SOIL SURVEY OF THE

PEE DEE RESEARCH AND EDUCATION CENTER DARLINGTON, SOUTH CAROLINA

-?..

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**SOIL LEGEND**

PEE DEE RESEARCH AND DEVELOPMENT CENTER DARLINGTON COUNTY, SOUTH CAROLINA

SYMBOL

BlB BoB Co EnA EnB EuA

GoA

Gd.A

HnA HnB HnB2

HnC2 HnD2

Ly NbA NbB NcA

NcB NlA



Blanton sand, 0 to 3 percent slopes Bonneau sand, 0 to 3 percent slopes Coxville sandy loam

Eunola loamy sand, 0 to 2 percent slopes

Eunola loamy sand, 2 to 6 percent slopes

Eunola sandy loam, O to 2 percent slopes, depositional

Goldsboro loamy sand, 0 to 2 percent slopes

Goldsboro loamy sand, 0 to 2 percent slopes, depositional

Hornsville sandy loam, 0 to 1 percent slopes Hornsville sandy loam, 1 to 3 percent slopes Hornsville sandy loam, 1 to 3 percent

slopes, eroded

Hornsville sandy loam, 3 to 5 percent slopes, eroded

Hornsville sandy loam, 5 to 8 percent slopes, eroded

Lynchburg sandy loam

Noboco loamy sand, 0 to 1 percent slopes Noboco loamy sand, 1 to 3 percent slopes

Noboco loamy sand, thin surface, 0 to 1 percent slopes

Noboco loamy sand, thin surface, 1 to 3 percent slopes

Noboco sandy loam, 0 to 1 percent slopes

NnA Norfolk loamy sand, thin surface, 1 to 3

percent slopes

NnB Norfolk loamy sand, thin surface, 1 to 3

percent slopes

NoA Norfolk loamy sand, 0 to 1 percent slopes

NoB Norfolk loamy sand, 1 to 3 percent slopes

OcB Ocilla sand, 0 to 3 percent slopes

Ra Rains sandy loam

UcB Uchee sand, 0 to 3 percent slopes

WaB Wagram sand *I* 0 to 3 percent slopes

J COUNTY, SOUTH CAROLINA

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION SOUTH CAROLINA LAND RESOURCES CONSERVATION COMMISSION

**CONVENTIONAL AND SPECIAL SYMBOLS LEGEND**

**ULTURAL FEATURES**

BOUNOARIES

**SPECIAL SYMBOLS FOR SOIL SURVEY**

**National, state or province** MISCELLANEOUS CULTURAL FEATURES SOIL DELINEATIONS AND SYMBOLS

**County or parish Farmstead, house**

**(omit in urban areas)**

ESCARPMENTS

**Minor civil division**

**Reservation (national forest *or* park , state forest or park,**

**and large airport)**

Church School

Indian mound (label)

**Indian**

**/\. Mound**

Bedrock

(points down slope)

Other than bedrock (points down slope)

SHORT STEEP SLOPE

**land grant Tower**

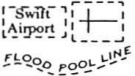
Located object (label)

0 GULLY

Limit of soil survey (label) Gas

Tank (label) DEPRESSION OR SINK

**Field sheet matchline and neatline**

AD HOC BOUNDARY (label)

**Small airport, airfield , park, oilfield,**

**Wells , oil *or* gas** SOIL SAMPLE

(normally not shown)

W indmill MISCELLANEOUS

**cemetery, or flood pool Kitchen midden** Blowout

STATE COORDINATE TICK

LAND DIVISION CORNER

Clay spot

(sections and land grants) **Gravelly spot**

ROADS

**WATER FEATURES** *¢*

Gumbo , slick or scabby spot (sodic)

Divided (median shown

**if scale permits) Dumps and other similar**

**·1er roads**

. **ail**

ROAD EMBLEM & DESIGNATIONS

**Interstate** Federal State

**County, farm or ranch**

RAILROAD

POWER TRANSMISSION LINE

**(normally not shown)**

PIPE LINE

**(normally not shown)**

FENCE

DRAINAGE

**Perennial , double line Perennial, single line Intermittent**

**Drainage end**

**Can ls or ditches**

®

Double·line (label)

**Drainage and /or irrigatiop**

LAKES, PONDS AND RESERVOIRS

**Perennial Intermittent**



-... . ..-· --

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-- . .

-...... . . ......----

**non soil areas Prominent hill or peak**

**Rock outcrop**

**(includes sandstone and shale)**

**Saline spot** +

Sandy spot

**Severely eroded spot**

))

Slide or slip flips point upslope) )

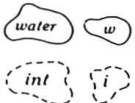
**Stony SPol. ver)· stony spot** o m

**Belter drained area · as much as 2 acres**

**Water ·as much as 2 acres** <D

**Udor1hents and lldipsamments . as much dS**

**2 acres**

**(normally not shown)** MISCELLANEOUS WATER FEATURES

LEVEES

**Marsh or swamp**

**Without road 1 1 1 1 1 1 1 1 1 111 1 1 1**

**1 1 1 1 1 1 1 1 1 1 1 1 1 1 1**

With road

**1 1 1 1 1 1 1 111 1 1 1 1 1**

**With railroad**

Spring

**Well, artesian Well , irrigation**

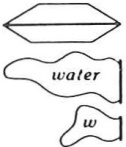
DAMS

Large (to scale)

**''?dium or Small**

**Gravel pit**

**Mine or quarry**

Wet spot

**BLANTON SERIES**

**TAXONOMIC CLASSIFICATION:**

Loamy, siliceous, thermic Grossarenic Paleudults .

**REPRESENTATIVE PEDON**

Ap - - 0 to 7 inches; brown (lOYR 5/3) sand; weak fine granular structure; friable; common fine and medium roots; neutral; abrupt wavy boundary.

El - - 7 to 25 inches; light yellowish brown (lOYR 6/3) sand; weak fine granular structure; very friable; few fine roots; slightly acid; gradual wavy boundary .

E2 - - 25 to 41 inches; pale brown (lOYR 6/3) sand; single grained; loose; few fine roots; slightly acid; gradual wavy boundary .

Btl - - 41 to 50 inches; yellowish brown (lOYR 6/6) sandy clay loam; few distinct clay films on faces of peds; common fine pores; common medium distinct reddish yellow (7.5YR 6/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bt2 - - 50 to 61 inches; yellowish brown (lOYR 5/6) sandy

clay loam; moderate medium subangular blocky structure; friable; few distinct clay films on faces of peds; common medium prominent reddish yellow (5YR 5/6) and common medium prominent red (2.5YR 4/8) masses of iron

accumulation; common medium distinct gray (lOYR 5/1) iron depletions with clear boundaries in the matrix; strongly acid.

Btg - - 61 to 72 inches; gray (lOYR 5/1) sandy clay; weak medium subangular blocky and massive structure; firm; common medium prominent red (2.5YR 4/8) and common medium distinct brownish yellow (lOYR 6/6) masses of iron accumulation; very strongly acid .

**RANGE IN CHARACTERISTICS**

Solum thickness ranges from 60 to more than 80 inches. Reaction is very strongly acid to slightly acid throughout.

The A or Ap horizon has hue of lOYR, value of 3 to 5, and chroma of 1 to 4. It is sand.

The E horizon has hue of lOYR, value of 4 to 6, and chroma of 2 to 6. It is sand .

The upper part of the Bt horizon has hue of 7.5YR or

lOYR, value of 5 to 7, and chroma of 3 to 8. loam or sandy clay loam .

It is sandy

The lower part of the Bt horizon has hue of 7 .5YR or lOYR, value of 5 to 8 and chroma of 3 to 8 or it is multicolored without a dominant matrix. Iron depletions are

commonly within the upper 10 inches of the Bt horizon. It is sandy clay loam.

The Btg horizon has hue of lOYR, value of 6 to 8 and chroma of 1 or 2 or it is dominated by chroma 2 or less with iron accumulations of red, brown and yellow . It is sandy

clay loam, or sandy clay.

**GEOGRAPHICALLY ASSOCIATED SOILS**

These are the Bonneau, Coxville, Noboco, Norfolk, Ocilla, Rains, and Wagram soils. Bonneau, Wagram, Norfolk , Noboco and Ocilla soils have Bt horizons within 40 inches . Coxville and Rains soils have gray horizons immediately below surface layer .

**REPRESENTATIVE PEDON LOCATION:**

A typical profile of Blanton sand, 0 to 3 percent slopes, is located 0.8 mile northeast from the entrance of the research center. 0.1 mile north on farm road; 0.1 mile west .

**MAP UNIT DESCRIPTION**

*BlB* - *Blanton sand,* 0 to *3 percent slopes*

**SETTING**

This map unit consists of very deep, well drained soils that formed in loamy marine sediments. These soils are on nearly level to gently sloping low ridges and side slopes on the Coastal Plain.

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

0 to 7 inches - - brownish loamy sand

*SUBSURFACE LAYER:*

7 to 25 inches - - brownish loamy sand

25 to 41 inches - - brownish sand

*SUBSOIL:*

41 to 60 inches - - brownish sandy clay loam with red and gray mottles

60 to 72 inches - - grayish sandy clay with yellow and red mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the well drained Bonneau and Wagram soils.

**SOIL PROP ERTIES**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 4.0 to 6.0 feet

*AVAILABLE WATER CAPACITY:* low

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Draughtiness, low nutrient holding capacity, and soil blowing are the major concerns .

**BONNEAU SERIES**

**TAXONOMIC CLASSIFICATION:**

Loamy, siliceous, thermic Arenic Paleudults .

**REPRES ENTATIVE PEDON**

Ap - - 0 to 10 inches; grayish brown (lOYR 5/2) sand; weak fine granular structure; very friable; few very fine roots; few clean sand grains; slightly acid; abrupt broken boundary .

