | 80 | 26 | 0 | 2 | 5 | 9 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 169 | |
| 79 | Dela | 82 | 64 | 51 | 13 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 82 | |
| 81 | Asgarganj | 49 | 19 | 17 | 2 | 11 | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 5 | 49 | |
| 82 | Mohiuddampur | 471 | 251 | 164 | 87 | 39 | 30 | 7 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 114 | 471 | |
| 83 | Bhatamau | 105 | 61 | 54 | 7 | 33 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 105 | |
| 84 | Bhatuli | 177 | 99 | 76 | 23 | 32 | 18 | 6 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 16 | 177 | |
| 85 | Chandrasena | 144 | 103 | 80 | 23 | 1 | 6 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 23 | 144 | |
| 86 | Darehata | 372 | 182 | 171 | 11 | 75 | 6 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 51 | 372 | |
| 87 | Himmatpur | 85 | 54 | 31 | 23 | 21 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 85 | |
| 88 | Kodra | 284 | 151 | 93 | 58 | 27 | 17 | 5 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78 | 284 | |
| 89 | Muraita | 237 | 144 | 98 | 46 | 32 | 16 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 27 | 237 | |
| 90 | Naya Gaon | 150 | 106 | 72 | 34 | 29 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 9 | 150 | |
| 91 | Pinjra | 334 | 186 | 113 | 73 | 71 | 5 | 6 | 7 | 1 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 334 | |
| 92 | Topra | 248 | 162 | 159 | 3 | 48 | 2 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 15 | 248 | |
| 93 | Jampur | 260 | 207 | 96 | 111 | 7 | 7 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 21 | 260 | |
| 94 | Bajuzamau | 176 | 145 | 122 | 23 | 1 | 7 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 176 | |
| 95 | Ghinakhara | 123 | 80 | 60 | 20 | 30 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 123 | |
| 96 | Mannreipur | 454 | 320 | 308 | 12 | 16 | 58 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 30 | 454 | |
| 97 | Pakra Buzurg | 458 | 326 | 300 | 26 | 24 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 458 | |
| 98 | Panhan | 92 | 73 | 69 | 4 | 1 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 8 | 92 | |
| 99 | Purandarapur | 198 | 117 | 76 | 41 | 56 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 23 | 198 | |
| 100 | Raghunatipur | 146 | 107 | 98 | 9 | 3 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 146 | |

Data Source : Miran Khasra, Unnao & Rae Bareilly District THE SIL Concerned

Table.C.15 Village-wise Present Land Use in Purwa Study Area (3/3)

