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Virginia Agricultural Experiment Station **Bulletin 93-2**

Characterization and Composition of Selected Cecil Map Units in the Virginia Piedmont

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CHARACTERIZATION AND COMPOSITION OF SELECTED CECIL MAP UNITS IN THE VIRGINIA PIEDMONT

VAES Bulletin 93-2

August 1993

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COVER PHOTOGRAPH: Extent of Cecil and similar soils in the Virginia Piedmont superimposed on a typical Cecil landscape.

ABSTRACT

A study in Appomattox, Pittsylvania, and Lunenburg counties in the southern Piedmont of Virginia assessed composition and variability of a map unit named for a taxon of Typic Kanhapludults. Twelve delineations of Cecil sandy loam, 2 to 7 percent slopes, three to eight sites within each delineation, and three profiles within each site were randomly located in a two-level nested sampling scheme. Soil physical, chemical, and morphological data were collected from the Ap, Bt, and C horizons of each profile. In Appomattox County, 38 percent of the 81 profiles met the criteria for the Cecil soil series. An additional 33 percent of the profiles were taxonomically similar to Cecil. The remaining 29 percent were taxonomically dissimilar inclusions. In Pittsylvania County, 48 percent of the 75 profiles were Cecil series. An additional 47 percent of the profiles were taxonomically similar to Cecil. The remaining 5 percent were taxonomically dissimilar inclusions. In Lunenburg County, 42 percent of the 45 profiles were the Cecil series; the remaining 58 percent of the profiles were taxonomically similar to Cecil. Thus, the map unit in all three counties would be named Cecil and the map unit description in Appomattox and Pittsylvania counties would include dissimilar soils according to National Cooperative Soil Survey criteria. Taxonomic variability was reflected in the variability of taxonomically important soil properties. Percent base saturation decreased with depth in the profile. Maximum clay content occurred in the Bt horizon and ranged from 25 to 75 percent. The solum exhibited large variation in thickness. Subsoil properties important to classification (percent base saturation in the chemical control section, clay percentage in the particle-size control section, and solum thickness) exhibited considerable variation within delineations, but the variability was consistent from delineation to delineation. Intrusions of mafic material into the felsic crystalline system, from which Cecil and similar soils form, probably accounts for most of the variability in soil properties. Low plant-available water, low bases, and high P-fixing capacity are major management concerns of the Cecil and similar soils. Understanding the interrelationship between map unit composition, variability, and soil properties is essential in increasing the productivity of these major landscape units.

Acknowledgements

The authors express sincere thanks to the following persons, without whom this publication would not have been possible:

George W. Hawkins, Professor, Department of Crop and Soil Environmental Sciences
William J. Edmonds, Associate Professor, Department of Crop and Soil Environmental Sciences
Bruce Stoneman, Soil Specialist, Soil Conservation Service, Richmond
John Nicholson, Supervisory Soil Scientist, Soil Conservation Service, Farmville
William Kitchel, Party Leader, Virginia Tech, Appomattox County Soil Survey
Thomas Saxton, Soil Scientist, Virginia Tech, Appomattox County Soil Survey

Special thanks go to Louise Price and Christine Robertson for laboratory analysis of the 700+ samples.

Mary Holliman deserves special recognition for editing the manuscript.

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INTRODUCTION

The Cecil series, one of the most extensive series mapped in the Piedmont physiographic province of the southeastern United States, covers an estimated 10 million acres. Approximately 900,000 acres of Cecil have been mapped in Virginia. Cecil soils are recognized in Virginia, North Carolina, South Carolina, Georgia, and Alabama. The series was one of the first soil series established, named in Cecil County, Maryland, in 1899. Cecil was the typical concept of the Red-Yellow Podzolic soils formed from residuum. As mapping progressed and concepts were re-evaluated, new series were separated from Cecil. Hayesville was separated from Cecil in 1903 based on physiographic province (Hayesville is restricted to the Blue Ridge province). Appling was established in 1911, the differentiating characteristic being a yellower subsoil. Other series that have splintered from Cecil include Madison (high mica), Georgeville (high silt), and Pacolet (thin solum).

All these soils occur on the landscape in close association with Cecil. Map unit descriptions in modern soil surveys frequently include these soils as inclusions (Carter, 1971; McDaniel, 1981). Knowing the kind, extent, and properties of these inclusions and dissimilar inclusions will improve usability of soil survey reports.

Two regional studies on Cecil map unit composition were conducted in 1959 and 1971 encompassing the southern Piedmont from Virginia to Alabama (Rich et al., 1959; McCracken et al., 1971). Comparisons of morphological and chemical properties of the Cecil soil in these two studies are presented in Table 1 and Table 2. Clay content of the Bt horizon was greater in the 1971 study as compared to the 1959 study, probably because of the wider range in clay percentages. Base saturation is higher throughout the profile in the 1959 study, although cation-exchange capacity (CEC) and effective CEC are similar. Aluminum (Al^{3+}) is higher in the 1971 study. Overall, these studies reiterated that the Cecil series is red, clayey, and low in bases.

McCracken et al. (1989) studied a small virgin tract of Cecil sandy loam near Greensboro, North Carolina. Topsoils (A + E + BE) were thin, averaging 4 to 5 inches in thickness. If the virgin area was plowed to a depth of 10 inches, about 60 percent of the area would incorporate Bt horizon into the plow layer. Thus, these areas would probably be classified as moderate erosion according to current definitions (Soil Survey Staff, 1981). Solum thickness averaged 60 inches on summit positions and more than 78 inches on midslope positions. Bt horizon thickness averages about 30 inches on both landscapes. The upper 12 to 18 inches of most profiles were reworked sediments from upslope. Nutrient supply was low and acidity high throughout the profile. In a cultivated, eroded Cecil pedon exchangeable bases were much higher in both topsoil and subsoil, reflecting the importance of liming on supplying Ca and neutralizing acidity. However, CEC was similar between the virgin Cecil soil and the cultivated soil, although base saturation was five times higher in the cultivated soil.

Composition of a map unit named for the Cecil soil series was examined in the Georgia Piedmont (Powell and Springer, 1965). Inclusions made up 30 percent of the map unit, and Appling soils comprised 12 percent of the map unit. The Lloyd series was another major inclusion. Although the map unit had large percentages of inclusions, the percentage of dissimilar soils was small.

The objectives of this study were to examine soil map units named for the Cecil soil series in three counties in the Virginia Piedmont to i) quantitatively assess the taxonomic variability of a map unit and ii) assist in the proper classification

of widespread soils through a quantitative assessment of taxonomically important soil properties. These objectives will be discussed as follows: i) taxonomic variability at the series level, ii) taxonomic variability in each of the three counties, iii) taxonomic variability in each delineation, iv) variability of taxonomic soil properties in each county, and v) range in characteristics of the Cecil series. These discussions will highlight the interrelationship between soil map unit studies and use and management of these soils.

Table 1. Morphological properties for Cecil.

Horizon	Study†	Color	Clay‡	Texture
			%	
E	1959	5YR 4/6 10YR 6/6	11 7-21	SL
	1971	10YR 6/4 10YR 5/3	16 8-25	L-SL
Bt	1959	2.5YR 4/6	53 40-70	C
	1971	2.5YR 4/6	63 50-72	C
BC	1959	2.5YR 4/6	36 20-44	SIL-C
	1971	5YR 4/6 2.5YR 4/8	17 6-36	SL-CL

†1959 study -- 6 woodland sites, 2 cultivated sites
1971 study -- 3 woodland sites
‡Top value is average clay content; bottom value is range in clay content.

Table 2. Chemical properties for Cecil.

Horizon	Study†	CEC	ECEC	Al	B.S.
		---------cmol (+) kg^{-1}---------			%
A	1959	5.6	3.3	1.5	23
	1971	15.6	4.3	2.1	8
E	1959	4.2	2.3	1.3	22
	1971	6.4	1.7	1.3	3
Bt	1959	9.0	3.6	0.6	24
	1971	9.5	3.2	2.2	5
BC	1959	9.2	4.6	1.9	9
	1971	7.6	2.4	2.6	2
C	1959	7.6	5.9	4.8	10
	1971	--	2.3	2.4	--

†1959 study -- 6 woodland sites, 2 cultivated sites
1971 study -- 3 woodland sites

MATERIALS AND METHODS

Study Area

Appomattox, Pittsylvania, and Lunenburg counties are located in the south-central Piedmont region of Virginia (Figure 1). The Piedmont physiographic province is underlain by deformed, highly metamorphosed, eugeosynclinal felsic crystalline rocks of late Precambrian to early Paleozoic age. Extensive faulting and folding have caused intrusions of mafic rock into some of the felsic crystalline system (Fisher, 1970). The scale of the intrusions is variable, ranging from one or two meters to several kilometers. The study area in Appomattox and Pittsylvania counties is underlain by the Shelton granite gneiss with dikes of hornblende gabbro and hornblende gneiss interspersed throughout the unit. The study area in Lunenburg County is underlain by the Wissachickon granite gneiss (Calver, 1963).

Delineations selected for this study formed from the parent materials previously described. The dominant soils in the delineations fit within the Cecil series according to current official series descriptions. This benchmark soil is representative of large areas of the southern Piedmont of Virginia (Figure 1). The Cecil series is a member of the clayey, kaolinitic, thermic family of Typic Kanhapludults. This well-drained soil occurs on summit, shoulder, and sideslope positions of the Piedmont uplands (Figure 2). The Cecil series is typified by sandy loam to sandy clay loam surface horizons, depending on the degree of erosion. The underlying Bt horizon is red and highly structured, and has 40 to 60 percent clay. Cecil soils are naturally infertile with low cation exchange capacities and low base saturations.

Sampling Scheme

The soil survey for Lunenburg County was published in 1981 (McDaniel, 1981). Field work for the soil survey of Pittsylvania County was completed in 1988 and is awaiting publication. The soil survey of Appomattox County was completed in 1990 and is awaiting publication. Map unit delineations in this study were previously done in accordance with procedures of the National Cooperative Soil Survey and range from 2 to 5 ha (Soil Survey Staff, 1983). Five delineations in Appomattox County, four delineations in Pittsylvania County, and three delineations in Lunenburg County were selected for study. All delineations were in cultivated areas of Cecil sandy loam, 2 to 7 percent slopes. Three to eight sites within each delineation and three profiles within each site were randomly located in a two-level nested sampling scheme (Figure 3). The 7-m dimension for sites was chosen to represent variability at this level to take in account variability of soils that were cyclic. Each pedon (site) includes the variability that occurs within the site but not necessarily the variability in other similar pedons (sites) in a larger area (Soil Survey Staff, 1975). In Pittsylvania and Lunenburg counties, slight, moderate, and severe erosion classes were identified for an erosion-productivity study (Thomas et al., 1989). The criteria most commonly used for field identification of erosion severity in the Piedmont are color of the surface horizon and clay content. In general, a 10YR sandy loam surface horizon is considered slightly eroded, a 7.5YR sandy loam to sandy clay loam surface horizon is moderately eroded, and a 5YR or 2.5YR sandy clay loam surface is considered severely eroded. In Appomattox County, profiles were observed with a bucket auger to a depth of 72 inches. In Pittsylvania and Lunenburg counties, 3-inch diameter soil cores were taken to a depth of 72 inches with a truck-mounted hydraulic-powered Bull probe (Carl's Machine Shop, Inc., Woodward, Oklahoma). Profile descriptions were made on each auger and core sample. Samples were collected from the Ap horizon, the upper 20 inches of the Bt horizon, and the C horizon. In Pittsylvania and Lunenburg counties, separate 1.9-inch by 1-inch core samples were taken, one per site for the Ap and Bt horizon, with a double cylinder, hammer-driven core sampler for determination of bulk density and volumetric water contents.

Laboratory Methods

Particle size distribution of the samples was determined by sieving and by the hydrometer method (Day, 1965). Bulk density and -10kPa volumetric water content were determined on the double-cylinder soil cores. Volumetric water content at -1500 kPa was determined on crushed and sieved core samples used previously for the -10kPa determinations (Richards, 1965).

Chemical properties determined included pH, cation exchange capacity (CEC), effective CEC (sum of exchangeable bases plus exchangeable Al), organic matter, and available P. Soil pH was measured in a 1:1 soil to water paste. For the purpose of statistical analysis, hydronium ion (H_3O^+) concentrations were substituted for pH. Exchangeable bases (Ca^{2+}, Mg^{2+}, K^+) were extracted with 1 *M* NH_4OAc (pH 7.0), and extractable acidity was determined by extraction with $BaCl_2$-triethanolamine (pH 8.2) (Thomas, 1982). Exchangeable Al^{3+} and H^+ were extracted with 1 *M* KCl (pH 7.0) (Yuan, 1959). Soil organic matter was determined using the Walkley-Black method (Nelson and Sommers, 1982). Available

P was determined following extraction with 0.05 *M* HCl + 0.013 *M* H_2SO_4 (Mehlich, 1953). The Murphy-Riley colormetric procedure (Watanabe and Olsen, 1965) was used to measure P in the extracts.

Statistical Methods

Descriptive statistics of mean, standard deviation, minimum, and maximum values were estimated for each variable by the SAS univariate procedure (SAS, 1985). Comparisions were made between horizons for all soil properties and series and between delineations for taxa-limiting soil properties.

Observations (Y_{ijk}), e.g., clay percentage, base saturation, etc., in the map unit were described by the linear model

$$Y_{ijk} = \mu + D_i + S_{ij} + \varepsilon_{ijk}$$

where μ represents an overall mean, D_i represents the effect due to a particular delineation, S_{ij} represents the effect due to a particular site, and ε_{ijk} represents variation among the profiles within a given site as well as errors in sampling and laboratory procedures. Usual normality properties of D_i, S_{ij}, and ε_{ijk} were assumed, i.e. these components are normally and independently distributed with zero means and respective variances of σ_D^2, σ_S^2, and σ_ε^2 (Edmonds et al., 1982).

Analysis of variance was used to evaluate statistical differences among sites and among delineations for the measured soil properties (SAS, 1985). Differences among delineations were evaluated by an F-test using mean squares for sites. Differences among sites were evaluated by an F-test using residual mean squares.

Percent of the total variance contributed by each component in the sampling scheme was estimated by dividing variance contributed by the individual components by total variance (Sokal and Rohlf, 1985). Variance contributed by delineations, σ_D^2, is estimated by

$$\sigma_D^2 = \frac{(MS_D - MS_S)}{s'p}$$

where MS_D is the mean square for delineations, MS_S is the mean square for sites, s' is the number of sites per delineation, and p is the number of profiles per site. Variance contributed by sites, σ_S^2, was estimated by

$$\sigma_S^2 = \frac{(MS_S - MS_E)}{p}$$

where MS_E is mean square for profiles and error. Residual variance, σ_ε^2, is estimated by MS_E. Total variance, σ_T^2, is estimated by

$$\sigma_T^2 = \sigma_D^2 + \sigma_S^2 + \sigma_\varepsilon^2$$

With unequal number of sites per delineation, a modification of the estimation of σ_D^2 was required. The correction factor, s', for sites is given by

$$s' = \frac{[n - s\sum_{i}\frac{p_i^2}{p}]}{(d-1)}$$

where n is total number of observations; s is number of sites at each iteration, i, where i equals the number of iterations of $\frac{p_i}{p}$; p is the number of profiles; and d is the number of delineations (Lentner and Bishop, 1986). Estimates of variance components are obtained from an ANOVA table.

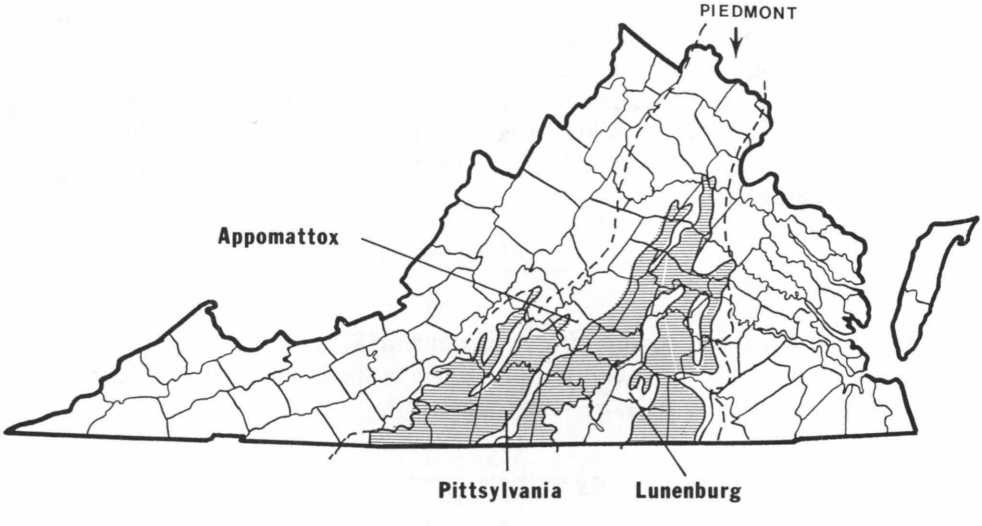

Figure 1. Extent of Cecil series and similar soils in the Virginia Piedmont and location of study areas.

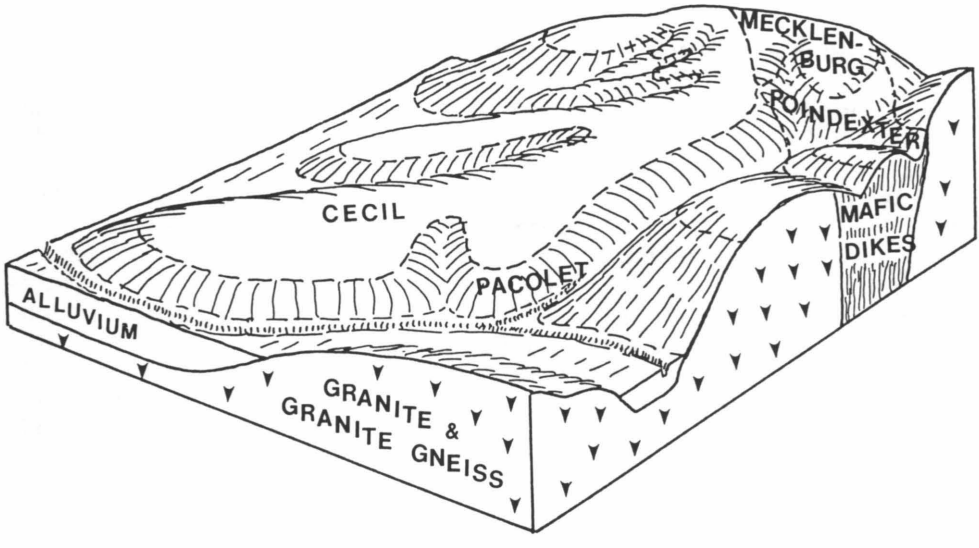

Figure 2. Cross-section of the Cecil landscape.

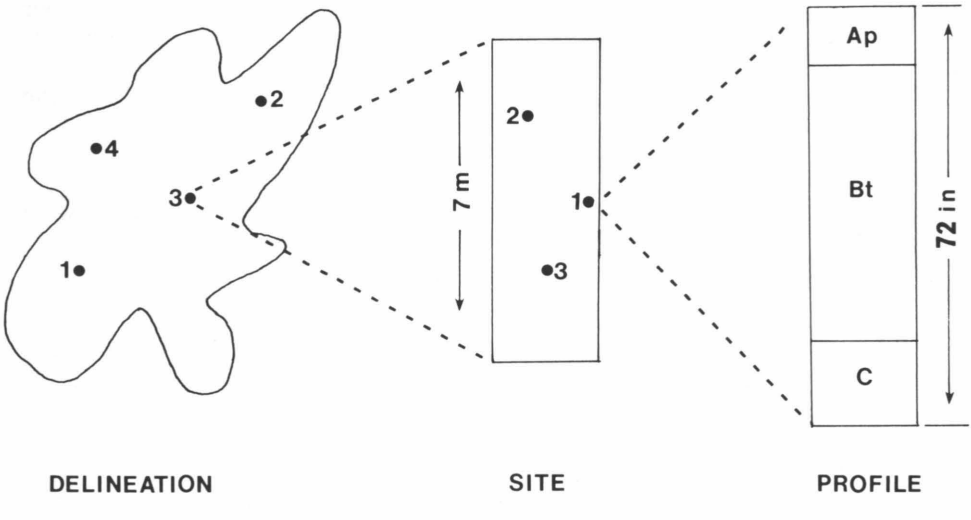

Figure 3. Diagrammatic representation of the nested sampling design.

RESULTS AND DISCUSSION

Taxonomic Variability - Soil Series

Each profile was classified based on the data available from chemical, particle size, and morphologic features. Data from each profile is given in Appendices A, B, and C. All the clayey, thermic Typic Kanhapludults and Hapludults formed from felsic parent materials were assumed to have kaolinitic mineralogy as determined mineralogical analyses of four representative profiles (Table 3). All of the Alfisols formed from mafic materials were assumed to have mixed mineralogy as determined mineralogical analysis of a representative profile (Table 3). These findings are consistent with data from the VPI&SU Soil Survey Characterization Laboratories for similar felsic and mafic soil materials.

The four family classes observed in the map unit and the suggested series that fit each family, with total number of observations of each series, are reported in Table 4. Two of the family classes were Ultisols with a combined total of five soil series (71% of the observations). The other two family classes were Alfisols with a combined total of three soil series (29% of the observations). Characteristics of the series are given in Figures 4 through 8. Cecil, Pacolet, Appling, Wedowee, and Georgeville soils are similar, having formed from felsic material, with the major differentiating characteristics being solum thickness, subsoil color, and subsoil silt content. Cecil and Pacolet both have red (2.5YR) subsoils. The Cecil soil has a solum thickness of 40 to 60 inches while the Pacolet has a solum thickness of less than 40 inches. The Appling subsoil is less red (7.5YR) than the Cecil soil. Wedowee is the thin-solum phase of Appling. The Georgeville soil is similar to Cecil but has a silt content greater than 30 percent in the Bt horizon. All soils formed from felsic materials appeared to have kaolinite as the dominant clay mineral, as determined by mineralogical analysis (Table 3).

The Mecklenburg soils are formed from mafic materials and are similar morphologically to Wedowee soils, dominantly having 5YR subsoils. Enon soils have hues that dominantly are 7.5YR. Poindexter soils, also mafic, have greater than 60 percent base saturation in the chemical control section and less clay in the subsoil than do Mecklenburg and Enon soils. In mafic soils, no one clay mineral is dominant; thus the mineralogy is mixed (Rich et al., 1959) (Table 3).

Soils with greater than 36 inch solum thicknesses are classified as Karma series. However, Poindexter soils, with a solum thickness of less than 36 inches, were correlated in all three counties. Thus, Poindexter will be correlated in this study instead of Karma. Use and management of Poindexter soils are similar to that of Karma soils.

All clayey, Ultisol profiles meet the criteria for a kandic horizon (effective CEC of clay < 12 $cmol_c kg^{-1}$) except for the Wedowee soil in Appomattox County (Figure 9). The Georgeville series also meets kandic horizon criteria but is classified as Typic Hapludult. The Enon soil in Pittsylvania County also meets kandic horizon criteria, but the other Alfisols have effective CEC of > 12 $cmol_c kg^{-1}$.

Selected soil properties and interpretations for each series in the map unit is given in Table 5 and Table 6. All Ultisols have similar properties and interpretations. Because of its high silt content, Georgeville has a higher K factor, an indication that it is more erodible. The Alfisols have properties and interpretations different from the Ultisols as to make the Alfisols dissimilar soils.

Table 3. Clay mineralogy of selected profiles (Appomattox County).

Profile	Clay minerals present (g kg^{-1})†								
	K	HIV	V	Mo	Mi	Ch	Qz	Gi	Fd
	----------Felsic profiles----------								
5-1	690	240	0	50	10	0	Tr.	10	Tr.
9-2	760	200	0	30	0	0	Tr.	10	Tr.
10-2	710	230	0	20	20	0	Tr.	20	Tr.
14-1	670	280	0	30	20	Tr.	Tr.	Tr.	Tr.
	----------Mafic profile----------								
2-3	340	280	80	240	30	10	20	0	Tr.

†K = Kaolinite; HIV = Hydroxy-Interlayered Vermiculite; V = Vermiculite; Mo = Montmorillonite; Mi = Mica; Ch = Chlorite; Qz = Quartz; Gi = Gibbsite; Fd = Feldspar; Tr. = Trace.

Table 4. Taxonomic classification and number of profiles in the Cecil map unit.

clayey, kaolinitic, thermic Typic Kanhapludults
Cecil (86), Pacolet (28), Appling (11), Wedowee (33)

clayey, kaolinitic, thermic Typic Hapludults
Georgeville (15)

fine, mixed, thermic Ultic Hapludalfs
Mecklenburg (10), Enon (4)

fine-loamy, mixed, thermic Typic Hapludalfs
Poindexter (14)

Table 5. Selected soil properties.

Soil Series†	Permeability	Shrink-Swell	K
Cecil	Moderate	Low	.28
Pacolet	Moderate	Low	.20
Appling	Moderate	Low	.24
Wedowee	Moderate	Moderate	.24
Georgeville	Moderate	Low	.43
Mecklenburg	Slow	Moderate	.24
Enon	Slow	High	.28
Poindexter	Moderate	Low	.28

†2 to 7 percent slopes; none to slight erosion

Table 6. Selected soil interpretations.

Soil Series†	Septic Tank Drainfields	Dwellings Basements	Corn Grain Yield
			bu/a
Cecil	Moderate	Slight	95
Pacolet	Moderate	Slight	80
Appling	Moderate	Slight	95
Wedowee	Moderate	Slight	80
Georgeville	Moderate	Slight	95
Mecklenburg	Severe	Moderate	90
Enon	Severe	Severe	95
Poindexter	Severe	Moderate	60

†2 to 7 percent slopes; none to slight erosion

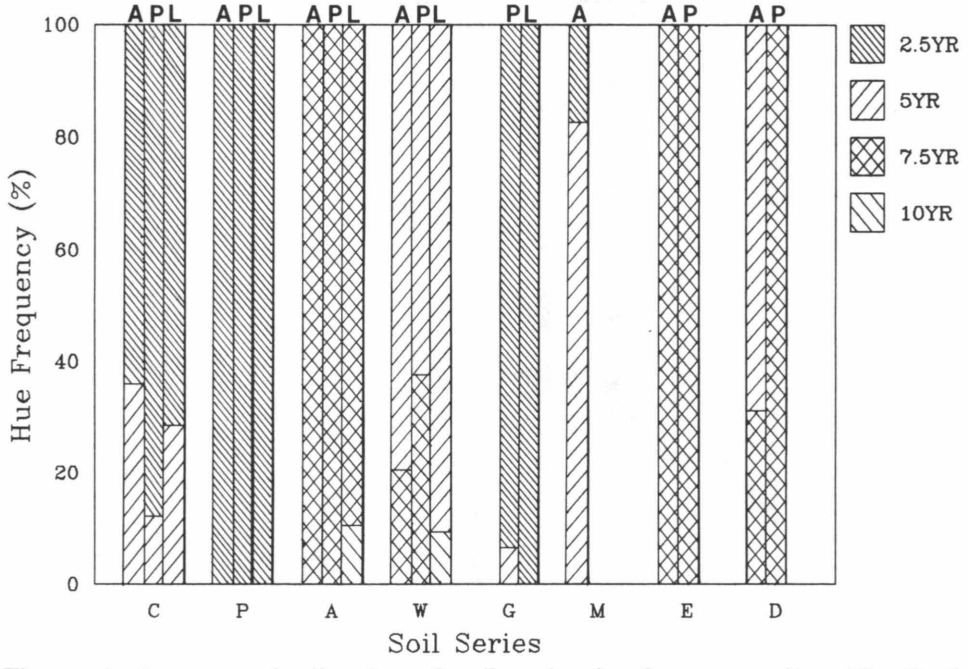

Figure 4. Average subsoil color of soil series in the map unit. (C = Cecil, P = Pacolet, A = Appling, W = Wedowee, G = Georgeville, M = Mecklenburg, E = Enon, D = Poindexter.)

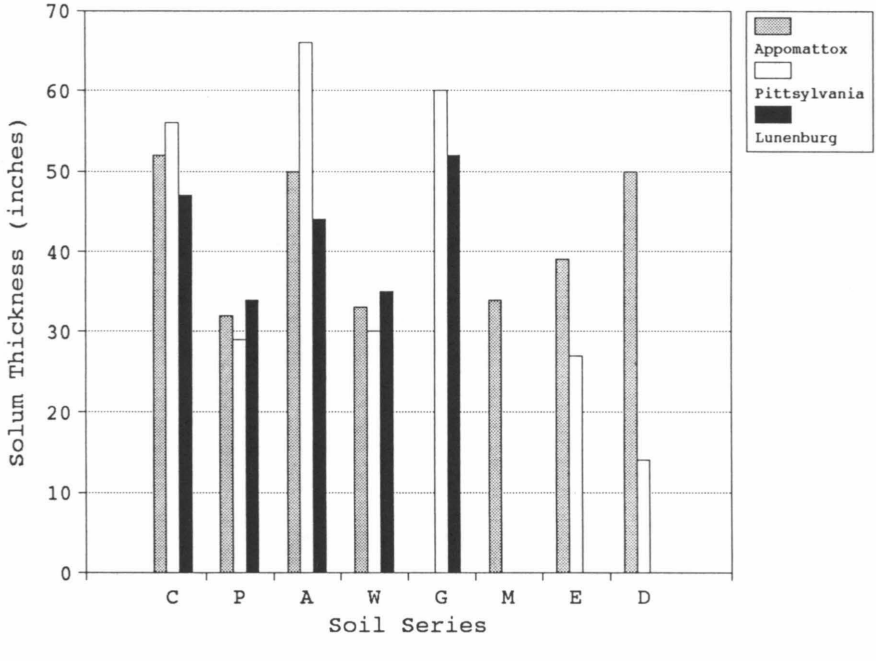

Figure 5. Average solum thickness of soil series in the map unit. (C = Cecil, P = Pacolet, A = Appling, W = Wedowee, G = Georgeville, M = Mecklenburg, E = Enon, D = Poindexter.)

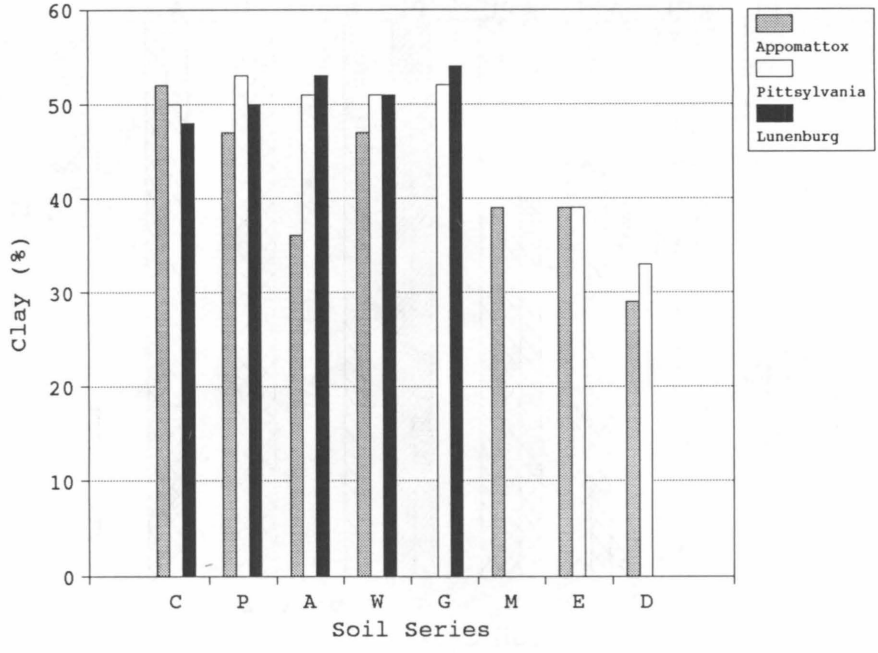

Figure 6. Average Bt horizon clay content of soil series in the map unit. (C = Cecil, P = Pacolet, A = Appling, W = Wedowee, G = Georgeville, M = Mecklenburg, E = Enon, D = Poindexter.)