El - - 10 to 19 inches; light yellowish pale brown (lOYR 6/4) sand; weak fine granular structure; very friable; few very fine roots; moderately acid; gradual wavy

boundary .

E2 - - 19 to 38 inches; very pale brown (lOYR 7/4) loamy sand; weak fine granular structure; friable; common medium distinct light yellowish brown (lOYR 6/4) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btl - - 38 to 42 inches; yellowish brown (lOYR 5/6) sandy clay loam; weak medium subangular blocky structure; very friable; few very fine roots; common very fine pores; few distinct clay films on faces of peds; faces of some peds coated with stripped sand; moderately acid; gradual wavy boundary .

Bt2 - - 42 to 54 inches; yellowish brown (lOYR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine pores; many coarse clean sand grains; common medium distinct brown (lOYR 5/3) and common medium prominent red (2.5YR 4/8) masses of iron accumulation; moderately acid; gradual wavy boundary .

Bt3 - - 54 to 60 inches; brownish yellow (lOYR 6/8); sandy clay loam; weak medium subangular blocky structure; friable; few distinct clay films on faces of peds; common clean sand grains; common medium distinct gray (lOYR 5/1) iron depletions with clear boundaries in the matrix; common medium distinct (2.5YR 4/6) masses of iron accumulation; strongly acid; gradual wavy

boundary.

### RANGE IN CHARACTERISTICS

Solum thickness ranges from 60 to more than 80 inches .

Reaction is very strongly acid to moderately acid throughout .

The A or Ap horizon has hue of lOYR, value of 3 to 5, and chroma of 1 to 4. It is sand .

The E horizon has hue of lOYR, value of 4 to 6, and chroma of 2 to 6. It is sand.

The upper part of the Bt horizon has hue of 7.SYR or

lOYR, value of 5 to 7, and chroma of 3 to 8. loam, or sandy clay loam.

It is sandy

The lower part of the Bt horizon has hue of 7.SYR or lOYR, value of 5 to 8 and chroma of 3 to 8 . It commonly has masses of iron accumulation in shades of red or yellow .

Iron depletions are at depths between 42 and 60 inches. It is sandy clay loam.

### GEOGRAPHICALLY ASSOCIATED SOILS:

These are the Uchee, Blanton, Coxville, Noboco, Norfolk, Ocilla, Rains, Uchee, and Wagram soils . Blanton soils are grossarenic . Coxville and Rains soils have gray horizons immediately below surface layer. Wagram soils do not have mottles of chroma 2 or less before 60 inches.

Norfolk and Noboco soils do not have arenic epipedons. Ocilla soils are somewhat poorly drained.

### REPRESENTATIVE PEDON LOCATION:

A typical pedon of Bonneau loamy sand, 0 to 3 percent slopes, 0.1 mile northeast from the entrance of the research center; 0.6 mile north on paved road; 0.05 east; 100 feet north .

**MAP UNIT DESCRIPTION**

*Bob* - - *Bonneau loamy sand,* 0 to *3 percent slopes*

**SETTING**

This map unit consists of very deep, well drained, moderately permeable soils that formed in loamy marine sediments. These soils are on nearly level to gently sloping low ridges and side slopes on the Coastal Plain .

**REPRESENTATIVE PEDON**

*SURFACE LAYER :*

0 to 10 inches - - grayish sand

*SUBSURFACE LAY ERS :*

10 to 19 inches

19 to 38 inches

*SUBSO I L :*

38 to 42 inches

42 to 54 inches red mottles

brownish sand with brown mottles brownish loamy sand with brown mottles

brownish sandy clay loam

brownish sandy clay loam with brown and

54 to 60 inches - - yellowish sandy clay loam with reddish

and grayish mottles

60 to 65 inches - - brownish sandy clay loam with reddish and grayish mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the well drained Blanton and Wagram soils, and the moderately well drained Ocilla soils. Included similar soils make up less than 15 percent of the map unit .

*Dissimilar Soils*

These are the well drained Norfolk and Noboco soils.

Included dissimilar soils make up O to 10 percent of the map unit.

**SOIL PROP ERTIES**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE* DEPTH: 3.5 to 5 .0 feet

*AVAILABLE WATER CAPACITY:* low

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Droughtiness, low nutrient holding capacity, and soil blowing are the major management concerns.

**COXVILLE SERIES**

**TAXONOMIC CLASSIFICATION:**

Clayey, kaolinitic, thermic Typic Paleaquults

**REPRESENTATIVE PEDON**

Ap - - 0 to 10 inches; dark gray (lOYR 4/1) sandy loam; weak fine subangular blocky structure; friable; many fine and very fine roots; few very fine pores; moderately acid; gradual wavy boundary .

Btgl - - 10 to 22 inches; gray (lOYR 5/1) clay; moderate medium subangular blocky structure; friable; few fine and very fine roots; common prominent clay films on faces of peds; few very fine pores; few fine distinct reddish yellow (7.5YR 6/8) masses of iron accumulation; strongly acid; gradual wavy boundary .

Btg2 - - 22 to 30 inches; gray (lOYR 5/1) clay; moderate medium subangular blocky structure; friable; few fine and very fine roots; prominent clay films on faces of peds; few very fine pores; common fine distinct yellowish brown (lOYR 5/8) and few fine prominent red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btg3 - - 30 to 50 inches; gray (lOYR 5/1) clay; moderate medium subangular blocky structure; friable; few very fine decayed roots; prominent clay films on faces of peds; few very fine pores; many fine distinct yellowish brown (lOYR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg4 - - 50 to 62 inches; gray (N 6/) clay; moderate medium subangular blocky structure; firm; common prominent clay films on faces of peds; few very fine pores; few clean sand grains; common coarse distinct brownish yellow (lOYR 6/6) and few fine prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid .

### RANGE IN CHARACTERISTICS:

Solum thickness exceeds 60 inches. Reaction ranges from extremely acid to strongly acid throughout.

The Ap horizon has hue of lOYR, value of 2 to 5 and chroma of 1 or 2. It is sandy loam.

The Btg horizon has hue of lOYR, value of 4 to 7 , and chroma of 0 to 2 . It has few to common masses of iron

accumulation in shades of yellow, brown, and red.

sandy clay, clay loam, or clay.

It is

**GEOGRAPHICALLY ASSOCIATED SOILS:**

These are the Goldsboro, Lynchburg, Noboco, Ocilla and Rains soils . Goldsboro, Lynchburg, Noboco and Ocilla soils are better drained . Rains soils are fine-loamy .

**REPRESENTATIVE PEDON LOCATION:**

## A typical pedon of Coxville sandy loam is located 0 .07 mile north of the entrance of the research center .

**MAP UNIT DESCRIPTION**

*Co* - - *Coxville sandy loam*

**SETTING**

The Coxville series consists of very deep, poorly drained, slowly permeable soils that formed in clayey marine sediments . They are on nearly level areas and in slightly depressed areas on the Coastal Plain.

**REPR ESENTATIVE PEDON**

*SURFACE LAY ER :*

0 to 10 inches - - grayish sandy loam

*SUBSOI L :*

10 to 22 inches gray clay with yellow mottles

22 to 30 inches grayish clay with brown and red mottles

30 to 50 inches grayish clay with brown mottles

50 to 62 inches grayish clay with yellow and red mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the poorly drained Rains soils. Included similar soils make up about 10 percent of the map unit.

**SOIL PROPERTIES:**

*PERM EAB I L I T Y :* moderately slow

*SEASONAL HIGH WATER TABLE DEPTH:* 0 to 1.0 feet

*AVAILABLE WATER CAPACITY:* high

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow to ponded

*ORGANIC MATTER CONTENT:* moderate

**AGRONOMIC INFORMATION:**

Wetness is the major management concern .

**EUNOLA SERIES**

**TAXONOMIC CLASSIFICATION:**

Fine- loamy, siliceous, thermic Aquic Hapludults

**REPRESENTATIVE PEDON**

Ap - - 0 to 7 inches; grayish brown (lOYR 5/3) loamy sand; weak fine subangular blocky structure; very friable; common fine and medium roots; moderately acid; abrupt wavy boundary.

E - - 7 to 17 inches; light yellowish brown (lOYR 6/4) loamy sand; weak fine subangular blocky structure; very friable; moderately acid; clear wavy boundary.

Btl - - 17 to 30 inches; brownish yellow (lOYR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; few fine pores; very strongly acid; gradual wavy boundary.

Bt2 - - 30 to 47 inches; yellowish brown (lOYR 6/6) sandy

loam and sandy clay loam; weak medium subangular blocky structure; friable; common medium distinct gray (lOYR 6/1) masses of iron accumulation; few medium distinct brown (7.5YR 5.6) masses of iron accumulation; very strongly acid; gradual wavy boundary .

BCg - - 47 to 60 inchesi gray (lOYR 6/1) sandy loam;

massive i friable i common medium faint light gray (lOYR 7/1) iron depletions with clear boundaries in the matrix; very strongly acid .

## REPRESENTATIVE PEDON LOCATION:

A typical pedon of Eunola loamy sand, 0 to 2 percent slopes, is located 30 feet west from the entrance of the research centeri 0 .2 mile north on unpaved road i 0 .3

mile west; 200 feet south i 75 feet west .

The A or Ap horizon has hue of lOYR, value of 3 to 5, and chroma of 1 to 4. It is loamy sand.

The E horizon has hue of lOYR, value of 4 to 7, and chroma of 3 to 4 . It is loamy sand .

The upper Bt horizon has hue of lOYR, value of 5 to 7, and chroma of 3 to 8. It is sandy loam or sandy clay loam.

The lower Bt horizon has hue of lOYR, value of 4 to 8, and chrom of 1 to 8, or it is multicolored with no dominant hue. It has few to common masses of iron accumulation in

shades of red or yellow. loam .

