LOCATION BAILE MD+PA VA

Established Series
Rev. JC-MS-MJ
02/2008

# BAILE SERIES

The Baile series consists of very deep, poorly drained, moderately low to moderately high saturated hydraulic conductivity, soils on upland depressions and footslopes. They formed in local alluvium over residuum from acid crystalline rocks, chiefly mica schist and granitized schist and gneiss. Slope ranges from 0 to 8 percent. Mean annual temperature is 53 degrees F., and mean annual precipitation is 40 inches.

**TAXONOMIC CLASS:** Fine-loamy, mixed, semiactive, mesic Typic Endoaquults

**TYPICAL PEDON:** Baile silt loam - on a nearly level slope in a pasture at an elevation of 430 feet. (Colors are for moist soil unless otherwise stated.)
Ap--0 to 9 inches, dark gray (10YR 4/1) silt loam; moderate fine and medium granular structure; friable, slightly sticky, slightly plastic; many roots; slightly acid (limed); clear smooth boundary. (8 to 10 inches thick)

**Bg**--9 to 14 inches, gray (10YR 5/1) silty clay loam; weak fine and medium subangular blocky structure, slight tendency toward thin platiness; firm, sticky, slightly plastic; common roots; common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; slightly acid; clear wavy boundary. (0 to 10 inches thick)

**Btg1**--14 to 22 inches, gray (5Y 5/1) silty clay loam; weak medium and coarse subangular blocky structure; firm, sticky, plastic; few roots; few clay films; many medium and coarse prominent yellowish red (5YR 4/6) and brown (7.5YR 4/4) masses of oxidized iron; few fine dark concretions; strongly acid; gradual irregular boundary.

**2Btg2**--22 to 32 inches, gray (N5/0) silty clay loam; very weak thin platy structure; firm, sticky, plastic; few clay films; many medium and coarse prominent brownish yellow (10YR 6/8) and strong brown (7.5YR 5/6) masses of oxidized iron; many mica flakes; higher in sand in lower portion; very strongly acid; abrupt smooth boundary. (combined thickness of the Bt is 17 to 30 inches)

**2Cg**--32 to 65 inches, bluish gray (5B 6/1) loam, grading toward sandy loam with depth; massive; friable, slightly sticky, plastic; highly micaceous; strongly acid.

**TYPE LOCATION:** Howard County, Maryland; on Manor Lane about 1 mile north of Elioak.

**RANGE IN CHARACTERISTICS:** Solum thickness ranges from 24 to 40 inches. Depth to bedrock is 5 to 10 feet. Stones range from 0 to 10 percent in the upper part of the solum or on the surface. Rock fragments of fine quartzite gravel range from 0 to 15 percent in the 2Bt and 2C horizons. The soil, if unlimed, is strongly acid to extremely acid; if limed, it is neutral to

strongly acid.
The A horizon has hue of 10YR to 5Y, value of 2 to 6, and chroma of 0 to 2. Value of 2 or 3 is confined to undisturbed A horizons less than 6 inches thick. The texture of the A horizon ranges from loam to silty clay loam.
The E horizon, where present, has hue of 10YR to 5Y, value of 4 to 6, and chroma of 0 to 2 with mottles in shades of red, yellow and brown. Textures are loam or silt loam.
The B horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 0 to 2 with mottles in shades of red, yellow and brown. The B horizon is silty clay loam, silt loam, or clay loam.
The C horizon is strongly gleyed and has hue commonly greener or bluer than 5Y unless mottled. Some pedons have a mottled C horizon in which high-chroma colors dominate. The C horizon is silt loam, loam, sandy loam or silty clay loam, but some pedons have thin clay loam subhorizons.

**COMPETING SERIES:** Chatuge series in the only other series in this family. Chatuge soils are formed in loamy sediments on low stream terraces, are underlain by gravelly coarse sand and are commonly flooded, and have mean annual precipitation greater than 70 inches. The Armagh, Elkton, Fallsington, Kinkora, Othello, Purdy, Roanoke, Shrewsbury and Worsham series are in closely related families. The Armagh, Elkton, Kinkora, Purdy, Roanoke and Worsham soils have a clayey particle size control section and a thermic temperature regime. Fallsington soils have active cation-exchange activity classes and do not have bedrock within 5 to 10 feet; also, they have Bt horizons with sandy clay loam, loam, or sandy loam. Othello soils have a fine-silty particle size control section. Shrewsbury soils have active cation-exchange activity classes, sandy clay loam Bt horizons and also have glauconite in the series control section.

**GEOGRAPHIC SETTING:** Baile soils are on upland depressions and footslopes in the northern Piedmont Plateau. Slopes range from 0 to 8 percent. These soils developed in contrasting materials of silty local alluvium over residuum from acid crystalline rocks, chiefly mica schist and granitized schist and gneiss. The mean annual temperature ranges from 45 to 55 degrees F., and the mean annual precipitation is 40 inches.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the Brandywine, Chester, Codorus, Elioak, Glenelg, Glenville, Hatboro, and Manor soils. The somewhat excessively drained Brandywine, well drained Chester, Elioak and Glenelg, and well to somewhat excessively drained Manor soils are on associated uplands. The moderately well to somewhat poorly drained Codorus, well drained Comus, and poorly drained Hatboro are on adjacent flood plains. The moderately well to somewhat poorly drained Glenville soils have a fragipan.

**DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY:** Poorly drained. Saturated hydraulic conductivity is moderately low to moderately high. Runoff is slow.

**USE AND VEGETATION:** Drained areas are used for pasture, hay and some corn. Native vegetation includes pin oak, birch, red maple and holly with understory of laurel, sweetbriar, various herbs and sedges.

**DISTRIBUTION AND EXTENT:** Pennsylvania, Maryland, and Virginia. This series is of moderate extent.

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

**SERIES ESTABLISHED:** Howard County, Maryland, 1965

**REMARKS:** Diagnostic horizons and features recognized in this pedon are:
a. Ochric epipedon -- zone from the surface of the soil to a depth of approximately 9 inches (Ap horizon)
b. Argillic horizon -- the zone from approximately 14 to 32 inches (Btg and 2Btg2 horizons).
c. Typic aquults feature -- colors with chroma of less than or equal to 1 in the zone from 9 to 32 inches and very strongly acid reaction in the zone from 32 to 60 inches.
Feb. 2008 update was for minor description and range in characteristics changes as well as competing and geographically associated soils. Revision 6/2001 - WDC

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