Soil Survey Investigations Report No. 22

Soil Survey Laboratory Data and Descriptions for Some Soils of...

...ALABAMA and FLORIDA

SOIL CONSERVATION SERVICE U.S. DEPARTMENT OF AGRICULTURE
In cooperation with
ALABAMA and FLORIDA AGRICULTURAL EXPERIMENT STATIONS

Soil survey investigations reports already published are listed below:

SSIR No. 1	Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples
	Soil Survey Laboratory Data and Descriptions for Some Soils of:
SSIR No. 2	North Dakota
SSIR No. 3	Iowa
SSIR No. 4	Kansas
SSIR No. 5	Nebraska
SSIR No. 6	Arkansas, Louisiana, and Missouri
SSIR No. 7	Montana
SSIR No. 8	Wyoming
SSIR No. 9	Minnesota
SSIR No. 10	Colorado
SSIR No. 11	Oklahoma
SSIR No. 12	Puerto Rico and the Virgin Islands
SSIR No. 13	Mississippi
SSIR No. 14	Kentucky
SSIR No. 15	Tennessee
SSIR No. 16	North Carolina, South Carolina, and Georgia
SSIR No. 17	Wisconsin
SSIR No. 18	Indiana
SSIR No. 19	Illinois
SSIR No. 20	New England States
SSIR No. 21	A Toposequence of Soils in Tonalite Grus in the Southern California Peninsular Range

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Soil Survey Laboratory Data and Descriptions for Some Soils of...

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August 1969

SOIL CONSERVATION SERVICE U.S. DEPARTMENT OF AGRICULTURE
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1. SAMPLE COLLECTION AND PREPARATION
   A. Field sampling
      1. Site selection
      2. Soil sampling
         a. Stony soils
   B. Laboratory preparation
      1. Standard (airdry)
         a. Square-hole 2-mm sieve
         b. Round-hole 2-mm sieve
      2. Field moist
      3. Carbonate-containing material
      4. Carbonate-indurated material
2. CONVENTIONS
   A. Size-fraction base for reporting
      1. <2-mm
      2. <size specified
   B. Data-sheet symbols
      tr: trace, not measurable by quantitative procedure used or less than reportable amount
      tr(s): trace, detectable only by qualitative procedure more sensitive than quantitative procedure used
      - : analysis run but none detected
      -(s): none detected by sensitive qualitative test
      blank: analysis not run
      nd: analysis not run
      <: less than reported amount or none present
3. PARTICLE-SIZE ANALYSES
   A. <2-mm fraction (pipet method)
      1. Airdry samples
         a. Carbonate and noncarbonate clay
      2. Moist samples
         a. Carbonate and noncarbonate clay
   B. >2-mm fraction
      1. Weight estimates
      2. Volume estimates
4. FABRIC-RELATED ANALYSES
   A. Bulk density
      1. Saran-coated clods
         a. Field state
         b. Airdry
         c. 30-cm absorption
         d. 1/3-bar desorption I
         e. 1/3-bar desorption II
         f. 1/3-bar desorption III
         g. 1/10-bar desorption
         h. Ovendry
      2. Paraffin-coated clods
         a. Ovendry
      3. Cores
         a. Field moist
      4. Nonpolar-liquid-saturated clods
   B. Water retention
      1. Pressure-plate extraction (1/3 or 1/10 bar)
         a. Sieved samples
         b. Soil pieces
         c. Natural clods
         d. Cores
      2. Pressure-membrane extraction (15 bars)
      3. Sand table absorption
      4. Field state
      5. Airdry
   C. Water-retention difference
      1. 1/3 bar to 15 bars
      2. 1/10 bar to 15 bars
   D. Coefficient of linear extensibility
      1. Dry to moist
   E. Micromorphology
      1. Thin sections
         a. Preparation
         b. Interpretation
         c. Moved-clay percentage
5. ION-EXCHANGE PROPERTIES
   A. Cation-exchange capacity
      1. NH_4OAc, pH 7.0
         a. Direct distillation
         b. Displacement, distillation

5A. Cation-exchange capacity (cont.)
      2. NaOAc, pH 8.2
         a. Centrifuge method
      3. Sum of cations
         a. Acidity by $BaCl_2$-TEA, pH 8.2; bases by NH_4OAc, pH 7.0
      4. KOAc, pH 7.0
      5. $BaCl_2$, pH 8.2
         a. Barium by flame photometry
   B. Extractable bases
      1. NH_4OAc extraction
         a. Uncorrected
         b. Corrected (exchangeable)
      2. KCl-TEA extraction, pH 8.2
   C. Base saturation
      1. NH_4OAc, pH 7.0
      2. NaOAc, pH 8.2
      3. Sum of cations
   D. Sodium saturation (exchangeable Na pct.)
      1. NaOAc, pH 8.2
      2. NH_4OAc, pH 7.0
   E. Sodium adsorption ratio
6. CHEMICAL ANALYSES
   A. Organic carbon
      1. Acid-dichromate digestion
         a. $FeSO_4$ titration
         b. CO_2 evolution, gravimetric
      2. Dry combustion
         a. CO_2 evolution I
         b. CO_2 evolution II
      3. Peroxide digestion
         a. Weight loss
   B. Nitrogen
      1. Kjeldahl digestion
         a. Ammonia distillation
      2. Semimicro Kjeldahl
         a. Ammonia distillation
   C. Iron
      1. Dithionite extraction
         a. Dichromate titration
         b. EDTA titration
      2. Dithionite-citrate extraction
         a. Orthophenanthroline colorimetry
      3. Dithionite-citrate-bicarbonate extraction
         a. Potassium-thiocyanate colorimetry
      4. Pyrophosphate-dithionite extraction
   D. Manganese
      1. Dithionite extraction
         a. Permanganate colorimetry
   E. Calcium carbonate
      1. HCl treatment
         a. Gas volumetric
         b. Manometric
         c. Weight loss
         d. Weight gain
         e. Titrimetric
      2. Sensitive qualitative method
         a. Visual, gas bubbles
   F. Gypsum
      1. Water extract
         a. Precipitation in acetone
   G. Aluminum
      1. KCl extraction I, 30 min
         a. Aluminon I
         b. Aluminon II
         c. Aluminon III
         d. Fluoride titration
      2. KCl extraction II, overnight
         a. Aluminon I
      3. NH_4OAc extraction
         a. Aluminon III
      4. NaOAc extraction
         a. Aluminon III
   H. Extractable acidity
      1. $BaCl_2$-triethanolamine I
         a. Back-titration with HCl
      2. $BaCl_2$-triethanolamine II
         a. Back-titration with HCl
      3. KCl-triethanolamine
         a. Back-titration with NaOH
   I. Carbonate
      1. Saturation extract
         a. Acid titration

6. CHEMICAL ANALYSES (cont.)
   J. Bicarbonate
      1. Saturation extract
         a. Acid titration
   K. Chloride
      1. Saturation extract
         a. Mohr titration
         b. Potentiometric titration
   L. Sulfate
      1. Saturation extract
         a. Gravimetric, $BaSO_4$
      2. NH_4OAc extraction
         a. Gravimetric, $BaSO_4$
   M. Nitrate
      1. Saturation extract
         a. PDS acid colorimetry
   N. Calcium
      1. Saturation extract
         a. EDTA titration
      2. NH_4OAc extraction
         a. EDTA-alcohol separation
         b. Oxalate-permanganate I
         c. Oxalate-permanganate II Fe, Al, and Mn removed
         d. Oxalate-cerate
      3. NH_4Cl-EtOH extraction
         a. EDTA titration
      4. KCl-TEA extraction
         a. Oxalate-permanganate
   O. Magnesium
      1. Saturation extract
         a. EDTA titration
      2. NH_4OAc extraction
         a. EDTA-alcohol separation
         b. Phosphate titration
         c. Gravimetric, $Mg_2P_2O_7$
      3. NH_4Cl-EtOH extraction
         a. EDTA titration
   P. Sodium
      1. Saturation extract
         a. Flame photometry
      2. NH_4OAc extraction
         a. Flame photometry
   Q. Potassium
      1. Saturation extract
         a. Flame photometry
      2. NH_4OAc extraction
         a. Flame photometry
   R. Sulfur
      1. $NaHCO_3$ extraction, pH 8.5
         a. Methylene blue
   S. Total phosphorus
      1. Perchloric-acid digestion
         a. Molybdovanadophosphoric-acid colorimetry
7. MINERALOGY
   A. Instrumental analysis
      1. Preparation
         a. Carbonate removal
         b. Organic-matter removal
         c. Iron removal
         d. Particle-size fractionation
      2. X-ray diffraction
      3. Differential thermal analysis
   B. Optical analysis
      1. Grain studies
   C. Total analysis
      1. Chemical
      2. X-ray emission spectrography
   D. Surface area
      1. Glycerol retention
8. MISCELLANEOUS
   A. Saturated paste, mixed
      1. Saturation extract
         a. Conductivity
      2. Conductivity, saturated paste
   B. Saturated paste, capillary rise
      1. Saturation extract
         a. Conductivity
   C. pH
      1. Soil suspensions
         a. Water dilution
         b. Saturated paste
         c. KCl
   D. Ratios
      1. To total clay
      2. To noncarbonate clay
      3. Ca to Mg (extractable)

PREFACE

This publication is one in a new U.S. Department of Agriculture series established to preserve and make available technical information resulting from soil survey investigations. These investigations have been going on for about two decades. Data from them have been distributed in unpublished form to those immediately concerned. Some of the data and descriptions have appeared in technical journals, in regional bulletins, in USDA technical bulletins, and in the text of published soil surveys. But most were not available to all who might use them.

We intend to publish in this series all data from the soil survey laboratories that form reasonably complete characterizations of soils. Already-assembled data and descriptions will be published just as rapidly as they can be prepared for printing. Fragmentary data collected as reference points for specific soil surveys will not be included.

While these data were being assembled, there were many changes in laboratory methods. Some were improved and some new ones were devised. Consequently, laboratory data for different soils cannot always be directly compared without allowance for the method.

The method used is indicated by symbol in the column headings of the data table. These symbols are identified in the code sheet on the opposite page. Each method is described in the first number of this series, "Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples," SSIR No. 1.

Ways of describing soils have also changed. Soil descriptions have become explicit on more and more features. The systems for designating horizons and for classifying soils have been changed.

The soil descriptions published here were prepared as working documents to meet a specific need of a soil survey at the time the soil samples were collected. The soil scientists who wrote them had no idea they would be published. Editing has been limited for the most part to that necessary for conformance to the "Soil Survey Manual." Field textural estimates have been retained, even though some are at variance with the laboratory data, because the field estimates themselves are important data.

There were several reasons for sampling these soils. Some were sampled to study soil genesis, some to facilitate classification, and some to obtain data to permit more useful interpretations. Those sampled for genesis or classification studies do not always fit neatly into our present concepts of soil series. Partly because of these studies, our concepts of some soil series have been modified. As a consequence, the soil series name assigned a soil at the time of sampling is not always the name that would be assigned today. Soil series names in this publication follow 1965 series definitions.

Soil Survey
Soil Conservation Service

ALABAMA

Soil Series	County	Soil Survey No.	Page	Soil Series	County	Soil Survey No.	Page
Crossville	DeKalb	S51Ala-25-3	3	Vaiden	Dallas	S58Ala-24-2	13
Greenville	Perry	S61Ala-53-1	5		Perry	S58Ala-53-1	15
	Perry	S61Ala-53-2	7		Perry	S58Ala-53-2	17
Mayhew	Marengo	S58Ala-46-3	9	Wilcox	Marengo	S58Ala-46-1	19
Vaiden	Dallas	S58Ala-24-1	11		Marengo	S58Ala-46-2	21

FLORIDA

Soil Series	County	Soil Survey No.	Page	Soil Series	County	Soil Survey No.	Page
Archer	Suwannee	S60Fla-61-32	23	Keri	Sarasota	S53Fla-58-2	99
	Suwannee	S60Fla-61-33	25		Sarasota	S53Fla-58-3	101
	Suwannee	S60Fla-61-37	27	Matmon	Sarasota	S53Fla-58-14	103
Arzell	Sarasota	S53Fla-58-11	29		Sarasota	S53Fla-58-15	105
	Sarasota	S53Fla-58-12	31	Ona	Sarasota	S53Fla-58-8	107
Basinger	Sarasota	S53Fla-58-9	33		Sarasota	S53Fla-58-17	109
	Sarasota	S53Fla-58-18	35	Orangeburg	Escambia	S53Fla-17-12	111
Blanton	Sarasota	S53Fla-58-27	37		Escambia	S53Fla-17-29	113
Bowie	Suwannee	S60Fla-61-30	39	Paola	Sarasota	S53Fla-58-1	115
	Suwannee	S60Fla-61-31	41		Escambia	S53Fla-17-15	117
Bradenton	Sarasota	S53Fla-58-6	43		Escambia	S53Fla-17-19	119
	Sarasota	S53Fla-58-25	45		Sarasota	S53Fla-58-4	121
Broward	Sarasota	S53Fla-58-14	47	Parkwood	Sarasota	S53Fla-58-22	123
	Sarasota	S53Fla-58-15	49		Sarasota	S53Fla-58-28	125
Chobee	Sarasota	S53Fla-58-13	51	Placid	Sarasota	S53Fla-58-5	127
Delray	Sarasota	S53Fla-58-19	53		Sarasota	S53Fla-58-10	129
	Sarasota	S53Fla-58-20	55	Red Bay	Escambia	S53Fla-17-1	131
Dothan	Escambia	S53Fla-17-3	57		Escambia	S53Fla-17-8	133
	Escambia	S53Fla-17-5	59		Escambia	S53Fla-17-9	135
	Escambia	S53Fla-17-17	61		Escambia	S53Fla-17-16	137
	Escambia	S53Fla-17-20	63	Shubuta	Escambia	S53Fla-17-24	139
Esto	Escambia	S53Fla-17-23	65		Escambia	S53Fla-17-26	141
	Escambia	S53Fla-17-25	67	Susquehanna	Suwannee	S60Fla-61-35	143
Felda	Sarasota	S53Fla-58-21	69	Tavares	Sarasota	S53Fla-58-16	145
	Sarasota	S53Fla-58-23	71		Sarasota	S53Fla-58-27	147
	Sarasota	S53Fla-58-24	73	Tifton	Escambia	S53Fla-17-10	149
	Sarasota	S53Fla-58-26	75		Escambia	S53Fla-17-11	151
Goldsboro	Escambia	S53Fla-17-32	77		Escambia	S53Fla-17-13	153
	Escambia	S53Fla-17-33	79		Escambia	S53Fla-17-14	155
	Escambia	S53Fla-17-34	81	Troup	Escambia	S53Fla-17-21	157
Greenville	Escambia	S53Fla-17-2	83		Escambia	S53Fla-17-22	159
	Escambia	S53Fla-17-4	85		Escambia	S53Fla-17-30	161
Immokalee	Sarasota	S53Fla-58-7	87		Escambia	S53Fla-17-31	163
	Sarasota	S53Fla-58-29	89	Weston	Suwannee	S60Fla-61-29	165
Irvington	Escambia	S53Fla-17-6	91		Suwannee	S60Fla-61-36	167
	Escambia	S53Fla-17-7	93	Zuber	Suwannee	S60Fla-61-34	169
Izagora	Escambia	S53Fla-17-27	95		Suwannee	S60Fla-61-28	171
	Escambia	S53Fla-17-28	97				

ALABAMA

County	Soil Series	Soil Survey No.	Page	County	Soil Series	Soil Survey No.	Page
Dallas	Vaiden	S58Ala-24-1	11	Marengo	Mayhew	S58Ala-46-3	9
	Vaiden	S58Ala-24-2	13	Perry	Vaiden	S58Ala-53-1	15
DeKalb	Crossville	S51Ala-25-3	3		Vaiden	S58Ala-53-2	17
Marengo	Wilcox	S58Ala-46-1	19		Greenville	S61Ala-53-1	5
	Wilcox	S58Ala-46-2	21		Greenville	S61Ala-53-2	7

FLORIDA

County	Soil Series	Soil Survey No.	Page	County	Soil Series	Soil Survey No.	Page
Escambia	Dothan	S53Fla-17-3	57	Sarasota	Bradenton	S53Fla-58-6	43
	Dothan	S53Fla-17-5	59		Bradenton	S53Fla-58-25	45
	Dothan	S53Fla-17-17	61		Broward	S53Fla-58-14	47
	Dothan	S53Fla-17-20	63		Broward	S53Fla-58-15	49
	Esto	S53Fla-17-23	65		Chobee	S53Fla-58-13	51
	Esto	S53Fla-17-25	67		Delray	S53Fla-58-19	53
	Goldsboro	S53Fla-17-32	77		Delray	S53Fla-58-20	55
	Goldsboro	S53Fla-17-33	79		Felda	S53Fla-58-21	69
	Goldsboro	S53Fla-17-34	81		Felda	S53Fla-58-23	71
	Greenville	S53Fla-17-2	83		Felda	S53Fla-58-24	73
	Greenville	S53Fla-17-4	85		Felda	S53Fla-58-26	75
	Irvington	S53Fla-17-6	91		Immokalee	S53Fla-58-7	87
	Irvington	S53Fla-17-7	93		Immokalee	S53Fla-58-29	89
	Izagora	S53Fla-17-27	95		Keri	S53Fla-58-2	99
	Izagora	S53Fla-17-28	97		Keri	S53Fla-58-3	101
	Orangeburg	S53Fla-17-12	111		Matmon	S53Fla-58-14	103
	Orangeburg	S53F a-17-29	113		Matmon	S53Fla-58-15	105
	Paola	S53Fla-17-15	117		Ona	S53Fla-58-8	107
	Paola	S53Fla-17-19	119		Ona	S53Fla-58-17	109
	Red Bay	S53Fla-17-1	131		Paola	S53Fla-58-1	115
	Red Bay	S53Fla-17-8	133		Paola	S53Fla-58-4	121
	Red Bay	S53Fla-17-9	135		Parkwood	S53Fla-58-22	123
	Red Bay	S53Fla-17-16	137		Parkwood	S53Fla-58-28	125
	Shubuta	S53Fla-17-24	139		Placid	S53Fla-58-5	127
	Shubuta	S53Fla-17-26	141		Placid	S53Fla-58-10	129
	Tifton	S53Fla-17-10	149		Tavares	S53Fla-58-16	145
	Tifton	S53Fla-17-11	151		Tavares	S53Fla-58-27	147
	Tifton	S53Fla-17-13	153	Suwannee	Archer	S60Fla-61-32	23
	Tifton	S53Fla-17-14	155		Archer	S60Fla-61-33	25
	Troup	S53Fla-17-21	157		Archer	S60Fla-61-37	27
	Troup	S53Fla-17-22	159		Bowie	S60Fla-61-30	39
	Troup	S53Fla-17-30	161		Bowie	S60Fla-61-31	41
	Troup	S53Fla-17-31	163		Susquehanna	S60Fla-61-35	143
Sarasota	Arzell	S53Fla-58-11	29		Weston	S60Fla-61-29	165
	Arzell	S53Fla-58-12	31		Weston	S60Fla-61-36	167
	Basinger	S53Fla-58-9	33		Zuber	S60Fla-61-34	169
	Basinger	S53Fla-58-18	35		Zuber	S60Fla-61-28	171
	Blanton	S53Fla-58-27	37				

SCS-421
10-64 (Rev 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Crossville loam SOIL Nos. S51Ala-25-3 LOCATION De Kalb County, Alabama

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 52114 - 52119

Depth (In.)	Horizon	1B1b Total Sand (2–0 05)	Total Silt (0 05–0 002)	Total Clay (< 0.002)	Sand Very coarse (2–1)	Sand Coarse (1–0.5)	Sand Medium (0.5–0 25)	Sand Fine (0.25–0.1)	Sand Very fine (0 1–0 05)	Silt (0 05–0.02)	Silt Int III (0.02–0.002)	Silt Int. II (0.2–0.02)	Silt (2–0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct.	2 - 19	19 - 76
		Pct. of < 2 mm														Pct. of < 76mm		
0-2			25.8	18.2	5.1	21.2	18.5	9.5	1.7		19.4					4		
2-8			27.1	22.8	2.9	18.8	18.0	9.0	1.4		19.9					5		
8-12			26.6	23.5	2.8	18.4	18.0	9.2	1.5		19.8					5		
12-18			25.7	22.0	3.4	19.0	18.8	9.6	1.5		18.7					4		
18-28			15.9	17.2	10.5	21.2	21.9	11.7	1.6		11.2					46		
28+			3.9	2.9	0.4	21.4	40.0	27.3	4.1		1.3					10		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH	8C1c (1:1) KCl	8C1a (1 1) H_2O
0-2	5.3																	4.6
2-8	1.29																	4.6
8-12	0.74																	4.4
12-18	0.59																	4.6
18-28	0.39																	4.6
28+	0.05																	4.9

Depth (In)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC 5A3a Sum cations		6G1d Ext. Al			Ratios to clay CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-2	1.1	1.0	0.2	0.4		22.5	25.2										11	
2-8	tr.	0.2	0.1	0.2		13.2	13.8										4	
8-12	tr.	0.1	0.1	0.2		11.8	12.3										4	
12-18	tr.	0.2	0.1	0.2		9.7	10.3										6	
18-28	tr.	0.3	0.1	0.2		10.8	11.5										6	
28+	tr.	tr.	0.1	0.1		1.0	1.4										29	

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt.	Chl.	Vm.	Mi	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil Type: Crossville loam
Soil No.: S51Ala-25-3
Location: De Kalb County, Alabama. About 1/2 mile nearly north of Mentone. Site is a little north of Eagle Nest near west rim of Lookout Mountain.
Vegetation and land use: Area has never been cleared. Cutover forest was largely hardwood although a few shortleaf and Virginia pine occur in places.
Slope and land form: 2 or 3 percent.
Sampled by and date: R. S. Dyal, G. A. Swenson, James E. Paseur, and A. H. Hasty. December 12, 1951.

Horizon and Beltsville Lab. No.	
52114	0 to 2 inches. Very dark gray (5YR 3/1) friable granular loam with moderate amount of organic matter.
52115	2 to 8 inches. Brown to dark brown (7.5YR 4/2) friable weak fine granular heavy loam.
52116	8 to 12 inches. Brown to dark brown (7.5YR 4/4) friable to firm weak fine granular fine sandy clay loam.
52117	12 to 18 inches. Brown to dark brown (10YR 4/3) friable granular fine sandy loam or fine sandy clay loam.
52118	18 to 28 inches. Brown (7.5YR 5/4) friable gravelly loam or sandy loam. The layer contains numerous waterworn quartz gravel that appear to have come from conglomerate rock which occurs frequently in this part. This layer not commonly found under this soil although it does occur in places.
52119	Bedrock 28 inches plus. Beneath this layer is solid rock composed of rather hard sandstone and ironstone conglomerate. No shale rock noted in this profile.

Water ran into hole from gravel layer and had to be dipped out frequently during sampling. Bag and volume weight samples taken from each layer described.

SOIL SURVEY LABORATORY Lincoln, Nebr. August 1962

SOIL TYPE Greenville fine sandy loam **LOCATION** Perry County, Alabama

SOIL NOS. S61Ala-53-1 **LAB. NOS.** 15232-15237

DEPTH INCHES	HORIZON	1B1a VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	0.2-0.02	0.02-0.002	3A1 2A2 > 2	TEXTURAL CLASS
		PARTICLE SIZE DISTRIBUTION (in mm.) (per cent)										
0-5	Ap	0.2	1.3	8.7	45.1	11.5	20.4	12.8	43.0	10.6	-	fsl
5-10	B21	<0.1	0.7	4.7	26.2	7.2	29.2	32.0	28.8	20.2	-	cl
10-19	B22	<0.1	0.5	4.3	23.4	6.4	24.1	41.3	26.5	15.7	-	c
19-32	B23	0.1a	0.6	4.9	26.0	7.0	18.2	43.2	26.2	12.0	-	c
32-47	B31	<0.1	0.5	5.3	29.7	7.9	16.2	40.4	28.6	10.5	-	c/cl
47-66	B32	0.4a	0.6	5.9	31.3	7.8	13.6	40.4	28.2	8.6	-	sc

pH 8C1a H_2O 1:1	pH 8C1c KCl 1:1	Organic Matter 6A1a O.C. %	Organic Matter 6B1a N %	C/N	Bulk Density: Field Moist 4B4 % M.	Field Moist 4A1a g/cc	30 cm. 4B3 % M.	30 cm. 4A1c g/cc	A.D. 4A1b g/cc	MOISTURE TENSIONS: 4B1b 1/3 Atmos. Pieces %	4C1 1/3 to 15 Atm in/in	4B2 15 ATMOS. Sieved %
6.1	5.3	0.39	0.036	11	5.2	1.77	11.3	1.72	1.75	8.4	.07	4.5
5.7	4.5	0.30	0.044	7								11.6
5.9	4.7	0.20	0.038		18.3	1.55	23.6	1.52	1.66	22.0	.11	14.9
5.7	4.8	0.10	0.038									15.5
5.7	5.1	0.06			21.0	1.56	23.8	1.56	1.64	21.1	.10	14.9
5.6	5.2	0.06										14.8

5A1a CATION EXCHANGE CAPACITY NH_4OAc	EXTRACTABLE CATIONS Ext. Bases 6N2b Ca	6Q2b Mg	6P2a Na	6Q2a K	6H1a H	5B1a 6G2a Al	5C1 Base Sat.% NH_4OAc Exch.	5A3a Sum Ext. Cations	5C3 Base Sat.% Sum Cat.	Sum Ext. Bases and Al	8D3 Ca/Mg	6C1a Free Iron (Fe_2O_3) %
	milliequivalents per 100g. soil							me/100g				
4.5	2.5	0.9	<0.1	0.3	3.2		82	6.9	54			2.4
8.5	5.5	1.2	0.1	0.2	6.5		82	13.5	52		4.6	2.9
10.5	7.2	1.4	0.1	0.2	6.3		85	15.2	58		5.1	3.8
9.7	6.0	1.7	0.1	0.2	6.3		82	14.3	56		3.5	3.9
8.7	4.7	1.7	0.1	0.3	6.0		78	12.8	53		2.8	4.0
9.4	4.6	1.9	0.1	0.4	6.5		74	13.5	52		2.4	4.7

a. Many Fe/Mn?-bearing aggregates.

Soil Type: Greenville fine sandy loam
Soil Nos.: S61Ala-53-1
Location: Perry County, Alabama. One-half mile south of Southern Railroad Depot at Marion, Alabama, on State Highway 45. SW 1/4 NW 1/4, Sec. 19, T19N, R8E. Sample collected 175 feet east of road and 200 feet southeast from entrance to field.
Physiographic Position: Upland - elevation 370 feet.
Climate: Average annual precipitation 50 to 52 inches. Average annual temperature about 65 degrees.
Topography: Nearly level - 0 to 1 percent slope.
Drainage: Well drained.
Parent Material: Unconsolidated sandy loams and clays - marine.
Vegetation: Idle - has been row cropped for many years.
Ground Water: Deep.
Erosion: Slight to moderate.
Root Distribution: Good.
Collected by: J. S. Allen, Dean C. McMurtry, W. J. Reeves and L. H. Burgess, May 22, 1961.
Described by: Leland H. Burgess, May 22, 1961.

Horizon and Lincoln Lab. No.	
Ap 15232	0 to 5 inches. Dark reddish brown (5YR 3/4) fine sandy loam; medium weak crumb structure; very friable; abrupt smooth boundary.
B21 15233	5 to 10 inches. Dark red (10R 3/6) heavy clay loam; fine weak subangular blocky structure; friable moist, sticky wet, hard dry; few worm casts; few dark-colored manganese ped coatings; gradual smooth boundary.
B22 15234	10 to 19 inches. Dusky red (10R 3/4) clay; fine to medium moderate subangular blocky structure; friable moist, sticky wet, hard dry; few worm casts; many dark-colored manganese ped coatings; few fine round manganese concretions; gradual smooth boundary.
B23 15235	19 to 32 inches. Dark red (10R 3/6) heavy clay loam; fine to medium moderate subangular blocky structure; friable moist, sticky wet; hard dry; many dark-colored manganese concretions; gradual smooth boundary.
B31 15236	32 to 47 inches. Dark red (2.5YR 3/6 and 10R 3/6) heavy sandy clay loam; fine weak subangular blocky structure; friable moist, slightly sticky wet; few dark-colored manganese ped coatings; gradual smooth boundary.
B32 15237	47 to 66 inches. Dark red (2.5YR 3/6) sandy clay loam; medium weak subangular blocky structure; friable moist, slightly sticky wet.

Remarks: Soil was moist to dry when sampled.

Mineralogy (Method 7B): The mineralogy is uniform throughout. Quartz and feldspar dominate the very fine sand, with small amounts of kyanite, zircon, tourmaline, and a trace of pyroxene present.

SOIL SURVEY LABORATORY Lincoln, Nebr. August 1962

SOIL TYPE Greenville loam **LOCATION** Perry County, Alabama

SOIL NOS. S61Ala-53-2 **LAB. NOS.** 15238-15244

DEPTH INCHES	HORIZON	1B1a PARTICLE-SIZE DISTRIBUTION (in mm.) (per cent) VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	3A1 0.2-0.02	0.02-0.002	2A2 > 2	TEXTURAL CLASS
0-5	Ap	0.4	1.3	5.8	26.8	6.4	37.9	21.4	32.6	23.5	Tr.	l
5-15	B21	<0.1	0.3	2.9	16.8	4.2	32.9	42.9	21.9	22.9	-	c
15-23	B22	<0.1	0.3	3.2	18.7	4.5	25.8	47.5	21.6	17.2	-	c
23-33	B23	0.1a	0.4	3.6	21.4	5.2	21.9	47.4	23.5	13.5	-	c
33-47	B31	0.2a	0.4	4.0	23.5	5.8	22.7	43.4	24.9	14.4	-	c
47-59	B32	0.2a	0.5	4.1	24.0	6.1	20.5	44.6	25.3	12.5	-	c
59-71	B33	0.1a	0.5	4.3	25.0	6.2	19.4	44.5	26.0	11.3	-	c

pH 8C1a H_2O 1:1	pH 8C1c KCl 1:1	Organic Matter 6A1a O.C. %	Organic Matter 6B1a N %	C/N	Bulk Density Field Moist 4B4 % M.	Field Moist 4A1a g/cc	30 cm. 4B3 % M.	30 cm. 4A1c g/cc	A.D. 4A1b g/cc	MOISTURE TENSIONS 4B1b 1/3 ATMOS. Pieces %	4C1 1/3-to 15-Atm. in/in	4B2 15 ATMOS. Sieved %
6.4	5.6	1.05	0.107	10	4.2	1.70	20.1	1.63	1.68	16.5	.14	7.6
5.7	5.1	0.28	0.051	5								14.3
6.0	5.0	0.16	0.041		21.3	1.53	24.5	1.51	1.64	23.4	.11	16.2
6.0	5.2	0.13	0.038									16.3
6.1	5.6	0.07			24.9	1.52	27.6	1.50	1.59	21.6	.09	15.5
5.3	4.4	0.06										15.5
4.7	3.8	0.06										15.7

5A1a CATION EXCHANGE CAPACITY NH_4OAc	EXTRACTABLE CATIONS Ext. Bases 6N2b Ca	6O2b Mg	6P2a Na	6Q2a K	6H1a H	5B1a 6G2a Al	5C1 Base Sat. % NH_4OAc Exch.	5A3a Sum Ext. Cations	5C3 Base Sat. % Sum Cat.	Sum Ext. Bases and Al	8D3 Ca/Mg	6C1a Free Iron (Fe_2O_3) %
←	milliequivalents per 100g. soil					→		← me/100g		→		
8.7	5.8	1.5	<0.1	0.8	2.8	-	93	10.9	74	8.1	3.9	2.1
10.3	6.3	1.8	0.1	0.5	5.4	-	84	14.1	62	8.7	3.5	3.5
10.2	6.2	1.8	0.1	0.2	5.8	-	81	14.1	59	8.3	3.4	4.1
8.3	5.2	1.8	0.1	0.2	4.9	-	88	12.2	60	7.3	2.9	4.2
8.0	4.0	1.9	0.1	0.2	4.7	-	78	10.9	57	6.2	2.1	4.2
8.3	3.2	2.4	0.1	0.2	6.7	0.1	71	12.6	47	6.0	1.3	4.7
7.7	1.7	1.7	0.1	0.2	7.7	1.0	48	11.4	32	4.7	1.0	4.9

a. Many Fe/Mn?-bearing aggregates.

Soil Type: Greenville loam
Soil Nos.: S61Ala-53-2
Location: Perry County, Alabama. 300 yards southeast of Railroad overpass south of Marion Military Institution, Marion, Alabama, on State Highway 5. NW 1/4 SE 1/4, Sec. 13, T19N, R7E. Sample collected 160 feet southeast of highway.
Physiographic Position: Upland - elevation 375 feet.
Climate: Average annual precipitation 50 to 52 inches. Average annual temperature about 65 degrees.
Topography: Nearly level - 0 to 1 percent slope
Drainage: Well drained.
Parent Material: Unconsolidated sandy loam and clays - marine.
Vegetation: Row cropped for many years.
Ground Water: Deep.
Erosion: Slight to moderate.
Root Distribution: Good.
Collected by: J. S. Allen, Dean C. McMurtry, W. J. Reeves and L. H. Burgess, May 23, 1961.
Described by: L. H. Burgess.

Horizon and Lincoln Lab. No.	
Ap 15238	0 to 5 inches. Dark reddish brown (5YR 3/3) loam; fine and medium moderate granular structure; very friable moist, slightly sticky wet; few fine round manganese concretions; abrupt smooth boundary.
B21 15239	5 to 15 inches. Dusky red (10R 3/3 and 3/4) heavy clay loam or clay; fine moderate angular blocky and subangular blocky structure; friable moist, sticky wet, hard dry; many worm casts; many dark-colored manganese ped coatings; few fine round manganese concretions; gradual smooth boundary.
B22 15240	15 to 23 inches. Dusky red (10R 3/4) heavy clay loam or clay; fine moderate angular blocky and subangular blocky structure; friable moist, sticky wet, hard dry; many worm casts, many dark-colored manganese ped coatings; few fine round manganese concretions; gradual smooth boundary.
B23 15241	23 to 33 inches. Dusky red (10R 3/4) heavy clay loam or clay; fine weak to moderate angular blocky and subangular blocky structure; friable moist, sticky wet, hard dry; few worm casts; few dark-colored manganese ped coatings; few fine round manganese concretions; gradual smooth boundary.
B31 15242	33 to 47 inches. Dark red (10R 3/6) heavy clay loam; fine weak angular and subangular blocky structure; friable moist, slightly sticky wet; few worm casts, few fine round manganese concretions; gradual smooth boundary.
B32 15243	47 to 59 inches. Dark red (10R 3/6) clay loam; fine weak angular and subangular blocky structure; friable moist, slightly sticky wet; few fine round manganese concretions; gradual smooth boundary.
B33 15244	59 to 71 inches. Dark red (2.5YR 3/6) clay loam; fine weak angular and subangular blocky structure; friable moist, slightly sticky wet; very few fine round manganese concretions.

Remarks: Soil was moist to dry when sampled. C horizon encountered at 96 inches with bucket auger (not sampled) consists of stratified sandy clay loam and clay with pockets of very soft manganese concretions. Dark red (2.5YR 3/6) with a few coarse prominent mottles of yellowish brown (10YR 5/8).

Mineralogy (Method 7B): The mineralogy is uniform throughout. Quartz and feldspar dominate the very fine sand, with small amounts of kyanite, zircon, tourmaline and a trace of pyroxene present.

SOIL SURVEY LABORATORY Lincoln, Nebr. December 1958

SOIL TYPE Mayhew silty clay **LOCATION** Marengo County, Alabama

SOIL NOS. S58Ala-46-3 **LAB. NOS.** 8297-8303

DEPTH INCHES	HORIZON	1B1a VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	0.2-0.02	0.02-0.002	3A1 2A2 > 2	TEXTURAL CLASS
		PARTICLE-SIZE DISTRIBUTION (in mm.) (per cent)										
0-2	A11	0.5a	1.1a	0.8a	1.3a	1.1a	26.8	68.4	5.9	22.6	Tr.	c
2-5	A12	0.5a	0.9a	0.6a	0.6a	1.2a	19.2	77.0	3.6	16.9	Tr.	c
5-10	A13	0.5a	1.1a	0.5a	0.8a	0.6a	19.5	77.0	3.5	17.0	Tr.	c
10-18	A3	0.3a	1.3a	0.7a	0.8a	0.6a	23.0	73.3	3.6	20.4	Tr.	c
18-28	AC1	0.8a	1.7a	0.7a	0.8a	0.6a	22.5	72.9	4.6	18.9	-	c
28-40	AC2	0.1a	0.5a	0.3a	0.4a	0.3a	17.7	80.7	1.9	16.3	-	c
40-53	C	0.2a	0.7a	0.4a	0.4a	0.3a	17.9	80.1	2.1	16.3	-	c

8C1a pH 1:1	pH 1:5	pH 1:10	6A1a ORGANIC CARBON %	6B1a NITROGEN %	C/N	Free Iron Fe_2O_3% 6C1a		$CaCO_3$ equivalent %		MOISTURE TENSIONS 1/10 ATMOS. %	1/3 ATMOS. %	4B2 15 ATMOS. %
			ORGANIC MATTER									
4.8			4.96	0.276	18	3.1						28.6
4.5			1.60	0.118	14	3.2						29.2
4.4			0.87	0.075	12	3.4						28.9
4.5			0.35	0.046	8	3.4						27.2
4.5			0.25	0.036	7	3.3						27.3
4.2			0.17			2.1						31.0
4.0			0.16			2.0						31.0

5A1a CATION EXCHANGE CAPACITY NH_4Ac	6N2b Ca	6O2b Mg	6H1a H	6P2a Na	6Q2a K	BASE SAT. % NH_4Ac EXCH. 5C1	5C3 Base Sat. % on Sum Cations	5B1a Sum Bases	5A3a Sum Cations	Ca/Mg 8D3
	EXTRACTABLE CATIONS				5B1a					
	milliequivalents per 100g. soil							← me/100g →		
45.4	18.2	13.9	22.7	0.2	1.1	74	60	33.4	56.1	1.3
44.8	16.8	14.0	22.9	0.2	1.1	72	58	32.1	55.0	1.2
44.2	13.9	13.0	24.9	0.3	1.1	64	53	28.3	53.2	1.1
42.0	11.1	12.2	26.3	0.5	0.9	59	48	24.7	51.0	0.9
42.2	11.0	13.0	25.9	0.8	0.8	61	50	25.6	51.5	0.8
45.9	13.3	17.8	23.6	1.4	1.0	73	59	33.5	57.1	0.6
45.7	14.8	20.5	20.0	2.0	1.1	84	66	38.4	58.4	0.7

a. Many smooth light brown to black concr. (Fe-Mn)

Soil Type: Mayhew silty clay
Soil Nos.: S58Ala-46-3
Location: 2.5 miles west of the junction of U. S. Highway 43 and Alabama Highway 79 (Linden to Myrtlewood), turn left on gravel road, proceed 1.7 miles. Sample collected 210 feet east of the road across the road from cattlepen. SW 1/4 NE 1/4, Sec. 24, T15N, R2E.
Area: Marengo County, Alabama.
Physiographic Position: Upland. Elevation about 125 feet.
Climate: Average annual precipitation about 56 inches. Average annual temperature about 65 degrees.
Topography: Nearly level with gilgai relief. About 1 percent slope. Acid marine clays from the Sucarnoochee (Porters Creek clay) formation.
Drainage: Poorly drained.
Vegetation: Mixed hardwoods and pines.
Use: Timber and range.
Collected by: J. S. Allen, K. W. Flach, I. L. Martin, Y. H. Havens, W. J. Reeves, L. H. Burgess, and M. E. Stephens, May 26, 1958.
Described by: M. E. Stephens and Y. H. Havens.

Horizon and Lincoln Lab. No.	
A_0	1 to 0 inch. Partly decomposed leaves and pine straw.
A11 8297	0 to 2 inches. Dark gray (10YR 4/1) silty clay loam; moderate fine granular and weak subangular blocky structure; friable when moist and plastic when wet; many worm casts; many fine and few medium roots; abrupt clear boundary.
A12 8298	2 to 5 inches. Yellowish brown (10YR 5/4) silty clay, mottled with many fine prominent light brownish gray (10YR 6/2) and strong brown (7.5YR 5/6) mottles; moderate fine subangular blocky structure; plastic and sticky when wet; few fine pores; many root channels filled with material from the above layer, many fine and few coarse roots; clear smooth boundary.
A13 8299	5 to 10 inches. Yellowish brown (10YR 5/4) clay, mottled with many fine distinct and prominent gray (10YR 6/1) and red (2.5YR 4/8) mottles; moderate fine subangular blocky structure; very plastic and very sticky when wet; many worm and root channels filled with dark gray (10YR 4/1) material from the above layers; many fine and few coarse roots; gradual wavy boundary.
A3 8300	10 to 18 inches. Light olive gray (5Y 6/2) clay, mottled with many fine distinct and prominent yellowish brown (10YR 5/8) olive yellow (5Y 6/6) and red (2.5YR 4/6) mottles; weak fine subangular blocky structure; very plastic and very sticky; many fine and few coarse roots; gradual wavy boundary.
AC1 8301	18 to 28 inches. Light brownish gray (2.5Y 6/2) clay, mottled with many fine distinct and prominent yellowish brown (10YR 5/8) and red (10R 4/8) mottles; few weak slickensides; moderate very fine and fine angular blocky structure; very plastic and very sticky when wet; few worm channels filled with dark gray material; few fine roots; gradual wavy boundary.
AC2 8302	28 to 40 inches. Grayish brown (2.5Y 5/2) clay, mottled with many fine distinct yellowish brown (10YR 5/6) and few prominent red (2.5YR 4/8) mottles; this layer contained a streak about 2 inches wide of brownish yellow; weak angular blocky structure; very plastic and very sticky when wet; few strong slickensides; few small pieces of partly weathered shale; few fine roots; gradual irregular boundary.
C 8303	40 to 53 inches. Grayish brown (2.5Y 5/2) clay, mottled with many fine distinct yellowish brown (10YR 5/6) and few prominent red (2.5YR 4/8) mottles; moderate medium angular blocky structure; very plastic and very sticky when wet; many well-developed slickensides; tongue about 4 inches wide of shale extended into this horizon at about 60-degree angle; clear irregular boundary.
D	53 to 60 inches. Light olive brown and olive gray shale. No sample collected of this material.

Remarks: Colors given are for moist soils. Samples of the A12 and AC horizons were collected for the Bureau of Public Roads.

SOIL SURVEY LABORATORY Lincoln, Nebr. December 1958

SOIL TYPE Vaiden silty clay, (deep phase) **LOCATION** Dallas County, Alabama

SOIL NOS. S58Ala-24-1 **LAB. NOS.** 8304-8310

DEPTH INCHES	HORIZON	1B1a PARTICLE SIZE DISTRIBUTION (in mm.) (per cent) VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	3A1 0.2-0.02	0.02-0.002	2A2 > 2	TEXTURAL CLASS
0-3	A11	0.8a	1.4a	0.9b	1.4b	7.6b	40.6	47.3	26.2	22.3	Tr.	sic
3-9	A12	0.6a	0.7a	0.6b	1.6b	4.1b	33.6	58.8	18.6	20.0	Tr.	c
9-15	A13	0.6a	0.7a	0.6b	1.7b	4.2b	33.6	58.6	18.2	20.6	Tr.	c
15-34	A14	1.4a	0.9a	0.7b	1.6b	5.3b	35.4	54.7	20.9	20.5	Tr.	c
34-48	AC1	0.8a	0.6a	0.6b	1.6b	4.1b	36.0	55.5	19.6	21.4	Tr.	c
48-76	AC2	0.7a	0.4a	0.4b	0.9b	2.6b	34.0	61.0	16.9	20.1	Tr.	c
76-80	C	0.2c	0.5c	0.5d	0.8d	4.0d	29.8	64.2	15.2	18.8	1	c

8C1a pH 1:1	1:5	1:10	ORGANIC MATTER 6A1a ORGANIC CARBON %	6B1a NITROGEN %	C/N	Free Iron Fe_2O_3% 6C1a		6E1a $CaCO_3$ equivalent %		MOISTURE TENSIONS 1/10 ATMOS. %	1/3 ATMOS. %	4B2 15 ATMOS. %
4.9			5.45	0.210	26	2.4						19.8
4.7			0.85	0.045	19	2.9						20.8
4.7			0.55	0.027	20	3.0						20.7
4.8			0.30	0.018	17	2.9						19.0
4.9			0.20			2.9						19.4
5.0			0.13			2.7						21.0
7.2			0.10			4.2		1				21.8

5A1a CATION EXCHANGE CAPACITY NH_4Ac	EXTRACTABLE CATIONS 6N2b Ca	6O2b Mg	6H1a H	6P2a Na	5B1a 6Q2a K	BASE SAT. % NH_4Ac EXCH. 5C1	5C3 Base Sat. % on Sum Cations	5B1a Sum Bases	5A3a Sum Cations	Ca/Mg 8D3		
←	———	milliequivalents per 100g. soil	———	———	→		← me/100g →					
32.3	18.7	4.2	18.9	<0.1	0.5	72	55	23.4	42.3	4.4		
30.5	15.2	3.2	19.4	0.1	0.3	62	49	18.8	38.2	4.8		
30.2	14.6	2.7	19.0	0.1	0.2	58	48	17.6	36.6	5.4		
28.1	12.8	1.9	18.0	0.1	0.2	53	45	15.0	33.0	6.7		
29.4	15.5	1.8	17.1	0.3	0.2	60	51	17.8	34.9	8.6		
33.2	26.2	2.4	10.0	0.6	0.2	88	75	29.4	39.4	10.9		
36.0		2.8	3.3	1.1	0.2							

a. Common smooth light brown to black concr. (Fe-Mn)
b. Few smooth light brown to black concr. (Fe-Mn)
c. Common smooth light brown to black concr. (Fe-Mn) Also, few, $CaCO_3$ concr.
d. Few smooth light brown to black concr. (Fe-Mn) Also, few, $CaCO_3$ concr.