It is sandy clay loam or clay

The BCg horizon has hue of lOYR, value of 4 to 8, and chroma of 1 to 2. Masses of iron accumulation in shades of

brown or yellow are present in most pedons . loam or sandy clay loam.

It is sandy

**GEOGRAPHICALLY ASSOCIATED SOILS:**

These are the Goldsboro, Lynchburg, Noboco, Ocilla and Rains soils . Goldsboro, Lynchburg, Noboco, Ocilla and Rains soils do not have a clay content decrease of greater than 20 percent of the maximum within 60 inches of the soil surface . In addition, Noboco soils are well drained,

Lynchburg soils are somewhat poorly drained, and Rains soils are poorly drained .

**REPRESENTATIVE PEDON LOCATION:**

A typical pedon of Eunola loamy sand, 0 to 2 percent slopes, is located 30 feet west from the entrance of the research center; 0.2 mile north on unpaved road; 0.3

mile west; 200 feet south; 75 feet west .

**MAP UNIT DESCRIPTION**

*EnA* - - *Eunola loamy sand,* 0 to *2 percent slopes*

**SETTING**

The Eunola series consists of very deep, moderately well drained, moderately permeable soils that formed in loamy marine and fluvial sediments on the Coastal Plain. These soils are on nearly level upland areas and stream terraces.

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

0 to 7 inches - - brownish loamy sand

*SUBSURFACE LAYER:*

7 to 17 inches

*SUBSOIL:*

17 to 30 inches

30 to 47 inches mottles

brownish loamy sand

brownish sandy clay loam

brownish sandy clay loam with gray

47 to 60 inches - - grayish sandy loam and loamy sand

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the moderately well drained Goldsboro and the somewhat poorly drained Lynchburg soils. Included similar soils make up less than 15 percent of the map unit.

**SOIL PROPERTIES**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2 .0 to 3 .0 feet

*AVAILABLE WATER CAPACITY:* low

*EROSION HAZARD:* slight *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Wetness is the major management concern .

**MAP UNIT DESCRIPTION**

*EnB* - *Eunola loamy sand, 1* to *3 percent slopes.*

**SETTING**

The Eunola series consists of very deep, moderately well drained, moderately permeable soils that formed in loamy marine and fluvial sediments on the Coastal Plain. These soils are on nearly level upland areas and stream terraces .

**REPRESENTATIVE PEDON**

*SUR FACE LAY ER :*

O to 7 inches - - brownish loamy sand

*SUBSURFACE LAY ER :*

7 to 17 inches

*SUBSO I L :*

17 to 30 inches

30 to 47 inches mottles

brownish loamy ·sand

brownish sandy clay loam

brownish sandy clay loam with gray

47 to 60 inches - - grayish sandy loam and loamy sand

**MAP UNIT COMPOSITION**

*Included Similar Soils*

This is the moderately well drained Hornsville soils .

Included soils make up 0 to 10 percent of this unit .

**SOIL PROPERTIES:**

*PERMEAB I L I TY :* moderate slow

*SEASONAL HIGH WATER TABLE DEPTH:* 2 .0 to 3.0 feet

*AVAILABLE WATER CAPACITY:* low

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern .

**MAP UNIT DESCRIPTION**

*EuA* - - *Eunola sandy loam,* 0 to *2 percent slopes, depositional*

**SETTING**

The Eunola series consists of very deep, moderately well drained, moderately permeable soils that formed in loamy marine and fluvial sediments on the Coastal Plain . This phase consists of Eunola soils that have been covered with 8 to 12 inches of loamy spoil material dredged from nearby drainage ditches . These soils are on nearly level upland areas and stream terraces.

**R EPR ESENTATIVE PEDON**

*SURFACE LAY ER :*

0 to 4 inches - - brownish sandy loam

4 to 12 inches - - grayish sandy loam

*SUBSO I L :*

12 to 28 inches

28 to 38 inches mottles

brownish sandy clay loam

brownish sandy clay loam with gray

38 to 45 inches - - brownish sandy clay loam with grayish and

brownish mottles

45 to 60 inches grayish sandy loam and sandy clay loam with brownish mottles

**MAP UNIT COMPOSITION**

2 4

*Similar Soils*

These are the moderately well drained Goldsboro and soils and the somewhat poorly drained Lynchburg soils .

Included similar soils make up less than 15 percent of the map unit .

**SOIL PROPERTIES**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2 .0 to 3 .0 feet

*AVAILABLE WATER CAPACITY :* low

*EROSION HAZARD :* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT :* low

**AGRONOMIC INFORMATION:**

Wetness is the major management concern .

**GOLDSBORO SERIES**

**TAXONOMIC CLASSIFICATION:**

Fine-loamy, siliceous, thermic Aquic Paleudults

**R EPRESENTATIVE PEDON**

A - - 0 to 8 inches; brown (lOYR 5/3) loamy sand; weak fine subangular blocky structure; friable; few fine roots ; slightly acid; clear wavy boundary .

Btl - - 8 to 28 inches; yellowish brown (lOYR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few clean sand grains; common medium faint yellowish brown (lOYR 6/6) masses of iron accumulation; moderately acid; gradual wavy boundary.

Bt2 - - 28 to 38 inches; yellowish brown (lOYR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; few clean sand grains; common medium faint yellowish brown (lOYR 5/8) and common medium distinct (lOYR 6/1) masses of iron accumulation; very strongly acid;

gradual wavy boundary .

Btgl - - 38 to 49 inches; gray (lOYR 6/1) sandy clay loam; moderate medium subangular blocky structure; friable;

common distinct clay films on faces of peds; common medium distinct yellowish brown (lOYR 5/4), common medium prominent yellowish red (5YR 5/8), and common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy

boundary.

Btg2 - - 49 to 62 inches; gray (lOYR 5/1) sandy clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; common medium distinct strong brown (7.5YR 5/6) and common medium prominent yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy

boundary.

**RANGE IN CHARACTERISTICS:**

Solum thickness is more than 60 inches. Reaction is extremely acid to strongly acid throughout.

The Ap horizon has hue of lOYR, value of 4 or 5, and chroma of 2 or 3. It is loamy sand. Some areas that near drainage ditches and roads have a sandy clay loam surface layer.

The upper part of the Bt horizon has hue of lOYR, value of 4 to 6, and chroma of 3 to 8 . Masses of iron

# accumulation in shades of red, yellow, or brown range from none to common. It is sandy clay loam.

The lower part of the Bt horizon has hue of lOYR, value of 4 to 7, and chroma of 3 to 8 . Iron depletions range

from few to common within a depth of 18 to 30 inches. It is sandy clay loam, or clay loam .

The Btg horizon has hue of lOYR, value of 4 to 7, and chroma of 1 through 8. Masses of iron accumulation in shades of red, yellow, or brown range from few to common.

It is sandy clay loam or clay loam

**GEOGRAPHICALLY ASSOCIATED SOILS:**

# These are the Bonneau, Eunola, Lynchburg, Noboco, Ocilla, and Rains soils. Eunola soils have a clay content decrease of greater than 20 percent of the maximum within 60 inches of the soil surface . Noboco . soils are well drained .

Lynchburg soils are somewhat poorly drained. Rains soils are poorly drained. Bonneau and Ocilla soils have A and E horizons more than 20 inches thick.

**REPRESENTATIVE PEDON LOCATION:**

# A typical pedon of Goldsboro sandy loam, 0 to 2 percent slopes; 0.5 north from the entrance of the research center; 0 .5 mile west on unpaved road; 125 feet south of road .

**MAP UNIT DESCRIPTION**

*GbA* - - *Goldsboro loamy sand ,* 0 to *2 percent slopes*

**SETTING**

These very deep, moderately well drained, moderately permeable soils are on broad level flats on the Coastal Plain.

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

0 to 8 inches

*SUBSOIL:*

brownish loamy sand

8 to 28 inches - - brownish sandy clay loam with yellow

mottles

28 to 38 inches - - brownish sandy clay loam with brown and gray mottles

38 to 62 inches - - grayish sandy clay loam with brown and red mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the moderately well drained Eunola and Ocilla soils. The somewhat poorly drained Lynchburg soils and the poorly drained Rains soils. Included similar soils make up less than 15 percent of the map unit .

*Dissimilar soils*

These are the well drained Noboco and Bonneau soils.

Included dissimilar soils make up 0 to 10 percent of the map unit.

## SOIL PROPERTIES

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2 .0 to 3 .0 feet

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT :* low

## AGRONOMIC INFORMATION:

Wetness is the major management concern.

**MAP UNIT DESCRIPTION**

*GdA* - - *Goldsboro sandy clay loam,* 0 to *2 percent slopes, depositional*

**SETTING**

These very deep, moderately well drained, moderately permeable soils on broad flats on the Coastal Plain . This phase consists of Goldsboro soils that have been covered with 8 to 12 inches of loamy spoil material dredged from nearby drainage ditches .

**REPRESENTATIVE PEDON**

*SURFACE LAYERS:*

0 to 12 inches - mottled grayish and brownish sandy clay loam

12 to 20 inches, grayish sandy loam

*SUBSOIL:*

20 to 28 inches - yellowish brown sandy clay loam with brownish yellow mottles

28 to 38 inches - yellowish brown sandy clay loam with yellowish brown and gray mottles

38 to 49 inches - gray sandy clay loam with yellowish brown , strong brown, and yellowish red mottles

49 to 62 inches - gray sandy clay loam with strong brown and yellowish red mottles

62 to 70 inches - gray sandy clay loam with light gray mottles

**MAP UNIT COMPOSITION**

*Similar soils*

These are the moderately well drained Eunola and Ocilla soils . The somewhat poorly drained Lynchburg soils and the poorly drained Rains soils . Included similar soils make up less than 15 percent of the map unit .

*Dissimilar soils*

These are the well drained Noboco and Bonneau soils.

Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES**

*PERMEABILITY :* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2.0 to 3 .0 feet

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Wetness is the major management concern.