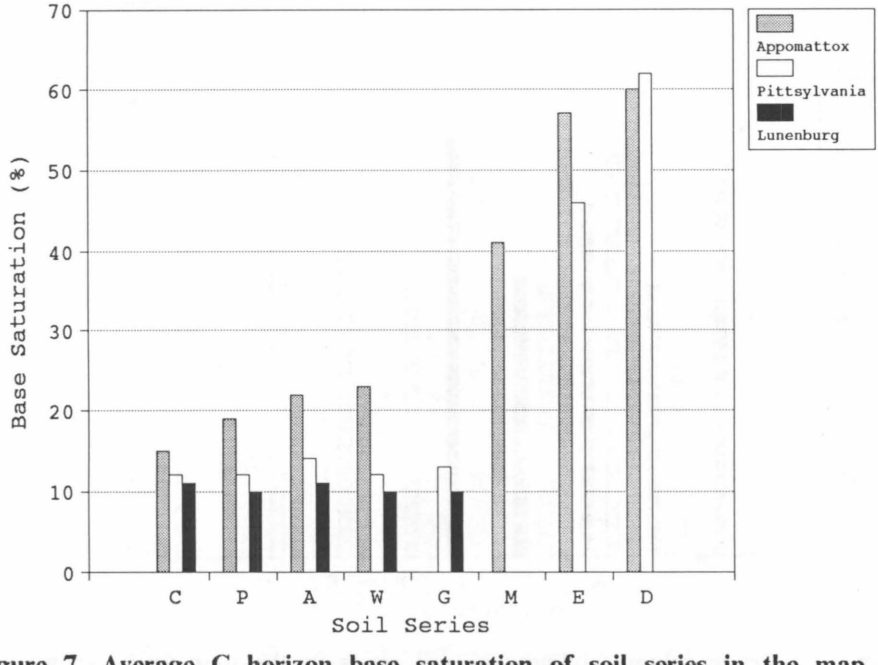

Figure 7. Average C horizon base saturation of soil series in the map unit. (C = Cecil, P = Pacolet, A = Appling, W = Wedowee, G = Georgeville, M = Mecklenburg, E = Enon, D = Poindexter.)

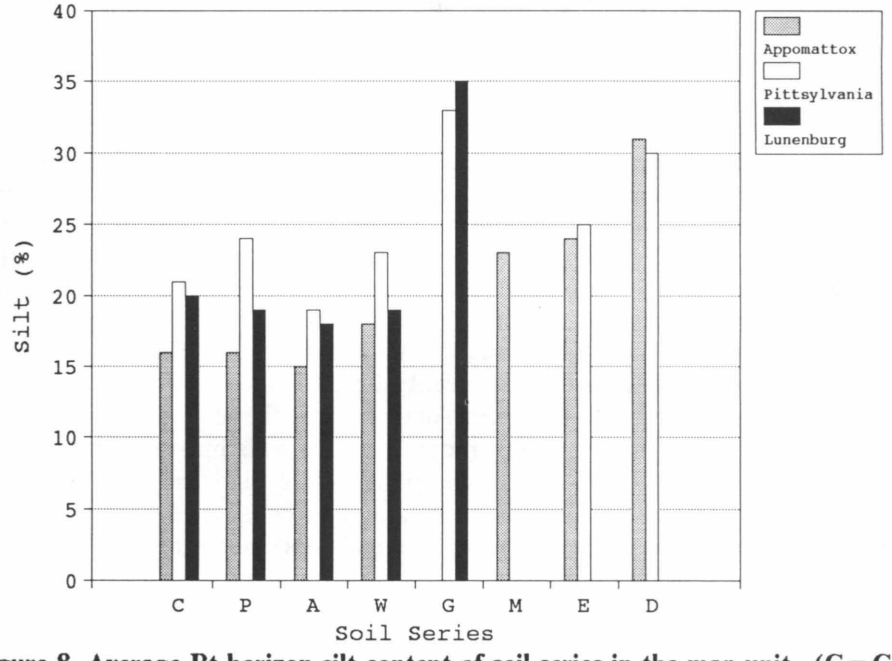

Figure 8. Average Bt horizon silt content of soil series in the map unit. (C = Cecil, P = Pacolet, A = Appling, W = Wedowee, G = Georgeville, M = Mecklenburg, E = Enon, D = Poindexter.)

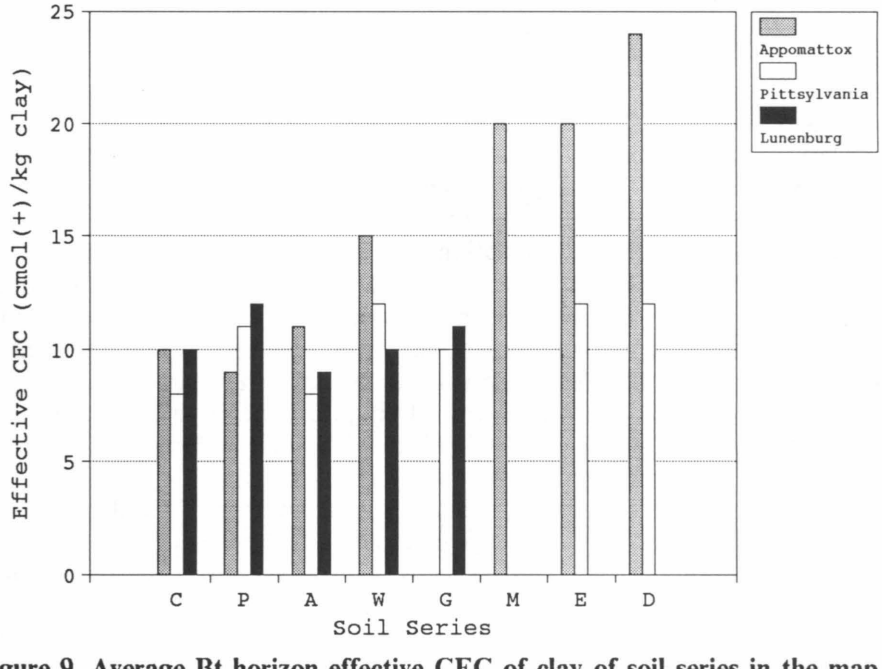

Figure 9. Average Bt horizon effective CEC of clay of soil series in the map unit. (C = Cecil, P = Pacolet, A = Appling, W = Wedowee, G = Georgeville, M = Mecklenburg, E = Enon, D = Poindexter.)

Taxonomic Variability - Counties

For a map unit to be called a consociation, 75 percent of the pedons must be the named taxon or similar taxa. No included similar soil is greater than the named taxa. Dissimilar soils must affect use and management. Soils that are limiting cannot be used for sample purposes as the major soil. As a rule, 50 percent of the pedons are of the named taxon. The total amount of dissimilar nonlimiting soils should be less than 25 percent. Dissimilar limiting soils should not exceed 15 percent of the map unit (Soil Survey Staff, 1985). For example, Cecil sandy loam, 2 to 7 percent slopes could include: 50 percent Cecil, 15 percent Pacolet, 10 percent Appling, 9 percent Iredell, and 6 percent Altavista and still be a consociation. For a unit to qualify as a complex, two or more dissimilar soils must occur in a regularly repeating pattern. The major components are significantly different in morphology or behavior that the map unit cannot be called a consociation. The amount of inclusions dissimilar to the named soils does not exceed 15 percent if limiting and 25 percent if nonlimiting (Soil Survey Staff, 1985).

Map unit composition in all three counties is given in Figure 10. Cecil, the predominant soil, is the classification for 43 percent of the total 201 profiles. Similar Pacolet, Appling, Wedowee, and Georgeville soils make up 38 percent of the map unit. The thin-solum Pacolet and Wedowee make up the largest percentage of similar inclusions in the unit. High base soils--Mecklenburg, Enon, and Poindexter--comprise 14 percent of the unit and are dissimilar nonlimiting inclusions. Thus, the map unit is 86 percent pure if named on basis of similar soils and is a consociation of Cecil.

Appomattox County (Figure 10) has the most diversity in the map unit in terms of taxonomic variability. Cecil makes up 38 percent of the unit. Pacolet, Appling, and Wedowee comprise an additional 33 percent. Thus, 71 percent of the unit consists of Cecil and similar soils. The remaining 29 percent are dissimilar nonlimiting inclusions of Alfisols, greater than the 25 percent dissimilar nonlimiting inclusions allowed in both a consociation and a complex. Thus, given that the map unit in Appomattox County does not fit either a consociation or a complex, an alternative to naming the map unit must be derived. If the map unit is named as a consociation and the map unit description gives the kind and actual percentage of dissimilar inclusions, the user of the soil survey would have access to the most information concerning the landscape unit. Using this criteria, the map unit name in Appomattox County would be Cecil and the dissimilar inclusions, Poindexter, Mecklenburg, and Enon, comprise 29 percent of the unit.

Pittsylvania County (Figure 10) has the largest number of Cecil profiles, at nearly 48 percent. Similar soils make up an additional 47 percent of the unit, thus giving a purity of similar soils of 95 percent. Alfisols comprise the remaining 5 percent of the unit. Thus, the map unit in Pittsylvania is a Cecil consociation.

Lunenburg County (Figure 10) is the purest unit in terms of use and management. Similar soils make up 100 percent of the unit. Cecil is the dominant series, comprising 42 percent of the unit. Pacolet, Appling, and Wedowee make up the remainder of the unit and occur with nearly equal frequency. Thus, the map unit in Lunenburg County is also a Cecil consociation.

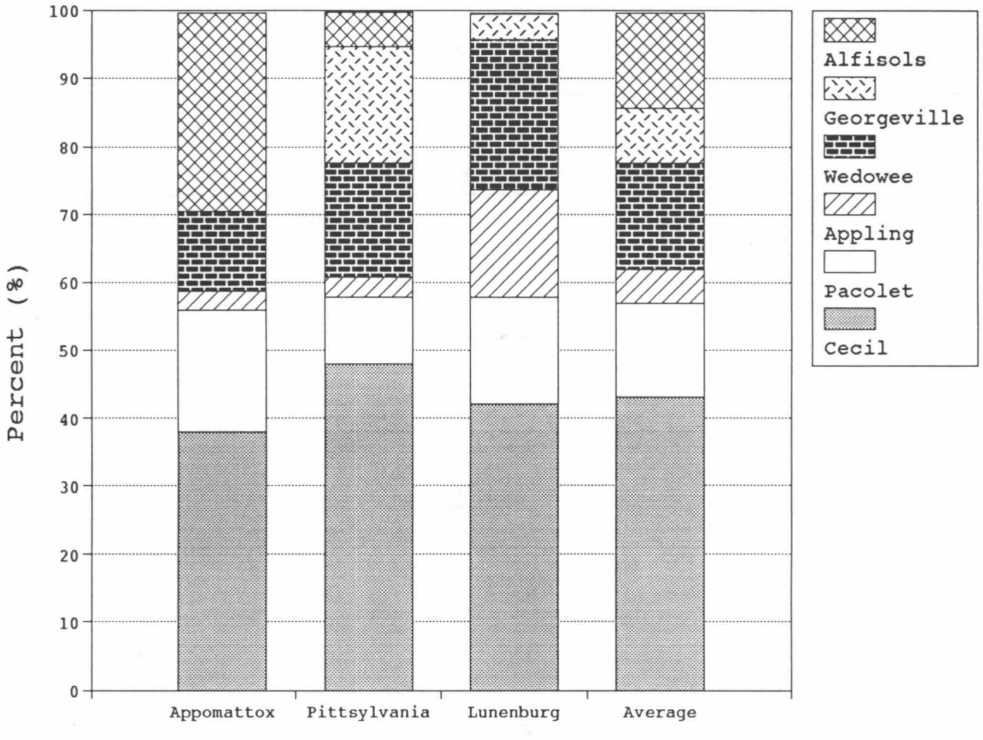

Figure 10. Map unit composition.

Taxonomic Variability - Delineations

If we adhere strictly to the definition of a consociation in Chapter 5 of the *Soil Survey Manual* (Soil Survey Staff, 1985) only three delineations of the twelve total delineations in the three counties are Cecil consociations (Table 7). Delineation 2 in Appomattox, Delineation 3 in Pittsylvania, and Delineation 2 in Lunenburg meet the criteria for a Cecil consociation in that greater than 50 percent of the taxa are Cecil. However, if delineations are named on the basis of similar soils, i.e., similar use and management, and where Cecil is the dominant soil, three more delineations can be named Cecil. Delineation 4 in Appomattox, Delineation 2 in Pittsylvania, and Delineation 1 in Lunenburg meet these criteria. Thus, 50 percent of the twelve total delineations are Cecil consociations.

Four other delineations are composed primarily of soils similar to Cecil, but the named taxa is some soil other than Cecil. Delineation 5 in Appomattox should be Pacolet with large inclusions of similar Cecil soils and dissimilar Mecklenburg soils. Delineation 4 in Pittsylvania meets the criteria for a consociation of Georgeville. Delineation 1 in Pittsylvania County should be a consociation of Wedowee with large inclusions of Cecil and Pacolet. Delineation 3 in Lunenburg County is 50 percent Cecil and Pacolet and 50 percent Appling and Wedowee with Wedowee as the dominant series. Thus, this delineation should be named Wedowee. We now have a total of ten delineations, or 83 percent, that are named Cecil or taxa similar to Cecil.

Table 7. Composition of delineations in Cecil map unit.

Del.†	No. Profiles	C	P	A	W	G	M	E	D
		% of No. Profiles							
				Appomattox County					
1	9	22	0	0	22	0	22	0	34
2	24	67	8	8	17	0	0	0	0
3	12	8	17	0	0	0	8	8	59
4	12	41	17	0	17	0	17	0	8
5	24	29	34	8	0	0	21	0	8
Total	81	38	18	3	12	0	12	1	16
				Pittsylvania County					
1	24	21	25	0	50	4	0	0	0
2	12	34	8	0	8	17	0	25	8
3	27	92	0	8	0	0	0	0	0
4	12	17	0	0	0	83	0	0	0
Total	75	48	10	3	17	17	0	4	1
				Lunenburg County					
1	15	40	0	33	27	0	0	0	0
2	18	56	22	0	11	11	0	0	0
3	12	25	25	17	33	0	0	0	0
Total	45	42	16	16	22	4	0	0	0
TOTAL	201	43	14	5	16	8	5	2	7

†Del. = Delineation; C = Cecil; P = Pacolet; A = Appling; W = Wedowee; G = Georgeville; M = Mecklenburg; E = Enon; D = Poindexter

The other two delineations, both in Appomattox County, are Hapludalfs. Delineation 3 should be a Poindexter consociation. Delineation 1 should also be named Poindexter, but two-thirds of the profiles are Cecil, Wedowee, and Mecklenburg. Thus, the delineation should be a Poindexter-Cecil complex.

Cecil and similar soils make up 71 percent of the map unit in Appomattox County, 95 percent in Pittsylvania County, and 100 percent in Lunenburg County. In each county, the Cecil series is the largest component of the map unit. Appomattox County has the most dissimilar profiles at 29 percent. Pittsylvania County has only five percent dissimilar soils while Lunenburg County has no dissimilar soils.

Much of the variability in Appomattox and Pittsylvania County is due to intrusions of mafic rock in the felsic parent materials. This variability is random and cannot be avoided. Map unit descriptions should call attention to these intrusions. Even with the variability observed in the map unit, the name Cecil, along with similar soil components, accurately describes the unit. Dissimilar soils should be discussed in map unit descriptions.

Variability of Taxonomic Soil Properties

The percentage of total variance contributed by delineations, sites, and profiles in the sampling design and the probability of rejecting the null of equal group means is given for selected taxonomic soil properties in Table 8. Where there is no variation depicted for a particular component, the mean square for that component was smaller than the mean square for the next lower component. In these instances, the sum of squares and degrees of freedom were pooled into the next lower component. Large values of profile variance indicated large amounts of short-range variability. Where profile variation is small, moderate- and wide-range variability is indicative. Estimates of short-, moderate-, and wide-range variability can be used to determine whether classes (e.g., fine-loamy vs. clayey, Alfisol vs. Ultisol) of soils, based on the dissection of specific variables (clay and base saturation), can be mapped at a given scale.

The subsoil properties important for mapping are clay content in the upper 20 inches of the Bt (particle-size control section); percent base saturation in the chemical control section (usually the BC or C horizon), which can be estimated by parent material associations; and solum thickness (Figures 4, 5, 6). The remaining soil properties necessary for classification are left to chance on the assumption that they are accessory to the observed soil characteristics.

In Appomattox County, 77 percent of the variance in the Bt horizon clay content was cumulative within delineations, but the delineations were not significantly different (Table 8). Thus, we could expect fine-loamy and clayey (fine) soils in the same delineation. About half (51%) of the variance in the base saturation of the C horizon was cumulative within delineations, and the delineations were significantly different at the 1% level. Therefore, Alfisols and Ultisols may or may not occur within the same delineation or there may be delineations that are dominantly either Alfisols or Ultisols. Table 7 shows this dominance; two of the five delineations were dominantly Alfisols while the other three delineations were Ultisols. All of the variation (100%) was cumulative within delineations for solum thickness. Therefore, we would expect highly variable solum thickness within the same delineation (between sites), but the variation in thickness is consistent from delineation to delineation. All the delineations in Appomattox County had both thin-solum and thick-solum profiles.

Table 8. Probability and percent of total variation contributed by delineations, sites, and profiles of taxonomic soil properties.

Property	Level				
	Delineation		Site		Profile†
	%	p‡	%	p	%
			Appomattox		
Clay (Bt horizon)	23	0.12	53	< 0.01	24
B.S. (C horizon)	49	< 0.01	36	< 0.01	15
Thickness (solum)	--	--	88	< 0.01	12
			Pittsylvania		
Clay (Bt horizon)	38	< 0.01	35	< 0.01	27
B.S. (C horizon)	54	< 0.01	30	< 0.01	16
Thickness (solum)	65	< 0.01	17	< 0.01	18
			Lunenburg		
Clay (Bt horizon)	31	0.04	33	< 0.01	36
B.S. (C horizon)	54	< 0.01	21	< 0.01	25
Thickness (solum)	--	--	27	0.05	73

†Includes error variance.
‡Probability (p) of rejecting the null hypothesis of equal group means.

In Pittsylvania County, 62 percent of the variance in the Bt horizon clay content was cumulative within delineations, and the delineations were significantly different at the 1% level (Table 8). Therefore, fine-loamy and clayey (fine) soils may or may not occur within the same delineation. All the delineations in Pittsylvania County are dominantly clayey. More than half (54%) of the variance in base saturation occurs between delineations, i.e., most of the variability is between pedons (sites) within delineations and between profiles within pedons (sites). Thus, Alfisols and Ultisols may or may not occur in the same delineation. Only one delineation is dominantly Alfisols in Pittsylvania County. Most of the variance in solum thickness occurs between delineations. Solum thickness would be consistent within delineations and within pedons (between profiles).

In Lunenburg County, 69 percent of the variance in Bt clay content occurs within delineations, and the delineations were significantly different at the 5% level (Table 8). Since all the profiles in Lunenburg County are in the clayey particle-size class (Table 7), variability of clay content does not affect classification. About half (46%) of the variance in base saturation of the C horizon was cumulative within delineations, and the delineations were significantly different at the 1% level. Since all B.S. values were less than 35 percent, classification is not affected by variability in base saturation. All the variation (100%) was cumulative within delineations for solum thickness. Therefore, we would expect highly variable solum thickness in the same delineation (between sites) and within sites (between profiles), but the variation in thickness is consistent from delineation to delineation. All three delineations in Lunenburg County have both thin-solum and thick-solum profiles.

Range in Characteristics - Cecil Series

Characteristics of each soil series in the map unit were discussed in the section on "Taxonomic Variability - Soil Series" and is shown in Figures 4 through 8. Characteristics of the Cecil soils series, the major component of the map unit in each of the three counties, is discussed in the following section and is shown in Figures 11 through 19.

Particle size distributions are similar in each of the three counties, as shown in Figures 11, 12, and 13. Average textures for the Ap horizon are sandy clay loam in Appomattox and Pittsylvania counties and sandy loam in Lunenburg County. Textures range from sandy loam to clay loam and clay in each county. Sand, silt, and clay percentages are nearly equal in the Ap horizon in the three counties. Average particle size distributions for the Ap horizon are 58% sand, 21% silt, and 21% clay.

Average texture for the Bt horizon is clay in each county with an average clay content of 50 percent. Clay content ranges from 35 to 66 percent. Silt content of the Bt horizon is less than 30 percent by Cecil series definition. Sand content is less than 50 percent in the subsoil throughout the study areas.

The C horizon is more variable than the overlying Ap and Bt horizons. Average textures are sandy clay loam in Appomattox and Lunenburg counties and loam in Pittsylvania County. Average values for sand, silt, and clay are similar between the three counties. Sand averages 50 percent, silt 25 percent, and clay 25 percent. Ranges in the various size fractions, though, is highly variable.

Depth to the bottom of the Ap and Bt horizon and the solum are given in Figure 14. Ap horizon thickness averages 6 inches. The thinner horizons, 2 to 4 inches thick, were generally associated with the more severely eroded soils (higher clay contents). Depth to the bottom of the Bt horizon is highly variable in all three counties. Average depth is 34 inches in Appomattox and Pittsylvania, but Lunenburg has much thinner Bt horizons with an average depth of 21 inches. Profiles in Lunenburg were more eroded, thus possibly accounting for the thinner subsoils.

Bt horizon thickness was determined by subtracting depth to the bottom of the Bt horizon from the Ap depth. Bt horizon thickness in the 20 profiles with AB or BA transition horizons were determined by subtracting depth to the bottom of the Bt horizon from the transition horizon depth. Average Bt thickness is 28 inches in Appomattox and Pittsylvania Counties and 16 inches in Lunenburg County.

By current Official Series Description (OSD) for the Cecil series, solum thickness is greater than 40 inches. Solum thickness ranges from about 40 inches to 72 inches in all three counties. Average solum thickness is the greatest in Pittsylvania and Appomattox counties at 56 and 52 inches, respectively. Lunenburg has an average solum thickness of 47 inches.

Averages and ranges in chemical properties of the Cecil series are presented in Figures 15 through 19. All the graphs show that the Cecil series is low in bases and acidic. CEC and effective CEC (Figures 15 and 16) are similar throughout the three counties. The Bt horizon in each county has a higher CEC, reflecting higher clay contents. The low CEC values are probably the result of hydrous oxide-coated soil particles that inhibit attachment of bases.

Base saturation (B.S.) in each county follows a similar pattern in that B.S. decreases with depth throughout the profile (Figure 17). The higher B.S. in the

Ap horizon is possibily the result of liming practices. The relatively high B.S. in the upper Bt horizon (as compared to the C horizon) reiterates the importance of soil testing of the Bt horizon to assess residual fertility levels. With the renewed emphasis on protection of the Chesapeake Bay and other critical watersheds, analysis of subsoil fertility levels will help reduce the quantity of fertilizers needed to maximize productivity and reduce the potential for pollution of the surrounding environment.

Values for pH range from extremely acid to neutral (3.7 to 6.7); acidity increases with depth (Figure 18). Average pH of the Ap horizon is very strongly acid (4.6) in Appomattox and moderately acid in Pittsylvania and Lunenburg (5.6 and 5.7, respectively). Average pH of the Bt horizon is very strongly acid in Appomattox and Pittsylvania (4.9 and 4.8, respectively) and strongly acid (5.1) in Lunenburg. Average pH of the C horizon is very strongly acid in all three counties (4.5 - Appomattox, 4.8 - Pittsylvania, 4.9 - Lunenburg). The higher pH values of the Ap horizon are associated with liming although the pH values are below the recommended level for most crops. All fields within the study area had been limed based on soil test levels within 12 months prior to sampling for this study.

Exchangeable aluminum (Al^{+3}) is very low throughout the profile in all three counties (Figure 19). The low Al values do not appear to be correlated with the low pH values. Thus, another source for the hydronium ions must be present. Manganese (Mn) or iron (Fe) would be logical proton donors; however, this hypothesis was not evaluated in this study. Aluminum did not seem to have any effect on soybean growth (Thomas et al., 1989). At Al saturations above 20% soybean roots should not penetrate the root zone. Al saturation values exceed this even though the roots did not seem to be affected.

Available P, bulk density, and water content were studied in Pittsylvania and Lunenburg counties in conjuction with an erosion-productivity study (Thomas et al., 1989). These properties were evaluated on the basis of erosion class (Table 9). Available P of the Ap horizon was strongly correlated to erosion. As erosion became more severe, available P decreased accordingly. The decrease was attributed to the high P-fixing capacity of the Al and Fe hydrous oxide-rich clays in the surface layer.

Bulk density remained constant in the Ap and Bt horizons as erosion severity increased (Table 9). There was an increase in -10kPa and -1500kPa water content as erosion severity increased, attributed to the increase in clay content. However, available water did not change with a change in erosion class and did not exceed 9 percent by volume. The low plant available water is of serious concern in crop production. Even in a good rainfall year, these soils could not supply the water required by the crop.

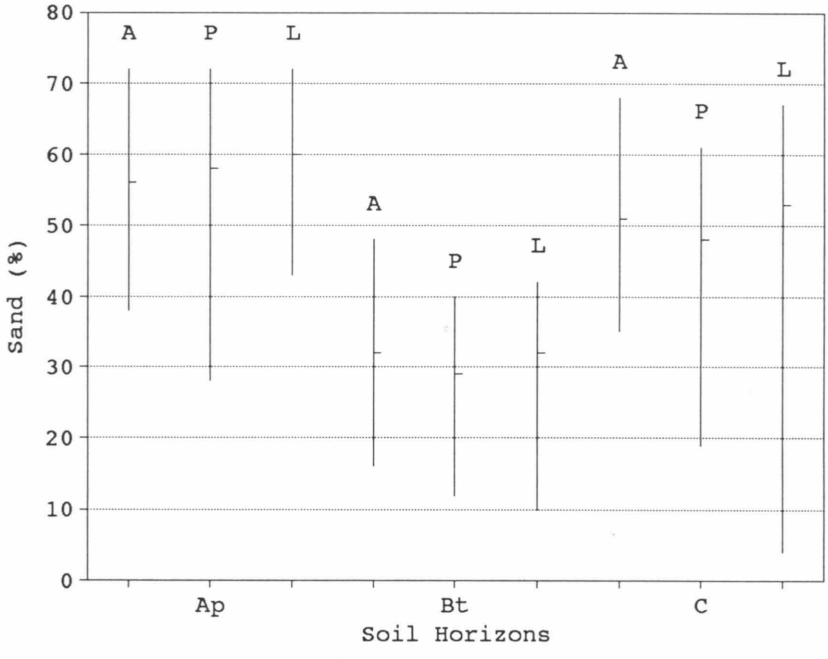

Figure 11. Average and range in sand content of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

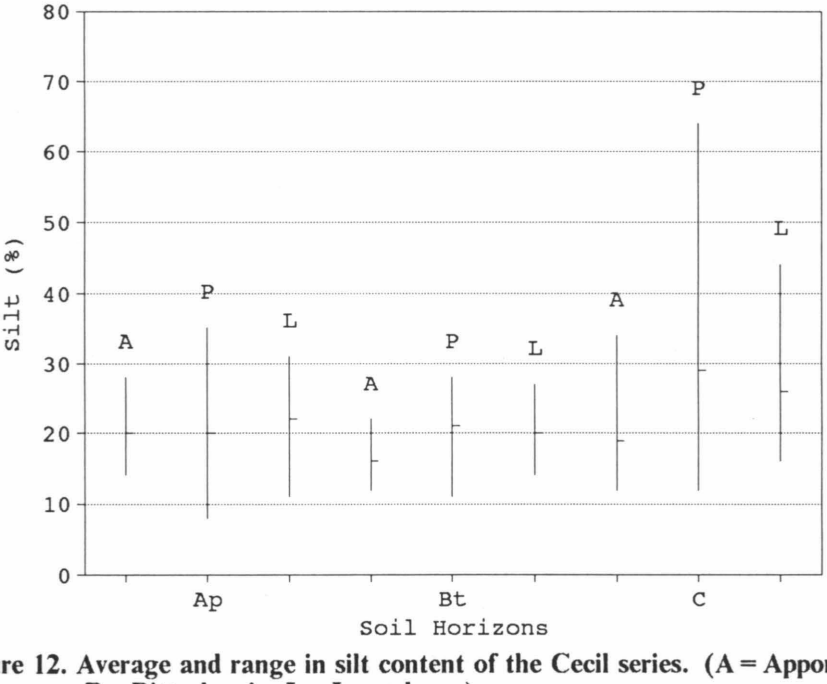

Figure 12. Average and range in silt content of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

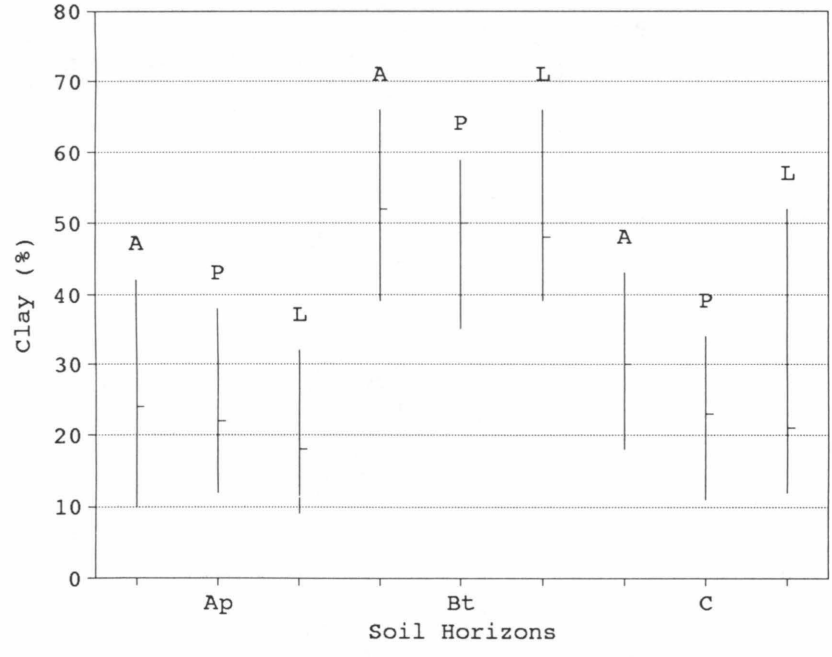

Figure 13. Average and range in clay content of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

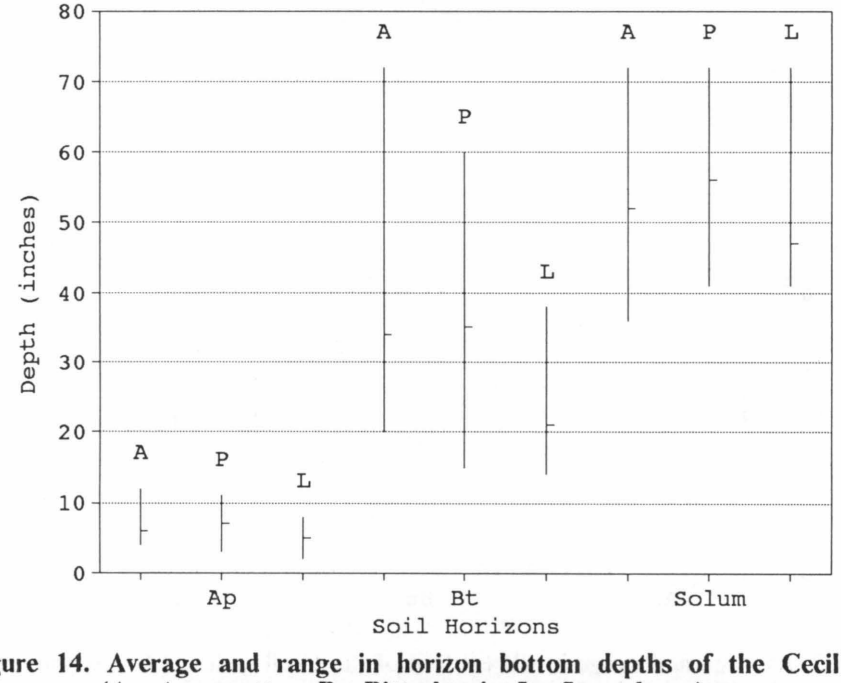

Figure 14. Average and range in horizon bottom depths of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

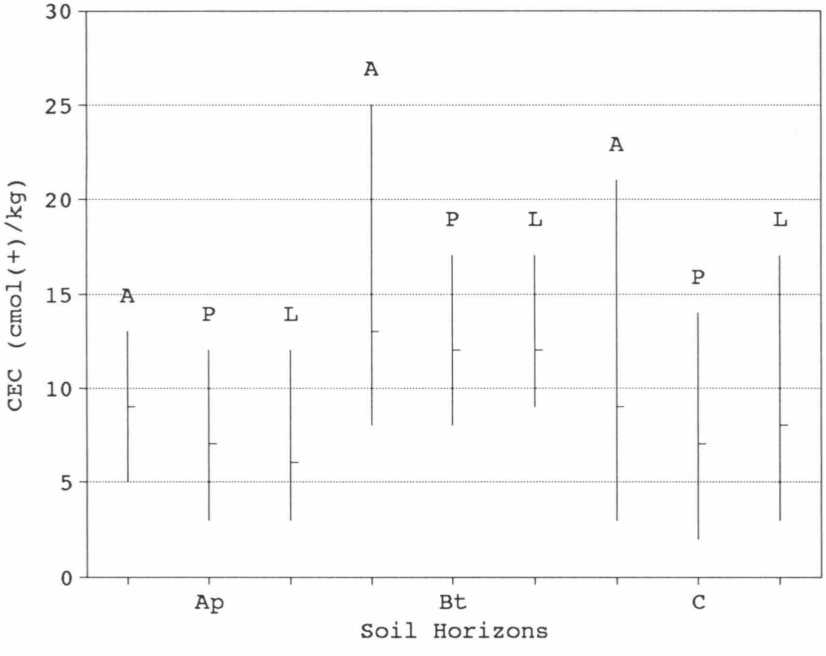

Figure 15. Average and range in CEC of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

