

Byars Series

The Byars series consists of very poorly drained, nearly level soils on uplands. These soils formed in Coastal Plain sediment. A seasonal high water table is at or near the surface.

In a typical profile, the surface layer is black and very dark gray loam about 13 inches thick. The subsoil is about 50 inches thick. In the upper part, the subsoil is dark gray, very firm silty clay. In the lower part, it is gray, very firm clay mottled with dark gray and yellowish brown. Below the subsoil and extending to a depth of about 72 inches is gray sandy clay loam mottled with brownish yellow and bluish gray.

Natural fertility, the content of organic matter, and available water capacity are all medium. Permeability is slow, and shrink-swell potential high. In areas that have not received lime, reaction is very strongly acid or extremely acid.

The Byars soils in Pitt County are only minor importance for farming. A seasonal high water, infrequent ponding for brief periods, and slow permeability are the major limitations to their use. Most of the acreage is in forest, and the rest is chiefly cultivated or in pasture. In areas used for crops, response is good to recommended applications of fertilizer and lime.

Representative profile of Byars loam, 6 miles southwest of Bethel, 1 mile of State Road No. 1424, and 50 feet north of pulpwood road in Grindle Pocosin:

- O1- 1 inch to 0, undecayed grass, pine needles, and leaf mold.
- A11- 0 to 2 inches, black (10YR 2/1) loam; common, medium, distinct, dark grayish-brown (10YR 4/2) mottles; weak, medium, granular structure; very friable; many small and medium roots; high content of organic matter; very strongly acid; abrupt, smooth boundary.
- A12-2 to 11 inches, black (10YR 2/1) loam; weak, medium, granular structure; very friable; many small and medium roots; few medium root channels; very strongly acid; abrupt, smooth boundary.
- A13-11 to 13 inches, very dark gray (10YR 3/1) loam; weak, medium, granular structure; very friable; few small and medium roots; few medium root channels; very strongly acid; abrupt, smooth boundary.
- B21tg-13 to 21 inches, dark-gray (10YR 4/1) silty clay; weak, medium, angular blocky structure; very firm, sticky and plastic; small and medium roots; few medium root channels; thin, patchy clay films on faces of peds; very strongly acid; gradual, wavy boundary.
- B22tg-21 to 27 inches, gray (10YR 5/1) clay; few, fine, distinct, very dark gray mottles; weak, medium, angular blocky structure; very firm, very sticky and very plastic; few medium roots and root channels; thin, patchy clay films on faces of peds; extremely acid; gradual, wavy boundary.
- B23tg-27 to 63 inches, gray (10YR 6/1) clay; few, fine, distinct, very dark gray and yellowish-brown mottles; weak, medium, angular blocky structure; very firm, very sticky and very plastic; few medium root channels; extremely acid; gradual, wavy boundary.
- Cg-63 to 72 inches, gray (10YR 6/1) sandy clay loam with lenses of sandy loam; few, fine, distinct, brownish-yellow and bluish-gray mottles; massive; firm, slightly sticky and slightly plastic; extremely acid.

Thickness of the solum ranges from 60 to 70 inches or more. The A horizon is black or very dark gray and ranges from 10 to 20 inches in thickness. The B horizon is gray to dark-gray silty clay and clay and is 50 inches or more thick. It is commonly mottled with yellowish brown and very dark gray. The C horizon is gray and ranges from sandy clay loam to clay in texture.

Byars loam (By) – This is a very poorly drained soil on smooth flats and in slight depressions in the uplands. It occurs in areas of irregular shape that are 5 to more than 40 acres in size. Slopes are 0 to 1 percent. The surface layer is black and very dark gray loam about 13 inches thick. The subsoil is about 50 inches thick. In the upper part, the subsoil is dark-gray, very firm silty clay. In the lower part, it is gray, very firm clay mottled with very dark gray and yellowish brown.

Included with this soil in mapping were a few areas of soils that have a similar profile but that have a surface layer of fine sandy loam, very fine sandy loam, or silt loam. Also included were small areas of Bladen, Leaf, Coxville, and Pantego soils.

Infiltration is moderate. Runoff is very slow to ponded.

This soil is fairly easy to keep in good tilth, but it can be satisfactorily worked only within a fairly narrow range of moisture content. Most of the acreage is in forest, and the rest is used chiefly for cultivated crops and pasture. Water infrequently ponds on the surface for brief periods, and wetness is a severe limitation to use. If properly drained, this soil is suited to a few locally grown crops. Surface drainage is needed if cultivated crops are grown. Areas that are farmed are used mainly for corn, soybeans, small grain, and pasture. Capability unit IIIw-2; woodland suitability group 2w9.