OCCASIONAL PAPER 147 1956

PROPERTIES OF 91 SOUTHERN SOIL SERIES

Basil D. Doss and W. M. Broadfoot

Southern Forest Experiment Station
Philip A. Briegleb, Director
FOREST SERVICE, U. S. DEPT. OF AGRICULTURE

PROPERTIES OF 91 SOUTHERN SOIL SERIES

Basil D. Doss and W. M. Broadfoot
Southern Forest Experiment Station

From June 1954 to July 1955 the Vicksburg Infiltration Project[1/] collected and analyzed samples of 91 soil series in 7 southern states. The purpose was to supply the U. S. Army with information needed for specialized research on military trafficability, but the basic data on soil properties should be of interest to soil scientists generally. The 91 series may be considered typical of the soils in the Gulf Coastal Plain and the Lower Mississippi Valley. Samples were taken at 176 sites, and standard methods were used throughout the study for both field and laboratory procedures.

The soil series are listed alphabetically in Table 1. They were identified in all cases by regional soil correlators of the Soil Conservation Service. The general locations of the sites are shown in figure 1, in which each dot represents a weather station. One to five sites were located within 5 miles of each of these stations.[2/]

Tables 2 to 8 (one table for each State) characterize the individual sample sites and summarize the information on soil properties.

In these tables, "vegetation and land use" refers to the cover type on the site and to any disturbance caused by man—cultivation, grazing, or the cutting of hay. Where none of these disturbances had occurred within 5 years, the site was classed as undisturbed.

No sites were established on recently logged areas or on land in cultivation in 1953-54. Areas that had been cultivated sometime within the five years preceding the survey were classed as cultivated previously—now grazed if they were being currently grazed by livestock; and as cultivated previously—now in hay if the cover was being cut for hay.

1/ Maintained at Vicksburg, Mississippi, cooperatively by the Southern Forest Experiment Station, Forest Service, U. S. Department of Agriculture, and the Waterways Experiment Station, Corps of Engineers, U.S. Army. Special acknowledgment is due Messrs. Irving Martin, Allen Hasty, and Marvin Lawson of the Soil Survey Office, Soil Conservation Service, Knoxville, Tennessee, for identifying the soils of this region.

2/ As will be apparent from the information under "Weather station and county," in tables 2 to 8, the station and the sampling site were not always in the same county.