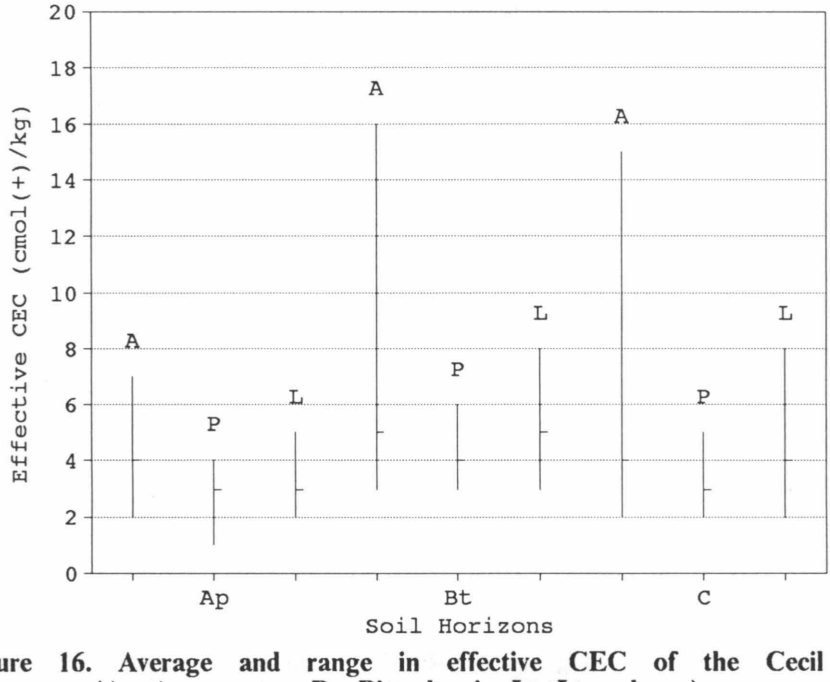

Figure 16. Average and range in effective CEC of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

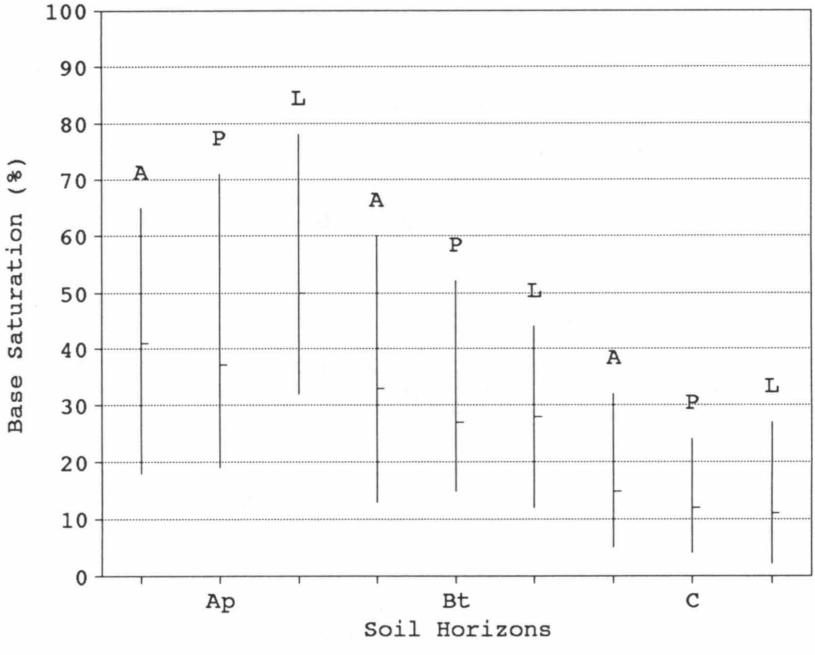

Figure 17. Average and range in base saturation of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

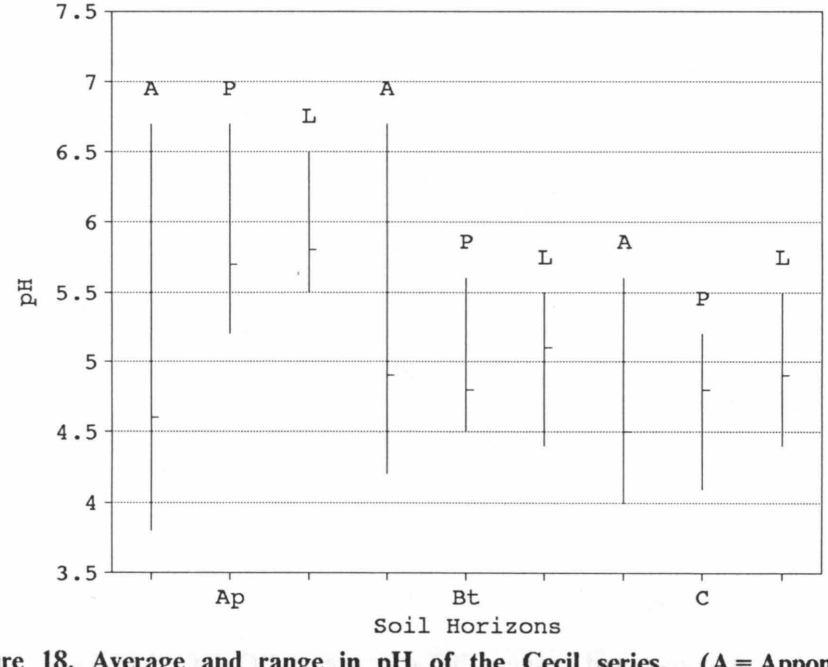

Figure 18. Average and range in pH of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

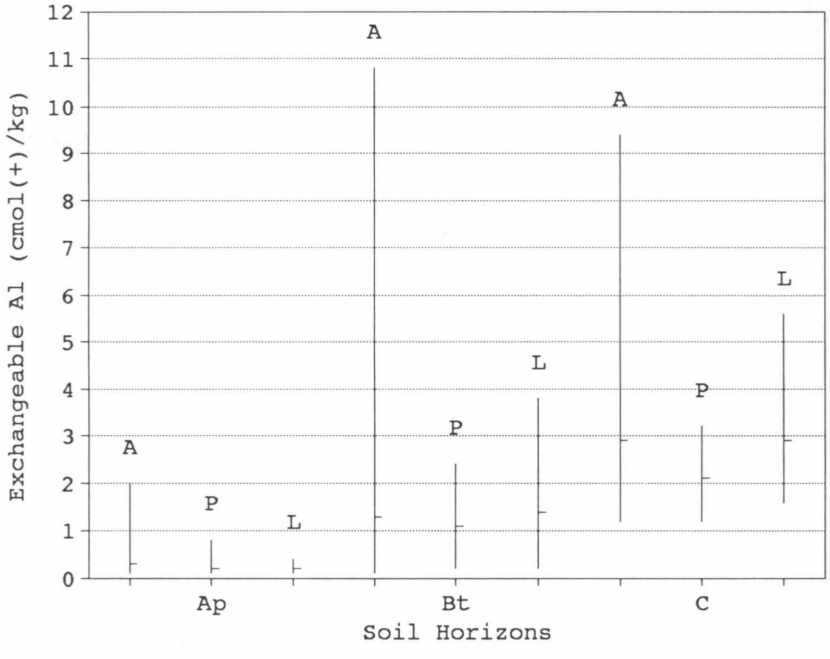

Figure 19. Average and range in exchangeable Al of the Cecil series. (A = Appomattox, P = Pittsylvania, L = Lunenburg.)

Table 9. Available P, bulk density, and water content based on erosion class.

Property	Horizon	Erosion class		
		Slight	Moderate	Severe
Available P ($g\ kg^{-1}$)	Ap	25.4	23.1	8.9
Bulk density ($Mg\ m^{-3}$)	Ap	1.54	1.61	1.53
	Bt	1.56	1.52	1.49
-10kPa water ($m^3\ m^3$)	Ap	0.26	0.27	0.33
	Bt	0.42	0.44	0.46
-1500kPa water ($m^3\ m^3$)	Ap	0.18	0.18	0.24
	Bt	0.35	0.36	0.38
Available water ($m^3\ m^3$)	Ap	0.08	0.09	0.09
	Bt	0.07	0.07	0.08

SUMMARY

The Cecil map unit in three counties in the Virginia Piedmont showed large variation in measured soil properties and taxonomic classes. Statistical analyses show that variability was extensive within delineated soil bodies but that the variability occurred in all delineations. Variability was reflected in taxonomic classification in which up to seven soil series occurred in the same delineation.

Appomattox County has the most diverse map unit; 38 percent of the soils classify as Cecil series. Similar soils comprise an additional 33 percent of the unit. Dissimilar inclusions make up the remaining 29 percent.

In Pittsylvania County, 48 percent of the profiles are Cecil series, and similar soils make up an additional 47 percent. Dissimilar soils comprise only 5 percent of the unit.

In Lunenburg County, 100 percent of the profiles are Cecil series and similar inclusions, with 42 percent classifying as Cecil series.

Therefore, it is recommended that the map unit in each county be named Cecil and that any descriptions of the map unit include distribution and extent of dissimilar soils.

The Cecil series and similar soils have a combined acreage of more than two million acres in the southern Piedmont region of Virginia. Because these soils make up a major portion of the landscape, their management is extremely critical. Based on findings from this study, water-supplying capacity and fertility status are the two plant growth-limiting factors on Cecil and related soils.

In this study, plant available water did not exceed 9 percent by volume in either the Ap or Bt horizons. Low plant available water has been documented in other studies. Starner (1985) observed low water contents on a Cecil soil in Nottoway County, Virginia. The soil held only 16% plant available water by volume in the A horizon, and the Bt horizon held only 5% plant available water. An SCS study (USDA-SCS, 1979) on Cecil and related soils gives average plant available water contents of no greater than 9% in the A and Bt horizons. Using SCS classes for available water capacity, based on inches of available water per 60 inches of soil, the Cecil for this study contains 4.3 inches of available water, the Starner study Cecil has 3.7 inches, and the SCS study Cecil has 5.4 inches of available water. All of these values fall in the low plant-available water class (3 to 6 inches). Thus, low plant-available water seems to be the limiting factor in summer crop production in the Piedmont. Even in a normal rainfall year and on uneroded soils, these Cecil soils could not supply the water required by the crop. Without management amendments, irrigation would be needed during most of the growing season to optimize productivity. Increasing organic matter content will improve structure and should increase water-holding capacity.

Low soil fertility in Cecil and related soils are also a major management concern. Naturally low levels of Ca, Mg, K, and P in Cecil and similar soils require annual high applications of fertilizers to improve fertility. Phosphorus is especially limiting to plant growth due to the high P-fixing capacity of the Fe and Al hydrous oxide-coated clays. Where erosion is occurring, every tillage operation brings new subsoil material to the surface, providing a mechanism for continuous high P fixation. Large amounts of P fertilizers need to be applied each year to overcome P deficiency. Soybean grain yields, available P, and erosion class were strongly correlated on the Cecil and similar soils in Pittsylvania and Lunenburg Counties (Thomas et al., 1989). Available P on the slightly and moderately eroded soils was

above the 18 mg kg^{-1} for P, and yields were nearly equal. On the severely eroded soils available P was below 18 mg kg^{-1} and yields were low.

According to Kamprath (1970), soybean roots should not penetrate zones with Al saturations greater than 20% of the effective CEC. Aluminum saturation exceeded 20% in the erosion-productivity study in Pittsylvania and Lunenburg Counties (Thomas et al., 1989). The study showed that soybean roots penetrated into the high Al saturation horizons. However, actual Al concentrations are low, as has been observed in other studies (Rich et al., 1959; McCracken et al., 1971). These past studies and this study both show low pH and low Al values. Thus, soil acidity is not being generated by Al. The logical proton donors would be Fe or Mn; further study is needed.

The low plant-available water capacity, low bases, and high P-fixing capacity of the Cecil and similar soils creates an inhospitable environment for the plant root. In an eroded state, the poor physical condition of the seedbed initially restricts plant growth. Since Cecil and similar soils comprise a major portion of the southern Piedmont landscape, these management factors need to be addressed to improve productivity of these soils. Detailed study of composition, variability, and characteristics of the Cecil and related map units is essential to quantify the soils in the landscape; thus the information presented in this paper will contribute to better understanding of these relationships.

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APPENDICES: PROFILE DATA

Appendix A - Appomattox County

Profile A1-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	1.60	1.42	3.12	25.28	15.92	47.34	24.90	27.76	scl
Bt	5-30	0.05	0.12	0.72	8.82	9.10	18.81	20.25	60.94	c
C	39-72	0.52	0.85	2.40	23.92	20.12	47.81	33.99	18.20	l

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	4.72	3.50	1.84	0.13	6.17	0.55	11.64	6.02	46.99	90.86
Bt	5-30	4.65	2.94	3.10	0.09	13.66	5.55	19.79	11.68	30.98	52.48
C	39-72	4.50	0.87	4.70	0.09	14.33	9.35	19.99	15.01	28.31	37.71

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/6	2,gr
Bt	5-30	5YR5/8	2,sbk
BC	30-39	5YR5/8	1,sbk
C	39-72	7.5YR6/8	0,m

Cecil series

Profile A1-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	2.52	1.50	3.18	21.78	16.50	45.48	27.35	27.17	scl,cl,l
Bt	8-23	0.45	0.55	1.30	10.48	6.92	19.70	26.79	53.51	c
C	30-72	0.15	0.88	7.42	18.68	8.62	35.75	41.73	22.52	l

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	4.48	2.95	1.78	0.14	4.73	0.85	9.60	5.72	50.73	94.28
Bt	8-23	4.35	1.17	3.20	0.07	12.74	4.75	17.78	9.79	28.35	51.48
C	30-72	4.50	0.95	11.10	0.07	20.90	13.85	33.02	25.97	36.71	46.67

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR5/6	2,gr
Bt	8-23	5YR6/8	2,sbk
BC	23-30	5YR6/8	2,sbk
C	30-72	7.5YR6/8	0,m

Mecklenburg series

Profile A1-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	1.20	1.15	2.78	23.22	13.78	42.13	22.80	35.07	cl
Bt	5-26	0.12	0.30	0.60	2.30	2.22	5.54	21.97	72.49	c
C	32-72	0.02	0.12	1.05	11.18	8.78	21.15	34.50	44.35	c

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	4.50	3.32	2.10	0.12	8.36	0.85	13.90	6.39	39.86	93.61
Bt	5-26	4.32	2.00	2.90	0.07	16.12	8.05	21.90	13.02	23.57	38.17
C	32-72	5.00	0.61	3.60	0.07	16.24	10.25	20.52	14.53	20.86	29.46

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/6	2,gr
Bt	5-26	5YR5/6	2,sbk
BC	26-32	5YR5/6	2,sbk
C	32-72	7.5YR5/6	0,m

Wedowee series

Profile A2-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	2.80	1.98	3.52	23.08	15.60	46.98	27.55	25.47	scl
Bt	11-30	0.18	0.28	1.00	8.68	5.55	15.69	18.61	65.70	c
C	40-72	0.15	1.95	7.78	19.45	12.40	41.73	28.59	29.68	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	4.15	1.63	1.07	0.15	6.11	1.95	8.96	3.70	31.81	47.30
Bt	11-30	4.92	1.72	3.50	0.08	19.21	10.85	24.51	16.15	21.62	32.82
C	40-72	4.50	0.36	4.10	0.05	16.32	8.75	20.83	12.26	21.65	34.01

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR6/6	1,gr
BA	4-11	7.5YR5/6	2,sbk
Bt	11-30	5YR5/6	2,sbk
BC	30-40	5YR6/8	1,sbk
C	40-72	7.5YR6/8	0,m

Cecil series

Profile A2-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	3.95	2.18	3.78	24.65	16.70	51.26	19.14	29.60	scl
Bt	7-20	0.25	0.40	0.80	4.20	7.48	13.13	11.70	75.17	c
C	31-72	0.32	0.65	2.08	6.72	4.42	14.19	32.81	53.00	c

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.30	1.55	0.85	0.15	9.15	1.65	11.70	4.20	21.79	60.71
Bt	7-20	4.20	1.12	3.90	0.09	21.89	12.95	27.00	18.06	18.93	28.29
C	31-72	4.38	2.57	6.10	0.15	20.50	11.65	29.32	20.97	30.08	43.09

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR6/6	1,gr
Bt	7-20	5YR6/8	2,sbk
BC	20-31	7.5YR6/8	1,sbk
C	31-72	10YR6/8	0,m

Wedowee series

Profile A2-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.82	1.95	4.12	27.45	14.78	50.12	25.48	24.40	scl
Bt	6-18	0.25	0.68	2.20	15.62	7.75	26.50	26.32	47.18	c
C	26-72	0.10	0.45	1.55	7.80	8.95	18.85	44.15	37.00	sicl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.00	2.13	1.54	0.20	6.11	1.35	9.98	5.22	38.78	74.14
Bt	6-18	4.40	1.78	5.90	0.13	16.92	11.85	24.73	19.66	31.58	39.73
C	26-72	4.64	1.31	14.80	0.08	24.48	16.45	40.67	32.64	39.81	49.60

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR4/6	1,gr
Bt	6-18	5YR5/6	2,sbk
BC	18-26	5YR5/6	1,sbk
C	26-72	7.5YR5/8	0,m

Mecklenburg series

Profile A3-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-13	1.25	3.00	5.28	23.88	17.02	50.43	33.95	15.62	l
AB	13-18	0.68	2.00	4.08	20.85	16.30	43.91	37.34	18.75	l
Bt	18-72	1.22	1.75	2.92	15.60	9.22	30.71	28.17	31.12	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-13	4.68	3.26	0.92	0.17	6.38	0.20	10.73	4.55	40.54	95.60
AB	13-18	6.24	3.95	1.12	0.09	6.14	0.10	11.30	5.26	45.66	98.10
Bt	18-72	5.65	6.17	3.90	0.07	5.57	0.15	15.71	10.29	64.54	98.54

Horizon	Depth	Color	Structure
	inches		
Ap	0-13	7.5YR5/4	2,gr
AB	13-18	7.5YR5/6	1,sbk
Bt	18-72	7.5YR5/8	2,sbk

Poindexter series

Profile A3-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-13	0.85	2.52	5.05	25.10	17.45	50.97	33.32	15.71	l
Bt1	13-38	0.80	1.28	2.18	11.03	10.65	25.94	39.09	34.97	cl
Bt2	38-72	0.50	0.65	1.38	8.62	8.10	19.25	41.49	39.26	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-13	5.60	4.17	1.34	0.07	4.78	0.05	10.36	5.63	53.86	99.11
Bt1	13-38	5.80	5.28	7.30	0.07	8.76	0.05	21.41	12.70	59.08	99.61
Bt2	38-72	5.30	4.00	8.90	0.08	7.16	0.15	20.14	13.13	64.45	98.86

Horizon	Depth	Color	Structure
	inches		
Ap	0-13	7.5YR4/4	2,gr
Bt1	13-38	7.5YR5/6	2,sbk
Bt2	38-72	2.5YR4/6	2,sbk

Poindexter series

Profile A3-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-12	1.42	2.80	5.68	23.45	16.65	50.00	33.13	16.87	l
Bt1	12-36	1.00	1.12	1.95	11.02	10.82	25.91	41.77	32.32	cl
Bt2	36-72	0.80	2.00	3.75	10.75	7.70	25.00	39.97	35.03	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-12	5.26	3.73	1.10	0.11	3.98	0.05	8.92	4.99	55.38	99.00
Bt1	12-36	6.38	4.94	4.60	0.11	4.95	0.05	14.60	9.70	66.10	99.48
Bt2	36-72	5.56	3.75	5.50	0.05	5.97	0.05	15.27	9.35	60.90	99.47

Horizon	Depth	Color	Structure
	inches		
Ap	0-12	7.5YR4/4	2,gr
Bt1	12-36	7.5YR5/6	2,sbk
Bt2	36-72	2.5YR4/6	3,sbk

Poindexter series

Profile A4-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	0.75	5.05	17.62	33.78	8.28	65.48	21.86	12.66	fsl
Bt1	7-20	0.15	2.65	7.50	10.98	4.12	25.40	12.14	62.46	c
Bt2	20-43	0.15	4.60	11.98	17.42	7.42	41.57	15.48	42.95	c
C	65-72	0.28	6.22	14.20	19.82	8.88	49.40	16.42	34.18	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	5.00	2.16	0.60	0.15	2.99	0.15	5.90	3.06	49.32	95.10
Bt1	7-20	4.94	3.02	1.30	0.13	12.28	1.45	16.73	5.90	26.60	75.42
Bt2	20-43	4.86	1.46	0.74	0.09	9.70	2.85	11.99	5.14	19.10	44.55
C	65-72	4.66	0.45	0.28	0.08	10.30	3.55	11.11	4.36	7.29	18.58

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/3	2,gr
Bt1	7-20	5YR6/8	2,sbk
Bt2	20-43	2.5YR5/8	2,sbk
BC	43-65	5YR5/8	1,sbk
C	65-72	5YR5/8	0,m

Cecil series

Profile A4-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	0.85	5.02	19.40	34.32	8.62	68.21	20.35	11.44	fsl
Bt1	6-28	0.15	1.72	7.15	11.58	4.50	25.10	12.04	62.86	c
Bt2	28-41	0.28	4.88	10.30	15.18	7.05	37.69	16.95	45.36	c
C	62-72	0.25	5.15	13.05	21.52	9.85	49.82	20.26	29.92	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.66	2.01	0.46	0.26	4.55	0.15	7.28	2.88	37.50	94.79
Bt1	6-28	5.50	4.22	1.97	0.24	8.51	0.20	14.94	6.63	43.04	96.98
Bt2	28-41	4.70	1.06	0.77	0.08	10.49	3.55	12.40	5.46	15.40	71.83
C	62-72	4.00	0.26	0.26	0.08	7.72	3.55	8.32	4.15	7.21	14.46

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR4/3	2,gr
Bt1	6-28	5YR6/8	2,sbk
Bt2	28-41	2.5YR5/6	2,sbk
BC	41-62	5YR5/8	1,sbk
C	62-72	5YR6/8	0,m

Cecil series

Profile A4-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	0.78	5.50	20.58	33.55	7.45	67.86	16.64	15.50	fsl
Bt1	8-18	0.42	2.62	9.52	15.65	5.35	33.56	14.21	52.23	c
Bt2	18-39	0.45	3.10	8.42	14.38	5.60	12.78	31.78	55.44	c
C	58-72	0.50	4.93	12.22	19.62	8.22	45.49	18.13	36.38	sc,cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.02	2.08	0.48	0.30	5.97	0.05	8.83	2.91	32.39	98.28
Bt1	8-18	5.95	3.63	1.66	0.33	6.14	0.10	11.76	5.72	47.79	98.25
Bt2	18-39	4.90	1.14	0.82	0.11	11.09	4.15	13.16	6.22	15.73	33.28
C	58-72	4.78	0.37	0.35	0.10	9.90	3.45	10.72	4.27	7.65	19.20

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/3	2,gr
Bt1	8-18	5YR6/8	2,sbk
Bt2	18-39	2.5YR5/6	2,sbk
BC	39-58	5YR5/6	1,sbk
C	58-72	5YR5/6	0,m

Cecil series

Profile A5-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	1.65	6.85	17.35	26.85	8.30	61.00	20.80	18.20	fsl
Bt	5-30	0.48	3.08	7.30	11.68	5.20	27.74	11.87	60.29	c
C	47-72	0.88	8.48	14.55	23.78	10.12	57.81	13.52	28.67	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	5.05	1.75	0.64	0.44	5.54	0.75	8.37	3.58	33.81	79.05
Bt	5-30	5.01	1.86	1.18	0.10	11.48	1.75	14.62	4.89	21.48	64.21
C	47-72	4.92	0.40	0.35	0.10	2.57	2.35	3.42	3.20	24.85	26.56

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/6	1,gr
Bt	5-30	2.5YR5/8	2,sbk
BC	30-47	2.5YR4/8	1,sbk
C	47-72	2.5YR4/8	0,m

Cecil series

Profile A5-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	0.43	5.50	18.15	30.83	8.30	63.21	16.53	20.26	scl
Bt	6-32	0.55	4.98	7.08	9.00	4.60	26.21	14.53	59.26	c
C	46-72	0.70	6.50	14.22	22.18	10.88	54.48	20.43	25.09	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.15	1.20	0.31	0.14	7.56	0.55	9.21	2.20	17.92	75.00
Bt	6-32	4.96	2.00	1.16	0.10	10.30	1.65	13.56	4.91	24.04	66.40
C	46-72	4.25	0.10	0.31	0.08	8.76	2.45	9.25	2.94	5.30	16.67

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR5/6	1,gr
Bt	6-32	2.5YR5/8	2,sbk
BC	32-46	2.5YR4/8	1,sbk
C	46-72	2.5YR4/8	0,m

Cecil series

Profile A5-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.28	5.65	16.48	26.48	7.00	56.89	21.89	21.22	scl
Bt	7-28	0.22	3.48	8.52	12.80	5.90	30.92	13.53	55.55	c
C	41-72	0.38	5.50	13.62	19.30	12.38	51.18	18.45	30.37	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.10	1.52	0.66	0.43	3.35	0.55	5.96	3.16	43.79	82.59
Bt	7-28	4.20	1.83	0.94	0.11	8.76	1.45	11.64	4.33	24.74	66.51
C	41-72	4.95	0.11	0.23	0.05	7.13	2.75	7.52	3.14	5.19	12.42

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR5/6	1,gr
Bt	7-28	2.5YR5/8	2,sbk
BC	28-41	2.5YR4/8	1,sbk
C	41-72	2.5YR4/8	0,m

Cecil series

Profile A6-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	0.90	4.88	15.98	28.13	7.50	57.39	17.51	25.10	scl
Bt	6-30	0.25	2.75	7.50	12.50	5.50	28.50	14.64	56.86	c
C	42-72	0.40	4.92	12.45	17.72	8.60	44.09	22.71	33.20	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.40	2.37	0.71	0.20	8.56	0.20	11.84	3.48	27.70	94.25
Bt	6-30	4.52	2.28	1.24	0.08	10.10	1.05	13.70	4.65	26.28	77.42
C	42-72	4.12	0.14	0.31	0.08	8.32	3.15	8.85	3.68	5.99	14.40

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR5/4	1,gr
Bt	6-30	5YR5/6	2,sbk
BC	30-42	5YR5/8	1,sbk
C	42-72	2.5YR5/8	0,m

Cecil series

Profile A6-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	0.45	3.95	14.22	26.10	6.95	51.67	28.08	20.25	l,sl,scl
Bt	5-20	0.51	1.80	7.12	12.42	5.12	26.61	15.84	57.55	c
C	40-72	0.22	1.80	11.05	26.62	11.52	51.01	19.57	29.42	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	4.56	2.17	0.62	0.25	4.38	0.15	7.42	3.19	40.97	95.30
Bt	5-20	4.56	2.17	1.28	0.11	10.55	1.05	14.11	4.61	25.23	77.22
C	40-72	4.23	0.40	0.39	0.08	7.16	2.25	8.03	3.12	10.83	27.88

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	7.5YR5/4	2,gr
Bt	5-20	2.5YR4/8	2,sbk
BC	20-40	2.5YR4/8	1,sbk
C	40-72	5YR5/8	0,m

Cecil series

Profile A6-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	0.62	4.22	16.08	28.23	9.45	58.60	16.23	25.17	scl
Bt	5-30	0.18	2.25	7.35	14.20	5.62	29.60	14.82	55.58	c
C	43-72	0.20	4.05	13.18	23.55	10.85	51.83	25.00	23.17	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	4.54	2.27	0.71	0.23	7.36	0.15	10.57	3.36	30.37	95.54
Bt	5-30	4.80	2.44	1.39	0.07	9.55	0.95	13.45	4.85	29.00	95.15
C	43-72	4.20	0.08	0.25	0.07	7.16	2.85	7.56	3.25	5.29	12.31

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/4	1,gr
Bt	5-30	2.5YR5/8	2,sbk
BC	30-43	2.5YR5/8	1,sbk
C	43-72	2.5YR5/8	0,m

Cecil series

Profile A7-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	2.15	8.30	17.25	22.20	5.58	55.48	26.52	18.00	fsl
Bt	5-28	1.78	6.02	10.62	15.92	5.92	40.26	17.26	42.48	c
C	42-72	3.28	9.00	14.75	28.40	8.72	64.15	13.11	22.75	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	3.80	1.23	0.36	0.31	4.14	1.05	6.04	2.95	31.46	64.41
Bt	5-28	4.65	2.12	1.05	0.16	7.92	1.05	11.25	4.38	29.60	76.03
C	42-72	5.15	0.42	0.49	0.18	4.95	2.05	6.04	3.14	18.05	34.71

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	7.5YR5/6	2,gr
Bt	5-28	5YR5/8	2,sbk
BC	28-42	5YR5/8	1,sbk
C	42-72	5YR5/8	0,m

Cecil series

Profile A7-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	2.88	9.60	18.00	23.53	6.18	60.19	16.96	22.85	scl
Bt	9-30	2.08	6.58	10.30	14.95	4.85	38.76	17.95	43.29	c
C	41-72	2.60	8.72	14.30	22.90	8.55	57.07	15.43	27.50	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-9	4.42	1.60	0.40	0.28	7.76	0.55	10.04	2.83	22.71	80.57
Bt	9-30	4.75	2.34	1.26	0.15	8.76	0.45	12.51	4.20	29.98	89.29
C	41-72	4.50	0.32	0.56	0.12	6.95	2.45	7.97	3.45	12.55	28.99

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR5/6	2,gr
Bt	9-30	2.5YR5/8	2,sbk
BC	30-41	2.5YR5/8	1,sbk
C	41-72	2.5YR5/8	0,m

Cecil series

Profile A7-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-12	3.40	9.82	17.78	23.58	5.55	60.13	23.53	16.34	fsl
Bt	12-30	2.22	6.45	10.62	14.72	4.30	58.31	18.85	42.84	sc
C	36-72	1.50	5.25	9.72	16.72	7.98	41.17	26.24	32.59	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-12	4.72	1.40	0.41	0.27	5.15	0.85	7.23	2.93	28.77	70.99
Bt	12-30	5.24	1.86	0.92	0.26	10.30	0.95	13.34	3.99	22.79	76.19
C	36-72	4.30	0.52	0.62	0.18	6.97	2.85	8.29	4.17	15.92	31.65

Horizon	Depth	Color	Structure
	inches		
Ap	0-12	10YR5/6	2,gr
Bt	12-30	5YR6/8	2,sbk
BC	30-36	2.5YR5/8	1,sbk
C	36-72	2.5YR5/8	0,m

Wedowee series

Profile A8-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	1.48	6.65	15.45	22.52	5.62	51.72	16.65	31.63	scl
Bt	9-20	0.48	2.80	7.82	15.40	5.90	32.40	17.40	50.20	c
C	35-72	0.42	4.45	11.75	20.85	10.40	47.87	20.23	31.90	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-9	6.28	3.86	1.67	0.15	3.37	0.05	9.05	5.73	62.76	99.13
Bt	9-20	5.62	2.92	1.41	0.08	7.13	0.05	11.54	4.46	38.21	98.88
C	35-72	5.01	0.55	0.43	0.09	7.92	2.25	8.99	3.22	11.90	32.23

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	7.5YR5/6	1,sbk
Bt	9-20	5YR5/8	2,sbk
BC	20-35	5YR5/8	1,sbk
C	35-72	5YR6/8	0,m

Wedowee series

Profile A8-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-3	1.45	4.38	9.62	17.90	6.15	39.80	16.75	43.45	c
Bt	3-16	0.62	3.85	9.55	16.88	6.35	37.25	19.60	43.15	c
C	24-72	0.78	5.30	10.60	22.53	9.68	48.89	17.80	33.31	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-3	6.30	3.93	1.70	0.17	4.16	0.05	9.96	5.85	58.23	99.15
Bt	3-16	5.65	3.30	1.39	0.09	6.37	0.05	11.15	4.83	42.87	98.96
C	24-72	4.24	0.34	0.32	0.09	8.96	1.75	9.71	2.50	7.72	30.00

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	7.5YR5/8	1,sbk
Bt	3-16	5YR5/8	2,sbk
BC	16-24	5YR5/8	1,sbk
C	24-72	5YR6/8	0,m