| Sl. No. | Village Name | Geographical Area (ha) | | Net Cultivated Area | | Current Fallow Lands (ha) | | Other Barren but Arable Lands (ha) | | Forest for Timber Lands (ha) | | Permanent Pasture Lands (ha) | | Usar/Uncultivable Lands (ha) | | Forest Lands (ha) | | Other Lands (ha) | | Total (ha) |
|--|------------------|------------------------|------------|---------------------|-------------------------|---------------------------|-------------------------|------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------|------------------------------|-------|-------------------|---|------------------|-----|------------|
| | | Area (ha) | Total (ha) | Irrigated Area (ha) | Non-Irrigated Area (ha) | Fallow Lands (ha) | Other Fallow Lands (ha) | Barren but Arable Lands (ha) | Forest for Timber Lands (ha) | Permanent Pasture Lands (ha) | Usar/Uncultivable Lands (ha) | Forest Lands (ha) | Other Lands (ha) | | | | | | | |
| A. PURWA BLOCK (UNNAO DISTRICT) (3/3) | | | | | | | | | | | | | | | | | | | | |
| | 101 Ram Khera | 66 | 49 | 40 | 9 | 9 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 66 |
| | 102 Rawatpur | 145 | 112 | 101 | 11 | 4 | 14 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 145 |
| | 103 Turkaha | 118 | 88 | 41 | 47 | 2 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 118 |
| | 104 Afsari | 151 | 131 | 72 | 59 | 0 | 2 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 13 | 151 |
| | 105 Adhauji | 173 | 121 | 48 | 73 | 17 | 2 | 15 | 15 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 12 | 173 |
| | 109 Kathar | 145 | 116 | 73 | 43 | 14 | 2 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 145 |
| | Sub-Total | 18,276 | 11,888 | 9,769 | 2,095 | 1,954 | 653 | 859 | 289 | 54 | 17 | 1,963 | 595 | 17 | 1,963 | 18,272 | | | | |
| B. SUMELPUR BLOCK (UNNAO DISTRICT) | | | | | | | | | | | | | | | | | | | | |
| | 4 Khjauli | 216 | 142 | 121 | 21 | 0 | 44 | 13 | 13 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 16 | 216 |
| | 7 Pakra Khurd | 451 | 311 | 305 | 6 | 59 | 3 | 22 | 22 | 0 | 0 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 41 | 451 |
| | 8 Saraiyan | 149 | 84 | 77 | 7 | 8 | 2 | 11 | 11 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 41 | 149 |
| | Sub-Total | 816 | 537 | 503 | 34 | 67 | 49 | 46 | 46 | 0 | 0 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 98 | 816 |
| C. HILAULI BLOCK (UNNAO DISTRICT) | | | | | | | | | | | | | | | | | | | | |
| | 15 Jera | 518 | 271 | 181 | 90 | 108 | 25 | 0 | 0 | 9 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 61 | 518 |
| | 28 Patewala Dasi | 204 | 133 | 108 | 25 | 12 | 11 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 38 | 204 |
| | Sub-Total | 722 | 404 | 289 | 115 | 120 | 36 | 0 | 0 | 11 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 99 | 722 |
| D. KHEERO BLOCK (RAEBARELI DISTRICT) | | | | | | | | | | | | | | | | | | | | |
| | 7 Aindhi | 384 | 244 | 132 | 112 | 58 | 3 | 4 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 384 |
| | 32 Jari | 407 | 258 | 177 | 81 | 80 | 0 | 6 | 6 | 16 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 32 | 407 |
| | 79 Sheopuri | 223 | 161 | 88 | 73 | 16 | 0 | 8 | 8 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 32 | 223 |
| | Sub-Total | 1,014 | 663 | 397 | 266 | 154 | 3 | 18 | 18 | 27 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 134 | 1,014 |
| | Grand-Total | 20,828 | 13,492 | 10,958 | 2,450 | 2,295 | 741 | 923 | 327 | 66 | 17 | 2,294 | 669 | 17 | 2,294 | 20,824 | | | | |

Data Source : Miran Khasara, Unnao & Rae Bareli District THESSIL Concerned

Table.C.16 Land Capability Classification

| Soil Map Unit No. | Soil series | Land Capability Classes | Description | Area ha | % |
|------------------------|--|-------------------------|--|---------|-------|
| 2 3 4 6 16 | GANGAULI TANDA AMETHI KAKARI MERAURA | 1 | 2, 3, and 4 are located in Upland, while 6, and 16 are located in Midland. The land has good drainability and the soil strata have good permeability. Nearly no limitation factor is present in the soil. Land is capable of yielding good harvest. | 32,654 | 29.1 |
| 1 | LAKHPERA | 2-1 | 1 is located in Upland. The land has good drainability and the soil strata have good permeability. The soil is sensitive to drought and is low in fertility. Yield of harvest is somewhat limited. Irrigation is needed. | 1,138 | 1.0 |
| 9 10 | SAIDAPUR GARHI | 2-2 | 9, and 10 are located in Midupland. Drainability of the land is moderately good. Permeability of soil strata is somewhat moderate. Ground water level may rise from time to time, thus making the land wetness. Yield of harvest is somewhat limited. Drainage is needed. | 26,806 | 23.8 |
| 11 12 | HASANPUR UTELWA | 3-3 | 11, and 12 are located in Midland. Drainability of the land is poor. Permeability of soil strata is also slow. Ground water level rises frequently to sub-surface soil, thus making the land wetness. Yield of harvest is severely impaired. Strong alkalinity of lower strata may tend to make reaction of fertilizers ineffective. Plant growth is irregular. | 9,162 | 8.2 |
| 14 15 | GOSHAINGANJ UTTARGAON | 3-2 | 14, and 15 are located in Lowland. Drainability of the land is extremely poor. Permeability of soil strata is very slow. Ground surface is wetness and frequently flooded. Cultivation is severely limited. Crushability of soil is poor and sprouting may be irregular. Plant growth may be irregular also. Draining needs to be intensified. | 7,143 | 6.3 |
| 7 8 | TAMORIA SITAU LI | 4-1 | 7, and 8 are located in mid Upland. While drainability of the land is moderate, permeability of soil strata is moderately slow. Ground surface is strongly to very strongly alkaline. During rabi season concentration of saline may be present in ground surface. Lower soil strata are wetness and yield of harvest is extremely limited. About half of the area is used as paddy, while another half is left unutilized. | 16,648 | 14.8 |
| 13 | POKHARA | 4-2 | 13 is located in mid Lowland. Drainability of the land is poor. Permeability of soil strata is slow. Ground surface is strongly-very strongly alkaline. During rabi season concentration of saline may be present in ground surface. Soil strata are wetness up to the stratum near ground surface. Yield of harvest is extremely limited. Most of the area is left unutilized. Rate of cultivation is very low. | 6,683 | 6.0 |
| miscellaneous | | | | 12,115 | 10.8 |
| Total | | | | 112,349 | 100.0 |

