

The wide variety of climates in North America has helped spawn a complex pattern of soil regions.

In general, the realm's soils also reflect the broad environmental partitioning into "humid America" and "arid America."

" Where annual precipitation exceeds 20 inches (50 centimeters), soils in humid areas tend to be acidic in chemical content. Since crops do best in soils that are neither acidic (higher in acid content) nor alkaline (higher in salt content).

fertilization is necessary to achieve the desired level of neutrality between the two.

Arid America's soils are typically alkaline and must be fertilized back toward neutrality by adding acidic compounds.

Although many of these dryland soils, particularly in the Great Plains, are quite fertile, European settlers learned over a century ago that water is the main missing ingredient in achieving their agricultural potential.

In the 1970's, certain irrigation methods were perfected and finally provided a real opportunity to expand more intensive farming west from the Central Lowland into the drier portions of the Great Plains.

Glaciation also enhanced the rich legacy of fertile soils in the central United States, both from the deposition of mineral-rich glacial debris left by meltwater and from thick layers of fine wind-blown glacial material, called loess, in and around the middle Mississippi Valley.

Natural vegetation patterns could be displayed on a map of North America, but the enormous human modification of the North American environment in modern times has all but reduced this regionalization scheme to the level of the hypothetical.

Nonetheless, the humid America-arid America dichotomy is still a valid generalization: the natural vegetation of areas receiving more than 20 inches of water yearly is forest, whereas the drier climates give rise to a grassland cover.

The forests of North America tend to make a broad transition by latitude.

In the Canadian North, needle-leaf forests dominate, but these coniferous trees become mixed with broadleaf deciduous trees as one crosses the border into the Northeast United States.

As one proceeds toward the Southeast, broadleaf vegetation becomes dominant.

Arid America mostly consists of short-grass prairies or steppe.

The only areas of true desert are in the Southwest.