Wedowee series

Profile A8-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	0.40	4.68	12.60	24.02	7.35	49.05	18.86	32.09	scl
Bt	8-26	0.30	3.70	11.28	19.18	7.15	41.61	15.20	43.19	c
C	36-72	0.30	4.45	11.75	20.85	10.40	47.87	20.23	31.90	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.92	3.99	1.46	0.13	4.18	0.05	9.76	5.63	57.17	99.11
Bt	8-26	4.75	2.26	1.03	0.06	7.52	0.35	10.87	3.70	30.82	90.54
C	36-72	5.30	0.26	0.20	0.06	5.15	1.85	5.67	2.37	10.90	38.44

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	7.5YR5/6	1,sbk
Bt	8-26	5YR5/8	2,sbk
BC	26-36	5YR5/8	1,sbk
C	36-72	5YR6/8	0,m

Wedowee series

Profile A9-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.50	3.28	10.92	24.28	7.35	47.33	23.17	29.50	scl
Bt	4-32	0.70	1.60	3.28	8.25	4.28	18.11	20.96	60.92	c
BC	32-65	9.28	10.10	7.20	9.65	5.72	41.75	18.23	40.02	cl,c

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	6.05	3.72	1.24	0.18	3.96	0.05	9.10	5.19	56.48	99.04
Bt	4-32	5.12	2.77	1.34	0.07	8.76	0.05	12.94	4.23	32.30	98.82
BC	32-65	4.88	0.21	0.21	0.16	7.13	2.25	7.71	2.83	7.52	20.49

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	7.5YR4/6	1,sbk
Bt	4-32	2.5YR4/8	2,sbk
BC	32-65	2.5YR4/8	1,sbk
C	65-72	5YR6/8	0,m

Cecil series

Profile A9-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.18	2.98	7.02	20.82	8.75	40.75	23.45	35.80	cl
Bt1	6-40	0.50	1.30	2.98	8.22	4.28	17.28	16.65	66.08	c
Bt2	40-72	1.15	3.38	6.68	16.75	7.20	35.16	22.06	42.78	c

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.90	3.60	1.45	0.12	5.15	0.05	10.32	5.22	50.10	99.04
Bt1	6-40	4.90	2.74	1.51	0.05	9.55	0.35	13.85	4.65	31.05	92.47
Bt2	40-72	4.90	0.28	0.27	0.10	8.91	2.35	9.56	3.00	6.80	21.67

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR5/6	2,gr
Bt1	6-40	2.5YR4/8	2,sbk
Bt2	40-72	2.5YR4/8	3,sbk

Cecil series

Profile A9-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.68	3.28	7.58	21.02	8.08	41.65	27.70	33.66	cl
Bt1	6-39	0.75	1.50	3.38	9.28	4.95	19.86	18.98	61.16	c
Bt2	39-72	9.28	10.10	7.20	9.65	5.72	41.95	18.03	40.02	cl,c

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.50	3.27	1.27	0.11	5.17	0.10	9.82	4.75	47.35	97.89
Bt1	6-39	4.30	0.76	0.79	0.07	10.95	1.65	12.57	3.27	12.89	49.54
Bt2	39-72	5.10	0.19	0.14	0.09	6.93	1.95	7.35	2.37	5.71	17.72

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR5/6	2,gr
Bt1	6-39	2.5YR4/8	2,sbk
Bt2	39-72	2.5YR4/8	2,sbk

Cecil series

Profile A10-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	0.98	6.25	19.88	34.42	8.92	70.45	19.21	10.34	fsl
Bt1	6-19	1.02	4.65	14.78	24.72	6.60	51.77	21.93	26.30	scl
BC	45-72	0.40	1.90	7.55	16.58	5.42	31.85	18.53	49.62	c

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.40	2.18	0.60	0.08	2.97	0.05	5.83	2.91	49.06	98.28
Bt1	6-19	5.50	2.08	1.00	0.05	6.14	0.10	9.27	3.23	33.76	96.90
BC	45-72	5.05	1.23	0.75	0.10	8.91	2.75	10.99	4.83	18.93	43.06

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR4/4	2,gr
Bt1	6-19	7.5YR5/8	1,sbk
Bt2	19-45	5YR5/8	2,sbk
BC	45-72	2.5YR4/8	1,sbk

Appling series (taxadjucnt)

Profile A10-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.00	6.02	19.42	36.02	9.65	72.11	18.44	9.45	fsl
Bt	8-39	0.65	3.08	8.60	15.70	5.22	33.25	17.62	49.13	c
C	60-72	0.85	6.22	15.15	24.00	9.30	55.52	16.75	27.73	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	5.92	2.55	0.64	0.04	1.78	0.05	5.01	3.28	64.47	98.48
Bt	8-39	4.90	2.68	1.07	0.06	9.35	0.55	13.16	4.36	28.95	87.39
C	60-72	4.34	0.20	0.34	0.07	5.74	2.35	6.35	2.96	9.61	20.61

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR4/4	2,gr
BA	4-8	5YR5/8	1,sbk
Bt	8-39	2.5YR5/8	2,sbk
BC	39-60	2.5YR5/8	1,sbk
C	60-72	5YR5/8	0,m

Cecil series

Profile A10-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	1.12	6.20	19.85	35.12	9.42	71.71	18.14	10.15	fsl
BA	8-14	0.90	5.42	16.35	27.78	7.45	57.90	21.16	20.94	scl
Bt	14-28	0.90	3.92	9.85	15.82	5.32	35.81	18.78	45.41	c
C	36-72	2.32	8.75	14.58	23.82	9.05	58.52	14.84	26.64	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.56	1.92	0.58	0.08	2.79	0.05	5.37	2.63	48.04	98.10
BA	8-14	5.85	1.61	0.72	0.05	5.57	0.05	7.95	2.43	29.94	97.94
Bt	14-28	4.55	2.12	0.94	0.07	8.76	0.95	11.89	4.08	26.32	76.72
C	36-72	5.00	0.42	0.41	0.08	6.73	2.05	7.64	2.96	11.91	66.22

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR5/4	2,gr
BA	8-14	5YR6/8	2,sbk
Bt	14-28	2.5YR5/8	2,sbk
BC	28-36	2.5YR5/8	1,sbk
C	36-72	5YR5/8	0,m

Pacolet series

Profile A11-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	0.98	7.08	16.82	24.75	6.75	56.38	16.58	27.04	scl
Bt1	5-19	1.28	8.10	15.10	16.28	4.78	45.54	9.15	45.31	sc,c
Bt2	19-34	0.22	2.35	6.45	18.32	7.50	34.84	21.80	43.36	c
C	55-72	0.18	1.08	8.20	25.38	9.50	44.34	24.99	30.67	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	5.95	2.74	1.05	0.08	3.58	0.05	7.45	3.92	51.95	98.72
Bt1	5-19	6.45	3.70	1.20	0.09	6.14	0.05	11.13	5.04	44.83	99.01
Bt2	19-34	5.05	2.70	1.41	0.10	7.16	0.15	11.37	4.36	37.03	96.56
C	55-72	5.26	1.01	0.84	0.13	5.74	2.25	7.72	4.23	25.65	46.81

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/4	1,sbk
Bt1	5-19	7.5YR6/8	2,sbk
Bt2	19-34	2.5YR5/8	2,sbk
BC	34-55	2.5YR5/8	1,sbk
C	55-72	2.5YR4/8	0,m

Appling series

Profile A11-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.05	6.64	17.78	30.55	8.82	64.85	16.23	18.92	fsl
Bt	7-36	0.50	3.15	7.38	18.38	7.42	36.83	16.88	46.29	c
C	61-72	0.40	3.52	9.00	28.20	10.05	51.17	16.74	32.09	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	6.70	2.60	0.99	0.09	2.97	0.00	6.65	3.68	55.34	100.0
Bt	7-36	4.80	2.16	1.23	0.07	10.35	0.75	13.81	4.21	25.05	82.19
C	61-72	4.55	0.14	0.29	0.17	8.96	2.85	9.56	3.45	6.28	17.39

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR5/6	2,sbk
Bt	7-36	2.5YR5/8	2,sbk
BC	36-61	2.5YR5/8	1,sbk
C	61-72	5YR5/8	0,m

Cecil series

Profile A11-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.02	6.35	17.50	31.62	8.75	65.24	14.01	20.75	scl
BA	6-15	0.70	5.12	10.30	14.10	3.72	33.94	18.91	47.15	c
Bt	15-36	0.88	3.92	8.82	19.38	7.15	40.15	20.01	39.84	cl,c
C	59-72	0.20	0.48	5.92	30.98	10.82	48.22	21.48	30.30	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	6.40	2.68	1.02	0.16	2.97	0.05	6.83	3.91	56.52	98.72
BA	6-15	5.92	3.21	1.46	0.09	6.53	0.15	11.29	4.91	42.16	98.32
Bt	15-36	4.60	1.64	1.15	0.08	8.56	6.45	11.43	9.32	25.11	30.79
C	59-72	4.16	0.46	0.57	0.11	9.15	3.65	10.29	4.79	11.08	23.80

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR5/6	2,gr
BA	6-15	7.5YR5/8	1,sbk
Bt	15-36	2.5YR5/8	2,sbk
BC	36-59	2.5YR5/8	1,sbk
C	59-72	2.5YR5/8	0,m

Cecil series

Profile A12-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	1.35	8.20	18.70	30.05	10.32	68.62	21.36	10.02	fsl
Bt	8-28	2.23	7.85	9.53	11.93	5.15	36.69	23.68	39.63	cl,c
C	39-72	0.45	3.98	8.73	14.73	8.65	36.54	27.50	35.96	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	6.35	2.75	0.92	0.11	2.77	0.05	6.55	3.83	57.71	98.69
Bt	8-28	5.25	6.17	1.48	0.10	5.97	0.05	13.72	7.80	56.49	99.36
C	39-72	5.54	6.85	3.40	0.23	6.93	1.35	17.41	11.83	60.20	88.59

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-28	7.5YR5/8	2,sbk
BC	28-39	5YR5/8	1,sbk
C	39-72	5YR5/8	0,m

Enon series

Profile A12-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	2.00	9.65	19.30	27.78	9.05	67.78	16.02	16.20	fsl
Bt	8-36	1.78	7.68	10.00	12.30	4.90	36.66	31.37	31.97	cl
C	52-72	1.98	9.42	10.22	11.10	6.72	39.44	31.57	28.99	cl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.12	2.50	0.82	0.14	3.78	0.15	7.24	3.61	47.79	95.84
Bt	8-36	5.68	4.79	1.31	0.08	7.76	0.05	13.94	6.23	44.33	99.20
C	52-72	4.92	5.77	3.50	0.20	4.14	0.05	13.61	9.52	69.58	99.47

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	1,gr
Bt	8-36	5YR5/8	2,sbk
BC	36-52	5YR5/8	1,sbk
C	52-72	2.5YR5/8	0,m

Poindexter series

Profile A12-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	1.02	7.90	18.55	30.50	10.20	68.17	22.97	8.86	fsl
Bt	8-34	1.85	8.72	10.80	12.88	5.12	39.37	31.50	29.13	cl
C	49-72	1.35	6.50	8.20	9.92	7.18	33.15	34.30	32.55	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.28	1.82	0.51	0.23	2.97	0.15	5.58	2.71	46.29	94.46
Bt	8-34	5.50	5.90	1.59	0.16	5.37	0.05	13.02	7.70	58.76	99.35
C	49-72	5.54	6.85	3.40	0.23	6.93	1.35	17.41	11.83	60.20	88.59

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-34	5YR5/8	2,sbk
BC	34-49	5YR5/8	1,sbk
C	49-72	7.5YR5/8	0,m

Poindexter series

Profile A13-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	0.95	8.48	18.65	29.20	8.52	65.80	19.91	14.29	fsl
BA	6-14	2.05	7.90	14.53	20.53	7.90	52.91	22.12	24.97	scl
Bt1	14-26	3.28	10.20	13.30	15.80	5.30	47.88	25.97	26.15	scl
BC	41-72	0.68	4.62	9.72	16.00	9.22	40.24	24.49	35.27	cl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.52	2.71	0.80	0.18	6.77	0.05	10.46	3.74	35.28	98.66
BA	6-14	5.50	2.57	1.05	0.11	3.98	0.05	7.71	3.78	48.38	98.68
Bt1	14-26	5.72	3.66	1.06	0.12	6.35	0.15	10.19	4.99	47.50	96.99
BC	41-72	5.40	7.02	2.50	0.14	7.52	0.05	17.18	9.71	56.23	99.49

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR4/4	2,gr
BA	6-14	7.5YR5/6	1,sbk
Bt1	14-26	5YR5/6	2,sbk
Bt2	26-41	5YR5/8	2,sbk
BC	41-72	2.5YR5/8	1,sbk

Poindexter series

Profile A13-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	1.95	9.62	18.75	27.00	8.68	66.00	16.00	18.00	fsl
BA	8-18	1.55	8.50	15.18	18.55	6.38	50.16	24.23	25.61	scl
Bt	18-39	1.65	10.10	12.80	13.58	5.50	43.63	23.67	32.70	cl
C	49-72	1.05	11.18	16.28	18.48	8.70	55.69	19.79	24.52	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.50	2.63	0.74	0.20	8.76	0.05	12.33	3.62	28.95	98.62
BA	8-18	6.10	2.75	1.17	0.11	3.58	0.05	7.61	4.08	52.96	98.77
Bt	18-39	6.25	5.35	1.44	0.13	5.35	0.05	12.27	6.97	56.40	99.28
C	49-72	5.15	4.34	1.13	0.10	4.95	0.05	10.52	5.62	52.95	99.11

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
BA	8-18	7.5YR5/6	1,sbk
Bt	18-39	5YR5/8	2,sbk
BC	39-49	7.5YR5/8	1,sbk
C	49-72	7.5YR6/8	0,m

Mecklenburg series

Profile A13-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.85	9.48	19.85	28.28	9.08	68.54	19.64	11.82	fsl
BA	7-15	1.52	9.88	16.55	22.30	7.08	57.33	24.51	18.16	fsl
Bt1	15-24	1.53	6.70	12.10	18.85	7.80	46.98	22.20	30.82	scl
C	42-72	0.18	2.03	6.50	16.80	6.80	32.31	28.60	39.09	cl,c

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	6.15	2.91	0.98	0.19	3.17	0.05	7.25	4.13	56.28	98.78
BA	7-15	5.75	2.22	1.00	0.19	2.99	0.05	6.40	3.46	53.28	98.55
Bt1	15-24	5.75	4.09	1.41	0.24	10.75	0.05	16.49	5.79	34.81	99.14
C	42-72	5.62	8.00	2.70	0.12	9.95	0.05	20.77	10.87	52.09	99.54

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/4	2,gr
BA	7-15	7.5YR5/7	1,sbk
Bt1	15-24	5YR5/8	2,sbk
Bt2	24-30	5YR5/8	2,sbk
BC	30-42	5YR5/8	1,sbk
C	42-72	5YR5/8	0,m

Poindexter series

Profile A14-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	2.13	8.37	14.83	22.03	6.73	54.09	24.51	21.40	scl
Bt	6-24	1.35	5.25	6.62	7.70	4.15	25.07	14.70	60.23	c
C	34-72	2.25	11.55	13.12	17.92	12.68	57.52	23.68	18.80	fsl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	6.32	4.94	1.66	0.10	2.38	0.05	9.08	6.75	73.79	99.26
Bt	6-24	6.60	6.22	2.10	0.14	7.72	0.05	16.18	8.51	52.29	99.41
C	34-72	5.10	1.61	1.06	0.29	7.13	4.05	10.09	7.01	29.34	42.23

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR4/4	1,gr
Bt	6-24	2.5YR4/6	2,sbk
BC	24-34	2.5YR4/6	1,sbk
C	34-72	2.5YR5/8	0,m

Pacolet series

Profile A14-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.35	7.20	13.08	18.70	5.52	45.85	18.96	35.19	cl,scl,sc
Bt	6-26	0.88	5.95	8.12	8.62	5.00	28.57	17.76	53.67	c
C	36-72	1.02	7.95	15.50	20.75	12.55	57.77	22.75	19.48	fsl,scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	6.45	5.30	1.80	0.11	5.17	0.05	12.38	7.26	58.24	99.31
Bt	6-26	6.05	6.18	2.00	0.10	7.52	0.05	15.80	8.33	52.41	98.20
C	36-72	5.36	0.65	0.76	0.19	9.11	5.45	10.71	7.05	14.94	22.70

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR4/4	1,gr
Bt	6-26	2.5YR4/6	2,sbk
BC	26-36	2.5YR4/6	1,sbk
C	36-72	2.5YR5/8	0,m

Pacolet series

Profile A14-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.45	7.53	16.10	23.80	6.60	55.48	14.15	30.37	scl
Bt	6-28	0.88	5.40	8.02	8.95	4.42	27.67	17.80	54.53	c
C	43-72	1.90	9.75	11.11	14.55	10.75	48.06	28.12	23.82	l,scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	6.30	5.34	1.75	0.13	6.17	0.05	13.39	7.27	53.92	99.31
Bt	6-28	6.70	6.00	2.00	0.13	5.54	0.00	13.67	8.13	59.47	100.0
C	43-72	5.50	0.78	0.78	0.14	6.53	3.95	8.23	5.65	20.66	30.09

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR4/4	1,gr
Bt	6-28	2.5YR4/6	2,sbk
BC	28-43	2.5YR4/6	1,sbk
C	43-72	2.5YR5/8	0,m

Cecil series

Profile A15-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.05	7.15	15.38	25.35	8.20	57.13	25.51	17.36	fsl
Bt	6-17	1.15	6.20	11.45	17.80	8.08	44.68	29.06	26.26	l,cl,scl
C2	23-72	5.98	15.98	17.08	14.88	6.82	60.74	23.54	15.72	sl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.85	4.77	1.83	0.26	4.78	0.15	11.64	7.01	58.93	97.87
Bt	6-17	5.25	6.18	2.30	0.14	5.15	0.35	13.77	8.97	62.60	96.10
C2	23-72	5.14	9.50	5.80	0.25	5.54	0.55	21.09	16.10	73.73	98.59

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR4/4	1,gr
Bt	6-17	7.5YR5/6	2,sbk
BC	17-23	5YR5/6	1,sbk
C	23-72	5YR5/6	0,m

Poindexter series

Profile A15-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.23	6.83	16.45	27.95	9.78	62.24	18.87	18.89	fsl
BA	9-16	2.50	7.22	14.28	23.55	9.58	57.13	26.60	16.27	fsl
Bt	16-26	0.35	2.12	8.32	14.45	8.32	33.56	34.84	31.60	cl
C	36-72	0.20	3.98	10.42	14.08	8.95	37.63	34.83	27.54	l,cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.72	2.67	0.91	0.14	8.36	0.35	12.08	4.07	30.79	91.40
BA	9-16	5.78	3.22	0.80	0.12	3.56	0.40	7.70	4.54	53.77	91.19
Bt	16-26	5.82	6.78	2.30	0.14	5.15	0.35	14.37	9.57	64.16	96.34
C	36-72	5.72	5.55	3.10	0.15	6.53	0.15	15.53	8.95	57.40	98.32

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR4/4	2,gr
AB	6-9	7.5YR5/6	1,gr
BA	9-16	5YR5/6	1,sbk
Bt	16-26	5YR5/6	2,sbk
BC	26-36	2.5YR5/6	2,sbk
C	36-72	2.5YR5/6	0,m

Poindexter series

Profile A15-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	1.08	5.02	14.62	28.62	11.40	60.74	25.40	13.86	fsl
BA	8-15	1.78	5.18	12.55	22.85	8.55	50.91	27.13	21.96	l,sl,scl
Bt	15-38	0.68	3.52	10.05	17.18	7.05	38.48	30.52	31.00	cl
C	38-72	0.20	1.95	9.40	16.05	9.80	37.40	29.30	33.30	cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.05	1.56	0.46	0.12	3.76	0.85	5.90	2.99	36.27	71.57
BA	8-15	4.65	2.62	0.55	0.11	3.78	0.45	7.06	3.73	46.46	87.94
Bt	15-38	5.73	5.67	1.63	0.13	4.85	0.05	12.28	7.48	60.50	98.95
C	38-72	6.11	6.16	2.90	0.14	6.14	0.15	15.34	9.35	59.97	98.40

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
BA	8-15	7.5YR5/6	1,sbk
Bt	15-38	5YR5/6	2,sbk
C	38-72	5YR5/6	0,m

Poindexter series

Profile A16-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	2.55	10.65	18.38	21.98	6.30	59.86	23.67	16.47	sl
Bt	8-28	0.30	4.88	10.48	13.65	6.78	36.09	18.40	45.51	c
C	42-72	2.55	11.92	15.80	22.05	10.05	62.37	12.34	25.29	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	4.90	2.84	0.87	0.28	6.17	0.25	10.16	4.24	39.27	94.10
Bt	8-28	5.80	3.93	1.42	0.10	5.57	0.05	11.02	5.50	49.41	99.09
C	42-72	5.10	1.32	1.10	0.11	6.14	1.35	8.67	3.88	29.18	65.21

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	1,gr
Bt	8-28	5YR5/8	3,sbk
BC	28-42	5YR5/8	1,sbk
C	42-72	5YR5/6	0,m

Cecil series

Profile A16-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	2.00	10.32	20.68	22.65	5.55	61.20	22.55	16.26	sl
Bt	9-30	0.78	5.18	8.75	11.55	5.08	31.34	18.89	49.77	c
C	48-72	0.80	7.98	13.38	21.68	10.98	54.82	17.55	27.63	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-9	5.10	2.64	0.88	0.32	5.54	0.20	9.38	4.04	40.94	95.05
Bt	9-30	5.66	4.18	1.48	0.15	7.52	0.05	13.33	5.87	43.59	99.15
C	48-72	5.12	1.19	1.00	0.14	5.54	2.30	7.87	4.63	29.61	50.32

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR5/4	2,gr
Bt	9-30	5YR5/8	3,sbk
BC	30-48	5YR5/8	1,sbk
C	48-72	7.5YR6/8	0,m

Cecil series

Profile A16-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-12	1.58	9.28	18.90	23.12	6.02	58.90	25.56	15.54	fsl
Bt	12-32	0.52	5.15	11.68	14.80	7.12	39.27	21.84	38.89	cl
C	48-72	0.52	5.28	14.60	23.88	11.82	56.10	18.77	25.13	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-12	5.25	2.84	1.07	0.49	5.35	0.25	9.75	4.65	45.13	94.62
Bt	12-32	5.30	3.40	1.43	0.11	7.56	0.05	12.50	4.99	39.52	99.00
C	48-72	5.06	1.15	1.40	0.13	5.74	1.55	8.42	4.23	31.83	63.36

Horizon	Depth	Color	Structure
	inches		
Ap	0-12	10YR4/4	2,gr
Bt	12-32	5YR5/8	2,sbk
BC	32-48	5YR5/8	1,sbk
C	48-72	7.5YR6/8	0,m

Cecil series

Profile A17-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	2.50	10.12	20.40	31.02	7.40	71.44	18.01	10.55	fsl
BA	8-13	1.60	8.38	15.15	19.70	5.15	49.98	23.68	26.34	scl
Bt	13-36	1.42	8.08	13.05	16.25	5.95	44.75	21.98	33.27	cl,scl
C	66-72	1.02	8.58	18.00	23.45	7.98	59.03	15.64	25.33	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	4.60	1.21	0.44	0.30	6.34	0.55	8.29	2.50	23.52	78.00
BA	8-13	4.72	2.05	0.75	0.10	5.77	0.15	8.67	3.05	33.45	95.08
Bt	13-36	5.35	3.28	1.15	0.07	5.77	0.10	10.27	4.60	43.82	97.83
C	66-72	5.10	2.06	1.63	0.09	5.37	0.45	9.15	4.23	41.31	89.36

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
BA	8-13	5YR5/8	2,sbk
Bt	13-36	5YR5/8	1,sbk
BC	36-66	5YR5/8	1,sbk
C	66-72	5YR5/8	0,m

Mecklenburg series

Profile A17-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.10	7.93	19.63	32.50	8.60	69.76	17.76	12.48	fsl
AB	6-12	1.58	9.82	18.68	23.35	5.92	59.35	23.33	17.32	fsl
Bt	12-36	2.00	9.60	13.10	15.58	5.82	46.10	23.20	30.70	scl
BC	36-72	2.25	8.90	15.25	20.22	6.92	53.54	16.21	30.25	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.96	0.90	0.20	0.17	3.56	0.85	4.83	2.12	26.29	59.91
AB	6-12	5.85	1.62	0.53	0.10	2.57	0.25	4.82	2.50	46.68	90.00
Bt	12-36	5.50	3.04	1.08	0.10	3.56	0.45	7.78	4.65	54.24	90.36
BC	36-72	4.70	1.91	1.67	0.10	5.97	1.15	9.65	4.83	38.13	76.19

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR5/4	2,gr
AB	6-12	10YR5/6	1,gr
Bt	12-36	2.5YR5/8	2,sbk
BC	36-72	5YR5/8	1,sbk

Mecklenburg series

Profile A17-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.22	8.35	20.70	32.35	7.98	70.60	18.87	10.53	fsl
AB	7-15	1.50	9.05	18.45	23.15	5.75	57.90	24.09	18.01	fsl
Bt	15-38	1.42	8.02	14.98	16.30	7.25	47.97	24.17	27.86	scl
BC	38-72	2.02	10.45	17.35	21.02	7.02	57.86	13.84	28.30	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.95	0.88	0.31	0.27	5.74	0.85	7.20	2.31	20.28	63.20
AB	7-15	4.48	1.37	0.48	0.11	5.37	0.35	7.33	2.31	26.74	84.85
Bt	15-38	5.42	2.82	0.94	0.11	3.96	0.45	7.83	4.32	49.43	89.58
BC	38-72	4.75	2.39	1.24	0.07	6.78	1.15	10.45	4.87	35.60	76.39

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR5/4	2,gr
AB	7-15	10YR5/6	1,sbk
Bt	15-38	5YR5/8	2,sbk
BC	38-72	5YR5/8	1,sbk

Poindexter series

Profile A18-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	3.20	9.58	16.28	20.45	6.95	56.46	17.75	25.79	sl
Bt	5-24	1.38	9.10	18.00	19.90	5.38	53.76	10.89	35.35	scl,sc
C	34-72	5.60	10.90	12.08	21.18	8.40	58.16	19.01	22.83	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	4.84	2.70	0.97	0.23	6.14	0.75	10.04	4.65	38.84	83.87
Bt	5-24	5.63	2.48	1.28	0.10	4.55	0.55	8.41	3.91	45.90	98.72
C	34-72	4.80	0.13	0.37	0.17	6.97	2.35	7.64	3.02	8.77	22.19

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	5YR4/6	1,gr
Bt	5-24	2.5YR5/8	2,sbk
BC	24-34	2.5YR5/8	1,sbk
C	34-72	2.5YR4/8	0,m

Pacolet series

Profile A18-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.38	11.42	17.92	20.65	5.48	56.85	16.10	27.05	scl
Bt	6-32	2.65	9.50	13.58	13.38	4.58	43.69	14.04	42.30	c
C	44-72	6.38	11.30	10.92	17.65	8.38	54.63	18.73	26.64	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.24	2.15	0.70	0.18	7.16	0.65	10.19	3.68	29.74	82.34
Bt	6-32	5.30	2.95	1.39	0.05	5.57	0.05	9.96	4.44	44.08	98.87
C	44-72	4.45	0.48	0.63	0.12	6.37	2.05	7.60	3.28	16.18	37.50

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR4/6	2,gr
Bt	6-32	5YR5/6	2,sbk
BC	32-44	5YR5/8	1,sbk
C	44-72	2.5YR5/8	0,m

Cecil series

Profile A18-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	2.52	9.05	15.18	19.90	6.12	52.77	19.14	28.09	scl
Bt	5-17	2.90	8.10	11.50	15.80	5.60	43.90	14.91	41.19	c
C	30-72	1.90	8.25	17.90	25.10	6.50	59.65	12.46	27.89	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	4.48	2.98	1.12	0.20	4.73	0.65	9.03	4.95	47.62	99.35
Bt	5-17	5.12	2.54	1.36	0.09	8.76	0.05	12.75	4.04	31.29	98.76
C	30-72	4.45	0.31	0.65	0.21	10.15	2.65	11.32	3.82	10.34	30.63

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	5YR5/6	1,sbk
Bt	5-17	2.5YR5/8	2,sbk
BC	17-30	2.5YR5/8	1,sbk
C	30-72	2.5YR4/8	0,m

Pacolet series

Profile A19-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	3.38	9.55	15.75	17.62	6.15	52.45	26.33	21.22	scl
Bt	6-24	3.35	8.15	8.02	14.08	5.30	38.90	24.85	36.25	cl
C	35-72	2.45	11.75	12.98	22.72	9.52	59.42	20.03	20.55	fsl,scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.32	2.27	0.75	0.21	5.71	0.45	8.94	3.68	36.13	99.55
Bt	6-24	5.35	3.36	1.22	0.10	6.37	0.05	11.05	4.73	42.35	98.94
C	35-72	4.96	2.08	1.36	0.10	6.77	0.15	10.31	3.69	34.34	95.93

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR4/4	2,gr
Bt	6-24	7.5YR5/6	2,sbk
BC	24-35	7.5YR5/6	1,sbk
C	35-72	7.5YR6/8	0,m

Wedowee series

Profile A19-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	2.52	11.22	18.68	23.38	6.48	62.28	22.10	15.53	sl
Bt	12-36	3.30	8.10	10.38	15.15	5.82	42.75	14.06	43.19	c
C	58-72	5.20	9.12	12.22	20.88	7.85	55.27	22.59	24.14	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.30	1.68	0.50	0.14	6.57	0.40	8.89	2.72	26.10	85.29
Bt	12-36	5.54	2.98	0.99	0.07	4.36	0.10	8.40	4.14	48.10	97.58
C	58-72	4.80	1.26	1.24	0.11	5.77	1.15	8.38	3.76	31.15	69.41

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR4/4	2,gr
BA	6-12	5YR5/6	1,sbk
Bt	12-36	2.5YR5/8	2,sbk
BC	36-58	5YR5/8	1,sbk
C	58-72	7.5YR6/8	0,m

Cecil series

Profile A19-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	2.38	10.30	18.02	24.20	6.62	61.52	19.38	19.10	sl
Bt	7-20	5.48	9.42	9.22	14.00	5.62	43.74	20.38	35.88	cl
C	28-72	3.70	12.25	13.58	26.28	10.45	66.26	17.13	16.61	fsl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.50	2.05	0.61	0.16	7.96	0.35	10.78	3.17	26.16	88.96
Bt	7-20	5.25	3.24	1.11	0.09	5.97	0.15	10.41	4.59	42.65	96.73
C	28-72	4.75	1.45	1.01	0.12	4.78	0.45	7.36	3.03	35.05	85.15

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR5/4	2,gr
Bt	7-20	7.5YR5/6	2,sbk
BC	20-28	7.5YR5/8	1,sbk
C	28-72	7.5YR6/8	0,m

Wedowee series

Profile A20-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.88	10.52	20.25	27.00	7.08	66.73	14.64	18.63	sl
Bt	4-26	1.98	9.15	14.38	16.85	5.48	54.27	10.63	35.10	scl,sc
C	38-72	1.68	9.62	14.18	18.78	7.68	51.94	15.97	32.09	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	4.78	2.10	0.53	0.07	5.77	0.05	8.47	2.75	31.88	98.18
Bt	4-26	5.20	2.52	1.17	1.10	5.77	0.05	10.56	4.84	45.36	98.97
C	38-72	4.70	1.85	1.07	0.05	5.94	0.45	8.91	3.42	33.33	86.84

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	7.5YR4/4	1,gr
Bt	4-26	2.5YR5/8	2,sbk
BC	26-38	2.5YR5/8	1,sbk
C	38-72	2.5YR5/8	0,m

Pacolet series

Profile A20-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.68	9.60	18.10	28.12	6.95	64.45	19.28	16.27	fsl
Bt	4-22	0.88	7.00	12.30	14.92	5.48	40.58	15.45	43.97	c
C	35-72	0.98	7.90	12.45	16.31	7.62	45.34	18.98	35.68	l,cl,scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	4.60	1.75	0.53	0.12	3.74	0.25	6.14	2.65	39.09	99.75
Bt	4-22	5.90	3.05	1.27	0.09	5.37	0.05	9.78	4.46	45.09	98.88
C	35-72	5.48	2.35	1.24	0.08	7.13	0.25	10.80	3.92	33.98	93.62

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	7.5YR4/4	2,gr
Bt	4-22	5YR5/8	2,sbk
BC	22-35	5YR5/8	1,sbk
C	35-72	5YR6/8	0,m