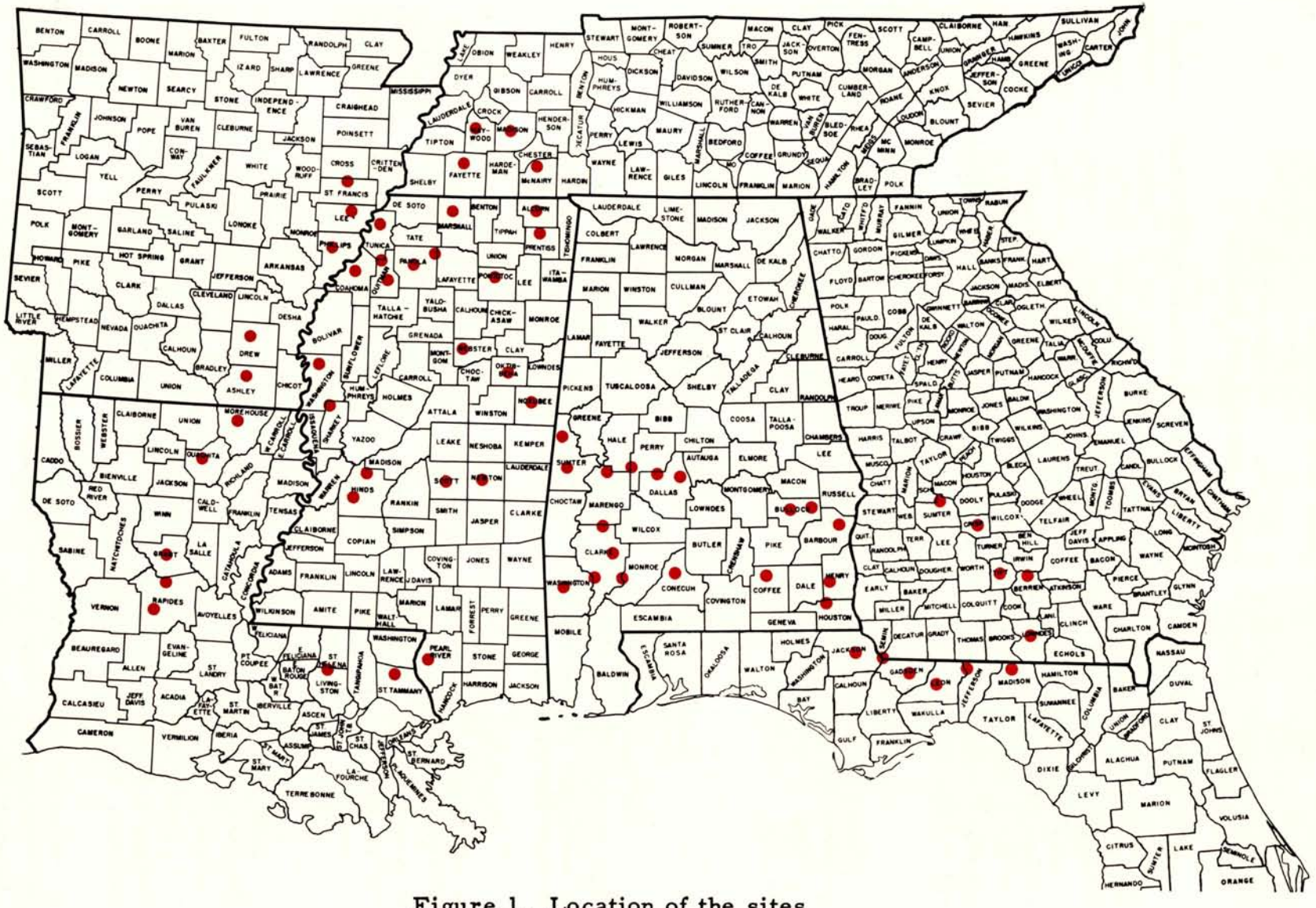

Figure 1. Location of the sites

Table 1.—Soil series studied

Series	State
Alligator	Mississippi
Barth	Florida
Bibb	Alabama
Boswell	Alabama
	Arkansas
Bowie	Louisiana
Brooksville	Mississippi
Byars	Alabama
	Georgia
Caddo	Louisiana
Cahaba	Alabama
Calhoun	Arkansas
	Louisiana
	Mississippi
Calloway	Mississippi
Carroll	Mississippi
	Tennessee
Catalpa	Alabama
Clack	Arkansas
Collins (See Falaya-Collins)	Mississippi
Commerce	Mississippi
Congaree	Florida
Cuthbert	Alabama
Dowling	Mississippi
Dubbs	Mississippi
Dulac	Arkansas
Dundee	Mississippi
Ecru	Mississippi
Eustis (See Orangeburg-Eustis)	Alabama
Eutaw	Alabama
	Mississippi
Faceville	Florida
Falaya	Mississippi
Falaya-Collins	Mississippi
Falkner	Mississippi
Flint	Alabama
Forestdale	Arkansas
	Mississippi
Franklinton	Mississippi
Geiger	Alabama
	Mississippi
Goldsboro	Georgia
Grady	Florida
	Georgia
Greenville	Alabama
	Georgia
Grenada	Arkansas
	Mississippi
	Tennessee
Henderson	Georgia
Henry	Mississippi
Huckabee	Alabama
Hunt	Mississippi
Hymon	Mississippi
Independence	Tennessee
Irvington	Georgia
Iuka	Alabama
Jonesville	Georgia
Kaufman	Mississippi
Kershaw	Alabama
Klej	Florida
Lafe	Arkansas
Lakeland	Alabama
Lakeland	Florida
Leeper	Mississippi
Leon	Florida
Lexington	Arkansas
	Mississippi
	Tennessee
Lintonia	Arkansas
	Tennessee
Loring	Arkansas
	Mississippi
Lynchburg	Alabama
	Georgia
Magnolia	Alabama
	Georgia
Mantachie	Alabama
	Mississippi
Memphis	Mississippi
	Tennessee
Norfolk	Alabama
Ochlockonee	Florida
	Louisiana
Oktibbeha	Mississippi
Olivier	Louisiana
	Mississippi
	Tennessee
Ora	Alabama
Orangeburg	Alabama
	Louisiana
Orangeburg-Eustis	Alabama
Pheba	Alabama
Plummer	Florida
Prentiss	Mississippi
Rains	Alabama
	Georgia
Red Bay	Alabama
	Florida
Richland	Louisiana
Ruston	Alabama
	Louisiana
Sawyer	Alabama
	Mississippi
Savannah	Louisiana
	Mississippi
Sharkey	Mississippi
Shubuta	Mississippi
Stough	Alabama
Sumter	Alabama
Susquehanna	Alabama
	Mississippi
Thompson	Louisiana
Tifton	Georgia
Tilden	Mississippi
Tunica	Mississippi
Vaiden	Mississippi
Vian	Louisiana
Vaucluse	Florida
Waverly	Arkansas
	Mississippi
	Tennessee
Wrightsville	Louisiana
Yahola	Louisiana
Stratified Clays & Muck	Alabama

Areas that had not been cultivated for 5 years were classed as lightly grazed if they showed some animal use; as moderately grazed if they were being intensively managed for concentrated grazing; as hay if they revealed no grazing but the cover was cut for hay; and as lawn if they were mowed frequently.