Table.C.17 Land Capability Classes and Suggestions for Management (1/3)

| Land Capability Classes | Soil Map Unit No. | Soil series | Problems of soils | Suggestions for management |
|-------------------------|-------------------|-------------|---|---|
| 1 | 2 | GANGAULI | (1) Gentle or irregular sloping may cause irrigation to be irregular. | (1) Modification of cultivated land surface irregularities and construction of ridges. |
| | 3 | TANDA | (2) Surface soil is poor in humus content. | (2) Spreading of rice hulls or bulky organic manures to maintain soil fertility and to improve and maintain physical properties of soil such as water holding capacity. |
| | 4 | AMETHI | | (3) TANDA soil series: Spreading of alkalinity neutralizing material based on the results of soil test. |
| | 6 | KAKARI | | |
| | 16 | MERAURA | | |
| 2-1 | 1 | LAKHPERA | (1) Gentle or irregular sloping may cause irrigation to be irregular. Irrigation is imperative. | (1) Modification of cultivated land surface irregularities and construction of ridges. Full irrigation of surface soil and underlying soil stratum. |
| | | | (2) Surface soil is poor in humus content. | (2) Aggressive efforts are needed to improve chemical and physical properties of soil by spreading rice hulls or bulky organic manures. |
| 2-2 | 9 | SAIDAPUR | (1) The land becomes wet by the rise of ground water level during kharif season. | (1) Excessive wetness during kharif season tends to impair functions of plant roots and causes irregular plant growth. Intensified drainage should be effective. |
| | 10 | GARHI | (2) Surface soil is poor in humus content. | Rainfall during kharif season contributes to enhance soil leaching and prevents soil capability deterioration. |
| 3-1 | 11 | HASANPUR | (1) Ground water level rises during kharif season to make soil wet up to 60cm depth. | (2) Spreading of rice hulls or bulky organic manures to improve chemical and physical properties of soil. |
| | 12 | UTELWA | (2) Surface soil is poor in humus content. | (1) Reasonably satisfactory effects of drainage may be expected. Precipitation during kharif season contributes to accelerate soil reaching. |
| | | | | (2) For addition of organic manures, refer to the above. |