Wedowee series

Profile A20-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	3.90	12.18	19.70	25.58	6.95	68.31	16.77	14.92	sl
Bt	8-30	3.52	9.90	13.12	15.00	4.92	46.46	18.97	34.57	scl,cl,sc
C	42-72	0.95	8.45	15.12	21.10	9.05	54.67	18.74	26.59	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	5.75	2.28	0.56	0.09	4.16	0.15	7.09	3.08	41.33	95.13
Bt	8-30	5.30	2.73	1.07	0.06	4.58	0.05	8.44	3.91	45.73	98.72
C	42-72	4.46	1.96	0.98	0.06	4.98	0.35	7.98	3.35	37.59	89.55

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR5/4	2,gr
Bt	8-30	5YR5/8	2,sbk
BC	30-42	5YR5/8	1,sbk
C	42-72	5YR5/6	0,m

Mecklenburg series

Profile A21-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	2.22	8.78	14.98	19.22	5.85	51.05	18.95	30.00	scl
Bt	4-13	2.45	8.40	9.35	9.70	4.00	33.90	15.67	50.43	c
C	30-72	2.25	12.92	17.38	19.55	8.42	47.60	29.81	22.59	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	5.02	3.28	1.04	0.13	6.14	0.05	10.59	4.50	42.02	98.89
Bt	4-13	5.90	3.75	1.26	0.08	7.76	0.05	12.85	5.14	39.61	99.03
C	30-72	4.70	1.68	0.53	0.04	6.97	0.35	9.22	2.60	24.40	86.54

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	5YR5/6	1,sbk
Bt	4-13	2.5YR5/8	2,sbk
BC	13-30	2.5YR5/8	1,sbk
C	30-72	5YR5/8	0,m

Pacolet series

Profile A21-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	2.18	8.92	14.30	19.02	6.10	50.52	23.53	25.95	scl
Bt	6-18	2.15	7.70	8.65	8.58	3.42	30.50	16.58	52.92	c
C	35-72	1.20	9.68	17.92	19.50	7.98	56.28	19.28	24.44	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.10	3.67	1.12	0.12	4.95	0.10	9.86	5.01	49.80	98.00
Bt	6-18	5.50	3.15	1.21	0.06	10.55	0.05	14.97	4.47	29.53	98.88
C	35-72	4.54	0.26	0.89	0.10	7.36	0.95	8.61	2.20	14.52	56.82

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR4/6	1,sbk
Bt	6-18	2.5YR5/8	2,sbk
BC	18-35	2.5YR5/8	1,sbk
C	35-72	5YR5/8	0,m

Pacolet series

Profile A21-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-3	2.00	9.40	17.55	21.32	5.85	56.12	19.88	24.00	scl
Bt	3-17	1.50	6.32	8.35	8.45	3.93	28.55	18.07	53.38	c
C	30-72	3.88	16.68	14.28	14.25	6.42	55.51	18.16	26.33	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-3	5.02	3.78	1.31	0.18	5.97	0.25	11.24	5.52	46.89	95.47
Bt	3-17	6.16	3.55	1.48	0.11	7.52	0.05	12.66	5.19	40.60	99.04
C	30-72	5.30	0.72	1.39	0.07	5.15	0.85	7.33	3.03	29.74	71.95

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	5YR4/6	1,sbk
Bt	3-17	2.5YR4/8	2,sbk
BC	17-30	2.5YR4/8	1,sbk
C	30-72	2.5YR5/8	0,m

Pacolet series

Profile A22-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	3.60	10.82	14.38	20.32	6.32	55.44	20.73	23.83	scl
Bt	4-12	2.38	8.18	9.98	15.80	7.12	43.46	25.20	31.34	cl
C	38-72	4.53	10.70	12.10	23.73	11.03	62.09	15.72	22.19	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	5.10	3.27	1.11	0.13	5.17	0.15	9.68	4.66	46.59	96.78
Bt	4-12	5.30	3.07	1.26	0.10	4.38	0.10	8.81	4.53	50.28	97.79
C	38-72	5.14	1.64	1.23	0.09	3.58	0.10	6.54	3.06	45.26	96.73

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	5YR4/6	1,sbk
Bt	4-12	5YR5/6	2,sbk
BC	12-38	5YR5/8	2,sbk
C	38-72	7.5YR5/8	0,m

Poindexter series

Profile A22-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	3.88	9.90	12.18	17.62	7.22	50.80	25.97	23.23	scl
Bt	6-17	2.38	8.30	11.25	17.45	6.65	46.03	24.10	29.87	scl
C2	39-72	0.02	0.62	5.28	21.25	12.90	40.07	34.15	25.81	l,cl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.60	2.98	1.14	0.15	3.94	0.05	8.21	4.32	52.01	98.84
Bt	6-17	5.25	3.35	1.31	0.10	4.78	0.10	9.54	4.86	49.90	97.94
C2	39-72	5.20	4.57	3.20	0.13	7.76	0.05	15.66	7.95	50.45	99.37

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR4/6	1,sbk
Bt	6-17	5YR4/6	2,sbk
BC	17-24	5YR5/8	1,sbk
C1	24-39	5YR5/8	0,m
C2	39-72	7.5YR5/8	0,m

Poindexter series

Profile A22-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	3.52	9.95	13.30	21.20	9.55	57.52	20.50	21.98	scl
Bt	4-13	2.20	9.72	13.98	24.50	7.65	58.05	16.20	25.75	scl
C	22-72	7.32	12.28	13.12	26.68	10.10	69.50	13.97	16.53	sl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	5.38	3.51	1.23	0.23	4.16	0.20	9.13	5.17	54.44	96.13
Bt	4-13	5.40	2.65	1.15	0.10	3.98	0.10	7.88	4.00	49.49	97.50
C	22-72	5.15	1.71	1.17	0.14	6.37	0.05	9.39	3.07	32.16	98.37

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	5YR4/6	1,sbk
Bt	4-13	5YR5/6	2,sbk
BC	13-22	5YR5/8	2,sbk
C	22-72	7.5YR6/8	0,m

Wedowee series

Profile A23-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	3.40	10.52	17.15	22.62	6.40	60.09	15.03	24.88	scl
Bt	5-23	1.82	8.33	8.983	16.83	7.14	43.10	15.58	41.32	c
C	45-72	2.10	10.52	13.02	31.00	11.32	67.96	14.40	17.64	fsl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	5.70	2.94	1.02	0.12	5.54	0.10	9.62	4.18	42.41	97.61
Bt	5-23	5.05	2.27	1.08	0.07	6.57	0.15	9.99	3.57	34.23	95.80
C	45-72	5.22	0.20	0.25	0.14	6.53	2.15	7.12	2.74	8.29	21.53

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	7.5YR5/6	1,sbk
Bt	5-23	2.5YR5/8	2,sbk
BC	23-45	2.5YR5/8	1,sbk
C	45-72	5YR5/8	0,m

Cecil series

Profile A23-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	0.05	8.70	16.38	24.08	6.25	55.36	14.38	30.26	scl
Bt	7-24	1.78	8.75	10.38	19.02	7.78	47.71	12.48	39.81	sc
C	44-72	2.15	10.03	13.55	30.73	9.38	65.84	14.89	19.27	fsl,scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.22	3.00	1.01	0.16	6.17	0.35	10.34	4.52	40.33	92.26
Bt	7-24	5.30	3.00	1.19	0.10	5.94	0.10	10.23	4.39	41.94	97.72
C	44-72	4.20	1.60	1.10	0.10	8.51	1.35	11.31	4.15	24.76	67.47

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	5YR4/6	2,gr
Bt	7-24	2.5YR5/8	2,sbk
BC	24-44	2.5YR5/8	1,sbk
C	44-72	5YR5/8	0,m

Cecil series

Profile A23-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.28	7.38	14.58	21.05	5.30	49.59	26.32	24.09	scl
Bt	7-23	2.00	7.40	9.12	15.08	5.85	39.45	12.15	48.39	c
C	41-72	2.45	8.40	10.35	18.52	6.32	46.04	15.75	38.21	cl,sc

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.75	2.78	0.89	0.19	7.96	0.20	11.82	4.06	32.66	98.07
Bt	7-23	5.92	3.23	1.48	0.08	6.14	0.05	10.93	4.84	43.82	98.97
C	41-72	4.20	1.60	1.10	0.10	8.51	1.35	11.31	4.15	24.76	67.47

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	5YR4/6	1,sbk
Bt	7-23	2.5YR5/8	2,sbk
BC	23-41	2.5YR5/8	1,sbk
C	41-72	5YR5/8	0,m

Cecil series

Profile A24-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-3	1.48	7.15	19.78	21.22	9.35	58.98	13.37	27.65	scl
C	15-72	1.62	8.68	16.40	29.25	9.98	65.93	14.28	19.79	fsl,scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-3	5.60	3.34	1.26	0.14	4.95	0.15	9.69	4.89	48.92	96.93
C	15-72	4.75	1.78	0.75	0.11	4.58	0.35	7.22	2.99	36.57	88.29

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	5YR5/6	1,sbk
BC	3-15	5YR5/6	1,sbk
C	15-72	5YR4/6	0,m

Mecklenburg series

Profile A24-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	2.60	8.45	13.60	21.18	6.90	52.73	18.98	28.29	scl
C	16-72	0.30	4.92	14.52	32.38	11.88	64.00	18.81	17.19	fsl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	5.42	3.98	1.38	0.15	8.71	0.10	14.22	5.61	38.75	98.22
C	16-72	5.02	1.78	0.81	0.06	3.58	0.05	6.23	2.70	42.54	98.15

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	5YR5/6	1,sbk
BC	5-16	5YR5/6	1,sbk
C	16-72	5YR4/6	0,m

Mecklenburg series

Profile A24-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.58	8.42	12.52	16.90	7.32	46.74	22.97	30.29	scl
C	15-72	1.95	9.10	15.82	27.25	9.10	63.22	13.89	22.89	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-4	5.12	3.58	1.37	0.29	9.11	0.20	14.35	5.44	36.52	96.32
C	15-72	5.12	2.22	0.93	0.08	5.15	0.05	8.38	3.28	38.54	98.48

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	5YR5/6	1,sbk
BC	4-15	5YR5/6	1,sbk
C	15-72	5YR4/6	0,m

Mecklenburg series

Profile A25-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	1.22	6.88	14.20	20.88	6.40	49.58	14.97	35.45	scl,sc
C	20-72	1.62	12.18	25.12	24.55	4.40	67.87	4.74	27.39	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-9	5.97	3.42	1.23	0.08	5.94	0.05	10.67	4.78	44.33	98.95
C	20-72	4.70	1.04	0.52	0.04	3.78	0.55	5.38	2.15	29.74	74.42

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	5YR4/6	1,sbk
BC	9-20	5YR5/6	1,sbk
C	20-72	2.5YR4/8	0,m

Pacolet series

Profile A25-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	1.15	7.05	17.33	24.63	6.68	56.84	6.75	36.41	sc
C	18-72	1.95	10.82	26.42	27.12	4.62	70.93	8.05	21.02	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-8	4.75	2.74	1.14	0.14	8.16	0.05	12.18	4.07	33.00	98.77
C	18-72	5.25	0.91	0.60	0.02	5.15	0.65	6.68	2.18	22.90	70.18

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	5YR4/6	1,sbk
BC	8-18	5YR5/6	1,sbk
C	18-72	2.5YR4/8	0,m

Pacolet series

Profile A25-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	1.42	8.80	18.12	22.65	5.70	56.69	12.80	30.52	scl
C	21-72	0.82	8.88	25.88	27.92	4.72	68.22	7.11	24.67	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-9	6.00	2.88	1.27	0.13	3.96	0.05	8.24	4.33	51.94	98.85
C	21-72	4.90	1.65	0.56	0.04	2.77	0.10	5.02	2.35	44.82	95.74

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	5YR4/6	1,sbk
BC	9-21	5YR4/6	1,sbk
C	21-72	2.5YR4/8	0,m

Mecklenburg series

Profile A26-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	2.72	7.88	8.48	12.38	4.65	36.11	17.19	46.70	c
Bt	5-12	1.55	6.58	7.15	10.90	5.02	30.30	20.92	48.78	c
C	30-72	3.62	11.05	12.48	17.42	6.80	51.37	16.43	32.20	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-5	5.20	4.50	1.87	0.15	7.96	0.05	14.48	6.57	45.03	99.24
Bt	5-12	5.20	3.01	1.65	0.16	10.69	1.55	15.51	6.37	31.08	75.67
C	30-72	4.32	0.40	0.62	0.10	8.56	4.15	9.68	5.27	11.57	21.25

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	5YR5/6	1,sbk
Bt	5-12	2.5YR5/8	2,sbk
BC	12-30	2.5YR5/8	1,sbk
C	30-72	2.5YR5/8	0,m

Pacolet series

Profile A26-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	2.08	7.88	8.10	10.45	4.18	32.69	20.38	46.93	c
Bt	7-24	1.90	7.72	10.23	14.90	5.80	40.60	18.24	41.16	c
C	36-72	3.05	10.12	10.90	15.80	6.32	46.19	21.76	32.05	scl

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.62	3.53	1.61	0.26	7.88	0.45	13.28	5.85	40.66	92.31
Bt	7-24	5.80	3.60	1.42	0.11	6.73	0.10	11.86	5.23	43.25	98.09
C	36-72	5.45	0.99	0.58	0.18	7.92	3.05	9.67	4.80	18.10	36.46

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	5YR5/6	1,sbk
Bt	7-24	2.5YR5/8	2,sbk
BC	24-36	2.5YR5/8	1,sbk
C	36-72	2.5YR5/8	0,m

Pacolet series

Profile A26-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	2.22	8.38	10.10	13.18	4.40	38.28	20.07	41.65	c
Bt	6-36	3.12	8.22	8.70	12.78	5.50	38.32	17.81	43.87	c
BC	36-72	3.35	9.65	11.02	14.30	5.70	44.02	20.17	35.81	cl,scl,sc

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	4.60	3.10	1.37	0.18	7.96	0.55	12.61	5.20	36.88	89.42
Bt	6-36	5.03	1.19	0.59	0.08	8.71	1.75	10.57	3.61	17.60	51.52
BC	36-72	5.35	0.30	0.43	0.07	8.12	3.25	8.92	4.05	8.97	19.75

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR5/6	1,sbk
Bt	6-36	2.5YR5/8	2,sbk
BC	36-72	2.5YR5/8	1,sbk

Cecil series

Profile A27-1. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	2.98	8.80	13.78	20.12	6.52	52.20	15.71	32.09	scl
Bt1	6-20	2.10	7.85	12.95	19.05	6.08	48.03	11.54	40.43	sc
Bt2	20-36	1.30	3.82	8.05	14.00	4.68	31.85	13.03	55.12	c
C	58-72	0.15	1.25	8.60	28.03	11.13	49.16	13.95	36.89	sc

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.76	3.50	1.29	0.10	7.13	0.15	12.02	5.04	40.68	97.02
Bt1	6-20	5.88	2.00	1.13	0.04	4.75	0.15	7.92	3.32	40.03	95.48
Bt2	20-36	4.50	1.35	1.73	0.09	10.15	1.05	13.32	4.42	23.80	75.12
C	58-72	4.62	0.18	0.91	0.12	10.15	3.10	11.36	4.31	10.65	28.07

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR5/6	1,sbk
Bt1	6-20	2.5YR5/6	2,sbk
Bt2	20-36	2.5YR5/6	2,sbk
BC	36-58	2.5YR5/8	1,sbk
C	58-72	2.5YR5/8	0,m

Cecil series

Profile A27-2. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	2.72	8.02	13.60	19.78	5.88	50.00	17.50	32.50	scl
Bt	7-36	0.70	6.00	7.88	13.28	4.68	32.54	13.21	54.25	c
C	55-72	0.35	3.35	11.60	21.42	8.85	45.57	20.38	34.05	cl,scl,sc

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.
			Ca	Mg	K	H	Al				
	inches		cmol (+) kg^{-1}							%	
Ap	0-7	4.58	3.27	1.30	0.18	4.93	0.10	9.68	4.85	49.07	97.94
Bt	7-36	5.32	1.80	1.10	0.07	9.11	0.75	12.08	3.72	24.59	79.84
C	55-72	4.66	0.12	0.70	0.10	7.33	2.55	8.25	3.47	11.15	26.51

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	5YR5/6	1,sbk
Bt	7-36	2.5YR5/6	2,sbk
BC	36-55	2.5YR5/6	1,sbk
C	55-72	2.5YR5/6	0,m

Cecil series

Profile A27-3. Particle size distributions, chemical and morphological properties, Appomattox County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	3.35	9.80	15.32	18.12	4.02	50.61	17.34	32.05	scl
Bt	6-36	1.38	5.02	7.62	12.38	4.35	30.75	14.02	55.23	c
C	62-72	0.28	3.48	13.18	26.70	11.20	54.84	16.02	29.14	scl

Horizon	Depth	pH	Exchangeable cations								
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.
	inches		cmol (+) kg^{-1}							%	
Ap	0-6	5.45	3.30	1.21	0.16	5.15	0.20	9.82	4.87	47.56	95.89
Bt	6-36	4.85	2.53	1.14	0.08	9.31	0.10	13.06	3.85	28.71	97.40
C	62-72	5.64	0.40	0.50	0.20	5.94	2.15	7.04	3.25	15.63	33.85

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR5/6	1,sbk
Bt	6-36	2.5YR5/6	2,sbk
BC	36-62	2.5YR5/6	1,sbk
C	62-72	2.5YR5/6	1,sbk

Cecil series

Appendix B - Pittsylvania County

Profile P1-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-8	0.50	5.05	18.60	23.65	8.75	56.55	23.24	20.21	fsl,scl	0.29	0.12	1.35
Bt1	8-22	0.49	2.38	5.33	9.84	5.98	24.02	23.06	52.92	c	0.49	0.44	1.53
C	48-72	2.92	8.48	13.75	16.45	11.95	53.55	35.18	11.27	fsl,l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	6.08	1.87	0.93	0.21	2.77	0.05	5.78	3.06	52.08	98.37	15.5	8.0
Bt1	8-22	4.54	1.50	1.17	0.11	8.12	1.55	10.90	4.33	25.50	64.20	4.2	.
C	48-72	4.82	0.02	0.11	0.12	4.36	2.25	4.61	2.50	5.42	10.00	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt1	8-22	2.5YR4/6	2,sbk
Bt2	22-36	2.5YR4/6	2,sbk
BC	36-48	5YR5/6	1,sbk
C	48-72	7.5YR6/6	0,m

Cecil series

Profile P1-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	0.42	4.92	17.65	23.42	8.30	54.71	22.63	22.66	scl
Bt	7-34	0.47	3.93	7.66	10.14	4.55	26.75	23.45	49.80	c
C	44-72	2.42	8.13	13.99	16.32	11.87	52.73	32.66	14.61	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	6.06	1.96	0.99	0.31	3.56	0.05	6.82	3.31	47.80	98.49	14.2	4.6
Bt	7-34	4.70	1.40	1.27	0.12	6.34	1.25	9.13	4.04	30.56	69.06	2.9	.
C	44-72	4.75	0.16	0.08	0.13	1.78	1.85	2.15	2.22	17.21	16.67	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/4	2,gr
Bt1	7-21	2.5YR4/8	2,sbk
Bt2	21-34	2.5YR4/6	2,sbk
BC	34-44	5YR5/6	1,sbk
C	44-72	7.5YR6/6	0,m

Cecil series

Profile P1-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	0.62	5.30	15.88	22.22	8.92	52.94	24.36	22.70	scl
Bt	8-32	0.42	2.40	7.25	10.08	5.55	25.70	23.15	51.15	c
C	44-72	1.80	7.22	15.20	17.15	10.75	52.12	29.39	18.49	fsl,l,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-8	6.07	1.82	0.85	0.22	3.76	0.05	6.65	2.94	43.46	98.30	14.7	6.0
Bt	8-32	4.00	1.82	1.40	0.11	7.33	1.45	10.66	4.78	31.24	69.67	2.4	.
C	44-72	4.65	0.15	0.14	0.11	3.56	2.15	3.96	2.55	10.10	15.69	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-32	2.5YR4/6	2,sbk
BC	32-44	5YR5/6	1,sbk
C	44-72	7.5YR6/6	0,m

Cecil series

Profile P2-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-7	0.83	4.55	12.12	20.05	10.88	48.43	24.97	26.60	scl	0.29	0.18	1.31
Bt	7-22	0.74	1.42	2.95	9.10	3.74	17.95	23.57	58.48	c	0.47	0.36	1.50
C2	44-72	2.19	8.43	14.55	21.98	13.37	60.52	29.99	9.49	fsl	.	.	.

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	6.08	2.05	1.15	0.27	4.16	0.05	7.63	3.52	45.48	98.58	20.6	8.9
Bt	7-22	4.81	1.99	1.00	0.12	8.71	2.45	11.82	5.56	26.31	55.94	3.8	3.1
C2	44-72	4.92	0.19	0.07	0.12	0.99	1.35	1.37	1.73	27.74	21.97	.	4.9

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/4	2,gr
Bt	7-22	5YR4/6	2,sbk
BC	22-32	5YR5/6	1,sbk
C1	32-44	7.5YR6/6	0,m
C2	44-72	7.5YR8/2	0,m

Pacolet series

Profile P2-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	0.76	4.52	12.61	20.01	10.95	48.85	25.33	25.82	scl
Bt	8-23	0.41	1.27	3.41	9.29	6.77	21.15	18.31	60.54	c
C2	68-72	0.56	2.12	7.12	23.46	17.20	50.46	34.39	15.15	sl,l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	6.32	2.42	1.38	0.30	2.77	0.05	6.87	4.15	59.68	98.80	17.7	11.0
Bt	8-23	4.71	1.86	1.04	0.13	10.10	2.85	13.13	5.88	23.08	51.53	3.7	.
C2	68-72	4.50	0.22	0.12	0.13	4.55	2.95	5.02	3.42	9.36	13.74	.	5.2

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-23	2.5YR4/6	2,sbk
BC	23-28	5YR5/8	1,sbk
C1	28-68	7.5YR6/8	1,sbk
C2	68-72	7.5YR8/2	0,m

Pacolet series

Profile P2-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.11	4.72	12.07	18.99	10.35	47.24	24.46	28.30	scl
Bt	4-17	0.41	3.76	7.83	6.79	3.38	22.17	18.01	59.82	c
C2	41-72	0.15	1.18	5.90	21.30	19.40	47.93	36.74	15.33	l

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	6.40	2.70	1.59	0.31	1.78	0.05	6.38	4.65	72.10	98.92	18.0	9.8
Bt	4-17	4.90	2.88	1.27	0.11	8.71	1.95	12.97	6.21	32.85	68.6	7.6	2.8
C2	41-72	4.50	0.17	0.25	0.07	6.14	3.45	6.63	3.94	7.39	12.44	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR4/4	2,gr
Bt	4-17	2.5YR4/6	2,sbk
BC	17-26	5YR4/6	1,sbk
C1	26-41	7.5YR5/8	1,sbk
C2	41-72	7.5YR8/2	0,m

Pacolet series

Profile P3-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-8	1.62	7.73	14.77	16.69	7.15	47.96	24.97	27.07	scl	0.29	0.19	1.26
Bt	8-18	0.86	2.94	3.35	4.47	4.64	16.26	28.08	55.66	c	0.40	0.28	1.64
C2	58-72	0.73	5.83	11.23	17.04	14.57	49.40	38.83	11.77	sl,l	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	5.51	2.38	1.20	0.27	3.17	0.10	7.02	3.95	54.84	97.47	16.3	6.7
Bt	3-18	4.56	1.71	1.33	0.19	9.31	3.65	12.54	6.88	25.76	46.95	4.2	23.5
C2	58-72	4.78	0.21	0.18	0.15	2.77	2.55	3.31	3.09	16.31	17.48	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-18	2.5YR4/6	2,sbk
BC	18-22	5YR4/6	1,sbk
C1	22-58	5YR7/3	1,sbk
C2	58-72	2.5YR6/6	0,m

Wedowee series

Profile P3-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	1.59	7.12	13.72	16.01	7.28	45.72	29.88	24.40	l,scl
Bt	9-23	0.72	1.87	2.94	5.63	5.55	16.71	32.19	51.10	c
C2	43-72	1.93	7.13	12.88	24.53	16.28	62.75	31.34	5.91	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-9	5.60	2.34	0.97	0.38	3.56	0.15	7.25	3.84	50.90	96.09	20.6	8.0
Bt	9-23	4.71	1.64	0.84	0.08	8.91	2.85	11.47	5.41	22.32	47.32	4.0	3.1
C2	43-72	4.29	0.05	0.05	0.10	2.18	1.35	2.38	1.55	8.40	12.90	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR4/4	2,gr
Bt	9-23	2.5YR4/6	2,sbk
BC	23-32	5YR5/6	1,sbk
C1	32-43	5YR7/3	1,sbk
C2	43-72	5YR7/6	0,m

Pacolet series

Profile P3-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	4.05	6.65	8.95	15.18	10.38	45.21	27.20	27.09	l,scl,cl
Bt	8-28	0.30	0.73	1.73	6.75	6.08	15.59	25.06	59.35	c
C2	67-72	1.00	5.33	11.93	17.78	13.43	49.47	38.21	12.32	fsl,l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-8	5.70	2.07	1.19	0.34	3.56	0.05	7.16	3.65	50.28	98.63	16.5	7.8
Bt	8-28	4.70	1.53	1.33	0.22	14.06	3.65	17.14	6.73	17.97	45.77	3.8	.
C2	67-72	4.34	0.08	0.14	0.11	4.36	3.95	4.69	4.28	7.04	7.71	.	3.6

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	1,gr
Bt	8-28	2.5YR4/6	2,sbk
C1	28-67	5YR5/8	1,sbk
C2	67-72	7.5YR6/8	0,m

Pacolet series

Profile P4-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-8	4.08	6.78	12.32	17.68	9.72	50.58	28.78	20.64	fsl,l,scl	0.24	0.13	1.39
Bt	8-28	0.73	1.87	2.32	5.66	5.24	15.82	25.24	58.94	c	0.45	0.34	1.53
C	36-72	3.14	7.02	7.98	13.44	11.48	43.06	33.51	23.43	l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	5.72	1.65	1.02	0.28	4.36	0.10	7.31	3.05	40.36	96.72	17.8	9.6
Bt	8-28	4.58	2.82	1.24	0.18	13.66	2.25	17.90	6.49	23.69	65.33	6.5	.
C	36-72	4.62	0.03	0.10	0.10	5.35	2.65	5.58	2.88	4.12	7.99	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	1,gr
Bt	8-28	5YR5/6	2,sbk
BC	28-36	7.5YR5/6	1,sbk
C	36-72	7.5YR7/6	0,m

Wedowee series

Profile P4-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	2.62	6.38	12.12	18.45	9.60	49.17	31.03	19.80	l
Bt	9-28	0.84	2.02	2.14	6.33	5.12	16.45	26.29	57.26	c
C	66-72	2.85	7.33	8.41	13.56	10.86	43.01	35.52	21.47	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-9	5.80	1.90	1.23	0.29	3.76	0.05	7.18	3.47	47.63	98.56	20.1	5.3
Bt	9-28	4.55	2.42	1.25	0.17	12.47	2.95	16.31	6.79	23.54	56.55	5.7	.
C	66-72	4.40	0.06	0.12	0.15	7.13	3.55	7.46	3.88	4.24	8.51	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR4/4	2,gr
Bt	9-28	7.5YR5/6	2,sbk
BC	28-34	7.5YR5/6	1,sbk
C1	34-66	7.5YR7/6	0,m
C2	66-72	7.5YR7/6	0,m

Wedowee series

Profile P4-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	3.35	7.02	12.00	18.05	9.15	49.57	28.39	22.04	fsl,l,scl
Bt	8-20	1.18	1.95	2.58	6.65	5.25	17.61	16.97	65.42	c
C	30-72	3.38	7.05	8.50	14.98	11.35	45.26	32.08	22.66	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-8	6.12	2.15	1.51	0.45	4.16	0.05	8.27	4.16	49.70	98.80	21.2	8.0
Bt	8-20	4.95	2.76	1.60	0.13	11.29	2.05	15.78	6.54	28.45	68.65	4.4	.
C	30-72	4.67	0.08	0.06	0.16	4.16	3.25	4.46	3.55	6.78	8.45	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	1,gr
Bt	8-20	7.5YR5/6	2,sbk
BC	20-30	7.5YR6/8	1,sbk
C	30-72	7.5YR7/6	0,m

Wedowee series

Profile P5-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-9	3.50	9.35	18.88	20.85	7.82	52.58	35.76	11.66	sl,l	0.25	0.20	1.63
Bt	9-20	3.66	6.41	7.84	10.12	6.88	34.91	20.71	44.38	c	0.38	0.35	1.67
C2	70-72	5.72	9.78	11.14	13.35	10.45	50.44	34.41	15.15	l,fsl	.	.	

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	6.38	1.97	0.67	0.47	2.57	0.05	5.68	3.16	54.75	98.42	14.3	26.0
Bt	9-20	5.56	4.02	1.10	0.12	5.15	0.05	10.39	5.29	50.43	99.05	7.1	.
C2	70-72	5.76	0.12	0.34	0.14	6.14	3.85	6.74	4.45	8.90	13.48	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR4/3	2,gr
Bt	9-20	7.5YR5/6	2,sbk
BC	20-36	7.5YR5/6	1,sbk
C1	36-70	7.5YR6/6	0,m
C2	70-72	7.5YR7/8	0,m

Wedowee series

Profile P5-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-10	3.90	9.92	19.65	19.58	7.50	60.55	26.48	12.97	sl
Bt	10-30	2.02	6.00	7.68	11.25	8.02	34.97	23.81	41.22	cl,c
C2	57-72	5.85	9.68	11.08	12.82	9.72	49.15	36.19	14.66	fsl,l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-10	6.58	2.46	0.73	0.46	2.18	0.05	5.83	3.70	62.61	98.65	13.9	24.0
Bt	10-30	5.48	3.70	0.68	0.12	4.16	0.35	8.66	4.85	51.96	92.78	1.9	.
C2	57-72	4.50	0.25	0.28	0.19	5.15	3.15	5.87	3.87	12.27	18.60	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-10	10YR4/3	2,gr
Bt	10-30	5YR5/6	2,sbk
BC	30-36	7.5YR5/6	1,sbk
C1	36-57	7.5YR6/8	0,m
C2	57-72	7.5YR7/8	0,m

Wedowee series

Profile P5-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	4.88	10.00	18.38	19.10	7.55	59.91	25.29	14.80	sl
Bt	8-26	4.72	6.78	8.10	7.90	4.30	31.80	22.03	46.17	c
C2	61-72	5.12	10.15	11.35	13.45	10.52	50.59	34.41	15.00	fsl,l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	6.67	3.12	0.81	0.49	0.79	0.05	5.21	4.47	84.84	98.88	15.1	31.0
Bt	8-26	5.83	4.73	0.88	0.11	5.15	0.05	10.87	5.77	52.62	99.13	2.9	.
C2	61-72	4.58	0.24	0.24	0.16	4.36	3.15	5.00	3.79	12.80	16.89	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/3	2,gr
Bt	8-26	5YR4/6	2,sbk
BC	26-39	5YR5/6	1,sbk
C1	39-61	7.5YR5/8	0,m
C2	61-72	7.5YR7/8	0,m

Wedowee series

Profile P6-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-3	1.18	3.43	8.15	16.63	10.15	39.54	27.82	32.64	cl	0.36	0.31	1.43
Bt	3-17	0.08	0.68	2.74	11.11	12.09	26.70	26.25	47.05	c	0.51	0.46	1.54
C	26-72	0.30	2.27	7.06	21.19	17.46	48.28	37.43	14.29	l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-3	5.43	2.25	0.82	0.90	5.74	0.35	9.71	4.32	40.89	91.90	18.9	33.3
Bt	3-17	5.23	2.47	1.10	0.45	3.96	0.55	7.98	4.57	50.38	87.96	6.0	4.2
C	26-72	4.62	0.34	0.46	0.20	3.37	1.35	4.37	2.35	22.88	57.45	.	4.5

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	7.5YR4/6	1,sbk
Bt	3-17	5YR4/6	2,sbk
BC	17-26	5YR5/6	1,sbk
C	26-72	10YR6/6	0,m

Wedowee series

Profile P6-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	1.03	3.00	8.35	16.42	9.59	38.39	29.96	31.65	cl
Bt	5-19	0.13	0.79	3.23	8.79	7.98	20.92	24.16	54.92	c
C	41-72	0.03	0.76	4.70	15.95	16.86	38.30	40.48	21.22	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	5.44	2.38	0.75	0.80	6.73	0.15	10.66	4.08	36.87	96.32	13.9	39.6
Bt	5-19	5.58	3.62	1.65	0.60	5.35	0.25	11.22	6.12	52.32	95.92	7.8	3.9
C	41-72	4.97	0.24	0.44	0.28	4.95	2.25	5.91	3.21	16.24	29.91	.	4.8

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	7.5YR5/6	1,sbk
Bt	5-19	5YR4/6	2,sbk
BC	19-41	5YR5/6	1,sbk
C	41-72	10YR6/6	0,m

Cecil series

Profile P6-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.06	3.58	9.65	17.54	11.24	43.07	27.93	29.00	l,scl,cl
Bt	7-32	1.15	2.75	5.22	9.50	6.59	25.21	24.99	49.80	c
C	45-72	0.08	1.32	5.16	14.14	14.30	35.00	44.83	20.17	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.29	2.00	0.65	0.80	4.55	0.25	8.00	3.70	43.13	93.24	18.9	46.0
Bt	7-32	4.95	2.37	1.50	0.48	5.94	1.25	10.29	5.60	42.27	77.68	6.6	3.6
C	45-72	4.76	0.12	0.45	0.26	5.35	3.15	6.18	3.98	13.43	20.85	.	3.8

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/6	1,sbk
Bt	7-32	2.5YR4/6	2,sbk
BC	32-45	7.5YR5/6	1,sbk
C	45-72	7.5YR6/8	0,m

Cecil series

Profile P7-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-9	4.36	6.69	11.48	9.16	18.31	50.00	25.91	24.09	l,scl	0.28	0.24	1.65
Bt	9-18	0.43	1.09	4.16	12.54	10.51	28.73	28.35	42.92	cl,c	0.45	0.31	1.55
C	46-72	2.42	8.96	14.90	19.31	12.16	57.75	28.43	18.32	fsl	.	.	