The soil properties were determined from bulk samples and 2-inch cores taken randomly from a 12 by 18-foot plot at each site. Bulk samples, composited from six locations, were taken from the 0 to 6-, 6 to 12-, and the 12 to 18-inch layers for determination of mechanical analysis, plasticity constants, and organic-matter content. No samples were taken below 18 inches.

Texture class follows the terminology given in the U. S. Department of Agriculture Soil Survey Manual, p. 210.[3/] The following symbols are used, alone or in combination:

S = sand

Si = silt

C = clay

L = loam

The mechanical composition was determined at the Mississippi Agricultural Experiment Station by a combination sieve and hydrometer method. The separation of medium from fine-sized particles was based on Bouyoucos hydrometer readings taken only one hour after the suspension was mixed and adjusted to a pH of 9.5 with 0.01N sodium hydroxide. The figures for fine-particle content may thus include a portion of the particles usually classified as fine silt. However, in the tables the medium and fine-sized particles are reported as silt and clay, respectively. The figures are expressed in the table as percent of dry weight.

Organic-matter determinations were made by a modified Walkley rapid-dichromate oxidation method[4/] at the Mississippi Agricultural

---

3/ Soil Survey Staff, U. S. Bureau of Plant Industry, Soils, and Agricultural Engineering.
Soil survey manual. U. S. Dept. Agr. Handbook 18, 503 pp., illus. 1951.

4/ Peech, M., Alexander, L. T., Dean, L. A., and Reed, J. F.
Methods of soil analysis for soil-fertility investigations.
U. S. Dept. Agr. Cir. 757, 25 pp. 1947.

Experiment Station and are expressed as percent of dry weight. The loss-on-ignition method, following modified procedures of the Association of Official Agricultural Chemists, 5/ was used for samples when the organic-matter content was determined as over 5 percent by the Walkley method.

The plasticity constants of the 6 to 12-inch layer were determined by the Soils Laboratory of the Waterways Experiment Station. 6/ The figures are expressed as moisture content in percent of dry weight.

Bulk density and tension analysis were determined from 2-inch cores obtained with the modified San Dimas or drive-type sampler 7/ when the soil was moist. Cores were taken in duplicate at the 0 to 3-inch, 3 to 6-inch, 6 to 9-inch and 9 to 12-inch depths and averaged in the table by 6-inch layers. The moisture held by the soil at zero tension (saturation) was determined by weighing the 2-inch cores after they had been soaked in a pan of water. As some water was lost during transfer, and as all pores are usually not filled by this method, these values are frequently less than the theoretical maximum. The 60-cm. values were determined by use of a tension table. 8/ The tension values are expressed in percent of dry weight.

5/ Association of Official Agricultural Chemists.
Methods of analysis. Ed. 6, 932 pp., illus. Washington, D. C. 1945.

6/ Waterways Experiment Station.
Soils Laboratory manual—Lower Mississippi Valley Division. Section 111, mechanical analysis. U. S. Army, Waterways Experiment Station, 16 pp., illus. 1951.

7/ Broadfoot, W. M.
Procedures and equipment for determining soil bulk density. U. S. Forest Service, Southern Forest Expt. Sta. Occas. Paper 135, pp. 2-11, illus. 1954.

8/ Leamer, R. W., and Shaw, B.
A simple apparatus for measuring non-capillary porosity on an extensive scale. Jour. Amer. Soc. Agron. 33:1003. 1941.