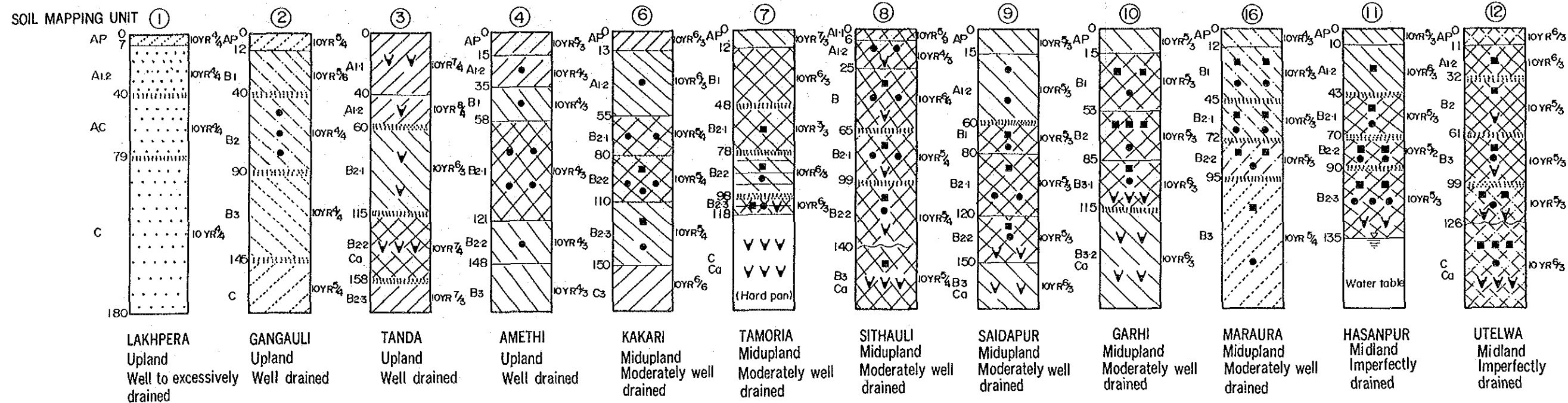
Table.C.17 Land Capability Classes and Suggestions for Management (2/3)

| Land Capability Classes | Soil Map Unit No. | Soil series | Problems of soils | Suggestions for management |
|-------------------------|-------------------|---------------------------|--|---|
| 3-2 | 14 15 | GOSHAINGANJ UTTARGAOAN | (1) The land is very wet and drainage is poor. Even during rabi season, the land remains very wet underneath 40 - 50cm depth. (2) Soil texture is very fine and soil crushability is poor. | (1) During kharif season, most of the land is utilized as paddy as the land is very wet up to ground surface. Plant growth is irregular and rate of fructification is low. Open drain system with high drainability or underdrain system which is provided with measures to enhance water permeability and water drainability such as filling of rice hulls or broken bricks is needed. (2) Sprouting of plant seeds is irregular due to poor crushability of soil, thus resulting significant reduction of harvest. Spreading of rice hulls or bulky manures together with machinized tilling is needed. Keeping as deep as possible soil strata dry during rabi season would help. |
| 4-1 | 7 8 | TAMORIA SITAULI | (1) Soil is strongly alkaline. (2) Ground water level rises during kharif season to make soil very wet up to 10 - 50cm depth. Saline may be concentrated in ground surface during rabi season. (3) Surface soil is poor in humus content | (1) Both surface and subsoil are strongly alkaline. Alkalinity neutralizing material must be spread properly on the basis of the results of soil test. In case large quantities of alkalinity neutralizing material have to be spread, it is recommended to divide spreading into spreading one half of the quantities before tilling and the other half after completion of tilling, or spreading over two years. Neutralizing agent must be mixed well with soil. |

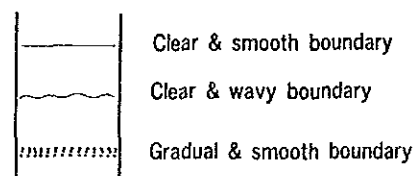
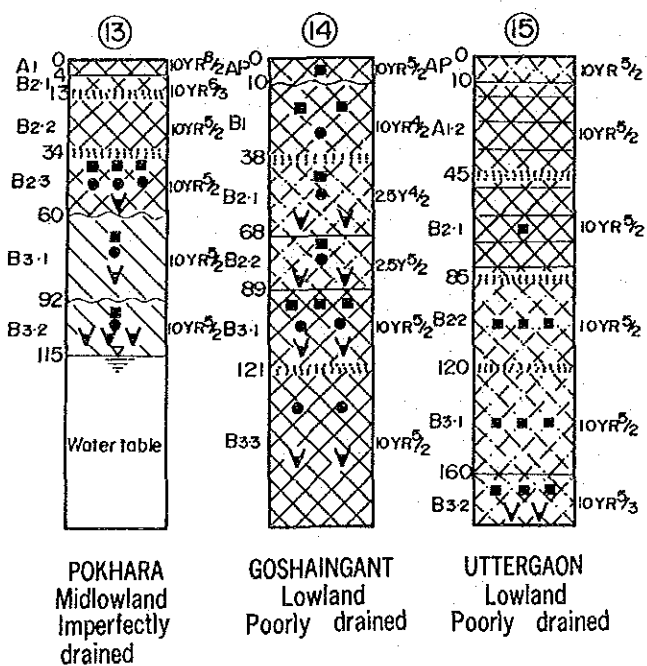
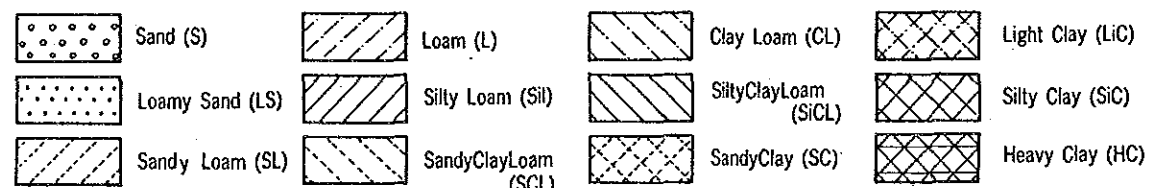
Table.C.17 Land Capability Classes and Suggestions for Management (3/3)