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al						
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.81	1.86	1.04	0.50	2.97	0.05	6.37	3.45	53.38	98.55	10.3	57.0
Bt	9-18	5.05	2.76	1.32	0.37	5.15	1.05	9.60	5.50	46.35	80.91	3.8	7.2
C	46-72	4.80	0.59	0.61	0.23	2.57	1.25	4.00	2.68	35.75	53.36	.	6.6

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	7.5YR5/6	1,sbk
Bt	9-18	7.5YR5/8	2,sbk
BC	18-46	7.5YR6/8	1,sbk
C	46-72	10YR6/8	0,m

Enon series

Profile P7-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	3.55	5.92	10.76	18.62	11.83	50.67	26.08	23.25	l,scl
Bt	7-17	0.33	1.22	5.47	11.76	9.55	28.33	26.36	45.31	c
C	44-72	0.15	1.60	7.45	16.92	12.94	39.06	35.14	25.80	l,cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	5.93	1.98	1.08	0.43	2.77	0.05	6.26	3.54	55.75	98.59	8.8	45.0
Bt	7-17	5.08	2.49	1.22	0.34	6.73	1.25	10.78	5.30	37.57	76.42	8.0	3.8
C	44-72	5.12	0.44	0.96	0.33	5.35	2.45	7.08	4.18	24.44	41.39	.	3.1

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/6	1,sbk
Bt	7-17	5YR5/8	2,sbk
BC	17-44	7.5YR5/6	1,sbk
C	44-72	7.5YR5/8	0,m

Cecil series

Profile P7-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	3.25	6.22	10.96	19.13	11.62	51.18	27.27	21.55	fsl,l,scl
Bt	16-33	1.19	3.30	6.85	12.13	8.88	32.35	24.29	43.36	c
C	52-72	3.70	9.15	11.77	15.55	11.42	51.59	31.37	17.04	fsl,l

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al						
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	6.61	2.26	1.39	0.60	1.19	0.05	5.44	4.30	78.13	98.84	10.6	57.6
Bt	16-33	5.00	2.06	1.19	0.35	5.94	1.15	9.54	4.75	37.74	75.79	2.2	4.4
C	52-72	4.89	0.62	0.74	0.26	4.16	1.85	5.78	3.47	28.03	46.69	.	17.8

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/4	1,sbk
BA	7-16	7.5YR5/6	1,sbk
Bt	16-33	2.5YR4/6	2,sbk
C1	33-52	10YR6/6	0,m
C2	52-72	10YR6/8	0,m

Pacolet series

Profile P8-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-5	1.98	3.85	9.50	19.75	11.38	46.46	27.71	25.83	l,scl	0.27	0.23	1.19
Bt	5-14	0.45	2.02	6.30	16.70	11.52	36.99	29.91	33.10	cl	0.43	0.23	1.53
C	14-72	0.22	1.18	6.98	20.05	17.80	46.23	37.45	16.32	sl,l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		$cmol(+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-5	6.26	2.18	1.49	0.60	4.55	0.05	8.82	4.32	48.41	98.84	14.3	52.0
Bt	5-14	4.81	1.86	0.97	0.42	4.75	1.05	8.00	4.30	40.63	75.58	6.6	.
C	14-72	4.65	0.89	0.78	0.25	1.19	0.95	3.11	2.87	61.74	66.90	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	7.5YR5/6	1,sbk
Bt	5-14	7.5YR5/8	2,sbk
C	14-72	10YR7/4	0,m

Poindexter series

Profile P8-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.62	3.70	9.08	19.02	10.70	44.12	28.12	27.76	l,scl,cl
Bt	6-18	0.32	1.98	6.45	15.02	11.35	35.12	22.12	42.76	cl,c
C	18-72	0.18	1.34	6.54	21.14	16.85	46.05	39.11	14.84	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-6	6.36	2.45	1.65	0.70	4.75	0.05	9.55	4.85	50.26	98.97	14.3	58.0
Bt	6-18	4.89	1.87	0.87	0.40	5.74	1.05	8.88	4.19	35.36	74.94	3.7	.
C	18-72	4.55	1.14	0.58	0.23	1.58	1.05	3.53	3.00	55.24	65.00	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR4/8	1,gr
Bt	6-18	7.5YR5/6	2,sbk
C	18-72	10YR7/4	0,m

Enon series

Profile P8-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand								Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	
	inches	%								
Ap	0-6	1.22	2.92	8.50	18.55	11.18	42.37	29.39	28.24	l,scl,cl
Bt	6-18	0.44	2.02	6.22	16.68	11.65	37.01	23.84	39.15	cl,c
C	18-72	0.10	1.22	6.88	21.18	17.10	46.48	37.97	15.55	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-6	6.05	2.30	1.44	0.70	4.95	0.05	9.39	4.49	47.28	98.89	12.5	58.0
Bt	6-18	4.83	1.75	0.72	0.47	4.75	1.15	7.69	4.09	38.23	71.88	5.3	.
C	18-72	4.91	1.06	0.52	0.24	1.98	1.15	3.80	2.97	47.89	61.23	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR4/6	1,gr
Bt	6-18	7.5YR5/6	2,sbk
C	18-72	10YR7/4	0,m

Enon series

Profile P9-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-18	1.10	4.58	12.75	20.88	12.32	51.63	33.36	15.01	fsl,l	0.32	0.23	1.95
Bt	18-52	0.32	1.68	5.58	12.52	9.12	29.22	35.51	35.27	cl	0.36	0.23	1.69
C	69-72	0.78	2.25	6.10	16.65	13.78	39.56	39.12	21.32	l	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-18	4.81	0.41	0.15	0.34	5.94	0.85	6.84	1.75	13.16	51.43	11.1	89.2
Bt	18-52	4.86	2.32	0.50	0.39	6.14	1.25	9.35	4.46	34.33	71.97	3.4	.
C	69-72	4.79	1.20	0.55	0.22	4.55	2.75	6.52	4.72	30.21	41.74	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-18	10YR4/4	2,gr
Bt	18-52	2.5YR4/6	3,sbk
BC	52-69	7.5YR5/6	1,sbk
C	69-72	7.5YR5/8	0,m

Cecil series

Profile P9-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-16	1.08	4.55	12.85	21.60	12.90	52.98	32.59	14.43	fsl,l
Bt	16-44	0.38	2.08	6.20	13.92	9.90	32.48	30.91	36.61	cl
C	63-72	0.58	1.95	5.10	18.38	15.55	41.56	39.72	18.72	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-16	4.96	0.53	0.22	0.38	4.16	0.85	5.29	1.98	21.36	57.07	9.3	88.0
Bt	16-44	4.87	2.38	0.50	0.42	6.14	1.35	9.44	4.65	34.96	70.97	3.9	.
C	63-72	4.68	0.86	0.56	0.24	4.95	2.55	6.61	4.21	25.11	39.43	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-16	10YR4/4	2,gr
Bt	16-44	5YR5/6	3,sbk
BC	44-63	5YR5/8	1,sbk
C	63-72	7.5YR5/8	0,m

Cecil series

Profile P9-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-11	1.85	5.25	14.10	22.38	12.60	56.18	31.81	12.01	fsl
Bt	11-36	2.15	4.10	8.02	15.05	8.40	37.82	26.82	35.36	cl
C	44-72	0.42	2.25	7.28	20.85	17.28	48.08	35.37	16.55	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-11	5.23	0.65	0.33	0.37	3.96	0.75	5.31	2.10	25.42	64.29	12.2	79.4
Bt	11-36	4.93	2.14	0.48	0.42	5.15	0.85	8.19	3.89	37.12	78.15	2.3	.
C	44-72	4.79	0.63	0.45	0.14	5.15	1.95	6.37	3.17	19.15	38.49	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-11	10YR4/6	2,gr
Bt	11-36	5YR5/6	2,sbk
BC	36-44	5YR4/6	1,sbk
C	44-72	7.5YR5/6	0,m

Cecil series

Profile P10-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-9	0.55	8.80	20.12	20.30	7.95	57.72	23.36	18.92	fsl,scl	0.23	0.18	1.53
Bt1	9-30	0.28	5.18	9.80	9.90	6.45	31.61	23.02	45.37	c	0.44	0.39	1.49
C	53-72	1.20	9.72	16.55	19.00	14.20	60.67	17.42	21.91	fsl,scl	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.29	0.91	0.34	0.42	5.88	0.15	7.55	1.82	22.12	91.76	13.0	28.8
Bt1	9-30	4.84	1.83	1.15	0.28	11.56	0.55	14.82	3.81	22.00	85.56	6.5	.
C	53-72	4.94	0.07	0.36	0.13	4.51	1.45	5.07	2.01	11.05	27.86	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR4/4	2,gr
Bt1	9-30	2.5YR4/8	2,sbk
Bt2	30-43	2.5YR4/8	2,sbk
BC	43-53	2.5YR4/8	1,sbk
C	53-72	2.5YR4/8	0,m

Cecil series

Profile P10-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	0.85	10.65	19.92	18.88	7.55	57.85	22.73	19.42	sl,scl
Bt	8-43	0.48	3.70	7.25	10.38	6.02	27.83	17.53	54.64	c
C	58-72	1.15	8.78	14.45	13.40	6.58	44.36	25.76	29.88	scl,cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-8	5.55	1.09	0.53	0.60	5.10	0.05	7.32	2.27	30.33	97.80	13.4	32.0
Bt	8-43	4.88	2.57	1.36	0.40	6.66	0.25	10.99	4.58	39.40	94.54	3.5	.
C	58-72	4.81	0.05	0.70	0.16	5.49	1.55	6.40	2.46	14.22	36.99	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	7.5YR5/6	1,sbk
Bt	8-43	2.5YR4/8	2,sbk
BC	43-58	2.5YR4/8	1,sbk
C	58-72	2.5YR5/8	0,m

Cecil series

Profile P10-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.10	10.98	20.62	19.30	8.58	60.58	22.50	16.92	sl
Bt	7-49	0.45	6.02	9.78	8.70	4.78	29.73	14.94	55.33	c
C	66-72	0.15	1.02	7.30	23.95	13.18	45.60	20.57	33.83	scl,cl,sc

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	6.20	1.57	0.90	0.50	3.33	0.15	6.30	3.12	47.14	95.19	13.4	42.0
Bt	7-49	4.80	2.08	1.26	0.27	9.41	0.75	13.02	4.36	27.73	82.80	4.2	.
C	66-72	5.02	0.18	1.84	0.19	10.00	2.65	12.21	4.86	18.10	45.47	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/6	1,gr
Bt	7-49	2.5YR4/8	2,sbk
BC	49-66	2.5YR5/8	1,sbk
C	66-72	5YR5/8	0,m

Cecil series

Profile P11-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-4	0.48	8.95	19.55	18.72	10.52	58.22	7.87	33.91	scl,sc	0.38	0.33	1.55
Bt	4-30	0.32	3.10	5.92	9.58	7.20	26.12	17.94	55.94	c	0.44	0.40	1.56
C	48-72	1.12	9.58	13.85	13.62	10.28	48.45	34.40	17.15	l	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	6.02	1.60	0.90	0.60	5.10	0.05	8.20	3.15	37.80	98.41	10.5	23.0
Bt	4-30	4.76	1.72	1.02	0.24	9.60	0.95	12.58	3.93	23.69	75.83	5.5	.
C	48-72	4.97	0.12	0.56	0.14	3.92	1.55	4.74	2.37	17.30	34.60	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	5YR4/6	1,sbk
Bt	4-30	2.5YR4/8	2,sbk
BC	30-48	2.5YR5/8	1,sbk
C	48-72	5YR5/8	0,m

Cecil series

Profile P11-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	0.35	5.75	15.70	18.05	7.65	47.50	29.35	23.15	l,scl
Bt1	4-20	0.70	6.42	9.78	8.58	4.65	30.13	19.52	50.35	c
C	57-72	11.25	5.95	9.65	14.65	11.32	52.82	21.13	26.05	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	5.60	1.43	0.68	0.60	6.34	0.10	9.05	2.81	29.94	96.44	9.1	38.0
Bt1	4-20	4.90	2.12	1.26	0.31	8.23	0.55	11.92	4.24	30.96	87.03	2.8	.
C	57-72	4.91	0.09	0.70	0.18	4.51	2.05	5.48	3.02	17.70	32.12	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	5YR5/6	1,sbk
Bt1	4-20	2.5YR4/8	2,sbk
Bt2	20-42	2.5YR5/8	2,sbk
BC	42-57	2.5YR4/6	1,sbk
C	57-72	2.5YR4/6	0,m

Cecil series

Profile P11-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	0.68	10.25	21.25	19.30	7.83	59.31	12.06	28.63	scl
Bt1	5-35	1.18	5.85	10.08	13.48	7.65	38.24	22.58	39.18	cl,c
C	70-72	0.18	4.18	8.52	11.30	11.20	35.38	35.27	29.35	cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	6.08	1.40	0.72	0.46	4.51	0.10	7.09	2.68	36.39	96.27	7.9	25.0
Bt1	5-35	4.76	1.70	0.96	0.32	7.84	0.75	10.82	3.73	27.54	79.89	3.5	.
C	70-72	4.76	0.04	0.77	0.13	8.62	2.85	9.56	3.79	9.83	24.80	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	5YR5/6	1,sbk
Bt1	5-35	2.5YR4/8	2,sbk
Bt2	35-60	2.5YR4/8	2,sbk
BC	60-70	5YR4/6	1,sbk
C	70-72	5YR4/6	0,m

Cecil series

Profile P12-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-6	0.80	10.68	23.08	19.65	7.60	61.81	14.20	23.99	scl	0.28	0.24	1.53
Bt1	6-22	0.60	6.42	8.38	7.00	4.22	26.62	15.20	58.18	c	0.46	0.33	1.53
C	66-72	0.90	9.28	13.75	13.45	7.33	44.71	31.97	23.32	l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-6	5.85	1.36	0.76	0.50	4.70	0.05	7.32	2.67	35.79	98.13	11.8	42.0
Bt1	6-22	4.72	1.64	1.11	0.22	7.45	1.15	10.42	4.12	28.50	72.09	3.5	.
C	66-72	4.78	0.05	0.35	0.10	5.68	2.45	6.18	2.95	8.09	16.95	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	5YR4/6	1,sbk
Bt1	6-22	2.5YR4/8	2,sbk
Bt2	22-47	2.5YR4/8	2,sbk
BC	47-66	2.5YR4/6	1,sbk
C	66-72	2.5YR5/8	0,m

Cecil series

Profile P12-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	0.80	10.70	21.95	19.50	7.40	60.35	10.70	28.95	scl
Bt1	5-25	0.92	5.82	8.80	8.60	4.35	28.49	18.01	53.50	c
C	70-72	0.52	3.90	8.30	12.78	10.30	35.80	34.55	29.65	cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	5.92	1.33	0.73	0.41	6.27	0.05	8.74	2.52	28.26	98.02	10.9	36.0
Bt1	5-25	4.51	1.27	1.07	0.18	5.88	1.25	8.40	4.77	30.00	52.83	3.2	.
C	70-72	5.01	0.01	0.38	0.10	8.04	2.95	8.53	3.44	5.74	14.24	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	7.5YR4/6	1,gr
Bt1	5-25	2.5YR4/8	2,sbk
Bt2	25-52	2.5YR4/8	2,sbk
BC	52-70	2.5YR4/6	1,sbk
C	70-72	5YR4/6	0,m

Cecil series

Profile P12-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	0.98	10.00	21.38	20.00	7.25	59.61	11.37	29.02	scl
Bt	4-36	0.50	3.48	6.53	8.13	4.40	23.04	19.67	57.29	c
C	56-72	1.00	2.10	3.98	7.18	5.15	19.41	64.11	16.48	sil

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	5.80	1.46	0.76	0.50	5.68	0.05	8.40	2.77	32.38	98.19	10.7	46.0
Bt	4-36	4.76	1.16	1.19	0.24	14.50	1.65	17.09	4.24	15.16	61.08	2.8	.
C	56-72	5.16	0.02	0.33	0.18	6.27	1.65	6.80	2.18	7.79	24.31	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	7.5YR4/6	1,gr
Bt	4-36	2.5YR4/8	2,sbk
BC	36-56	2.5YR4/8	1,sbk
C	56-72	2.5YR4/8	0,m

Cecil series

Profile P13-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-6	4.52	7.25	8.80	15.28	9.82	45.67	35.41	18.92	l	0.25	0.21	1.62
Bt1	6-23	0.40	4.90	8.70	8.30	4.95	27.25	21.35	51.40	c	0.46	0.42	1.52
C	59-72	1.15	10.02	13.78	14.28	8.88	48.11	23.74	28.15	scl	.	.	.

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al						
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-6	5.78	1.38	0.75	0.46	5.10	0.10	7.69	2.69	33.68	96.28	11.2	39.0
Bt1	6-23	4.73	1.40	1.34	0.33	9.70	1.15	12.77	4.22	24.04	72.75	4.0	.
C	59-72	4.79	0.17	0.56	0.17	8.51	2.85	9.41	3.75	9.56	24.00	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR4/6	1,gr
Bt1	6-23	2.5YR4/8	2,sbk
Bt2	23-48	2.5YR4/8	2,sbk
BC	48-59	2.5YR4/8	1,sbk
C	59-72	5YR5/8	0,m

Cecil series

Profile P13-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	0.55	9.70	22.55	20.50	7.40	60.70	15.94	23.36	scl
Bt	7-42	0.65	6.35	9.60	8.90	4.98	30.48	16.75	52.77	c
C	52-72	1.65	10.32	14.02	13.88	9.95	49.82	29.15	21.03	fsl,l,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.78	1.24	0.68	0.42	6.08	0.10	8.42	2.44	27.79	95.90	8.6	35.0
Bt	7-42	4.64	1.33	1.12	0.30	9.11	1.35	11.86	4.10	23.19	67.07	3.8	.
C	52-72	4.79	0.07	0.43	0.12	6.73	2.65	7.35	3.27	8.44	18.96	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/6	1,gr
Bt	7-42	2.5YR4/8	2,sbk
BC	42-52	2.5YR5/8	1,sbk
C	52-72	2.5YR5/8	0,m

Cecil series

Profile P13-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	0.42	9.55	23.30	21.98	7.95	63.20	15.31	21.49	sl,scl
Bt	6-36	0.30	5.52	10.95	10.00	5.55	32.32	22.30	45.38	c
C	69-72	0.62	8.62	12.50	12.45	8.40	42.59	31.86	25.55	l,cl

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-6	5.64	1.15	0.57	0.44	5.15	0.05	7.31	2.21	29.55	97.74	9.9	38.0
Bt	6-36	4.88	1.94	1.35	0.33	8.51	0.65	12.13	4.27	29.84	84.78	3.2	.
C	69-72	5.13	0.13	0.71	0.18	7.72	2.15	8.74	3.17	11.67	32.18	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR4/6	1,gr
Bt	6-36	2.5YR4/8	2,sbk
BC	36-69	2.5YR4/8	1,sbk
C	69-72	2.5YR4/8	1,sbk

Cecil series

Profile P14-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-9	0.50	8.80	24.82	26.48	9.75	70.35	12.49	17.16	sl	0.21	0.15	1.42
Bt1	15-27	0.35	4.75	9.75	9.25	5.42	29.52	16.91	53.57	c	0.40	0.36	1.57
C	70-72	2.65	8.02	11.18	20.98	15.15	57.98	15.52	26.50	scl	.	.	.

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.56	0.69	0.32	0.34	3.17	0.05	4.52	1.40	29.87	96.43	9.8	60.0
Bt1	15-27	4.67	1.06	0.98	0.27	9.11	1.75	11.42	4.06	20.23	56.90	3.3	.
C	70-72	4.66	0.06	0.20	0.11	7.92	2.85	8.29	3.22	4.46	11.49	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR5/4	2,gr
BA	9-15	10YR5/8	1,sbk
Bt1	15-27	2.5YR4/8	2,sbk
Bt2	27-39	2.5YR4/8	2,sbk
BC	39-70	2.5YR5/8	1,sbk
C	70-72	5YR5/8	0,m

Cecil series

Profile P14-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	0.55	8.25	25.75	27.50	9.30	71.35	12.69	15.96	sl
Bt1	9-23	0.30	4.65	11.40	10.40	5.50	32.25	13.62	54.13	c
C	63-72	1.52	7.08	25.38	16.02	4.20	54.20	11.60	34.20	scl,sc

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-9	5.68	0.80	0.35	0.38	4.16	0.05	4.52	1.40	29.87	96.43	7.9	58.6
Bt1	9-23	4.57	1.48	1.10	0.32	8.91	1.35	11.81	4.25	24.56	68.24	6.5	.
C	63-72	4.62	0.07	0.17	0.14	8.71	3.05	9.09	3.43	4.18	11.08	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR5/4	2,gr
Bt1	9-23	2.5YR4/8	2,sbk
Bt2	23-32	2.5YR4/8	2,sbk
BC	32-63	2.5YR5/8	1,sbk
C	63-72	5YR6/8	0,m

Cecil series

Profile P14-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	0.65	8.65	25.88	26.78	10.52	72.21	8.97	18.82	sl,scl
Bt1	12-20	1.98	6.88	9.02	7.50	4.25	29.63	24.95	45.42	c
C	51-72	0.80	6.75	15.25	17.53	9.98	50.31	22.53	27.16	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.66	0.80	0.32	0.43	3.17	0.10	4.72	1.65	32.89	93.94	6.6	61.2
Bt1	12-20	4.72	1.83	1.11	0.32	6.53	0.95	9.79	4.21	33.30	77.43	3.2	.
C	51-72	4.10	0.42	0.35	0.15	7.13	2.15	8.05	3.07	11.43	29.97	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR5/4	2,gr
BA	7-12	10YR5/8	1,sbk
Bt1	12-20	2.5YR4/8	2,sbk
Bt2	20-30	2.5YR4/8	2,sbk
BC	30-51	2.5YR5/8	1,sbk
C	51-72	5YR6/8	0,m

Cecil series

Profile P15-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-4	0.48	9.05	24.18	22.40	6.90	63.01	20.04	16.95	sl	0.26	0.23	1.79
Bt	4-34	0.35	5.38	9.75	7.43	3.65	26.56	27.56	45.88	c	0.44	0.40	1.56
C	70-72	0.20	9.12	16.98	16.70	9.50	52.50	21.47	26.03	scl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	6.02	1.58	0.88	0.43	4.95	0.05	7.84	2.94	36.86	98.30	8.2	30.0
Bt	4-34	4.70	1.36	0.99	0.15	9.90	1.75	12.40	4.25	20.16	58.82	3.1	.
C	70-72	4.88	0.07	0.20	0.08	8.12	2.15	8.47	2.50	4.13	14.00	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR4/4	2,gr
Bt	4-34	2.5YR4/8	2,sbk
BC	34-70	2.5YR5/8	1,sbk
C	70-72	2.5YR5/8	0,m

Cecil series

Profile P15-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-3	0.60	9.90	24.95	22.70	7.38	65.53	13.61	20.86	scl,sl
Bt	8-15	0.22	6.25	14.25	11.25	4.32	36.29	22.47	41.24	c,cl
C	58-72	0.42	10.20	17.78	18.40	12.80	59.60	17.85	22.55	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-3	5.98	1.25	0.70	0.41	3.17	0.05	5.53	2.41	42.67	97.93	6.8	45.4
Bt	8-15	4.58	0.82	0.72	0.14	9.11	1.85	10.79	3.53	15.57	47.59	4.2	.
C	58-72	4.77	0.40	0.30	0.20	6.14	1.35	7.04	2.25	12.78	40.00	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	10YR5/3	2,gr
AB	3-8	10YR6/6	1,sbk
Bt	8-15	2.5YR4/8	2,sbk
BC	38-58	2.5YR5/8	1,sbk
C	58-72	2.5YR5/8	0,m

Cecil series

Profile P15-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	0.60	10.80	25.78	23.68	7.65	68.51	19.47	12.02	sl
Bt	12-22	0.18	5.80	12.80	9.98	4.40	33.16	21.05	45.79	c
C	56-72	0.78	11.48	16.62	16.78	10.22	55.88	21.33	22.79	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	5.60	0.92	0.42	0.30	4.16	0.10	5.80	1.74	28.28	94.25	7.1	40.6
Bt	12-22	4.71	2.18	0.98	0.18	11.29	0.65	14.63	3.99	22.83	83.71	3.0	.
C	56-72	4.86	0.33	0.29	0.10	6.34	1.55	7.06	2.27	10.20	31.72	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/4	2,gr
BA	5-12	10YR5/6	1,sbk
Bt	12-22	2.5YR4/8	2,sbk
BC	22-56	2.5YR4/8	1,sbk
C	56-72	2.5YR5/8	0,m

Cecil series

Profile P16-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	---------- % ----------									----- $m^3\ m^{-3}$ -----		$Mg\ m^{-3}$
Ap	0-8	1.15	12.82	27.48	21.40	7.75	70.60	20.34	9.06	sl	0.17	0.08	1.57
Bt1	8-16	0.38	6.80	10.98	9.05	5.82	33.03	19.07	47.90	c	0.41	0.34	1.53
C	68-72	0.85	10.25	15.18	19.08	7.52	52.88	23.05	24.07	scl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		---------- cmol (+) kg^{-1} ----------							------- % -------		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	6.46	1.10	0.50	0.48	0.99	0.05	3.07	2.13	67.75	97.65	10.8	64.2
Bt1	8-16	5.09	1.72	0.57	0.20	5.74	0.65	8.23	3.14	30.26	79.30	2.5	.
C	68-72	4.94	0.10	0.29	0.13	3.56	1.65	4.08	2.17	12.75	23.96	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR5/4	2,gr
Bt1	8-16	7.5YR5/6	2,sbk
Bt2	16-24	2.5YR4/8	2,sbk
BC	24-68	2.5YR4/6	1,sbk
C	68-72	2.5YR5/8	0,m

Appling series

Profile P16-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	1.40	13.60	28.15	21.42	6.80	71.37	19.52	9.11	sl
Bt1	6-14	0.40	5.60	9.15	7.92	5.10	28.17	18.53	53.30	c
C	65-72	1.38	10.78	15.22	14.38	11.40	53.16	28.80	18.04	fsl,l,scl

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-6	6.54	1.17	0.49	0.40	1.19	0.05	3.25	2.11	63.38	97.63	8.2	61.2
Bt1	6-14	5.58	2.52	1.06	0.20	5.74	0.15	9.52	3.93	39.71	96.18	4.3	.
C	65-72	4.99	0.23	0.32	0.18	4.16	1.45	4.89	2.18	14.93	33.49	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR5/4	2,gr
Bt1	6-14	7.5YR5/6	2,sbk
Bt2	14-34	2.5YR4/8	2,sbk
BC	34-65	2.5YR4/8	1,sbk
C	65-72	5YR5/8	0,m

Appling series

Profile P16-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	---------- % ----------								
Ap	0-8	1.35	13.65	27.12	21.78	7.32	71.22	17.22	11.56	sl
Bt	12-32	0.48	6.05	11.55	9.28	5.82	33.18	20.08	46.74	c
C	62-72	0.85	9.45	15.92	17.58	12.22	56.02	25.12	18.86	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		---------- cmol (+) kg^{-1} ----------							------- % -------		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	6.40	1.14	0.52	0.33	0.99	0.05	2.98	2.04	66.78	97.55	8.8	72.4
Bt	12-32	5.30	1.95	1.12	0.28	7.13	0.25	10.48	3.60	31.97	93.06	3.9	.
C	62-72	5.15	0.20	0.46	0.22	4.16	1.25	5.04	2.13	17.46	41.31	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR5/4	2,gr
BA	8-12	5YR5/6	1,sbk
Bt	12-32	2.5YR4/6	2,sbk
BC	32-62	2.5YR4/6	1,sbk
C	62-72	2.5YR5/8	0,m

Cecil series

Profile P17-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-11	1.02	12.28	23.95	21.60	7.82	66.67	13.71	19.62	sl,scl	0.21	0.17	1.84
Bt	11-43	0.25	5.32	12.50	13.05	6.90	38.02	17.99	43.99	c	0.45	0.40	1.51
C	70-72	0.55	11.23	18.65	16.90	9.53	56.86	21.09	22.05	sl,scl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-11	5.40	0.61	0.30	0.37	5.54	0.25	6.82	1.53	18.77	83.66	10.9	32.0
Bt	11-43	4.93	1.62	0.82	0.23	7.13	0.65	9.80	3.32	27.24	80.42	3.1	.
C	70-72	4.89	0.11	0.36	0.20	6.86	1.45	7.53	2.12	8.90	31.60	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-11	10YR5/6	2,gr
Bt	11-43	2.5YR4/8	2,sbk
BC	43-70	2.5YR4/8	1,sbk
C	70-72	5YR4/6	0,m

Cecil series

Profile P17-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-11	0.72	11.78	25.45	21.50	7.75	67.20	13.18	19.62	sl,scl
Bt	11-41	0.78	7.65	13.10	11.90	6.12	39.55	11.22	49.23	c
C	67-72	0.98	11.88	13.25	16.53	11.58	54.22	23.55	22.23	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-11	5.30	0.60	0.29	0.28	4.16	0.25	5.33	1.42	21.95	82.39	8.3	36.0
Bt	11-41	4.74	1.65	0.66	0.24	13.66	0.85	16.21	3.40	15.73	75.00	4.7	.
C	67-72	4.95	0.20	0.43	0.17	7.64	1.45	8.44	2.25	9.48	35.56	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-11	10YR4/4	2,gr
Bt	11-41	2.5YR4/8	2,sbk
BC	41-67	2.5YR4/6	1,sbk
C	67-72	2.5YR4/6	0,m

Cecil series

Profile P17-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-10	0.75	11.48	24.95	21.50	7.90	66.58	14.45	18.97	sl,scl
Bt	10-26	0.40	5.62	9.58	9.85	5.72	31.17	20.94	47.89	c
C	69-72	0.98	10.08	14.62	13.80	10.15	49.63	30.08	20.29	fsl,l,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-10	5.70	0.65	0.35	0.35	5.15	0.15	6.50	1.50	20.77	90.00	9.3	34.0
Bt	10-26	4.92	2.02	0.88	0.20	7.33	0.85	10.43	3.95	29.72	21.52	3.3	.
C	69-72	4.91	0.18	0.46	0.10	8.04	1.75	8.78	2.49	8.43	29.72	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-10	10YR4/4	2,gr
Bt	10-26	2.5YR4/8	2,sbk
BC	26-69	2.5YR4/6	1,sbk
C	69-72	5YR4/6	0,m

Cecil series

Profile P18-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-8	0.78	11.65	22.85	19.90	7.62	62.80	20.40	16.80	sl	0.21	0.14	1.50
Bt	8-30	0.32	6.65	11.90	9.55	4.25	32.67	18.97	48.36	c	0.39	0.34	1.69
C	67-72	0.25	7.95	17.32	18.10	9.62	53.24	24.24	22.52	fsl,scl	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	6.71	1.43	0.87	0.60	1.19	0.05	4.09	2.95	70.90	98.31	10.9	22.0
Bt	8-30	4.98	1.76	1.49	0.23	10.10	0.65	13.58	4.13	25.63	84.26	3.2	.
C	67-72	4.84	0.10	0.31	0.11	7.25	1.65	7.77	2.17	6.69	23.96	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-30	2.5YR4/6	2,sbk
BC	30-67	2.5YR4/6	1,sbk
C	67-72	5YR4/6	0,m

