

SOIL OF UTTAR PRADESH

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Soils of Uttar Pradesh

Soil is the upper layer of the Earth which is formed by organic matter, clay, rock particles, etc. Soil contains minerals, air, water, organic remains and micro organisms within it.

Classification of Soil

The soil found in Uttar Pradesh is mostly old in nature except the traces found in the river valleys. The soil of the state can be classified into three sub-heads. These are:

1. Soils of Bhabar and Terai Region
2. Soils of Genetic Plains
3. Soils of Southern Plateau

Soils of Bhabar and Terai Region

Soil of Bhabar Region:

The Bhabar is about 8-16 km wide running along the Shivalik foothills. Rivers descending from the Himalayas deposit their load along the foothills in the form of alluvial fans (often pebbly soil). This soil is very shallow. This region isn't suitable for agriculture as the soil of this region is porous (permeable). Only big trees with large roots thrive in this region.

Soil of Terai Region:

This region is running parallel to the South of Bhabar and composed of newer alluvium. It is about 15- 30 km wide. The underground streams of the Bhabar region re-emerge in this belt and make it swampy lowland with silty soils. The soil of Terai region is rich in nitrogen and organic matter but is deficient in phosphate. The soil is generally covered by tall grasses and forest but it is suitable for a number of crops such as wheat, rice, sugarcane, jute, etc. Terai belt is the zone of sand and clay soils.

Soil of Gangetic Plains

The vast Gangetic plains have been developed in Quaternary period and as a result of sedimentary deposition by rivers. In this region alluvial soil is found. Alluvial soil is made of fine particles of silt, clay and larger particles of sand and gravel (Kankar). The chemical composition of the alluvial soil makes this group of soils as one of the most fertile in the world. In the alluvial soil, nitrogen and phosphorus are generally low but

potash, phosphoric acid and alkalis are adequate, while iron oxide and lime vary within a wide range. The alluvial soil is divided into two parts:

Bangar Soil:

It covers the largest part of the plain, found in high plain regions which are free from flood water. It is not very fertile in nature due to calcareous deposits locally known as Kankar and it has a low upland covered by laterite deposits. It is older and matured alluvial soil. It is known by various names loam, clay, sandy loam, bhut, clayey loam, etc. The fertility of this soil has been lost due to continuous use of the soil for agriculture which results in lack of nitrogen and phosphorus.

Khadar Soil:

This soil is found in flood plains region of Uttar Pradesh. It is fine, light brown colour, porous and having capacity of water retention as compared to Bangar soil. It is very suitable for extensive cultivation as the soil is frequently renewed and it does not contain calcareous deposits of calcium. It is made of new alluvium and fine granules (particles). The soil is also known by different names like sandy, sandy silt, loam, clay or clayey loam. Lime, potash, magnesium and organic matter are found in this soil.

Soils of Western, Eastern and Central Ranges of Gangetic Region:

The Gangetic region is also divided into Western, Central and

Eastern ranges. In the Western region the soil is mostly dark grey in colour and loam to sandy loam in nature. Deep and fertile soils are found in the plain areas of this region i.e. Saharanpur, Muzaffarnagar and Meerut districts. Heavy loam soils are found in Eastern parts i.e. Bareilly, Bijnor, Pilibhit and Moradabad. Sandy loam soils are found in the entire central region. Whereas the North-Eastern part (Kheri and Sitapur) has loam or sandy loam soil which are slightly acidic in nature. The Eastern part of the Gangetic plain has three types of soils, Bhat, Bangar and Dhuh. Bhat is rich in lime. Dhuh soil is an inundated soil which is found along the rivers bank. The North- Western part of this region is considered as phosphatic deficient belt. Soils which are found in Jaunpur, Azamgarh and Mau districts are deficient in potash. The dry part of this region have soil which is known as 'usar' and 'reh'. This soil is found in Aligarh, Etah, Etawah, Sitapur, Unnao, Kanpur, Mainipuri, Raibareli and Lucknow districts of Uttar Pradesh.

Soil of Southern Plateau

The Southern Plateau was made up in the Pre-Cambrian period also known as Bundelkhand and Baghelkhand region. The soil found in this region is known as Bundelkhand soil. It lies just South of Ganga and occupies the entire Southern zone of the state.

Soils found in the Southern Plateau region are as follows:

Red soil:

It is formed by weathering of red sandstones rocks. Due to the

presence of iron oxide, the colour of soil is red. The parent materials of the red soil are crystalline and metamorphic rocks like acid granites, gneisses and quartzite. The soil is mainly found in Mirzapur, Southern part of Allahabad, Sonbhadra, Jhansi, Banda, Hamirpur and Chandauli. The soil is found in the water logging area of river Betwa and Dhasan in the form of granite.

Black soil or Regur soil:

It is found in the Western district and Bundelkhand region of Uttar Pradesh. It is clayey in nature. It is generally known as Mar and Kabar. Mar and Kabar soils are calcareous and fertile. As compared to Mar soil, Kabar soil is less water retentive soil. It is found in Mirzapur, Jhansi, and Sonbhadra districts. At some places it is mixed with red soil.

Parwa Soil:

It is light red- brownish colour of sandy loam soil, which is low in organic matter. This soil is also known as Padwa or Paduwa. It is found in Hamirpur, Jalaun and coastal part of river Yamuna especially in ravines. The soil responds well to the proper use of fertilisers and irrigation and gives excellent yields of millet (Kharif) and gram (rabi).

Maar/Maaf Soil:

It is black in colour and largely clayey in nature like black or regur soil but not as fertile. The soil is highly retentive of moisture.

Rakar Soil:

The slopy areas of hilly and plateau regions are covered with this

soil. The soil is divided into deep Rakar and thin Rakar. The fertility of this soil can be increased with the use of fertilisers. Generally, crops like sesame or til (Kharif) and grams (Rabi) are grown in this soil.

Monta Soil:

This soil is found in the form of broken pebbles at the Vindhyan hilly areas. Due to slow process of weathering, these pebbles are converted into fine sand. The colour of this soil is reddish. Generally, cereals are grown in this soil such as millets.