

WHAT ARE THE MAJOR SOIL GROUPS OF THE WORLD?

The zonal soils are subdivided into the following types on the basis of climatic zones.

(a) Soils of the humid tropics

The humid tropical regions of the world are found close to the equator, where the average temperature is 25°C with little seasonal variation and a rainfall of over 2000 mm each year.

These climatic conditions favour the formation of laterites, which are the common tropical soils. These are the leached, hard, concentrated horizons of iron and aluminium oxides and are used in making bricks.

(b) Soils of humid temperate regions

In middle latitudes, leaching is the dominant soil-forming process. Two main groups of soils occur in this climatic zones, as Podzols and Brown earths.

Podzols are the dominant soils of the zone between 50° North and the Arctic circle. They develop under conditions of a cold winter and an adequate precipitation spread throughout the year.

They are found mainly in the northern coniferous forest belt and on infertile, sandy and gravelly areas in warmer climates. In this zone precipitation ranges between 500 to 1000 mm and evaporation is low, which encourages leaching.

The leaching process carries iron and aluminium compounds out of the surface horizons and makes them rich in silica.

Brown earth's are mostly found in the deciduous forests, where the winter is shorter and rainfall is more evenly distributed throughout the year. Here leaching is less intense and the soils are more fertile than podzols.

(c) Soils of seasonally wet regions

These regions include three groups

(i) Areas

With wet winters i.e. Mediterranean type regions which are characterized by cyclonic winter rain causing leaching. Cinnamon soils are the examples.

(ii) Tropical areas with wet summer, where there is maximum rainfall in the summer. Ferruginous soils are well-developed in such regions.

(ii) Temperate areas with wet summer which occur in the semi-arid middle-latitude steppe lands of North America and Asia. These regions have a low rainfall (mostly in summer) and cold winters.

Chestnut brown soils are the most characteristic soils of this climatic region. Chernozems are the important soils developed in the south-central parts of USSR. Such soils are extremely fertile.

(d) Soils of arid areas

Here the rainfall is very less and the area occurs between 30° and 50° North latitudes in the northern-hemisphere. In this region day time temperatures are quite high and humidity is low and there is almost no leaching.

There is little profile development in the soil e.g. 'grey desert soils'.

(e) Soils of cold areas

These are the soils developed in a tundra climate where the soils are frozen for a large part of the year. Here the drainage conditions are poor and boggy.

These are also known as Tundra soils.

The intrazonal and azonal soil types are not of much significance.

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