Cecil series

Profile P18-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	0.70	10.70	22.40	19.92	7.40	61.12	20.77	18.11	sl,scl
Bt	7-28	0.32	6.15	11.72	4.75	4.80	27.74	23.18	49.08	c
C	50-72	1.12	10.98	15.00	19.05	11.55	57.70	21.49	20.81	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	6.58	1.50	0.96	0.36	3.17	0.05	5.99	2.87	47.08	98.26	12.5	30.0
Bt	7-28	4.99	1.70	1.36	0.14	10.30	0.65	13.50	3.85	23.70	83.12	3.8	.
C	50-72	4.97	0.12	0.35	0.16	6.86	1.75	7.49	2.38	8.41	26.47	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/4	2,gr
Bt	7-28	2.5YR4/8	2,sbk
BC	28-50	2.5YR4/8	1,sbk
C	50-72	5YR4/6	0,m

Cecil series

Profile P18-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	0.65	10.40	21.22	18.65	7.02	57.94	14.94	27.12	scl
Bt	8-26	0.18	5.25	9.82	9.15	4.08	28.48	21.09	50.43	c
C	70-72	0.92	10.50	15.08	17.85	11.52	55.87	24.20	19.93	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-8	6.18	1.54	0.82	0.42	5.94	0.15	8.72	2.93	31.88	94.88	11.2	41.6
Bt	8-26	5.23	2.63	1.56	0.30	8.91	0.15	13.40	4.64	33.51	96.77	2.4	.
C	70-72	4.94	0.11	0.34	0.21	5.49	1.65	6.15	2.31	10.73	28.57	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	7.5YR4/4	2,gr
Bt	8-26	2.5YR4/8	2,sbk
BC	26-70	2.5YR4/8	1,sbk
C	70-72	5YR4/6	0,m

Cecil series

Profile P19-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-7	0.60	5.10	17.12	23.25	9.55	55.62	25.31	19.07	fsl,scl	0.30	0.16	1.56
Bt	7-28	0.20	2.35	7.78	10.62	5.35	26.30	25.81	47.89	c	0.46	0.39	1.48
C	45-72	1.00	6.48	13.98	18.22	10.75	50.43	31.62	17.95	fsl,l	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	6.35	1.51	0.94	0.30	1.98	0.05	4.73	2.80	58.14	98.21	10.4	4.8
Bt	7-28	4.66	1.27	0.65	0.13	8.91	2.15	10.96	4.20	18.70	48.81	2.7	.
C	45-72	4.86	0.11	0.10	0.11	1.58	2.35	1.90	2.67	16.84	11.99	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/4	2,gr
Bt	7-28	5YR5/6	2,sbk
BC	28-45	2.5YR4/6	1,sbk
C	45-72	7.5YR6/8	0,m

Cecil series

Profile P19-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	0.55	4.72	17.08	22.38	9.70	54.43	25.26	20.31	fsl,scl
Bt	8-26	0.18	2.60	8.15	11.12	5.95	28.00	22.76	49.24	c
C	36-72	0.40	4.12	12.78	19.18	13.30	49.78	37.44	12.78	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-8	6.27	1.64	0.94	0.22	2.18	0.05	4.98	2.85	56.22	98.25	10.9	5.2
Bt	8-26	4.73	1.42	0.81	0.15	7.72	2.25	10.10	4.63	23.56	51.40	2.8	.
C	36-72	4.77	0.10	0.15	0.13	4.55	2.55	4.93	2.93	7.71	12.97	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-26	5YR5/6	2,sbk
BC	26-36	2.5YR4/6	1,sbk
C	36-72	7.5YR6/8	0,m

Wedowee series

Profile P19-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	0.35	0.88	15.25	20.38	8.92	45.78	27.18	27.04	l,scl,cl
Bt	7-23	0.18	2.28	6.65	9.35	5.12	23.58	26.80	49.62	c
C	53-72	0.98	6.48	13.90	17.55	11.25	50.16	36.37	13.47	fsl,l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	6.21	2.10	1.27	0.28	3.56	0.05	7.21	3.70	50.62	98.65	10.4	3.0
Bt	7-23	4.86	2.00	1.15	0.12	10.49	2.45	13.76	5.72	23.76	57.17	5.2	.
C	53-72	4.81	0.14	0.14	0.12	1.98	2.85	2.38	3.25	16.81	12.31	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/4	2,gr
Bt	7-23	2.5YR4/6	2,sbk
BC	23-53	7.5YR4/6	1,sbk
C	53-72	7.5YR6/8	0,m

Cecil series

Profile P20-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-10	1.03	6.02	14.02	19.31	8.96	49.34	27.47	23.19	l,scl	0.25	0.19	1.49
Bt	10-23	1.40	5.03	8.38	8.73	5.58	28.22	24.76	47.02	c	0.42	0.32	1.63
C2	45-72	1.38	8.25	14.83	16.08	11.98	52.52	34.38	13.10	fsl,l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-10	5.27	1.80	0.78	0.28	4.16	0.55	7.02	3.41	40.74	83.87	19.0	7.2
Bt	10-23	4.77	1.70	0.97	0.19	10.49	4.15	13.35	7.01	21.42	59.20	8.8	3.6
C2	45-72	4.53	0.07	0.22	0.14	6.73	3.75	7.16	4.18	6.01	10.29	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-10	10YR4/4	2,gr
Bt	10-23	2.5YR4/6	2,sbk
BC	23-32	7.5YR5/6	1,sbk
C1	32-45	7.5YR6/8	0,m
C2	45-72	7.5YR8/2	0,m

Pacolet series

Profile P20-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	1.06	6.94	14.43	18.37	8.20	49.00	25.72	25.28	scl
Bt	9-17	0.30	4.40	9.60	10.62	5.78	30.70	24.05	45.25	c
C2	48-72	2.53	9.28	13.05	14.55	11.88	51.29	32.90	15.81	fsl,l

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.20	1.85	0.84	0.26	3.96	0.75	6.91	3.70	42.69	79.73	17.5	20.0
Bt	9-17	4.65	1.57	0.88	0.22	8.71	3.95	11.38	6.62	23.46	40.33	6.2	3.9
C2	48-72	4.42	0.16	0.41	0.16	6.14	5.05	6.87	5.78	10.63	12.63	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR4/4	2,gr
Bt	9-17	2.5YR4/6	2,sbk
BC	17-32	5YR5/6	1,sbk
C1	32-48	7.5YR6/8	0,m
C2	48-72	7.5YR8/2	0,m

Pacolet series

Profile P20-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	1.84	7.29	15.94	17.38	7.62	50.07	24.91	25.02	scl
Bt	9-17	1.75	6.20	9.48	8.60	4.48	30.51	23.02	46.47	c
C2	42-72	0.38	2.92	6.68	9.22	5.95	25.15	57.07	17.78	sil

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.46	2.12	1.08	0.29	4.36	0.45	7.85	3.94	44.46	88.58	19.3	11.8
Bt	9-17	4.72	1.87	0.92	0.20	10.10	4.35	13.09	7.34	22.84	40.74	9.3	.
C2	42-72	4.59	0.19	0.36	0.10	4.75	4.25	5.40	4.90	12.04	13.27	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR4/4	2,gr
Bt	9-17	5YR5/6	2,sbk
BC	17-24	5YR5/8	1,sbk
C1	24-42	7.5YR6/8	0,m
C2	42-72	7.5YR8/2	0,m

Wedowee series

Profile P21-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-8	5.05	7.78	9.30	15.33	10.48	47.94	27.52	24.54	l,scl	0.25	0.23	1.36
Bt	8-19	6.50	6.53	5.33	7.93	6.05	32.34	22.20	45.46	c	0.41	0.39	1.46
C2	35-72	8.08	12.03	9.80	13.45	12.65	56.01	34.41	9.58	fsl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	5.20	1.68	0.91	0.25	4.16	0.45	7.00	3.29	40.57	86.32	17.5	7.5
Bt	8-19	4.82	1.94	1.32	0.14	8.51	1.65	11.91	5.05	28.55	67.33	4.3	.
C2	35-72	4.62	0.10	0.28	0.15	1.58	1.25	2.11	1.78	25.12	29.78	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-19	7.5YR5/8	2,sbk
C1	19-35	7.5YR7/8	0,m
C2	35-72	7.5YR8/2	0,m

Wedowee series

Profile P21-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	0.75	9.90	21.95	20.20	7.70	60.50	14.25	25.25	scl
Bt	9-15	2.95	5.80	6.20	9.45	7.40	31.80	23.99	44.21	c
C	15-72	1.50	2.98	6.30	18.88	15.20	44.86	37.71	17.43	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.60	1.86	1.10	0.21	3.76	0.15	6.93	3.32	45.74	95.48	17.2	5.0
Bt	9-15	4.92	1.98	1.14	0.12	8.51	1.65	11.75	4.89	27.57	66.26	5.5	.
C	15-72	4.46	0.08	0.29	0.17	5.15	2.75	5.69	3.29	9.49	16.41	.	3.5

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	10YR4/4	2,gr
Bt	9-15	7.5YR5/8	2,sbk
C	15-72	7.5YR5/8	0,m

Wedowee series

Profile P21-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.65	7.03	15.30	17.48	7.75	49.21	28.24	22.55	fsl,l,scl
Bt	7-19	0.43	2.38	5.15	8.13	5.53	21.62	21.57	56.81	c
C2	58-72	0.32	7.30	14.58	13.48	8.38	44.06	49.90	6.04	fsl,l,sil

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.63	1.87	0.98	0.38	4.16	0.45	7.39	3.68	43.71	87.77	19.3	6.5
Bt	7-19	4.73	1.35	0.93	0.10	10.69	3.45	13.07	5.83	18.21	40.82	5.0	3.9
C2	58-72	4.62	0.05	0.15	0.14	3.76	2.55	4.10	2.89	8.29	11.76	.	4.6

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR4/4	2,gr
Bt	7-19	5YR5/6	2,sbk
BC	19-25	5YR5/6	1,sbk
C1	25-58	7.5YR7/8	0,m
C2	58-72	7.5YR8/2	0,m

Wedowee series

Profile P22-1. Physical, chemical and morphological properties, Pittsylvania County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-9	0.25	1.65	5.58	13.95	9.95	31.38	40.00	28.62	l,cl	0.28	0.23	1.20
Bt	9-32	0.08	0.48	1.28	4.08	5.80	11.72	29.80	58.48	c	0.38	0.34	1.66
C	70-72	0.05	0.32	0.82	9.65	15.58	26.42	47.09	26.49	l,cl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	6.02	2.04	1.18	0.28	6.34	0.05	9.84	3.55	35.57	98.59	15.1	1.0
Bt	9-32	5.13	0.95	1.90	0.22	12.49	0.95	16.01	4.02	19.18	76.37	4.2	.
C	70-72	5.10	0.08	1.67	0.24	12.15	2.25	14.14	4.24	14.07	46.93	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	5YR4/4	1,sbk
Bt	9-32	2.5YR4/6	2,sbk
BC	32-70	2.5YR4/6	1,sbk
C	70-72	2.5YR4/6	0,m

Georgeville series

Profile P22-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	0.28	1.65	5.50	13.45	8.12	29.00	36.07	34.93	cl
Bt	9-30	0.08	0.80	2.85	7.78	6.45	17.96	30.33	51.71	c
C	54-72	0.12	0.48	1.35	13.00	14.35	29.30	42.86	27.84	l,cl

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-9	5.54	1.91	1.17	0.22	7.72	0.15	11.02	3.45	29.95	95.65	13.0	1.2
Bt	9-30	5.06	0.54	1.62	0.23	11.29	1.15	13.68	3.54	17.47	67.51	5.3	.
C	54-72	5.11	0.10	1.66	0.21	12.74	2.65	14.71	4.62	13.39	42.64	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	5YR4/6	1,sbk
Bt	9-30	2.5YR4/6	2,sbk
BC	30-54	2.5YR4/6	1,sbk
C	54-72	5YR4/6	0,m

Georgeville series

Profile P22-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	0.35	1.65	5.18	12.78	8.42	28.38	34.06	37.56	cl
Bt	9-26	0.08	0.85	2.85	8.48	6.90	19.16	27.53	53.31	c
C	54-72	0.02	0.30	1.18	12.55	13.90	27.95	40.23	31.82	cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-9	5.74	2.25	1.44	0.35	8.12	0.10	12.16	4.14	33.22	97.58	16.0	1.0
Bt	9-26	5.13	0.62	1.82	0.17	11.48	1.45	14.09	4.06	18.52	64.29	4.9	.
C	54-72	5.03	0.08	1.91	0.26	11.56	2.15	13.81	4.40	16.29	51.14	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	5YR4/6	1,sbk
Bt	9-26	2.5YR5/6	2,sbk
BC	26-54	2.5YR5/6	1,sbk
C	54-72	5YR4/6	0,m

Cecil series

Profile P23-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-11	0.22	1.42	6.92	19.28	11.22	39.06	31.96	28.98	cl,l	0.30	0.18	1.56
Bt	11-32	0.05	0.32	1.50	4.78	4.78	11.43	33.36	55.21	c	0.43	0.38	1.37
C	53-72	0.08	1.30	8.22	16.20	13.38	39.18	36.34	24.48	l,cl	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-11	5.40	1.34	0.68	0.18	7.52	0.25	9.72	2.45	22.63	89.80	14.7	1.7
Bt	11-32	4.77	1.18	1.26	0.21	12.47	1.75	15.12	4.40	17.53	60.23	4.0	.
C	53-72	5.03	0.08	0.31	0.16	6.27	1.95	6.82	2.50	8.06	22.00	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-11	5YR4/6	1,sbk
Bt	11-32	2.5YR4/6	2,sbk
BC	32-53	2.5YR4/6	1,sbk
C	53-72	5YR5/8	0,m

Georgeville series

Profile P23-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-10	0.32	1.85	7.50	19.40	10.78	39.85	30.72	29.43	l,cl
Bt	10-24	0.02	0.42	1.88	6.18	6.78	15.28	31.86	52.86	c
C	55-72	0.05	0.35	2.25	9.13	11.83	23.61	45.81	30.58	cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-10	5.25	1.38	0.78	0.27	7.13	0.20	9.56	2.63	25.42	92.40	14.7	2.0
Bt	10-24	4.88	1.21	1.18	0.18	11.48	1.65	14.05	4.22	18.29	60.90	3.4	.
C	55-72	4.99	0.10	0.46	0.22	12.74	2.45	13.52	3.23	5.77	24.15	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-10	5YR4/6	1,sbk
Bt	10-24	2.5YR4/6	2,sbk
BC	24-55	2.5YR4/6	1,sbk
C	55-72	2.5YR4/6	0,m

Georgeville series

Profile P23-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-11	0.20	1.45	6.42	18.78	12.18	39.03	30.35	30.62	cl
Bt	11-38	0.02	0.32	1.52	4.82	5.50	12.18	28.69	59.13	c
C	65-72	0.15	1.50	8.10	20.02	15.08	44.85	42.99	12.16	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-11	5.47	1.34	0.74	0.21	4.95	0.20	7.24	2.49	31.63	91.97	14.5	2.0
Bt	11-38	4.82	1.19	1.30	0.17	13.46	1.65	16.12	4.31	16.50	61.72	6.4	.
C	65-72	5.02	0.04	0.16	0.16	5.29	1.15	5.65	1.51	6.37	23.84	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-11	5YR4/6	1,sbk
Bt	11-38	2.5YR4/6	2,sbk
BC	38-65	2.5YR4/6	1,sbk
C	65-72	7.5YR7/6	0,m

Cecil series

Profile P24-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-9	0.45	1.75	5.48	12.50	9.70	29.88	41.32	28.80	1,cl	0.40	0.28	1.73
Bt	9-32	0.05	0.58	2.16	5.37	6.00	14.16	36.73	49.11	c	0.47	0.36	1.41
C	44-72	0.08	1.14	5.23	12.71	16.35	35.51	46.97	17.52	l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.60	1.50	1.00	0.21	5.15	0.15	7.86	2.86	34.48	94.76	9.7	1.3
Bt	9-32	4.98	0.83	1.42	0.28	10.98	1.95	13.42	4.48	18.85	56.47	2.2	3.9
C	44-72	4.96	0.18	0.35	0.18	3.96	2.65	4.67	3.36	15.20	21.13	.	7.2

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	5YR4/4	1,sbk
Bt	9-32	2.5YR4/6	2,sbk
BC	32-44	2.5YR4/6	1,sbk
C	44-72	7.5YR7/8	0,m

Pacolet series

Profile P24-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-9	0.40	1.65	5.58	12.43	9.60	29.66	38.81	31.53	cl
Bt	9-32	0.13	0.64	2.01	5.23	5.72	13.73	35.67	50.60	c
C	49-72	0.23	3.68	10.33	15.34	14.29	43.87	41.78	14.35	l

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.44	1.32	0.88	0.20	3.76	0.35	6.16	2.75	38.96	87.27	11.7	1.0
Bt	9-32	4.84	1.00	1.38	0.24	7.52	1.65	10.14	4.27	25.84	61.36	5.5	3.2
C	49-72	5.00	0.17	0.24	0.12	3.37	1.95	3.90	2.48	13.59	21.37	.	15.9

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	5YR4/4	1,gr
Bt	9-32	2.5YR4/6	2,sbk
BC	32-49	5YR4/6	1,sbk
C	49-72	5YR5/8	0,m

Pacolet series

Profile P24-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-11	0.35	1.37	4.65	10.69	8.32	25.38	42.25	32.37	cl
Bt	11-36	0.03	0.28	1.32	4.78	6.61	13.02	32.59	54.39	c
C	52-72	0.03	0.43	2.73	9.78	12.99	25.96	53.90	20.14	sil

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-11	5.20	1.67	0.86	0.18	5.35	0.55	8.06	3.26	33.62	83.13	11.6	0.9
Bt	11-36	4.84	0.77	1.34	0.20	8.71	2.65	11.02	4.96	20.96	46.57	2.8	.
C	52-72	4.76	0.18	0.43	0.17	4.55	3.65	5.33	4.43	14.63	17.61	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-11	5YR4/4	1,gr
Bt	11-36	2.5YR4/6	2,sbk
BC	36-52	5YR4/6	1,sbk
C	52-72	5YR5/8	0,m

Georgeville series

Profile P25-1. Physical, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-9	0.83	2.25	4.60	8.10	5.50	21.28	37.62	41.10	cl,c	0.45	0.40	1.44
Bt	9-41	0.08	0.48	1.15	3.00	3.60	8.31	31.02	60.67	c	0.56	0.43	1.39
C	68-72	0.12	0.20	0.42	4.05	10.95	15.74	55.45	28.81	sil,sicl	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-9	5.40	1.94	1.42	0.28	8.51	0.35	12.15	3.99	29.96	91.23	20.2	1.7
Bt	9-41	4.81	1.23	1.64	0.17	14.26	2.05	17.30	5.09	17.57	59.72	8.3	.
C	68-72	5.00	0.04	0.90	0.18	10.30	4.15	11.42	5.27	9.81	21.25	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-9	2.5YR4/8	1,sbk
Bt	9-41	2.5YR4/6	2,sbk
BC	41-68	2.5YR4/6	1,sbk
C	68-72	5YR5/8	0,m

Georgeville series

Profile P25-2. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-11	0.58	2.35	4.63	8.03	5.25	20.84	37.15	42.01	cl,c
Bt	11-30	0.12	0.38	1.24	2.98	3.50	8.22	32.13	59.65	c
C	70-72	0.14	0.22	0.45	4.28	11.78	16.87	55.98	27.15	sil,sicl

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-11	5.34	1.97	1.41	0.35	8.51	0.55	12.24	4.28	30.47	87.15	20.1	1.2
Bt	11-30	4.78	0.96	1.65	0.15	11.88	2.35	14.64	5.11	18.85	54.01	3.7	.
C	70-72	4.98	0.01	0.74	0.16	11.88	4.65	12.79	5.56	7.11	16.37	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-11	2.5YR4/8	1,sbk
Bt	11-30	2.5YR4/6	2,sbk
BC	30-70	2.5YR4/6	1,sbk
C	70-72	2.5YR5/8	0,m

Georgeville series

Profile P25-3. Particle size distributions, chemical and morphological properties, Pittsylvania County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-10	0.85	9.72	15.28	18.25	11.65	55.75	2.23	42.02	sc
Bt	10-32	0.14	0.42	0.95	3.14	3.65	8.30	30.28	61.42	c
C	59-72	0.05	0.18	0.55	4.25	11.80	16.83	55.71	27.46	sil,sicl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-10	5.20	2.06	1.59	0.45	8.51	0.35	12.61	4.45	32.51	92.13	22.6	1.2
Bt	10-32	4.78	0.90	1.50	0.14	11.68	2.85	14.22	5.39	17.86	47.12	6.7	.
C	59-72	4.86	0.01	0.70	0.18	11.68	5.25	12.57	6.14	7.08	14.50	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-10	2.5YR4/8	1,sbk
Bt	10-32	2.5YR4/6	2,sbk
BC	32-59	2.5YR4/8	1,sbk
C	59-72	5YR5/8	0,m

Georgeville series

Appendix C - Lunenburg County

Profile L1-1. Physical, chemical and morphological properties, Lunenburg County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-2	1.35	6.20	18.58	37.80	8.12	72.05	15.15	12.80	fsl	0.28	0.17	1.59
Bt	2-22	0.80	5.12	7.58	11.12	4.45	29.07	13.74	57.19	c	0.50	0.37	1.39
C	44-72	1.56	8.00	15.58	23.75	9.18	58.07	18.58	23.35	scl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}								%	$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-2	6.42	1.73	0.64	0.08	4.55	0.05	7.00	2.50	35.00	98.00	12.2	4.0
Bt	2-22	4.67	2.08	0.68	0.04	11.48	1.15	14.28	3.95	19.61	70.89	5.8	.
C	44-72	4.66	0.17	0.07	0.08	6.14	1.95	6.46	2.27	4.95	14.10	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-2	10YR4/4	2,gr
Bt	2-22	2.5YR4/6	2,sbk
BC	22-44	2.5YR4/6	1,sbk
C	44-72	2.5YR4/6	0,m

Cecil series

Profile L1-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	1.25	6.02	18.36	34.22	7.95	67.80	17.75	14.45	fsl
Bt	5-19	0.73	3.93	5.73	9.35	4.20	23.94	15.19	60.87	c
C	43-72	1.40	8.10	16.55	24.12	9.05	59.22	16.34	24.44	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	5.78	1.81	0.72	0.10	5.35	0.05	7.98	2.68	32.96	98.13	14.5	2.4
Bt	5-19	4.75	1.28	0.55	0.07	13.13	1.75	15.03	3.65	12.64	52.05	6.2	.
C	43-72	5.09	0.12	0.06	0.05	8.04	1.95	8.27	2.18	2.78	10.55	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR4/4	2,gr
Bt	5-19	2.5YR4/6	2,sbk
BC	19-43	2.5YR4/6	1,sbk
C	43-72	2.5YR4/6	0,m

Cecil series

Profile L1-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.18	5.90	19.15	35.88	8.42	70.53	15.59	13.88	fsl
Bt	4-38	0.63	3.95	5.66	8.96	4.00	23.20	19.45	57.34	c
C	47-72	1.28	10.02	16.22	24.28	8.98	60.78	19.50	19.72	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	5.98	2.15	0.86	0.15	4.16	0.10	7.32	3.26	43.17	96.93	15.5	1.8
Bt	4-38	4.52	0.99	0.39	0.07	9.31	1.85	10.76	3.30	13.48	43.94	3.9	.
C	47-72	4.86	0.15	0.06	0.03	8.71	2.55	8.95	2.79	2.68	8.60	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR5/4	2,gr
Bt	4-38	2.5YR4/6	2,sbk
BC	38-47	2.5YR4/6	1,sbk
C	47-72	2.5YR4/6	0,m

Cecil series

Profile I.2-1. Physical, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-4	1.44	5.66	18.02	35.66	6.05	66.83	11.90	21.27	fsl,scl	0.25	0.17	1.78
Bt	4-14	0.80	5.38	6.64	12.45	7.66	32.93	9.43	57.64	c	0.51	0.44	1.28
C	45-72	0.71	3.60	9.98	18.42	12.90	45.61	37.06	17.33	l	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	5.50	1.98	0.80	0.15	4.75	0.25	7.68	3.18	38.15	92.14	18.8	3.2
Bt	4-14	4.53	1.00	0.41	0.05	10.10	2.65	11.56	4.11	12.63	35.52	5.2	.
C	45-72	4.92	0.20	0.04	0.10	4.75	1.55	5.09	1.89	6.68	17.99	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR4/4	2,gr
Bt	4-14	7.5YR5/6	2,sbk
BC	14-45	2.5YR4/6	1,sbk
C	45-72	2.5YR5/8	0,m

Appling series

Profile L2-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.38	5.75	17.35	35.15	7.22	66.85	9.19	23.96	scl
Bt	4-44	1.12	5.40	5.58	11.32	7.94	31.36	13.09	55.55	c
C	50-72	0.58	3.65	8.72	19.52	13.40	45.87	37.87	16.26	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	6.05	2.02	0.78	0.09	5.74	0.10	8.63	2.99	33.49	96.66	16.3	4.8
Bt	4-44	4.58	0.45	0.24	0.05	9.31	3.15	10.05	3.89	7.36	19.02	2.3	.
C	50-72	4.77	0.14	0.09	0.06	8.04	4.05	8.33	4.33	3.48	6.68	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR4/4	2,gr
Bt1	4-20	10YR6/8	2,sbk
Bt2	20-44	5YR5/6	2,sbk
BC	44-50	5YR5/6	1,sbk
C	50-72	2.5YR4/6	0,m

Appling series

Profile L2-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.27	5.30	17.45	34.48	7.11	65.61	10.61	23.78	scl
Bt	4-23	0.70	4.95	7.02	11.54	6.68	30.89	15.03	54.08	c
C	44-72	0.60	4.12	9.43	18.15	12.54	44.84	39.23	15.93	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	5.96	1.99	0.84	0.13	3.17	0.05	6.13	3.01	48.29	98.34	18.2	2.8
Bt	4-23	4.43	0.84	0.42	0.07	9.90	2.55	11.23	3.88	11.84	34.28	3.8	.
C	44-72	4.67	0.19	0.04	0.06	6.34	2.55	6.63	2.84	4.37	10.21	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR4/4	2,gr
Bt	4-23	2.5YR4/6	2,sbk
BC	23-44	2.5YR4/6	1,sbk
C	44-72	5YR5/6	0,m

Cecil series

Profile L3-1. Physical, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-4	1.75	6.90	14.08	22.40	6.75	51.88	17.40	30.72	scl	0.32	0.23	1.82
Bt	4-22	0.84	4.42	7.04	8.90	8.45	29.65	21.93	48.42	c	0.49	0.42	1.47
C	38-72	1.40	7.45	10.82	15.58	8.32	43.57	25.74	30.69	scl,cl	.	.	.

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al						
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	5.60	2.09	0.79	0.17	9.90	0.20	12.95	3.25	23.55	93.85	22.2	3.7
Bt	4-22	4.72	0.47	0.35	0.07	10.89	2.85	11.78	3.74	7.56	23.80	3.9	.
C	38-72	4.64	0.15	0.06	0.04	8.43	3.25	8.68	3.50	2.88	7.14	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR4/4	2,gr
Bt	4-22	5YR5/6	2,sbk
BC	22-38	5YR5/6	1,sbk
C	38-72	5YR5/6	0,m

Wedowee series

Profile L3-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-3	2.15	5.94	14.32	21.84	7.05	51.30	20.26	28.44	scl
Bt	3-25	0.65	4.12	7.85	12.42	7.08	32.12	23.90	43.98	c
C	41-72	0.55	3.78	10.25	23.30	14.10	51.98	33.52	14.50	sl,l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-3	5.22	1.97	0.74	0.19	7.33	0.35	10.23	3.25	28.35	89.23	20.5	2.1
Bt	3-25	4.82	0.22	0.29	0.07	10.19	3.25	10.77	3.83	5.39	15.14	2.5	.
C	41-72	4.67	0.24	0.08	0.04	6.34	3.25	6.70	3.61	5.37	9.97	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	10YR4/4	2,gr
Bt1	3-16	7.5YR5/6	2,sbk
Bt2	16-25	5YR5/6	2,sbk
BC	25-41	5YR5/6	1,sbk
C	41-72	7.5YR6/8	0,m

Appling series

Profile L3-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	1.95	6.74	13.99	22.80	6.94	52.42	17.94	29.64	scl
Bt	5-20	1.22	5.48	6.25	6.92	3.32	23.19	17.55	59.26	c
C	42-72	0.42	4.05	8.88	20.58	13.32	47.25	27.55	25.20	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	5.20	1.90	0.72	0.19	6.73	0.45	9.54	3.26	29.45	86.20	21.5	4.9
Bt	5-20	4.64	0.66	0.62	0.07	13.86	3.05	15.21	4.40	8.88	30.68	5.9	.
C	42-72	4.76	0.18	0.06	0.05	7.84	3.55	8.13	3.84	3.57	7.55	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR4/4	2,gr
Bt	5-20	7.5YR4/6	2,sbk
BC	20-42	5YR5/6	1,sbk
C	42-72	7.5YR6/8	0,m

Appling series

Profile 14-1. Physical, chemical and morphological properties, Lunenburg County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-7	1.08	5.38	13.28	22.25	5.98	47.97	23.69	28.34	scl	0.24	0.18	1.69
Bt	7-17	0.52	3.60	6.88	10.98	5.32	27.30	18.08	54.62	c	0.43	0.35	1.41
C	38-72	2.48	5.12	9.00	21.35	11.32	49.27	29.46	21.27	scl,l	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	5.59	2.04	0.93	0.35	6.14	0.05	9.46	3.37	35.10	98.52	18.5	3.9
Bt	7-17	4.51	0.63	0.57	0.07	11.88	3.15	13.15	4.42	9.66	28.73	2.8	.
C	38-72	4.98	0.07	0.10	0.06	7.84	3.15	8.07	3.38	2.85	6.80	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	10YR5/4	2,gr
Bt	7-17	10YR6/6	2,sbk
BC	17-38	7.5YR5/6	1,sbk
C	38-72	2.5YR4/6	0,m

Wedowee series

Profile 14-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.22	5.95	14.50	23.60	6.20	51.47	18.93	29.60	scl
Bt	7-27	0.55	3.58	7.18	10.98	4.25	26.54	16.79	56.67	c
C	38-72	0.12	2.78	11.65	22.65	10.08	47.28	30.63	22.09	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.56	1.90	0.85	0.19	4.95	0.10	7.89	3.04	37.26	96.71	20.1	4.2
Bt	7-27	4.63	0.81	0.56	0.04	13.46	2.95	14.87	4.36	9.48	32.34	4.6	.
C	38-72	4.81	0.09	0.06	0.04	6.47	3.65	6.66	3.84	2.85	4.95	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/6	2,gr
Bt1	7-14	5YR5/6	2,sbk
Bt2	14-27	5YR5/6	2,sbk
BC	27-38	2.5YR5/6	1,sbk
C	38-72	2.5YR4/6	0,m

Pacolet series

Profile L4-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	2.38	7.20	15.30	23.20	5.75	53.83	19.13	27.04	scl
Bt	6-20	1.62	5.58	7.15	10.78	6.45	31.58	17.26	51.16	c
C	41-72	0.72	4.25	9.60	16.38	10.20	41.15	33.38	25.47	l,cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-6	5.32	1.62	0.72	0.22	5.74	0.25	8.30	2.81	30.84	91.10	16.7	4.0
Bt	6-20	4.68	0.72	0.59	0.08	11.88	2.65	13.27	4.04	10.47	34.41	4.7	.
C	41-72	4.82	0.10	0.08	0.07	9.02	3.65	9.27	3.90	2.70	6.41	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR5/6	2,gr
Bt	6-20	7.5YR4/6	2,sbk
BC	20-41	2.5YR5/6	1,sbk
C	41-72	2.5YR4/6	0,m

Appling series

Profile I.5-1. Physical, chemical and morphological properties, Lunenburg County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	---------- % ----------									----- $m^3\ m^{-3}$ -----		$Mg\ m^{-3}$
Ap	0-8	1.98	8.52	17.98	30.32	7.72	66.52	19.04	14.44	fsl	0.25	0.15	1.76
Bt	8-22	0.22	2.52	6.35	14.28	5.10	28.47	18.45	53.08	c	0.47	0.34	1.41
C	46-72	0.58	4.35	12.75	27.82	9.80	55.30	20.63	24.07	scl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		---------- cmol (+) kg^{-1} ----------							------- % -------		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-8	6.49	1.83	0.71	0.15	2.38	0.05	5.07	2.74	53.06	98.18	15.7	5.8
Bt	8-22	4.71	1.05	0.81	0.08	12.15	2.15	14.09	4.09	13.77	47.43	4.5	.
C	46-72	4.80	0.10	0.09	0.02	9.41	3.15	9.62	3.36	2.18	6.25	.	0.2

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR4/4	2,gr
Bt	8-22	2.5YR4/6	2,sbk
BC	22-46	2.5YR4/6	1,sbk
C	46-72	2.5YR4/6	0,m

Cecil series

Profile L5-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	1.98	9.40	20.00	28.35	6.73	66.46	20.40	13.14	sl
Bt	5-21	0.38	2.98	6.02	9.78	4.38	23.54	14.70	61.76	c
C	34-72	1.22	7.10	14.15	28.85	10.20	61.52	21.56	16.92	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	6.36	2.42	0.79	0.28	2.97	0.10	6.46	3.59	54.02	97.21	17.1	8.0
Bt	5-21	4.64	1.68	1.00	0.07	13.86	1.85	16.61	4.60	16.56	59.78	5.8	.
C	34-72	4.93	0.08	0.09	0.03	7.25	2.95	7.45	3.15	2.68	6.35	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR4/4	2,gr
Bt	5-21	5YR5/6	2,sbk
BC	21-34	2.5YR4/6	1,sbk
C	34-72	2.5YR4/6	0,m

Wedowee series

Profile L5-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	2.58	9.05	18.50	27.95	7.10	65.18	20.55	14.27	fsl
Bt	5-24	0.30	2.55	5.23	9.93	4.55	22.56	18.26	59.18	c
C	41-72	0.25	4.28	11.65	28.42	9.08	53.68	23.80	22.52	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	6.48	2.38	0.86	0.25	7.33	0.25	10.82	3.74	32.26	93.32	17.3	7.8
Bt	5-24	4.80	1.97	1.11	0.06	13.72	1.65	16.86	4.79	18.62	65.55	8.3	.
C	41-72	4.86	0.10	0.07	0.02	8.23	2.85	8.42	3.04	2.26	6.25	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR4/4	2,gr
Bt	5-24	5YR5/6	2,sbk
BC	24-41	5YR5/6	1,sbk
C	41-72	2.5YR4/6	0,m

Cecil series

Profile L6-1. Physical, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-3	3.14	6.88	13.50	22.48	8.32	54.32	22.34	23.34	scl	0.26	0.13	1.51
Bt	3-27	0.20	5.50	1.20	2.22	1.32	10.44	24.00	65.56	c	0.46	0.32	1.51
C	70-72	0.05	0.18	0.32	1.15	2.12	3.82	44.25	51.93	sic	.	.	.