| Land Capability Classes | Soil Map Unit No. | Soil series | Problems of soils | Suggestions for management |
|-------------------------|-------------------|---------------------|--|--|
| 4-1 | 7 8 | TAMORIA SITAUULI | (1) Soil is strongly alkaline. (2) Ground water level rises during kharif season to make soil very wet up to 10 - 50cm depth. Saline may be concentrated in ground surface during rabi season. (3) Surface soil is poor in humus content | (2) Reasonably satisfactory effects of drainage may be expected. Precipitation during kharif season contributes to accelerate soil leaching. Irrigation during rabi season also helps soil leaching. It is imperative to secure irrigation water sufficient for the desalination of soil. (3) Spreading of rice hulls or bulky organic manures must be promoted. Addition of micro-elements to soil, in particular zinc, together with fertilizers is needed. Addition of boron may be needed for a certain type of plants. |
| 4-2 | 13 | POKHARA | (1) Soil is strongly alkaline. (2) Soil strata up to 60cm depth remain very wet all year round. Concentration of saline in ground surface is heaviest during rabi season. (3) Surface soil is poor in humus content. | (1) Both surface and subsoil are strongly alkaline. Alkalinity neutralizing material must be spread properly on the basis of the results of soil test. See above for spreading details. (2) Installation of drainage system is imperative. Additional measures to enhance drainability are also needed. As said above, use of open drainage system or underdrain system must be provided with measures to enhance water permeability. Soil leaching during rabi season is also needed. (3) For addition of organic manures and micro-elements, refer to the above. |

FIGURES



TEXTURE



| S.N. | PARTICULARS | Few | Common | Many |
|------|-------------------------------|-----|---------|-----------------|
| 1 | MOTTLES | ■ | ■ ■ ■ ■ | ■ ■ ■ ■ ■ ■ ■ ■ |
| 2 | FERROMANGANESE CONCRETIONS | ● | ● ● ● ● | ● ● ● ● ● ● ● ● |
| 3 | CALCIUM CARBONATE CONCRETIONS | ∇ | ∇ ∇ ∇ ∇ | ∇ ∇ ∇ ∇ ∇ ∇ ∇ ∇ |

Fig. C.1 Schematic Diagram of Identific Soils

INDIA

FEASIBILITY STUDY ON
IRRIGATION AND DRAINAGE DEVELOPMENT OF
SHARDA CANAL CAD PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