Soil Type: Vaiden silty clay, deep phase
Soil Nos.: S58Ala-24-1
Location: 2.3 miles north of U. S. Highway 80 on gravel road that runs parallel to the Southern Railroad (Marion Junction to Marion); NW 1/4 NE 1/4, Sec. 10, T17N, R8E. Sample collected 170 feet east of the gravel road at mile post 17 (on Southern Railroad). Area: Dallas County, Alabama.
Physiographic Position: Upland - elevation about 220 feet.
Climate: Average annual precipitation 50 to 52 inches. Average annual temperature about 65 degrees.
Topography: Nearly level with gilgai relief. About 1 percent slope. Acid clays over Selma chalk.
Drainage: Somewhat poorly drained.
Vegetation: Mixed hardwoods and pines.
Use: Timber and range.
Collected by: J. S. Allen, K. W. Flach, I. L. Martin, Y. H. Havens, W. J. Reeves, L. H. Burgess and M. E. Stephens, May 27, 1958.
Described by: M. E. Stephens and Y. H. Havens.

Horizon and Lincoln Lab. No.	
Ao	1 to 0 inch. Partly decomposed leaves, pine straw, and grass.
A11 8304	0 to 3 inches. Very dark grayish brown (10YR 3/2) silty clay loam; moderate fine granular and weak fine subangular blocky structure; friable; slightly plastic and slightly sticky; many fine roots and worm casts filled with material from the B1 and B21 horizons; abrupt wavy boundary.
A12 8305	3 to 9 inches. Yellowish brown (10YR 5/6) clay, mottled with many fine prominent and distinct gray (10YR 6/1) and red (2.5YR 5/8) mottles; moderate medium and very fine angular and subangular blocky structure; firm when moist, and very plastic and very sticky when wet; clear wavy boundary.
A13 8306	9 to 15 inches. Brownish yellow (10YR 6/6) clay with many fine distinct mottles of gray (10YR 6/1) and a few of yellowish red (5YR 4/8); moderate medium and very fine subangular and angular blocky structure; firm when moist, hard when dry, very plastic and sticky when wet; clear wavy boundary.
A14 8307	15 to 34 inches. Mottled gray (6/0) and brownish yellow (10YR 6/8) to yellowish brown (10YR 5/8) clay with a few fine prominent red (2.5YR 4/8) mottles; moderate very fine and fine angular and subangular blocky structure; friable when moist, hard when dry, very plastic and very sticky when wet; few weak slickensides; few small root and wormholes filled with gray (10YR 6/1) silty clay loam; gradual wavy boundary.
AC1 8308	34 to 48 inches. Mottled gray (6/0) and brownish yellow (10YR 6/8) to yellowish brown clay containing a few fine prominent red (2.5YR 4/8) mottles; moderate fine and very fine angular and subangular blocky structure; friable when moist, hard when dry, very plastic and very sticky when wet; a few small weak slickensides; gradual wavy boundary.
AC2 8309	48 to 76 inches. Mottled gray (5Y 6/1) strong brown (7.5YR 5/8) and yellowish brown (10YR 5/8) clay; moderate fine angular blocky structure; firm when moist, hard when dry, very plastic and very sticky when wet; many large moderately developed slickensides; few small rounded quartz gravels in the lower 4 inches; many peds are partly coated with manganese; many small round manganese concretions; clear wavy boundary.
C 8310	76 to 80 inches plus. Yellowish brown (10YR 5/8 and 6/8) clay containing many hard lime nodules 1/4 to 1 inch in diameter. There is a gray (10YR 6/1) streak in this horizon about 2 inches wide - almost vertical. Many well-developed large slickensides which break down in moderately developed fine angular blocky fragments; friable when moist, very hard when dry, and very plastic and very sticky when wet. This horizon contains many small - 1/8 inch to 1/4 inch diameter - manganese concretions and a few quartz gravels. This horizon contains a few fine roots.

Remarks: Colors given are for moist soils. Samples of the A12, A14, and AC2 horizons were collected for the Bureau of Public Roads.

SOIL SURVEY LABORATORY Lincoln, Nebr. December 1958

SOIL TYPE Vaiden silty clay, (deep phase) **LOCATION** Dallas County, Alabama

SOIL NOS. S58Ala-24-2 **LAB. NOS.** 8315-8322

DEPTH INCHES	HORIZON	1B1a PARTICLE-SIZE DISTRIBUTION (in mm.) (per cent) VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	3A1 0.2-0.02	0.02-0.002	2A2 > 2	TEXTURAL CLASS
0-1½	A1	0.3a	0.7a	0.4a	1.9b	9.4b	51.5	35.8	39.5	22.6	-	sic
1½-4	A12	0.2a	0.5a	0.4a	1.5b	7.0b	44.7	45.7	32.7	19.9	-	sic
4-9	A13	0.4a	0.2a	0.1a	0.6b	4.3b	34.0	60.4	21.9	16.8	-	c
9-21	A14	0.1a	0.2a	0.1a	0.6b	4.3b	36.7	58.0	23.4	18.0	-	c
21-29	AC1	<0.1	0.2a	0.1a	0.7b	4.3b	37.3	57.4	23.9	18.2	-	c
29-44	AC2	0.1a	0.2a	0.1a	0.6b	3.8b	36.5	58.7	22.6	18.1	-	c
44-62	AC3	0.3a	0.2a	0.1a	0.5b	4.5b	36.3	58.1	22.7	18.4	-	c
62-69+	C	0.2c	0.2c	0.2c	0.5d	4.3d	36.4	58.2	22.6	18.3	Tr.	c

8C1a pH 1:1	1:5	1:10	6A1a ORGANIC CARBON %	6B1a NITROGEN %	C/N	Free Iron Fe_2O_3% 6C1a		6E1a $CaCO_3$ equivalent %		MOISTURE TENSIONS 1/10 ATMOS. %	1/3 ATMOS. %	4B2 15 ATMOS. %
5.4			5.35	0.250	21	1.8						17.8
5.1			1.52	0.086	18	2.5						17.5
4.6			0.61	0.035	17	3.1						22.3
4.8			0.26	0.014	18	2.8						20.8
4.8			0.17	0.008		2.6						20.3
5.0			0.20			3.0						20.7
5.4			0.19			3.0						20.3
7.6			0.16			3.0		4				20.0

5A1a CATION EXCHANGE CAPACITY NH_4Ac	EXTRACTABLE CATIONS 6N2b Ca	6O2b Mg	6H1a H	6P2a Na	5B1a 6Q2a K	BASE SAT. % NH_4Ac EXCH. 5C1	5C3 Base Sat. % on Sum Cations	5B1a Sum Bases	5A3a Sum Cations	Ca/Mg 8D3		
←	———	———	milliequivalents per 100g. soil	———	——→			← me/100g →				
30.3	22.0	2.9	16.5	0.1	0.3	83	60	25.3	41.8	7.6		
29.4	20.6	2.5	13.7	<0.1	0.2	79	63	23.3	37.0	8.2		
36.1	20.9	1.6	21.4	0.1	0.2	63	52	22.8	44.2	13.1		
34.8	22.2	1.2	18.5	0.1	0.2	68	56	23.7	42.2	18.5		
34.9	26.0	1.1	14.7	0.2	0.2	79	65	27.5	42.2	23.6		
36.1	30.5	1.0	11.9	0.3	0.2	89	73	32.0	43.9	30.5		
36.4	34.7	0.8	9.5	0.6	0.2	100	79	36.3	45.8			
36.6		0.8	0.5	0.9	0.2							

a. Many smooth light brown to black concr. (Fe-Mn)
b. Few smooth light brown to black concr. (Fe-Mn)
c. Many smooth light brown to black concr. (Fe-Mn) Also, few, $CaCO_3$ concr.
d. Few smooth light brown to black concr. (Fe-Mn) Also, few, $CaCO_3$ concr.

Soil Type: Vaiden silty clay, deep phase
Soil Nos.: S58Ala-24-2
Location: 3.4 miles south of the junction of U. S. Highway 80 and Alabama Highway 5 (Browns to Safford Road), NE 1/4 NW 1/4, Sec. 3, T16N, R7E; 150 feet east of the highway along wire fence.
Physiographic Position: Upland. Elevation approximately 200 feet.
Climate: Average annual precipitation about 50 inches. Average annual temperature 65 degrees.
Topography: Nearly level, about 1 percent slope; acid clays over Selma chalk.
Drainage: Somewhat poorly drained.
Vegetation: Mixed hardwoods and pines.
Use: Timber and range.
Collected by: J. S. Allen, K. W. Flach, I. L. Martin, Y. H. Havens, W. J. Reeves, L. H. Burgess, and M. E. Stephens, May 28, 1958.
Described by: M. E. Stephens and Y. H. Havens.

Horizon and Lincoln Lab. No.	
Ao	1 to 0 inch. Partly decomposed leaves and pine straw.
A1 8315	0 to 1½ inches. Very dark gray (10YR 3/1) silty clay loam; moderate fine granular structure and weak fine subangular blocky structure; friable when moist, plastic and sticky when wet; few fine and medium pores; many fine and medium-size roots; abrupt wavy boundary.
A12 8316	1½ to 4 inches. Brown (10YR 5/3) silty clay; moderate fine and medium subangular blocky structure; gray coating on ped surfaces; friable to firm when moist, plastic and sticky when wet; few fine pores; many root and worm channels filled with material from the layers above and below; many fine and medium-size roots; abrupt smooth boundary.
A13 8317	4 to 9 inches. Yellowish brown (10YR 5/6) clay with few very fine faint mottles of dark brown (7.5YR 4/4) and grayish brown (10YR 5/2); moderate to strong very fine and medium subangular and angular blocky structure; ped surface coated with gray material from the above layers; friable to firm when moist, very plastic and very sticky when wet; few small weak slickensides; few fine pores; many root and worm channels filled with material from the above layer; many fine and medium roots; clear smooth boundary.
A14 8318	9 to 21 inches. Mottled yellowish brown (10YR 5/8) gray (10YR 6/1) and red (2.5YR 4/8) clay; mottles are fine and medium, distinct, and prominent; moderate medium and very fine angular and subangular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; many weak to strong slickensides in the lower 4 inches; many fine pores; few small black concretions; few small worm casts; many fine roots; clear wavy boundary.
AC1 8319	21 to 29 inches. Mottled gray (6/0) yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) clay; mottles fine and distinct; moderate very fine and medium angular and subangular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; many peds coated with gray and brown; many strong slickensides; few fine pores; few fine black concretions; few fine roots; gradual wavy boundary.
AC2 8320	29 to 44 inches. Mottled gray (6/0) brownish yellow (10YR 6/8) and red (2.5YR 5/6) clay; mottles fine and distinct and prominent; moderate very fine and medium angular and subangular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; many peds are coated with olive gray (5Y 5/2); many strong slickensides; few fine pores; few fine roots; gradual wavy boundary.
AC3 8321	44 to 62 inches. Olive brown (2.5Y 4/4) clay with many fine distinct gray (10YR 6/1) and yellowish red (5YR 4/8) mottles; moderate very fine and medium angular and subangular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; many peds coated with gray (10YR 6/1); many strong slickensides; few fine pores; few fine concretions; few fine roots; clear wavy boundary.
C 8322	62 to 69 inches plus. Light olive brown (2.5Y 5/6) clay; peds coated with olive brown (2.5Y 4/4) few peds were partly coated with black (10YR 2/1); moderate very fine and medium angular and subangular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; many lime nodules (1/4 inch to 1 inch).

Remarks: Colors given are for moist soils. Samples of the A12, AC1, and C horizons were collected for the Bureau of Public Roads.

SOIL SURVEY LABORATORY Lincoln, Nebr. December 1958

SOIL TYPE Vaiden silty clay **LOCATION** Perry County, Alabama

SOIL NOS. S58Ala-53-1 **LAB. NOS.** 8311-8314

DEPTH INCHES	HORIZON	1B1a PARTICLE SIZE DISTRIBUTION (in mm.) (per cent) VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	0.2-0.02	3A1 0.02-0.002	2A2 > 2	TEXTURAL CLASS
0-2	A1	0.5a	0.5a	0.5a	2.9b	20.4b	40.0	35.2	44.8	17.5	Tr.	cl
2-10	A12	0.1a	0.4a	0.4a	2.1b	18.3b	38.6	40.1	41.1	17.3	Tr.	c
10-24	AC	0.2a	0.4a	0.2a	1.1b	10.5b	30.7	56.9	26.8	15.0	-	c
24-36	C	0.1a	0.4a	0.3a	1.3b	9.2b	32.2	56.5	24.5	17.7	Tr.	c

8C1a pH 1:1	pH 1:5	pH 1:10	6A1a ORGANIC MATTER ORGANIC CARBON %	6B1a NITROGEN %	C/N	Free Iron Fe_2O_3% 6C1a		6E1a $CaCO_3$ equivalent %		MOISTURE TENSIONS 1/10 ATMOS. %	1/3 ATMOS. %	4B2 15 ATMOS. %
6.3			5.87	0.343	17	1.9						18.6
4.9			0.93	0.071	13	2.3						15.7
5.3			0.43	0.026	16	3.5						21.4
7.4			0.30			3.0		<1				21.6

5A1a CATION EXCHANGE CAPACITY NH_4Ac	EXTRACTABLE CATIONS 6N2b Ca	6Q2b Mg	6H1a H	6P2a Na	6Q2a K	BASE SAT. % NH_4Ac EXCH. 5C1	5C3 Base Sat. % on Sum Cations	5B1a Sum Bases	5A3a Sum Cations	Ca/Mg 8D3
←	milliequivalents per 100g. soil				→			← me/100g →		
35.0	34.4	2.4	9.0	<0.1	0.5	106	80	37.3	46.3	14.3
28.2	19.2	1.4	14.1	<0.1	0.2	74	60	20.8	34.9	13.7
35.7	33.4	1.4	8.6	0.1	0.3	98	80	35.2	43.8	23.8
38.4		1.8	3.4	0.1	0.4					

a. Many smooth light brown to black concr. (Fe-Mn)
b. Few smooth light brown to black concr. (Fe-Mn)

Soil Type: Vaiden silty clay
Soil Nos.: S58Ala-53-1
Location: 8.2 miles southeast of Uniontown, Alabama, in the SE 1/4 SW 1/4, Sec. 15, T16N, R6E, and 160 feet east of the road.
Area: Perry County, Alabama.
Physiographic Position: Upland - elevation approximately 275 feet.
Climate: Average annual precipitation 50 inches. Average annual temperature 65 degrees.
Topography: Nearly level with gilgai relief. Acid clays over Selma chalk.
Drainage: Somewhat poorly drained.
Vegetation: Hardwoods.
Use: Firewood and range.
Collected by: J. S. Allen, K. W. Flach, I. L. Martin, Y. H. Havens, W. J. Reeves, L. H. Burgess, and M. E. Stephens, May 27, 1958.
Described by: M. E. Stephens and Y. H. Havens.

Horizon and Lincoln Lab. No.	
A1 8311	0 to 2 inches. Very dark gray (10YR 3/1) silty clay loam; moderate fine granular and weak medium subangular blocky structure; friable when moist, and plastic and sticky when wet; few fine and medium pores; many worm casts; many fine and medium roots; abrupt wavy boundary.
A12 8312	2 to 10 inches. Light olive brown (2.5Y 5/4) clay mottled with few fine faint mottles of yellowish brown (10YR 5/8); moderate very fine and medium subangular blocky structure; friable when moist, and very plastic and very sticky when wet; many worm and root channels filled with material from the layers above and below; many fine and few coarse roots; clear wavy boundary.
AC 8313	10 to 24 inches. Brownish yellow (10YR 6/6) clay mottled with red (2.5YR 4/8) and pale yellow (2.5Y 7/4); mottles many, fine and prominent; moderate medium and very fine angular and subangular blocky structure; friable when moist, very plastic and very sticky when wet; few fine black concretions; few fine roots; clear wavy boundary.
C 8314	24 to 36 inches. Light olive brown (2.5Y 5/6) clay; moderate fine and very fine angular and subangular blocky structure; many stony slickensides with olive (5Y 5/3) surface; friable when moist, and very plastic when wet; few black concretions; few fine pores; few fine roots; abrupt irregular boundary.
D	36 to 40 inches plus. Pale yellow chalk - no samples collected.

Remarks: Colors are for moist soils. Samples of the A12 and AC horizons were collected for the Bureau of Public Roads.

SOIL SURVEY LABORATORY Lincoln, Nebr. December 1958

SOIL TYPE Vaiden silty clay **LOCATION** Perry County, Alabama

SOIL NOS. S58Ala-53-2 **LAB. NOS.** 8323-8327

DEPTH INCHES	HORIZON	1B1a PARTICLE-SIZE DISTRIBUTION (in mm.) (per cent) VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	0.2-0.02	3A1 0.02-0.002	2A2 > 2	TEXTURAL CLASS
0-4	A1	1.6a	1.7a	0.6a	2.0b	12.4c	50.6	31.1	39.6	24.6	-	sicl
4-12	A12	3.2a	2.1a	0.6a	1.5b	8.7c	39.8	44.1	29.6	19.7	Tr.	c
12-24	A3	1.1a	1.1a	0.4a	0.7b	4.8c	27.2	64.7	17.6	14.6	-	c
24-32	AC	1.4a	1.4a	0.3a	0.9b	5.1c	32.0	58.9	20.1	17.6	-	c
32-39	C	1.5a	1.2a	0.6a	0.8b	6.3c	33.3	56.3	21.4	18.4	-	c

8C1a pH 1:1	pH 1:5	pH 1:10	ORGANIC MATTER 6A1a ORGANIC CARBON %	6B1a NITROGEN %	C/N	Free Iron Fe_2O_3% 6C1a		$CaCO_3$ equivalent %		MOISTURE TENSIONS 1/10 ATMOS. %	1/3 ATMOS. %	4B2 15 ATMOS. %
6.3			3.45	0.205	17	2.9						14.3
5.4			0.54	0.033	16	4.3						16.0
4.8			0.37	0.022	17	5.4						22.5
5.0			0.21			5.0						20.5
6.0			0.20			4.6						20.0

5A1a CATION EXCHANGE CAPACITY NH_4Ac	EXTRACTABLE CATIONS 6N2b Ca	6Q2b Mg	6H1a H	6P2a Na	6Q2a K	5B1a BASE SAT. % NH_4Ac EXCH. 5C1	5C3 Base Sat. % on Sum Cations	5B1a Sum Bases	5A3a Sum Cations	Ca/Mg 8D3	
←	milliequivalents per 100g. soil				→			← me/100g →			
26.5	25.3	1.2	6.5	<0.1	0.2	101	80	26.7	33.2	21.1	
24.9	19.4	0.6	7.5	0.1	0.1	81	73	20.2	27.7		
31.9	19.4	0.5	16.2	0.1	0.2	63	55	20.2	36.4		
29.7	21.6	0.4	11.8	0.1	0.2	75	65	22.3	34.1		
30.5	29.5	0.1	4.7	0.2	0.2	98	86	30.0	34.7		

a. Many smooth light brown to black concr. (Fe-Mn)
b. Common smooth light brown to black concr. (Fe-Mn)
c. Few smooth light brown to black concr. (Fe-Mn)

Soil Type: Vaiden silty clay
Soil Nos.: S58Ala-53-2
Location: 4.7 miles southeast of Uniontown, Alabama, in NW 1/4 NE 1/4, Sec. 34, T17N, R6E, and 1/4 mile west of the road.
Area: Perry County, Alabama.
Physiographic Position: Upland. Elevation approximately 275 feet.
Climate: Average annual precipitation 50 inches. Average temperature 65 degrees.
Topography: Nearly level with gilgai relief. Acid clays over Selma chalk.
Drainage: Somewhat poorly drained.
Vegetation: Mixed hardwoods (hickory and oaks.)
Use: Poor grade of timber and pasture.
Collected by: J. S. Allen, K. W. Flach, I. L. Martin, Y. H. Havens, W. J. Reeves, L. H. Burgess, and M. E. Stephens, May 28, 1958.
Described by: M. E. Stephens and Y. H. Havens.

Horizon and Lincoln Lab. No.	
Ao	1 to 0 inch. Partly decomposed leaves.
A1 8323	0 to 4 inches. Very dark gray (10YR 3/1) silty clay loam; weak very fine and fine granular and subangular blocky structure; friable when moist, plastic and sticky when wet; few fine and medium pores; many fine black concretions; many wormholes filled with material from the layers below; many fine and few coarse roots; abrupt wavy boundary.
A12 8324	4 to 12 inches. Yellowish brown (10YR 5/6) clay with many fine and medium prominent red (2.5YR 4/8) mottles; moderate very fine and medium subangular blocky structure; friable to firm when moist, very plastic and very sticky when wet; many fine black concretions; many root and worm channels filled with material from the layers above and below; many fine roots; clear wavy boundary.
A3 8325	12 to 24 inches. Mottled yellowish brown (10YR 5/8) light olive brown (2.5Y 5/4) light yellowish brown (2.5Y 6/4) and red (10R 4/6) clay; mottles fine, medium and faint; moderate to strong very fine and medium angular and subangular blocky structure; friable to firm when moist, very plastic and very sticky when wet; few fine black concretions; many worm casts; many fine roots; clear wavy boundary.
AC 8326	24 to 32 inches. Mottled pale olive (5Y 6/3) and red (10R 4/8) clay; mottles are fine, medium and prominent; moderate very fine and medium angular and subangular blocky structure; few weak to strong slickensides; few fine black concretions; few fine roots; clear wavy boundary.
C 8327	32 to 39 inches. Light olive brown (2.5Y 5/4) clay with many fine and medium distinct mottles of light olive gray (5Y 6/2) and yellowish brown (10YR 5/8) and a few fine prominent red (2.5YR 4/8) mottles; moderate very fine and medium subangular and angular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; few weak to strong slickensides; many fine black concretions and many lime nodules; few fine roots; abrupt wavy boundary.
D	39 inches plus. White to pale yellow chalk. No sample collected.

Remarks: Colors given are for moist soil. Samples of the A3 and C horizons were collected for the Bureau of Public Roads.

SOIL SURVEY LABORATORY Lincoln, Nebr. December 1958

SOIL TYPE Wilcox silty clay **LOCATION** Marengo County, Alabama

SOIL NOS. S58Ala-46-1 **LAB. NOS.** 8282-8288

DEPTH INCHES	HORIZON	1B1a PARTICLE-SIZE DISTRIBUTION (in mm.) (per cent) VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	0.2-0.02	0.02-0.002	3A1	2A2 > 2	TEXTURAL CLASS
0-1	A11	3.8a	3.2b	2.1b	3.0b	1.6b	38.8	47.5	13.4	28.3		2	c
1-6	A12	2.5a	2.3b	1.6b	1.9b	1.4b	28.9	61.4	8.3	22.7		4	c
6-14	A13	1.6a	1.7b	0.9b	1.4b	0.8b	22.0	71.6	6.2	17.3		3	c
14-28	AC1	1.5a	1.7b	1.1b	1.0b	1.5b	23.5	69.7	7.4	17.8		2	c
28-42	AC2	1.1a	1.7b	1.0b	1.5b	0.8b	24.0	69.9	6.8	18.7		2	c
42-51	C1	1.1a	1.1b	0.7b	1.4b	1.1b	18.9	75.7	5.2	15.5		Tr.	c
51-62	C2	0.2a	0.3b	0.3b	0.7b	0.8b	12.8	84.9	2.7	11.2		Tr.	c

8C1a pH 1:1	1:5	1:10	ORGANIC MATTER 6A1a ORGANIC CARBON %	6B1a NITROGEN %	C/N	Free Iron Fe_2O_3% 6C1a		$CaCO_3$ equivalent %		MOISTURE TENSIONS 1/10 ATMOS. %	1/3 ATMOS. %	4B2 15 ATMOS. %
5.3			8.36	0.318	26	4.1						22.1
4.8			1.44	0.099	14	4.6						21.8
4.5			0.52	0.045	12	4.3						25.5
4.6			0.23	0.028		4.1						24.5
4.5			0.18			4.3						24.5
4.2			0.16			4.0						26.5
4.3			0.09			4.1						31.0

5A1a CATION EXCHANGE CAPACITY NH_4Ac	EXTRACTABLE CATIONS 6N2b Ca	6O2b Mg	6H1a H	6P2a Na	6Q2a K	5B1a BASE SAT. % NH_4Ac EXCH.	5C3 Base Sat. % on Sum Cations	5B1a Sum Bases	5A3a Sum Cations	Ca/Mg		
←	milliequivalents per 100g. soil				→	5C1		← me/100g →		8D3		
37.2	16.8	8.6	24.7	0.2	0.8	71	52	26.4	51.1	2.0		
33.7	11.0	9.5	19.6	0.2	0.8	64	52	21.5	41.1	1.2		
38.4	11.0	10.4	25.7	0.3	0.9	59	47	22.6	48.3	1.0		
37.7	9.8	10.3	23.8	0.5	0.7	56	47	21.3	45.1	1.0		
38.3	11.6	11.2	20.4	0.9	0.6	63	54	24.3	44.7	1.0		
41.7	16.9	16.2	14.7	2.0	0.8	86	71	35.9	50.6	1.0		
43.6	20.8	20.0	10.8	3.2	1.0	103	81	45.0	55.8	1.0		

a. Many smooth light brown concr. (Fe)
b. Common smooth light brown to black concr. (Fe-Mn)

Soil Type: Wilcox silty clay
Soil Nos.: S58Ala-46-1
Location: 3.2 miles southwest of the junction of U. S. Highway 43 and Alabama Highway 79 (Linden to Myrtlewood Road) in SW 1/4 SW 1/4, Sec. 12, T15N, R3E, in front of the Cates School, 300 feet north along fence, 210 feet west from the fence.
Physiographic Position: Upland. Clay hills, elevation approximately 150 feet.
Climate: Average annual precipitation about 56 inches. Annual temperature about 65 degrees.
Topography: Nearly level hilltop slope about 1 percent. Acid marine clays from the Sucarnoochee (Porters Creek clay) formation (Eocene). Has a moderate amount of gilgai relief.
Drainage: Somewhat poorly drained.
Vegetation: Mixed hardwoods and pines. Area has not been cultivated.
Use: Timber.
Collected by: J. S. Allen, K. W. Flach, I. L. Martin, Y. H. Havens, W. J. Reeves, L. H. Burgess, and M. E. Stephens, May 26, 1958.
Described by: M. E. Stephens and Y. H. Havens.

Horizon and Lincoln Lab. No.	
Ao	1 to 0 inch. Partly decomposed leaves and pine straw.
A11 8282	0 to 1 inch. Very dark gray (10YR 3/1) to dark gray (10YR 4/1) silt loam; weak medium subangular blocky and fine granular structure; friable when moist, plastic and sticky when wet; abrupt smooth boundary.
A12 8283	1 to 6 inches. Dark gray (10YR 4/1) mottled with dark brown (7.5YR 4/4) and yellowish red (5YR 4/6) silty clay; mottles are fine faint and many; moderate fine and medium subangular blocky structure; firm to friable when moist, plastic and sticky when wet; many fine pores; few small brown and black concretions; many fine and few coarse roots; abrupt wavy boundary.
A13 8284	6 to 14 inches. Red (2.5YR 4/8) mottled with brownish yellow (10YR 6/8) gray (10YR 6/1) and light brownish gray (2.5Y 6/2) clay; mottles are fine, medium prominent, distinct and many; moderate fine and medium angular and subangular blocky structure; friable to firm when moist, and plastic and sticky when wet; many fine and a few coarse roots; clear wavy boundary.
AC1 8285	14 to 28 inches. Brownish yellow (10YR 6/8) to yellowish brown (10YR 5/8) clay, mottled with gray (5Y 6/1) and red (2.5YR 4/8); mottles are many, fine and prominent; moderate fine and very fine angular and subangular blocky structure; friable to firm when moist, and plastic and sticky when wet; many large strong slickensides; many fine roots; gradual wavy boundary.
AC2 8286	28 to 42 inches. Gray (5Y 6/1) clay, mottled with red (2.5YR 4/8) and greenish gray (10G 5/1); moderate fine and medium angular and subangular blocky structure; friable to firm when moist, and plastic and sticky when wet; mottles many, fine, medium and prominent; many large strong slickensides; few iron concretions and fine quartz gravels; few fine roots; clear wavy boundary.
C1 8287	42 to 51 inches. Gray (5Y 6/1) clay, mottled with pale red (2.5YR 6/1) brownish yellow (10YR 6/8) and greenish gray (5G 5/1); moderate fine and medium angular and subangular blocky structure; firm when moist, very plastic and very sticky when wet; mottles many, fine and medium, distinct; many large strong slickensides; few concretions and fine quartz gravels; few fine roots on slickeside surfaces; clear irregular boundary.
C2 8288	51 to 62 inches. Mottled yellowish brown (10YR 5/6) and gray (10YR 6/1) clay; moderate fine angular blocky structure; friable fo firm when moist, and very plastic and very sticky when wet; few small weak slickensides; abrupt wavy boundary.
	62 to 72 inches plus. Shale - no sample collected.

Remarks: Colors are for moist soils. Samples of the A12, AC2, and C2 horizons were sampled for the Bureau of Public Roads.

SOIL SURVEY LABORATORY Lincoln, Nebr. December 1958

SOIL TYPE Wilcox silty clay **LOCATION** Marengo County, Alabama

SOIL NOS. S58A1a-46-2 **LAB. NOS.** 8289-8296

DEPTH INCHES	HORIZON	1B1a PARTICLE SIZE DISTRIBUTION (in mm.) (per cent) VERY COARSE SAND 2-1	COARSE SAND 1-0.5	MEDIUM SAND 0.5-0.25	FINE SAND 0.25-0.10	VERY FINE SAND 0.10-0.05	SILT 0.05-0.002	CLAY < 0.002	0.2-0.02	3A1 0.02-0.002	2A2 > 2	TEXTURAL CLASS
0-1	A11	3.4a	3.7a	1.7a	1.6a	2.1b	47.1	40.4	12.3	37.5	5.	sic
1-4	A12	2.5a	3.3a	1.4a	1.6a	1.9b	44.2	45.1	11.7	35.2	4.	sic
4-9	A13	1.5a	2.2a	1.1a	1.5a	1.6b	37.2	54.9	9.2	30.3	4.	c
9-14	A14	2.0a	2.5a	1.0a	0.7a	1.7b	29.6	62.5	6.7	24.7	4.	c
14-32	AC1	2.4a	2.4a	0.9a	0.6a	1.5b	29.2	63.0	6.8	24.0	8.	c
32-43	AC2	3.0a	2.5a	1.1a	1.4a	1.4b	26.6	64.0	7.1	21.6	9	c
43-59	C1	3.0a	2.7a	1.0a	1.3a	1.3b	27.4	63.3	7.1	22.3	14	c
59-72	C2	4.6a	3.5a	1.6a	1.9a	3.6b	21.3	63.5	7.7	17.7	34	c

8C1a pH 1:1	pH 1:5	pH 1:10	6A1a ORGANIC CARBON %	6B1a NITROGEN %	C/N	Free Iron Fe_2O_3% 6C1a		$CaCO_3$ equivalent %		MOISTURE TENSIONS 1/10 ATMOS. %	1/3 ATMOS. %	4B2 15 ATMOS. %
5.5			7.12	0.309	23	4.9						21.4
5.5			2.40	0.170	14	5.4						19.0
5.0			0.96	0.093	10	5.6						20.3
4.7			0.51	0.056	9	6.1						22.4
4.6			0.30	0.044	7	5.9						22.8
4.7			0.22			6.7						24.1
4.6			0.19			6.8						23.9
4.0			0.21			9.4						25.1

5A1a CATION EXCHANGE CAPACITY NH_4Ac	EXTRACTABLE CATIONS 6N2b Ca	6O2b Mg	6H1a H	6P2a Na	5B1a 6Q2a K	BASE SAT. NH_4Ac EXCH. 5C1	5C3 Base Sat. % on Sum Cations	5B1a Sum Bases	5A3a Sum Cations	Ca/Mg 8D3	
←	milliequivalents per 100g. soil				→			← me/100g →			
37.2	22.4	7.3	19.9	0.1	0.6	82	60	30.4	50.3	3.1	
29.3	16.4	6.6	14.2	0.1	0.4	80	62	23.5	37.7	2.5	
29.0	13.9	7.1	13.8	0.2	0.4	74	61	21.6	35.4	2.0	
31.7	10.7	6.6	20.6	0.2	0.6	57	47	18.1	38.7	1.6	
33.2	6.7	6.5	25.5	0.4	0.6	43	36	14.2	39.7	1.0	
34.1	5.2	7.6	27.5	0.8	0.6	42	34	14.2	41.7	0.7	
33.6	5.6	8.1	25.6	1.0	0.6	46	37	15.3	40.9	0.7	
37.4	9.0	11.7	21.6	1.5	0.7	61	51	22.9	44.5	0.8	

a. Many smooth light brown to black concr. (Fe-Mn)
b. Common smooth light brown to black concr. (Fe-Mn)

Soil Type: Wilcox silty clay
Soil Nos.: S58Ala-46-2
Location: SW 1/4 NW 1/4, Sec. 15, T15N, R2E; 5.6 miles southwest of the junction of U. S. Highway No. 43 and Alabama Highway 79 (Linden to Myrtlewood Road). Sampled collected 200 feet south of the highway.
Area: Marengo County, Alabama.
Physiographic Position: Upland. Clay hills; elevation approximately 150 feet.
Climate: Average annual precipitation about 56 inches. Annual temperature about 65 degrees.
Topography: Nearly level hilltop slope about 1 percent. Acid marine clays from the Sucarnoochee (Porters Creek clay) formation (Eocene). Has a moderate amount of gilgai relief.
Drainage: Somewhat poorly drained.
Vegetation: Mixed hardwoods and pines. Area has not been cultivated.
Use: Timber.
Collected by: J. S. Allen, K. W. Flach, I. L. Martin, Y. H. Havens, W. J. Reeves, L. H. Burgess, and M. E. Stephens, May 26, 1958.
Described by: M. E. Stephens and Y. H. Havens.

Horizon and Lincoln Lab. No.	
Ao	1 to 0 inch. Partly decomposed leaves and pine straw.
A11 8289	0 to 1 inch. Very dark gray (10YR 3/1) silt loam; weak fine granular and subangular blocky structure; friable when moist, and sticky and plastic when wet; many fine and a few coarse roots; many fine concretions; many fine pores; clear smooth boundary.
A12 8290	1 to 4 inches. Very dark gray (10YR 3/1) silty clay; moderate fine granular and subangular blocky structure; friable when moist, and plastic and sticky when wet; few fine pores; many fine concretions; many worm and root channels filled with material from the layer above and below; many fine and few coarse roots; abrupt smooth boundary.
A13 8291	4 to 9 inches. Dark brown (10YR 4/3) clay, mottled with few fine distinct red (2.5YR 5/6) mottles; moderate very fine and fine angular and subangular blocky structure; firm when moist, very plastic and very sticky when wet; few fine pores; many fine concretions; few fine quartz gravels; many fine and few coarse roots; clear smooth boundary.
A14 8292	9 to 14 inches. Yellowish brown (10YR 5/6) clay with many fine faint light brownish gray (10YR 6/2) and few distinct strong brown (7.5YR 5/6) mottles; many small weak slickensides; moderate fine angular and subangular structure; friable to firm when moist, and very plastic and very sticky when wet; few fine pores; few fine concretions; few fine roots; gradual smooth boundary.
AC1 8293	14 to 32 inches. Strong brown (7.5YR 5/6) clay with many fine and medium distinct gray (5YR 6/1) and few medium red (10R 4/8) mottles; few large slickensides; moderate very fine and medium angular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; few fine concretions; few fine roots; gradual wavy boundary.
AC2 8294	32 to 43 inches. Yellowish brown (10YR 5/6) clay with many fine distinct gray (5Y 6/1) and red (10R 4/8) mottles; few large slickensides; moderate very fine and medium angular and subangular blocky structure; friable to firm when moist, and very plastic and very sticky when wet; few concretions; few fine roots; gradual wavy boundary.
C1 8295	43 to 59 inches. Gray (5Y 6/1) clay with many fine and medium prominent mottles of yellowish brown (10YR 5/6) and red (2.5YR 4/8); many large strong slickensides; weak fine and very fine angular blocky structure; friable to firm when moist, very plastic and sticky when wet; large concretions and few quartz gravels; few fine roots; gradual wavy boundary.
C2 8296	59 to 72 inches. Light brownish gray (2.5Y 6/2) clay with many fine prominent mottles of yellowish brown (10YR 5/6) and dark red (10R 3/6); no slickensides; weak fine and very fine angular blocky structure; firm when moist, and very plastic and sticky when wet; many large (1/4 inch to 1 inch) concretions; few fine roots; abrupt irregular boundary.
	72 to 78 inches. Same as the above layer - no sample collected.
	78 inches plus. Shale - no sample collected.

Remarks: Colors are for moist soils. Samples of the A13, AC2, and C2 horizons were collected for the Bureau of Public Roads.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Archer loamy fine sand SOIL Nos.: S60Fla-61-32 LOCATION: Suwannee County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 60270 - 60276

Depth (in)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt (0.05-0.002)	Int III (0.02-0.002)	Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 <76 Pct	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-5	A1	76.9	18.4	4.7	1.1	3.4	4.4	31.8	36.2	13.1	5.3	73.4	40.7			tr.		
5-9	A2	74.3	19.6	6.1	0.9	2.6	3.5	26.6	40.7	14.4	5.2	75.1	33.6			tr.		
9-14	B2/D	36.8	14.0	49.2	0.1	1.0	1.6	11.5	22.6	10.0	4.0	41.4	14.2			tr.		
14-21	B3/D	32.4	19.0	48.6	0.1	0.5	0.8	6.7	24.3	12.9	6.1	43.2	8.1			tr.		
21-29	D1	29.4	23.2	47.4	0.1	0.4	0.7	5.6	22.6	14.9	8.3	42.3	6.8			tr.		
29-41	D2	17.3	38.1	44.6	1.4	1.0	0.5	1.7	12.7	19.6	18.5	33.5	4.6			tr.		
41-52+	D3	25.5	25.7	48.8	tr.	0.2	0.2	2.7	22.4	16.0	9.7	40.5	3.1			tr.		

Depth (in)	6A1a Organic carbon Pct	6B2a Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	6C1a Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: 4B1c 1/10 bar Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct	6S1a Total P Pct.	4C1 WRD in/in		pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	2.08	0.110	19			0.1		1.20[b]			21.3[c]	15.0[c]	5.6[a]	0.014			4.1	5.0
5-9	0.55	0.041	13			0.2		1.61[b]			13.2[c]	6.3[c]	2.7	0.006			4.3	5.6
9-14	0.31					1.4		1.53	1.75			24.2	16.8	0.028			3.6	4.7
14-21	0.15					1.2		1.60	1.79			21.4	15.5	0.028			3.7	4.7
21-29	0.18					1.0		1.58	1.78			21.7	14.6	0.025			3.5	4.7
29-41	0.13					0.6		1.66	1.93			19.7	15.3	0.028			3.9	4.9
41-52+	0.11					0.3							14.4	0.024			6.7	7.6

Depth (in)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay 8D1: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	2.4	0.6	0.5	0.2	3.7	8.4	11.7		0.52			2.49	0.02	1.19			28	
5-9	1.1	0.2	0.2	0.1	1.6	3.7	5.1		0.56			0.84	0.03	0.44			27	
9-14	4.9	0.9	0.8	0.1	6.7	10.7	16.7		4.5			0.34	0.03	0.34			36	
14-21	4.9	0.5	0.8	0.1	6.3	10.8	16.4		5.2			0.34	0.02	0.32			34	
21-29	6.7	0.2	0.9	0.1	7.9	9.6	16.7		4.5			0.35	0.02	0.31			42	
29-41	13.3	0.2	0.1	0.1	13.7	5.8	19.6		1.35			0.44	0.01	0.34			70[d]	
41-52+	e												0.01	0.30				

Depth (in)	Clay Fraction Analysis 7A1b d: Mt	Chl	Vm	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						DTA 7A3		
0-5									
5-9									
9-14	x	-	x	-	-	-	40	-	
14-21	xxx	-	-	-	-	-	48	-	
21-29									
29-41	xxx	-	-	-	-	tr.	43	-	
41-52+	xxx	-	-	-	-	tr.	44	-	

a <2mm sieved samples
b 1 x 2 inch cores, field moist
c 1 x 2 inch cores
d Sample contained calcareous fragments
e Free carbonates

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Archer loamy fine sand
Soil No.: S60Fla-61-32
Location: Suwannee County, Florida. Suwannee River SCD about one mile northwest of Branford on south line of SW 1/4, SE 1/4, NW 1/4, Sec. 8, R14E, T6S on photo IV-IR-130.
Vegetation and land use: Wiregrass, sedges, blackberry briars, loblolly pine and live oak.
Drainage: Moderately well.
Permeability: Upper portion moderately rapid; lower portion very slow.
Parent material: Unconsolidated clays over unrelated limerock.
Sampled by and date: E. J. Pedersen, R. D. Roush, and M. W. Hazen. February 26, 1960.
Described by: T. B. Houston, K. W. Flach.

Horizon and Beltsville Lab. No.	
A1 60270	0 to 5 inches. Very dark gray (10YR 3/1) loamy fine sand; weak fine granular structure; moist, very friable; many fine roots; very strongly acid; boundary clear and smooth.
A2 60271	5 to 9 inches. Pale brown (10YR 6/3), mixed with very dark gray and dark gray (10YR 3/1 and 4/1), loamy fine sand; weak fine granular structure; moist very friable; some fine roots; very strongly acid; boundary abrupt and smooth.
B2/D 60272	9 to 14 inches. Pale brown to light yellowish brown clay with many, medium, prominent, red (2.5YR 4/6) and common, fine distinct, yellowish brown (10YR 5/6) mottles; weak medium subangular blocky structure; moist, firm; discontinuous, common, clay films; very strongly acid; boundary gradual and wavy.
B3/D 60273	14 to 21 inches. Grayish brown (10YR 5/2) clay with common, medium, prominent, red (2.5YR 5/6) and few, fine, prominent, weak red (10R 5/4) and few, fine, distinct, yellow (10YR 7/8) mottles; massive; moist, very firm; strongly acid; boundary gradual and wavy.
D1 60274	21 to 29 inches. Gray to light gray to light brownish gray (10YR 6/1 - 6/2) clay with common, medium, distinct, brownish yellow (10YR 6/6) and common, medium, prominent, red (2.5YR 4/6) and few, fine, prominent, weak red (10R 5/4) mottles; massive; moist, firm; medium acid; boundary gradual and wavy.
D2 60275	29 to 41 inches. Gray to light gray (10YR 6/1) clay with common, medium, distinct, yellow (10YR 7/8) and few, medium, prominent, light reddish brown (2.5YR 6/4) mottles; massive; moist, very firm; strong slickensides; medium acid; boundary gradual and wavy.
D3 60276	41 to 52 inches. Gray to light gray (10YR 6/1) clay mixed with particles of limerock and mottled with common, medium, distinct, yellow (10YR 7/6) and few, fine, distinct, yellow (2.5Y 8/6) mottles; massive; moist, very firm; tree roots; mildly alkaline.