**HORNSVILLE SERIES**

**TAXONOMIC CLASSIFICATION:**

Clayey, kaolinitic thermic Aquic Hapludults

**REPRESENTATIVE PEDON**

Ap - - 0 to 2 inches; very dark gray (lOYR 3/1) sandy loam; weak fine granular structure; friable; many fine and few medium roots; moderately acid; abrupt wavy boundary.

E - - 2 to 4 inches; pale brown (lOYR 6/3) sandy loam; weak fine subangular blocky structure; friable; many fine roots; few fine pores; few quartz gravel; moderately acid; abrupt wavy boundary.

BE - - 4 to 13 inches; yellowish brown (lOYR 5/4) sandy clay loam; common medium prominent yellowish red (5YR 5/8) mottles; weak medium subangular blocky structure; friable; common distinct clay films on faces of peds; few very fine roots; common medium prominent yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btl - - 13 to 22 inches; yellowish brown (lOYR 5/4) sandy clay; moderate medium subangular blocky structure; friable; few very fine roots; common distinct clay

films on faces of peds; common medium distinct yellowish red (5YR 5/8) and common fine distinct gray

(lOYR 6/1) iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

Bt2 - - 22 to 27 inches; brownish yellow (lOYR 5/4) clay; strong medium subangular blocky structure; firm; few very fine roots; common distinct clay films on faces of peds; fine distinct yellowish red (5YR 5/8) masses

of iron accumulation; common medium distinct gray (lOYR 5/1) iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

Btgl - - 27 to 37 inches; gray (lOYR 5/1) clay, moderate medium subangular blocky structure; firm; common very fine roots; few fine pores; many distinct clay films on faces of peds; common medium distinct yellowish brown (lOYR 5/4) and red (2.5YR 4/8) masses of iron accumulation; very strongly acid; gradual wavy

boundary .

Btg2 - - 37 to 46 inches; gray (lOYR 5/1) sandy clay; weak medium subangular blocky structure; firm in place; common medium prominent red (2.5YR 5/8) and common medium distinct yellowish brown (lOYR 5/4) masses of iron accumulation; very strongly acid; gradual wavy boundary.

BCg - - 46 to 60 inches; gray (N 6/) sandy clay and sandy clay loam; massive; friable; pockets of stripped sand; common medium distinct light gray (lOYR 7/2) iron depletions with clear boundaries in the matrix; common medium prominent red (2.SYR 4/8) masses of iron accumulation; ; very strongly acid.

**RANGE IN CHARACTERISTICS:**

Solum thickness ranges from 40 to more than 60 inches .

Reaction is strongly or very strongly acid .

The A or Ap horizon has hue of lOYR, value of 2 to 5, and chroma of 1 to 4. It is sandy loam.

The E horizon has hue of lOYR, value of 4 to 7, and chroma of 1 to 4 . It is sandy loam .

The BE horizon has hue of lOYR, value of 4 to 7, and chroma of 1 to 4 . It is sandy clay loam

The Bt horizon has hue of SYR to lOYR, value of 4 to 7 and chroma of 3 to 8 . Iron depletions occur within 24 inches o the argillic horizon. It is clay loam, sandy clay, or clay .

The lower part of the Bt horizon has hue of 7.5YR or lOYR 1 value of 4 to 7 and chroma of 1 to *8 1* or it is

multicolored without a dominant hue. clay 1 or clay.

It is clay loam 1 sandy

The Btg horizon has hue of 7.5YR or lOYR 1 value of 4 to

7 and chroma of 1 to 3 . Few to common masses of iron accumulation in shades of red 1 and yellow are in most pedons . It is sandy clay 1 or clay.

The BCg horizon has hue of lOYR 1 value of 4 to 7 and chroma of 1 to 3 . Few to common masses of iron accumulation in shades of red 1 yellow 1 and brown are present in some pedons. It is sandy clay, or clay .

**GEOGRAPHICALLY ASSOCIATED SOILS :**

These are the well drained Noboco soils . Noboco soils are fine- loamy .

**REPRESENTATIVE PEDON LOCATION:**

A typical pedon of Hornsville sandy loam 1 1 to 3 percent slopes, eroded 1 is located 0 .3 mile north on paved road from the entrance of the research center; 250 feet east of road .

**MAP UNIT DESCRIPTION**

*HnA* - *Hornsville sandy loam,* 0 to *1 percent slopes.*

**SETTING**

The Hornsville series consists of very deep, moderately well drained, moderately slowly permeable soils that formed in clayey marine sediments. These soils are on nearly level areas on the Coastal Plain .

**REPRESENTATIVE PEDON**

*SURFACE LAYER :*

0 to 10 inches grayish sandy loam

*SUBSOIL :*

10 to 14 inches - brownish sandy clay loam

14 to 24 inches - brownish sandy clay with grayish mottles

24 to 57 inches - grayish clay with yellowish and reddish mottles

57 to 65 inches - grayish and reddish sandy clay loam,

sandy clay, and clay

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the moderately well drained Eunola soils. Also included are small areas of Hornsville soils that have been covered by more than 10 inches of spoil material dredged from drainage ditches. Included similar soils make up less than 10 percent of the unit.

*Dissimilar Soils*

These are the poorly drained Coxville and Rains soils .

These included soils make up 0 to 10 percent of the unit.

**SOIL PROPERTIES**

*PERMEABILITY:* moderately slow

*SEASONAL HIGH WATER TABLE DEPTH:* 2.5 to 3 .5 feet

*AVAILABLE WATER CAPACITY:* high

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Wetness is the major management concern for this soil .

**MAP UNIT DESCRIPTION**

*HnB* - *Hornsville sandy loam, 1* to *3 percent slopes.*

**SETTING**

The Hornsville series consists of very deep, moderately well drained, moderately slowly permeable soils that formed in clayey marine sediments. These soils are on gently

sloping areas on the Coastal Plain .

**REPRESENTATIVE PEDON**

*SUR FACE LAY ER :*

0 to 10 inches - grayish sandy loam

*SUBSO I L :*

10 to 14 inches - brownish sandy clay loam

14 to 24 inches - brownish sandy clay with grayish mottles

24 to 57 inches - grayish clay with yellowish and reddish mottles

57 to 65 inches - grayish and reddish sandy clay loam, sandy clay, and clay

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the moderately well drained Eunola. Included similar soils make up less than 15 percent of the unit .

**SOIL PROPERTIES**

*PERMEABILITY:* moderately slow

*SEASONAL HIGH WATER TABLE DEPTH:* 2.5 to 3.5 feet

*AVAILABLE WATER CAPACITY:* high

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* moderate *ORGANIC MATTER CONTENT:* low

## AGRONOMIC INFORMATION:

Erosion is the major management concern for this soil .

**MAP UNIT DESCRIPTION**

*HnB2* - *Hornsville sandy loam, 1* to *3 percent slopes, eroded.*

**SETTING**

The Hornsville series consists of very deep, moderately well drained, moderately slowly permeable soils that formed in clayey marine sediments . These soils are on gently sloping areas on the Coastal Plain .

**REPRESENTATIVE PEDON**

*SURFACE LAYER :*

0 to 2 inches - grayish sandy loam

*SUBSURFACE LAY ER :*

2 to 4 inches - brownish sandy loam

*SUBSOI L :*

4 to 13 inches - brownish sandy clay with reddish mottles

13 to 27 inches - brownish sandy clay and clay with reddish and grayish mottles

27 to 46 inches - grayish clay and sandy clay with reddish and brownish mottles

*SUBST RATUM :*

46 to 60 inches - grayish sandy clay loam and sandy clay

These are the moderately well Eunola soils on similar landscapes . Included similar soils make up less than 15 percent of the unit .

*Dissimilar Soils*

These are the poorly drained Coxville and Rains soils are on lower landscapes . These included soils make up 0 to

10 percent of the unit .

**SOIL PROPERTIES**

*PERMEABILITY:* moderately slow

*SEASONAL HIGH WATER TABLE DEPTH:* 2.5 to 3 .5 feet

*AVAILABLE WATER CAPACITY :* high

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* moderate *ORGANIC MATTER CONTENT :* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern for this soil.

**MAP UNIT DESCRIPTION**

*HnC2* - *Honsville sandy loam, 3* to 5 *percent slopes, eroded.*

**SETTING**

The Hornsville series consists of very deep, moderately well drained, moderately slowly permeable soils that formed in clayey marine sediments. These soils are on gently sloping areas on the Coastal Plain.

**REPRESENTATIVE PEDON**

*SUR FACE LAY ER :*

O to 2 inches - grayish sandy loam

*SUBSURFACE LAYER :*

2 to 4 inches - brownish sandy loam

*SUBSOI L :*

4 to 13 inches - brownish sandy clay with reddish mottles

13 to 27 inches - brownish sandy clay and clay with reddish and grayish mottles

27 to 46 inches - grayish clay and sandy clay with reddish and brownish mottles

*SUBSTRATUM :*

46 to 60 inches - grayish sandy clay loam and sandy clay

These are the well drained Eunola soils on similar landscapes. Included similar soils make up less than 15 percent of the unit.

*Dissimilar Soils*

These are the poorly drained Coxville and Rains soils are on lower landscapes . These included soils make up 0 to

10 percent of the unit.

**SOIL PROPERTIES**

*PERMEABILITY:* moderately slow

*SEASONAL HIGH WATER TABLE DEPTH:* 2.5 to 3.5 feet

*AVAILABLE WATER CAPACITY:* high

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* moderate *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern for this soil .

**MAP UNIT DESCRIPTION**

*HnD2* - *Hornsville sandy loam, 1* to *3 percent slopes, eroded .*

**SETTING**

The Hornsville series consists of very deep, moderately well drained, moderately slowly permeable soils that formed in clayey marine sediments . These soils are on gently sloping areas on the Coastal Plain.