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al						
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-3	5.74	2.02	0.64	0.23	0.79	0.10	3.68	2.99	78.53	96.66	9.8	0.6
Bt	3-27	5.26	4.27	2.70	0.21	10.10	1.15	17.28	8.33	41.55	86.19	3.6	.
C	70-72	5.04	0.18	1.57	0.42	14.65	5.65	16.82	7.82	12.90	27.75	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	7.5YR5/4	2,gr
Bt	3-27	2.5YR4/8	2,sbk
BC	27-70	2.5YR4/6	1,sbk
C	70-72	5YR5/6	0,m

Cecil series

Profile L6-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-2	3.25	6.12	12.18	20.65	7.60	49.80	24.59	25.61	scl
Bt	2-19	0.50	1.82	6.05	17.92	8.62	34.91	21.37	43.72	c
C	45-72	3.65	8.42	12.02	23.00	11.55	58.64	20.86	20.50	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-2	5.61	2.25	0.64	0.22	3.37	0.05	6.48	3.16	47.99	98.42	9.4	0.7
Bt	2-19	5.27	2.45	1.27	0.14	7.72	1.15	11.58	5.01	33.33	77.04	1.6	.
C	45-72	5.04	0.06	0.44	0.24	5.94	3.15	6.68	3.89	11.08	19.02	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-2	7.5YR4/6	2,gr
Bt	2-19	2.5YR4/8	2,sbk
BC	19-45	2.5YR4/8	1,sbk
C	45-72	7.5YR5/6	0,m

Cecil series

Profile L6-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-3	3.08	7.32	14.58	23.00	8.20	56.18	22.68	21.14	fsl,scl
Bt	3-14	1.00	2.98	6.68	14.58	6.58	31.82	19.97	48.21	c
C	42-72	1.18	3.82	9.85	24.50	16.18	55.53	29.42	15.05	sl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-3	5.60	1.96	0.56	0.21	2.57	0.15	5.30	2.88	51.51	94.79	8.6	0.7
Bt	3-14	5.01	2.42	1.79	0.16	7.92	1.85	12.29	6.22	35.56	70.26	3.7	.
C	42-72	4.80	0.07	0.66	0.27	6.93	4.95	7.93	5.95	12.61	16.81	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-3	5YR4/6	2,gr
Bt	3-14	2.5YR4/6	2,sbk
BC	14-42	2.5YR4/8	1,sbk
C	42-72	7.5YR6/6	0,m

Cecil series

Profile L7-1. Physical, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-5	1.05	5.95	13.88	26.18	8.95	56.01	27.79	16.20	fsl	0.27	0.12	1.70
Bt	5-33	0.18	0.72	1.05	2.00	1.78	5.73	31.54	62.73	c	0.48	0.35	1.59
C	68-72	0.18	0.62	0.85	1.68	2.80	6.13	45.51	48.36	sic	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-5	5.78	1.63	0.54	0.21	3.76	0.15	6.14	2.53	38.76	94.07	12.6	1.6
Bt	5-33	5.27	1.67	2.60	0.34	13.27	2.45	17.88	7.06	25.78	65.30	4.1	.
C	68-72	4.97	0.14	1.52	0.28	15.88	5.65	17.82	7.59	10.89	25.56	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	7.5YR5/4	2,gr
Bt	5-33	2.5YR4/6	2,sbk
BC	33-68	2.5YR4/6	1,sbk
C	68-72	2.5YR4/6	0,m

Cecil series

Profile L7-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.45	5.80	13.42	25.78	8.04	54.49	27.85	17.66	fsl
Bt	4-20	1.50	4.50	5.52	10.60	6.50	28.62	25.18	46.20	c
C	35-72	2.40	7.55	11.30	23.80	12.60	57.65	22.19	20.16	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	5.59	1.85	0.66	0.18	9.31	0.15	12.00	2.84	22.42	94.72	11.8	1.1
Bt	4-20	5.05	3.15	1.68	0.10	9.60	1.45	14.53	6.38	33.93	77.27	4.2	.
C	35-72	4.61	0.15	0.42	0.15	6.66	3.25	7.38	3.97	9.76	18.14	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	7.5YR5/4	2,gr
Bt	4-20	2.5YR4/6	2,sbk
BC	20-35	2.5YR4/6	1,sbk
C	35-72	5YR5/6	0,m

Pacolet series

Profile L7-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	1.50	5.72	12.95	24.22	8.18	52.57	22.99	24.44	scl
Bt	4-18	0.53	2.93	6.33	14.05	6.03	29.87	21.75	48.38	c
C	35-72	1.12	4.88	10.60	27.40	14.12	58.12	25.90	15.98	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	5.37	2.05	0.72	0.23	4.36	0.25	7.36	3.25	40.76	92.31	11.7	2.4
Bt	4-18	5.17	3.03	1.70	0.10	9.41	1.05	14.24	5.88	33.92	82.14	4.6	.
C	35-72	4.81	0.12	0.57	0.15	8.23	4.15	9.07	4.99	9.26	16.83	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	7.5YR5/4	2,gr
Bt	4-18	2.5YR4/6	2,sbk
BC	18-35	2.5YR4/6	1,sbk
C	35-72	2.5YR4/6	0,m

Pacolet series

Profile L8-1. Physical, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-4	4.08	7.08	14.50	28.68	9.72	64.06	24.45	11.49	fsl	0.26	0.15	1.80
Bt	4-19	1.65	3.95	7.18	17.58	9.50	39.86	18.99	41.15	cl,c	0.43	0.33	1.64
C	49-72	3.22	6.68	11.10	27.40	15.05	63.45	23.79	12.76	fsl	.	.	.

Horizon	Depth	pH	Exchangeable cations					CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al						
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	6.05	1.52	0.44	0.30	1.19	0.05	3.45	2.31	65.51	97.84	11.1	2.4
Bt	4-19	5.12	2.76	0.60	0.28	5.35	0.35	8.99	3.99	40.49	91.23	6.1	.
C	49-72	4.95	0.24	0.15	0.18	1.98	1.65	2.55	2.22	22.35	25.68	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR5/3	2,gr
Bt	4-19	2.5YR4/8	2,sbk
BC	19-49	2.5YR5/8	1,sbk
C	49-72	7.5YR6/8	0,m

Cecil series

Profile L8-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	2.55	7.92	16.55	27.88	9.40	64.30	25.50	10.20	fsl
Bt	6-17	0.58	2.92	8.18	16.75	7.98	36.41	21.29	42.30	c
C	53-72	1.25	5.00	11.52	24.18	11.82	53.77	23.44	22.79	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-6	5.90	1.29	0.40	0.32	1.58	0.05	3.59	2.06	55.99	97.57	13.6	2.8
Bt	6-17	5.52	3.00	0.78	0.27	6.34	0.15	10.39	4.20	38.98	96.43	2.9	.
C	53-72	5.03	0.15	0.27	0.28	3.37	2.45	4.07	3.15	17.20	22.22	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	10YR5/3	2,gr
Bt	6-17	2.5YR4/8	2,sbk
BC	17-53	2.5YR4/8	1,sbk
C	53-72	7.5YR6/6	0,m

Cecil series

Profile L8-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-8	2.65	8.22	15.98	24.42	8.78	60.05	30.46	9.49	fsl
Bt	8-23	1.80	5.48	9.48	18.02	7.42	42.20	18.68	39.12	cl,c
C	64-72	0.90	4.75	11.82	28.52	13.82	59.81	19.20	20.99	fsl,cl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-8	6.13	1.44	0.45	0.32	1.78	0.05	3.99	2.26	55.39	97.79	11.4	2.8
Bt	8-23	5.36	3.10	0.85	0.17	5.35	0.45	9.47	4.57	43.51	96.15	2.8	.
C	64-72	5.06	0.37	0.43	0.21	4.75	2.25	5.76	3.26	17.53	30.98	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-8	10YR5/4	2,gr
Bt	8-23	2.5YR4/8	2,sbk
BC	23-64	2.5YR6/8	1,sbk
C	64-72	7.5YR6/8	0,m

Cecil series

Profile L9-1. Physical, chemical and morphological properties, Lunenburg County.

		Sand									Water Content		
Horizon	Depth	Very Coarse	Coarse	Medium	Fine	Very Fine	Total	Silt	Clay	Textural Class	-10kPa	-1500kPa	Bulk Density
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-5	4.22	8.52	15.45	26.22	8.75	63.16	23.38	13.46	fsl	0.22	0.13	1.75
Bt	5-15	3.42	6.65	7.00	10.72	6.45	34.24	18.36	47.40	c	0.44	0.34	1.48
C	38-72	3.88	9.88	14.42	22.02	10.38	60.58	20.86	18.56	fsl,cl	.	.	.

			Exchangeable cations										
Horizon	Depth	pH	Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.	Organic Matter	Avail. P
	inches		cmol (+) kg^{-1}								%	$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-5	5.64	1.11	0.44	0.21	1.19	0.25	2.95	2.01	59.66	87.56	10.9	2.0
Bt	5-15	5.11	1.63	1.32	0.15	7.13	1.85	10.23	4.95	30.30	62.63	5.1	.
C	38-72	4.96	0.03	0.42	0.17	5.94	2.85	6.56	3.47	9.45	17.87	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/4	2,gr
Bt	5-15	5YR5/8	2,sbk
BC	15-38	2.5YR5/8	1,sbk
C	38-72	5YR5/8	0,m

Wedowee series

Profile L9-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	4.20	8.55	15.22	26.24	9.26	63.47	23.21	13.32	fsl
Bt	4-20	2.05	4.52	6.52	12.30	6.48	31.87	23.61	44.52	c
C	45-72	1.80	6.10	8.98	19.02	10.22	46.12	27.76	26.12	l,cl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	5.52	1.18	0.47	0.17	2.38	0.25	4.20	2.07	43.33	87.92	11.3	1.1
Bt	4-20	5.19	2.16	1.43	0.14	9.50	1.65	13.23	5.38	28.19	69.33	1.2	.
C	45-72	5.11	0.08	0.58	0.38	10.10	2.45	11.14	3.49	9.34	29.80	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR5/4	2,gr
Bt	4-20	5YR5/6	2,sbk
BC	20-45	5YR5/6	1,sbk
C	45-72	5YR6/8	0,m

Cecil series

Profile L9-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	4.15	8.60	14.70	26.75	9.25	63.45	23.35	13.20	fsl
Bt	4-16	1.68	4.80	8.12	15.32	6.02	35.94	21.70	42.36	c
C	42-72	3.20	8.30	12.22	23.68	11.62	59.02	57.99	17.01	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	5.75	1.10	0.41	0.22	1.19	0.15	2.92	1.88	59.25	92.02	10.6	1.6
Bt	4-16	5.14	2.88	0.93	0.12	5.94	0.15	9.87	4.08	39.82	96.32	3.3	.
C	42-72	5.09	0.32	0.63	0.14	2.97	2.45	4.06	3.54	26.85	30.79	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR5/4	2,gr
Bt	4-16	5YR5/6	2,sbk
BC	16-42	2.5YR4/8	1,sbk
C	42-72	5YR5/6	0,m

Cecil series

Profile L10-1. Physical, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-4	1.70	8.50	17.22	24.85	7.78	60.05	28.68	11.27	fsl	0.22	0.10	1.68
Bt	4-14	5.85	7.32	7.10	12.05	7.40	39.72	23.12	37.16	cl	0.44	0.35	1.67
C	25-72	1.55	8.78	16.40	26.98	11.48	65.19	19.46	15.35	fsl	.	.	.

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		$cmol\ (+)\ kg^{-1}$							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	5.51	1.18	0.43	0.18	3.56	0.15	5.35	1.94	33.46	92.27	17.4	5.0
Bt	4-14	5.06	2.74	1.43	0.11	7.13	1.45	11.41	5.73	37.51	74.69	3.1	.
C	25-72	5.06	0.13	0.41	0.20	5.54	2.35	6.28	3.09	11.78	23.95	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR5/4	2,gr
Bt	4-14	2.5YR5/8	2,sbk
BC	14-25	2.5YR5/8	1,sbk
C	25-72	5YR6/8	0,m

Pacolet series

Profile L10-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	2.18	9.15	18.78	26.98	7.75	64.84	21.18	13.98	sl
Bt	7-16	3.30	6.42	6.98	13.43	8.80	38.93	23.23	37.84	cl
C	31-72	7.68	11.98	11.82	18.85	9.50	59.83	27.58	12.59	sl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.79	0.95	0.35	0.16	3.76	0.15	5.22	1.61	27.97	90.68	13.6	4.4
Bt	7-16	5.27	3.58	1.85	0.10	4.75	0.65	10.28	6.18	53.79	89.48	4.2	.
C	31-72	4.99	0.25	1.12	0.21	6.14	3.75	7.72	5.33	20.47	29.64	.	.

Horizon	Depth	Color	Structure
	inches		
Ap1	0-3	10YR5/4	2,gr
Ap2	3-7	7.5YR5/6	2,gr
Bt	7-16	5YR5/8	2,sbk
BC	16-31	2.5YR5/8	1,sbk
C	31-72	2.5YR5/8	0,m

Wedowee series

Profile L10-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-6	3.22	9.30	17.58	27.20	9.68	66.98	18.66	14.36	sl
Bt	6-22	1.88	6.15	7.80	13.68	9.28	38.79	22.23	38.98	cl,c
C	45-72	2.60	7.82	9.58	23.40	15.00	58.40	25.21	16.39	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-6	5.73	1.01	0.42	0.19	3.17	0.15	4.79	1.77	33.82	91.53	11.8	1.8
Bt	6-22	5.09	1.70	1.48	0.10	7.92	2.45	11.20	5.73	29.29	57.24	3.8	.
C	45-72	5.01	0.08	0.98	0.20	8.32	5.35	9.58	6.61	13.15	19.06	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-6	7.5YR6/6	2,gr
Bt	6-22	2.5YR4/8	2,sbk
BC	22-45	2.5YR4/8	1,sbk
C	45-72	2.5YR4/6	0,m

Cecil series

Profile L11-1. Physical, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class	Water Content		Bulk Density
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total				-10kPa	-1500kPa	
	inches	%									$m^3\ m^{-3}$		$Mg\ m^{-3}$
Ap	0-4	3.50	8.05	14.22	22.62	8.95	57.34	24.35	18.31	fsl	0.29	0.16	1.64
Bt	4-17	0.42	2.15	5.75	17.78	10.70	36.80	18.15	45.05	c	0.44	0.35	1.55
C	36-72	0.90	2.25	7.32	30.32	16.00	56.79	25.12	18.09	fsl,scl	.	.	.

Horizon	Depth	pH	Exchangeable cations							B.S.	E.B.S.	Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC				
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-4	5.65	1.50	0.58	0.19	3.17	0.10	5.44	2.37	41.73	95.78	12.8	2.0
Bt	4-17	4.97	2.12	0.82	0.18	7.52	1.35	10.64	4.47	29.32	69.80	6.3	.
C	36-72	5.03	0.09	0.27	0.15	5.15	2.35	5.66	2.86	9.01	17.83	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR5/4	2,gr
Bt	4-17	2.5YR5/8	2,sbk
BC	17-36	2.5YR5/8	1,sbk
C	36-72	5YR6/8	0,m

Pacolet series

Profile L11-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-5	3.50	8.45	15.52	23.98	8.65	60.10	26.64	13.26	fsl
Bt	5-24	1.32	4.60	8.30	14.70	8.72	37.64	23.39	38.97	cl,c
C	36-72	3.42	7.82	10.88	20.42	10.45	52.99	25.87	21.14	fsl,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-5	5.66	1.42	0.53	0.19	3.17	0.05	5.31	2.19	40.30	97.72	10.6	2.0
Bt	5-24	4.98	2.45	0.80	0.13	8.12	2.05	11.50	5.43	29.39	62.25	2.3	.
C	36-72	4.77	0.29	0.51	0.17	7.13	3.65	8.10	4.62	11.98	21.00	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-5	10YR5/3	2,gr
Bt	5-24	2.5YR5/8	2,sbk
BC	24-36	5YR5/8	1,sbk
C	36-72	5YR5/8	0,m

Pacolet series

Profile L11-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-4	3.62	8.88	16.02	26.52	9.02	64.06	24.53	11.41	fsl
Bt	4-27	1.72	4.08	6.50	11.32	7.15	30.77	26.31	42.92	c
C	44-72	0.28	3.12	12.22	27.72	12.00	55.34	19.51	25.15	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-4	6.07	1.31	0.52	0.15	0.59	0.05	2.57	2.03	77.04	97.54	9.9	1.8
Bt	4-27	5.19	3.68	1.25	0.14	8.12	0.55	13.19	5.62	38.44	90.21	2.6	.
C	44-72	5.22	0.28	0.42	0.22	6.14	1.85	7.06	2.77	13.03	33.21	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-4	10YR5/4	2,gr
Bt	4-27	2.5YR5/8	2,sbk
BC	27-44	2.5YR5/8	1,sbk
C	44-72	5YR6/8	0,m

Cecil series

Profile L12-1. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	5.32	6.98	11.65	13.40	5.34	42.69	25.55	31.76	cl
Bt	7-17	1.30	3.58	7.42	13.40	4.88	30.58	26.96	42.46	c
C	41-72	0.28	4.84	18.32	31.95	11.48	66.87	20.98	12.15	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	5.53	2.53	1.21	0.50	7.33	0.35	11.57	4.59	36.65	92.37	21.7	6.0
Bt	7-17	4.70	1.37	1.21	0.16	10.69	3.85	13.43	6.59	20.40	41.58	3.3	.
C	41-72	4.70	0.16	0.63	0.11	9.11	4.85	10.01	5.75	8.99	15.65	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-17	5YR5/6	2,sbk
BC	17-41	5YR5/6	1,sbk
C1	41-55	10YR8/1	0,m
C2	55-72	2.5YR5/8	0,m

Cecil series

Profile L12-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	5.50	7.32	10.52	13.48	5.22	42.04	26.07	31.89	cl
Bt	7-19	1.40	3.40	6.98	13.22	5.28	30.28	20.12	49.60	c
C	37-72	0.30	4.88	17.78	32.38	11.65	66.99	20.81	12.20	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.24	2.48	1.19	0.41	7.92	0.55	12.00	4.63	34.00	88.12	19.1	5.0
Bt	7-19	5.02	2.03	1.67	0.17	12.28	2.75	16.15	6.62	23.96	58.46	4.8	.
C	37-72	4.76	0.03	0.69	0.15	6.73	3.45	7.60	4.32	11.45	20.14	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-19	5YR5/6	2,sbk
BC	19-37	5YR5/6	1,sbk
C	37-72	7.5YR6/8	0,m

Wedowee series

Profile L12-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	5.28	7.35	10.88	13.58	4.95	42.04	25.04	32.92	cl
Bt	7-17	1.32	3.62	7.18	13.34	5.00	30.46	13.27	56.27	c
C	39-72	0.32	4.94	17.65	32.36	11.75	67.02	20.78	12.20	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.29	2.92	1.42	0.41	7.72	0.45	12.47	5.20	38.09	91.35	21.0	4.7
Bt	7-17	4.84	2.06	1.84	0.23	12.47	2.35	16.60	6.48	24.88	63.73	6.3	.
C	39-72	5.04	0.16	0.54	0.18	7.72	2.95	8.60	3.83	10.23	22.98	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-17	2.5YR4/8	2,sbk
BC	17-39	2.5YR4/8	1,sbk
C	39-72	7.5YR5/4	0,m

Pacolet series

Profile L13-1. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	5.05	7.76	9.25	15.46	7.34	44.86	25.05	30.09	cl,scl
Bt	7-18	2.15	4.70	5.55	7.98	5.02	25.40	13.27	61.33	c
C	35-72	2.92	8.84	13.58	16.54	12.00	53.88	24.86	21.26	fsl,l,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.18	2.17	1.03	0.42	8.71	0.35	12.33	3.97	29.36	91.41	21.3	3.4
Bt	7-18	4.88	1.46	1.80	0.19	9.70	1.75	13.15	5.20	26.24	66.35	4.2	.
C	35-72	5.14	0.18	0.37	0.12	5.94	1.65	6.61	2.32	10.14	28.88	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/4	2,gr
Bt	7-18	2.5YR4/6	2,sbk
BC	18-35	2.5YR4/6	1,sbk
C	35-72	7.5YR5/8	0,m

Pacolet series

Profile L13-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	4.78	6.85	12.50	17.02	5.90	47.05	17.29	35.66	scl,sc
Bt	7-18	3.66	4.62	5.64	8.34	4.85	27.11	13.42	59.47	c
C	30-72	2.24	8.32	14.04	16.24	11.86	52.70	22.67	24.63	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	5.47	2.44	1.21	0.39	6.93	0.15	10.97	4.19	36.83	96.42	14.9	3.0
Bt	7-18	4.57	1.90	2.20	0.18	12.08	1.75	16.36	6.03	26.16	70.98	4.8	.
C	30-72	5.00	0.08	0.53	0.16	10.30	2.35	11.07	3.12	6.96	24.68	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/4	2,gr
Bt	7-18	2.5YR4/4	2,sbk
BC	18-30	5YR5/6	1,sbk
C	30-72	2.5YR4/6	0,m

Pacolet series

Profile L13-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	6.62	8.00	12.60	16.65	5.78	49.65	16.21	34.14	scl,sc
Bt	7-14	4.50	4.78	5.65	8.60	4.25	27.78	9.75	62.47	c
C	28-72	1.08	7.22	15.02	17.52	10.56	51.40	20.13	28.47	scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.36	2.16	1.10	0.35	6.14	0.35	9.75	3.96	37.03	91.16	14.8	3.0
Bt	7-14	5.11	2.28	2.10	0.22	10.89	0.35	15.49	4.95	29.70	92.93	5.9	.
C	28-72	4.57	0.18	0.55	0.17	5.74	1.75	6.64	2.65	13.55	33.96	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR4/4	2,gr
Bt	7-14	5YR4/6	2,sbk
BC	14-28	5YR5/6	1,sbk
C	28-72	5YR5/6	0,m

Wedowee series

Profile L14-1. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.60	3.85	9.56	17.44	11.42	43.87	26.05	30.08	scl,cl
Bt	7-18	4.20	7.65	7.52	12.38	5.80	37.55	20.77	41.68	cl,c
C	48-72	0.85	10.78	16.62	13.80	7.02	49.07	31.54	19.39	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.74	2.09	1.24	0.37	4.75	0.25	8.45	3.95	43.79	93.67	14.7	2.4
Bt	7-18	5.17	1.34	1.71	0.26	7.33	0.75	10.64	4.06	31.11	81.53	2.9	.
C	48-72	4.76	0.34	0.94	0.37	11.68	1.75	13.33	3.40	12.38	48.53	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-18	5YR5/6	2,sbk
BC	18-48	5YR5/6	1,sbk
C	48-72	7.5YR5/6	0,m

Cecil series

Profile L14-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.11	4.72	12.36	17.76	10.88	46.83	24.75	28.42	scl,cl
Bt	7-18	3.65	6.14	7.72	11.90	6.68	36.09	20.46	43.45	c
C	41-72	0.98	9.45	15.58	14.44	7.62	48.07	34.52	17.41	l

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	5.86	2.44	1.27	0.42	3.37	0.05	7.50	4.18	55.07	98.80	12.9	3.0
Bt	7-18	5.00	1.88	1.64	0.28	10.30	1.25	14.10	5.05	26.95	75.25	3.5	.
C	41-72	5.00	0.16	0.43	0.23	6.73	1.95	7.55	2.77	10.86	29.60	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-18	5YR5/6	2,sbk
BC	18-41	5YR5/6	1,sbk
C	41-72	7.5YR5/6	0,m

Cecil series

Profile L14-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.18	3.34	8.15	16.54	10.20	39.41	31.59	29.00	cl
Bt	7-17	2.22	6.38	7.85	12.80	6.40	35.65	20.17	44.18	c
C	39-72	1.28	11.48	17.45	12.08	7.04	49.33	26.73	23.94	l,scl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.98	2.17	1.23	0.50	3.76	0.10	7.66	4.00	50.91	97.50	15.2	3.0
Bt	7-17	5.05	1.38	1.74	0.17	9.31	1.35	12.60	4.64	26.11	70.91	1.0	.
C	39-72	5.32	0.02	0.34	0.12	5.74	1.85	6.22	2.33	7.72	20.60	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-17	5YR5/6	2,sbk
BC	17-39	5YR5/6	1,sbk
C	39-72	7.5YR6/8	0,m

Wedowee series

Profile L15-1. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.81	3.43	8.52	16.36	10.52	40.64	28.56	30.80	cl
Bt	7-16	0.50	2.84	5.33	9.48	5.86	24.01	26.39	49.60	c
C	33-72	6.45	12.08	12.85	16.65	9.55	57.88	25.73	16.39	sl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.75	2.04	0.99	0.48	5.74	0.10	9.25	3.61	37.95	97.23	12.5	3.0
Bt	7-16	5.10	1.80	2.60	0.19	10.30	1.75	14.89	6.34	30.83	72.40	3.6	.
C	33-72	4.93	0.12	1.32	0.18	5.94	3.95	7.56	5.57	21.43	29.08	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-16	5YR5/6	2,sbk
BC	16-33	7.5YR5/6	1,sbk
C	33-72	7.5YR5/6	0,m

Wedowee series

Profile L15-2. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.30	3.00	8.54	16.24	9.60	38.68	32.91	28.41	l,cl
Bt	7-21	0.52	3.48	7.65	10.42	4.98	27.05	18.56	54.39	c
C	41-72	0.65	3.58	16.28	31.85	9.28	61.64	20.78	17.58	fsl

Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		$g\ kg^{-1}$	$mg\ kg^{-1}$
Ap	0-7	5.38	1.90	0.87	0.33	4.75	0.20	7.85	3.30	39.49	93.94	11.8	2.5
Bt	7-21	4.91	1.44	1.88	0.24	6.73	1.35	10.29	4.91	34.60	72.51	1.2	.
C	41-72	4.93	0.40	2.20	0.30	12.74	3.85	15.64	6.75	18.54	42.96	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-21	7.5YR5/6	2,sbk
BC	21-41	7.5YR6/8	1,sbk
C	41-72	7.5YR7/6	0,m

Appling series

Profile L15-3. Particle size distributions, chemical and morphological properties, Lunenburg County.

Horizon	Depth	Sand						Silt	Clay	Textural Class
		Very Coarse	Coarse	Medium	Fine	Very Fine	Total			
	inches	%								
Ap	0-7	1.60	3.85	9.55	17.45	11.42	43.87	28.14	27.99	l,cl
Bt	7-20	0.42	2.04	7.52	10.80	5.56	26.34	23.66	50.00	c
C	51-72	0.81	11.94	12.46	20.04	8.78	54.03	27.54	18.43	fsl

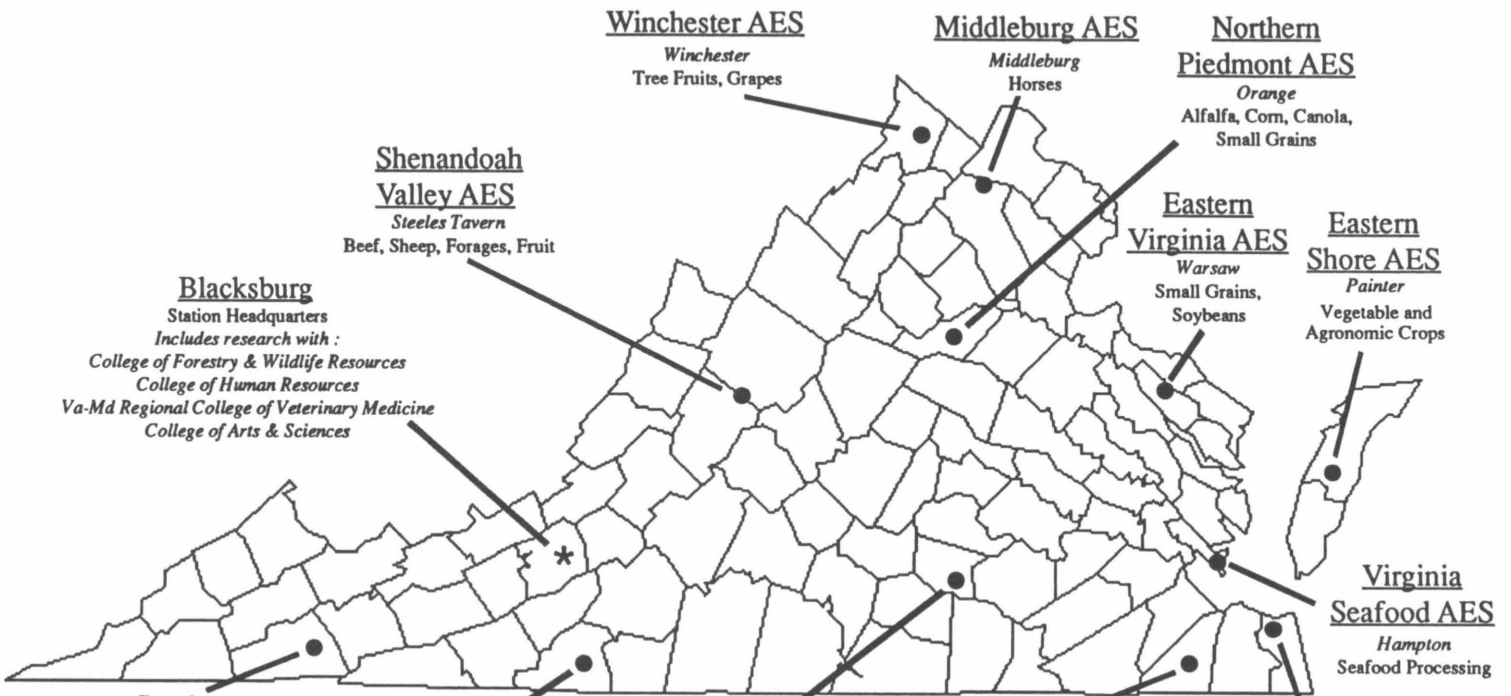
Horizon	Depth	pH	Exchangeable cations									Organic Matter	Avail. P
			Ca	Mg	K	H	Al	CEC	ECEC	B.S.	E.B.S.		
	inches		cmol (+) kg^{-1}							%		g kg^{-1}	mg kg^{-1}
Ap	0-7	5.73	2.02	0.95	0.34	3.96	0.05	7.27	3.36	45.53	98.51	13.5	3.4
Bt	7-20	4.84	2.00	2.20	0.21	8.91	1.85	13.32	6.26	33.11	70.45	3.2	.
C	51-72	4.79	0.92	3.50	0.23	9.11	3.35	13.76	8.00	33.79	58.12	.	.

Horizon	Depth	Color	Structure
	inches		
Ap	0-7	7.5YR5/4	2,gr
Bt	7-20	7.5YR5/4	2,sbk
BC	20-51	7.5YR5/6	1,sbk
C	51-72	7.5YR6/6	0,m

Appling series

Virginia Agricultural Experiment Station

College of Agriculture & Life Sciences



January 1993

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