Notes: A1, D1, and D2 horizons were sampled for the Bureau of Public Roads. Reaction was determined by LaMotte method.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Archer loamy fine sand SOIL Nos. S60Fla-61-33 LOCATION Suwannee County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 60277 - 60282

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt (0.05-0.02)	Silt: Int III (0.02-0.002)	Silt: Int II (0.2-0.02)	Silt (2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 <76 Pct.	2-19 (Pct. of < 76mm)	19-76 (Pct. of < 76mm)
		Pct. of < 2 mm																
0-4	A1	89.1	6.8	4.1	0.3	7.5	23.7	48.8	8.8	3.1	3.7	31.9	80.3			tr.		
4-7	A2	89.3	7.3	3.4	0.3	4.2	14.3	49.1	21.4	3.3	4.0	52.2	67.9			tr.		
7-12	B2/D	56.1	4.8	39.1	0.1	3.4	11.9	31.2	9.5	2.1	2.7	27.5	46.6			tr.		
12-21	B3/D	63.3	4.6	32.1	0.2	3.6	12.8	34.9	11.8	1.5	3.1	3.1	51.5			tr.		
21-31	D1	49.2	5.0	45.8	0.2	3.2	11.2	27.8	6.8	1.8	3.2	3.2	42.4			tr.		
31-39	D2	29.3	7.3	63.4	0.1	2.0	7.5	15.4	4.3	1.7	5.6	5.6	25.0			tr.		

Depth (In.)	6A1a Organic carbon Pct	6B2a Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	6C1a Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: 4B1c 1/10 bar Pct.	Water content: 4B1c ⅓ bar Pct	Water content: 4B2 15 bar Pct.	6S1a Total P Pct.	4C1 WRD in/in		pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-4	1.75	0.038	46			0.1		1.18			15.6	10.7	4.6[a]	0.011			4.4	4.8
4-7	0.42	0.083	5			0.1		1.46			8.7	4.9	2.2	0.006			3.6	5.3
7-12	0.56	0.047	12			1.4		1.28	1.78			33.6	16.5	0.024			3.9	4.8
12-21	0.21					1.1		1.77				18.9	13.2	0.019			3.9	4.9
21-31	0.12	0.028				1.0		1.18	1.91			42.5	19.9	0.024			3.7	4.8
31-39	0.81	0.052	16			1.5		1.02	1.59			49.1	27.2	0.036			4.9	5.7

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay 8D1: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-4	1.6	0.3	tr.	0.1	2.0	7.3	9.3		0.69			2.27	0.02	1.12			22	
4-7	1.3	0.2	tr.	0.1	1.6	2.9	4.5		0.32			1.32	0.03	0.65			36	
7-12	11.9	1.4	0.1	0.2	13.6	13.1	26.7		5.6			0.68	0.04	0.42			51	
12-21	8.7	0.8	0.1	0.2	9.8	11.2	20.9		6.0			0.65	0.03	0.41			46	
21-31	18.2	0.7	0.1	0.2	19.2	13.6	32.8		6.6			0.72	0.02	0.43			58	
31-39	d	0.5	0.1	0.3	0.9	10.9	d		0.59				0.02	0.43				

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						DTA 7A3		
0-4									
4-7	xxxx	-	x	-	-	tr.	22	-	
7-12	xxx	-	-	-	-	-	28	-	
12-21									
21-31									
31-39	xxx	-	-	-	-	-	32	-	

a <2mm sieved samples
b 1 x 2 inch cores field moist
c 1 x 2 inch cores
d Carbonates present

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl = Kaolinite

Relative amounts blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Archer loamy fine sand
Soil No.: S60Fla-61-33
Location: Suwannee County, Florida. Suwannee River, SCD, about one mile northwest of O'Brien in southeast corner of the SW 1/4, SE 1/4, NW 1/4, Sec. 18, R14E, T5S on photo IV-IR-200.
Vegetation and land use: Wiregrass, sedges, longleaf pine, water and live oaks.
Slope and land form: 2 to 5 percent
Drainage: Moderately well drained.
Permeability: Upper portion is moderately rapid, lower portion is very slow.
Parent material: Unconsolidated clays over unrelated limerock.
Sampled by and date: E. J. Pedersen, M. W. Hazen, and R. D. Roush. February 26, 1960.
Described by: T. B. Houston, K. W. Flach

Horizon and Beltsville Lab. No.	
A1 60277	0 to 4 inches. Dark gray (10YR 4/1) loamy fine sand; weak granular structure; moist very friable; many fine grass roots; very strongly acid; boundary clear and smooth.
A2 60278	4 to 7 inches. Gray to grayish brown (10YR 5/1 - 5/2) mixed with dark gray (10YR 4/1) loamy fine sand; weak granular structure; moist very friable; many fine grass roots; very strongly acid; boundary abrupt and wavy.
B2/D 60279	7 to 12 inches. Yellowish red (5YR 5/6) clay with many, medium distinct, red (2.5YR 5/6) and few, fine, distinct, pale brown (10YR 6/3) mottles; weak medium subangular blocky structure; moist, very firm; common, thin clay films; strongly acid; boundary gradual and wavy.
B3/D 60280	12 to 21 inches. Reddish yellow (7.5YR 6/6) clay with many, medium, prominent, red (2.5YR 5/6) and few, fine, distinct, yellow (10YR 7/6) mottles; weak coarse subangular blocky structure; moist very firm; strongly acid; boundary gradual and wavy.
D1 60281	21 to 31 inches. Strong brown (7.5YR 5/6) clay with many, medium, distinct, yellowish red (5YR 5/6) and few, fine, prominent, red (2.5YR 5/6) mottles; weak medium subangular blocky structure; moist, very firm; many slickensides; strongly acid; boundary gradual and wavy.
D2 60282	31 to 39 inches. Yellowish brown to light yellowish brown (10YR 5/4 - 6/4) clay with few, medium, distinct, light gray (10YR 7/2) and yellowish brown (10YR 5/6) mottles occurring in patches; weak medium angular and subangular blocky structure; moist, very firm; some tree roots; medium acid; boundary abrupt and irregular.
Dr Not Sampled	39 inches plus. Soft limestone (strong effervescense with 5 percent Hcl).

Notes: A1, B3/D, D2 horizons were sampled for the Bureau of Public Roads. Reaction was determined by LaMotte method.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Archer fine sand SOIL Nos. S60Fla-61-37 LOCATION: Suwannee County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 60303 - 60309

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: (0.05-0.02)	Silt: Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 <76 Pct	2-19	19-76
		Pct of < 2 mm															Pct of < 76mm	
0-5	A11	92.7	5.5	1.8	0.4	1.8	16.6	61.3	12.6	2.0	3.5	42.0	80.1			tr.		
5-10	A12	92.0	5.2	2.8	0.3	1.8	15.8	60.6	13.5	1.8	3.4	43.2	78.5			tr.		
10-14	B2/D	60.2	3.6	36.2	0.2	1.0	9.6	39.6	9.8	1.7	1.9	30.1	50.4			tr.		
14-24	B3/D	33.5	2.2	64.3	0.2	0.5	5.6	21.9	5.3	0.5	1.7	15.7	28.2			tr.		
24-35	D1	43.4	3.8	52.8	0.1	0.6	6.5	28.8	7.4	1.5	2.3	22.5	36.0			tr.		
35-45	D2	43.3	2.8	53.9	0.2	0.6	7.1	28.2	7.2	1.2	1.6	21.7	36.1			tr.		
45-56+	D3	36.7	3.4	59.9	0.1	0.5	5.5	24.4	6.2	2.3	1.1	19.7	30.5			tr.		

Depth (In.)	6A1a Organic carbon Pct	6B2a Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	6C1a Ext. iron as Fe Pct.	Bulk density: 4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	0.59	0.034	17			0.1						3.0a			4.5	5.2
5-10	0.16	0.018				0.2						1.6			4.4	5.1
10-14	0.30					1.6		1.36	1.75		30.4	15.4			3.5	4.7
14-24	0.31					2.8		1.06			52.3	27.2			3.6	4.6
24-35	0.14					2.3		1.29			37.3	21.8			3.5	4.8
35-45	0.08					2.4		1.52	1.88		25.5	21.8			3.4	4.7
45-56+	0.06					2.2		1.15			46.8	25.9			3.4	4.7

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay 8D1: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	1.0	0.5	tr.	0.1	1.6	3.2	4.8		0.47			2.67	0.06	1.67			33	
5-10	0.3	0.3	tr.	0.1	0.7	2.0	2.7		0.56			0.96	0.07	0.57			26	
10-14	4.0	1.4	0.1	0.2	5.7	13.1	18.8		6.5			0.52	0.04	0.42	3		30	
14-24	8.2	2.8	0.2	0.5	11.6	21.9	33.5		11.0			0.52	0.04	0.42	3		35	
24-35	7.2	1.9	0.1	0.4	9.6	17.1	26.7		9.1			0.50	0.04	0.41	4		36	
35-45	10.6	2.1	0.1	0.4	13.2	16.9	30.1		9.7			0.56	0.04	0.40	5		44	
45-56+	18.1	2.7	0.1	0.5	21.4	17.5	38.9		9.0			0.65	0.04	0.43	7		55	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi	Int.	Qtz.	Kl	Gibbsite	
	7A2 X-ray						7A3		

a <2mm sieved samples

Mt = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int = Interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Archer fine sand
Soil No.: S60Fla-61-37
Location: Suwannee County, Florida. Suwannee River SCD about three-quarters of a mile northwest of old Pinemount Post Office in southeast part of the SW 1/4, NE 1/4, NW 1/4, Sec. 1, R13E, T4S on photo IV-1R-192.
Vegetation and land use: Wiregrass and longleaf pine.
Slope and land form: 2 to 5 percent.
Permeability: Upper portion is moderately rapid, lower portion is very slow.
Parent material: Unconsolidated acid clays.
Sampled by and date: E. J. Pedersen, M. M. Hazen, H. R. Parsons, and J. W. Hampton. March 1, 1960.
Described by: T. B. Houston and K. W. Flach.

Horizon and Beltsville Lab. No.	
A11 60303	0 to 5 inches. Dark gray (10YR 4/1) fine sand; structureless, single grain; moist, loose; strongly acid; boundary clear and smooth.
A12 60304	5 to 10 inches. Brown (10YR 5/3) fine sand; structureless, single grain; moist, loose; strongly acid; boundary clear and smooth.
B2/D 60305	10 to 14 inches. Yellowish red (5YR 5/6) clay with many, fine, distinct, red (2.5YR 4/6) mottles; weak medium subangular blocky structure; moist, firm, thin and discontinuous clay films; very strongly acid; boundary clear and wavy.
B3/D 60306	14 to 24 inches. Yellowish brown (10YR 5/4) clay with common, medium, prominent red (2.5YR 4/6) and common, coarse, distinct, light yellowish brown (10YR 6/4) mottles; weak medium subangular blocky structure; very strongly acid; boundary clear and wavy.
D1 60307	24 to 35 inches. Light yellowish brown to yellowish brown (10YR 6/4 - 5/4) clay with many, coarse, distinct, light brownish gray (10YR 6/2) and common, medium, prominent, red (2.5YR 5/6) and common, fine prominent, weak red (10R 5/3) mottles; weak medium subangular blocky structure; moist firm; few fine pores; weak slickensides; very strongly acid; boundary gradual and wavy.
D2 60308	35 to 45 inches. Gray to light gray (10YR 6/1) clay with common, medium, distinct, yellowish red (5YR 5/6) and common, fine, prominent, red (10R 4/6) and few, fine prominent, weak red (10R 5/3) mottles; weak medium subangular blocky structure; moist, firm; few fine pores; common slickensides; very strongly acid; boundary gradual and wavy.
D3 60309	45 to 56 inches plus. Light gray (N 7/) clay with common, medium, distinct, yellowish brown (10YR 5/8) and common, medium, prominent, weak red (10R 4/3) and few, common, prominent, dark red (2.5YR 3/6) mottles; weak coarse angular blocky structure formed by slickensides; moist, very firm; few fine pores; many prominent slickensides; very strongly acid.

Notes: A12, B3/D, D3 horizons were sampled for the Bureau of Public Roads. Reaction was determined by LaMotte method.

SCS-421
10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Arzell fine sand SOIL Nos. 853Fla-58-11 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531115-531120

Depth (In.)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0.05-0.002)	Clay (< 0 002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0 5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0 1-0.05)	Silt: 0.05-0.02	Int. III (0 02-0 002)	Int. II (0.2-0 02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 - 19	19 - 76
		Pct of < 2 mm														Pct. of < 76mm		
0-7	a		2.7	1.0	2.6	4.0	12.1	54.1	23.5		1.3	64.5				0		
7-17			1.8	0.9	0.5	5.7	14.5	55.1	21.5		0.8	61.3				0		
17-20			2.6	1.0	0.3	5.3	13.2	47.4	30.2		1.0	66.2				0		
20-26			2.9	1.0	0.2	4.1	12.3	48.6	30.9		0.9	68.6				0		
26-40			2.7	1.4	0.4	4.4	12.0	49.3	29.8		1.4	68.2				0		
40-50			2.9	1.8	0.5	4.6	11.1	49.2	29.9		1.2	68.9				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1 1) H_2O
0-7	2.64																	4.8
7-17	0.28																	5.2
17-20	0.60																	5.5
20-26	0.35																	5.9
26-40	0.04																	6.5
40-50	0.01																	6.3

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. Iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct
	meq/100 g																	
0-7	2.7	1.2	tr.	tr.		10.9	14.8										26	
7-17	-	0.1	tr.	tr.		0.9	1.0										10	
17-20	-	0.1	tr.	tr.		4.6	4.7										2	
20-26	0.2	-	tr.	tr.		2.8	3.0										7	
26-40	0.5	0.4	tr.	tr.		0.4	1.3										69	
40-50	0.7	0.1	tr.	tr.		0.4	1.2										67	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Undecomposed organic matter in sand fractions.

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Arzell fine sand
Soil No.: S53Fla-58-11
Location: Sarasota County, Florida. NE 1/4 S9 T30S R21E, Map 1D172
Vegetation and land use: Cabbage palm, saw palmetto, pine, runner oak, gallberry, wiregrass, and huckleberry
Slope and land form: Nearly level
Drainage: Somewhat poorly
Parent material: Moderately deep beds of sand overlying heavier textured alkaline material

Horizon and Beltsville Lab. No.	
531115	0 to 7 inches. Dark Gray (N 4/) to very dark gray (N 3/) nearly loose fine sand with a large number of small roots; contains sufficient light gray fine sand to impart a salt and pepper appearance; clear wavy boundary; acid.
531116	7 to 17 inches. Gray (N 6/) to light gray (N 7/) loose fine sand containing a large number of roots; acid; abrupt wavy boundary.
531117	17 to 20 inches. Dark brown (7.5YR 3/2) nearly loose; fine sand matted with small roots; acid; abrupt wavy boundary.
531118	20 to 26 inches. Brown (7.5YR 5/4) or (10YR 4/3) to dark grayish brown (10YR 4/2) loose fine sand with a few, medium, faint gray and dark grayish brown mottles; acid; wavy irregular boundary.
531119	26 to 40 inches. White (10YR 8/2) loose fine sand with a few medium, distinct gray splotches; thin fingers of material from overlying material extend into upper part; neutral or slightly acid; gradual, irregular boundary.
531120	40 to 50 inches. Light gray (10YR 7/1) to white (10YR 8/2) loose fine sand with many medium to coarse, distinct and prominent yellow mottles; neutral to alkaline; this layer saturated when sample taken.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Arzell fine sand SOIL Nos.: S53Fla-58-12 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 531121-531128

Depth (In.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: (0.05–0.02)	Int III (0.02–0.002)	Int II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2–19	19–76
		Pct. of < 2 mm														Pct	Pct. of < 76mm	
0-3	a		2.9	1.6	3.2	6.7	11.8	61.2	12.6		1.8	54.1				0		
3-10			1.4	1.1	0.4	2.9	11.5	64.4	18.3		1.1	64.0				0		
10-16			0.8	0.8	0.4	3.2	11.1	64.2	19.5		0.6	65.4				0		
16-19			1.2	0.8	0.3	2.9	10.2	62.4	22.2		0.7	68.1				0		
19-25			1.3	0.8	0.1	2.5	10.0	61.9	23.4		0.8	69.4				0		
25-33			2.1	2.0	0.3	2.9	10.4	60.9	21.4		0.9	67.0				0		
33-43			2.0	2.1	0.4	2.5	9.2	60.3	23.5		1.0					0		
43-57			1.3	1.2	0.3	2.7	8.5	62.6	23.4		0.9	70.6				0		

Depth (In.)	6A1a Organic carbon	Nitrogen	C/N		Carbonate as $CaCO_3$	Ext. iron as Fe	Bulk density:	4A1e ⅓ bar	4A1h Oven dry	4D1 COLE	Water content:	4B1c ⅓ bar	4B2 15 bar		4C1 WRD	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
	Pct	Pct			Pct.	Pct.	g/cc	g/cc	g/cc		Pct.	Pct.	Pct.		in/in			
0-3	6.9																	4.5
3-10	0.92																	5.0
10-16	0.39																	5.6
16-19	0.68																	5.2
19-25	0.28																	7.0
25-33	0.19																	8.1
33-43	0.10																	8.2
43-57	0.08																	8.2

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations	5C1 NH_4OAc
	meq/100 g																Pct.	Pct.
0-3	6.6	2.9	1.0	0.2		22.8	33.5										32	
3-10	0.5	0.2	0.1	tr.		2.4	3.2										25	
10-16	0.3	0.1	tr.	tr.		0.6	1.0										40	
16-19	0.5	0.2	0.2	tr.		4.3	5.2										17	
19-25	1.3	0.1	0.2	tr.		0.7	2.3										70	
25-33	b																	
33-43	b																	
43-57	b																	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi	Int	Qtz	Kl	Gibbsite	
	7A2 X-ray						7A3		

a Undecomposed organic matter in sand fractions.
b Calcareous.

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Arzell fine sand
Soil No.: S53Fla-58-12
Location: Sarasota County, Florida. NW 1/4 S33 T37S R19E, Map 2D107
Vegetation and land use: Cabbage palm, saw palmetto, pine, runner oak, gallberry, wiregrass, and huckleberry
Slope and land form: Nearly level
Drainage: Somewhat poorly
Parent material: Moderately deep beds of sand overlying heavier textured alkaline material

Horizon and Beltsville Lab. No.	
531121	0 to 3 inches. Very dark gray (10YR 3/1) to black (10YR 2/1) nearly loose fine sand with a small to moderate amount of light gray fine sand matted with numerous fine roots; strongly acid; abrupt wavy boundary.
531122	3 to 10 inches. Gray (N 5/) to light gray (N 6/) loose fine sand with small percent of dark gray fine sand; moderate number of roots; strongly acid; clear, irregular boundary.
531123	10 to 16 inches. Light gray (N 6/) loose fine sand interspersed with large irregular seams of gray fine sand; strongly acid; moderate percent of small roots; abrupt wavy boundary.
531124	16 to 19 inches. Brown (7.5YR 5/2) fine sand, slightly firm in place, with a few, small to medium, faint mottles of gray; strongly acid; a few roots; abrupt irregular boundary.
531125	19 to 25 inches. Pale brown (10YR 6/3) to brown (10YR 5/3) nearly loose, fine sand with common, medium, distinct gray, light gray and dark brown stains; slightly acid; moderate number of roots; gradual irregular boundary.
531126	25 to 33 inches. Light gray (2.5Y 7/2) to white (10YR 8/1) fine sand, firm in place but friable disturbed, having common, medium to coarse, faint pale brown and yellow stains and containing a very small percent of limy material in small root channels; neutral or slightly alkaline; small number of roots; abrupt irregular boundary.
531127	33 to 43 inches. Brownish yellow (10YR 6/8) to yellow (10YR 7/8) nearly loose fine sand, slightly compact in place, with few medium, faint to distinct light gray, yellowish brown mottles and occasional light gray stain; neutral; gradual, irregular boundary.
531128	43 to 57 inches. Light gray (2.5Y 7/2) nearly loose fine sand, slightly compact in place with a few, medium, distinct to prominent yellow stains; small streaks of white through layer; neutral to slightly alkaline.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Basinger fine sand SOIL Nos. 853Fla-58-9 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531106 - 531109

Depth (In.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: 0.05–0.02	Int. III (0.02–0.002)	Int II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2 – 19	19 – 76
		Pct. of < 2 mm														Pct of < 76mm		
0-3			1.0	1.2	1.5	6.1	23.4	58.6	8.2		0.6	39.5				0		
3-12			0.7	0.8	0.6	5.7	23.3	60.6	8.3		0.9	39.8				0		
12-38			1.2	0.9	0.5	4.8	19.3	61.4	11.9		0.7	46.5				0		
38-44			2.7	3.9	0.3	4.3	18.0	58.8	12.0		2.1	46.0				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density:	4A1a ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	1.17																	4.7
3-12	0.11																	5.4
12-38	0.00																	5.8
38-44	0.92																	5.2

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-3	-	0.1	tr.	-		5.2	5.3										2	
3-12	-	0.5	tr.	-		0.6	1.1										45	
12-38	-	-	tr.	tr.		0.4	0.4										0	
38-44	0.1	0.7	tr.	-		8.5	9.3										9	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi.	Int	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Basinger fine sand
Soil No.: S53Fla-58-9
Location: Sarasota County, Florida. NE 1/4 S17 T37S R19E, Map 2D81.
Vegetation and land use: Water loving grasses and weeds, broomsedge, St. Johns-wort, wiregrass, and myrthle.
Slope and landform: Nearly level.
Drainage: Poor or very poor.
Parent material: Thickbeds of acid sands.

Horizon and Beltsville Lab. No.	
531106	0 to 3 inches. Very dark gray or dark gray (N 3/ - 4/) loose fine sand with a moderate amount of light gray fine sand; abrupt wavy boundary; acid.
531107	3 to 12 inches. Gray (N 5/) with a small percent of white fine sand; very few small roots; gradual, irregular boundary; acid.
531108	12 to 38 inches. Light gray (N 7/) to white (10YR 8/1) loose fine sand with small seams or veins of gray fine sand; occasional root; abrupt wavy boundary; acid.
531109	38 to 44 inches. Very dark grayish brown (10YR 3/2) strongly cemented pan of fine sand and organic matter.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Basinger fine sand SOIL Nos. S53Fla-58-18 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531157 - 531161

Depth (in.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: (0.05–0.02)	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 – 19	19 – 76
		Pct. of < 2 mm															Pct of < 76mm	
0-4			4.1	1.0	0.7	5.8	14.1	56.2	18.1		1.9	59.2				0		
4-8			3.2	0.6	1.3	5.5	13.5	49.9	26.0		0.6	62.7				0		
8-40			3.3	0.6	1.0	5.3	11.9	48.7	29.2		1.0	65.9				0		
40-45			3.9	1.0	0.9	5.4	11.8	48.4	28.6		1.7	65.5				0		
45-49			3.9	2.7	0.9	5.0	11.4	47.3	28.8		1.1	65.4				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	1.03																5.0
4-8	0.20																5.8
8-40	0.11																6.2
40-45	0.12																6.7
45-49	0.92																5.4

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1e Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-4	0.3	0.1	tr.	tr.		5.5	5.9										7	
4-8	0.3	0.1	tr.	tr.		0.7	1.1										36	
8-40	0.3	-	tr.	tr.		0.6	0.9										33	
40-45	0.2	0.1	tr.	tr.		0.4	0.7										43	
45-49	0.6	0.7	tr.	tr.		5.2	6.5										20	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz	Kl	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Basinger fine sand
Soil No.: S53Fla-58-18
Location: Sarasota County, Florida. NE 1/4 S25 T37S R19E, Map 2D180.
Vegetation and land use: Water loving grasses and weeds, broomsedge, St. Johns-wort, wiregrass, and myrthle.
Slope and land form: Nearly level.
Drainage: Poor or very poor.
Parent material: Thickbeds of acid sands.

Horizon and Beltsville Lab. No.	
531157	0 to 4 inches. Very dark gray or dark gray (10YR 3/1 - 4/1) nearly loose fine sand mixed with sufficient light gray fine sand producing a salt and pepper coloration; acid; abrupt, wavy boundary.
531158	4 to 8 inches. Gray (10YR 6/1) loose fine sand with clear, wavy boundary; acid.
531159	8 to 40 inches. Light gray (10YR 7/1) to white (10YR 8/1) nearly loose fine sand, slightly compact in place when moist; acid, gradual, irregular boundary.
531160	40 to 45 inches. Light brownish gray (10YR 6/2) nearly loose fine sand but slightly compact in place, streaked with light gray; abrupt, wavy boundary.
531161	45 to 49 inches. Very dark gray (N 3/) to black (N 2/) firmly cemented pan of fine sand and organic matter.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Blanton fine sand SOIL Nos. S53Fla-58-27 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB Nos. 531205-531209

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand Very coarse (2-1)	Sand Coarse (1-0.5)	Sand Medium (0.5-0.25)	Sand Fine (0.25-0.1)	Sand Very fine (0.1-0.05)	Silt (0.05-0.02)	Silt Int III (0.02-0.002)	Silt Int II (0.2-0.02)	Silt (2-0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct	2-19 (Pct. of < 76mm)	19-76 (Pct. of < 76mm)
		Pct of < 2 mm																
0-5			1.4	2.7	0.2	8.6	30.7	48.1	8.3		1.5	32.5				0		
5-14			1.8	3.2	0.4	7.8	30.5	47.8	8.5		1.5	33.5				0		
14-20			1.6	3.0	0.3	7.4	27.7	50.0	10.0		1.0	38.7				0		
20-30			0.9	3.6	0.4	7.5	26.4	51.8	9.4		0.7	38.1				0		
30-48			1.1	3.5	0.2	7.6	25.4	52.1	10.1		0.7	39.8				0		

Depth (In.)	6A1e Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct	Bulk density g/cc	Bulk density 4A1e ⅓ bar g/cc	Bulk density 4A1h Oven dry g/cc	4D1 COLE	Water content g/cc	Water content 4B1c ⅓ bar Pct.	Water content 4B2 15 bar Pct		4C1 WRD in/in	pH	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	1.10																	5.1
5-14	0.42																	5.4
14-20	0.15																	5.4
20-30	0.14																	5.1
30-48	0.12																	4.9

Depth (In.)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC 5A3a Sum cations	CEC	6G1d Ext. Al			Ratios to clay CEC Sum	Ratios to clay Ext. iron	Ratios to clay 15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct	5C1 NH_4OAc Pct
	meq/100 g																	
0-5	0.5	-	tr.	tr.		5.8	6.3										8	
5-14	0.2	-	tr.	tr.		4.6	4.8										4	
14-20	-	-	tr.	tr.		2.2	2.2										-	
20-30	0.3	-	tr.	tr.		1.3	1.6										20	
30-48	0.3	0.1	tr.	tr.		1.2	1.6										25	

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt	Chl.	Vm	Mi	Int	Qtz.	Kl	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl = Kaolinite

Relative amounts blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Blanton fine sand
Soil No.: S53Fla-58-27
Location: Sarasota County, Florida. NW 1/4 S21 T36S R19E, Map 2D99
Vegetation and land use: Live oaks, pine, saw palmetto, wiregrass, and runner oak
Slope and land form: Nearly level
Drainage: Somewhat poorly
Parent material: Thick beds of unconsolidated sands

Horizon and Beltsville Lab. No.	
531205	0 to 5 inches. Very dark gray (10YR 3/1) loose fine sand with small percent of light gray fine sand; acid; many small, fine roots; abrupt wavy boundary.
531206	5 to 14 inches. Light yellowish brown to brown (10YR 6/4-5/3) loose fine sand containing small lumps of slightly coherent material; some medium and small roots; acid; gradual, irregular boundary.
531207	14 to 20 inches. Pale brown (10YR 6/3) loose fine sand; a few small roots; acid; clear, irregular boundary.
531208	20 to 30 inches. Light gray (10YR 7/2) loose fine sand with a few, small, faint yellow mottles; acid; few roots; clear, irregular boundary.
531209	30 to 48 inches. White (10YR 8/2) loose fine sand; acid.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Bowie fine sand SOIL Nos. S60Fla-61-30 LOCATION Suwannee County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 60255 - 60261

Depth (in.)	Horizon	1B1b Total Sand (2-0 05)	Total Silt (0 05-0 002)	Total Clay (< 0 002)	Sand Very coarse (2-1)	Sand Coarse (1-0 5)	Sand Medium (0.5-0.25)	Sand Fine (0.25-0.1)	Sand Very fine (0 1-0 05)	Silt 0.05-0.02	Silt Int. III (0 02-0 002)	Int. II (0.2-0.02)	(2-0 1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 <76 Pct.	2 - 19	19-76
		Size class and particle diameter (mm) 3A1 — Pct of < 2 mm														Pct. of < 76mm		
0-6	Ap	95.1	4.0	0.9	0.1	0.7	16.1	67.2	11.0	2.5	1.5	41.0	84.1			tr.		
6-11	A21	94.5	2.6	2.9	tr.	0.7	17.4	66.6	9.8	2.5	0.1	39.5	84.7			tr.		
11-24	A22	94.6	4.4	1.0	-	0.7	17.2	66.8	9.9	2.3	2.1	39.4	84.7			tr.		
24-30	B2	71.5	4.6	23.9	0.1	0.5	10.7	52.6	7.6	2.4	2.2	32.9	63.9			tr.		
30-41	B/D	70.6	3.5	25.9	-	0.5	12.5	52.3	5.3	2.0	1.5	28.4	65.3			tr.		
41-55	D1 - C1	76.0	1.7	22.3	-	0.2	13.1	60.2	2.5	0.7	1.0	26.0	73.5			tr.		
55-62+	D2 - C2	79.4	1.3	19.3	-	0.2	14.2	63.1	1.9	0.8	0.5	25.1	77.5			tr.		

Depth (in.)	6A1a Organic carbon Pct	6B2a Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	6C1a Ext. iron as Fe Pct.	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content 4B1c 1/10 bar Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH 8C1c (1:1) KCl	8C1a (1 1) H_2O
0-6	0.32	0.025	13			0.1		1.56[b]			5.2[c]	2.8[c]	1.2[a]			4.3	5.3
6-11	0.13	0.017				0.1		1.57[b]			5.0[c]	2.7[c]	0.8			4.4	5.3
11-24	0.07					0.1		1.50[b]			4.8[c]	2.0[c]	0.9			4.4	5.3
24-30	0.17					1.6		1.60	1.64			16.1	10.0			4.0	4.9
30-41	0.11					2.2		1.64	1.69			17.1	10.3			4.0	4.9
41-55	0.03					1.5		1.74	1.77			14.7	8.6			3.9	4.8
55-62+	0.02					1.2							7.3			3.8	4.8

Depth (in.)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext acidity	CEC 5A3a Sum cations		6G1d Ext Al			Ratios to clay 8D1 CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-6	0.3	tr.	tr.	0.1	0.4	1.9	2.3		0.31			2.56	0.11	1.33			17	
6-11	0.2	tr.	tr.	0.1	0.3	1.1	1.4		0.30			0.48	0.03	0.28			21	
11-24	tr.	0.5	tr.	0.1	0.6	0.8	1.4		0.23			1.40	0.10	0.90			43	
24-30	0.9	0.5	tr.	0.1	1.5	5.2	6.8		1.35			0.28	0.06	0.42			24	
30-41	0.5	0.5	tr.	0.1	1.1	5.9	7.1		1.9			0.27	0.08	0.40			17	
41-55	0.2	0.3	tr.	0.2	0.7	6.3	7.0		3.6			0.31	0.07	0.38			10	
55-62+	0.2	0.4	tr.	0.2	0.8	6.2	7.0		3.8			0.36	0.06	0.38			11	

Depth (in.)	Clay Fraction Analysis 7A1b-d Mt	Chl	Vm.	Mi	Int	Qtz.	Kl.	Gibbsite	
	X-ray 7A2						DTA 7A3		
0-6									
6-11									
11-24									
24-30	-	-	xx	-	-	-	32	-	
30-41									
41-55									
55-62+	x	-	tr.	-	-	-	32	-	

a 2mm sieved samples
b 1 x 2 inch cores, field moist
c 1 x 2 inch cores

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl = Kaolinite

Relative amounts blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Bowie fine sand
Soil No.: S60Fla-61-30
Location: Suwannee County, Florida. Suwannee River SCD about 7 miles south of Live Oak in northwest part of the NE 1/4, NE 1/4, SW 1/4 of Sec. 2, R13E, T4S on photo IV-2R-76.
Vegetation and land use: Pensacola bahiagrass pasture.
Slope and land form: 2 to 5 percent.
Drainage: Moderately well drained.
Permeability: Upper portion is rapid; lower portion is moderate to slow.
Parent material: Unconsolidated clays.
Sampled by and date: E. J. Pedersen, Tom Matthews, and George Brown. February 24, 1960.
Described by: T. B. Houston and K. W. Flach.

Horizon and Beltsville Lab. No.	
Ap 60255	0 to 6 inches. Gray (10YR 5/1) fine sand; single grain structure; moist, loose; many Pensacola bahiagrass roots; strongly acid; boundary abrupt and smooth.
A21 60256	6 to 11 inches. Light brownish gray (2.5Y 6/2) fine sand, with common, medium faint, pale brown (10YR 6/3) splotches; structureless, single grain; moist, loose; few Pensacola bahiagrass roots; strongly acid; boundary gradual and smooth.
A22 60257	11 to 24 inches. Pale brown (10YR 6/3) fine sand, with common, medium, faint, light gray (10YR 7/2) splotches; structureless, single grain; moist, loose; few Pensacola grass roots; strongly acid; boundary abrupt and smooth.
B2 60258	24 to 30 inches. Yellowish brown to brownish yellow (10YR 5/8 - 6/8) clay loam or fine sandy clay loam; weak medium angular blocky structure; moist friable; few root channels; few clay bridges among sand grains; strongly acid; boundary clear and wavy.
B/D 60259	30 to 41 inches. Brownish yellow (10YR 6/8) clay loam or fine sandy clay loam with common, fine, distinct, light yellowish brown (10YR 6/4) and common, medium prominent red (10R 4/6) mottles; massive; moist, friable; few root channels; strongly acid; boundary clear and wavy.
D1 or C1 60260	41 to 55 inches. Light gray (10YR 7/1) fine sandy clay loam with few, fine and medium distinct yellow (10YR 7/8) and common, medium, prominent, red (2.5YR 5/6) and common, coarse, prominent, dusky red (10R 3/4) mottles; massive; moist, friable; strongly acid; boundary gradual and smooth.
D2 or C2 60261	55 to 62 inches plus. Light gray (10YR 7/1) fine sandy clay with common, medium, prominent, red (2.5YR 5/6) mottles surrounded with common, medium, distinct, brownish yellow (10YR 6/8) mottles, also has few, coarse, prominent, dusky red (10R 3/4) mottles (less red and more gray in D2 or C2 than in D1 or C1); massive; moist, friable; strongly acid.

Notes: A22, B2, and D1 or C1 horizons were sampled for the Bureau of Public Roads. Reaction was determined by LaMotte method.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Bowie fine sand SOIL Nos. S60Fla-61-31 LOCATION Suwannee County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 60262 - 60269

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: 0.05-0.02	Silt: Int III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 <76 Pct.	2-19	19-76
		Pct. of < 2 mm															Pct. of < 76mm	
0-7	Ap	94.4	3.9	1.7	0.1	4.2	15.6	51.4	23.1	2.5	1.4	52.4	71.3			tr.		
7-13	A21	94.5	3.4	2.1	-	3.6	14.7	51.5	24.7	1.7	1.7	54.2	69.8			tr.		
13-25	A22	94.4	3.3	2.3	0.1	4.5	16.0	51.0	22.8	1.8	1.5	52.0	71.6			tr.		
25-32	B21	78.2	4.0	17.8	0.1	3.5	11.9	43.1	19.6	1.9	2.1	44.5	58.6			tr.		
32-37	B22	71.3	2.7	26.0	tr.	4.2	13.3	38.4	15.4	1.3	1.4	35.5	55.9			tr.		
37-45	D1- C1	61.3	6.7	32.0	0.1	4.6	13.9	31.3	11.4	2.1	4.6	27.8	49.9			tr.		
45-55	D2- C2	42.5	2.9	54.6	-	0.9	8.7	30.1	2.8	2.9	tr.	17.2	39.7			tr.		
55-67	D3- C3	55.0	2.7	42.3	0.1	3.2	12.0	31.4	8.3	1.8	0.9	23.2	46.7			tr.		

Depth (In.)	6A1a Organic carbon Pct.	6B2a Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	6C1a Ext iron as Fe Pct.	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: 4B1c 1/10 bar Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-7	0.40	0.025	16			0.1		1.47[b]		6.0[c]	3.5[c]	1.9[c]			4.4	5.4
7-13	0.17	0.014				0.1		1.46[b]		5.9[c]	3.5[c]	1.0			4.3	5.2
13-25	0.13					0.1		1.45[b]		5.2[c]	2.5[c]	1.0			4.3	5.0
25-32	0.16					0.6		1.66	1.71		15.5	6.7			3.8	4.8
32-37	0.15					0.8		1.64	1.71		17.2	9.6			3.6	4.7
37-45	0.08					0.8		1.62	1.72		20.5	14.3			3.5	4.6
45-55	0.09					0.2		1.24			40.3	25.6			3.5	4.3
55-67	0.08					0.1		1.51	1.73		25.4	17.3			3.6	4.5

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext. Al			Ratios to clay 8D1: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-7	0.6	0.1	0.1	0.1	0.9	2.4	3.3		0.33			1.94	0.06	2.06			27	
7-13	0.1	0.1	tr.	0.1	0.3	1.7	2.0		0.36			0.95	0.05	1.67			15	
13-25	0.1	0.1	tr.	0.1	0.3	1.3	1.6		0.47			0.70	0.04	1.09			19	
25-32	0.7	0.3	tr.	0.1	1.1	6.4	7.6		3.50			0.43	0.03	0.87			16	
32-37	0.6	0.6	tr.	0.2	1.4	8.2	9.6		4.60			0.37	0.03	0.66			14	
37-45	0.8	0.9	0.1	0.3	2.1	14.0	16.0		9.80			0.50	0.02	0.64			12	
45-55	2.0	2.4	0.1	0.5	5.0	35.3	40.4		31.50			0.74	-	0.74	1		13	
55-67	1.4	1.5	0.1	0.4	3.4	18.9	22.3		13.80			0.53	-	0.60	1		15	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm	Mi	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						DTA 7A3		
0-7									
7-13	xx	-	-	-	-	xx	20	-	
13-25									
25-32	xx	-	-	-	-	-	32	-	
32-37									
37-45	xx	-	-	-	-	-	34	-	
45-55	xxxx	-	-	-	-	-	-	-	
55-67	xxxx	-	-	-	-	-	20	-	

a <2mm sieved samples
b 1 x 2 inch cores field moist
c 1 x 2 inch cores

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Bowie fine sand
Soil No.: S60Fla-61-31
Location: Suwannee County, Florida. Suwannee River SCD about one mile south of Live Oak in northwest corner of the NW 1/4, NE 1/4, SW 1/4 of Sec. 35, R13E, T2S on photo IV-2R-70.
Vegetation and land use: Pensacola bahiagrass pasture.
Slope and land form: 2 to 5 percent.
Drainage: Moderately well drained.
Permeability: Upper portion is rapid; lower portion is moderate to slow.
Parent material: Unconsolidated clays.
Sampled by and date: E. J. Pedersen, George Brown, and Tom Matthews. February 25, 1960.
Described by: K. W. Flach and M. W. Hazen.

Horizon and Beltsville Lab. No.	
Ap 60262	0 to 7 inches. Dark gray (10YR 4/1) fine sand; structureless, single grain; moist, loose; many Pensacola bahiagrass roots; medium acid; boundary clear and irregular.
A21 60263	7 to 13 inches. Light brownish gray (10YR 6/2 - 2.5Y 6/2) fine sand with many, coarse, faint, grayish brown (2.5Y 5/2) splotches; structureless, single grain; moist, loose, few Pensacola bahiagrass roots; strongly acid; boundary gradual and wavy.
A22 60264	13 to 25 inches. Pale brown (10YR 6/3) fine sand, with many coarse, faint, grayish brown (2.5Y 5/2) and few, medium, faint, light yellowish brown (10YR 6/4) splotches; structureless, single grain; moist, loose; few Pensacola bahiagrass roots; strongly acid; boundary clear and wavy.
B21 60265	25 to 32 inches. Yellowish brown (10YR 5/6) clay loam; weak medium and fine subangular blocky structure; moist, friable; many fine pores; few thin clay films in pores; strongly acid; boundary gradual and wavy.
B22 60266	32 to 37 inches. Yellowish brown (10YR 5/6) to strong brown (7.5YR 5/6) light clay; weak medium subangular blocky structure; moist, friable; common fine pores; strongly acid; clear and wavy boundary.
D1 or C1 60267	37 to 45 inches. Light gray (10YR 7/1) clay with common, medium, distinct, yellow (10YR 7/6) and common, medium and coarse, prominent, red (10R 4/6) and many, coarse, distinct, pale brown (10YR 6/3) mottles; weak, medium subangular blocky structure; moist, friable; few fine pores; few weak slickensides; strongly acid; gradual and wavy boundary.
D2 or C2 60268	45 to 55 inches. Light gray (10YR 7/1) clay with common, medium and coarse, prominent, red (2.5YR 5/6) and few, medium, distinct, yellow (10YR 7/6) mottles; weak medium subangular blocky structure; moist, very friable; few medium and fine pores; strong slickensides; very strongly acid; boundary gradual and wavy.
D3 or C3 60269	55 to 67 inches. Light gray (10YR 7/1) clay with common, medium and coarse, prominent, red (2.5YR 5/6) and few, medium distinct, yellow (10YR 7/6) and few medium and coarse, prominent, dark red (redder than 10R 3/6) mottles; weak medium prismatic structure formed by intersecting slickensides; moist, friable; common, weak slickensides; very strongly acid.

Notes: Ap1, B21, and D3 horizons were sampled for the Bureau of Public Roads. Reaction was determined by LaMotte method.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Bradenton fine sand SOIL Nos. S53Fla-58-6 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531087-531093

Depth (In.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: (0.05–0.02)	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2 – 19	19 – 76
		Pct of < 2 mm														Pct	Pct. of < 76mm	
0-7			3.2	3.6	1.8	62.7	2.6	22.6	3.5		1.1	20.5				0		
7-12			3.3	4.7	1.5	53.2	4.0	28.8	4.5		0.9	23.6				0		
12-20			2.3	5.7	1.6	37.6	2.5	37.4	12.9		0.5	45.5				0		
20-28			2.4	9.9	0.6	2.9	8.6	47.4	28.2		1.0	63.3				0		
28-37			3.2	12.0	0.3	2.1	7.6	45.7	29.1		1.4	63.8				0		
37-43			5.6	11.8	2.5	5.4	8.0	41.1	25.6		3.2	57.3				0		
43-60			2.8	7.6	0.6	2.0	7.4	47.8	31.8		1.3	68.2				0		-

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-7	0.81																	5.1
7-12	0.34																	5.1
12-20	0.16																	4.9
20-28	0.35																	5.2
28-37	0.22																	6.6
37-43	0.10																	8.2
43-60	0.06																	8.3

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-7	0.8	0.6	tr.	tr.		3.6	5.0										28	
7-12	0.8	1.0	tr.	tr.		3.4	5.2										35	
12-20	0.9	0.4	tr.	tr.		3.3	4.6										28	
20-28	4.0	3.5	0.1	tr.		3.3	10.9										70	
28-37	6.9	5.0	0.2	tr.		1.2	13.3										75	
37-43	a																	
43-60	a																	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm.	Mi	Int	Qtz.	Ki.	Gibbsite	
	7A2 X-ray						7A3		

a. Calcareous.

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Ki = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Bradenton fine sand
Soil No.: S53Fla-58-6
Location: Sarasota County, Florida. SE 1/4 S1 T37S R12E, Map 3D11
Vegetation and land use: Cabbage palm, live and water oaks and some slash pine with an undergrowth of saw palmetto, vines, and grasses.
Slope and land form: Nearly level.
Drainage: Somewhat poor drainage
Parent material: Thin beds of sands over clayey material and marl.

