Major soil types in Indian

In India, the Indian Council of Agricultural Research (ICAR) has classified soils into 8 categories. Alluvial Soil, Black Cotton Soil, Red Soil, Laterite Soil, Mountainous or Forest Soils, Arid or Desert Soil, Saline and Alkaline Soil, Peaty, and Marshy Soil are the categories of Indian Soil.

1. Alluvial soil [43%]
2. Red soil [18.5%]
3. Black / regur soil [15%]
4. Arid / desert soil
5. Laterite soil
6. Saline soil
7. Peaty / marshy soil
8. Forest soil
9. Sub-mountain soil
10. Snowfields

**Alluvial soil:**

Mostly available soil in India (about 43%) which covers an area of 143 sq.km. Widespread in northern plains and river valleys. In peninsular-India, they are mostly found in deltas and estuaries. Humus, lime and organic matters are present. Highly fertile. Indus-Ganga-Brahmaputhra plain, Narmada-Tapi plain etc are examples. They are depositional soil – transported and deposited by rivers, streams etc. Sand content decreases from west to east of the country. New alluvium is termed as Khadar and old alluvium is termed as Bhangar.Seen mainly in low rainfall area.

Colour is Light Grey to Ash Grey. Texture usually Sandy to silty loam or clay. Rich in potash and Poor in phosphorous. Wheat, rice, maize, sugarcane, pulses, oilseed etc are cultivated mainly.

**Red soil:**

Also known as Omnibus group. Porous, friable structure. Absence of lime, kankar (impure calcium carbonate). Deficient in: lime, phosphate, manganese, nitrogen, humus and potash. Most of the Deccan is occupied by Black soil.

Colour is Red because of Ferric oxide. The lower layer is reddish yellow or yellow. Texture is Sandy to clay and loamy. Wheat, cotton, pulses, tobacco, oilseeds, potato etc are cultivated.

**Black soil / regur soil:**

Black or dark gray in colour. Sticky and best soil for cotton cultivation.

**Mature soil.**

High water retaining capacity. Swells and will become sticky when wet and shrink when dried. Self-ploughing is a characteristic of the black soil as it develops wide cracks when dried. Rich in Iron, lime, calcium, potassium, aluminum and magnesium and deficient in Nitrogen, Phosphorous and organic matter. Colour is Deep black to light black. Texture Clayey.

**Laterite soil:**

Name from Latin word ‘Later’ which means Brick. Become so soft when wet and so hard when dried. In the areas of high temperature and high rainfall. Formed as a result of high leaching. Lime and silica will be leached away from the soil. Organic matters of the soil will be removed fast by the bacteria as it is high temperature and humus will be taken quickly by the trees and other plants. Thus, humus content is low. Rich in Iron and Aluminum. Deficient in Nitrogen, Potash, Potassium, Lime, Humus. Colour is Red colour due to iron oxide. Rice, Ragi, Sugarcane and Cashew nuts are cultivated mainly.

**Desert / arid soil:**

Seen under Arid and Semi-Arid conditions. Deposited mainly by wind activities. High salt content. Lack of moisture and Humus. Kankar or Impure Calcium carbonate content is high which restricts the infiltration of water. Nitrogen is insufficient and Phosphate is normal. Texture is Sandy. Colour ranges from Red to Brown.

**Peaty / marshy soil:**

Areas of heavy rainfall and high humidity. Growth of vegetation is very less. A large quantity of dead organic matter/humus which makes the soil alkaline. Heavy soil with black colour.

**Forest soil:**

Regions of high rainfall. Humus content is less and thus the soil is acidic.

**Sub Mountain soil:**

In the mountain regions of the country. Immature soil with low humus and acidic.

**Snowfields:**

These are the land masses or soil which are usually remain buried under snow for most of the year. Soil is not suitable for any major type of vegetation.