**REPRESENTATIVE PEDON**

*SURFACE LAYER :*

0 to 2 inches - grayish sandy loam

*SUBSURFACE LAY ER :*

2 to 4 inches - brownish sandy loam

*SUBSOI L :*

4 to 13 inches - brownish sandy clay with reddish mottles

13 to 27 inches - brownish sandy clay and 6lay with reddish and grayish mottles

27 to 4 6 inches - grayish clay and sandy clay with reddish and brownish mottles

*SUBSTRATUM :*

4 6 to 6 0 inches - grayish sandy clay loam and sandy clay

These are the well drained Eunola soils on similar landscapes. Included similar soils make up less than 15 percent of the unit.

*Dissimilar Soils*

These are the poorly drained Coxville and Rains soils are on lower landscapes . These included soils make up 0 to

10 percent of the unit .

**SOIL PROPERTIES**

*PERMEABILITY:* moderately slow

*SEASONAL HIGH WATER TABLE DEPTH:* 2.5 to 3.5 feet

*AVAILABLE WATER CAPACITY:* high

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* moderate *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern for this soil .

**LYNCHBURG SERIES**

**TAXONOMIC CLASSIFICATION:**

Fine- loamy, siliceous, thermic Aerie Paleaquults

**REPRESENTATIVE PEDON**

Ap - - O to 11 inches; grayish brown (lOYR 5/2) sandy loam; weak fine subangular blocky structure; very friable; common medium and fine roots; few small pockets of

loamy B material; few clean sand grains; strongly acid; clear wavy boundary.

BE - - 11 to 15 inches; pale brown (lOYR 6/3) sandy loam; weak medium subangular blocky structure; friable; few fine roots; common medium distinct light gray (lOYR 7/2) iron depletions with clear boundaries in the matrix; and few medium distinct brownish yellow (lOYR 6/8) masses of iron accumulation; moderately acid; clear wavy boundary.

Btgl - - 15 to 30 inches; light brownish gray (lOYR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; few medium distinct clay films on faces of peds; common fine pores; common medium distinct brownish yellow (lOYR 6/8) masses of iron

accumulation and common medium prominent yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg2 - - 30 to 49 inches; light brownish gray (lOYR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; few medium distinct clay films on faces of peds; common fine pores; common medium distinct yellowish brown (lOYR 5/6) masses of iron

accumulation with clear in the matrix and common medium prominent yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy

boundary.

Btg2 - - 49 to 75 inches; gray (lOYR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; common distinct clay films on faces of peds; common fine pores; common medium distinct brownish yellow (lOYR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

## RANGE IN CHARACTERISTICS:

Solum thickness exceeds 60 inches. Reaction . is extremely acid to strongly acid throughout .

The Ap horizon has hue of lOYR, value of 2 to 4, and chroma of 0 to 2 . It is sandy loam.

The BE horizon has hue of lOYR or 2.5Y, value of 5 to 6 and chroma of 3 to 6 . It is sandy loam .

The Bt horizon has hue of lOYR or 2 .5Y, value of 5 to

6, and chroma of 3 to 8 . loam, or clay loam .

It is sandy loam, sandy clay loam,

The Btg horizon has hue of lOYR to 2 .5Y, value of 4 to

7, and chroma of 0 to 2 . clay loam .

It is loam, sandy clay loam, or

## GEOGRAPHICALLY ASSOCIATED SOILS:

These are the Coxville, Eunola, Goldsboro, Ocilla and Rains soils . Ocilla soils have A and E horizons more than 20 inches thick . Coxville and Rains soils have dominant chroma of 2 or less throughout the horizon. Goldsboro soils do not have gray ottles of chroma 2 or less within 18 inches of

the surface. Eunola soils decrease in clay content by more than 20 percent of the maximum within 60 inches of the surface .

## REPRESENTATIVE PEDON LOCATION:

A typical pedon of Lynchburg sandy loam, 0 to 2 percent slopes, is located 0.5 mile north on paved road from the entrance of the research center; 0 .3 mile west on unpaved road; 200 feet south west of road .

**MAP UNIT DESCRIPTION**

*Ly* - - *Lynchburg sandy loam,* O to *2 percent slopes .*

**SETTING**

These very deep, somewhat poorly drained, moderately

permeable soils formed in loamy marine sediments. on broad flats on the Coastal Plain .

They are

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

1. to 11 inches - grayish loamy sand

*SUBSOIL:*

1. to 15 inches - brownish sandy clay loam with grayish mottles

15 to 75 inches - grayish sandy clay loam with yellowish and reddish mottles

**MAP UNIT COMPOSITION**

*Similar soils*

These are the moderately well drained Goldsboro and Ocilla soils. Included similar soils make up less than 10 percent of the map unit.

*Dissimilar Soils*

The poorly drained Rains and Coxville soils. Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE:* 0.5 to 1.5 feet

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight *SURFACE RUNOFF :* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Wetness is the major management concern .

**NOBOCO SERIES**

**TAXONOMIC CLASSIFICATION:**

Fine-loamy, siliceous, thermic Typic Paleudults

**REPRESENTATIVE PEDON**

Ap - - 0 to 7 inches; dark grayish brown (lOYR 4/2) loamy sand; weak fine subangular blocky structure; very friable; few very fine and fine roots; few clean sand grains; few pockets of E horizon material; neutral; abrupt wavy boundary.

E - - 7 to 13 inches; very pale brown (lOYR 7/4) loamy sand; weak fine subangular blocky structure; very friable; few very fine roots; neutral; gradual wavy boundary .

Btl - - 13 to 31 inches; yellowish brown (lOYR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few very fine roots; common fine pores;

distinct clay films on faces of peds and along old root channels; few clean sand grains; strongly acid; gradual wavy boundary.

Bt2 - - 31 to 45 inches; yellowish brown (lOYR 5/6) sandy clay loam; moderate medium faint yellowish brown (lOYR 5/4) and moderate medium distinct yellowish red (5YR 5/8) mottles; moderate medium subangular blocky

structure; friable; few very fine pores; few distinct clay films on faces of peds; 2 percent nodules of plinthite; few clean sand grains; common medium faint yellowish brown (lOYR 5/4) and common medium prominent yellowish red (5YR 5/8) masses of iron accumulation;av strongly acid; gradual wavy boundary .

Bt3 - - 45 to 60 inches; strong brown (7.5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; common clean sand grains; common medium prominent red (2.5YR 4/6) masses of iron accumulation; common medium distinct gray (lOYR 6/1) iron depletions with clear boundaries in the matrix; very strongly acid .

## RANGE IN CHARACTERISTICS:

Solum thickness is more than 60 inches. Reaction is very strongly acid or strongly acid throughout .

The Ap horizon has hue of lOYR, value of 4 to 6, and chroma of 1 to 4 . It is loamy sand .

The E horizon has hue of lOYR, value of 6 or 7, and chroma of 2 to 4 . It is loamy sand.

The upper part of the Bt horizon has hue of 7.5YR or lOYR, value of 3 or 6, and chroma of 3 or 8 . Masses of iron

accumulation in shades of red, yellow, or brown range from none to common. It is sandy loam or sandy clay loam.

The lower part of the Bt horizon has hue of 7 .SYR or lOYR, value of 5 or 6, and chroma of 3 to 8 . Masses of iron accumulation in shades of red, yellow, or brown range from few to common. Iron depletions are within 30 to 48 inches of the surface . It is sandy clay loam or clay loam.

**GEOGRAPHICALLY ASSOCIATED SOILS:**

These are the Blanton, Bonneau, Coxville, Goldsboro, Lynchburg, Norfolk, Ocilla and Rains soils. Blanton, Bonneau, and Ocilla soils have A and E horizons more than 20 inches thick . Coxville and Rains have dominant chroma of 2 or less throughout the horizon. Goldsboro and Lynchburg soils have gray mottles of chroma 2 or less within 30 inches of the surface . Norfolk soils do not have gray mottles of chroma 2 or less within 48 inches of the surface .

**REPRESENTATIVE PEDON LOCATION:**

A typical pedon of Noboco loamy sand, 0 to 2 percent slopes, is located 0.5 mile north on paved road from the entrance of the research center; 0 .3 mile west on unpaved road; 0 .3 mile south on unpaved road; 200 feet west .

**MAP UNIT DESCRIPTION:**

*NbA* - - *Noboco loamy sand,* 0 to *1 percent slopes .*

**SETTING**

The Noboco series consist of very deep, well drained, moderately permeable soils that formed in loamy marine sediments . These soils are on nearly level upland areas on the Coastal Plain .

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

0 to 7 inches - - brownish loamy sand

*SUBSURFACE LAYER:*

7 to 13 inches

*SUBSOIL:*

13 to 31 inches

31 to 45 inches red mottles

brownish loamy sand

brownish sandy . clay loam

brownish sandy clay loam with yellow and

45 to 60 inches - - brown sandy clay loam with gray and red

mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

The well drained Norfolk soils. Included similar soils make up less than 10 percent of the map unit .

*Dissimilar Soils*

These are the well drained Bonneau soils and the moderately well drained Goldsboro soils. Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2.5 to 4.0 ft

**AVAILABLE WATER CAPACITY:** moderate

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

There are no major management concerns.

**MAP UNIT DESCRIPTION**

*NbB* - - *Noboco loamy sand, 1* to *3 percent slopes .*

**SETTING**

The Noboco series consist of very deep, well drained, moderately permeable soils that formed in loamy marine sediments. These soils are on gently sloping upland areas on the Coastal Plain.

**REPRESENTATIVE PROFILE**

*SURFACE LAY ER :*

0 to 7 inches - - brownish loamy sand

*SUBSURFACE LAY ER :*

7 to 13 inches

*SUBSO I L :*

13 to 31 inches

31 to 45 inches red mottles

brownish loamy sand

brownish sandy clay loam

brownish sandy clay loam with yellow and

45 to 60 inches - - brownish sandy clay loam with gray and

red mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

The well drained Norfolk soils . Included similar soils make up less than 10 percent of the map unit .