Horizon and Beltsville Lab. No.	
531087	0 to 7 inches. Dark gray (10YR 4/1) to very dark gray (10YR 3/1) nearly loose fine sand interspersed with light gray fine sand; when dry has pepper and salt appearance; matted together with a mass of small roots; abrupt, wavy boundary.
531088	7 to 12 inches. Dark grayish brown (10YR 4/2) to grayish brown (10YR 5/2) loose fine sand with a few, faint, fine yellow and light gray mottles; numerous small roots; gradual, wavy boundary.
531089	12 to 20 inches. Light brownish gray (10YR 6/2) to light gray (10YR 7/1-6/1) loose fine sand with common, fine and medium, distinct yellow and light gray mottles; (when mixed produces shades of brown); abrupt irregular boundary; moderate number of roots.
531090	20 to 28 inches. Very dark gray (10YR 3/1) fine, sandy clay to fine sandy clay loam with a few, fine faint light gray, gray and brown stains; plastic when wet and hard when dry; a few small and medium roots; clear, wavy boundary.
531091	28 to 37 inches. Dark gray (10YR 4/1) fine, sandy clay to fine sandy clay loam with a few, small, faint rust colored stains and having narrow fingers of very dark gray material extending from layer above; when moist is plastic and becomes hard and firm when dry; a few small and medium size roots; gradual, irregular boundary.
531092	37 to 43 inches. Light gray (10YR 7/1) to white (10YR 8/1) marly fine sandy clay to marly fine sandy clay loam with a few gray and dark gray fingers of material extending from layer above; contains cemented, rounded concretions and irregular lumps of marl; amount of marl variable in short linear distance and locally is lacking; diffused, broken boundary.
531093	43 to 60 inches. White (10YR 8/1) friable light fine sandy clay loam to heavy fine sandy loam material with a few, medium distinct yellow mottles in places. Texture of layer variable.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Bradenton fine sand SOIL Nos. S53Fla-58-25 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos 531194-531199

Depth (In.)	Horizon	1B1b Total Sand (2–0 05)	Total Silt (0 05–0 002)	Total Clay (< 0 002)	Sand: Very coarse (2–1)	Sand: Coarse (1–0 5)	Sand: Medium (0 5–0 25)	Sand: Fine (0.25–0.1)	Sand: Very fine (0 1–0 05)	Silt (0 05–0.02)	Silt: Int III (0 02–0.002)	Silt: Int II (0 2–0 02)	(2–0 1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 – 19 (Pct. of < 76mm)	19 – 76 (Pct. of < 76mm)
		Pct. of < 2 mm																
0-6			4.2	1.1	1.3	36.6	20.9	31.3	4.6		2.5	25.2				0		
6-12			3.2	0.7	0.6	13.3	21.8	54.3	6.1		1.9	31.1				0		
12-21			3.3	0.5	0.4	6.3	18.9	56.8	13.8		1.5	53.5				0		
21-25			3.1	14.2	0.6	5.8	14.5	47.6	14.2		1.3	47.7				0		
25-34			2.9	16.2	0.2	9.8	14.9	47.2	8.8		0.9	40.6				0		
34-44			3.5	11.3	2.6	6.6	15.8	45.7	14.5		1.9	46.4				9		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	Water content: 4B1c ⅓ bar Pct.	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-6	1.66																4.8
6-12	0.59																5.4
12-21	0.26																5.9
21-25	1.15																6.0
25-34	0.57																6.8
34-44	0.23																7.6

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-6	2.1	0.6	tr.	tr.		5.7	8.4										32	
6-12	0.6	0.3	tr.	tr.		1.5	2.4										38	
12-21	0.4	0.2	tr.	tr.		0.4	1.0										60	
21-25	11.3	1.8	0.4	tr.		4.0	17.5										77	
25-34	13.8	1.8	0.5	0.1		1.2	17.4										93	
34-44	a																	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Calcareous.

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Bradenton fine sand
Soil No.: S53Fla-58-25
Location: Sarasota County, Florida. SW 1/4 T36S R19E, Map 2D174
Vegetation and land use: Cabbage palm, live and water oaks and some slash pine with an undergrowth of saw palmetto, vines and grasses.
Slope and land form: Nearly level
Drainage: Somewhat poor
Parent material: Thin beds of sands over clayey material and marl

Horizon and Beltsville Lab. No.	
531194	0 to 6 inches. Very dark gray to black (10YR 3/1-2/1) nearly loose fine sand with a small, conspicuous content of light gray fine sand; numerous fine roots; acid, clear wavy boundary.
531195	6 to 12 inches. Dark gray (N 4/) loose fine sand mixed with moderate amount of light gray fine sand; moderate number of small and fine roots; acid; clear, wavy boundary.
531196	12 to 21 inches. Gray to light gray (10YR 6/1-7/1) loose fine sand with thin veins and streaks of gray fine sand; moderate number of roots; abrupt, wavy boundary.
531197	21 to 25 inches. Very dark gray to black (10YR 3/1-2/1) heavy fine sandy clay with common, medium, distinct yellow, gray and rust colored mottles; plastic when moist, hard when dry; medium and small roots; clear, irregular boundary.
531198	25 to 34 inches. Gray (N 5/) heavy fine sandy clay with small seams and projections of dark material extending from layer above; plastic when moist; firm when dry; moderate number of roots; abrupt, irregular boundary.
531199	34 to 44 inches. Gray to light gray (10YR 6/1-7/1) marly fine sandy clay loam or fine sandy clay with common, medium, distinct yellow, brown and dark brown mottles; contains many medium to large strongly cemented or indurated nodules and lumps of marl.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Broward fine sand SOIL Nos.: S53Fla-58-14 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 531134-531137

Depth (In.)	Horizon	1B1b Total Sand (2-0 05)	Total Silt (0 05-0 002)	Total Clay (< 0 002)	Sand Very coarse (2-1)	Sand Coarse (1-0.5)	Sand Medium (0.5-0.25)	Sand Fine (0.25-0 1)	Sand Very fine (0.1-0.05)	Silt 0.05-0.02	Silt Int. III (0.02-0 002)	Silt Int. II (0.2-0.02)	Silt (2-0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct.	2 - 19	19-76
		Pct of < 2 mm															Pct of < 76mm	
0-5			0.5	1.0	1.4	50.7	8.1	35.1	3.2		1.2	22.7				0		
5-21			0.8	0.8	2.6	9.9	17.6	60.5	7.8		0.9	45.2				0		
21-23			1.3	15.8	3.5	9.0	14.2	49.2	7.0		1.6	38.6				tr.		
23+	a																	

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	0.97																6.0
5-21	0.12																6.6
21-23	1.00																6.4
23+	a																

Depth (In.)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC 5A3a Sum cations		6G1d Ext. Al			Ratios to clay CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-5	2.1	0.6	0.2	tr.		2.5	5.4										54	
5-21	0.3	-	tr.	tr.		0.4	0.7										43	
21-23	2.3	0.3	0.6	tr.		3.0	6.2										52	
23+	a																	

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt.	Chl	Vm	Mi	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Limestone.

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Broward fine sand
Soil No.: S53Fla-58-14
Location: Sarasota County, Florida. NE 1/4 S6 T36S R18E, Map 1D31
Vegetation and land use: Cabbage palm, saw palmetto, wiregrass, scrub oak, runner oak, pine and native grasses
Slope and land form: Nearly flat
Drainage: Somewhat poorly
Parent material: Thin cover of sand over limestone

Horizon and Beltsville Lab. No.	
531134	0 to 5 inches. Mixture of dark gray, gray and light gray loose fine sand producing a salt and pepper coloration; matted by roots; acid; clear, irregular boundary.
531135	5 to 21 inches. White (10YR 8/1) loose fine sand with a few, common, coarse, faint light gray splotches; moderate number of roots; acid; abrupt wavy boundary.
531136	21 to 23 inches. Gray (N 5/) plastic heavy clay loam to heavy fine sandy clay loam with many, small to medium, distinct yellow, brown, light gray and rust colored mottles; residual from limestone.
531137	23 inches plus. Limestone.

Notes: Slabs and fragments of limestone project up through the soil or occur locally over the surface.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Broward fine sand SOIL Nos.: S53Fla-58-15 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 531138-531143

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand Very coarse (2-1)	Sand Coarse (1-0.5)	Sand Medium (0.5-0.25)	Sand Fine (0.25-0.1)	Sand Very fine (0.1-0.05)	Silt 0.05-0.02	Silt Int. III (0.02-0.002)	Silt Int. II (0.2-0.02)	Silt (2-0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct.	2-19 (Pct. of < 76mm)	19-76 (Pct. of < 76mm)
		Pct. of < 2 mm																
0-4			1.6	1.6	1.4	37.4	10.8	44.1	3.1		1.8	26.8				0		
4-14			1.6	0.3	2.2	8.2	17.2	59.7	10.8		1.8	49.8				0		
14-17			1.6	3.2	3.1	9.1	14.1	56.8	12.1		1.8	51.3				tr.		
17-24			1.7	5.8	3.3	7.8	13.8	55.5	12.1		1.8	50.3				tr.		
24-27			2.8	12.6	5.2	8.6	14.4	45.2	11.2		1.8	42.0				4		
27+	a																	

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	1.36																	5.8
4-14	0.26																	6.4
14-17	0.47																	6.6
17-24	0.28																	6.4
24-27	0.30																	7.6
27+	a																	

Depth (In.)	Extractable bases 5B1a 6N2d Ca (meq/100 g)	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC 5A3a Sum cations		6G1d Ext. Al		Ratios to clay CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
0-4	2.8	0.6	0.1	tr.		3.0	6.5									54	
4-14	0.7	-	tr.	tr.		0.4	1.1									64	
14-17	2.8	0.2	0.1	tr.		1.5	4.6									67	
17-24	3.4	0.5	0.2	tr.		2.1	6.2									66	
24-27	b																
27+	a																

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt.	Chl	Vm.	Mi.	Int	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

a Limestone.
b Calcareous.

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Broward fine sand
Soil No.: S53Fla-58-15
Location: Sarasota County, Florida. SE 1/4 S30 T40S R20E, Map 3D46
Vegetation and land use: Cabbage palm, saw palmetto, wiregrass, scrub oak, runner oak, pine and native grasses.
Slope and land form: Nearly flat
Drainage: Somewhat poorly
Parent material: Thin cover of sand over limestone

Horizon and Beltsville Lab. No.	
531138	0 to 4 inches. Mixture of dark gray and light gray loose fine sand having a salt and pepper coloration; matted with small roots; abrupt wavy boundary.
531139	4 to 14 inches. White (10YR 8/1) loose fine sand with common, coarse faint to distinct light gray seams and mottles; moderate number of roots; abrupt wavy boundary.
531140	14 to 17 inches. Dark grayish brown (10YR 4/2) or grayish brown (10YR 5/2) nearly loose fine sand with a clear wavy boundary; moderate number of roots.
531141	17 to 24 inches. Light brownish gray (10YR 6/2) to pale brown (10YR 6/3) nearly loose fine sand with common, medium, faint gray, brown, yellow and rust colored specks and stains; color modified when mixed; small number of roots; clear wavy boundary.
531142	24 to 27 inches. Light gray (10YR 7/1) plastic, gritty clay loam to fine sandy clay loam with many, medium, distinct and prominent yellow and gray mottles; abrupt broken boundary.
531143	27 inches plus. Limestone.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Chobee fine sandy loam SOIL Nos. S53Fla-58-13 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos: 531129-531133

Depth (In)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct of < 76mm		
0-14			1.5	6.1	0.4	3.0	11.1	65.4	12.5		1.6	60.1				0		
14-30			2.8	10.1	0.4	3.9	12.8	62.0	8.0		2.1	49.9				0		
30-35			8.6	12.1	0.8	3.8	11.1	55.6	8.0		8.0	46.3				0		
35-42			6.0	17.6	1.5	4.2	10.8	51.1	8.8		3.7	46.3				0		
42-56			1.2	6.6	0.6	3.5	12.2	65.1	10.8		1.2	56.5				0		

Depth (In)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-14	1.36																	5.7
14-30	0.47																	6.9
30-35	0.43																	7.8
35-42	0.26																	7.8
42-56	0.30																	6.4

Depth (In)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-14	6.1	0.9	0.3	0.1		4.8	12.2										61	
14-30	17.4	0.8	0.7	tr.		0.4	19.3										98	
30-35	a																	
35-42	a																	
42-56	a																	

Depth (In)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Calcareous.

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica
Int. = interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected,
tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Chobee fine sandy loam
Soil No.: S53Fla-58-13
Location: Sarasota County, Florida. NE 1/4 S10 T39S R19E, Map 2D115
Vegetation: Cabbage palm, ash, live and water oaks, pine and saw palmetto. Some areas are treeless and support aquatic grasses and plants.
Slope and land form: Level
Drainage: Poorly to very poorly
Parent material: Sand over clay material that is usually underlain by marl

Horizon and Beltsville Lab. No.	
531129	0 to 14 inches. Very dark gray (N 3/) to black (N 2/) friable fine sandy loam containing a small amount of light gray fine sand; high in organic matter; acid; clear irregular boundary.
531130	14 to 30 inches. Very dark gray (N 3/) fine sandy clay loam to fine sandy clay, plastic when moist and hard when dry, having tongues or veins of light gray fine sand and containing common, small to medium, faint to distinct yellow, gray and rust colored mottles; narrow, vertical seams of black fine sandy clay loam material projected through layer; acid; moderate number of roots; gradual, irregular boundary.
531131	30 to 35 inches. Light gray (10YR 7/1) to gray (10YR 6/1) heavy fine sandy clay loam or fine sandy clay with a few to common, medium, distinct yellow and gray mottles; very dark gray fingers or veins of material extended from overlying layer; a few seams of marly material occur irregularly in layer; a few, small roots; gradual, irregular boundary.
531132	35 to 42 inches. Light gray (10YR 7/1) to white (10YR 8/1) marly fine sandy clay material with a few, medium, distinct yellow and gray mottles with fingers of very dark gray and gray material projecting from layer above; occasional roots; abrupt irregular boundary.
531133	42 to 56 inches. Gray (N 5/) to dark gray (10YR 4/1) fine sandy clay loam with common, medium, distinct yellow, brownish yellow and rust colored mottles interspersed with a few pockets or veins of gray marly fine sandy clay.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Delray fine sand SOIL Nos. S53Fla-58-19 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531162-531165

Depth (In.)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0 05-0.002)	Clay (< 0.002)	Sand: Very coarse (2-1)	Coarse (1-0 5)	Medium (0 5-0 25)	Fine (0 25-0 1)	Very fine (0.1-0 05)	Silt: 0 05-0 02	Int. III (0 02-0.002)	Int II (0 2-0 02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2 - 19	19-76
		Pct. of < 2 mm															Pct of < 76mm	
0-10			5.9	7.6	1.3	7.2	13.3	48.9	15.8		3.0	50.3				0		
10-32			3.0	6.8	1.1	4.9	11.8	48.6	23.8		0.8	59.5				0		
32-40			2.1	5.9	0.7	7.1	13.6	58.7	11.9		0.3	52.0				0		
40-50			2.2	6.7	0.5	20.6	10.0	50.0	10.0		0.4	42.3				0		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-10	4.47																	5.0
10-32	0.78																	5.6
32-40	0.36																	6.0
40-50	0.25																	6.3

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-10	10.5	2.4	tr.	tr.		16.1	29.0										44	
10-32	5.8	1.6	0.1	tr.		3.4	10.9										69	
32-40	5.8	1.0	0.1	tr.		1.9	8.8										78	
40-50	5.8	1.3	tr.	tr.		1.6	8.7										82	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Delray fine sand
Soil No.: S53Fla-58-19
Location: Sarasota County, Florida. NW 1/4 S35 T37S R19E, Map 2D180
Vegetation and land use: Water loving grasses, sedges, water iris, pickeral weed and dollar plant predominate in prairie sites; some myrtle, pine and cabbage palm occur in other areas
Slope and land form: Flat or in slightly depressed areas
Drainage: Very poorly
Parent material: Thick beds of sand influenced by slightly acid to alkaline material in the lower part of the profile

Horizon and Beltsville Lab. No.	
531162	0 to 10 inches. Black (N 2/) to very dark gray (N 3/) with decomposed organic matter and fine sand, containing vertical veins of light gray finer sand; a very thin veneer of light gray fine sand is conspicuous over the surface; gradual, irregular boundary; acid.
531163	10 to 32 inches. Black (N 2/) to very dark gray (N 3/) very friable fine sand with high content of well decayed organic matter; small to medium seams or veins of light gray and dark gray fine sand project through layer; acid; gradual, irregular boundary.
531164	32 to 40 inches. Gray (N 5/) very friable fine sand having seams or veins of dark gray and light gray fine sand extending into or through layer; rust colored material occurs in some root channels; slightly acid; clear, irregular boundary.
531165	40 to 50 inches. Light gray (10YR 7/1) to gray (10YR 6/1) friable fine sand with thin seams of white fine sand and occasional dark gray veins of fine sand projecting from above; contains small lumps of loamy fine sand; slightly alkaline.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Delray fine sand SOIL Nos. 853Fla-58-20 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531166-531169

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-12			6.2	5.6	0.2	2.2	7.4	57.2	21.2		3.7	67.4				0		
12-28			5.8	6.0	0.2	2.4	7.5	55.7	22.4		2.9	67.4				0		
28-38			3.5	4.0	0.2	2.2	7.6	60.6	21.9		1.3	70.5				0		
38-50			2.4	5.6	0.2	2.5	8.4	62.5	18.4		0.6	67.3				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-12	1.29																	5.4
12-28	0.67																	5.8
28-38	0.36																	5.7
38-50	0.20																	5.4

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-12	3.5	0.8	0.1	tr.		5.1	9.5										46	
12-28	4.1	0.6	tr.	tr.		2.7	7.4										63	
28-38	2.7	0.4	tr.	tr.		1.5	4.6										67	
38-50	3.5	0.7	tr.	tr.		1.6	5.8										72	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi.	Int.	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Delray fine sand
Soil No.: S53Fla-58-20
Location: Sarasota County, Florida. SW 1/4 S35 T37S R19E, Map 3D20
Vegetation and land use: Water loving grasses, sedges, water iris, pickeral weed, and dollar plant predominate in prairie sites; some myrtle, pine and cabbage palm occur in other areas
Slope and land form: Flat or in slightly depressed areas
Drainage: Very poorly
Parent material: Thick beds of sand influenced by slightly acid to alkaline material in the lower part of the profile

Horizon and Beltsville Lab. No.	
531166	0 to 12 inches. Very dark gray to black (10YR 3/1-2/1) nearly loose fine sand with thin seams and streaks of light gray fine sand; acid; gradual, irregular boundary.
531167	12 to 28 inches. Black to very dark gray (10YR 4/1-3/1) very friable fine sand (slightly compact in place) with sufficient organic matter to produce a loamy feel; interspersed with small vertical veins and streaks of dark gray and light gray fine sand; acid; gradual, irregular boundary.
531168	28 to 38 inches. Gray (10YR 5/1-6/1) nearly loose fine sand having fingers or veins of very dark gray, dark gray and light gray fine sand; slightly acid; gradual, irregular boundary.
531169	28 to 50 inches. Light gray (10YR 7/1) fine sand, compact in place, with small veins of gray and white fine sand; alkaline.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Dothan fine sandy loam SOIL Nos. S53Fla-17-3 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53817 - 53822

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: (0.05-0.02)	Int III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2-19	19-76
		Pct of < 2 mm														Pct. of < 76mm		
0-2	A1		27.7	14.9	1.7	7.6	11.3	26.1	10.7		17.2	35.5				tr.		
2-8	A2		28.5	21.9	1.1	6.3	9.7	22.4	10.1		18.8	32.3				tr.		
8-13	B1		28.5	22.7	1.0	6.0	9.6	21.6	10.6		18.5	33.1				tr.		
13-24	B2		27.2	26.1	0.7	5.5	9.2	21.0	10.3		17.3	32.2				tr.		
24-36	B3		22.8	29.2	1.2	5.4	9.2	21.6	10.6		13.9	31.8				tr.		
36-54	C		22.6	26.5	0.6	6.0	10.2	22.9	11.2		13.3	33.4				tr.		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-2	3.57																	4.7
2-8	0.36																	4.8
8-13	0.26																	4.6
13-24	0.03																	4.8
24-36	0.02																	4.9
36-54	0.02																	4.9

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-2	4.4	1.0	0.1	0.2		19.3	25.0										23	
2-8	0.6	0.5	0.1	0.1		7.8	9.1										14	
8-13	0.3	0.3	0.2	0.1		6.5	7.4										12	
13-24	0.3	0.4	0.1	0.1		7.3	8.2										11	
24-36	0.3	0.1	tr.	0.1		6.4	6.9										7	
36-54	0.3	0.1	tr.	0.1		7.6	8.1										6	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Dothan fine sandy loam
Soil No.: S53Fla-17-3
Location: Escambia County, Florida. SE 1/4 of SE 1/4 Sec. 15, T5N R32W.
Vegetation and land use: Pine forest recently cutover.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53817	0 to 2 inches. Very dark gray (10YR 3/1) friable; weak fine crumb; fine sandy loam with some organic litter.
A2 53818	2 to 8 inches. Yellowish brown (10YR 5/6) friable; moderate fine crumb; fine sandy loam with very little organic matter and with a few live roots and fine pores.
B1 53819	8 to 13 inches. Brownish yellow (10YR 6/6) firm to friable; weak fine subangular blocky to fine crumb; fine sandy loam.
B2 53820	13 to 24 inches. Brownish yellow (10YR 6/8) firm to friable; moderate fine subangular blocky; fine sandy clay loam.
B3 53821	24 to 36 inches. Brownish yellow (10YR 6/8) weakly mottled with medium areas of brown, pale yellow and red; friable to firm; subangular blocky; fine sandy clay loam.
C 53822	36 to 54 inches. Mottled brownish yellow (10YR 6/8) wet strong brown (7.5YR 5/8) and a few medium areas of pale yellow and red; firm; massive; fine sandy clay loam; tending toward a pan development.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Dothan fine sandy loam SOIL Nos.: S53Fla-17-5 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 53829 - 53835

Depth (in.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: 0.05-0.02	Silt: Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19 (Pct of < 76mm)	19-76 (Pct of < 76mm)
		Pct. of < 2 mm																
0-3	A1		31.6	13.4	0.6	5.1	11.1	23.8	14.4		17.8	41.9				4		
3-7	A2		32.5	13.6	0.8	4.8	10.6	23.3	14.4		18.5	41.8				tr.		
7-13	B1		33.6	16.1	0.5	4.5	9.9	21.5	13.9		19.6	40.3				tr.		
13-20	B2		32.0	21.7	0.7	4.6	9.0	19.2	12.8		19.5	36.2				tr.		
20-27	B3		25.0	31.4	0.4	4.1	8.7	18.0	12.4		14.3	33.4				tr.		
27-36	C1		21.7	32.5	0.2	4.5	9.5	18.9	12.7		11.7	33.2				0		
36-50	C2		21.0	31.7	0.4	4.6	9.9	19.1	13.3		10.8	34.4				tr.		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	Water content: 4B1c ⅓ bar Pct	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	2.10																	4.6
3-7	0.29																	4.8
7-13	0.10																	4.8
13-20	0.08																	4.6
20-27	0.11																	4.8
27-36	0.07																	4.8
36-50	-																	5.0

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-3	0.2	0.2	tr.	tr.		16.0	16.4										2	
3-7	0.2	0.1	tr.	tr.		6.1	6.4										5	
7-13	-	0.2	tr.	tr.		4.7	4.9										4	
13-20	0.1	0.2	tr.	tr.		6.8	6.8										4	
20-27	0.2	0.1	tr.	tr.		7.8	8.1										4	
27-36	0.1	-	tr.	tr.		7.0	7.1										1	
36-50	0.1	0.2	0.2	tr.		6.5	6.8										4	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm	Ml	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, ml = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Dothan fine sandy loam
Soil No.: S53Fla-17-5
Location: Escambia County, Florida. SE 1/4 of SE 1/4 Sec. 7 T5N R32W.
Vegetation and land use: Thin hardwood forest with occasional pine.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53829	0 to 3 inches. Grayish brown (10YR 5/2) dry, friable; weak fine crumb; fine sandy loam with fairly good amount of organic matter.
A2 53830	3 to 7 inches. Brownish yellow (10YR 6/6) friable; fine crumb; fine sandy loam with only small organic content and a few live roots and pores.
B1 53831	7 to 13 inches. Yellow (10YR 7/8) friable; weak medium subangular blocky; light fine sandy clay loam.
B2 53832	13 to 20 inches. Brownish yellow (10YR 6/8) friable; weak subangular blocky crushing to a fine crumb; fine sandy clay loam.
B3 53833	20 to 27 inches. Brownish yellow (10YR 6/6) mottled with a few distinct red (10R 5/8) areas firm; fine sandy clay loam.
C1 53834	27 to 36 inches, mottled red (10R 5/8), brownish yellow (10YR 6/8) and pale yellow (2.5YR 7/4) firm; fine sandy clay loam (tends to be a pan layer).
C2 53835	36 to 50 inches. Mottled red (10R 5/8), brownish yellow (10YR 6/8) and pale yellow (2.5Y 7/4) firm; fine sandy clay loam. Pan here quite distinct.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Dothan fine sandy loam SOIL Nos.: S53Fla-17-17 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 53900 - 53904

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: 0.05-0.02	Silt: Int. III (0.02-0.002)	Silt: Int. II (0.2-0.02)	Silt: (2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2-19 (Pct of < 76mm)	19-76 (Pct of < 76mm)
		Pct of < 2 mm																
0-6	Ap		17.1	6.8	0.3	3.7	9.1	45.9	17.1		7.7	54.9				2		
6-20	B1		20.6	18.5	0.7	2.7	6.5	35.2	15.8		11.0	47.9				tr.		
20-48	B2		17.3	24.2	0.6	2.9	6.5	34.3	14.2		9.5	43.3				6		
48-66	C1		13.3	29.9	1.2	3.8	7.9	32.5	11.4		7.7	36.1				11		
66-72	C2		12.0	48.4	0.9	2.9	5.3	22.2	8.3		7.4	25.7				tr.		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	Water content: 4B1c ⅓ bar Pct.	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-6	0.67																5.4
6-20	0.06																5.0
20-48	0.04																5.0
48-66	0.01																5.0
66-72	-																5.1

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext. Al		Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct
	meq/100 g																
0-6	0.7	0.5	tr.	0.1		4.9	6.2									21	
6-20	0.3	0.3	tr.	0.1		3.8	4.5									16	
20-48	0.7	0.5	tr.	tr.		4.6	5.8									21	
48-66	0.1	0.1	tr.	0.1		5.2	5.5									5	
66-72	0.1	0.6	tr.	0.1		8.0	8.8									9	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm	Mi	Int	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Dothan fine sandy loam
Soil No.: S53Fla-17-17
Location: Escambia County, Florida. NE 1/4 of SW 1/4 Sec. 13 T1N R30W.
Vegetation and land use: Recently abandoned field.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty, May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53900	0 to 6 inches. Grayish brown (10YR 5/2) friable; moderate fine to medium crumb; fine sandy loam; medium acid.
B1 53901	6 to 20 inches. Brownish yellow (10YR 6/6) friable; moderate fine and medium crumb; heavy fine sandy loam; medium acid.
B2 53902	20 to 48 inches. Brownish yellow (10YR 6/8) friable; moderate fine and medium crumb; fine sandy clay loam; strongly to very strongly acid.
C1 53903	48 to 66 inches. Brownish yellow (10YR 6/8) faintly mottled with a few medium areas of yellow (10YR 7/8) and strong brown (7.5YR 5/8) firm; weak medium blocky; heavy fine sandy clay loam; strongly to very strongly acid.
C2 53904	66 to 72 inches. Prominently mottled with common medium areas of red (10R 4/8), pale yellow (2.5Y 7/4) and brownish yellow (10YR 6/8) firm; weak medium blocky; heavy fine sandy clay loam; strongly acid.

Notes: A few of both soft and hard iron concretions are scattered throughout profile. A slight cementation noted in the C2 layer.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Dothan fine sandy loam SOIL Nos.: S53Fla-17-20 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 53911 - 53917

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand: Very coarse (2–1)	Sand: Coarse (1–0.5)	Sand: Medium (0.5–0.25)	Sand: Fine (0.25–0.1)	Sand: Very fine (0.1–0.05)	Silt (0.05–0.02)	Silt: Int III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 - 19	19 - 76
		Pct of < 2 mm														Pct.	Pct. of < 76mm	
0-5	A1		24.0	5.8	0.7	5.4	10.1	36.7	17.3		11.2	53.7				0		
5-12	A2		24.3	13.2	0.4	4.0	8.8	33.0	16.3		12.8	48.2				tr.		
12-18	B1		24.3	17.5	0.4	4.2	7.7	30.8	15.1		12.8	46.8				tr.		
18-32	B2		23.1	20.9	0.9	4.6	7.6	28.4	14.5		12.8	43.3				tr.		
32-42	B3		20.3	23.5	0.7	4.6	7.8	28.6	14.5		10.2	43.3				tr.		
42-56	C1		16.8	24.2	0.6	4.6	8.3	29.9	15.6		8.4	43.0				tr.		
56-66	C2		16.4	22.4	0.4	4.5	8.4	31.6	16.3		7.8	44.9				tr.		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	0.83																	5.0
5-12	0.25																	4.8
12-18	0.16																	5.0
18-32	0.07																	5.0
32-42	0.01																	4.8
42-56	-																	4.8
56-66	-																	4.7

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	6D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	0.8	0.1	tr.	tr.		4.9	5.8										16	
5-12	0.7	0.0	tr.	tr.		4.1	4.8										14	
12-18	1.0	0.2	tr.	tr.		4.1	5.3										23	
18-32	0.2	0.2	tr.	tr.		4.9	5.3										8	
32-42	0.5	0.2	tr.	tr.		4.1	4.8										14	
42-56	0.3	0.1	tr.	tr.		4.0	4.4										9	
56-66	0.6	-	tr.	tr.		4.1	4.7										13	

Depth (In.)	Clay Fraction Analysis 7Afb-d: Mt	Chl	Vm	Mi	Int	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Dothan fine sandy loam
Soil No.: S53Fla-17-20
Location: Escambia County, Florida. NE 1/4 of NE 1/4 Sec. 23 T2N R31W.
Vegetation and land use: Cutover virgin pine forest.
Slope and land form: 5 to 8 percent.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53911	0 to 5 inches. Light gray (10YR 7/2) dry, friable; moderate fine crumb; fine sandy loam with small amount of organic matter.
A2 53912	5 to 12 inches. Yellow (10YR 7/8) dry, friable; moderate fine crumb; fine sandy loam.
B1 53913	12 to 18 inches. Brownish yellow (10YR 6/8) friable; weak medium subangular blocky crushing to moderate fine crumb; heavy fine sandy loam to fine sandy clay loam.
B2 53914	18 to 32 inches. Brownish yellow (10YR 6/8) friable; moderate medium subangular blocky crushing to moderate fine crumb; fine sandy clay loam.
B3 53915	32 to 42 inches. Brownish yellow (10YR 6/8) with faint moderate medium reddish yellow (7.5YR 6/8) mottling in lower part; friable; moderate medium subangular blocky; fine sandy clay loam.
C1 53916	42 to 56 inches. Brownish yellow (10YR 6/8) moderately mottled with distinct medium areas of strong brown (7.5YR 5/8), yellow (2.5Y 7/6) and red (2.5YR 4/8) friable to firm; fine sandy clay loam.
C2 53917	56 to 66 inches. Mottled brownish yellow (10YR 6/8), yellow (2.5Y 7/6) and red (2.5YR 4/8); more friable and less firm than above; light silty clay loam.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Esto fine sandy loam SOIL Nos. S53Fla-17-23 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531605 - 531609

Depth (in.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand Very coarse (2–1)	Sand Coarse (1–0.5)	Sand Medium (0.5–0.25)	Sand Fine (0.25–0.1)	Sand Very fine (0.1–0.05)	Silt 0.05–0.02	Silt Int III (0.02–0.002)	Silt Int II (0.2–0.02)	Silt (2–0.1)		3B2 Cm	Coarse fragments 3B1 2A2 ≥ 2 Pct.	2–19 (Pct of < 76mm)	19–76 (Pct of < 76mm)
		Pct of < 2 mm																
0-3	A1		23.0	12.3	0.9	4.2	7.2	24.8	27.6		7.4	60.5				4		
3-8	B1		22.0	26.2	0.4	3.5	6.3	20.0	21.6		8.8	48.6				tr.		
8-18	B2		21.6	35.1	0.5	2.6	5.0	15.5	19.7		10.0	42.1				tr.		
18-30	C1		22.4	36.3	0.4	2.4	4.8	15.1	18.6		10.3	41.3				tr.		
30-54	C2		18.0	40.9	0.4	2.5	4.1	14.0	20.1		16.5	42.0				0		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density g/cc	Bulk density 4A1e ⅓ bar g/cc	Bulk density 4A1h Oven dry g/cc	4D1 COLE	Water content g/cc	Water content 4B1c ⅓ bar Pct.	Water content 4B2 15 bar Pct		4C1 WRD in/in	pH 8C1c (1:1) KCl	pH 8C1a (1:1) H_2O
0-3	1.97																4.8
3-8	0.65																4.5
8-18	0.19																4.8
18-30	0.10																4.8
30-54	0.09																4.7

Depth (in.)	Extractable bases 5B1a 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC 5A3a Sum cations	CEC	6G1d Ext. Al			Ratios to clay CEC Sum	Ratios to clay Ext iron	Ratios to clay 15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-3	0.5	0.3	tr.	0.1		8.9	9.8										9	
3-8	0.2	0.3	tr.	0.1		6.8	7.4										8	
8-18	tr.	0.5	tr.	tr.		6.8	7.3										7	
18-30	tr.	0.6	tr.	tr.		7.4	8.0										7	
30-54	tr.	0.2	tr.	tr.		7.8	8.0										3	

Depth (in.)	Clay Fraction Analysis 7Alb-d Mt	Chl.	Vm	Mi	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Esto fine sandy loam
Soil No.: S53Fla-17-23
Location: Escambia County, Florida. NE 1/4 of NE 1/4 Sec. 3 T5N R33W.
Vegetation and land use: Clean cut forested area.
Sampled by and date: J. H. Walker, Victor W. Carlisle and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531605	0 to 3 inches. Dark grayish brown (10YR 4/2) friable; weak fine crumb; fine sandy loam containing a little organic matter and many fine roots.
B1 531606	3 to 8 inches. Brownish yellow (10YR 6/6) moderately friable; weak fine crumb or subangular blocky; fine sandy clay loam with a small amount of organic matter and a few fine roots.
B2 531607	8 to 18 inches. Brownish yellow (10YR 6/6) friable; distinctly mottled with a few medium areas of pale yellow (2.5Y 7/4), yellowish brown (10YR 5/8) and red (2.5YR 5/8); fine sandy clay with moderate medium subangular blocky structure.
C1 531608	18 to 30 inches. Prominently mottled with many medium areas of pale yellow (2.5Y 7/4), brownish yellow (10YR 6/6) and red (2.5YR 5/8) firm moderate medium subangular blocky; fine sandy clay.
C2 531609	30 to 54 inches. Pale yellow (2.5Y 7/4) prominently mottled with common medium areas of light gray (10YR 7/1), brownish yellow (10YR 6/8) strong brown (7.5YR 5/8) and red (2.5YR 5/8) firm moderate medium blocky; fine sandy clay.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Esto fine sandy loam SOIL Nos. S53Fla-17-25 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531615 - 531618

Depth (in.)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0.05-0 002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0 5)	Medium (0 5-0 25)	Fine (0 25-0 1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0 02-0.002)	Int II (0 2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 >= 2 Pct.	2 - 19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-6	A1		9.1	11.0	1.5	5.3	13.6	42.7	16.8		3.3	46.3				20		
6-28	B3		4.1	28.0	0.7	6.6	16.8	37.2	6.6		2.7	25.9				tr.		
28-48	C1		6.7	28.1	0.9	5.3	12.5	37.7	8.8		4.1	32.2				tr.		
48-60	C2		4.9	18.7	1.4	9.0	21.1	38.4	6.5		3.3	25.0				tr.		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e 1/3 bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c 1/3 bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-6	1.15																	4.6
6-28	0.15																	4.8
28-48	0.09																	4.6
48-60	0.07																	4.6

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																
0-6	0.1	0.4	tr.	tr.		7.3	7.8									6	
6-28	0.1	0.1	tr.	tr.		4.8	5.0									4	
28-48	0.1	0.3	tr.	tr.		5.0	5.4									8	
48-60	tr.	0.1	tr.	tr.		2.9	3.0									3	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Esto fine sandy loam
Soil No.: S53Fla-17-25
Location: Escambia County, Florida. NW 1/4 of NE 1/4 Sec. 30 T3N R31W.
Vegetation and land use: Cutover forest.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531615	0 to 6 inches. Brown to dark brown (10YR 4/3) friable; fine and medium crumb; fine sandy loam with a small amount of organic matter and many fine roots.
B3 531616	6 to 28 inches. Distinctly mottled with common medium areas of yellowish red (5YR 4/8), light gray (10YR 7/2), red (10R 5/8) and reddish yellow (7.5YR 6/8) firm to friable; structureless sandy clay loam. (Clayey and sandy strata intermixed)
C1 531617	28 to 48 inches. Distinctly mottled with common medium areas of light gray (10YR 7/2), yellowish red (5YR 4/8), reddish yellow (7.5YR 6/8) and red (10R 5/8) firm to friable; sandy clay loam.
C2 531618	48 to 60 inches. Red (2.5YR 5/8) prominently mottled with many medium areas of light gray (10YR 7/1), weak red (10R 5/2), and brownish yellow (10YR 6/6) friable to firm in spots; sandy loam. Contains spots of sandy material and other spots of clayey material.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Felda fine sand SOIL Nos. S53Fla-58-21 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531170 - 531177

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand Very coarse (2-1)	Sand Coarse (1-0.5)	Sand Medium (0.5-0.25)	Sand Fine (0.25-0.1)	Sand Very fine (0.1-0.05)	Silt 0.05-0.02	Silt Int III (0.02-0.002)	Silt Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2-19 (Pct. of < 76mm)	19-76 (Pct. of < 76mm)
		Pct. of < 2 mm																
0-5			3.5	0.7	3.1	3.3	9.1	69.3	11.0		0.9	66.0				0		
5-12			1.7	0.8	0.4	63.8	4.9	24.4	4.0		0.7	20.6				0		
12-16			2.3	1.7	0.3	3.3	8.8	57.6	26.0		1.1	70.1				0		
16-19			2.5	1.8	0.2	2.3	7.9	57.9	27.4		0.9	73.1				0		
19-22			2.2	2.8	0.2	3.1	9.5	57.3	24.9		1.0	68.8				0		
22-34			2.1	20.6	0.2	2.2	6.9	47.3	20.7		1.0	56.8				0		
34-40			3.7	13.6	4.4	5.0	7.3	44.6	21.4		2.0	56.5				0		
40-50			1.7	9.4	0.2	1.9	6.4	54.3	26.1		0.7	69.1				0		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	2.67																	4.8
5-12	0.42																	5.4
12-16	0.83																	5.4
16-19	0.35																	5.8
19-22	0.26																	5.8
22-34	0.39																	6.7
34-40	0.22																	7.8
40-50	0.07																	8.0

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct
	meq/100 g																	
0-5	2.9	0.8	0.2	tr.		9.5	13.4										29	
5-12	0.6	-	tr.	tr.		1.6	2.2										27	
12-16	0.3	0.3	tr.	tr.		6.7	7.3										8	
16-19	0.3	0.2	tr.	tr.		2.8	3.3										15	
19-22	1.2	0.2	tr.	tr.		1.3	2.7										51	
22-34	15.9	1.1	0.2	tr.		1.9	19.1										90	
34-40	a																	
40-50	a																	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi.	Int.	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

a Calcareous

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Felda fine sand
Soil No.: S53Fla-58-21
Location: Sarasota County, Florida. NW 1/4 S36 T37S R19E, Map 2D180.
Vegetation and land use: Saw palmetto, gallberry, huckleberry, pine, runner oak, wiregrass, and a few cabbage palm.
Slope and land form: Nearly level.
Drainage: Somewhat poorly drained, with low external runoff.
Permeability: Slow
Parent material: Composed of thin beds of marine deposited sands overlying alkaline clayey materials which usually contain marl material.

Horizon and Beltsville Lab. No.	
531170	0 to 5 inches. Very dark gray to black (10YR 3/1 - 2/1) nearly loose fine sand with a small to medium amount of light gray fine sand; matted with heavy growth of fine roots; acid; abrupt, wavy boundary.
531171	5 to 12 inches. Light gray (10YR 6/1 - 7/1) loose fine sand streaked with gray and light brownish gray; acid; numerous roots; abrupt, wavy boundary.
531172	12 to 16 inches. Dark brown (7.5YR 3/2) nearly loose fine sand; acid; moderate amount of fine roots; abrupt, wavy boundary.
531173	16 to 19 inches. Brown (10YR 5/3) to pale brown (10YR 6/3) loose fine sand with common, small and medium, distinct staining of white, light gray and brownish gray; acid; some medium size roots; abrupt, wavy boundary.
531174	19 to 22 inches. Light gray (10YR 7/1) loose fine sand with common, medium, faint white and pale brown mottles; contains some medium size roots; abrupt, wavy boundary.
531175	22 to 34 inches. Light gray (10YR 6/1 - 7/1) heavy plastic fine sandy clay with common, fine and medium, distinct light gray, yellow and orange mottles; gradual, irregular boundary; acid.
531176	34 to 40 inches. Light gray (10YR 7/1) plastic, fine sandy clay loam with a few, medium, distinct white and yellow mottles interspersed with moderate amount of marly material; contains some firmly cemented lumps and conretions of marl; gradual, irregular boundary.
531177	40 to 50 inches. White, moderately firm, light fine sandy clay loam or fine sandy clay loam with common, medium, distinct yellow, and light gray mottles.

SCS-421
10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Felda fine sand SOIL Nos. S53Fla-58-23 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531182-531187

Depth (in.)	Horizon	1B1b Total: Sand (2–0 05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0 1–0 05)	Silt: 0.05–0.02	Int III (0.02–0.002)	Int. II (0 2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2 – 19	19 – 76
		Pct. of < 2 mm															Pct. of < 76mm	
0-2			0.8	3.3	0.6	6.9	19.3	62.4	6.7		0.9	38.7				0		
2-12			-	0.9	0.6	61.6	6.9	26.8	3.2		-	17.9				0		
12-19			0.6	0.8	0.7	7.3	15.0	58.4	17.2		0.5	57.5				0		
19-23			2.4	12.8	0.9	37.7	6.6	33.4	6.2		1.4	26.5				0		
23-34			2.5	17.2	0.6	8.6	14.2	48.3	8.6		1.4	37.0				0		
34-50			1.9	9.8	0.6	7.0	14.8	53.3	12.6		0.8	47.8				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1.1) KCl	8C1a (1:1) H_2O
0-2	0.79																	6.0
2-12	0.12																	6.9
12-19	0.10																	7.0
19-23	0.18																	6.0
23-34	0.15																	5.7
34-50	0.09																	6.2

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-2	2.1	0.6	0.2	0.1		2.8	5.8										52	
2-12	0.7	0.1	tr.	0.1		0.9	1.8										50	
12-19	0.3	0.1	tr.	tr.		0.6	1.0										40	
19-23	6.9	2.1	tr.	tr.		1.8	10.8										83	
23-34	9.1	2.7	0.3	tr.		2.2	14.3										85	
34-50	5.1	1.5	0.2	tr.		1.0	7.8										87	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm.	Mi.	Int	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Felda fine sand
Soil No.: S53Fla-58-23
Location: Sarasota County, Florida. NW 1/4 S1 T36S R18E, Map 2D38
Vegetation and land use: Watergrasses, weeds, switchgrass, and sedges with scattered saw palmetto, cabbage palm, and pine
Slope and land form: Nearly level
Drainage: Poorly drained
Parent material: Thin beds of unconsolidated sands overlying slightly acid or alkaline beds of clayey materials

Horizon and Beltsville Lab. No.	
531182	0 to 2 inches. Mixture of very dark gray and light gray nearly loose fine sand; acid; abrupt wavy boundary.
531183	2 to 12 inches. White (10YR 8/1) loose fine sand; acid; gradual irregular boundary.
531184	12 to 19 inches. Light gray (10YR 7/2) loose fine sand with thin vertical seams of pale brown and having a few small, faint strains of dark brown; acid; abrupt, wavy boundary.
531185	19 to 23 inches. Very dark gray to dark gray (N 3/-4/) plastic, heavy, fine sandy clay with a few, small, faint rust colored mottles; acid; gradual, irregular boundary.
531186	23 to 34 inches. Gray (N 5/) heavy, plastic fine sandy clay with thin seams or coatings of rust colored material in small root channels; acid; clear, irregular boundary.
531187	34 to 50 inches. Light gray (N 7/-6/) slightly plastic, light fine sandy clay loam with many, small and medium, prominent yellow and brown mottles and seams or veins of rust colored material in or along root channels; neutral.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Felda fine sand SOIL Nos. S53Fla-58-24 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531188 - 531193

Depth (in.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: (0.05-0.02)	Int III (0.02-0.002)	Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2	2-19	19-76
		Pct of < 2 mm														Pct.	Pct of < 76mm	
0-5			5.0	0.4	1.8	8.1	15.4	55.3	14.0		1.9	51.7				0		
5-10			2.7	0.4	0.9	16.6	21.1	49.4	8.9		1.6	37.1				0		
10-16			3.8	0.6	2.1	8.3	14.1	51.8	19.3		1.4	57.3				0		
16-20			3.8	1.2	1.6	7.9	14.2	52.2	19.1		1.6	57.0				0		
20-38			2.9	21.0	1.2	10.9	12.1	41.2	10.7		1.0	38.2				0		
38-48			4.9	16.4	3.3	8.6	13.2	40.5	13.1		2.6	41.9				11		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	2.24																	4.6
5-10	0.70																	4.7
10-16	0.20																	5.5
16-20	0.28																	5.6
20-38	0.44																	5.6
38-48	0.10																	7.6

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-5	2.6	0.8	0.1	0.1		7.3	10.9										33	
5-10	0.8	0.3	tr.	tr.		2.2	3.3										33	
10-16	0.3	0.2	tr.	tr.		0.3	0.8										62	
16-20	0.5	0.1	tr.	tr.		0.6	1.2										42	
20-38	11.3	2.0	0.2	tr.		2.7	16.2										83	
38-48	a																	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

a Calcareous

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Felda fine sand
Soil No.: S53Fla-58-24
Location: Sarasota County, Florida. SE 1/4 S14 T37S R19E, Map 2D178.
Vegetation and land use: Saw palmetto, gallberry, huckleberry, pine, runner oak, wiregrass and a few cabbage palm.
Slope and land form: Nearly level.
Drainage: Somewhat poorly drained, with low external runoff.
Permeability: Slow.
Parent material: Composed of thin beds of marine deposited sands overlying alkaline clayey materials which usually contain marl material.