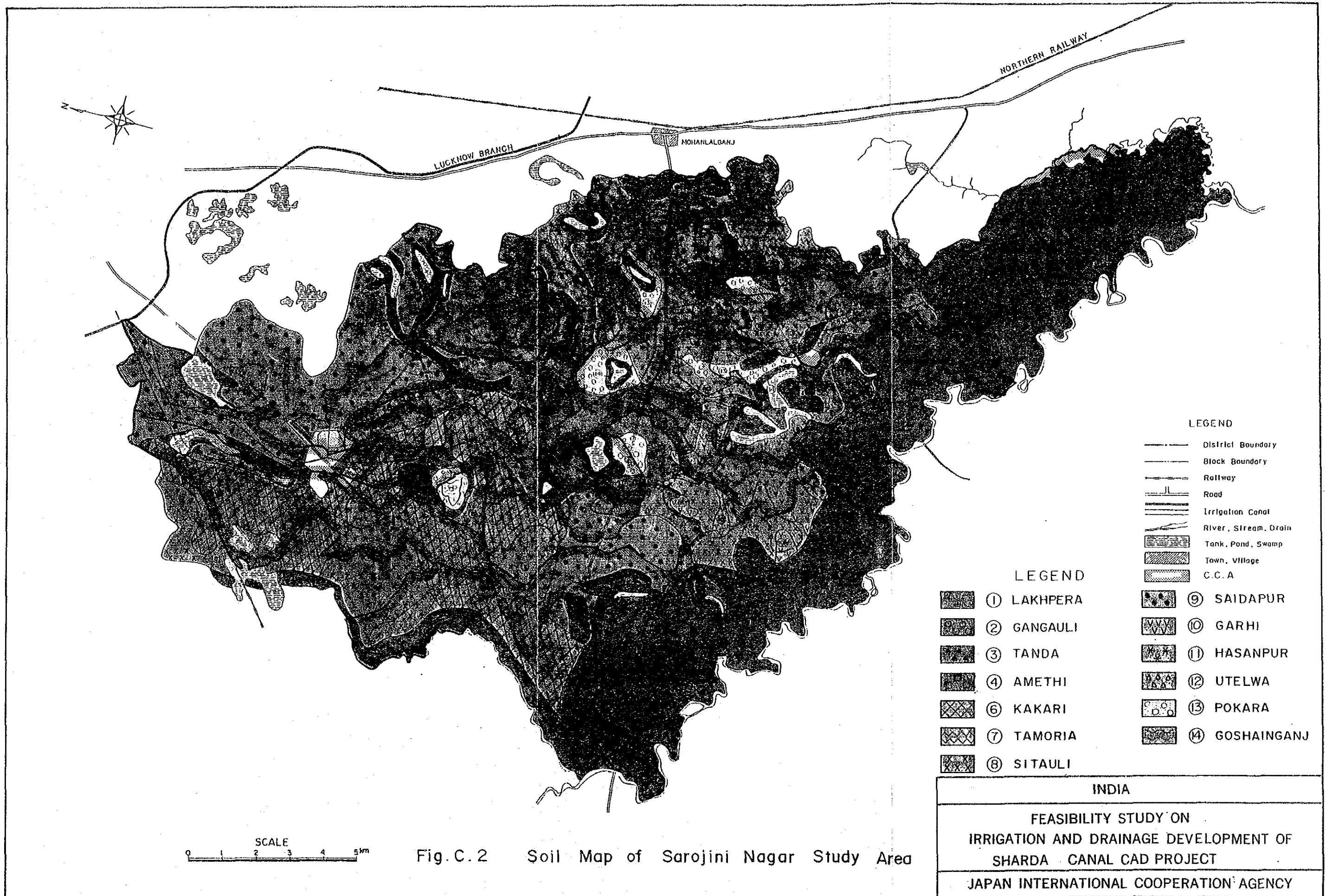


Fig. C.2 Soil Map of Sarojini Nagar Study Area

INDIA

**FEASIBILITY STUDY ON
IRRIGATION AND DRAINAGE DEVELOPMENT OF
SHARDA CANAL CAD PROJECT**

JAPAN INTERNATIONAL COOPERATION AGENCY

| | |
|---|--|
| <p style="text-align: center;">LEGEND</p> <p>① LAKHPERA</p> <p>② GANGAULI</p> <p>③ TANDA</p> <p>④ AMETHI</p> <p>⑥ KAKARI</p> <p>⑦ TAMORIA</p> <p>⑧ SITAULI</p> | <p style="text-align: center;">LEGEND</p> <p>⑨ SAIDAPUR</p> <p>⑩ GARHI</p> <p>⑪ HASANPUR</p> <p>⑫ UTELWA</p> <p>⑬ POKARA</p> <p>⑭ GOSHAINGANJ</p> |
|---|--|

| | |
|---|--|
| <p style="text-align: center;">LEGEND</p> <p>— District Boundary</p> <p>— Block Boundary</p> <p>— Railway</p> <p>— Road</p> <p>— Irrigation Canal</p> <p>— River, Stream, Drain</p> <p>— Tank, Pond, Swamp</p> <p>— Town, Village</p> <p>— C.C.A</p> | |
|---|--|