*Dissimilar Soils*

These are the well drained Bonneau soils and the moderately well drained Goldsboro soils. Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2 .5 to 4.0 ft

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern for this soil .

**MAP UNIT DESCRIPTION SETTING**

*NcA* - - *Noboco loamy sand, thin surface, 0* to *1 percent*

*slopes.*

**SETTING**

The Noboco series consist of very deep, well drained, moderately permeable soils that formed in loamy marine sediments . These soils are on nearly level upland areas on the Coastal Plain . These soils have surface layers less than 10 inches thick.

**REPRESENTATIVE PEDON SURFACE LAYER:**

0 to 6 inches - - brownish loamy sand

**SUBSURFACE LAYER**

6 to 8 inches

**SUBSOIL:**

brownish loamy sand

8 to 31 inches - - brownish sandy clay loam

31 to 48 inches - - brownish sandy clay loam with red and gray mottles

48 to 60 inches - - brownish sandy clay loam with gray and red mottles

*Similar Soils*

The well drained Norfolk soils. Included similar soils make up less than 10 percent of the map unit.

*Dissimilar Soils*

These are the well drained Bonneau soils and the moderately well. drained Goldsboro soils. Included dissimilar soils make up 0 to 10 percent of the map unit.

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2 .5 to 4.0 ft

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

There are no major management concerns.

**MAP UNIT DESCRIPTION**

*NcB* - - *Noboco loamy sand, thin surface, 1* to *3 percent slopes.*

**SETTING**

The Noboco series consist of very deep, well drained, moderately permeable soils that formed in loamy marine sediments. These soils are on gently sloping upland areas on the Coastal Plain.

**R EPRESENTATIVE PROFILE SURFACE LAYER:**

0 to 6 inches - - brownish loamy sand

**SUBSURFACE LAYER**

6 to 8 inches

**SUBSOIL:**

brownish loamy sand

8 to 31 inches - - brownish sandy clay loam

31 to 48 inches - - brownish sandy clay loam with red and gray mottles

48 to 60 inches - - brownish sandy clay loam with gray and red mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the well drained Norfolk and moderately well drained Goldsboro soils. Included similar soils make up less than 10 percent of the map unit.

*Dissimilar Soils*

These are the well drained Bonneau soils and the moderately well drained Goldsboro soils. Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2. 5 to 4.0 ft

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern for this soil .

**MAP UNIT DESCRIPTION**

*NlA* - *Noboco sandy loam,* 0 to *1 percent slopes.*

**SETTING**

This map unit consists of very deep, well drained, moderately permeable soils that formed in loamy marine sediments . These soils are on nearly level upland areas on the Coastal Plain .

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

0 to 10 inches brownish sandy loam

*SUBSURFACE LAYER:*

10 to 14 inches - - brownish sandy loam

*SUBSOIL:*

14 to 32 inches - - yellowish sandy clay loam with brown mottles

32 to 42 inches - - yellowish sandy lay loam with red mottles and gray mottles

42 to 57 inches - - mottled grayish and brownish sandy clay loam

57 to 65 inches - - grayish sandy clay with brown mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

The well drained Norfolk soils. Included similar soils make up less than 10 percent of the map unit .

*Dissimilar Soils*

These are the well drained Bonneau soils and the moderately well drained Goldsboro soils . Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 2.5 to 4.0 ft

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

There are no major management concerns.

**NORFOLK SERIES**

**TAXONOMIC CLASSIFICATION:**

Fine- loamy, siliceous, thermic Typic Kandiudults

**REPRESENTATIVE PEDON**

Ap - - 0 to 5 inches; grayish brown (lOYR 5/2) loamy sand; weak fine subangular blocky structure; friable; common very fine, fine and medium roots; few fine pores; common clean sand grains; moderately acid; abrupt wavy boundary.

E - - 5 to 17 inches; light yellowish brown (lOYR 6/4) loamy sand; weak fine subangular blocky structure; friable; few very fine roots; few .very fine pores; moderately acid; gradual wavy boundary .

Btl - - 17 to 23 inches; yellowish brown (lOYR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; few very fine roots; common distinct clay films on faces of peds; strongly acid; gradual wavy boundary .

Bt2 - - 23 to 34 inches; yellowish brown (lOYR 5/6) sandy clay loam; weak medium subangular blocky structure;

friable; few fine roots; few fine pores; common distinct clay films on faces of peds; few clean sand grains; very strongly acid; gradual wavy boundary.

Bt3 - - 34 to 54 inches; yellowish brown (lOYR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few fine pores; common

distinct clay films on faces of peds; few clean sand grains; common medium prominent yellowish red (5YR 5/8) and few medium faint yellowish brown (lOYR 5/4) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bt4 - - 54 to 63 inches; yellowish brown (lOYR 5/6) sandy clay loam; moderate medium subangular blocky structure; gray part is firm; red and brown parts are friable; common distinct clay films on faces of peds; common

fine prominent red (2.5YR 4/8) masses of iron accumulation; common fine distinct gray (lOYR 6/1) iron depletions with clear boundaries in the matrix; very strongly acid.

## RANGE IN CHARACTERISTICS

Solum thickness exceeds 60 inches. Reaction is

extremely acid to strongly acid throughout. have up to 4 percent plinthite .

Some pedons

The Ap horizon has hue of lOYR, value of 5 or 6, and chroma of 2 to 4. It is loamy sand.

The E horizon has hue of lOYR, value of 6 or 7, and chroma of 2 or 6 . It is loamy sand.

The upper Bt horizon has hue of 7.5YR or lOYR, value of

5 or 6, and chroma of 6 or 8 . Masses of iron accumulation in shades of red, yellow or brown range from none to common. It is sandy loam, or sandy clay loam .

The lower Bt horizon has hue of 7.5YR or lOYR, value of

5 or 6, and chroma of 3 to 8. Masses of iron accumulation in shades of red, yellow or brown range from none to common. Iron depletions are within 48 to 72 inches of the surface. It is sandy clay loam, or clay loam .

## GEOGRAPHICALLY ASSOCIATED SOILS

These are the Blanton, Bonneau, Coxville, Goldsboro, Lynchburg, Noboco, Rains and Wagram soils . Blanton,

Bonneau, and Wagram soils have A and E horizons more than 20 inches thick . Coxville and Rains have dominant chroma of 2 or less throughout the horizon. Goldsboro and Rains soils have gray mottles of chroma 2 or less within 30 inches of

the surface. Lynchburg soils have gray mottles of chroma 2 or less in the uppermost layer of the argillic horizon .

Noboco soils have gray mottles of chroma 2 or less within 48 inches of the surface.

## REPRESENTATIVE PEDON LOCATION:

A typical pedon of Norfolk loamy sand, 0 to 3 percent slopes, is located 0.7 mile north on paved road from the entrance of the research center 0.1 mile east on farm road; 0 .2 mile north on farm road; 0 .1 mile east on farm road; 600 feet south .

**MAP UNIT DESCRIPTION**

*NnA* - - *Norfolk loamy sand, thin surface,* 0 to *1 percent slopes.*

**SETTING**

The Norfolk series consist of very deep, well drained, moderately permeable soils that formed in loamy marine sediments. These soils are on nearly level ridge tops on the Coastal Plain. These soils have surface layers less than

10 inches thick .

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

0 to 8 inches

*SUBSOIL:*

brownish loamy sand

8 to 35 inches - - brownish sandy clay loam

35 to 56 inches - - brownish sandy clay loam with red and brown mottles

56 to 60 inches - - brownish sandy clay with red and gray mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the well drained Noboco. Included similar soils make up less than 10 percent of the map unit.

*Dissimilar Soils*

These are the well drained Wagram and Bonneau soils

Included dissimilar soils make up 0 to 10 percent of the map unit.

**SOIL PROPERTIES:**

*PERMEAB I L I TY :* moderate

*S EASONAL H I GH WATER TABLE DEPTH :* 4 .0 to 6 feet

*AVA I LABLE' WATER CAPACI TY :* moderate

*EROS I ON HAZARD :* slight

*SURFACE RUNOFF :* slow

*ORGAN I C MATT ER CONTENT :* low

**AGRONOMIC INFORMATION:**

There are no major management concerns .

*NnB* - - *Norfolk loamy sand, thin surface, 1* to *3 percent slopes .*

**SETTING**

The Norfolk series consist of very deep, well drained, moderately permeable soils that formed in loamy marine sediments . These soils are on nearly level ridge tops and side slopes on the Coastal Plain . These soils have surface layers less than 10 inches thick.

**REPRESENTATIVE PEDON**

*SURFACE LAY ER :*

0 to 8 inches

*SUBSO I L :*

brownish loamy sand

8 to 35 inches - - brownish sandy clay loam

35 to 56 inches - - brownish sandy clay loam with red and brown mottles

56 to 60 inches - - brownish sandy clay with red and gray mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

The well drained Noboco. Included similar soils make up less than 10 percent of the map unit .

*Dissimilar Soils*

These are the well drained Wagram and Bonneau soils

Included dissimilar soils make up 0 to 10 percent of the map unit.

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 4 .0 to 6 feet

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern.

**MAP UNIT DESCRIPTION**

*NoA* - - *Norfolk loamy sand,* 0 to *l percent slopes.*

**SETTING**

The Norfolk series consist of very deep, well drained, moderately permeable soils that formed in loamy marine sediments. These soils are on nearly level ridge tops on the Coastal Plain.

**REPRESENTATIVE PEDON**

*SURFACE LAY ER :*

0 to 5 inches - - brownish loamy sand

*SUBSURFACE LAY ER :*

5 to 17 inches

*SUBSO I L :*

17 to 34 inches

34 to 54 inches brown mottles

brownish loamy sand

brownish sandy clay loam

brownish sandy clay loam with red and

54 to 63 inches - - brownish sandy clay loam with red and

gray mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the well drained Noboco. Included similar soils make up less than 10 percent of the map unit.