Horizon and Beltsville Lab. No.	
531188	0 to 5 inches. Very dark gray to black (10YR 3/1 - 2/1) nearly loose fine sand with a small amount of light gray fine sand matted together with heavy growth of fine roots; acid; clear, wavy boundary.
531189	5 to 10 inches. Dark gray (10YR 4/1) loose fine sand with moderate percent of light gray and gray fine sand; acid; moderate number of roots; clear, wavy boundary.
531190	10 to 16 inches. Light gray or gray (10YR 7/1 - 6/1) loose fine sand with common, medium, faint light brownish gray mottles and seams; acid; moderate number of roots; abrupt, irregular boundary.
531191	16 to 20 inches. Light grayish brown (10YR 6/2) to grayish brown (10YR 5/2) nearly loose fine sand with common, small and medium, faint gray and light gray mottles; abrupt, wavy boundary.
531192	20 to 38 inches. Gray (10YR 6/1 - 5/1) plastic, heavy fine sandy clay with common, medium, distinct and prominent yellow, light gray and rust colored mottles and small veins; abrupt, irregular boundary.
531193	38 to 48 inches. Gray (N 6/ - 5/) plastic, heavy, fine sandy clay interspersed with marly material; common, medium, and distinct yellow and light gray mottles; contains firmly cemented lumps and nodules of marl.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Felda fine sand SOIL Nos. 853Fla-58-26 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531200-531204

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-3			2.9	5.5	0.7	6.3	15.3	51.5	17.8		1.3	52.7				tr.		
3-18			0.6	2.1	0.7	6.8	15.8	54.6	19.4		0.3	55.9				0		
18-24			2.7	11.9	0.5	5.4	12.9	48.9	17.7		0.9	52.8				0		
24-34			3.4	14.1	1.0	5.7	13.3	47.1	15.4		1.3	49.1				0		
34-44			3.5	14.5	0.8	5.6	13.2	45.5	16.9		1.7	49.5				tr.		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	0.86																	6.4
3-18	0.14																	6.6
18-24	0.23																	6.0
24-34	0.11																	6.2
34-44	0.15																	6.3

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																
0-3	6.1	2.1	0.4	0.2		1.5	10.3									85	
3-18	1.2	0.4	tr.	tr.		0.1	1.7									94	
18-24	7.4	2.9	0.3	0.1		1.3	12.0									89	
24-34	8.6	3.7	0.3	0.1		1.2	13.9									91	
34-44	9.4	2.8	0.4	0.1		1.0	13.7									93	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm	Mi.	Int.	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Felda fine sand
Soil No.: S53Fla-58-26
Location: Sarasota County, Florida. SW 1/4 S13 T37S R19E, Map 2D178
Vegetation and land use: Watergrasses, weeds, switchgrass, and sedges with scattered saw palmetto, cabbage palm, and pine
Slope and land form: Nearly level
Drainage: Poorly drained
Parent material: Thin beds of unconsolidated sands overlying slightly acid or alkaline beds of clayey materials

Horizon and Beltsville Lab. No.	
531200	0 to 3 inches. Dark gray to very dark gray (10YR 4/1-3/1) nearly loose fine sand with variable small content of light gray fine sand; slightly acid; clear, wavy boundary.
531201	3 to 18 inches. Light gray (10YR 7/1-6/1) loose fine sand with common, small, distinct seams and veins of gray and light brownish gray material; slightly acid; abrupt, irregular boundary.
531202	18 to 24 inches. Dark gray to very dark gray (N 4/-3/) fine sandy clay or heavy fine sandy clay having a few, narrow fingers of light gray material projecting from layer above; contains common, fine, faint seams of brown, yellow and rust colored material in root channels, slightly acid to neutral; gradual, irregular boundary.
531203	24 to 34 inches. Gray (N 5/-6/) heavy fine sandy clay with a few, medium distinct yellow, brown and rust colored mottles; plastic when moist, hard when dry; neutral or slightly acid; gradual, irregular boundary.
531204	34 to 44 inches. Light gray (10YR 7/1-6/1) fine sandy clay or heavy fine sandy clay with common, medium to coarse, distinct to prominent, yellow, brown and rust colored mottles; seams and veins of similar colored material in small root channels.

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10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Goldsboro fine sandy loam SOIL Nos. 853Fla-17-32 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531649 - 531653

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt (0.05-0.02)	Silt: Int III (0.02-0.002)	Silt: Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19 (Pct. of < 76mm)	19-76 (Pct. of < 76mm)
		Pct. of < 2 mm																
0-5	A1		34.2	15.7	0.8	6.1	9.1	18.9	15.2		18.0	42.7				0		
5-12	B1		32.2	16.0	1.6	6.9	9.5	18.0	15.8		15.9	42.5				tr.		
12-24	B2		31.8	22.6	2.1	5.9	8.2	15.4	14.0		16.7	37.8				3		
24-48	C1		29.6	24.6	1.8	7.0	9.2	15.0	12.8		15.8	35.0				tr.		
48-60	C2		27.4	25.8	2.2	8.2	9.7	14.4	12.3		14.2	33.6				tr.		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	Water content: 4B1c ⅓ bar Pct	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-5	3.90																4.6
5-12	0.40																4.8
12-24	0.25																5.0
24-48	0.16																5.1
48-60	0.44																5.1

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext. Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																
0-5	0.3	0.3	tr.	0.1		22.2	22.9									3	
5-12	tr.	0.1	tr.	tr.		5.7	5.7									2	
12-24	tr.	0.1	tr.	tr.		5.6	5.7									2	
24-48	0.2	0.3	tr.	tr.		5.7	6.2									8	
48-60	0.4	0.4	tr.	tr.		7.3	8.1									10	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi	Int	Qtz	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Goldsboro fine sandy loam
Soil No.: S53Fla-17-32
Location: Escambia County, Florida. SW 1/4 of SE 1/4 sec. 1 T5N R33W.
Vegetation and land use: Cutover area with only a few widely scattered trees but much wildgrass.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531649	0 to 5 inches. Very dark gray (10YR 3/1) friable; moderate fine granular; fine to very fine sandy loam; good amount of organic matter and many grass roots.
B1 531650	5 to 12 inches. Brownish yellow (10YR 6/6) friable; heavy fine sandy loam, with moderate fine subangular blocky structure and only a little organic matter and a few roots.
B2 531651	12 to 24 inches, light yellowish brown (2.5Y 6/4) distinctly mottled with medium areas of brownish yellow (10YR 6/8) and reddish yellow (7.5YR 6/8) firm; fine sandy clay loam.
C1 531652	24 to 48 inches. Prominently mottled with common medium areas of brownish yellow (10YR 6/8), strong brown (7.5YR 5/8) and light gray (10YR 7/1) firm; heavy fine sandy clay loam.
C2 531653	48 to 60 inches. Distinctly mottled brownish yellow (10YR 6/8), strong brown (7.5YR 5/8), gray (10YR 5/1) and red (10R 4/6) firm and plastic, fine sandy clay loam; some lenses of more sandy material.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Goldsboro fine sandy loam SOIL Nos. S53Fla-17-33 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531654 - 531658

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: 0.05-0.02	Silt: Int. III (0.02-0.002)	Silt: Int. II (0.2-0.02)	Silt: (2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 - 19 (Pct of < 76mm)	19 - 76 (Pct of < 76mm)
		Size class and particle diameter (mm) 3A1 — Pct of < 2 mm																
0-5	A1		50.7	9.8	0.4	8.8	4.5	15.8	10.0		24.7	46.1				0		
5-14	A2		53.8	11.2	0.2	1.0	2.3	14.0	17.5		25.2	56.6				0		
14-24	B2		51.4	15.4	0.3	0.9	2.1	11.0	18.9		24.6	53.8				0		
24-40	B3		49.6	13.2	0.2	1.0	2.5	13.4	20.1		20.4	59.4				0		
40-56	C		49.7	10.6	0.2	1.1	2.4	13.6	22.4		20.1	62.3				0		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	Water content: 4B1c ⅓ bar Pct	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-5	4.16																4.5
5-14	0.48																4.6
14-24	0.11																4.8
24-40	0.08																4.8
40-56	0.04																4.7

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	0.5	0.3	0.1	0.1		19.5	20.5										5	
5-14	0.1	0.1	tr.	tr.		6.0	6.2										3	
14-24	0.1	0.2	tr.	tr.		5.3	5.6										5	
24-40	tr.	0.2	tr.	tr.		3.9	4.1										5	
40-56	tr.	0.2	tr.	tr.		3.4	3.6										6	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Goldsboro fine sandy loam
Soil No.: S53Fla-17-33
Location: Escambia County, Florida. NE 1/4 of SW 1/4 sec. 17 T4N R32W.
Vegetation and land use: Very thin cutover forest with a heavy wildgrass and weed cover.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531654	0 to 5 inches. Very dark gray (10YR 3/1) friable; weak fine granular; fine or very fine sandy loam, with good amount of organic matter and many fine roots.
A2 531655	5 to 14 inches. Pale yellow (2.5Y 7/4) friable; moderate fine granular; fine to very fine sandy loam with very little organic matter but many fine grass and tree roots.
B2 531656	14 to 24 inches. Pale yellow (2.5Y 7/4) distinctly mottled with common medium areas of brownish yellow (10YR 6/8) and strong brown (7.5YR 5/8) friable to firm; fine sandy clay loam, containing many fine pores and with a weak fine subangular blocky structure.
B3 531657	24 to 40 inches. Prominently mottled with common medium areas of brownish yellow (10YR 6/8), yellow (2.5Y 7/8), light gray (10YR 7/1) and yellowish red (5YR 5/8) firm; weak fine subangular blocky; fine sandy clay loam.
C 531658	40 to 56 inches. Prominently mottled with common medium areas of brownish yellow (10YR 6/8), light gray (10YR 7/1), yellow (2.5Y 7/8) and red (2.5YR 4/8) friable to firm; fine sandy loam to fine sandy clay loam; texture becomes lighter with depth and gray color increases.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Goldsboro fine sandy loam SOIL Nos. 853Fla-17-34 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531659 - 531664

Depth (in.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: 0.05–0.02	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2 – 19	19 – 76
		Pct. of < 2 mm														Pct	Pct. of < 76mm	
0-5	A1		17.1	9.2	0.9	17.3	19.4	27.9	8.2		10.9	28.5				0		
5-10	A2		16.4	10.2	1.7	17.0	18.9	27.3	8.5		11.0	28.2				tr.		
10-24	B2		16.8	11.6	2.0	16.1	17.4	27.4	8.7		11.2	29.0				0		
24-48	B3		10.1	15.2	1.8	17.5	18.3	28.9	8.2		6.2	27.6				0		
48-60	C		5.5	15.0	2.5	20.4	22.6	28.5	5.5		3.4	20.9				0		
60-74	D		5.0	14.0	4.0	22.3	24.7	25.6	4.4		3.1	17.2				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct	Bulk density: 4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0.5	2.24															4.8
5-10	0.79															4.9
10-24	0.16															4.9
24-48	0.08															5.0
48-60	0.04															5.1
60-74	0.04															5.2

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	0.3	0.2	tr.	tr.		11.9	12.4										4	
5-10	0.1	0.2	tr.	tr.		5.9	6.2										5	
10-24	0.1	0.2	tr.	tr.		3.6	3.9										8	
24-48	0.1	0.2	tr.	tr.		2.6	2.9										10	
48-60	tr.	0.1	tr.	tr.		2.3	2.4										4	
60-74	tr.	0.3	tr.	tr.		2.2	2.5										12	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Goldsboro fine sandy loam
Soil No.: S53Fla-17-34
Location: Escambia County, Florida. SE 1/4 of SE 1/4 sec. 25 T1S R31W.
Vegetation and land use: Cutover area with widely scattered pines and a heavy growth of wild grasses.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531659	0 to 5 inches. Dark olive gray (5Y 3/2) friable; weak medium crumb; fine sandy loam with fairly good amount of organic matter and many grass and weed roots.
A2 531660	5 to 10 inches. Dark gray (5Y 4/1) mixed with brownish yellow (10YR 6/8) friable; weak fine granular; fine sandy loam; contains only a small amount of organic matter but many fine live roots.
B2 531661	10 to 24 inches. Brownish yellow (10YR 6/8) faintly mottled with a few medium areas of strong brown (7.5YR 5/8) friable; fine sandy loam to fine sandy clay loam.
B3 531662	24 to 48 inches. Brownish yellow (10YR 6/8) distinctly mottled with common medium areas of strong brown (7.5YR 5/8) and pale yellow (2.5Y 7/4) friable; weak medium crumb; sandy loam.
C 531663	48 to 60 inches. Distinctly mottled with common medium areas of brownish yellow (10YR 6/6), strong brown (7.5YR 5/8) and light gray (2.5Y 7/2) friable; light sandy loam. This layer more gray and more sandy than above.
D 531664	60 to 74 inches. Distinctly mottled with common medium areas of strong brown (7.5YR 5/8), brownish yellow (10YR 6/8), red (2.5YR 5/8) and light gray (2.5Y 7/2) firm to very firm; sandy loam.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Greenville loam SOIL Nos. 853Fla-17-2 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos: 53811 - 53816

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand: Very coarse (2–1)	Sand: Coarse (1–0.5)	Sand: Medium (0.5–0.25)	Sand: Fine (0.25–0.1)	Sand: Very fine (0.1–0.05)	Silt (0.05–0.02)	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2–19 (Pct. of < 76mm)	19–76 (Pct. of < 76mm)
		Pct. of < 2 mm																
0-6	Ap		16.3	9.8	2.1	16.4	21.5	26.1	7.8		8.8	26.2				tr.		
6-16	A3		20.3	16.7	1.1	13.2	19.4	23.9	5.4		13.8	21.4				0		
16-25	B1		18.4	25.0	1.6	12.1	17.1	21.2	4.6		12.2	19.4				0		
25-44	B2		12.6	34.8	1.6	10.8	16.1	19.7	4.4		8.3	16.7				0		
44-56	B2		10.7	32.1	1.4	11.8	17.8	21.6	4.6		6.6	17.2				0		
56-76	B3		9.5	29.8	1.3	12.5	18.6	23.3	5.0		5.7	18.0				0		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	Water content: 4B1c ⅓ bar Pct.	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-6	0.77																5.5
6-16	0.46																4.2
16-25	0.11																4.8
25-44	0.09																4.6
44-56	0.08																4.8
56-76	0.09																4.6

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-6	1.8	0.7	tr.	0.2		4.7	7.4										36	
6-16	0.8	0.6	tr.	0.2		5.9	7.5										21	
16-25	0.9	0.5	0.1	0.2		4.7	6.4										26	
25-44	1.0	0.6	0.2	0.2		5.6	7.6										26	
44-56	0.8	0.4	0.1	0.1		5.0	6.4										22	
56-76	0.7	0.2	tr.	tr.		4.7	5.6										16	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Greenville loam
Soil No.: S53Fla-17-2
Location: Escambia County, Florida. SW 1/4 of NE 1/4 Sec. 15 T5N R32W.
Vegetation and land use: Cornfield.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53811	0 to 6 inches. Brown (10YR 5/3) dry, friable; medium to fine weak crumb; loam with only small amount of organic matter.
A3 53812	6 to 16 inches. Yellowish red (5YR 4/6) dry, friable; moderate fine crumb; loam with very small amount of organic matter; some fine roots and a few fine and medium pores.
B1 53813	16 to 25 inches. Red (2.5YR 4/6) friable; moderate medium and fine crumb; light fine sandy clay loam with occasional fine gravel fragment.
B2 53814	25 to 44 inches. Red (10R 4/6) friable; moderate medium and fine crumb; heavy fine sandy clay loam.
B2 53815	44 to 56 inches. Red (10R 4/6) friable; moderate fine and medium fine crumb; heavy fine sandy clay loam.
B3 53816	56 to 76 inches. Red (10R 4/6) friable; moderate fine and medium crumb; fine sandy clay loam.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Greenville loam SOIL Nos. S53Fla-17-4 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos 53823 - 53828

Depth (In.)	Horizon	1B1b Total Sand (2-0 05)	Total Silt (0 05-0.002)	Total Clay (< 0 002)	Sand Very coarse (2-1)	Sand Coarse (1-0 5)	Sand Medium (0 5-0.25)	Sand Fine (0.25-0 1)	Sand Very fine (0 1-0 05)	Silt (0.05-0.02)	Silt Int. III (0.02-0 002)	Silt Int. II (0 2-0 02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct.	2 - 19	19-76
		Pct. of < 2 mm															Pct. of < 76mm	
0-10	Ap		32.2	18.4	1.0	10.2	13.4	18.5	6.3		22.3	24.9				0		
10-15	A2		27.2	20.8	1.0	13.0	16.0	16.2	5.8		19.2	21.3				0		
15-24	B1		20.4	33.7	1.6	12.1	14.1	13.6	4.5		14.9	16.2				0		
24-46	B2		18.0	37.9	1.1	11.1	13.9	13.4	4.6		12.0	16.6				tr.		
46-56	B2		12.0	39.2	1.2	12.6	15.8	14.6	4.6		7.5	15.6				0		
56-64	B2		12.1	43.4	1.3	11.8	14.0	13.4	4.0		8.3	13.9				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content Pct	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD In/in	pH	8C1c (1.1) KCl	8C1a (1 1) H_2O
0-10	1.92																	5.2
10-15	0.36																	5.0
15-24	0.08																	4.8
24-46	0.09																	4.8
46-56	0.04																	4.8
56-64	0.06																	4.8

Depth (In.)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC 5A3a Sum cations		6G1d Ext Al			Ratios to clay CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-10	2.8	0.8	0.1	0.4		13.5	17.6										23	
10-15	0.7	0.5	0.2	0.2		7.8	9.4										17	
15-24	0.8	1.0	0.2	0.1		6.5	8.6										24	
24-46	0.7	1.3	0.1	0.1		6.8	9.0										24	
46-56	0.1	0.4	tr.	tr.		6.1	6.6										8	
56-64	0.3	0.6	tr.	tr.		7.0	7.9										11	

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt.	Chl.	Vm.	Mi.	Int.	Qtz	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Greenville loam
Soil No.: S53Fla-17-4
Location: Escambia County, Florida. SW 1/4 of SW 1/4 Sec. 14 T5N R32W.
Vegetation and land use: Cornfield.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53823	0 to 10 inches. Brown to dark brown (7.5YR 4/4) dry, moderate fine crumb; friable; loam with small amount of organic matter.
A2 53824	10 to 15 inches. Reddish brown (5YR 4/4) dry, friable; moderate fine and medium crumb; loam to fine sandy clay loam.
B1 53825	15 to 24 inches. Red (10R 4/6) dry, friable to firm; moderate medium subangular blocky crushing to moderate fine crumb; fine sandy clay loam.
B2 53826	24 to 46 inches. Red (10R 4/6) moderate medium subangular blocky crushing to fine crumb; friable to firm; fine sandy clay loam.
B2 53827	46 to 56 inches. Red (10R 4/6) moderate medium to large subangular blocky crushing to fine crumb; friable to firm; fine sandy clay to fine sandy clay loam.
B2 53828	56 to 64 inches. Red (10R 4/6) friable to firm; moderate medium to large subangular blocky crushing to fine crumb; fine sandy clay to fine sandy clay loam.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Immokalee fine sand SOIL Nos. S53Fla-58-7 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531094-531099

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2-19	19-76
		Pct. of < 2 mm															Pct of < 76mm	
0-8			2.2	0.5	2.3	11.3	26.5	45.4	11.8		1.8	37.3				0		
8-15			1.8	0.4	1.2	19.6	26.6	42.7	7.7		1.2	32.5				0		
15-36			2.1	0.4	1.3	10.2	29.1	47.2	9.7		1.2	36.8				0		
36-39			4.0	6.8	2.9	9.0	17.3	45.0	15.0		3.2	43.4				0		
39-43			3.8	3.8	2.9	9.3	18.7	48.6	12.9		3.0	44.0				tr.		
43-53			3.9	4.8	2.8	8.1	17.7	46.2	16.5		2.8	46.8				7		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-8	1.21																	4.8
8-15	0.29																	5.4
15-36	0.09																	6.4
36-39	3.61																	4.5
39-43	1.57																	4.8
43-53	0.45																	5.2

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct
	meq/100 g																	
0-8	0.7	0.3	tr.	tr.		5.5	6.5										15	
8-15	-	-	tr.	tr.		0.9	0.9										-	
15-36	-	0.1	tr.	tr.		0.4	0.5										25	
36-39	-	0.3	tr.	tr.		21.3	21.6										1	
39-43	-	-	-	tr.		20.4	20.4										-	
43-53	-	0.1	tr.	tr.		11.9	12.0										1	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm	Mi	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Immokalee fine sand
Soil No.: S53Fla-58-7
Location: Sarasota County, Florida. NE 1/4 S21 T36S R20E, Map 1D101
Vegetation and land use: Saw palmetto, pine, gallberry, runner oak, huckleberry, and wiregrass
Slope and land form: Nearly level
Drainage: Somewhat imperfectly
Parent material: Thick beds of acid marine sands

Horizon and Beltsville Lab. No.	
531094	0 to 8 inches. Very dark gray (10YR 3/1) to dark gray (10YR 4/1) nearly loose fine sand mixed with small amount of light gray fine sand; has salt and pepper coloration when dry; numerous small roots; clear, wavy boundary.
531095	8 to 15 inches. Light gray (10YR 7/1) to gray (10YR 6/1) loose fine sand; moderate number of small roots; gradual irregular boundary.
531096	15 to 36 inches. White (10YR 8/1) loose fine sand; small number of roots; abrupt wavy boundary.
531097	36 to 39 inches. Very dark gray (10YR 3/1) to black (10YR 2/1) organic matter and fine sand containing a small amount of light gray fine sand; has laminated structure; when dry is strongly cemented, when moist is insipient pan; abrupt wavy boundary.
531098	39 to 43 inches. Dark brown (7.5YR 3/2) to very dark grayish brown (10YR 3/2) weakly cemented pan of fine sand and organic matter; clear irregular boundary; occasional roots penetrate through layer.
531099	43 to 53 inches. Light gray (10YR 7/1) nearly loose fine sand with a few, medium, distinct yellow mottles and containing a small number of firmly cemented concretions of gray yellow and brown.

SCS-421
10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Immokalee fine sand SOIL Nos.: S53Fla-58-29 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB Nos.: 531215-531222

Depth (In.)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0.05-0 002)	Clay (< 0 002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0 5)	Medium (0 5-0 25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0 002)	Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 - 19	19-76
		Pct. of < 2 mm														Pct of < 76mm		
0-5	a		2.2	1.3	2.7	9.0	16.4	63.5	4.9		0.6	47.8				0		
5-10			2.9	0.4	0.9	15.2	18.4	50.1	12.1		1.0	46.1				0		
10-18			1.7	0.4	0.3	26.8	28.4	38.9	3.5		0.6	22.0				0		
18-38			1.8	0.6	0.4	13.3	31.5	44.9	7.5		0.5	31.0				0		
38-41			1.8	1.6	0.4	34.8	27.3	30.6	3.5		1.5	17.8				0		
41-45			2.2	2.9	0.4	11.2	31.1	44.2	8.0		0.8	32.3				0		
45-51			1.2	2.0	0.1	3.5	11.6	73.1	8.5		0.5	60.9				0		
51-60			1.5	1.4	0.2	3.0	10.5	74.5	8.9		0.4	64.1				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1 1) KCl	8C1a (1 1) H_2O
0-5	3.13																	4.6
5-10	0.58																	5.0
10-18	0.12																	6.2
18-38	0.08																	6.5
38-41	2.37																	4.4
41-45	1.10																	4.6
45-51	0.56																	5.2
51-60	0.11																	5.8

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-5	2.7	1.0	0.2	0.1		9.0	13.0										31	
5-10	0.5	0.3	tr.	tr.		1.5	2.3										35	
10-18	0.0	0.2	tr.	tr.		1.6	1.8										11	
18-38	0.1	0.2	tr.	tr.		0.1	0.4										75	
38-41	0.4	0.2	tr.	tr.		1.3	1.9										32	
41-45	0.1	0.2	tr.	tr.		8.8	9.1										3	
45-51	0.2	0.2	tr.	tr.		6.5	6.9										6	
51-60	0.3	0.2	tr.	tr.		0.1	0.6										83	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi	Int	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

[a] Undecomposed matter in organic fraction.

Mt = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Immokalee fine sand
Soil No.: S53Fla-58-29
Location: Sarasota County, Florida. NW 1/4 S21 T36S R19E, Map 2D99
Vegetation and land use: Saw palmetto, pine, gallberry, runner oak, huckleberry, and wiregrass
Slope and land form: Nearly level
Drainage: Somewhat imperfectly
Parent material: Thick beds of acid marine sands

Horizon and Beltsville Lab. No.	
531215	0 to 5 inches. Very dark gray (10YR 3/1) nearly loose fine sand with small content of light gray fine sand; moderate number of small roots; acid; clear, wavy boundary.
531216	5 to 10 inches. Very dark gray to dark gray (10YR 3/1-4/1) nearly loose fine sand, with moderate content of light gray fine; has salt and pepper coloration; acid; small number of roots; clear, wavy boundary.
531217	10 to 18 inches. Light gray (10YR 6/1-7/1) loose fine sand with many, medium to large, faint and distinct veins and mottles of gray; diffused, irregular boundary; acid.
531218	18 to 38 inches. White (10YR 8/1) loose fine sand, slightly compact in place when dry; occasional root; acid; abrupt, wavy boundary.
531219	38 to 41 inches. Black (10YR 2/1) pan layer of organic matter and fine sand; laminated structure; degree of hardness and cementation influenced by moisture conditions; abrupt, wavy boundary.
531220	41 to 45 inches. Dark brown to very dark grayish brown (10YR 4/2-3/2) weakly to strongly cemented pan; abrupt, wavy boundary.
531221	45 to 51 inches. Very pale brown to pale brown (10YR 7/3-6/3) nearly loose fine sand having common, medium, distinct and faint gray, yellow and dark brown mottles.
531222	51 to 60 inches. White (10YR 8/1) loose fine sand with a few, small, faint pale yellow and light gray mottles.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Irvington fine sandy loam SOIL Nos. S53Fla-17-6 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 53836 - 53840

Depth (In)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0.05-0 002)	Clay (< 0 002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0 25-0 1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0 002)	Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 - 19	19 - 76
		Pct. of < 2 mm														Pct. of < 76mm		
0-7	Ap		36.6	20.4	0.7	2.5	4.4	18.0	17.4		19.4	46.7				5		
7-14	A2		35.9	19.9	0.9	2.2	4.2	18.1	18.8		18.3	48.7				6		
14-20	B1		32.5	29.2	0.9	2.2	4.1	15.1	16.0		17.4	41.0				16		
20-36	B2		28.5	33.6	0.7	2.1	3.7	15.0	16.4		14.7	40.2				8		
36-52	C		30.2	30.6	1.2	2.2	3.9	15.3	16.6		15.5	41.6				12		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1 1) H_2O
0-7	3.20																	4.8
7-14	0.45																	4.6
14-20	0.20																	4.8
20-36	0.12																	5.0
36-52	0.07																	5.0

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. Iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-7	0.5	0.4	tr.	0.1		18.8	19.8										5	
7-14	0.4	0.2	tr.	tr.		7.3	7.9										8	
14-20	-	-	tr.	tr.		7.3	7.3										0	
20-36	0.3	0.1	tr.	tr.		7.4	7.4										5	
36-52	0.4	0.1	tr.	tr.		6.8	7.3										7	

Depth (In)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm	Mi	Int	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Irvington fine sandy loam
Soil No.: S53Fla-17-6
Location: Escambia County, Florida. SE 1/4 of NE 1/4 Sec. 2 T2N R33W.
Vegetation and land use: Potato field--first crop after clearing.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53836	0 to 7 inches. Dark gray (10YR 4/1) to very dark gray (10YR 3/1) friable; weak fine crumb; fine sandy loam; good amount of organic matter.
A2 53837	7 to 14 inches. Olive yellow (2.5Y 6/6) with a little dark shading of organic matter; firm; weak fine crumb to fine subangular blocky; heavy fine sandy loam; many both soft and hard iron concretions.
B1 53838	14 to 20 inches. Yellow (10YR 7/6) faintly mottled with a few medium yellowish brown areas in lower part; firm; weak fine subangular blocky; light fine sandy clay loam; some soft and hard iron concretions.
B2 53839	20 to 36 inches. Mottled yellow (10YR 7/8), light gray (10YR 7/2) and red (2.5YR 5/8) firm; moderate fine subangular blocky; fine sandy clay loam; many soft and hard iron concretions in weak pan development.
C 53840	36 to 52 inches. Mottled yellow (10YR 7/8), light gray (10YR 7/2), strong brown (7.5YR 5/6) and red (2.5YR 5/8) firm to hard when dry; medium moderate blocky; fine sandy clay loam; numerous soft and hard iron concretions; some pan development though not strong.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Irvington fine sandy loam SOIL Nos. S53Fla-17-7 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 53841 - 53846

Depth (in.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: (0.05-0.02)	Silt: Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2-19 (Pct. of < 76mm)	19-76 (Pct. of < 76mm)
		Pct of < 2 mm																
0-4	A1		32.5	16.9	0.7	3.4	4.8	21.2	20.5		16.9	51.2				7		
4-10	A2		33.1	15.3	0.9	2.8	4.6	21.0	22.3		17.0	54.0				10		
10-18	B1		34.6	20.7	1.1	2.6	4.0	17.9	19.1		19.0	48.1				19		
18-26	B2		31.2	26.9	1.0	2.3	3.6	17.1	17.9		17.8	44.2				20		
26-32	B3		27.5	31.2	0.9	2.0	3.3	16.8	18.3		14.6	44.0				13		
32-50	C		28.8	24.2	1.4	2.7	3.9	18.5	20.5		15.3	47.9				10		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	Water content: 4B1c ⅓ bar Pct.	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-4	5.30																4.9
4-10	0.90																4.8
10-18	0.21																5.0
18-26	0.15																4.9
26-32	0.11																4.9
32-50	0.07																5.0

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-4	1.1	0.6	0.1	0.2		17.8	19.8										10	
4-10	0.6	0.3	tr.	tr.		6.7	7.6										12	
10-18	0.2	0.2	tr.	tr.		4.7	5.1										8	
18-26	0.3	0.3	tr.	tr.		6.4	6.9										7	
26-32	0.4	-	tr.	tr.		7.1	7.1										6	
32-50	0.5	0.2	tr.	tr.		4.8	5.4										13	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm	Mi	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Irvington fine sandy loam
Soil No.: S53Fla-17-7
Location: Escambia County, Florida. NE 1/4 of NE 1/4 Sec. 23 T5N R33W.
Vegetation and land use: Cutover thin pine forest.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53841	0 to 4 inches. Very dark gray (10YR 3/1) friable; weak fine crumb; fine sandy loam with a good amount of organic matter; some iron concretions noted in most places.
A2 53842	4 to 10 inches. Olive brown (2.5Y 4/4) friable; weak fine crumb; moderately heavy fine sandy loam; some stains from organic material above show in places; a few iron concretions are usually present.
B1 53843	10 to 18 inches. Olive yellow (2.5Y 6/6) friable to firm; weak fine crumb and fine subangular blocky structure; light fine sandy clay loam with faint mottling in lower part; numerous iron concretions.
B2 53844	18 to 26 inches. Brownish yellow (10YR 6/8) faintly mottled with a few fine areas of strong brown (7.5YR 5/8) and a little pale brown; firm; weak fine and medium subangular blocky; fine sandy clay loam; many iron concretions in most areas.
B3 53845	26 to 32 inches. Brownish yellow (10YR 6/6) distinctly mottled with common medium areas of strong brown (7.5YR 5/8), yellow (2.5Y 7/6) and yellowish red (5YR 5/8); firm; moderate fine and medium blocky; fine sandy clay loam. This is a weak pan containing many soft and hard iron concretions.
C 53846	32 to 50 inches. Brownish yellow (10YR 6/8) strongly mottled with many prominent areas of pale yellow (2.5Y 7/4), strong brown (7.5YR 5/8) and yellowish red (5YR 5/8); firm; medium blocky; fine sandy clay loam. This is a moderately well developed pan containing numerous soft and hard iron concretions.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Izagora fine sandy loam SOIL Nos. S53Fla-17-27 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531624 - 531628

Depth (in.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: 0.05–0.02	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 – 19	19 – 76
		Pct. of < 2 mm															Pct. of < 76mm	
0-4	A1		28.9	4.7	0.4	2.7	4.2	32.8	26.3		12.1	68.8				0		
4-8	A2		33.9	7.7	0.2	0.6	1.2	22.2	34.2		13.9	73.3				0		
8-10	B1		36.2	9.4	-	0.4	0.9	20.8	32.3		16.3	70.5				0		
10-28	B2		35.7	27.2	-	0.1	0.3	13.0	23.7		18.8	52.4				0		
28-72	C		33.5	39.2	-	0.1	0.3	9.9	17.0		20.3	39.0				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	2.12																4.8
4-8	0.95																5.0
8-10	0.39																4.8
10-28	0.16																4.8
28-72	0.14																4.8

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-4	0.4	0.3	tr.	tr.		11.9	12.6										6	
4-8	0.1	0.1	tr.	tr.		7.7	7.9										3	
8-10	tr.	0.1	tr.	tr.		4.5	4.6										2	
10-28	tr.	0.5	tr.	tr.		7.9	8.4										6	
28-72	tr.	0.7	tr.	0.1		12.9	13.7										6	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Izagora fine sandy loam
Soil No.: S53Fla-17-27
Location: Escambia County, Florida. NW 1/4 of NE 1/4 Sec. 3 T5N R30W.
Vegetation and land use: Fair stand of 40-year-old pine in cutover area.
Sampled by and date: J. H. Walker, Victor W. Carlisle and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531624	0 to 4 inches. Dark grayish brown (2.5Y 4/2) friable; weak fine and medium crumb; fine sandy loam with some organic matter and many live roots.
A2 531625	4 to 8 inches. Grayish brown (2.5Y 5/2) friable; weak medium crumb and fine subangular blocky; fine sandy loam with a little organic matter and many fine live roots.
B1 531626	8 to 10 inches. Light yellowish brown (2.5Y 6/4) friable; weak fine subangular blocky; fine sandy loam containing some shading of pale gray and brownish yellow.
B2 531627	10 to 28 inches. Brownish yellow (10YR 6/6) firm; moderate medium subangular blocky; very fine sandy clay loam with apparent high silt content; some graying on structural surfaces and along root channels; few faint fine mottlings of yellowish red (5YR 5/8).
C 531628	28 to 72 inches. Distinctly mottled with common medium areas of brownish yellow (10YR 6/8), light gray (10YR 7/1), strong brown (7.5YR 5/8) and red (10R 5/8) very firm; very fine sandy with high silt content. Red color decreases and gray increases with depth.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Izagora fine sandy loam SOIL Nos.: S53Fla-17-28 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 531629 - 531633

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: (0.05-0.02)	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-6	A1		27.4	6.4	2.5	13.3	17.0	22.4	11.0		15.3	34.6				0		
6-12	A2		25.9	7.0	3.8	14.2	16.8	21.7	10.6		14.9	32.5				0		
12-26	B1		24.5	8.9	6.7	13.6	16.0	20.2	10.1		14.3	30.5				3		
26-34	B23		22.9	21.0	3.4	10.2	13.0	18.3	11.2		12.6	31.4				tr.		
34-52	C		21.1	23.9	2.1	8.5	12.8	19.4	12.2		10.4	33.6				tr.		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: 4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD In/In	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-6	2.20															4.6
6-12	0.86															4.8
12-26	0.12															4.7
26-34	0.13															4.7
34-52	0.09															4.7

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																
0-6	0.1	0.2	tr.	0.1		10.7	11.1									4	
6-12	0.1	0.1	tr.	tr.		5.9	6.1									3	
12-26	tr.	0.2	tr.	tr.		1.9	2.1									10	
26-34	tr.	0.4	0.2	tr.		5.0	5.6									11	
34-52	tr.	0.4	0.2	tr.		6.2	6.8									9	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi.	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Izagora fine sandy loam
Soil No.: S53Fla-17-28
Location: Escambia County, Florida. 1/4 mile east of Bogia, Florida.
Vegetation and land use: Hardwood forest.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531629	0 to 6 inches. Dark grayish brown (2.5Y 4/2) friable; moderate fine crumb; fine sandy loam with good amount of organic matter and many fine live roots.
A2 531630	6 to 12 inches. Grayish brown (2.5Y 5/2) friable; moderate medium crumb; fine or medium sandy loam with many roots and a little organic stain.
B1 531631	12 to 26 inches. Light yellowish brown (2.5Y 6/4) with shades of yellow and brown; friable sandy loam to light sandy clay loam; some roots but little organic matter.
B23 531632	26 to 34 inches. Prominently mottled with common medium areas of light gray (2.5Y 7/2), brownish yellow (10YR 6/8), red (2.5YR 4/8) and strong brown (7.5YR 5/8) firm, weak fine subangular blocky, heavy sandy clay loam.
C 531633	34 to 48 inches. Prominently mottled with common medium areas of light gray (10YR 7/1), brownish yellow (10YR 6/8), strong brown (7.5YR 5/8) and red (2.5YR 5/8) firm to very firm, sandy clay or fine sandy clay.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Keri fine sand SOIL Nos. S53Fla-58-2 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531065-531070

Depth (In)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1: Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int II. (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm															Pct of < 76mm	
0-4			2.0	1.6	2.0	8.9	22.9	58.2	4.4		1.1	34.4				0		
4-15			0.1	1.4	0.6	8.2	27.3	55.1	7.3		0.0	35.7				0		
15-21			0.1	1.3	0.7	21.4	30.2	42.4	3.9		0.0	24.8				0		
21-27			4.8	5.4	0.9	9.9	25.8	47.5	5.7		3.6	30.8				0		
27-35			0.2	1.4	0.6	8.6	26.2	55.5	7.5		0.0	38.6				0		
35-46			0.9	2.2	1.3	8.4	24.8	55.1	7.3		0.3	38.9				tr.		

Depth (In)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	1.98																5.2
4-15	0.27																7.4
15-21	0.67																7.4
21-27	0.22																7.9
27-35	0.08																8.3
35-46	0.04																8.6

Depth (In)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																
0-4	4.1	0.3	0.1	tr.		5.4	9.9									45	
4-15	1.3	0.1	tr.	tr.		0.4	1.8									78	
15-21	2.2	0.1	tr.	tr.		0.6	2.9									79	
21-27	a																
27-35	a																
35-46	a																

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm	Mi.	Int	Qtz.	Kl	Gibbsite
	7A2 X-ray						7A3	

a Calcareous

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Keri fine sand
Soil No.: S53Fla-58-2
Location: Sarasota County, Florida. SW 1/4 S28 T40S R20E, Map 1D121
Vegetation and land use: Cabbage palm, saw palmetto; gallberry, runner oak, pine, wire and other grasses
Slope and land form: Nearly level
Drainage: Imperfectly
Parent material: Moderately thin stratified beds of marine sand and marl

Horizon and Beltsville Lab. No.	
531065	0 to 4 inches. Dark gray (N 4/) to very dark gray (N 3/) loose fine sand containing a small, variable amount of light gray fine sand; matted with small roots; clear wavy boundary.
531066	4 to 15 inches. Light gray (2.5Y 7/2) loose fine sand with many small roots; abrupt wavy boundary.
531067	15 to 21 inches. Light brownish gray (10YR 6/2) to pale brown (10YR 6/3) loose fine sand containing a small percent of gray fine sand; moderate number of small roots; abrupt, wavy boundary.
531068	21 to 27 inches. White, firm marly material with few, medium, distinct yellow mottles; degree of firmness influenced by moisture content; occurs as an irregular layer or as pockets and lenses in profile; variable in thickness and content of sandy material; a small number of roots penetrate into layer.
531069	27 to 35 inches. Pale yellow (2.5Y 8/4) loose fine sand with faint streaks of light gray and yellow in places; an occasional root; gradual irregular boundary.
531070	35 to 46 inches. Light gray (2.5Y 7/2) to white (2.5Y 8/2) loose fine sand with a few, medium, faint to distinct yellow and pale yellow mottles.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Keri fine sand SOIL Nos. S53Fla-58-3 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531071-531075

Depth (In.)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0 05-0 002)	Clay (< 0 002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0 5-0 25)	Fine (0.25-0 1)	Very fine (0 1-0.05)	Silt: 0 05-0.02	Int III (0 02-0 002)	Int II (0.2-0.02)	(2-0 1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2 - 19	19 - 76
		Pct. of < 2 mm														Pct of < 76mm		
0-5	a		0.8	1.7	2.0	10.4	20.5	61.2	3.4		0.3	34.2				0		
5-14			0.2	1.5	0.6	11.1	23.7	60.4	2.5		0.1	30.2				0		
14-21			0.1	1.8	0.9	9.1	20.7	61.5	5.9		0.2	43.5				0		
21-29			7.9	11.2	2.5	10.0	16.1	47.4	4.9		5.9	33.2				0		
29-45			3.6	5.1	2.3	7.4	16.4	58.2	7.0		2.3	47.4				tr.		

Depth (In)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1 1) H_2O
0-5	2.68																	5.6
5-14	0.62																	5.6
14-21	0.62																	6.5
21-29	0.30																	7.8
29-45	0.08																	8.2

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	5.5	1.9	0.2	0.1		7.1	14.8										52	
5-14	1.4	0.3	tr.	tr.		1.8	3.5										48	
14-21	4.3	0.3	0.4	tr.		1.9	6.9										72	
21-29	b																	
29-45	b																	

Depth (In)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi.	Int.	Qtz.	Kl	Gibbsite
	7A2 X-ray						7A3	

a Undecomposed organic matter in sand fractions.
b Calcareous.

