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Soil Colors of the Continental United States

Natural Resources Conservation Service

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NCSS National Cooperative Soil Survey

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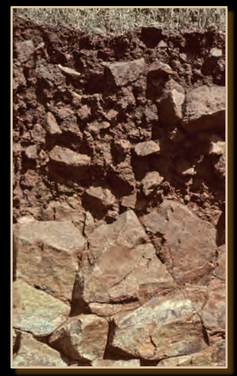
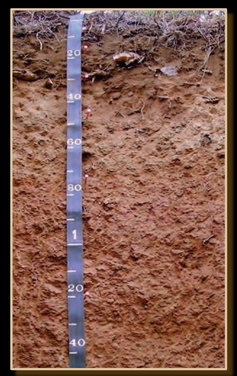
1 These soils formed in volcanic ash. They include weakly weathered soils that contain significant amounts of volcanic glass. They also include more strongly weathered soils. The content of volcanic glass is one characteristic used in classifying these soils.

4 These soils formed in wind-deposited sandy material that originated from erosional deposits along rivers. Wind blew the sand out of the areas along rivers, forming sand dunes and creating layers of deposits in the soil. The dominant sand mineralogy is quartz.

5 These soils formed where strong winds and glacial meltwaters deposited 2 to 3 feet of silty loess and loamy outwash on top of sand and gravel. The soils, which developed in areas of northern hardwood forests, have an organic-enriched surface layer and a clay-enriched subsoil.



8 These soils consist of very shallow and shallow, well drained and somewhat excessively drained soils that formed in material transported from a slope by water, material that accumulated at the bottom of a slope, and material that weathered from schist, gneiss, and granitic rocks. The soils are on mountain slopes, ridges, structural benches, and spurs, commonly on northern aspects.



2 These red soils have large amounts of secondary iron oxides, such as hematite. Located in foothills, these intensely weathered soils are derived from iron rich parent rocks, such as basalt, greenstone, gabbro, serpentinite, and mafic phases of granitic rocks.

9 These soils formed in sandy marine sediments on the Atlantic and Gulf Coastal Plain. They are in areas of flatwoods, in depressions, in low areas on uplands, on stream terraces, and in tidal areas.

3 These soils formed in wind-deposited sandy material that contained gypsum. The soils are nearly level and are in interdune areas, on low dunes, and along relict shorelines in dune fields.

6 These soils formed in silty material deposited by floodwaters onto flood plains and into upland drainageways. The soils are moderately deep over a buried soil. The buried soil had a dark surface horizon that was covered by fresh sediments.

7 These deep red soils formed from weathering of highly metamorphosed gneiss and schist, which characterize the Inner Piedmont Belt.

10 These soils consist of very deep organic deposits in freshwater marshes. They are in areas of flatwoods and lowlands that are very poorly drained and have a high water table. Organic materials accumulated under anaerobic conditions in areas where decomposition was very slow.

Exploring Soil Colors

The first impression we have when looking at bare earth, or soil, is of the color. Vivid colors and striking differences can catch our eye. The stories told by soil colors vary with the ecosystem and other factors. Soils come in many different colors, most commonly in shades of black, yellow, brown, red, gray, and white.

When looking below ground, we see various layers in the soil, which are called soil horizons. The arrangement of these horizons is known as a profile. Soil scientists observe and describe the horizons and profiles to classify the soil and make predictions for land use. Soil color can help us predict mineral content, chemical composition, physical properties, and other important soil characteristics. The map on this poster was generated by selecting the brightest color in the profile at each location.

Successful soil scientists and soil surveyors appreciate the tremendous quantity of information that is related to soil color. Differences in color by depth and position are meaningful to trained experts. Soil color supports a practical understanding of a landscape's recent and long-term history.

For more information, search online for "Soil Colors of the United States," visit *http://go.usa.gov/xmedN*, or scan the QR code below.

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