*Dissimilar Soils*

These are the well drained Wagram and Bonneau soils Included dissimilar soils make up 0 to 10 percent of the map unit.

## SOIL PROPERTIES:

*PERMEABILITY:* moderate

*SEASOIJAL HIGH WATER TABLE DEPTH:* 4.0 to 6 feet

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* low

## AGRONOMIC INFORMATION:

There are no major management concerns .

*NoB* - - *Norfolk loamy sand 1* to *3 p ercent slopes.*

**SETTING**

The Norfolk series consist of very deep, well drained, moderately perm eable soils that formed in loamy marine sediments. These soils are on nearly level ridge tops and side slopes on the Coastal Plain.

**REPRESENTATIVE PEDON**

*SURFACE LAY ER :*

0 to 5 inches - - brownish loamy sand

*SUBSURFACE LAY ER :*

5 to 17 inches

*SUBSOI L :*

17 to 23 inches

23 to 34 inches

34 to 54 inches brown mottles

54 to 63 inches gray mottles

brownish loamy sand

brownish sandy clay loam brownish sandy clay loam

brownish sandy clay loam with red and

- - brownish sandy clay loam with red and

**MAP UNIT COMPOSITION**

*Similar Soils*

The well drained Noboco. Included similar soils make up less than 10 percent of the map unit.

*Dissimilar Soils*

These are the well drained Wagram and Bonneau soils

Included dissimilar soils make up 0 to 10 percent of the map unit.

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 4 .0 to 6 feet

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT :* low

**AGRONOMIC INFORMATION:**

Erosion is the major management concern.

**OCILLA SERIES**

**TAXONOMIC CLASSIFICATION:**

Loamy, siliceous, thermic Aquic Arenic Paleudults.

**R EPRESENTATIVE PEDON**

Ap - - 0 to 12 inches; brown (lOYR 5/3) sand; weak fine granular structure; very friable; few fine roots; moderately acid; clear smooth boundary.

El - - 12 to 18 inches; light yellowish brown (lOYR 6/4) loamy sand; weak fine subangular blocky structure; very friable; few fine roots; few fine and medium pores; moderately acid; clear wavy boundary.

E2 - - 18 to 25 inches; very pale brown (lOYR 7/3) loamy sand; weak fine subangular blocky structure; very friable; few fine roots; few fine and medium pores; very strongly acid; clear wavy boundary.

Btl - - 25 to 48 inches; light yellowish brown (lOYR 6/4) sandy clay . loam; weak medium subangular blocky structure; friable; few fine roots; common fine and medium pores; few distinct clay films on faces of peds; few clean sand grains; common medium distinct strong brown (7.5YR 5/6) and common medium prominent yellowish red (5YR 5/6) masses of iron accumulation; common

medium distinct gray (lOYR 6/1) iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

Btg - - 40 to 60 inches; gray (lOYR 6/1) sandy clay loam; moderate medium subangular blocky structure; friable; common fine and medium pores; few distinct clay films

on faces of peds; yellowish brown (lOYR 5/8) and strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid .

**RANGE IN CHARACTERISTICS**

Solum thickness is greater than 60 inches. Reaction is very strongly acid or strongly acid throughout . Iron depletions are **wit hin** 12 to 30 inches of the surface.

The A or Ap horizon has hue of lOYR, value of 3 to 5, and chrow.a of 1 or 2. It is sand.

The E horizon has hue of lOYR, value of 4 to 8 and chroma of 1 to 4. It is sand.

The Bt horizon has hue of lOYR, value of 5 to 7 and chroma of 1 to 8. Masses of iron accumulation **in** shades of

red, yellow or brown range from few to common. loam or sandy clay loam.

It is sandy

The Btg horizon has hue of lOYR, value of 5 to 7 and chroma of 1 or 2. Masses of iron accumulation in shades of

red, yellow, or brown range from few to common. loam or sandy clay loam .

It is sandy

**GEOGRAPHICALLY ASSOCIATED SOILS**

These are the Blanton, Bonneau, Coxville, Noboco, Norfolk, Rains and Uchee soils. Blanton soils are grossarenic. Coxville and Rains soils have gray horizons immediately below surface layer . Bonneau soils do not have mottles of chroma 2 or less within 30 inches of the surface . Norfolk and Noboco soils do not have arenic epipedons.

**REPRESENTATIVE PEDON LOCATION:**

A typical pedon of Ocilla sand, 0 to 3 percent slopes , is located 0.5 mile north on paved road from the entrance of the research center, 0.5 mile north on paved road; 0.3 mile west on unpaved road; 0 .1 mile west on unpaved road; 100

feet east .

### MAP UNIT DESCRIPTION

*OcB* - - *Ocilla loamy sand, 0* to *3 percent slopes*

### SETTING

This map unit consists of very deep, well drained, moderately permeable soils that formed in loamy marine sediments . These soils are on nearly level to gently sloping low ridges, side slopes and around the inner rim of oval shaped depressions on the Coastal Plain .

### REPRESENTATIVE PEDON

*SURFACE LAYER :*

0 to 12 inches brownish loamy sand

*SUBSURFACE LAYER :*

12 to 25 inches - - brownish loamy sand

*SUBSO I L :*

25 to 48 inches - - brownish sandy clay loam with red and gray mottles

48 to 60 inches - - mottled brownish, reddish and grayish sandy clay loam

### MAP UNIT COMPOSITION

*Similar Soils*

These are the moderately well drained Goldsboro and Lynchburg and Rains soils. Included similar soils make up about 10 percent of the map unit.

*Dissimilar Soils*

These are the well drained Bonneau and Noboco soils .

Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 1.0 to 2 .5 feet

*AVAILABLE WATER CAPACITY:* low

*EROSION HAZARD:* moderate *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:**

Wetness, low nutrient holding capacity, and soil blowing are the major management concerns.

**RAINS SERIES**

**TAXONOMIC CLASSIFICATION:**

Fine-loamy, siliceous, thermic Typic Paleaquults

Ap - - 0 to 8 inches; very dark gray (lOYR 3/1) sandy loam; weak fine granular structure; friable; common very fine and fine roots; few fine pores; few clean sand grains; slightly acid; abrupt wavy boundary.

Btg - - 8 to 14 inches; light brownish gray (lOYR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; common very fine and fine roots; common distinct clay films on faces of peds; few clean sand grains; few fine distinct brownish yellow (lOYR 6/6) masses of iron accumulation; slightly acid; gradual wavy boundary.

Btg2 - - 14 to 28 inches; gray (lOYR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; common fine and few coarse pores; common distinct clay films on faces of peds; common clean sand grains; common medium distinct reddish yellow (7.SYR 6/6) and few fine prominent red (2.SYR 5/8) masses of iron accumulation; strongly acid; gradual wavy

boundary.

Btg3 - - 28 to 40 inches; gray (lOYR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; common fine and medium pores; common distinct clay films on faces of peds; many coarse clean sand grains; common medium distinct yellowish brown (lOYR 6/6) and common medium prominent red (2.5YR 5/8) masses of iron accumulation; very strongly acid; abrupt wavy boundary.

Btg4 - - 40 to 51 inches; gray (lOYR 5/1) sandy clay; moderate medium subangular blocky structure; firm; many distinct clay films on faces of peds; common clean sand grains; common fine distinct light red (2.5YR 6/8) and olive yellow (2.5Y 6/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg5 - - 51 to 61 inches; gray (lOYR 6/1) sandy clay; weak medium subangular blocky structure; firm; few medium distinct olive yellow (2.5Y 6/6) masses of iron accumulation; few medium faint gray (N/6) clay depletions with gradual boundaries in the matrix; very strongly acid; gradual wavy boundary .

Btg6 - - 61 to 65 inches; gray (lOYR 5/1) sandy clay and sandy clay loam; moderate medium subangular blocky structure parting to weak medium prismatic; firm; few fine distinct olive yellow (2.5Y 6/6) and few fine distinct red (2.5YR 4/6) masses of iron accumulation

with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

BCg - - 65 to 70 inches; gray (lOYR 6/1) sandy clay loam and sandy clay; massive; firm; few medium distinct yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid.

**RANGE IN CHARACTERISTIC**

Solum thickness is greater than 80 inches. Reaction is extremely acid to strongly acid throughout .

The Ap horizon has hue of lOYR, value of 2 to 5, and chroma of 0 to 2. It is sandy loam.

The Btg horizon has hue of lOYR, value of 4 to 7, and chroma of 0 to 2 . Masses of iron accumulation in shades of red, yellow or brown range from few to common. It is sandy loam, sandy clay loam, or sandy clay.

**GEOGRAPHICALLY ASSOCIATED SOILS**

These are the Bonneau, Coxville, Goldsboro, Lynchburg, Noboco and Ocilla soils. Bonneau, Goldsboro, Lynchburg, Noboco and Ocilla. In addition, Bonneau and Ocilla soils have A and E horizons more than 20 inches thick. Coxville soils have a clayey particle-size control section.

**REPRESENTATIVE PEDON LOCATION:**

A typical pedon of Rains sandy loam is located 0.4 mile northeast from the entrance of the research center; 0.4 mile north; .05 north on farm road; .05 mile east .

**MAP UNIT DESCRIPTION**

*Ra* - - *Rains sandy loam.*

**SETTING**

The Rains soils consists of very deep, poorly drained, moderately permeable soils that formed in loamy marine sediments. They are on nearly level flats or depression on the Coastal Plain.

**REPRESENTATIVE PEDON**

*SURFACE LAYER:*

0 to 8 inches

*SUBSOIL:*

grayish sandy loam.