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Keri fine sand
Soil No.: S53Fla-58-3
Location: Sarasota County, Florida. SW 1/4 S24 T40S R19E, Map 2D27
Vegetation and land use: Cabbage palm, saw palmetto; gallberry, runner oak, pine, wire and other grasses
Slope and land form: Nearly level
Drainage: Imperfectly drained
Parent material: Moderately thin stratified beds of marine sand and marl

Horizon and Beltsville Lab. No.	
531071	0 to 5 inches. Dark gray (N 4/) to very dark gray (N 3/) loose fine sand with moderate amount of light gray fine sand; matted with fine roots, clear, wavy boundary.
531072	5 to 14 inches. Light gray (N 7/) loose fine sand with small number of gray and dark gray sand particles; numerous roots; abrupt, irregular boundary.
531073	14 to 21 inches. Dark grayish brown (10YR 4/2) to very dark grayish brown (10YR 3/2) loose fine sand with a small percent of gray and light gray fine sand; numerous roots; abrupt wavy boundary.
531074	21 to 29 inches. Light gray moderately firm but friable soft marl; clear broken boundary; a few roots.
531075	29 to 45 inches. White (10YR 8/1) nearly loose fine sand (loamy fine sand in spots) with a few to common, fine and medium, distinct yellow and rust colored mottles.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Matmon fine sand SOIL Nos. S53Fla-58-14 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531134 - 531137

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: (0.05–0.02)	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 – 19	19 – 76
		Pct of < 2 mm														Pct of < 76mm		
0-5			0.5	1.0	1.4	50.7	8.1	35.1	3.2		1.2	22.7				0		
5-21			0.8	0.8	2.6	9.9	17.6	60.5	7.8		0.9	45.2				0		
21-23			1.3	15.8	3.5	9.0	14.2	49.2	7.0		1.6	38.6				tr.		
23+	a																	

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in		pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	0.97																	6.0
5-21	0.12																	6.6
21-23	1.00																	6.4
23+	a																	

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																
0-5	2.1	0.6	0.2	tr.		2.5	5.4									54	
5-21	0.3	-	tr.	tr.		0.4	0.7									43	
21-23	2.3	0.3	0.6	tr.		3.0	6.2									52	
23+	a																

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

a Limestone

Mt = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Matmon fine sand
Soil No.: S53Fla-58-14
Location: Sarasota County, Florida. NE 1/4 S6 T36S R18E, Map 1D31.
Vegetation and land use: Cabbage palm, saw palmetto, wiregrass, scrub oak, runner oak, pine and native grasses constitute the principal vegetation.
Slope and land form: Nearly level.
Drainage: Somewhat poorly.
Permeability: Slow to rapid.
Parent material: Thin cover of sand over limestone.

Horizon and Beltsville Lab. No.	
531134	0 to 5 inches. Mixture of dark gray, gray and light gray loose fine sand producing a salt and pepper coloration; matted by roots; acid; clear, irregular boundary.
531135	5 to 21 inches. White (10YR 8/1) loose fine sand with a few, common, coarse, faint light gray splotches; moderate number of roots; acid; abrupt wavy boundary.
531136	21 to 23 inches. Gray (N 5/) plastic heavy clay loam to heavy fine sandy clay loam with many, small to medium, distinct yellow, brown, light gray and rust colored mottles; residual from limestone.
531137	23 inches plus. Limestone.

Notes: Slabs and fragments of limestone project up through the soil or occur locally over the surface.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Matmon fine sand SOIL Nos S53Fla-58-15 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531138 - 531143

Depth (In)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0 05-0 002)	Clay (< 0 002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0 5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0 1-0.05)	Silt: 0.05-0.02	Int. III (0 02-0 002)	Int. II (0.2-0 02)	(2-0 1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2 - 19	19 - 76
		Pct of < 2 mm														Pct	Pct of < 76mm	
0-4			1.6	1.6	1.4	37.4	10.8	44.1	3.1		1.8	26.8				0		
4-14			1.6	0.3	2.2	8.2	17.2	59.7	10.8		1.8	49.8				0		
14-17			1.6	3.2	3.1	9.1	14.1	56.8	12.1		1.8	51.3				tr.		
17-24			1.7	5.8	3.3	7.8	13.8	55.5	12.1		1.8	50.3				tr.		
24-27			2.8	12.6	5.2	8.6	14.4	45.2	11.2		1.8	42.0				4		
27+	a																	

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1 1) KCl	8C1a (1:1) H_2O
0-4	1.36																	5.8
4-14	0.26																	6.4
14-17	0.47																	6.6
17-24	0.28																	6.4
24-27	0.30																	7.6
27+	a																	

Depth (In)	Extractable bases 5B1a: 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-4	2.8	0.6	0.1	tr.		3.0	6.5										54	
4-14	0.7	-	tr.	tr.		0.4	1.1										64	
14-17	2.8	0.2	0.1	tr.		1.5	4.6										67	
17-24	3.4	0.5	0.2	tr.		2.1	6.2										66	
24-27	a																	
27+	b																	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Calcareous
b Limestone

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Matmon fine sand
Soil No.: S53Fla-58-15
Location: Sarasota County, Florida. SE 1/4 S30 T40S R20E, Map 3D46.
Vegetation and land use: Cabbage palm, saw palmetto, wiregrass, scrub oak, runner oak, pine and native grasses constitute the principal vegetation.
Slope and land form: Nearly level.
Drainage: Somewhat poorly.
Permeability: Slow to rapid.
Parent material: Thin cover of sand over limestone.

Horizon and Beltsville Lab. No.	
531138	0 to 4 inches. Mixture of dark gray and light gray loose fine sand having a salt and pepper coloration; matted with small roots; abrupt wavy boundary.
531139	4 to 14 inches. White (10YR 8/1) loose fine sand with common, coarse faint to distinct light gray seams and mottles; moderate number of roots; abrupt wavy boundary.
531140	14 to 17 inches. Dark grayish brown (10YR 4/2) or grayish brown (10YR 5/2) nearly loose fine sand with a clear wavy boundary; moderate number of roots.
531141	17 to 24 inches. Light brownish gray (10YR 6/2) to pale brown (10YR 5/2) nearly loose fine sand with common, medium, faint gray, brown, yellow and rust colored specks and stains; color modified when mixed; small number of roots; clear wavy boundary.
531142	24 to 27 inches. Light gray (10YR 7/1) plastic, gritty clay loam to fine sandy clay loam with many, medium, distinct and prominent yellow and gray mottles; abrupt broken boundary.
531143	27 inches plus. Limestone.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Ona fine sand SOIL Nos. 853Fla-58-8 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531100-531105

Depth (in.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct of < 76mm		
0-9			4.9	1.5	1.1	6.4	20.8	57.7	7.6		4.0	36.6				0		
9-12			2.9	2.0	0.7	6.1	23.3	57.6	7.4		2.6	36.5				0		
12-15			3.6	3.0	0.5	5.7	21.5	56.5	9.2		3.2	39.5				0		
15-24			3.0	2.4	0.5	5.7	20.5	58.0	9.9		2.5	42.3				0		
24-40			2.2	2.1	0.4	5.8	21.2	58.4	9.8		1.8	41.9				0		
40-50			2.2	1.5	0.4	5.4	21.6	60.1	8.8		2.0	41.5				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-9	2.80																	4.5
9-12	1.59																	5.0
12-15	1.71																	5.0
15-24	0.74																	5.3
24-40	0.13																	5.4
40-50	0.06																	5.6

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																
0-9	0.5	0.8	tr.	tr.		14.0	15.3									8	
9-12	-	0.1	tr.	tr.		10.7	10.8									1	
12-15	-	-	tr.	tr.		12.8	12.8									-	
15-24	-	-	tr.	tr.		6.7	6.7									-	
24-40	-	-	tr.	tr.		1.6	1.6									-	
40-50	-	0.1	tr.	-		1.0	1.1									9	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi.	Int.	Qtz	Kl	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Ona fine sand
Soil No.: S53Fla-58-8
Location: Sarasota County, Florida. SE 1/4 S6 T37S R19E, Map 2D83
Vegetation and land use: Saw palmetto, runner oak, myrtle, pine, gallberry, and wiregrass
Slope and land form: Nearly level
Drainage: Imperfectly
Parent material: Thick beds of acid sands

Horizon and Beltsville Lab. No.	
531100	0 to 9 inches. Very dark gray (10YR 3/1) to black (10YR 2/1) nearly loose fine sand containing a small quantity of light gray fine sand; numerous small roots; abrupt wavy boundary.
531101	9 to 12 inches. Very dark gray (10YR 3/1) to very dark brown (10YR 2/2) incipient pan of organic matter and fine sand; small percent of roots; laminated structure; abrupt wavy boundary.
531102	12 to 15 inches. Very dark grayish brown (10YR 3/2) to dark brown (7.5YR 3/2) weakly cemented pan; small number of roots; gradual, irregular boundary.
531103	15 to 24 inches. Dark grayish brown (10YR 4/2) nearly loose fine sand with common, medium, faint and distinct gray and light gray stains; a few medium size roots; gradual, irregular boundary.
531104	24 to 40 inches. Light gray (2.5Y 7/2) loose fine sand with a very few, medium, distinct yellow mottles; a few roots in upper part of layer; gradual irregular boundary.
531105	40 to 50 inches. White (2.5Y 8/2) loose fine sand splotched light gray. (Layer saturated when sample taken.)

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Ona fine sand SOIL Nos. S53Fla-58-17 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531150-531156

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: (0.05-0.02)	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 - 19	19 - 76
		Pct. of < 2 mm														Pct.	Pct. of < 76mm	
0-10			4.2	1.0	0.5	7.7	25.6	55.3	5.7		3.4	32.1				0		
10-14			2.6	0.9	1.5	9.8	22.9	54.7	7.6		2.0	36.0				0		
14-17			3.6	3.8	0.6	6.8	19.8	55.6	9.8		2.7	41.0				0		
17-20			3.0	1.6	0.8	7.3	20.9	56.5	9.9		2.2	40.8				0		
20-26			2.7	1.7	0.6	7.1	20.2	57.7	10.0		2.1	41.4				0		
26-40			2.5	2.4	0.5	6.6	19.5	57.5	11.0		2.1	43.1				0		
40-50			2.4	3.4	0.6	6.6	19.3	57.7	10.0		1.2	43.4				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4O1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-10	1.32																	4.6
10-14	2.49																	4.7
14-17	2.03																	5.2
17-20	0.59																	5.4
20-26	0.28																	5.6
26-40	0.16																	5.4
40-50	0.10																	5.0

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-10	0.7	0.4	tr.	tr.		6.2	7.3										15	
10-14	0.3	0.4	tr.	0.1		4.0	4.8										17	
14-17	0.2	0.2	tr.	tr.		2.4	2.8										14	
17-20	0.5	0.1	tr.	tr.		6.8	7.4										8	
20-26	0.3	-	tr.	tr.		3.3	3.6										8	
26-40	-	-	tr.	tr.		2.1	2.1										-	
40-50	0.2	-	tr.	tr.		2.7	2.9										7	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Ona fine sand
Soil No.: S53Fla-58-17
Location: Sarasota County, Florida. NW 1/4 S2 T37S R18E, Map 2D44
Vegetation and land use: Saw palmetto, runner oak, myrtle, pine, gallberry, and wiregrass
Slope and land form: Nearly level
Drainage: Imperfectly
Parent material: Thick beds of acid sands

Horizon and Beltsville Lab. No.	
531150	0 to 10 inches. Very dark gray (10YR 3/1) to dark gray (10YR 4/1) nearly loose fine sand, containing a moderate percent of light gray fine sand; matted together by many fine roots; abrupt, wavy boundary.
531151	10 to 14 inches. Very dark gray (10YR 3/1) or black (10YR 2/1) weakly to firmly cemented pan of organic matter and fine sand; cementation is influenced by moisture conditions; has laminated structures; strongly acid; abrupt, wavy boundary.
531152	14 to 17 inches. Dark reddish brown (5YR 3/2) to very dark grayish brown (10YR 3/2) firmly cemented pan, abrupt, wavy boundary.
531153	17 to 20 inches. Dark brown (7.5YR 4/2) nearly loose fine sand with common, small, faint yellowish brown, very dark brown, and light grayish brown mottles; strongly acid; gradual wavy boundary.
531154	20 to 26 inches. Pale brown (10YR 6/3) or light gray (10YR 7/2) loose fine sand with common, medium, faint, yellow, brown and rust colored mottles; occasional root; gradual, irregular boundary.
531155	26 to 40 inches. Light gray (10YR 7/2) loose fine sand with many, medium to coarse, distinct yellow, pale brown and rust colored mottles; gradual irregular boundary.
531156	40 to 50 inches. White (10YR 8/1) loose fine sand with few, small, faint, light gray mottles.

SCS-421
10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Orangeburg fine sandy loam SOIL Nos. S53Fla-17-12 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53872 - 53876

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand Very coarse (2–1)	Sand Coarse (1–0.5)	Sand Medium (0.5–0.25)	Sand Fine (0.25–0.1)	Sand Very fine (0.1–0.05)	Silt (0.05–0.02)	Silt Int. III (0.02–0.002)	Int II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct.	2 – 19	19 – 76
		Size class and particle diameter (mm) 3A1 — Pct. of < 2 mm															Pct. of < 76mm	
0-6	Ap		20.1	9.9	2.2	14.0	15.4	26.5	11.9		11.1	34.6				tr.		
6-16	B1		19.5	17.3	1.5	11.8	13.9	24.6	11.4		10.9	32.8				tr.		
16-36	B2		18.4	23.9	1.7	10.7	12.1	22.4	10.8		10.4	30.6				3		
36-54	B3		11.7	35.3	2.4	10.8	11.4	19.4	9.0		6.2	24.5				3		
54-62	C		11.5	31.4	2.9	12.9	12.5	20.0	8.8		6.3	24.0				4		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density g/cc	Bulk density 4A1e ⅓ bar g/cc	Bulk density 4A1h Oven dry g/cc	4D1 COLE	Water content Pct	Water content 4B1c ⅓ bar Pct	Water content 4B2 15 bar Pct.		4C1 WRD in/in	pH 8C1c (1:1) KCl	pH 8C1a (1:1) H_2O
0-6	1.36																5.4
6-16	0.22																5.0
16-36	0.21																4.8
36-54	0.06																5.0
54-62	0.10																4.8

Depth (In.)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC 5A3a Sum cations		6G1d Ext. Al			Ratios to clay CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g.																	
0-6	1.7	0.4	0.1	0.1		5.2	7.5										31	
6-16	0.9	0.3	tr.	tr.		4.4	5.6										21	
16-36	0.8	0.4	tr.	0.1		4.4	5.7										23	
36-54	-	0.4	tr.	tr.		5.3	5.7										7	
54-62	-	0.3	tr.	tr.		5.2	5.5										5	

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt.	Chl	Vm.	Mi.	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Orangeburg fine sandy loam
Soil No.: S53Fla-17-12
Location: Escambia County, Florida. SE 1/4 of NW 1/4 Sec. 33 T3N R31W.
Vegetation and land use: Improved pasture.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53872	0 to 6 inches. Pale brown (10YR 6/3) dry, friable; weak fine crumb; fine sandy loam with some iron concretions.
B1 53873	6 to 16 inches. Reddish yellow (7.5YR 7/8) friable; weak medium crumb to weak medium subangular blocky; heavy fine sandy loam with a few iron concretions.
B2 53874	16 to 36 inches. Yellowish red (5YR 5/8) friable to firm; moderate subangular blocky; fine sandy clay loam with a few iron concretions; contains a few fine faint mottles of reddish yellow in lower part.
B3 53875	36 to 54 inches. Yellowish red (5YR 5/8) commonly mottled with a few faint areas of reddish yellow (7.5YR 6/8); firm; medium moderate subangular blocky; fine sandy clay loam with a few soft iron concretions.
C 53876	54 to 62 inches. Distinctly mottled with common medium areas of yellowish red (5YR 5/8), brownish yellow (10YR 6/8) and red (2.5YR 4/8); slightly sticky when wet but not so firm as above; fine sandy clay loam with some soft iron concretions.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Orangeburg fine sandy loam SOIL Nos. 853Fla-17-29 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531634 - 531638

Depth (in.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2	2-19	19-76
		Pct. of < 2 mm														Pct.	Pct. of < 76mm	
0-6	Ap		23.4	6.8	0.3	6.2	18.4	30.3	14.6		10.6	42.6				0		
6-20	B1		21.3	27.1	0.2	4.7	13.2	22.3	11.2		10.9	32.8				0		
20-32	B2		26.1	18.0	0.2	5.1	14.2	24.1	12.3		14.9	36.0				0		
32-56	B3		19.6	24.6	0.3	5.0	15.0	24.0	11.5		9.5	33.4				0		
56-72	C		16.2	26.8	0.2	5.9	16.1	23.2	11.6		7.6	31.3				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in		pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-6	0.77																	5.4
6-20	0.17																	4.8
20-32	0.21																	4.8
32-56	0.09																	4.8
56-72	0.10																	4.9

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-6	1.3	0.4	0.1	tr.		5.1	6.9										26	
6-20	1.0	0.5	0.2	tr.		6.0	7.7										22	
20-32	0.5	0.3	0.2	tr.		4.5	5.5										18	
32-56	0.4	0.3	0.1	tr.		5.3	6.1										13	
56-72	0.1	0.2	tr.	tr.		4.8	5.1										6	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi.	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Orangeburg fine sandy loam
Soil No.: S53Fla-17-29
Location: Escambia County, Florida. NW 1/4 of NE 1/4 Sec. 38 T5N R32W.
Vegetation and land use: Cultivated field near large pecan tree and homesite.
Sampled by and date: J. H. Walker, Victor W. Carlisle and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
Ap 531634	0 to 6 inches. Brown (10YR 5/3) friable; weak medium crumb; fine sandy loam; contains very little organic matter.
B1 531635	6 to 20 inches. Reddish yellow (7.5YR 6/8) friable; moderate medium crumb; heavy fine sandy loam; many fine roots in upper part but very little organic stain.
B2 531636	20 to 32 inches. Yellowish red (5YR 5/8) friable to firm; weak medium subangular blocky; fine sandy clay loam.
B3 531637	32 to 56 inches. Red (2.5YR 5/8) distinctly mottled with common medium areas of yellowish red (5YR 5/8) and red (10R 5/8) firm; weak medium subangular blocky; fine sandy clay loam.
C 531638	56 to 72 inches. Distinctly mottled with medium areas of red (10R 5/8), brownish yellow (10YR 6/6) and strong brown (7.5YR 5/8) firm; fine sandy clay loam.

SCS-421
10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Paola fine sand SOIL Nos. S53Fla-58-1 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531059-531064

Depth (in)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2-19	19-76
		Pct. of < 2 mm														Pct of < 76mm		
0-1			0.2	1.2	0.6	15.7	25.0	56.4	0.9		-	20.9				0		
1-12			0.3	0.8	0.4	4.6	16.8	74.7	2.4		0.3	34.7				0		
12-18			-	2.0	0.4	4.1	16.0	74.8	2.7		-	38.7				0		
18-25			0.1	2.0	0.5	3.6	15.2	75.4	3.2		0.1	41.5				0		
25-64			-	1.7	0.5	4.4	14.8	75.2	3.4		-	41.8				0		
64-70			-	1.7	1.0	4.7	14.2	75.0	3.4		-	41.3				0		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: 4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-1	1.04															5.4
1-12	0.06															6.4
12-18	0.12															6.0
18-25	0.15															5.8
25-64	0.05															6.1
64-70	0.06															6.0

Depth (in)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-1	1.5	0.1	tr.	tr.		2.5	4.1										39	
1-12	0.3	-	-	tr.		1.3	1.6										19	
12-18	0.5	0.1	-	tr.		1.3	1.9										32	
18-25	0.4	0.1	-	tr.		2.8	3.3										15	
25-64	0.1	-	-	tr.		1.3	1.4										7	
64-70	0.5	0.1	-	tr.		1.2	1.8										33	

Depth (in)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int = Interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Paola fine sand
Soil No.: S53Fla-58-1
Location: Sarasota County, Florida. SW 1/4 S28 T39S R18E, Map 2D56
Vegetation and land use: Dwarf live oak, rosemary, runner oak, prickly pear cactus, and wiregrass; also clusters of saw palmetto
Slope and land form: Nearly level
Drainage: Excessive
Parent material: Thick beds of loose, acid sands

Horizon and Beltsville Lab. No.	
531059	0 to 1 inch. Gray (N 5/) to dark gray (N 4/) loose fine sand mixed with some light gray fine sand which imparts a salt and pepper coloration to layer; clear, wavy boundary; strongly acid; numerous fine roots.
531060	1 to 12 inches. White (N 8/) loose fine sand; abrupt irregular boundary; strongly acid; numerous fine roots.
531061	12 to 18 inches. Pale yellow (5Y 8/3) loose fine sand with some grains of white and yellow fine sand; gradual, irregular boundary; moderate number of large and small roots; strongly acid.
531062	18 to 25 inches. Brownish yellow (10YR 6/6) to light yellowish brown (10YR 6/4) nearly loose fine sand containing small lumps of slightly coherent material having yellowish brown coloration; gradual irregular boundary; some large and small roots; strongly acid.
531063	25 to 64 inches. Pale yellow (2.5Y 7/4) loose fine sand containing a small percent of white and yellow fine sand; diffused, irregular boundary; a few roots in upper part of layer.
531064	64 to 70 inches. Pale yellow loose fine sand containing common, coarse, distinct and prominent yellowish brown, gray and rust colored mottles.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Paola sand SOIL Nos. 853Fla-17-15 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53889 - 53894

Depth (in.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-4			0.7	0.3	0.3	32.8	47.9	17.9	0.1		0.7	1.1				0		
4-16			0.3	0.1	0.2	28.0	54.9	16.5	-		0.5	0.5				0		
16-30			0.4	1.5	-	19.4	56.7	22.0	-		0.3	1.1				0		
30-60			0.1	0.8	0.2	21.9	56.6	20.4	-		0.1	0.9				0		
60-72			0.1	0.6	0.1	17.2	58.4	23.6	-		0.2	0.5				0		
72-96			-	0.8	0.1	26.3	60.4	12.4	-		0.1	0.2				0		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	0.80																	4.9
4-16	0.06																	6.0
16-30	0.03																	5.2
30-60	0.03																	5.5
60-72	0.01																	5.8
72-96	-																	5.8

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-4	0.3	0.2	0.1	tr.		2.3	2.9										21	
4-16	-	0.1	0.1	tr.		0.3	0.5										40	
16-30	0.2	0.2	tr.	tr.		0.3	0.7										57	
30-60	-	0.2	tr.	tr.		0.6	0.8										25	
60-72	-	0.1	tr.	tr.		0.4	0.5										20	
72-96	0.1	0.1	tr.	tr.		0.4	0.6										33	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Paola sand
Soil No.: S53Fla-17-15
Location: Escambia County, Florida. SW 1/4 of NE 1/4 Sec. 23 T3S R31W.
Vegetation and land use: Beach.
Slope and land form: 2 to 5 percent.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
53889	0 to 4 inches. White (10YR 8/2) dry, mixed with a little organic matter which gives a salt and pepper appearance.
53890	4 to 16 inches. White (10YR 8/1) dry, loose fine sand with very little organic matter.
53891	16 to 30 inches. Yellow (10YR 7/8) dry, loose fine sand.
53892	30 to 60 inches. Yellow (10YR 8/6) dry, loose fine sand.
53893	60 to 72 inches. Yellow (10YR 8/6) dry, loose fine sand.
53894	72 to 96 inches. Yellow (10YR 8/6) dry, loose fine sand.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Paola sand SOIL Nos. S53Fla-17-19 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 53905 - 53910

Depth (In)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: (0.05–0.02)	Int III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 – 19	19 – 76
		Pct of < 2 mm														Pct of < 76mm		
0-6			2.4	1.5	0.6	24.8	38.6	30.8	1.3		2.1	11.1				0		
6-18			1.4	1.1	0.8	22.1	39.7	33.7	1.2		1.4	11.2				0		
18-40			3.2	2.7	0.4	21.1	38.5	32.9	1.2		2.6	11.7				0		
40-74			2.8	2.7	1.2	23.2	38.4	30.8	0.9		2.7	9.9				0		
74-108			0.1	2.0	2.1	24.5	39.7	31.0	0.6		0.4	8.8				0		
108-144			-	1.2	0.5	20.8	46.7	30.5	0.3		0.3	5.9				0		

Depth (In)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-6	0.31																	5.0
6-18	0.16																	5.2
18-40	0.10																	5.2
40-74	0.01																	5.2
74-108	0.01																	5.6
108-144	-																	5.8

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-6	0.2	0.1	tr.	tr.		1.7	2.0										15	
6-18	-	0.1	tr.	tr.		0.8	0.9										11	
18-40	-	-	tr.	tr.		1.8	1.8										-	
40-74	-	-	tr.	tr.		1.7	1.7										-	
74-108	0.2	0.1	tr.	tr.		0.9	1.2										25	
108-144	0.2	0.2	tr.	tr.		0.6	1.0										40	

Depth (In)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi.	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Paola sand
Soil No.: S53Fla-17-19
Location: Escambia County, Florida. Just west of Kee's Bayou along paved road.
Vegetation and land use: Recently cleared of hardwood trees, chiefly live oak.
Slope and land form: 2 to 5 percent.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
53905	0 to 6 inches. White (10YR 8/2) dry, loose fine sand mixed with a little organic matter and many roots.
53906	6 to 18 inches. White (10YR 8/1) dry, loose fine sand with very little organic matter.
53907	18 to 40 inches. Yellow (10YR 7/8) dry, loose fine sand with only a few roots.
53908	40 to 74 inches. Yellow (10YR 7/8) loose fine sand.
53909	74 to 108 inches. Reddish yellow (7.5YR 7/8) loose fine sand.
53910	108 to 144 inches. Yellow (2.5Y 8/6) loose fine sand.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Paola fine sand SOIL Nos. S53Fla-58-4 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531076 - 531081

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand: Very coarse (2–1)	Sand: Coarse (1–0.5)	Sand: Medium (0.5–0.25)	Sand: Fine (0.25–0.1)	Sand: Very fine (0.1–0.05)	Silt: 0.05–0.02	Silt: Int. III (0.02–0.002)	Int II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 – 19 (Pct of < 76mm)	19 – 76 (Pct of < 76mm)
		Pct of < 2 mm																
0-2			1.6	1.6	0.6	4.8	16.0	72.1	3.3		1.0	41.9				0		
2-10			0.6	0.2	0.8	3.4	11.9	79.2	3.9		0.6	50.2				0		
10-18			0.9	1.2	0.3	2.9	10.2	79.5	5.0		0.5	55.0				0		
18-24			1.1	1.3	0.4	2.8	9.8	78.9	5.7		0.6	56.7				0		
24-52			1.0	1.4	0.6	3.2	10.7	77.7	5.4		0.4	55.0				0		
52-60			0.8	1.1	0.9	3.8	9.3	78.3	5.8		0.5	58.1				0		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	Water content: 4B1c ⅓ bar Pct	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-2	2.31																5.2
2-10	0.11																5.8
10-18	0.12																5.6
18-24	0.11																5.8
24-52	0.06																6.0
52-60	0.03																6.1

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext. Al			Ratios to clay: CEC Sum	Ext Iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-2	4.4	0.9	0.2	0.1		11.6	17.2										32	
2-10	0.5	-	-	tr.		0.4	0.9										56	
10-18	0.3	0.1	-	tr.		1.2	1.6										25	
18-24	0.4	0.1	tr.	tr.		1.8	2.3										22	
24-52	0.7	0.2	tr.	tr.		0.6	1.5										60	
52-60	0.3	0.3	tr.	tr.		0.5	1.1										54	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi	Int.	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Paola fine sand
Soil No.: S53Fla-58-4
Location: Sarasota County, Florida. SE 1/4 S10 T38S R18E, Map 2D27.
Vegetation and land use: Dwarf live oak, rosemary, runner oak, prickly pear cactus and wiregrass; also scattered clusters of saw palmetto
Slope and land form: Nearly level
Drainage: Excessive
Parent material: Thick beds of loose, acid sands

Horizon and Beltsville Lab. No.	
531076	0 to 2 inches. Very dark gray (N 3/) nearly loose fine sand containing small quantities of light gray fine sands matted together with small roots; abrupt wavy boundary.
531077	2 to 10 inches. White (10YR 8/1) incoherent fine sand with small splotches of light gray fine sand; abrupt wavy boundary.
531078	10 to 18 inches. Pale yellow (2.5Y 8/4) loose fine sand with a few fine, faint mottles of white and yellow; diffused, irregular boundary, numerous roots.
531079	18 to 24 inches. Yellow (10YR 8/6) incoherent fine sand interspersed with a few, slightly coherent medium lumps of fine sand which crush easily; gradual, irregular boundary; moderate number of roots.
531080	24 to 52 inches. Pale yellow (2.5Y 8/4) to pale brown or very pale brown (10YR 8/3) incoherent fine sand containing a small percent of white fine sand; moderate number of roots; gradual, irregular boundary.
531081	52 to 60 inches. Pale yellow (2.5Y 8/4) incoherent fine sand with common, coarse, distinct light gray mottles; a few roots.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Parkwood fine sand SOIL Nos. S53Fla-58-22 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531178 - 531181

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand Very coarse (2–1)	Sand Coarse (1–0.5)	Sand Medium (0.5–0.25)	Sand Fine (0.25–0.1)	Sand Very fine (0.1–0.05)	Silt 0.05–0.02	Silt Int. III (0.02–0.002)	Silt Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct.	2 – 19	19 – 76
		Pct. of < 2 mm														Pct.	Pct. of < 76mm	
0-3			3.7	5.6	1.5	13.7	20.1	47.2	8.2		1.6	35.6				0		
3-6			1.3	2.0	0.2	3.0	9.0	57.4	27.1		0.4	71.2				0		
6-25			1.4	5.2	0.5	6.6	13.9	60.6	11.8		0.6	51.5				0		
25-50			9.4	15.9	4.1	6.9	8.3	38.8	16.6		7.1	47.0				6		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext iron as Fe Pct.	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	3.53																	5.8
3-6	0.51																	6.9
6-25	0.35																	7.1
25-50	0.20																	7.9

Depth (In.)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC 5A3a Sum cations		6G1d Ext Al			Ratios to clay CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-3	14.8	2.5	0.4	0.2		7.6	25.5										70	
3-6	3.2	0.5	0.2	0.1		0.9	4.9										82	
6-25	5.7	0.2	0.2	tr.		0.9	7.0										87	
25-50	a																	

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt	Chl.	Vm.	Mi.	Int.	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Calcareous

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Parkwood fine sand
Soil No.: S53Fla-58-22
Location: Sarasota County, Florida. NW 1/4 S35 T37S R19E, Map 2D180.
Vegetation and land use: Hammock cover of cabbage palm, water and live oaks, pines, vines, briars, and a few large saw palmettos.
Slope and land form: Nearly level.
Drainage: Somewhat poorly drained, having low surface runoff.
Permeability: Slow to moderate.
Parent material: Very thin beds of sands over marl.

Horizon and Beltsville Lab. No.	
531178	0 to 3 inches. Very dark gray (10YR 3/1) nearly loose fine sand with a small percent of light gray fine sand, matted by a very heavy growth of small roots; neutral; abrupt, wavy boundary.
531179	3 to 6 inches. Light gray (10YR 7/1) loose, fine sand with common, fine and medium, distinct brown, yellow and rust colored mottles; neutral; abrupt, wavy boundary.
531180	6 to 25 inches. Dark brownish gray to grayish brown nearly loose fine sand, with some loamy fine sand, and small lumps of fine sandy loam; abrupt, wavy boundary.
531181	25 to 50 inches. White marly material, interspersed with dark gray projections from overlying layer.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Parkwood fine sand SOIL Nos. 853Fla-58-28 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531210 - 531214

Depth (In.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: 0.05–0.02	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2 – 19	19 – 76
		Pct. of < 2 mm														Pct	Pct of < 76mm	
0-4	a		3.4	5.5	2.4	38.0	19.2	26.8	4.7		1.3	22.1				0		
4-14			1.5	3.5	0.6	4.5	10.5	56.7	22.7		0.6	65.7				0		
14-22			1.5	5.3	0.4	4.1	10.1	56.7	21.9		0.6	64.7				0		
22-26			2.4	5.9	1.1	5.8	12.3	59.4	13.1		1.2	54.3				0		
26-48			8.1	11.5	2.9	7.0	10.1	47.7	12.7		6.3	47.4				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: 4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	4.40																5.2
4-14	0.45																6.1
14-22	0.18																7.1
22-26	0.13																8.0
26-48	0.12																8.2

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-4	13.1	1.0	0.6	0.2		8.3	23.2										64	
4-14	3.4	0.6	0.2	tr.		0.9	5.1										82	
14-22	5.3	0.6	0.2	tr.		0.1	6.2										95	
22-26	b																	
26-48	b																	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi	Int	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Undecomposed organic matter in sand fractions.

b Calcareous

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz = quartz, Kl = Kaolinite

Relative amounts blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Parkwood fine sand.
Soil No.: S53Fla-58-28
Location: Sarasota County, Florida. NW 1/4 S23 T37S R19E, Map 2D178.
Vegetation and land use: Hammock cover of cabbage palm, water and live oaks, pines, vines, briars, and a few large saw palmettos.
Slope and land form: Nearly level.
Drainage: Poorly drained, having low surface runoff.
Permeability: Slow to moderate.
Parent material: Very thin beds of sands over marl.

Horizon and Beltsville Lab. No.	
531210	0 to 4 inches. Very dark gray (10YR 3/1) nearly loose fine sand with a small conspicuous quantity of light gray fine sand; heavy growth of small roots; abrupt, wavy boundary.
531211	4 to 14 inches. Grayish brown (10YR 5/2) to dark grayish brown (2.5Y 4/2) nearly loose fine sand with common, small, faint brown, gray and rust colored stains; large number of small and medium roots; neutral; gradual, irregular boundary.
531212	14 to 22 inches. Light grayish brown (10YR 6/2) to light brownish gray (2.5Y 6/2) very friable loamy fine sand with common, small and medium, faint, gray, yellow and rust colored mottles; moderate number of roots; neutral gradual, irregular boundary.
531213	22 to 26 inches. Gray (10YR 6/1 - 5/1) very friable fine sand to fine sandy loam with common, small, faint, yellow, light gray and brown mottles; neutral; abrupt, wavy boundary.
531214	26 to 48 inches. White marly material containing fingers of gray material extending from layer above; a few, medium, distinct yellow mottles; upper part of layer strongly cemented locally.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Placid fine sand SOIL Nos. S53Fla-58-5 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531082 - 531086

Depth (In.)	Horizon	1B1b Total: Sand (2-0 05)	Total: Silt (0.05-0.002)	Total: Clay (< 0 002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0 5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: 0 05-0 02	Silt: Int. III (0.02-0.002)	Silt: Int. II (0 2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 - 19 (Pct. of < 76mm)	19-76 (Pct. of < 76mm)
		Size class and particle diameter (mm) 3A1 — Pct of < 2 mm																
0-10			2.5	2.4	2.3	60.7	11.1	19.3	1.7		1.5	13.8				0		
10-16			3.2	2.4	1.5	12.9	30.1	45.6	4.3		1.9	32.4				0		
16-22			3.2	2.2	1.6	10.2	26.8	47.4	8.6		1.8	39.1				0		
22-30			3.4	3.0	1.9	9.5	26.0	47.8	8.4		1.8	39.3				0		
30-48			3.4	2.7	1.6	8.6	24.3	47.4	12.0		1.7	43.2				0		

Depth (In)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	Water content: 4B1c ⅓ bar Pct	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1.1) H_2O
0-10	1.44																5.3
10-16	0.72																5.3
16-22	0.26																5.4
22-30	0.14																5.6
30-48	0.08																5.6

Depth (In)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al		Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																
0-10	0.6	-	0.7	tr.		8.3	9.6									14	
10-16	0.3	0.3	tr.	tr.		5.8	6.4									9	
16-22	0.3	-	tr.	tr.		3.1	3.4									9	
22-30	0.3	0.2	tr.	tr.		3.0	3.5									14	
30-48	-	0.1	tr.	tr.		2.1	2.2									4	

Depth (In)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm.	Mi	Int.	Qtz.	Kl	Gibbsite
	7A2 X-ray						7A3	

Mt = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts. blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Placid fine sand
Soil No.: S53Fla-58-5
Location: Sarasota County, Florida. NE 1/4 S26 T36S R20E, Map 3D9.
Vegetation and land use: Pine, myrtle, gallberry, wiregrass, saw palmetto, and small runner oak.
Slope and land form: Nearly level.
Drainage: Imperfectly drained.
Parent material: Moderately thick beds of sands.

Horizon and Beltsville Lab. No.	
531082	0 to 10 inches. Very dark gray (N 3/) nearly loose fine sand mixed with a small percent of light gray fine sand; numerous small roots; clear wavy boundary.
531083	10 to 16 inches. Dark gray (10YR 4/1) loose fine sand; numerous small roots; gradual, irregular boundary.
531084	16 to 22 inches. Gray (10YR 5/1) loose fine sand with narrow fingers of dark gray fine sand projecting from layer above; small number of roots; gradual, irregular boundary.
531085	22 to 30 inches. Light gray (10YR 6/1) to light brownish gray (2.5Y 6/2) loose fine sand; occasional roots; gradual irregular boundary.
531086	30 to 48 inches. Light gray (10YR 7/2) to white (10YR 8/2) nearly loose fine sand with a few, medium and coarse, faint to distinct yellow mottles.

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10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Placid fine sand SOIL Nos. 853Fla-58-10 LOCATION: Sarasota County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531110 - 531114

Depth (In.)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0.05-0.002)	Clay (< 0 002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0 25-0 1)	Very fine (0 1-0 05)	Silt: 0.05-0 02	Int III (0 02-0 002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2 - 19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-5			2.4	1.5	2.6[a]	5.7	16.7	58.1	13.0		2.0	48.6				0		
5-13			3.2	2.0	0.5	4.9	16.9	56.6	15.9		2.4	51.7				0		
13-18			3.3	2.1	0.3	4.7	16.2	56.1	17.3		2.5	53.3				0		
18-25			2.6	2.2	0.5	4.6	15.8	57.1	17.2		2.0	54.3				0		
25-50			2.7	2.4	0.5	4.6	15.6	56.8	17.4		1.9	54.1				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	2.72																	4.5
5-13	1.23																	5.4
13-18	0.67																	5.5
18-25	0.13																	5.5
25-50	0.09																	5.3

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct
	meq/100 g																	
0-5	0.6	0.8	tr.	tr.		13.6	15.0										9	
5-13	-	0.1	tr.	tr.		7.9	8.0										1	
13-18	-	-	tr.	tr.		4.9	4.9										-	
18-25	-	0.2	tr.	tr.		1.6	1.8										11	
25-50	-	-	tr.	tr.		1.3	1.3										-	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

a Organic matter in very coarse sand.

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Placid fine sand
Soil No.: S53Fla-58-10
Location: Sarasota County, Florida. NE 1/4 S16 T37S R19E, Map 2D105.
Vegetation and land use: Pine, myrtle, gallberry, wiregrass, saw palmetto, and small runner oak.
Slope and land form: Nearly level.
Drainage: Imperfectly drained.
Parent material: Moderately thick beds of sands.

Horizon and Beltsville Lab. No.	
531110	0 to 5 inches. Gray (N 5/) and dark gray (N 4/) loose fine sand matted together with large number of small roots; abrupt wavy boundary.
531111	5 to 13 inches. Very dark gray (N 3/) to black (10YR 2/1) nearly loose fine sand with large number of small roots; clear irregular boundary.
531112	13 to 18 inches. Dark gray (10YR 4/1) to very dark grayish brown (10YR 3/2) loose fine sand with narrow fingers of material projecting from layer above; common, medium, faint to distinct gray and yellow mottles; moderate percent of small roots; clear, irregular boundary.
531113	18 to 25 inches. Light gray (2.5Y 7/2) to light brownish gray loose fine sand with common, medium, distinct mottles of yellow and gray; diffused irregular boundary.
531114	25 to 50 inches. Light gray (10YR 7/2) to white (2.5Y 8/2) loose fine sand with common, medium, distinct yellow mottles.