Table 2. Alabama soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Bibb	314	Evergreen, Conecuh	Grasses, moderately grazed	Bottom level	0-6	SL	54	32	14	4.57				1.26	37.9	30.7
					6-12	SL	70	20	10	1.35	Non-plastic			1.53	23.1	18.1
					12-18	LS	80	13	7	.46						
Bibb	354	Union Springs, Bullock	Grasses, moderately grazed	Bottom 3 percent	0-6	LS	84	14	2	1.05				1.49	26.0	23.2
					6-12	LS	85	13	2	.55	Non-plastic			1.47	26.3	23.0
					12-18	LS	76	20	4	.55						
Bibb	368	Cuba, Sumter	Hardwood, undisturbed	Bottom level	0-6	L	27	47	26	3.77				1.34	34.3	31.4
					6-12	L	42	33	25	.86	26	16	10	1.50	25.6	24.3
					12-18	CL	38	32	30	.55						
Boswell	353	Union Springs, Bullock	Pine, undisturbed	Upland 15 percent	0-6	LS	79	14	7	1.15				1.23	42.4	32.7
					6-12	SC	52	10	38	.86	39	18	21	1.36	36.5	35.2
					12-18	C	42	11	47	.55						
Byars	355	Selma, Dallas	Pine, undisturbed	Terrace level	0-6	L	52	34	14	3.27				1.50	26.6	19.2
					6-12	SL	58	32	10	1.25	Non-plastic			1.52	24.4	16.6
					12-18	SL	60	31	9	.70						
Byars	366	Livingston, Sumter	Pine-sweet gum, undisturbed	Terrace 3 percent	0-6	SCL	47	23	30	1.45				1.46	27.5	24.9
					6-12	CL	38	23	39	.78	40	19	21	1.49	28.5	27.6
					12-18	CL	38	24	38	.55						
Cahaba	310	Claiborne, Monroe	Grasses, moderately grazed	Terrace 4 percent	0-6	LS	79	17	4	.95				1.41	30.9	18.4
					6-12	SL	70	20	10	.55	Non-plastic			1.53	23.2	16.0
					12-18	SL	68	16	16	.38						
Catalpa	360	Marion Junction, Dallas	Grasses, moderately grazed	Bottom level	0-6	SiC	2	48	50	3.13				1.37	34.0	32.3
					6-12	SiC	1	44	55	2.35	63	27	36	1.28	40.7	40.2
					12-18	C	7	33	60	1.25						
Cuthbert	301	Chatom, Washington	Pine-oak, undisturbed	Upland 15 percent	0-6	SL	61	29	10	1.05				1.55	26.0	16.2
					6-12	L	43	31	26	.62	26	15	11	1.61	20.9	16.5
					12-18	CL	43	23	34	.46						
Cuthbert	350	Midway, Bullock	Pine, undisturbed	Upland 8 percent	0-6	SL	72	13	15	1.33				1.45	29.4	18.7
					6-12	C	40	13	47	.86	49	23	26	1.27	41.7	39.8
					12-18	SC	49	13	38	.46						
Cuthbert	369	Cuba, Sumter	Pine, undisturbed	Upland 10 percent	0-6	SL	71	21	8	.95				1.51	24.3	18.0
					6-12	SCL	53	24	23	.62	31	15	16	1.64	21.2	20.0
					12-18	SCL	46	22	32	.38						
Eutaw	364	Demopolis, Marengo	Hardwood, undisturbed	Upland level	0-6	SiCL	17	49	34	2.23				1.40	31.6	29.8
					6-12	SiC	15	45	40	.55	49	20	29	1.48	29.5	29.0
					12-18	SiC	15	43	42	.32						
Flint	356	Selma, Dallas	Grasses-weeds, lightly grazed	Terrace level	0-6	SL	68	25	7	.62				1.42	29.6	23.4
					6-12	SL	65	25	10	.32	Non-plastic			1.43	29.4	22.8
					12-18	SL	59	25	16	.32						
Geiger	357	Selma, Dallas	Grasses, moderately grazed	Terrace level	0-6	SC	47	13	40	3.13				1.46	30.7	24.2
					6-12	L	43	34	23	1.25	45	20	25	1.43	30.0	22.4
					12-18	CL	35	29	36	.70						
Greenville	306	Jackson, Clarke	Grasses, moderately grazed	Upland 5 percent	0-6	SL	55	29	16	1.05				1.57	24.2	17.4
					6-12	CL	35	29	36	.70	33	13	20	1.56	23.4	20.1
					12-18	CL	35	31	34	.46						
Huckabee	365	Livingston, Sumter	Grasses, moderately grazed	Terrace level	0-6	SL	80	10	10	1.15				1.48	26.6	16.4
					6-12	SL	75	10	15	.95	Non-plastic			1.56	23.4	15.4
					12-18	LS	78	17	5	.38						
Iuka	304	Jackson, Washington	Grasses, moderately grazed	Bottom level	0-6	SiCL	9	57	34	2.75				1.40	30.5	26.9
					6-12	SiCL	10	56	34	1.25	44	23	21	1.48	29.5	27.7
					12-18	SiC	3	52	45	1.25						
Kershaw	305	Jackson, Clarke	Hardwood, undisturbed	Upland 6 percent	0-6	LS	79	17	4	1.05				1.36	32.1	11.6
					6-12	S	92	6	2	.78	Non-plastic			1.53	24.1	8.2
					12-18	S	87	9	4	.55						
Lakeland	348	Eufaula, Barbour	Grasses-weeds, undisturbed	Upland level	0-6	LS	83	14	3	.78				1.41	31.0	25.1
					6-12	LS	81	14	5	.70	Non-plastic			1.44	29.3	22.9
					12-18	LS	83	13	4	.25						
Lynchburg	303	Chatom, Washington	Pine, undisturbed	Upland 5 percent	0-6	SL	62	30	8	4.52				1.34	31.1	26.7
					6-12	SL	62	28	10	1.05	Non-plastic			1.71	19.9	16.7
					12-18	SL	53	27	20	.55						

