

Established Series
Rev. CHP:RPS
04/2001

TAFT SERIES

The Taft series consists of very deep, somewhat poorly drained soils with a fragipan in the subsoil. These soils formed in a silty mantle of loess or alluvium and the underlying residuum of limestone or shale. These nearly level soils and are on upland flats, stream terraces, and in depressions. Mean annual temperature is about 59 degrees F., and mean annual precipitation is about 50 inches.

TAXONOMIC CLASS: Fine-silty, siliceous, semiactive, thermic Glossaquic Fragiudults

TYPICAL PEDON: Taft silt loam - forested. (Colors are for moist)

A--0 to 1 inch; dark grayish brown (10YR 4/2) silt loam; moderate fine and medium granular structure; very friable; many fine roots; very strongly acid; abrupt smooth boundary. (0 to 2 inches thick)

E--1 to 9 inches; pale brown (10YR 6/3) silt loam, few fine distinct dark brown (10YR 4/3) and light brownish gray (10YR 6/2) mottles; weak medium granular structure; friable; many fine roots; very strongly acid; gradual smooth boundary. (5 to 15 inches thick)

Bw--9 to 24 inches; light yellowish brown (2.5Y 6/4) silt loam, common fine distinct light brownish gray (2.5YR 6/2) and light olive brown (2.5Y 5/4) mottles; weak medium subangular blocky structure; friable; common fine roots; few fine and medium pores; very strongly acid; clear wavy boundary. (12 to 20 inches thick)

E/Bx--24 to 28 inches; grayish brown (2.5Y 5/2) and light brownish gray (2.5Y 6/2) exteriors of peds and mottled light olive brown (2.5Y 5/4) and light brownish gray (2.5Y 6/2) interiors of peds, silt loam; weak medium prismatic structure parting to fine subangular blocky structure; friable, slightly brittle; few fine roots; few fine pores; very strongly acid; clear irregular boundary. (0 to 7 inches thick)

Btx1--28 to 46 inches; light yellowish brown (2.5Y 6/4) silt loam, common medium prominent gray (10YR 6/1) and yellowish brown (10YR 5/6) mottles; moderate coarse and very coarse prismatic structure parting to moderate medium subangular blocky; very firm and brittle; prominent nearly vertical veins of gray silty clay and gray silt up to 5 mm in diameter; many distinct clay films in pores and few faint films on faces of peds; few fragments of chert less than .5 inch across; common pores; very strongly acid; gradual wavy boundary. (15 to 25 inches thick)

Btx2--46 to 64 inches; mottled light yellowish brown (2.5Y 6/4), gray (10YR 6/1), and yellowish brown (10YR 5/8) silt loam, few fine distinct yellowish red mottles; weak coarse prismatic structure parting to weak medium subangular blocky structure; very firm and brittle; prominent nearly vertical veins of gray silty clay and silt extend through horizon; few fine and medium pores; few distinct clay films on faces of peds and in pores; few fine fragments of chert; very strongly acid; gradual wavy boundary. (15 to 25 inches thick)

2Bt--64 to 80 inches; coarsely mottled gray (N 5/), yellowish brown (10YR 5/6) and yellowish red (5YR 5/6) heavy silty clay loam; moderate medium subangular blocky structure; firm; many vertical gray clayey veins; few fine chert fragments; few distinct clay films on faces of peds; very strongly acid.

TYPE LOCATION: Coffee County, Tennessee; 9.5 miles north of Manchester on State Highway 53, 0.7 miles south of Davis Grocery Store and 200 feet east of State Highway 53.

RANGE IN CHARACTERISTICS: Solum thickness is greater than 50 inches. Depth to the fragipan ranges from 20 to 36 inches. Reaction in each horizon ranges from extremely acid through strongly acid except that the Ap horizon is less acid when limed.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4. Texture is silt loam.

The E horizon and E part of E/Bx horizon has hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 to 4. Texture is silt loam.

The Bw horizon has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 or 4. This horizon has mottles of chroma of 2 or less within 10 inches of its upper boundary. Texture is silt loam or silty clay loam.

The Btx horizon has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 or 4 with mottles in shades gray and brown. It is silt loam or silty clay loam. Much of the clay in the Btx horizon is concentrated in the gray seams.

The 2Bt horizon has hue of 10YR to 2.5YR, value of 4 or 5, and chroma of 4 to 8. Texture is variable, ranging from silt loam to clay.

COMPETING SERIES: Taft is the only series in this family. Soils in similar families are the [Dickson](#), [Guthrie](#), [Leadvale](#), and [Sango](#) series. Dickson soils lack gray mottles in the upper 10 inches of the B horizon, and are better drained than Taft soils. Guthrie soils have dominant chroma of 2 or less between the base of the Ap horizons and the fragipans. Leadvale soils lack gray mottles in the upper 10 inches of the B horizons and have argillic horizons above the fragipan. Sango soils lack gray mottles in the upper 10 inches of the B horizon and are better drained than Taft soils. Sango soils also have less than 18 percent clay in the B horizon above the fragipan.

GEOGRAPHIC SETTING: Taft soils are on upland flats, stream terraces, and in depressions. These soils formed in a silty mantle of loess or alluvium and the underlying residuum of limestone or shale. Slopes range from 0 to 2 percent. Near the type location, average annual temperature is about 59 degrees F., and average annual precipitation is about 50 inches.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the competing [Dickson](#), [Guthrie](#), [Leadvale](#) and [Sango](#) series, the silty, well drained [Mountview](#) soils.

DRAINAGE AND PERMEABILITY: Somewhat poorly drained; slow runoff; slow permeability.

USE AND VEGETATION: About two-thirds of the acreage is cleared and used chiefly for growing pasture, hay, soybeans, and some corn. The native vegetation is hardwood forest of maple, elm, water oak, post oak, gum, beech, sycamore, and cottonwood.

DISTRIBUTION AND EXTENT: Highland Rim and Great Valley of Tennessee, northern Alabama, northwest Georgia, Arkansas, and possibly Kentucky. The series is of large extent. Over 100,000 acres are on the Highland Rim in Tennessee.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Morgantown, West Virginia

SERIES ESTABLISHED: Humphreys County, Tennessee; 1938.

REMARKS: Diagnostic horizons and features in this pedon are:

Ochric epipedon - 0 to 9 inches (A and E horizons)

Cambic horizon - 9 to 24 inches (Bw horizon)

Glossic feature - 24 to 28 inches (E/Bx horizon)

Fragipan - 28 to 64 inches (Bx1, Bx2 horizons)

Argillic horizon - 28 to 80 inches (Bx, 2Bt horizons)