SCS-421
10-64 (Rev 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Red Bay fine sandy loam SOIL Nos. S53Fla-17-1 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53803 - 53810

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt (0.05-0.02)	Silt: Int. III (0.02-0.002)	Silt: Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2-19	19-76
		Pct. of < 2 mm															Pct. of < 76mm	
0-5	A1		22.8	17.2	0.4	5.7	11.5	32.9	9.5		15.2	35.0				0		
5-9	A2		23.1	22.0	0.4	4.9	10.2	30.2	9.2		15.9	32.6				0		
9-12	A3		22.3	24.0	0.2	4.4	9.6	30.0	9.5		14.1	34.2				0		
12-17	B1		20.7	26.6	0.6	4.5	8.9	29.0	9.7		13.1	33.4				0		
17-30	B2		15.5	33.2	0.7	4.3	9.0	28.2	9.1		9.2	31.1				0		
30-48	B2		12.7	34.3	0.5	4.3	9.3	29.6	9.3		7.4	30.7				0		
48-65	B3		12.3	32.1	0.6	4.6	9.7	30.9	9.8		7.0	32.0				0		
65-75	C		12.0	31.1	0.5	4.4	9.5	32.6	9.9		6.6	33.0				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	1.55																5.0
5-9	0.65																5.0
9-12	0.40																4.8
12-17	0.23																4.8
17-30	0.10																5.0
30-48	0.06																4.8
48-65	0.02																4.8
65-75	0.02																4.6

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	0.9	0.7	0.1	0.2		9.9	11.8										16	
5-9	0.4	0.6	tr.	0.1		7.4	8.5										13	
9-12	0.4	0.6	0.1	0.1		6.7	7.9										15	
12-17	0.5	0.8	0.1	0.1		5.9	7.4										20	
17-30	0.2	0.4	0.1	0.1		6.1	6.9										12	
30-48	0.2	0.3	tr.	tr.		5.5	6.0										8	
48-65	0.5	0.1	tr.	tr.		5.3	5.9										10	
65-75	0.3	0.2	tr.	tr.		5.9	6.4										8	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl	Vm	Mi.	Int.	Qtz.	Kl	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Red Bay fine sandy loam
Soil No.: S53Fla-17-1
Location: Escambia County, Florida. NE 1/4 of NW 1/4 Sec. 34 T5N R32W.
Vegetation and land use: Hardwood forest.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53803	0 to 5 inches. Brown to dark brown (10YR 4/3) dry, friable; weak fine crumb; fine sandy loam with small amount of well-decayed organic matter.
A2 53804	5 to 9 inches. Yellowish red (5YR 4/6) dry, friable; moderate fine crumb; fine sandy loam with very little organic matter but many live roots and some pores.
A3 53805	9 to 12 inches. Dark red (2.5YR 3/6) dry, friable; moderate fine crumb; fine sandy loam, slightly porous, with a few fine roots.
B1 53806	12 to 17 inches. Red (2.5YR 4/6) friable; moderate fine crumb; heavy fine sandy loam to fine sandy clay loam.
B2 53807	17 to 30 inches. Red (2.5YR 4/6) friable; moderate medium subangular blocky; fine sandy clay loam.
B2 53808	30 to 48 inches. Red (2.5YR 4/8) firm; moderate medium subangular blocky; heavy fine sandy clay loam.
B3 53809	48 to 65 inches. Red (2.5YR 5/6) faintly mottled with a few medium areas of pale yellow (2.5Y 8/4); weak fine subangular blocky; firm fine sandy clay loam.
C 53810	65 to 75 inches. Red (2.5YR 5/8) prominently mottled with moderate medium areas of pale yellow (2.5Y 8/4) firm to friable; light fine sandy clay loam.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Red Bay fine sandy loam SOIL Nos.: 853Fla-17-8 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 53847 - 53852

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-5	A1		20.3	11.0	4.8	25.4	18.3	15.4	4.8		13.6	17.6				tr.		
5-10	A2		20.2	16.1	3.4	23.1	17.2	15.1	4.9		13.9	17.0				tr.		
10-18	B1		20.4	19.4	3.6	20.4	16.2	15.0	5.0		13.8	17.8				tr.		
18-32	B1		15.9	30.4	4.5	18.8	14.1	12.5	3.8		10.8	14.0				tr.		
32-52	B2		12.7	29.6	4.2	20.1	15.5	13.8	4.1		8.4	13.9				tr.		
52-64+	B2		11.1	29.2	4.3	20.3	16.2	14.3	4.6		7.3	14.2				tr.		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	2.20																	5.1
5-10	0.63																	5.2
10-18	0.22																	5.3
18-32	0.11																	4.9
32-52	0.07																	5.0
52-64+	0.07																	4.9

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	0.9	0.6	tr.	0.1		9.1	10.7										15	
5-10	0.3	0.3	tr.	tr.		5.0	5.6										11	
10-18	1.1	0.6	tr.	tr.		4.3	6.0										28	
18-32	0.5	0.7	tr.	tr.		5.0	6.2										19	
32-52	0.5	0.4	tr.	tr.		4.6	5.5										16	
52-64+	0.2	0.1	tr.	tr.		4.3	4.6										6	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Red Bay fine sandy loam
Soil No.: S53Fla-17-8
Location: Escambia County, Florida. NW 1/4 of SE 1/4 Sec. 15 T4N R32W.
Vegetation and land use: Cutover pine-hardwood forest.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53847	0 to 5 inches. Dark grayish brown (10YR 4/2) dry, friable; weak fine crumb; fine sandy loam with a fairly good amount of organic matter.
A2 53848	5 to 10 inches. Yellowish red (5YR 4/6) dry, friable; moderate fine crumb; fine sandy loam with small amount of organic matter.
B1 53849	10 to 18 inches. Red (2.5YR 4/6) dry, friable to hard; moderate fine crumb and weak medium subangular blocky; fine sandy loam.
B1 53850	18 to 32 inches. Red (2.5YR 4/8) dry, moderate medium subangular blocky crushing to moderate fine crumb; fine sandy loam.
B2 53851	32 to 52 inches. Red (10R 4/6) firm; moderate medium subangular blocky crushing to moderate medium and fine crumb; fine sandy loam to fine sandy clay loam.
B2 53852	52 to 64 inches plus. Red (10R 4/6) firm; moderate medium subangular blocky crushing to moderate fine and medium crumb; fine sandy loam to fine sandy clay loam.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Red Bay fine sandy loam SOIL Nos. 853Fla.-17-9 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53853 - 53858

Depth (in.)	Horizon	1B1b Total: Sand (2-0 05)	Silt (0 05-0.002)	Clay (< 0.002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0 25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0 02-0 002)	Int. II (0 2-0 02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2 - 19	19-76
		Pct. of < 2 mm														Pct	Pct of < 76mm	
0-10	A1		17.4	10.6	5.6	22.4	14.8	20.8	8.4		11.0	26.2				tr.		
10-16	A3		17.6	15.8	4.2	18.6	13.8	21.2	8.8		11.1	27.1				tr.		
16-24	B1		16.8	20.1	4.7	18.4	12.2	19.3	8.5		11.0	25.2				tr.		
24-40	B2		13.1	28.8	5.7	17.7	11.2	16.4	7.1		8.7	20.8				tr.		
40-52	B2		10.4	29.1	7.2	18.4	11.2	16.4	7.3		6.7	20.3				3		
52-74+	B3		10.4	22.0	5.6	19.9	13.7	20.0	8.4		5.9	24.0				tr.		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-10	1.50																	4.8
10-16	0.42																	5.0
16-24	0.20																	5.0
24-40	0.14																	4.8
40-52	0.08																	4.9
52-74+	0.04																	4.9

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-10	0.9	0.3	tr.	0.1		7.6	8.9										15	
10-16	0.7	0.2	tr.	0.1		4.0	5.0										20	
16-24	0.6	0.3	tr.	tr.		3.0	3.9										30	
24-40	0.6	0.3	tr.	tr.		3.8	4.7										19	
40-52	0.6	0.2	tr.	tr.		3.8	4.6										17	
52-74+	0.3	0.2	tr.	tr.		2.4	2.9										17	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi.	Int.	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts. blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Red Bay fine sandy loam
Soil No.: S53Fla-17-9
Location: Escambia County, Florida. SE 1/4 of SE 1/4 Sec. 22 T1N R31W.
Vegetation and land use: Old field abandoned for several years.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53853	0 to 10 inches. Dark grayish brown (10YR 4/2) dry friable; weak fine and medium crumb; fine sandy loam; moderate amount of organic matter.
A3 53854	10 to 16 inches. Yellowish red (5YR 5/6) dry friable; weak medium crumb and blocky; fine sandy loam.
B1 53855	16 to 24 inches. Red (2.5YR 4/6) dry friable to hard; fine sandy clay loam with moderate medium crumb and weak fine subangular blocky; fine sandy clay loam.
B2 53856	24 to 40 inches. Red (10R 4/6) nearly dry friable to firm; moderate fine and medium crumb; fine sandy clay loam.
B2 53857	40 to 52 inches. Red (10R 4/6) friable to firm; heavy fine sandy clay loam with weak medium and fine subangular blocky structure.
B3 53858	52 to 74 inches plus. Red (10R 4/6) friable; weak medium subangular blocky and crumb; fine sandy clay loam.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Red Bay fine sandy loam SOIL Nos. 853Fla.-17-16 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53895 - 53899

Depth (in.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0.02-0.002)	Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm															Pct of < 76mm	
0-6	Ap		16.6	10.1	0.3	3.1	8.8	48.6	12.5		9.5	47.4				0		
6-15	A2		16.3	19.8	0.4	2.7	6.7	42.6	11.5		10.2	42.8				tr.		
15-72	B1		10.2	31.0	0.4	2.5	6.3	39.1	10.5		5.7	37.8				0		
72-144	B2		7.3	31.4	0.4	2.4	6.4	41.1	11.0		3.6	38.8				0		
144-153	B3		5.6	29.3	0.5	2.2	6.1	44.9	11.4		2.5	40.7				tr.		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-6	1.10																	5.2
6-15	0.16																	4.8
15-72	0.07																	5.1
72-144	0.03																	5.0
144-153	0.03																	5.0

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct
	meq/100 g																	
0-6	0.8	0.3	tr.	tr.		6.7	7.8										14	
6-15	0.1	0.2	tr.	tr.		4.1	4.4										7	
15-72	0.1	0.2	tr.	tr.		4.0	4.3										7	
72-144	0.2	0.3	tr.	tr.		3.3	3.8										13	
144-153	0.8	0.6	tr.	0.1		3.0	4.5										33	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm	Mi.	Int	Qtz.	Kl	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Red Bay fine sandy loam
Soil No.: S53Fla-17-16
Location: Escambia County, Florida. NE 1/4 of SW 1/4 Sec. 13 T1N R30W.
Vegetation and land use: New railroad cut across old idle field.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53895	0 to 6 inches. Dark brown (10YR 4/3) friable, moderate fine to medium crumb; fine sandy loam with small amount of organic matter; strongly to medium acid.
A2 53896	6 to 15 inches. Yellowish red (5YR 4/8) friable; moderate medium crumb; fine sandy loam; strongly acid.
B1 53897	15 to 72 inches. Red (10R 4/8) friable; moderate medium crumb; fine sandy clay loam; strongly acid.
B2 53898	72 to 144 inches. Red (10R 4/8) friable to firm; moderate medium crumb to moderate medium subangular blocky; heavy fine sandy clay loam; strongly acid.
B3 53899	144 to 153 inches. Red (10R 5/8) friable; moderate medium crumb or moderate medium subangular blocky; fine sandy clay loam or light fine sandy clay loam.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Shubuta fine sandy loam SOIL Nos.: 853Fla-17-24 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 531610 - 531614

Depth (in.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	int. III (0.02-0.002)	int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm															Pct. of < 76mm	
0-4	A1		22.8	6.5	3.8	4.4	7.2	32.3	23.0		8.8	60.6				20		
4-9	A2		26.1	8.0	3.4	4.0	6.8	29.2	22.5		10.3	60.4				8		
9-16	B2		24.1	38.8	1.5	2.9	6.1	14.0	12.6		12.7	33.2				tr.		
16-32	C1		23.1	37.6	0.3	1.0	9.1	16.4	12.5		12.2	33.9				0		
32-54	C2		19.0	21.9	0.1	1.0	14.3	27.1	16.6		9.9	42.7				0		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density:	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content:	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	1.72																	5.1
4-9	0.59																	5.3
9-16	0.24																	5.0
16-32	0.12																	4.9
32-54	0.05																	4.8

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-4	0.5	0.5	tr.	0.1		8.2	9.2										11	
4-9	0.3	0.2	tr.	tr.		4.2	4.7										11	
9-16	0.4	0.9	tr.	tr.		9.3	10.7										13	
16-32	0.1	0.5	tr.	tr.		9.9	10.5										6	
32-54	tr.	0.4	tr.	tr.		6.8	7.2										6	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm	Mi.	Int.	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Shubuta fine sandy loam
Soil No.: S53Fla-17-24
Location: Escambia County, Florida. NW 1/4 of NW 1/4 Sec. 27 T4N R31W.
Vegetation and land use: Clean cut forest with a few scattered young pine trees.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531610	0 to 4 inches. Very dark grayish brown (2.5Y 3/2) friable; fine sandy loam with a weak fine crumb structure; contains some organic matter, a few iron concretions and many grass roots.
A2 531611	4 to 9 inches. Yellowish brown (10YR 5/4) friable; weak fine crumb; fine sandy loam with a very small amount of organic matter, some fine roots and a few small iron concretions.
B2 531612	9 to 16 inches. Reddish yellow (5YR 6/8) friable to firm; weak fine subangular blocky; fine sandy clay loam with a few small iron concretions; faintly mottled in lower few inches.
C1 531613	16 to 32 inches. Prominently mottled with common medium areas of yellowish red (5YR 5/8), reddish yellow (5YR 6/8) and red (2.5YR 4/8) firm; moderate medium subangular blocky; fine sandy clay; contains a few thin sandy lenses and a few iron concretions.
C2 531614	32 to 54 inches. Distinctly mottled with common medium areas of reddish yellow (7.5YR 6/8), red (2.5YR 4/8), yellowish red (5YR 5/8) and light gray (10YR 7/1) firm to friable; fine sandy clay loam containing lenses of sandy and heavier material.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Shubuta fine sandy loam. SOIL Nos. 853Fla-17-26 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531619 - 531623

Depth (in.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm															Pct. of < 76mm	
0-2	A1		29.2	4.3	4.2	8.8	9.8	20.6	23.1		9.9	55.6				7		
2-8	A2		29.7	11.2	3.0	7.9	10.0	18.9	19.3		12.6	48.0				4		
8-14	B2		27.9	29.1	2.1	5.3	6.3	12.9	16.4		13.6	39.1				tr.		
14-34	C1		34.7	46.5	0.2	0.6	1.2	5.6	11.2		22.7	27.7				0		
34-48+	C2		34.4	40.9	0.1	0.4	1.8	7.6	14.8		23.1	32.0				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-2	1.09																	4.7
2-8	0.46																	4.8
8-14	0.36																	4.8
14-34	0.17																	4.9
34-48+	0.08																	4.8

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-2	0.2	0.2	tr.	tr.		5.7	6.1										6	
2-8	0.1	tr.	tr.	tr.		5.1	5.2										2	
8-14	tr.	0.4	tr.	tr.		10.5	10.9										4	
14-34	tr.	0.5	tr.	tr.		14.4	14.9										3	
34-48+	tr.	0.4	tr.	tr.		12.5	13.0										4	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi.	Int	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Shubuta fine sandy loam
Soil No.: S53Fla-17-26
Location: Escambia County, Florida. SE 1/4 of NE 1/4 Sec. 4 T3N R31W.
Vegetation and land use: Thin cutover forest, chiefly 30-year-old pine.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531619	0 to 2 inches. Grayish brown (2.5Y 5/2) friable; weak fine crumb; fine sandy loam with fairly good amount of organic matter and a few small roots.
A2 531620	2 to 8 inches. Yellowish brown (10YR 5/6) friable; moderate medium and fine crumb; fine sandy loam with only a little organic matter and many live roots.
B2 531621	8 to 14 inches. Yellowish red (5YR 5/8) faintly mottled with a few fine areas of red (2.5YR 4/8) and pale yellow (2.5Y 7/4) firm; weak medium subangular blocky; heavy fine sandy clay loam.
C1 531622	14 to 34 inches. Distinctly mottled with common medium areas of brownish yellow (10YR 6/6), yellowish red (5YR 5/8), red (2.5YR 5/6) and light gray (2.5Y 7/2) firm to very firm; moderate medium subangular blocky; fine sandy clay.
C2 531623	34 to 48 inches plus. Predominently mottled with common medium areas of brownish yellow (10YR 6/8), red (10R 4/8), light gray (2.5Y 7/2) and intermediate shades; firm to very firm; fine sandy clay.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Susquehanna fine sand SOIL Nos. S60Fla-61-35 LOCATION Suwannee County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 60292 - 60297

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 <76 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-8	A1	95.1	3.1	1.8	0.2	3.4	17.9	63.3	10.3	1.6	1.5	42.8	84.8			tr.		
8-12	B2/D	50.8	2.7	46.5	0.4	1.1	7.8	35.4	6.1	1.5	1.2	25.9	44.7			tr.		
12-16	B3/D	46.4	3.2	50.4	0.2	0.7	7.6	33.1	4.8	1.7	1.5	22.9	41.6			tr.		
16-26	D1	53.6	4.2	42.2	-	0.3	7.4	41.2	4.7	1.3	2.9	27.2	48.9			tr.		
26-36	D2	59.4	3.0	37.6	0.1	0.3	8.2	45.7	5.1	1.1	1.9	28.9	54.3			tr.		
36-52	D3	51.6	3.7	44.7	0.1	0.4	7.5	38.4	5.2	1.5	2.2	26.0	46.4			tr.		

Depth (In.)	6A1a Organic carbon Pct	6B2a Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	6C1a Ext. iron as Fe Pct.	Bulk density:	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: 4B1c 1/10 bar Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH: 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-8	0.47	0.030	16			0.1		1.50[b]			5.7[c]	3.5[c]	2.4[a]			4.3	5.3
8-12	0.55	0.055	10			1.5		1.24	1.80			34.9	20.7			3.8	4.6
12-16	0.45	0.045	10			1.8		1.22	1.76			37.5	22.7			3.9	4.6
16-26	0.20	0.016				1.2		1.31	1.88			31.4	19.7			3.8	4.6
26-36	0.08	0.023	36			1.3		1.44	1.92			27.5	18.7			3.9	4.5
36-52	0.08	0.030	27			1.0		1.26				38.3	20.3			3.4	4.5

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay 8D1: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-8	0.8	0.6	tr.	0.2	1.6	2.6	4.2		0.20			2.33	0.06	1.33			38	
8-12	6.8	2.8	0.1	0.5	10.2	17.6	27.8		7.8			0.60	0.03	0.45	2		37	
12-16	6.8	3.3	0.1	0.5	10.7	19.5	30.2		9.8			0.60	0.04	0.45	2		36	
16-26	6.1	2.3	0.1	0.5	9.0	17.9	26.9		12.1			0.64	0.03	0.47	3		33	
26-36	6.3	1.9	0.1	0.5	8.8	17.6	26.4		12.2			0.70	0.03	0.50	3		33	
36-52	8.3	1.7	0.1	0.5	10.6	18.4	29.0		11.7			0.65	0.02	0.45	5		36	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm	Mi	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						DTA 7A3		
0-8									
8-12	xxx	-	-	-	-	tr.	18	-	
12-16									
16-26									
26-36	xxxx	-	-	-	-	tr.	-	-	
36-52	xx	-	-	-	-	x	35	-	

a <2mm sieved samples
b 1 x 2 inch cores, field moist
c 1 x 2 inch cores

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Susquehanna fine sand
Soil No.: S60Fla-61-35
Location: Suwannee County, Florida. Suwannee River SCD about one-fourth mile southeast of old Pinemount Post Office in southwest corner of SW 1/4, SW 1/4, SW 1/4, Sec. 6, T4S, R14E on photo IV-1R-192.
Vegetation and land use: Sedges, tickle grass, wiregrass, longleaf pine and live oak.
Slope and land form: 2 to 5 percent.
Permeability: Upper portion is moderately rapid; lower portion is very slow.
Parent material: Unconsolidated acid clays.
Sampled by and date: E. J. Pedersen, E. H. Rawls. February 29, 1960.
Described by: T. B. Houston and K. W. Flach.

Horizon and Beltsville Lab. No.	
A1 60292	0 to 8 inches. Dark gray to gray (10YR 4/1 - 5/1) fine sand with many clean sand grains; structureless; single grain moist, loose; strongly acid; boundary abrupt and smooth. (One-half inch brown (10YR 5/3) fine sand layer between A1 and B2/D, not sampled.)
B2/D 60293	8 to 12 inches. Brown (10YR 5/3) clay with common, medium, distinct, strong brown (7.5YR 5/6) and few, fine, prominent, red (10R 4/6) mottles; weak medium subangular blocky structure; moist, firm; few clay films; strongly acid; boundary clear and smooth.
B3/D 60294	12 to 16 inches. Brown (10YR 5/3) clay with common, medium, distinct, light gray (10YR 7/2) and common, medium, prominent red (2.5YR 4/8) and few, fine, prominent, reddish yellow (5YR 6/8) and red (10R 4/6) mottles; weak medium subangular blocky structure; moist, very firm; strongly acid; boundary clear and wavy.
D1 60295	16 to 26 inches. Light brownish gray (10YR 6/2) clay with many medium, distinct, light gray (10YR 7/1) and many coarse, prominent, red (2.5YR 4/8) and common, medium distinct, light yellowish brown (10YR 6/4) and common, medium, prominent, dark red (10R 3/6) mottles; moist, very firm; common slickensides; massive; very strongly acid; boundary gradual and wavy.
D2 60296	26 to 36 inches. Light gray (10YR 7/1) clay with common, medium, distinct, yellowish red (5YR 4/8) and brownish yellow (10YR 6/8) and common, medium, prominent, red (10R 5/6) and common, coarse, prominent, dark red (darker than 10R 3/6) mottles; weak medium angular blocky structure; moist, very firm; common slickensides; very strongly acid; boundary gradual and wavy.
D3 60297	36 to 52 inches plus. Light gray (10YR 7/1) clay with common, medium, distinct, brownish yellow (10YR 6/8) and common, fine, prominent weak red (10R 5/4) and common, coarse, prominent, dark red (darker than 10R 3/6) mottles; irregular patches of gray (N 5/)about five inches thick in D3 no sample taken; weak medium angular blocky structure; moist, very firm; many strong slickensides on broad faces; very strongly acid.

Notes: A1, B2/D, D3 horizons were sampled for the Bureau of Public Roads. Reaction was determined by LaMotte method. Water table from recent rains between A1 and B2/D.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Tavares fine sand SOIL Nos. S53Fla-58-16 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531144 - 531149

Depth (in.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: 0.05–0.02	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 - 19	19 - 76
		Pct. of < 2 mm														Pct. of < 76mm		
0-3			1.5	0.6	1.0	3.0	6.6	78.1	9.2		1.8	69.3				0		
3-5			1.4	0.6	0.7	2.2	5.0	75.7	14.4		1.2	77.7				0		
5-8			1.1	1.0	0.5	1.9	5.8	79.7	10.0		1.4	70.9				0		
8-18			1.6	0.7	0.4	2.1	5.6	80.4	9.2		1.8	72.5				0		
18-28			1.5	0.9	0.4	2.1	6.2	80.1	8.8		1.4	71.7				0		
28-48			1.4	0.8	0.3	2.0	5.7	80.6	9.2		1.3	73.1				0		

Depth (in.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	1.65																	6.0
3-5	0.59																	5.2
5-8	0.55																	5.4
8-18	0.59																	5.4
18-28	0.28																	5.8
28-48	0.16																	5.6

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-3	3.0	0.9	0.3	tr.		5.1	9.3										45	
3-5	0.5	0.3	tr.	tr.		2.8	3.6										22	
5-8	0.2	0.2	tr.	tr.		3.4	3.8										10	
8-18	0.1	0.1	tr.	tr.		4.5	4.7										4	
18-28	0.4	-	tr.	tr.		2.1	2.5										16	
28-48	0.2	-	tr.	tr.		1.5	1.7										12	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi	Int	Qtz.	Kl	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Tavares fine sand
Soil No.: S53Fla-58-16
Location: Sarasota County, Florida. SW 1/4 S32 T30S R19E, Map 2D71.
Vegetation and land use: Mainly live oaks, pine, saw palmetto, wiregrass, and runner oak.
Slope and land form: Nearly level.
Drainage: Somewhat poorly.
Permeability: Rapid.
Parent material: Thick beds of unconsolidated sands.

Horizon and Beltsville Lab. No.	
531144	0 to 3 inches. Mixture of very dark gray, dark gray and light gray nearly loose fine sand causing a salt and pepper coloration; matted by numerous roots; abrupt wavy boundary.
531145	3 to 5 inches. Gray to light gray loose fine sand (a thin transitional layer that locally is not well defined); abrupt wavy boundary.
531146	5 to 8 inches. Dark grayish brown (10YR 4/2) to grayish brown (10YR 5/2) loose fine sand; small percent of light gray fine sand particles through layer; abrupt wavy boundary.
531147	8 to 18 inches. Grayish brown (10YR 5/2) to light brownish gray (10YR 6/2) loose fine sand with common to many, small and medium, faint and distinct light gray, dark brown and yellowish brown mottles; gradual irregular boundary.
531148	18 to 28 inches. Light gray (10YR 7/2) loose fine sand with common, small and medium, faint to distinct white, pale brown and light grayish brown stains; gradual irregular boundary.
531149	28 to 48 inches. White (10YR 7/1) loose fine sand interspersed with common, medium, faint and light gray splotches and veining.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Tavares fine sand SOIL Nos. S53Fla-58-27 LOCATION Sarasota County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531205 - 531209

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand Very coarse (2–1)	Sand Coarse (1–0.5)	Sand Medium (0.5–0.25)	Sand Fine (0.25–0.1)	Sand Very fine (0.1–0.05)	Silt (0.05–0.02)	Silt Int. III (0.02–0.002)	Int II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 – 19	19 – 76
		Pct. of < 2 mm														Pct. of < 76mm		
0-5			1.4	2.7	0.2	8.6	30.7	48.1	8.3		1.5	32.5				0		
5-14			1.8	3.2	0.4	7.8	30.5	47.8	8.5		1.5	33.5				0		
14-20			1.6	3.0	0.3	7.4	27.7	50.0	10.0		1.0	38.7				0		
20-30			0.9	3.6	0.4	7.5	26.4	51.8	9.4		0.7	38.1				0		
30-48			1.1	3.5	0.2	7.6	25.4	52.1	10.1		0.7	39.8				0		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density 4A1e ⅓ bar g/cc	Bulk density 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	Water content 4B1c ⅓ bar Pct.	Water content 4B2 15 bar Pct.		4C1 WRD in/in	pH:	pH 8C1c (1:1) KCl	pH 8C1a (1:1) H_2O
0-5	1.10																	5.1
5-14	0.42																	5.4
14-20	0.15																	5.4
20-30	0.14																	5.1
30-48	0.12																	4.9

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	0.5	-	tr.	tr.		5.8	6.3										8	
5-14	0.2	-	tr.	tr.		4.6	4.8										4	
14-20	-	-	tr.	tr.		2.2	2.2										-	
20-30	0.3	-	tr.	tr.		1.3	1.6										20	
30-48	0.3	0.1	tr.	tr.		1.2	1.6										25	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Tavares fine sand
Soil No.: S53Fla-58-27
Location: Sarasota County, Florida. NW 1/4 S21 T36S R19E, Map 2D99.
Vegetation and land use: Live oaks, pine, saw palmetto, wiregrass, and runner oak.
Slope and land form: Nearly level.
Drainage: Somewhat poorly.
Permeability: Rapid.
Parent material: Thick beds of unconsolidated sands.

Horizon and Beltsville Lab. No.	
531205	0 to 5 inches, very dark gray (10YR 3/1) loose fine sand with small percent of light gray fine sand; acid; many small, fine roots; abrupt wavy boundary.
531206	5 to 14 inches. Light yellowish brown to brown (10YR 6/4 - 5/3) loose fine sand containing small lumps of slightly coherent material; some medium and small roots; acid; gradual, irregular boundary.
531207	14 to 20 inches, pale brown (10YR 6/3) loose fine sand; a few small roots; acid; clear, irregular boundary.
531208	20 to 30 inches. Light gray (10YR 7/2) loose fine sand with a few, small, faint yellow mottles; acid; few roots; clear, irregular boundary.
531209	30 to 48 inches. White (10YR 8/2) loose fine sand; acid.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Tifton fine sandy loam SOIL Nos.: S53Fla-17-10 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 53859 - 53864

Depth (in.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: 0.05–0.02	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct.	2 – 19	19 – 76
		Size class and particle diameter (mm) 3A1 — Pct. of < 2 mm														Pct. of < 76mm		
0-5	Ap		23.5	7.2	0.3	3.6	7.5	38.2	19.7		11.5	56.2				tr.		
5-18	A23		24.3	13.4	0.4	2.8	6.2	34.5	18.4		12.7	53.1				4		
18-32	B1		22.1	17.4	0.3	2.9	6.1	33.3	17.9		11.8	50.4				13		
32-42	B2		20.0	20.5	0.6	3.0	5.9	31.9	18.1		10.2	49.2				8		
42-54	B3		21.5	16.9	0.8	3.2	6.4	33.5	17.7		10.6	50.8				8		
54+	C		15.4	31.8	3.3	5.5	6.6	25.6	11.8		8.4	34.3				12		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	1.22																	5.2
5-18	0.18																	4.7
18-32	0.13																	5.0
32-42	0.07																	4.9
42-54	0.05																	4.8
54+	0.03																	5.0

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-5	1.5	0.2	tr.	0.2		3.5	5.4										35	
5-18	0.1	0.1	tr.	tr.		3.3	3.5										6	
18-32	0.3	0.1	tr.	tr.		3.6	4.0										10	
32-42	0.8	-	tr.	0.1		3.5	4.4										20	
42-54	0.6	0.2	tr.	tr.		2.9	3.7										22	
54+	0.6	0.1	tr.	tr.		6.2	6.9										11	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Tifton fine sandy loam
Soil No.: 853Fla-17-10
Location: Escambia County, Florida. SW 1/4 of NW 1/4 Sec. 16 T1N R31W.
Vegetation and land use: Pecan grove 30 to 40 years old.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53859	0 to 5 inches. Light brownish gray (2.5Y 6/2) dry, friable; weak fine crumb; fine sandy loam with numerous iron concretions.
A23 53860	5 to 18 inches. Yellow (10YR 7/8) friable; moderate fine crumb; heavy fine sandy loam with a few iron concretions.
B1 53861	18 to 32 inches. Brownish yellow (10YR 6/8) friable to firm; weak fine subangular blocky; fine sandy clay loam with numerous soft and hard iron concretions.
B2 53862	32 to 42 inches. Brownish yellow (10YR 6/8) friable to firm; moderate medium subangular blocky; fine sandy clay loam; many iron concretions and a few faint fine mottlings of reddish yellow in lower part.
B3 53863	42 to 54 inches. Pale yellow (2.5Y 7/4) mottled with brownish yellow (10YR 6/8) and strong brown (7.5YR 5/8) firm to friable; fine sandy clay loam with many iron concretions.
C 53864	54 inches plus. Brownish yellow (10YR 6/8) mottled with pale yellow (2.5Y 7/4), strong brown (7.5YR 5/8) and yellowish red (5YR 5/8) firm; light fine sandy clay loam with many iron concretions; weak pan development.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Tifton fine sandy loam SOIL Nos. 853Fla-17-11 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53865 - 53871

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: (0.05-0.02)	Silt: Int. III (0.02-0.002)	Silt: Int II (0.2-0.02)	Silt: (2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2-19 (Pct of < 76mm)	19-76 (Pct of < 76mm)
		Pct. of < 2 mm																
0-6	Ap		15.6	8.5	1.6	7.1	16.8	36.8	13.6		7.2	40.6				18		
6-11	B1		15.1	11.2	2.0	7.2	15.8	34.8	13.9		7.3	39.2				18		
11-16	B2		15.4	20.5	1.9	5.7	13.6	31.1	11.8		8.1	34.6				18		
16-30	B2		11.6	28.4	0.7	4.9	13.0	31.5	9.9		6.7	29.8				9		
30-44	B3		10.1	39.7	0.3	2.6	6.6	30.0	10.7		5.4	31.3				tr.		
44-56	C1		6.3	30.3	0.3	2.0	7.5	44.9	8.7		3.0	32.8				tr.		
56-72+	C2		3.6	22.9	1.0	14.0	16.8	37.0	4.7		1.9	22.8				0		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	Water content: 4B1c ⅓ bar Pct.	Water content: 4B2 15 bar Pct.		4C1 WRD in/in	pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-6	1.35																5.9
6-11	0.51																5.8
11-16	0.34																5.2
16-30	0.12																5.0
30-44	0.08																4.8
44-56	0.01																4.6
56-72+	0.02																4.6

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-6	3.3	0.5	0.2	0.1		3.5	7.6										54	
6-11	2.0	0.1	0.1	tr.		2.6	4.8										46	
11-16	1.8	0.3	0.1	tr.		3.6	5.8										38	
16-30	1.4	0.2	0.1	tr.		4.6	6.3										27	
30-44	0.6	0.3	tr.	tr.		6.3	7.2										12	
44-56	0.7	0.1	tr.	tr.		5.5	6.3										13	
56-72+	0.8	-	tr.	tr.		4.4	5.2										15	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Tifton fine sandy loam
Soil No.: S53Fla-17-11
Location: Escambia County, Florida. SW 1/4 of NE 1/4 Sec. 28 T3N R31W.
Vegetation and land use: Improved pasture--area cleared many years.
Slope and land form: 5 to 8 percent.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
Ap 53865	0 to 6 inches. Pale brown (10YR 6/3) dry, hard; weak fine crumb to blocky; fine sandy loam containing a few iron concretions.
B1 53866	6 to 11 inches. Strong brown (7.5YR 5/6) dry, hard; weak medium subangular blocky crushing to fine crumb; fine sandy loam with a few iron concretions.
B2 53867	11 to 16 inches. Yellowish red (5YR 5/8) dry, hard; medium to coarse moderate subangular blocky; fine sandy clay loam with numerous iron concretions.
B2 53868	16 to 30 inches. Red (2.5YR 5/8) friable; weak medium subangular blocky and moderate medium crumb; heavy fine sandy clay loam with numerous iron concretions.
B3 53869	30 to 44 inches. Faintly mottled with a few medium areas of yellowish red (5YR 5/8), red (10R 5/8) and reddish yellow (7.5YR 6/8) friable; weak medium crumb to weak medium subangular blocky; fine sandy clay loam with some iron concretions.
C1 53870	44 to 56 inches. Red (10R 5/8) commonly mottled with faint medium areas of reddish yellow (7.5YR 6/8) friable; light sandy clay loam; contains some soft and hard iron concretions.
C2 53871	56 to 72 inches plus. Red (10R 4/8) prominently mottled with common medium areas of brownish yellow (10YR 6/8) friable; fine sandy loam; some soft and hard iron concretions.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Tifton fine sandy loam SOIL Nos. 853Fla-17-13 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 53877 - 53882

Depth (in.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: (0.05–0.02)	Int. III (0.02–0.002)	Int II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 – 19	19 – 76
		Pct. of < 2 mm														Pct. of < 76mm		
0-6	A1		32.8	6.3	1.5	5.0	6.9	23.4	24.1		14.5	57.6				16		
6-10	A2		33.8	13.9	1.8	3.3	5.7	20.1	21.4		16.4	52.3				25		
10-18	B1		31.9	22.0	1.7	2.8	4.7	17.6	19.3		16.2	46.7				36		
18-30	B2		24.6	38.4	1.7	2.4	3.7	13.4	15.8		12.1	37.2				22		
30-46	B3		25.2	36.5	1.4	2.5	3.9	13.5	17.0		12.3	39.0				13		
46-56	C		25.0	39.4	2.2	3.0	3.2	11.5	15.7		13.4	35.3				24		

Depth (in.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-6	1.54																	4.8
6-10	0.26																	4.8
10-18	0.17																	4.9
18-30	0.10																	5.0
30-46	0.06																	4.9
46-56	0.09																	5.0

Depth (in.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-6	0.5	0.4	tr.	tr.		7.9	8.8										10	
6-10	0.3	0.8	tr.	tr.		3.5	4.6										24	
10-18	0.3	0.6	tr.	tr.		4.6	5.5										16	
18-30	0.1	0.5	tr.	0.1		6.5	7.2										10	
30-46	0.0	0.5	tr.	0.1		6.8	7.4										8	
46-56	0.0	0.6	tr.	0.1		8.3	9.0										8	

Depth (in.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi.	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Tifton fine sandy loam
Soil No.: S53Fla-17-13
Location: Escambia County, Florida. NW 1/4 of SE 1/4 Sec. 13 T3N R32W.
Vegetation and land use: Cutover virgin pine forest.
Slope and land form: 5 to 8 percent.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53877	0 to 6 inches. Pale brown (10YR 6/3) dry, friable; weak fine crumb; fine sandy loam with a little organic matter and many iron concretions.
A2 53878	6 to 10 inches. Reddish yellow (7.5YR 7/8) dry, friable; fine crumb; fine sandy loam with a little organic matter and many iron concretions.
B1 53879	10 to 18 inches. Strong brown (7.5YR 5/8) dry, friable to hard; fine sandy loam with many iron concretions.
B2 53880	18 to 30 inches. Red (2.5YR 4/8) friable to firm; moderate medium and fine subangular blocky; fine sandy clay loam with many iron concretions.
B3 53881	30 to 46 inches. Yellowish red (5YR 5/8) faintly mottled with a few medium areas of reddish yellow (7.5YR 6/8) and red (2.5YR 4/8) friable to firm; fine sandy loam or fine sandy clay loam with many iron concretions.
C 53882	46 to 56 inches. Commonly distinctly mottled with medium areas of reddish yellow (7.5YR 6/8), red (2.5YR 4/8) and brownish yellow (10YR 6/8) friable; light fine sandy clay loam with many soft iron concretions.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Tifton fine sandy loam SOIL Nos.: S53Fla-17-14 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos: 53883 - 53888

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: 0.05-0.02	Int III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 Pct	2-19	19-76
		Pct. of < 2 mm														Pct of < 76mm		
0-3	A1		36.3	14.4	0.3	3.0	7.1	21.3	17.6		20.8	46.4				tr.		
3-12	A2		34.9	16.8	0.6	2.5	6.6	20.4	18.2		19.8	46.2				7		
12-20	B1		34.7	19.3	0.5	2.3	6.0	19.0	18.2		19.0	46.1				5		
20-34	B2		35.3	21.5	0.4	2.1	5.4	17.5	17.8		19.7	44.6				22		
34-48	B3		27.7	30.5	1.3	2.0	5.4	16.4	16.7		15.2	39.7				21		
48-56	C		26.1	32.4	0.9	2.2	5.6	16.4	16.4		14.9	38.0				12		

Depth (In.)	6A1a Organic carbon Pct	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	2.44																	4.8
3-12	0.74																	5.0
12-20	0.20																	5.0
20-34	0.15																	4.9
34-48	0.07																	5.0
48-56	0.06																	5.1

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-3	0.4	0.6	tr.	tr.		13.4	14.4										7	
3-12	0.2	0.5	tr.	tr.		7.1	7.8										9	
12-20	0.2	0.4	tr.	tr.		5.4	6.0										10	
20-34	-	0.4	tr.	tr.		5.5	5.9										7	
34-48	-	0.4	0.1	tr.		7.1	7.6										6	
48-56	-	0.3	0.1	tr.		7.4	7.8										5	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm.	Mi.	Int.	Qtz	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Tifton fine sandy loam
Soil No.: S53Fla-17-14
Location: Escambia County, Florida. SE 1/4 of NW 1/4 Sec. 33 T3N R31W.
Vegetation and land use: Cutover virgin pine forest.
Slope and land form: Nearly level.
Sampled by and date: J. H. Walker and A. H. Hasty. May 26 to June 2, 1953.

Horizon and Beltsville Lab. No.	
A1 53883	0 to 3 inches. Dark grayish brown (10YR 4/2) nearly dry, friable; moderate fine crumb; fine sandy loam with some organic matter and a few iron pebbles.
A2 53884	3 to 12 inches. Yellowish brown (10YR 5/8) friable; weak fine crumb; fine sandy loam with a few organic stains from above and with a few iron concretions.
B1 53885	12 to 20 inches. Brownish yellow (10YR 6/8) friable; weak fine crumb and medium subangular blocky; fine sandy clay loam with a few iron concretions.
B2 53886	20 to 34 inches. Brownish yellow (10YR 6/8) friable to firm; weak fine crumb and moderate medium subangular blocky; slightly heavy fine sandy clay loam with some iron concretions.
B3 53887	34 to 48 inches. Brownish yellow (10YR 6/8) distinctly mottled with a few medium areas of reddish yellow (5YR 6/8) and red (2.5YR 5/8) friable to firm and brittle; fine sandy clay loam with many iron concretions.
C 53888	48 to 56 inches. Brownish yellow (10YR 6/8) distinctly mottled with common medium areas of reddish yellow (5YR 6/8), red (2.5YR 5/8) and yellow (2.5Y 7/6) friable to firm; fine sandy clay loam; numerous iron concretions.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Troup loamy sand SOIL Nos. S53Fla-17-21 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531594 - 531599

Depth (In.)	Horizon	1B1b Total: Sand (2–0.05)	Silt (0.05–0.002)	Clay (< 0.002)	Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt: 0.05–0.02	Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2 – 19	19 – 76
		Pct. of < 2 mm														Pct. of < 76mm		
0-3	A1		10.3	6.2	1.7	20.3	24.1	31.3	6.1		7.0	23.9				tr.		
3-11	A2		11.0	8.2	1.4	15.6	22.1	34.2	7.5		6.9	27.8				tr.		
11-21	A3		11.2	7.9	2.1	16.3	22.2	33.4	6.9		6.5	27.5				tr.		
21-36	B2		10.9	11.9	2.3	14.1	18.7	34.3	7.8		6.4	29.3				tr.		
36-66	B2		6.9	28.2	2.4	13.9	16.9	26.2	5.5		3.6	21.2				tr.		
66-86	B3		6.9	16.0	2.6	15.7	21.0	31.5	6.3		3.5	24.6				tr.		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct	4B1c ⅓ bar Pct	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	1.62																	5.4
3-11	0.27																	5.6
11-21	0.14																	5.6
21-36	0.13																	5.4
36-66	0.12																	5.3
66-86	0.10																	5.2

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-3	1.1	0.3	tr.	0.1		7.9	9.4										16	
3-11	0.3	0.2	tr.	tr.		2.4	2.9										17	
11-21	0.1	0.1	tr.	tr.		1.6	1.8										11	
21-36	0.2	0.1	tr.	tr.		1.6	1.9										16	
36-66	0.1	0.1	tr.	tr.		3.7	3.9										5	
66-86	tr.	0.1	tr.	tr.		2.1	2.2										4	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Troup loamy sand
Soil No.: S53Fla-17-21
Location: Escambia County, Florida. SW 1/4 of NW 1/4 Sec. 30 T1N R31W.
Vegetation and land use: Cutover mixed forest.
Slope and land form: 5 to 8 percent.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531594	0 to 3 inches. Dark brown (7.5YR 3/2) friable to loose, single grained to weak medium crumb structure; loamy sand with small amount of organic matter and many fine roots.
A2 531595	3 to 11 inches. Yellowish red (5YR 4/6) nearly loose; single grained, loamy sand with many fine roots but little organic matter.
A3 531596	11 to 21 inches. Yellowish red (5YR 4/8) nearly loose; weak medium crumb; loamy sand with little or no organic matter and very few fine roots.
B1 531597	21 to 36 inches. Red (2.5YR 4/6) friable; moderate medium crumb; heavy loamy sand with no observable organic matter and very few or no roots.
B2 531598	36 to 66 inches. Red (10R 4/6) friable; moderate medium crumb to subangular blocky; sandy loam.
B3 531599	66 to 86 inches. Red (10R 4/6) friable; weak medium crumb to subangular blocky; light sandy loam.

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10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Troup loamy fine sand SOIL Nos. S53Fla-17-22 LOCATION Escambia County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 531600 - 531604

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: (0.05-0.02)	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-3	A1		10.2	3.4	0.7	7.7	29.1	44.0	4.9		6.3	25.5				0		
3-16	A2		11.9	4.9	0.4	6.0	26.4	44.4	6.0		7.4	26.8				tr.		
16-34	B1		11.8	5.2	0.3	5.5	26.7	44.3	6.2		7.4	28.1				tr.		
34-54	B2		13.0	6.3	0.5	5.6	24.0	44.3	6.3		8.3	28.9				tr.		
54-74	D		7.3	20.1	4.3	8.2	21.2	34.4	4.5		4.2	20.8				6		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext iron as Fe Pct.	Bulk density: g/cc	4A1a ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-3	1.20																	5.5
3-16	0.19																	5.2
16-34	0.08																	5.2
34-54	0.05																	5.3
54-74	0.08																	5.1

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext Al		Ratios to clay: CEC Sum	Ext iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																
0-3	1.5	0.4	0.1	0.1		6.1	8.2									26	
3-16	0.1	0.1	tr.	tr.		2.2	2.4									8	
16-34	0.1	0.1	tr.	tr.		1.6	1.8									11	
34-54	tr.	0.2	tr.	tr.		1.6	1.8									11	
54-74	tr.	0.4	tr.	tr.		3.6	4.0									10	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi	Int	Qtz.	Kl.	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl = chlorite, Vm. = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Troup loamy fine sand
Soil No.: S53Fla-17-22
Location: Escambia County, Florida. NW 1/4 of NE 1/4 Sec. 13 T3N R33W.
Vegetation and land use: Young cutover pine forest.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531600	0 to 3 inches. Dark grayish brown (10YR 4/2) loose; single grained; loamy fine sand with some organic matter and many grass and weed roots.
A2 531601	3 to 16 inches. Yellowish brown (10YR 5/6) loose; structureless; loamy fine sand with very little organic matter but numerous fine roots.
B1 531602	16 to 34 inches. Brownish yellow (10YR 6/6) nearly loose; weak fine to medium crumb; loamy fine sand containing a few weak white featherings in places but very little organic matter and only an occasional root.
B2 531603	34 to 54 inches. Brownish yellow (10YR 6/6) nearly loose; weak fine to medium crumb; loamy fine sand containing a few weak white featherings in places; gradually becomes a little heavier in lower part.
D 531604	54 to 74 inches. Distinctly mottled with common medium areas of yellow (10YR 7/6) pale yellow (2.5Y 7/4), strong brown (7.5YR 5/8) and red (10R 4/6) friable; fine sandy clay loam. Contains many soft concretions. This layer is somewhat compacted in place and suggests a weak pan development.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Troup loamy fine sand SOIL Nos.: S53Fla-17-30 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 531639 - 531643

Depth (In.)	Horizon	1B1b Total: Sand (2-0.05)	Total: Silt (0.05-0.002)	Total: Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: (0.05-0.02)	Silt: Int. III (0.02-0.002)	Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 Pct	2-19	19-76
		Pct. of < 2 mm															Pct of < 76mm	
0-4	A1		15.7	3.0	0.5	4.7	14.4	49.8	11.9		8.2	43.8				tr.		
4-13	A2		18.0	4.3	0.6	4.7	13.4	47.6	11.4		10.0	44.2				tr.		
13-40	B1		20.0	6.5	0.6	3.9	11.5	46.1	11.4		11.2	43.7				tr.		
40-60	B2		12.1	15.2	0.9	4.9	13.5	44.3	9.1		6.6	37.3				14		
60-72	D		9.5	26.6	2.8	8.0	11.4	34.0	7.7		4.9	30.4				tr.		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density: g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content: Pct.	4B1c ⅓ bar Pct	4B2 15 bar Pct		4C1 WRD in/in	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	0.75																	5.0
4-13	0.33																	5.1
13-40	0.14																	5.1
40-60	0.12																	5.0
60-72	0.08																	5.0

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext acidity	CEC: 5A3a Sum cations		6G1d Ext Al			Rehoe to clay: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																	
0-4	0.5	0.3	0.1	tr.		3.9	4.8										19	
4-13	0.1	0.1	tr.	tr.		2.6	2.8										7	
13-40	0.2	0.2	tr.	tr.		1.9	2.3										17	
40-60	tr.	0.2	tr.	tr.		2.5	2.7										7	
60-72	0.3	0.4	tr.	tr.		4.8	5.5										13	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl	Vm	Mi.	Int.	Qtz.	Kl	Gibbsite	
	7A2 X-ray						7A3		

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant

Soil type: Troup loamy fine sand
Soil No.: S53Fla-17-30
Location: Escambia County, Florida. NE 1/4 of SE 1/4 Sec. 36 T5N R34W.
Vegetation and land use: Old field forest of 50-year-old pine.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
A1 531639	0 to 4 inches. Grayish brown (2.5Y 5/2) nearly loose; structureless; loamy fine sand with only a little organic matter and a few grass, tree and weed roots.
A2 531640	4 to 13 inches. Pale yellow (2.5Y 7/4) friable to nearly loose; weak medium crumb; loamy fine sand; contains very little or no organic matter and only a few roots.
B1 531641	13 to 40 inches. Brownish yellow (10YR 6/6) friable to nearly loose; weak medium crumb; loamy fine sand. A little gray to white feathering noted below 24 inches and this increases gradually with depth. Texture becomes a little heavier in lower few inches.
B2 531642	40 to 60 inches. Brownish yellow (10YR 6/8) distinctly mottled with a few medium areas of strong brown (7.5YR 5/8). Friable; moderate medium to fine crumb; fine sandy loam, with a few soft iron concretions. A little feathering of light gray to white noted.
D 531643	60 to 75 inches. Distinctly mottled with many medium to coarse areas of reddish yellow (7.5YR 6/8), red (10R 4/8) and light gray (2.5Y 7/2). Many concretions which tend to be weakly cemented together forming a pan-like layer which is difficult to bore through with auger. When broken the material becomes friable and has a fine sandy clay loam texture.