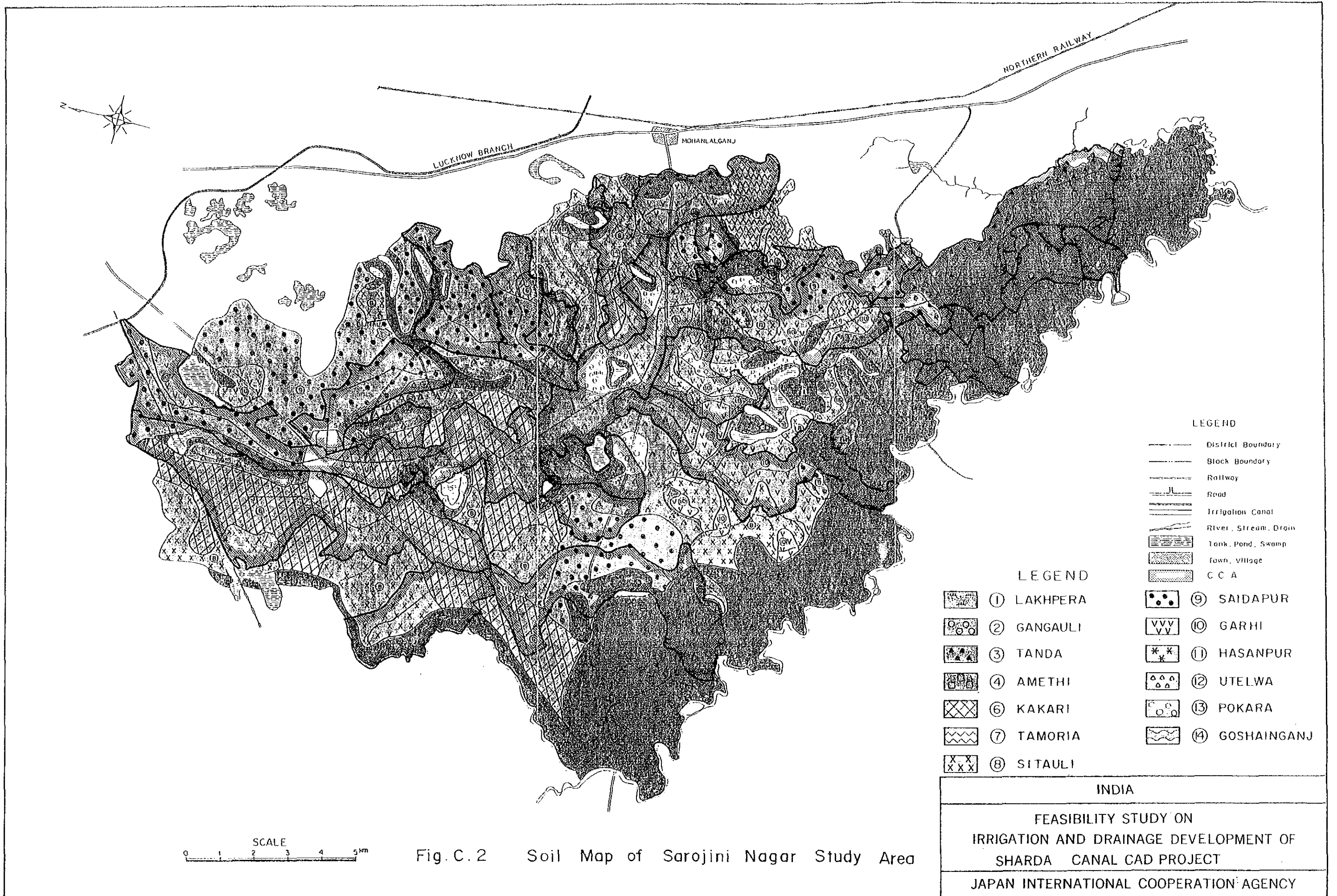


Fig. C. 2 Soil Map of Sarojini Nagar Study Area