8 to 14 inches - - grayish sandy clay loam with yellowish

mottles

14 to 40 inches - - grayish sandy clay loam with yellowish and reddish mottles

40 to 65 inches - grayish sandy clay with yellowish and reddish mottles

65 to 70 inches - grayish sandy clay loam and sandy clay with reddish mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the Coxville , Ocilla, and Lynchburg soils. Included similar soils make up less than 10 percent of the map unit .

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* 0 to 1.0 feet

*AVAILABLE WATER CAPACITY:* moderate

*EROSION HAZARD:* slight

*SURFACE RUNOFF:* slow

*ORGANIC MATTER CONTENT:* moderate

**AGRONOMIC INFORMATION:**

Wetness is the major management concern.

**UCHEE SERIES**

**TAXONOMIC CLASSIFICATION:**

loamy, siliceous, thermic, Arenic Hapludults

**R EPRESENTATIVE PEDON**

Ap - - 0 to 5 inch; grayish brown (lOYR 4/2) sand; weak fine granular structure; very friable; many medium, fine and very fine roots; common clean sand grains; slightly acid; clear wavy boundary .

E2 - - 5 to 25 inches; brownish yellow (lOYR 6/6) sand; weak fine subangular blocky structure; very friable; many fine roots; strongly acid; gradual wavy boundary .

Btl - - 25 to 34 inches; reddish yellow (7.5YR 6/8) sandy clay loam; weak medium subangular blocky structure; friable; few distinct clay films on faces of peds and along old root channels; few clean sand grains; common medium faint brownish yellow (7.5YR 6/6) masses of iron accumulation; very strongly acid; gradual wavy

boundary .

Bt2 - - 34 to 41 inches; strong brown (7.5YR 5/6) sandy clay; common medium distinct brownish yellow (lOYR 6/8) and common medium prominent red (2.5YR 4/8) mottles;

moderate medium subangular blocky structure; firm in place; dense; few very fine roots; few distinct clay films on faces of peds; common clean sand grains; very strongly acid; gradual wavy boundary.

BC - - 41 to 46 inches; variegated color pattern consisting of 60 percent red (2.SYR 4/8) 40 percent brownish yellow (lOYR 6/8) sandy loam and sandy clay loam; massive; dense; very strongly acid; clear wavy boundary .

C - - 46 to 60 inches; variegated color pattern consisting of

34 percent (2.SYR 4/8), 33 percent white (lOYR 8/1), and 33 percent brownish yellow (lOYR 6/8) sandy loam and loamy sand; massive; common small masses of white

(lOYR 8/1) balls of kaolin; very friable; very strongly acid.

**RANGE IN CHARACTERISTICS**

Solum thickness range from 40 to more than 60 inches . Reaction is very strongly acid or strongly acid throughout .

The A horizon has hue of lOYR, value of 4 to 5, and chroma of 1 to 4 . It is sand .

The E horizon has hue of lOYR, value of 5 to 6, and chroma of 4 to 6. It is sand.

The upper Bt horizon has hue of 2.SYR to lOYR, value of

5 to 7, and chroma of 4 to 8. Masses of iron accumu lation

in shades of red, yellow, or brown range from few to common . It is sandy loam or sandy clay loam .

The lower Bt horizon has hue of 7 .SYR or lOYR, value of

5 to 7 and chroma of 4 to 8. Masses of iron accumulation in shades of red , yellow, or brown range from few to many .

Iron depletions are within 40 to 60 inches of the surface . It is sandy clay loam, clay loam, sandy clay, or clay.

The BC horizon has hue of 7 .SYR or lOYR, value of 5 to

7 and chroma of 4 to 8. Masses of iron accumulation in shades of red, yellow, or brown range from few to many . It is sandy loam or sandy clay loam.

The C horizon is variegated in shades of red, yellow, brown, gray, or white . It is sandy loam or sandy clay loam, or is stratified in coarser and finer textured material .

### GEOGRAPHICALLY ASSOCIATED SOILS

These are the Bonneau, Blanton, Noboco and Wagram soils. Blanton soils are grossarenic. Coxville and Rains soils have gray horizons immediately below surface layer. Noboco soils do not have surface horizons more than 20 inches deep. Wagram and Bonneau soils are Paleudults.

**REPRESENTATIVE PEDON LOCATION:**

A typical pedon of Uchee sand, 0 to 3 percent slopes, is located 1.2 miles northeast from the entrance of the research center, 0.05 mile west on farm road; 250 southwest .

**MAP UNIT DESCRIPTION**

*23B* - - *Uchee sand,* 0 to *6 percent slopes .*

**SETTING**

This map unit consists of very deep, well drained, moderately permeable soils that formed in loamy marine sediments. These soils are on nearly level ridges and sloping side slopes near drainageways on the Coastal Plain .

**REPR ESENTATIVE PEDON**

*SURFACE LAY ER :*

0 to 5 inches grayish sand

*SUBSURFACE LAY ER :*

5 to 25 inches

*SUBSOI L :*

25 to 34 inches

34 to 41 inches reddish mottles

brownish sand

reddish sandy clay loam

brownish sandy clay with yellowish and

41 to 46 inches - - reddish and yellowish sandy clay loam and

sandy loam

*SUBSTRATUM :*

46 to 60 inches - - mottled reddish, yellowish and white sandy loam and loamy sand

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the well drained Bonneau and Wagram soils,

and the well drained to somewhat excessively drained Blanton soils. Included similar soils make up less than 10 percent of the map unit.

**SOIL PROPERTIES:**

*PERMEAB I L I T Y :* moderately slow

*S EASONAL H I GH WATER TABLE DE PTH :* 3.5 to 5.0 feet

*AVAI LABLE WATER CAPACI TY :* low

*EROS I ON HAZARD :* slight

*SUR FACE RUNOFF :* moderate

*ORGAN I C MATT ER CONTENT :* low

**AGRONOMIC INFORMATION:**

Droughtiness, low nutrient holding capacity, and soil blowing are the major management concerns.

### WAGRAM SERIES

**TAXONOMIC CLASSIFICATION:**

Loamy, siliceous, thermic Typic Kandiudults

### REPRESENTATIVE PEDON

Ap - - 0 to 8 inches; grayish brown (lOYR 5/2) sand; weak fine granular structure; very friable; few fine roots; slightly acid; clear wavy boundary.

E - - 8 to 25 inches; light yellowish brown (lOYR 6/4) sand; weak fine granular structure; very friable; few fine roots; slightly acid; clear wavy boundary.

Btl - - 25 to 40 inches; reddish yellow (7.5YR 6/8) sandy clay loam; weak fine subangular blocky structure; friable; few fine roots; common fine and medium pores; few distinct clay films on faces of peds; common medium faint brownish yellow (lOYR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bt2 - - 40 to 60 inches; reddish yellow (7.5YR 6/8) sandy

clay loam; moderate medium subangular blocky structure; friable; few distinct clay films on faces of peds; common medium clean sand grains; few medium distinct yellowish red (5YR 5/6) masses of iron accumulation; strongly acid.

**RANGE IN CHARACTERISTICS:**

Solum thickness exceeds 60 inches . Reaction is strongly acid or very strongly acid throughout.

The A or Ap horizon has hue of lOYR, value of 5, and chroma of 2 to 4 . Texture is sand.

The E horizon has hue of lOYR, value of 5 and chroma of

3 to 6 . It is sand.

The Bt horizon has hue of 7.5YR or lOYR, value of 5 or 6, and chroma of 6 or 8. It is sandy loam or sandy clay loam. Masses of iron accumulation in shades of red, yellow or brown range from few to common . Iron depletions are 60 inches or more below the surface.

**GEOGRAPHICALLY ASSOCIATED SOILS:**

These are the Blanton, Bonneau, Noboco, Norfolk, and Uchee soils. Blanton soils are grossarenic . Bonneau soils have chroma 2 iron depletions in the matrix within 60 inches of the surface. Noboco and Norfolk soils do not have

|  |  |  |
| --- | --- | --- |
| surface horizons | more | than 20 inches deep. Uchee soils have |
| clay percentages | that | decrease by more than 20 percent of |

the maximum within 60 inches .

**REPRESENTATIVE PEDON LOCATION:**

A typical pedon of Wagram Sand, 0 to 6 percent slopes; is located 0 .8 mile northeast of the research center entrance; 0 .1 mil e north on farm road; 0 .1 mile east on farm road; 10 feet north .

**MAP UNIT DESCRIPTION**

J OB - - *Wagram loamy sand,* 0 to *4 percent slopes*

**SETTING**

The Wagram series consists of very deep, well drained, moderately permeable soils that formed in loamy marine sediments . These soils are on nearly level ridge tops and gently sloping areas on the Coastal Plain .

**REPRESENTATIVE PROFILE:**

*SURFACE LAY ER :*

0 to 8 inches - - grayish brown sand

*SUBSURFACE LAYER :*

8 to 25 inches

*SUBSO I L :*

25 to 40 inches

40 to 60 inches

light yellowish brown sand

reddish yellow sandy clay loam reddish yellow sandy clay loam with

yellowish red mottles

**MAP UNIT COMPOSITION**

*Similar Soils*

These are the well drained Bonneau and Uchee soils and

the somewhat excessively drained Blanton soils. similar soils make 10 percent of the map unit. *Dissimilar Soils*

Included

These are the well drained Noboco and Norfolk soils .

Included dissimilar soils make up 0 to 10 percent of the map unit .

**SOIL PROPERTIES:**

*PERMEABILITY:* moderate

*SEASONAL HIGH WATER TABLE DEPTH:* greater than 6 feet

*AVAILABLE WATER CAPACITY:* low

*EROSION HAZARD:* slight *SURFACE RUNOFF:* slow *ORGANIC MATTER CONTENT:* low

**AGRONOMIC INFORMATION:** Draughtiness, low nutrient holding capacity, and soil blowing are the major management concerns .