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U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Troup loamy sand SOIL Nos. S53Fla-17-31 LOCATION: Escambia County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 531644 - 531648

Depth (In.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand Very coarse (2–1)	Sand Coarse (1–0.5)	Sand Medium (0.5–0.25)	Sand Fine (0.25–0.1)	Sand Very fine (0.1–0.05)	Silt 0.05–0.02	Silt Int. III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 Pct.	2 – 19 (Pct. of < 76mm)	19 – 76 (Pct. of < 76mm)
		Pct. of < 2 mm																
0-6	Ap		8.9	5.4	3.8	27.7	25.6	24.0	4.6		6.0	18.3				tr.		
6-21	A2		10.0	6.6	2.6	24.2	26.0	25.6	5.0		6.5	19.9				tr.		
21-44	B1		9.3	7.1	2.5	24.3	26.3	25.6	4.9		6.1	19.3				tr.		
44-85	B2		6.1	14.0	3.1	22.8	23.4	25.6	5.0		3.4	19.5				tr.		
85-115	B3		5.2	7.5	3.5	24.5	26.7	27.0	5.6		3.0	19.6				tr.		

Depth (In.)	6A1a Organic carbon Pct.	Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	Ext. iron as Fe Pct.	Bulk density 4A1e ⅓ bar g/cc	Bulk density 4A1h Oven dry g/cc	4D1 COLE	Water content Pct.	Water content 4B1c ⅓ bar Pct.	Water content 4B2 15 bar Pct.		4C1 WRD in/in	pH 8C1c (1:1) KCl	pH 8C1a (1:1) H_2O
0-6	0.86															5.3
6-21	0.37															5.3
21-44	0.15															5.2
44-85	0.14															5.0
85-115	0.08															5.2

Depth (In.)	Extractable bases 5B1a 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H1a Ext. acidity	CEC 5A3a Sum cations		6G1d Ext. Al		Ratios to clay CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct	5C1 NH_4OAc Pct.
	meq/100 g																
0-6	0.5	0.2	tr.	tr.		4.5	5.2									13	
6-21	0.2	0.1	tr.	tr.		2.6	2.9									10	
21-44	0.2	0.2	tr.	tr.		1.6	2.0									20	
44-85	0.1	0.1	tr.	tr.		2.3	2.5									8	
85-115	tr.	0.1	tr.	tr.		1.2	1.3									8	

Depth (In.)	Clay Fraction Analysis 7A1b-d Mt	Chl.	Vm.	Mi	Int	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Troup loamy sand
Soil No.: S53Fla-17-31
Location: Escambia County, Florida. 1/4 mile south of NW corner of sec. 32 near northeast corner of unused Gernans Air Field.
Vegetation and land use: Weeds and grass.
Sampled by and date: J. H. Walker, Victor W. Carlisle, and A. H. Hasty. August 27 to September 3, 1953.

Horizon and Beltsville Lab. No.	
Ap 531644	0 to 6 inches. Brown to dark brown (10YR 4/3) nearly loose; light loamy sand with very little apparent organic matter.
A2 531645	6 to 21 inches. Brown to dark brown (7.5YR 4/4) nearly loose; weak medium crumb, loamy fine sand with very little organic stain; contains a few insect and worm holes and many pores.
B1 531646	21 to 44 inches. Yellowish red (5YR 4/8) friable to loose; loamy sand with some gray feathering, especially in lower part.
B2 531647	44 to 85 inches. Red (2.5YR 4/8) friable; moderate medium crumb; sandy loam which gradually becomes lighter textured in lower part.
B3 531648	85 to 115 inches. Red (2.5YR 5/8) friable or nearly loose; heavy loamy sand which gradually becomes a little lighter colored with increased depth.

SCS-421
10-64 (Rev. 9-66)

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Weston fine sand SOIL Nos. S60Fla-61-29 LOCATION Suwannee County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 60248 - 60254

Depth (In)	Horizon	1B1b Total: Sand (2–0 05)	Silt (0.05–0.002)	Clay (< 0.002)	Sand: Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0 25)	Fine (0.25–0.1)	Very fine (0 1–0 05)	Silt: (0 05–0 02)	Int III (0 02–0 002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 <76 Pct	2 – 19	19 – 76
		Pct. of < 2 mm															Pct. of < 76mm	
0-4	A11	94.3	4.5	1.2	0.1	2.7	15.9	62.0	13.6	2.2	2.3	44.3	80.7			tr.		
4-11	A12	93.3	3.5	3.2	0.1	3.2	17.2	62.4	10.4	1.8	1.7	38.9	82.9			tr.		
11-19	A3	88.6	3.6	7.8	0.2	2.6	13.8	59.1	12.9	2.3	1.3	44.3	75.7			tr.		
19-29	A/D	77.9	3.4	18.7	0.3	2.9	14.8	51.2	8.7	2.6	0.8	32.9	69.2			tr.		
29-40	D1	70.2	3.4	26.4	0.2	3.2	14.2	44.7	7.9	2.4	1.0	29.7	62.3			tr.		
40-56	D2	73.8	2.5	23.7	tr.	1.0	11.6	54.9	6.3	2.3	0.2	32.9	67.5			tr.		
56-72	D3	70.5	12.5	17.0	tr.	0.7	8.8	51.2	9.8	11.7	0.8	45.5	60.7			tr.		

Depth (In.)	6A1a Organic carbon Pct	6B2a Nitrogen Pct	C/N		Carbonate as $CaCO_3$ Pct.	6C1a Ext iron as Fe Pct.	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content 4B1c 1/10 bar Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct	6S1a Total P Pct.	4C1 WRD in/in		pH 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-4	0.88	0.045	20			tr.		1.46[b]			9.0[c]	4.0[c]	3.2[a]	0.005			4.3	5.2
4-11	0.58	0.032	18			tr.		1.42[b]			6.6[c]	3.3[c]	2.0	0.004			4.3	5.4
11-19	0.21					tr.		1.51				8.1	3.3	0.009			4.3	5.1
19-29	0.20					tr.		1.61	1.66			12.8	7.6	0.022			3.9	4.9
29-40	0.14					0.1		1.56	1.62			17.9	10.1	0.032			3.8	4.8
40-56	0.05					0.4		1.78	1.84			13.5	9.0	0.032			3.8	4.8
56-72	0.04					0.1							6.5	0.024			3.7	4.6

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC: 5A3a Sum cations		6Q1d Ext Al			Ratios to clay 8D1: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																	
0-4	1.2	0.5	tr.	0.2	1.9	4.7	6.6		0.55			5.50	-	2.67			29	
4-11	0.6	0.3	tr.	0.1	1.0	3.6	4.6		0.54			2.56	-	1.11			22	
11-19	0.4	0.5	tr.	0.2	1.1	3.4	4.5		1.05			0.58	-	0.42			24	
19-29	0.7	0.6	0.1	0.2	1.6	6.5	8.0		2.8			0.43	-	0.41			19	
29-40	0.4	0.5	0.1	0.2	1.2	9.4	10.6		5.5			0.40	tr.	0.38			11	
40-56	0.4	0.2	0.1	0.2	0.9	8.9	9.8		5.7			0.41	0.2	0.38			9	
56-72	tr.	0.1	0.1	0.2	0.4	6.9	7.3		4.7			0.43	tr.	0.38			5	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm	Mi	Int	Qtz	Kl	Gibbsite	
	7A2 X-ray						7A3		

a <2mm sieved samples
b 1 x 2 inch cores, field moist
c 1 x 2 inch cores

Mt. = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Weston fine sand
Soil No.: S60Fla-61-29
Location: Suwannee County, Florida. Suwannee River SCD about 2 miles north of Live Oak in southeast part of the NE 1/4, NW 1/4, NE 1/4 of Sec. 10, R13E, T2S, on photo number IV-2R-66.
Vegetation and land use: Longleaf pine, wiregrass, sumac, wax myrtle, sedges and blackberry briars.
Slope and land form: 0 to 2 percent.
Drainage: Poorly to somewhat poorly drained.
Permeability: Upper portion is rapid; lower portion is slow to moderately slow.
Parent material: Unconsolidated acid clays.
Sampled by and date: E. J. Pedersen, George Brown, Tom Matthews. February 24, 1960.
Described by: T. B. Houston and K. W. Flach.

Horizon and Beltsville Lab. No.	
A11 60248	0 to 4 inches. Black (10YR 2/1) fine sand with many clean sand grains; weak fine crumb structure; moist, very friable; moderate amount of roots; medium acid; boundary clear and wavy.
A12 60249	4 to 11 inches. Dark gray (10YR 4/1) fine sand; weak fine crumb structure; moist, very friable; medium acid; boundary abrupt and smooth.
A3 60250	11 to 19 inches. Gray (10YR 5/1) fine sand or loamy fine sand; weak fine crumb structure; moist, very friable; strongly acid; boundary abrupt and smooth.
A/D 60251	19 to 29 inches. Dark gray (10YR 4/1 slightly lighter than D) fine sandy loam; very weak medium subangular blocky structure; moist, friable; strongly acid; boundary gradual and wavy.
D1 60252	29 to 40 inches. Dark gray (10YR 4/1 slightly darker than A/D) clay loam; very weak medium angular blocky structure; slickensides; moist, friable; common fine pores; strongly acid; boundary abrupt and irregular.
D2 60253	40 to 56 inches. Very dark gray (N 3/) clay mottled with common, medium, distinct yellowish brown (10YR 5/6 - around the edges of mottles) and strong brown (7.5YR 5/6 in center of mottles); weak medium angular blocky structure (faces formed by slickensides); moist, friable; strongly acid; boundary clear and wavy.
D3 60254	56 to 72 inches. Dark gray (N 4/) sandy loam with many, coarse, faint, very dark gray (N 3/) and few, medium, distinct, dark yellowish brown (10YR 4/4) and few, fine, prominent dark red (10R 3/6) mottles; massive; moist, friable; strongly acid; boundary gradual and wavy.
D4 Not Sampled	72 to 103 inches. Very dark gray (10YR 3/1) clay loam with common, medium, prominent, red (10R 5/8) mottles; massive; moist, firm; strongly acid.

Notes: A11, A3, and D2 horizons were sampled for the Bureau of Public Roads. Small veins of water beginning at three feet. Reaction determined by LaMotte method.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Weston loamy fine sand SOIL Nos.: S60Fla-61-36 LOCATION: Suwannee County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos.: 60298 - 60302

Depth (in.)	Horizon	1B1b Total Sand (2–0.05)	Total Silt (0.05–0.002)	Total Clay (< 0.002)	Sand (Size class and particle diameter (mm) 3A1) Very coarse (2–1)	Coarse (1–0.5)	Medium (0.5–0.25)	Fine (0.25–0.1)	Very fine (0.1–0.05)	Silt 0.05–0.02	Int III (0.02–0.002)	Int. II (0.2–0.02)	(2–0.1)		3B2 Cm	Coarse fragments 3B1 2A2 > 2 < 76 Pct.	2–19	19–76
		Pct. of < 2 mm															Pct. of < 76mm	
0-5	A11	92.9	5.7	1.4	0.2	3.0	16.4	56.7	16.6	2.8	2.9	47.4	76.3			tr.		
5-15	A12	92.3	5.1	2.6	0.2	2.6	15.5	56.1	17.9	2.7	2.4	49.2	74.4			tr.		
15-22	A/D	63.4	7.8	28.8	0.2	1.8	9.0	37.1	15.3	3.6	4.2	39.0	48.1			tr.		
22-35	D1	36.6	14.1	49.3	0.1	0.8	4.3	19.6	11.8	5.0	9.1	28.2	24.8			tr.		
35-52	D2	36.7	17.3	46.0	0.1	0.7	4.1	20.2	11.6	5.6	11.7	28.8	25.1			tr.		

Depth (in.)	6A1a Organic carbon Pct.	6B2a Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct.	6C1a Ext. iron as Fe Pct.	Bulk density g/cc	4A1e ⅓ bar g/cc	4A1h Oven dry g/cc	4D1 COLE	Water content 4B1c 1/10 bar Pct	4B1c ⅓ bar Pct.	4B2 15 bar Pct.		4C1 WRD in/in	pH 8C1c (1:1) KCl	8C1a (1:1) H_2O
0-5	0.45	0.029	15			tr.		1.42[b]			7.9[c]	5.1[c]	2.1[a]			4.1	4.9
5-15	0.19	0.024				tr.		1.45[b]			6.3[c]	3.3[c]	1.3			4.3	5.4
15-22	0.17					0.1		1.63[b]	1.76			18.1	11.0			4.0	4.8
22-35	0.10					0.1		1.60	1.89			23.0	16.6			4.0	4.8
35-52	0.06					0.2		1.66	1.80			19.6	14.5			3.9	4.7

Depth (in.)	Extractable bases 5B1a 6N2d Ca	6Q2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC 5A3a Sum cations		6G1d Ext Al		Ratios to clay 8D1 CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																
0-5	0.4	0.4	tr.	0.1	0.9	3.8	4.7		0.77		3.36	-	1.50			19	
5-15	0.2	0.3	tr.	0.1	0.6	2.1	2.8		0.49		1.08	-	0.50			25	
15-22	0.6	0.7	0.1	0.1	1.5	9.1	10.6		4.4		0.37	tr.	0.38			14	
22-35	1.0	1.0	0.2	0.2	2.4	13.4	15.7		7.1		0.32	tr.	0.34			15	
35-52	1.0	0.9	0.2	0.2	2.3	12.2	14.5		6.9		0.32	tr.	0.32			16	

Depth (in.)	Clay Fraction Analysis 7A1b-d Mt.	Chl.	Vm.	Mi.	Int.	Qtz.	Kl.	Gibbsite
	7A2 X-ray						7A3	

a <2mm sieved samples
b 1 x 2 inch cores, field moist
c 1 x 2 inch cores

Mt. = Montmorillonite, Chl. = chlorite, Vm. = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Weston fine sand
Soil No.: S60Fla-61-36
Location: Suwannee County, Florida. Suwannee River SCD about 13 miles southeast of Live Oak, along the eastern line NW 1/4, SE 1/4, SE 1/4, Sec. 13, R14E, T4S on photo IV-1R-86.
Vegetation and land use: Longleaf pine, wiregrass, broomsedge, and small oaks.
Slope and land form: 0 to 2 percent.
Drainage: Poorly to somewhat poorly.
Permeability: Upper portion is rapid; lower portion is slow to very slow.
Parent material: Unconsolidated acid clays.
Sampled by and date: E. J. Pedersen and H. R. Parsons. February 29, 1960.
Described by: K. W. Flach and M. W. Hazen.

Horizon and Beltsville Lab. No.	
A11 60298	0 to 5 inches. Dark gray (10YR 4/1) fine sand with many clean quartz grains; weak fine granular structure; moist, friable; strongly acid; boundary clear and smooth.
A12 60299	5 to 15 inches. Grayish brown (10YR 5/2) fine sand splotched with gray to light gray (10YR 6/1); structureless, single grain; moist, friable; strongly acid; boundary clear and smooth.
A/D 60300	15 to 22 inches. Dark gray (10YR 4/1) clay with few, medium, prominent, dark red (2.5YR 3/6) mottles; weak medium subangular blocky structure; moist friable; common, very fine pores; strongly acid; boundary clear and smooth.
D1 60301	22 to 35 inches. Very dark gray (10YR 3/1) clay with common, medium, prominent, dark red (2.5YR 3/6) mottles; weak coarse angular blocky structure; slickensides; moist very friable; strongly acid; boundary gradual and smooth.
D2 60302	35 to 52 inches plus. Black (10YR 2/1) clay with common, medium, prominent, dark red (2.5YR 3/6) mottles; weak coarse angular blocky structure formed by prominent slickensides; moist, very friable; strongly acid.

Notes: A12, A/D, and D2 horizons were sampled for the Bureau of Public Roads. Good moisture conditions prevailed when samples were taken, water table at 48 inches. Reaction determined by LaMotte method.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL: Zuber loamy fine sand SOIL Nos. S60Fla-61-34 LOCATION: Suwannee County, Florida

SOIL SURVEY LABORATORY: Beltsville, Maryland LAB. Nos. 60283 - 60291

Depth (In.)	Horizon	1B1b Total Sand (2-0.05)	Total Silt (0.05-0.002)	Total Clay (< 0.002)	Sand: Very coarse (2-1)	Sand: Coarse (1-0.5)	Sand: Medium (0.5-0.25)	Sand: Fine (0.25-0.1)	Sand: Very fine (0.1-0.05)	Silt: (0.05-0.02)	Silt: Int III (0.02-0.002)	Int II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 ≥ 2 <76 Pct	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-5	Ap	84.1	8.3	7.6	0.7	8.6	23.4	45.3	6.1	4.6	3.7	29.1	78.0			tr.		
5-12	B21	84.8	4.9	10.3	0.5	5.3	20.5	51.6	6.9	1.8	3.1	32.3	77.9			tr.		
12-17	B22	78.9	5.5	15.6	0.4	5.2	17.9	48.3	7.1	2.0	3.5	31.8	71.8			2		
17-23	B31	75.5	5.2	19.3	0.6	6.1	17.9	44.4	6.5	1.7	3.5	28.5	69.0			tr.		
23-32	B32	77.6	4.9	17.5	0.6	6.4	18.9	45.5	6.2	1.5	3.5	28.2	71.4			tr.		
32-39	B/D	75.1	4.9	20.0	1.0	5.5	16.8	44.5	7.3	2.2	2.7	30.1	67.8			2		
39-48	D1	68.3	5.0	26.7	2.4	5.4	13.4	39.0	8.1	2.6	2.4	29.6	60.2			tr.		
48-57	D2	65.7	2.4	31.9	0.1	1.2	9.5	51.1	3.8	1.4	1.0	30.6	61.9			tr.		
57-61	D3	60.8	1.8	37.4	0.0	0.8	8.4	48.7	2.9	1.5	0.3	28.7	57.9			tr.		

Depth (In.)	6A1a Organic carbon Pct	6B2a Nitrogen Pct.	C/N		Carbonate as $CaCO_3$ Pct	6C1a Ext. iron as Fe Pct.	Bulk density: 4A1e ⅓ bar g/cc	Bulk density: 4A1h Oven dry g/cc	4D1 COLE	Water content: 4B1c ⅓ bar Pct.	Water content: 4B2 15 bar Pct.	6S1a Total P Pct.	4C1 WRD in/in		pH: 8C1c (1:1) KCl	pH: 8C1a (1:1) H_2O
0-5	1.12	0.061	18			0.3				8.3[a]	4.4[a]	0.207			4.7	5.8
5-12	0.17	0.027				0.3				6.4	4.1	0.212			4.7	5.7
12-17	0.11					0.4				8.9	5.7	0.300			4.7	5.7
17-23	0.15					0.4				11.1	7.6	0.405			4.6	5.7
23-32	0.09					0.4				11.1	7.8	0.475			4.6	5.7
32-39	0.07					0.4				13.5	8.6	0.725			4.6	5.6
39-48	0.09					0.6				20.3	12.3	1.25			4.5	5.5
48-57	0.06					0.2				18.8	11.5	0.587			4.1	5.0
57-61	0.02					0.1				20.2	13.0	0.612			3.5	4.6

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext acidity	CEC: 5A3a Sum cations	CEC	6G1d Ext. Al		Ratios to clay 8D1: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations Pct.	5C1 NH_4OAc Pct
	meq/100 g																
0-5	2.3	0.6	tr.	0.3	3.2	8.6	11.8		0.40		1.55	0.04	0.58			27	
5-12	1.3	0.4	tr.	0.2	1.9	4.9	6.9		0.25		0.67	0.03	0.40			29	
12-17	2.0	1.0	tr.	0.2	3.2	6.1	9.3		0.37		0.60	0.02	0.36	2		34	
17-23	2.5	1.1	tr.	0.2	3.8	8.3	12.1		0.48		0.63	0.02	0.39	2		31	
23-32	2.7	1.0	tr.	0.2	3.9	9.0	12.9		0.53		0.74	0.02	0.44	3		30	
32-39	3.7	0.5	tr.	0.2	4.4	8.5	12.9		0.74		0.64	0.02	0.43			34	
39-48	6.8	2.3	tr.	0.2	9.3	11.2	20.6		0.82		0.77	0.02	0.46	3		46	
48-57	3.6	2.6	0.1	0.4	6.7	7.1	13.7		1.90		0.43	0.01	0.36	1		48	
57-61	1.1	1.6	tr.	0.2	2.9	10.4	13.3		5.90		0.36	tr.	0.35	1		22	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt	Chl.	Vm	Mi	Int	Qtz.	Kl.	Gibbsite	Wavellite
	7A2 X-ray						DTA 7A3		
0-5									
5-12									
12-17	-	-	x	-	-	-	18	-	x
17-23									
23-32									
32-39									
39-48	xxxx	-	-	-	-	tr.	24	-	-
48-57									
57-61	xx	-	-	-	-	-	38	-	xx

a <2mm sieved samples

Mt = Montmorillonite, Chl. = chlorite, Vm = Vermiculite, mi = mica, Int. = Interstratified layer, Qtz = quartz, Kl = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Zuber loamy fine sand
Soil No.: S60Fla-61-34
Location: Suwannee County, Florida. Suwannee River SCD about seven miles east of Live Oak on eastern line of the NE 1/4, NE 1/4, SE 1/4, Sec. 18, R15E, T2S on photo IV-2R-50.
Vegetation and land use: Planted to slash pine within the last week.
Slope and land form: 5 to 8 percent.
Drainage: Well drained.
Permeability: Moderate to rapid.
Parent material: Phosphatic residuum.
Sampled by and date: E. J. Pedersen, February 27, 1960.
Described by: K. W. Flach and M. W. Hazen.

Horizon and Beltsville Lab. No.	
Ap 60283	0 to 5 inches. Very dark gray (10YR 3/1) loamy fine sand; very fine granular structure; moist, very friable; some phosphatic and ferruginous rock--a few have diameters over three inches; strongly acid; boundary abrupt and wavy.
B21 60284	5 to 12 inches. Brown to dark brown (10YR 4/3) loamy fine sand with many fine inclusions of dark material (charcoal); structureless, single grain; moist, loose, medium acid; boundary gradual and wavy.
B22 60285	12 to 17 inches. Brown to dark brown to yellowish brown (10YR 4/3 - 5/4) loamy fine sand; structureless to weak fine subangular blocky structure; moist, very friable; few very fine pores and few inclusions of dark material (charcoal); medium acid; boundary gradual and wavy.
B31 60286	17 to 23 inches. Brown to dark brown (10YR 4/3) fine sandy loam; structureless to weak fine subangular blocky structure; moist, very friable; common pores; medium acid; boundary gradual and wavy.
B32 60287	23 to 32 inches. Brown to yellowish brown (10YR 5/3 - 5/6) fine sandy loam; structureless to weak fine subangular blocky structure; moist, very friable; common fine pores; medium acid; boundary clear and smooth.
B/D 60288	32 to 39 inches. Grayish brown (10YR 5/2) sandy clay loam with common medium and coarse, distinct, strong brown (7.5YR 5/8) and common, medium, faint, gray to light gray (10YR 6/1) mottles; weak medium subangular blocky structure; moist, firm; few clay skins; strongly acid; boundary clear and smooth.
D1 60289	39 to 48 inches. Light gray (10YR 7/1) clay with many, coarse, distinct, strong brown (7.5YR 5/6) and few, fine, prominent, dark red (2.5YR 3/6) mottles; weak coarse subangular blocky structure; moist, firm; common patchy clay skins; very strongly acid; boundary gradual and smooth.
D2 60290	48 to 57 inches. Light gray (10YR 7/1) sandy clay loam with many, medium, coarse and prominent, strong brown (7.5YR 5/6) mottles; and root channels are lined with dark red (2.5YR 3/6) mottles; structureless, massive; moist, friable; common pores; very strongly acid; boundary clear and smooth.
D3 60291	57 to 61 inches plus. White (10YR 8/1) clay with common, medium, distinct, brownish yellow (10YR 6/6) mottles; root channels lined with dark red (2.5YR 3/6) mottles; massive moist, friable; few fine pores; few weak slickensides; very strongly acid.

Notes: Ap, B32, D2 horizons were sampled for the Bureau of Public Roads. Good moisture conditions prevailed when samples were taken. Reaction determined by LaMotte method.

SCS-421
10-64 (Rev. 9-66)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL Zuber loamy fine sand SOIL Nos. S60Fla-61-28 LOCATION Suwannee County, Florida

SOIL SURVEY LABORATORY Beltsville, Maryland LAB. Nos. 60235 - 60247

Depth (In.)	Horizon	1B1h Total: Sand (2-0.05)	Silt (0.05-0.002)	Clay (< 0.002)	Size class and particle diameter (mm) 3A1 — Sand: Very coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	Silt: (0.05-0.02)	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)		3B2 Cm	Coarse fragments 3B1: 2A2 > 2 <76 Pct.	2-19	19-76
		Pct. of < 2 mm														Pct. of < 76mm		
0-7	A1p	90.2	5.9	3.9	1.0	8.9	20.6	47.7	12.0	4.0	1.9	40.3	78.2			3		
7-11	A12	86.6	8.1	5.3	0.5	6.7	16.8	47.9	14.7	5.0	3.1	45.3	71.9			8		
11-14	A3	80.8	7.4	11.8	0.8	6.1	15.1	45.6	13.2	4.5	2.9	41.4	67.6			36		
14-18	B1	69.6	7.0	23.4	1.2	5.5	13.7	40.2	9.0	4.0	3.0	33.0	60.6			5		
18-24	B21	69.8	6.1	24.1	0.5	4.8	14.0	42.8	7.7	3.0	3.1	31.5	62.1			5		
24-30	B22	68.7	5.8	25.5	0.3	2.7	12.4	45.9	7.4	3.0	2.8	31.4	61.3			tr.		
30-33	B3	69.7	5.8	24.5	0.2	2.1	12.4	48.3	6.7	2.9	2.9	31.9	63.0			tr.		
33-44	C1- D1	69.5	5.9	24.6	0.2	1.7	10.8	49.8	7.0	3.5	2.4	34.3	62.5			1		
44-56	C2- D2	68.9	5.4	25.7	0.4	1.4	10.8	50.5	5.8	2.7	2.7	30.8	63.1			2		
56-82	C3- D3	64.3	3.7	32.0	-	0.5	9.9	50.2	3.7	2.1	1.6	31.2	60.6			tr.		
82-92	C4 - D4	61.1	5.8	33.1	-	0.2	8.3	50.1	2.5	2.4	3.4	24.9	58.6			tr.		
92-106	C5 - D5	65.0	3.4	31.6	tr.	0.2	8.5	54.0	2.3	1.4	2.0	26.5	62.7			tr.		
106-123	C6 - D6	66.2	3.0	30.8	tr.	0.2	9.4	54.6	2.0	1.6	1.4	25.8	64.2			tr.		

Depth (In.)	6A1a Organic carbon	6B2a Nitrogen	C/N		Carbonate as $CaCO_3$	6C1a Ext. iron as Fe	Bulk density:	4A1e ⅓ bar	4A1h Oven dry	4D1 COLE	Water content:	4B1c ⅓ bar	4B2 15 bar	6S1a Total P	4C1 WRD	pH:	8C1c (1:1) KCl	8C1a (1:1) H_2O
	Pct.	Pct			Pct.	Pct.	g/cc	g/cc	g/cc		Pct.	Pct.	Pct.	Pct.	in/in			
0-7	0.66	0.044	15			0.3		1.58	1.56			7.5	2.8[a]	0.105			4.3	5.7
7-11	0.45	0.032	14			0.4		1.46	1.45			7.2	3.5	0.132			4.3	5.4
11-14	0.23					0.7							5.0	0.270			4.2	5.2
14-18	0.19					1.4							9.9	0.458			4.1	5.1
18-24	0.19					1.7		1.41	1.46			19.0	10.8	0.500			4.0	5.0
24-30	0.11					1.8		1.46	1.52			23.1	12.0	0.400			4.0	5.0
30-33	0.09					1.5		1.55	1.61			22.2	12.8	0.305			3.9	4.9
33-44	0.07					1.0		1.56	1.64			19.4	13.1	0.405			3.8	4.8
44-56	0.04					0.8		1.61	1.76			20.9	13.0	0.225			3.5	4.6
56-82	0.04					0.6		1.55	1.78			23.5	16.0	0.092			3.3	4.4
82-92	0.02					0.1							18.2	0.088			3.4	4.4
92-106	0.02					tr.							17.2	0.108			3.4	4.5
106-123	0.01					0.1							15.2	0.080			3.5	4.6

Depth (In.)	Extractable bases 5B1a: 6N2d Ca	6O2b Mg	6P2a Na	6Q2a K	Sum	6H2a Ext. acidity	CEC: 5A3a Sum cations		6G1d Ext. Al			Ratios to clay 8D1: CEC Sum	Ext. iron	15-bar water	8D3 Ca/Mg		Base saturation: 5C3 Sum cations	5C1 NH_4OAc
	meq/100 g.																Pct.	Pct.
0-7	1.0	0.5	tr.	0.2	1.7	5.6	7.3		0.40			1.87	0.08	0.72			23	
7-11	0.7	0.4	tr.	0.2	1.3	6.4	7.7		0.63			1.45	0.08	0.66			17	
11-14	1.4	1.1	tr.	0.2	2.7	6.1	8.8		0.83			0.74	0.06	0.42	1		32	
14-18	2.8	2.2	tr.	0.3	5.3	10.4	15.7		1.48			0.67	0.06	0.42	1		34	
18-24	2.6	2.4	tr.	0.2	5.2	13.3	18.6		2.0			0.77	0.07	0.45	1		28	
24-30	2.5	2.9	tr.	0.4	5.8	15.3	21.1		2.8			0.83	0.07	0.47	1		27	
30-33	2.4	3.7	tr.	0.4	6.5	16.0	22.6		4.9			0.92	0.06	0.52	1		29	
33-44	2.1	3.5	0.1	0.6	6.3	15.8	22.0		6.5			0.89	0.04	0.53	1		28	
44-56	2.8	4.3	0.1	0.5	7.7	16.8	24.4		9.6			0.95	0.03	0.50	1		32	
56-82	4.8	4.9	0.1	0.4	10.2	20.3	30.5		15.5			0.95	0.02	0.50	1		33	
82-92	7.0	7.0	0.2	0.4	14.6	23.7	38.2		16.2			1.15	tr.	0.55	1		40	
92-106	6.0	6.5	0.1	0.4	13.0	17.9	30.9		13.4			0.98	tr.	0.54	1		42	
106-123	5.7	4.7	0.2	0.4	11.0	14.9	25.8		13.4			0.84	tr.	0.49	1		42	

Depth (In.)	Clay Fraction Analysis 7A1b-d: Mt.	Chl.	Vm.	Mi.	Int	Qtz	Kl	Gibbsite	Wavellite
	7A2 X-ray						DTA 7A3		
0-7	x	-	-	-	-	x	15	-	tr.
7-11									
11-14									
14-18	x	-	-	-	-	tr.	18	-	tr.
18-24	xx	-	-	-	-	tr.	24	-	tr.
24-30	xx	-	-	-	-	tr.	18	-	tr.
30-33	x	-	-	-	-	tr.	15	-	-
33-44	xxx	-	-	-	-	tr.	13	-	-
44-56									
56-82	xxxx	-	-	-	-	tr.	-	-	-

a <2mm sieved samples

Mt. = Montmorillonite, Chl = chlorite, Vm = Vermiculite, mi = mica, Int. = interstratified layer, Qtz. = quartz, Kl. = Kaolinite

Relative amounts: blank = not determined, dash = not detected, tr. = trace, x = small, xx = moderate, xxx = abundant, xxxx = dominant.

Soil type: Zuber loamy fine sand
Soil No.: S60Fla-61-28
Location: Suwannee County, Florida. Suwannee River SCD about one mile east of Live Oak in the northeastern corner of the NE 1/4, NE 1/4, SW 1/4, Sec. 20, R14E, T2S on photo IV-1R-184.
Vegetation and land use: Cultivated
Slope and land form: 5 to 8 percent
Drainage: Well drained
Permeability: Moderate to rapid.
Parent material: Phosphatic residuum
Sampled by and date: E. J. Pedersen, C. H. Young, February 23, 1960.
Described by: K. W. Flach and T. B. Houston

Horizon and Beltsville Lab. No.	
Alp 60235	0 to 7 inches. Very dark grayish brown to dark grayish brown (10YR 3/2 - 4/2) loamy fine sand; fine granular structure; moist very friable; medium organic content; few fine roots; common phosphatic and ferruginous gravels, 1/4 to one inch in diameter; medium acid; boundary clear and wavy.
A12 60236	7 to 11 inches. Yellowish brown (10YR 5/4) loamy fine sand; fine granular structure; moist, very friable; medium acid; boundary clear and wavy.
A3 60237	11 to 14 inches. Yellowish brown (10YR 5/8) loamy fine sand; fine granular structure; moist, very friable; many phosphatic and ferruginous gravels; medium acid; boundary clear and wavy.
B1 60238	14 to 18 inches. Yellowish brown (10YR 5/8) fine sandy loam; weak, medium or fine subangular blocky structure; moist, friable; many fine pores; medium acid; boundary clear and wavy.
B21 60239	18 to 24 inches. Yellowish brown (10YR 5/8) fine sandy clay loam; weak, medium or fine subangular blocky structure; moist, friable; few fine pores; few clay films, mainly in pores; medium acid; boundary clear and wavy.
B22 60240	24 to 30 inches. Yellowish brown (10YR 5/8) fine sandy clay loam; weak (weaker than B21), medium or fine subangular blocky structure; moist friable; few fine pores; few clay films mainly in pores; medium acid; boundary clear and wavy.
B3 60241	30 to 33 inches. Yellowish brown (10YR 5/4) light fine sandy clay loam with common faint light yellowish brown (10YR 6/4) and pale brown (10YR 6/3) and few, medium distinct, yellowish red (5YR 5/8) mottles; weak (weaker than B22), medium or fine subangular blocky structure; moist, friable; few fine pores with no observable clay films; strongly acid; boundary clear and wavy.
C1 or D1 60242	33 to 44 inches. Light gray (10YR 7/1) fine sandy clay loam with common, fine, prominent, yellowish red (5YR 5/8) and few fine, prominent red (2.5YR 5/6) mottles; weak, medium angular blocky structure; moist, friable; very strongly acid; boundary clear and wavy.
C2 or D2 60243	44 to 56 inches. Light gray (5Y 7/1) fine sandy clay with common coarse, distinct, strong brown (7.5YR 5/8) and few, fine, prominent, weak red (10R 5/3) mottles; common slickensides; weak, medium angular blocky structure (structure formed by intersecting slickensides); moist, firm; very strongly acid; boundary gradual and wavy.
C3 or D3 60244	56 to 82 inches. White (5Y 8/1) fine sandy clay with common, medium distinct reddish yellow (7.5YR 6/8) and few, fine, prominent, yellow (10YR 8/6) mottles; many slickensides; weak, medium angular blocky structure; moist firm; very strongly acid; boundary gradual and wavy.
C4 or D4 60245	82 to 92 inches. Light gray and white (5Y 7/1 and 8/1) fine sandy clay with common, medium, distinct, brownish yellow (10YR 6/8) and few, fine, distinct, yellow (10YR 8/6) and few, fine, prominent, weak red (10R 4/3) mottles; weak slickensides; weak, medium subangular blocky structure; moist, firm; very strongly acid; boundary gradual and wavy.
C5 or D5 60246	92 to 106 inches. Light gray (5Y 7/1), fine sandy clay with few, fine, distinct, white (10YR 8/1) and few, fine prominent, reddish brown (5YR 4/4) and few, fine distinct, brownish yellow and yellow (10YR 6/8 and 8/6) mottles; weak slickensides; weak, medium subangular blocky structure; moist firm; extremely acid; boundary gradual and wavy.
C6 or D6 60247	106 to 123 inches. Light gray (5Y 7/1) fine sandy clay mottled with brownish yellow and yellow (10YR 6/8 and 8/6); weak, medium subangular blocky structure; nearly massive; moist, firm; very strongly acid.

Notes: Alp, B22, C3 or D3 horizons were sampled for the Bureau of Public Roads. Good moisture conditions prevailed when sampled. Reaction determined by LaMotte method. Samples from horizons below 82 inches were obtained with a bucket auger.

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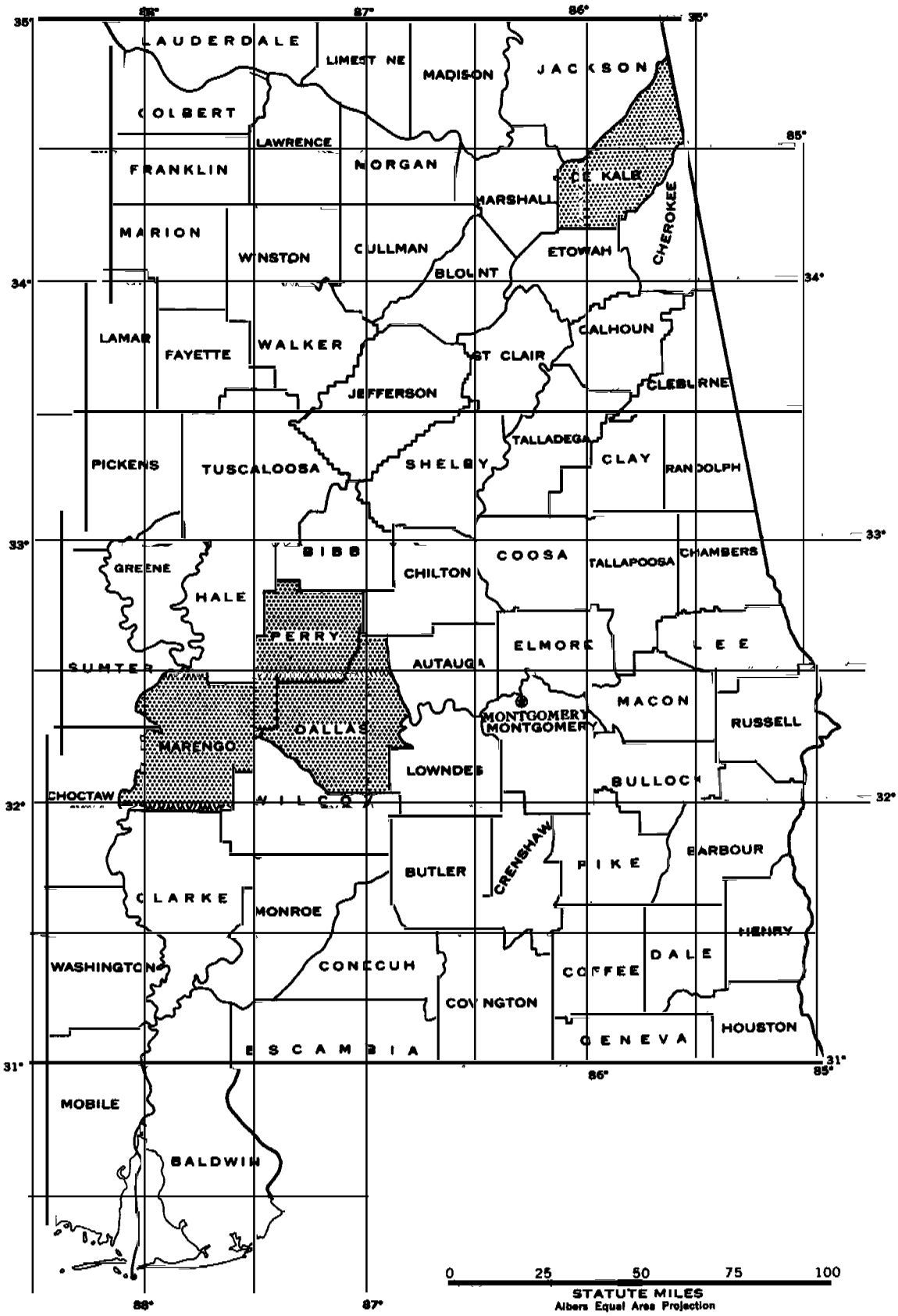
ALABAMA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WINSTON
CULLMAN
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LAMAR
FAYETTE
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CALHOUN
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CLARKE
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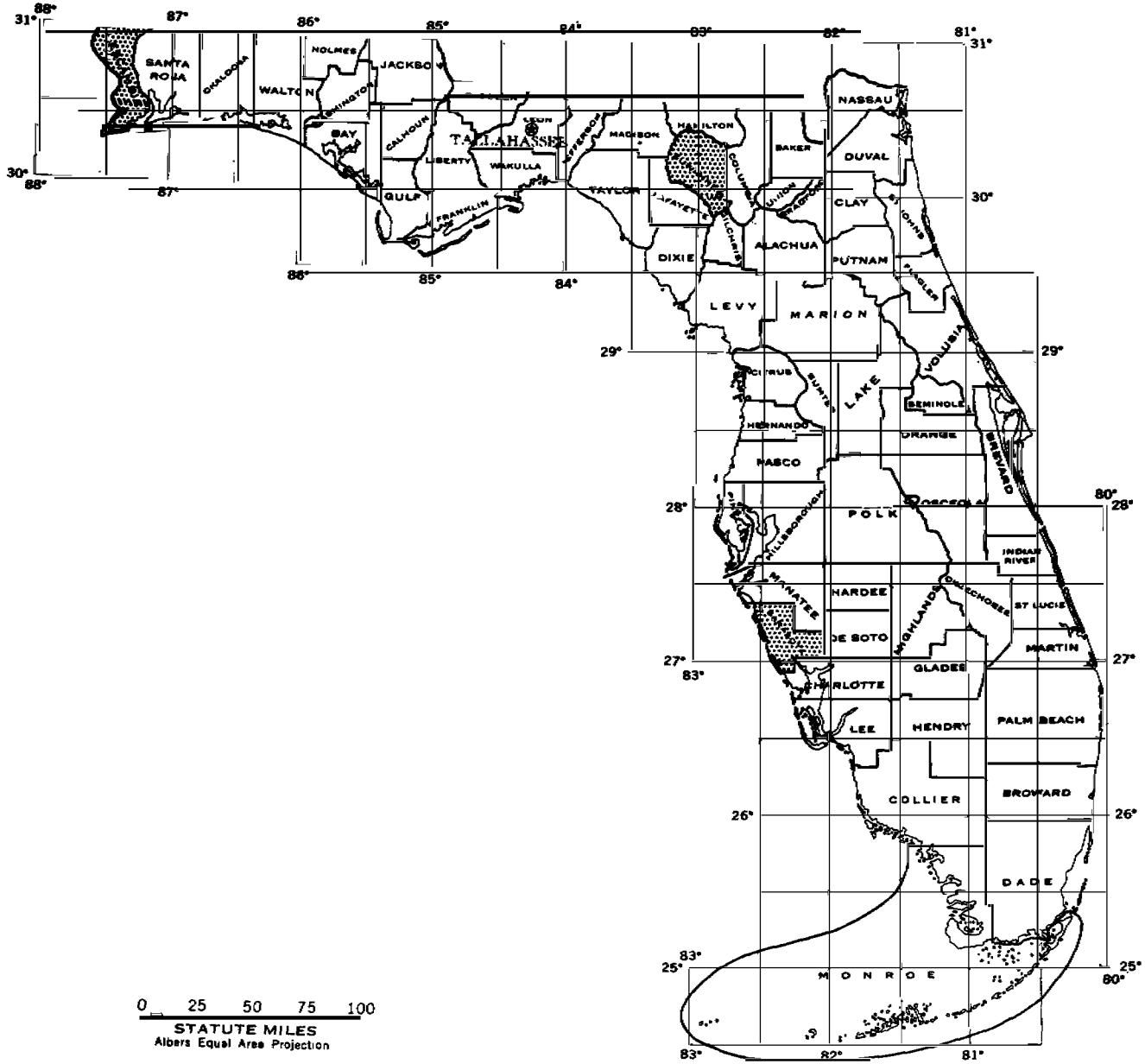
Albers Equal Area Projection


SANTA ROSA
OKALOOSA
WALTON
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BAY
CALHOUN
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TALLAHASSEE
LEON
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