(Continued)

Table 2. Alabama soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Magnolia	307	Thomasville, Clarke	Pine, undisturbed	Upland 12 percent	0-6	SL	75	19	6	1.25		Non-plastic		1.39	25.4	15.8
					6-12	SCL	51	19	30	.95				1.52	24.4	16.9
					12-18	SC	46	14	40	.62						
Mantachie	351	Midway, Bullock	Grasses-weeds, undisturbed	Bottom level	0-6	SL	74	18	8	1.25		Non-plastic		1.47	26.8	21.6
					6-12	SL	54	27	19	.86				1.45	28.6	23.1
					12-18	SL	57	25	18	.62						
Norfolk	313	Evergreen, Conecuh	Pine-oak, undisturbed	Upland 15 percent	0-6	LS	79	15	6	1.45		Non-plastic		1.49	28.5	18.6
					6-12	LS	77	19	4	.46				1.71	19.7	12.9
					12-18	SL	72	20	8	.25						
Norfolk	316	Headland, Henry	Grasses, lawn	Upland level	0-6	SL	74	16	10	2.08		Non-plastic		1.68	20.5	15.6
					6-12	SL	70	14	16	.70				1.84	15.6	13.8
					12-18	SL	62	18	20	.38						
Norfolk	317	Headland, Henry	Grasses, moderately grazed	Upland level	0-6	LS	82	12	6	1.15		Non-plastic		1.60	20.3	12.0
					6-12	SL	76	14	10	.46				1.70	17.6	10.9
					12-18	SL	77	14	9	.38						
Norfolk	320	Dothan, Houston	Pine, grasses and weeds, undisturbed	Upland level	0-6	SL	66	20	14	2.08		Non-plastic		1.58	22.8	14.6
					6-12	SL	67	14	19	.78				1.74	18.4	14.5
					12-18	SCL	64	10	26	.32						
Ora	311	Claiborne, Monroe	Grasses and weeds, undisturbed	Upland level	0-6	SL	66	28	6	1.25				1.65	20.6	13.1
					6-12	SL	56	24	20	.70	24	12	12	1.57	22.5	15.8
					12-18	SCL	54	24	22	.46						
Orangeburg	309	Whatley, Clarke	Pine, undisturbed	Upland 20 percent	0-6	LS	80	16	4	2.35		Non-plastic		1.57	24.6	11.9
					6-12	SL	63	29	8	.95				1.73	20.7	12.2
					12-18	SCL	65	15	20	.78						
Orangeburg-and Eustis	315	Elba, Coffee	Grasses-weeds, undisturbed	Upland 20 percent	0-6	LS	85	11	4	.86		Non-plastic		1.48	28.5	11.6
					6-12	LS	82	13	5	.46				1.62	21.1	9.3
					12-18	LS	80	12	8	.32						
Pheba	367	Livingston, Sumter	Pine, undisturbed	Upland 4 percent	0-6	SL	64	30	6	1.65				1.56	22.0	17.7
					6-12	SL	57	33	10	.38	12	14	-2	1.62	21.1	17.4
					12-18	SL	54	35	11	.32						
Rains	302	Chatom, Washington	Pine-oak, undisturbed	Upland level	0-6	SL	58	34	8	2.60		Non-plastic		1.43	25.9	20.1
					6-12	SL	55	35	10	.78				1.58	22.2	19.6
					12-18	SL	55	33	12	.70						
Red Bay	312	Evergreen, Conecuh	Grasses, moderately grazed	Upland 5 percent	0-6	SCL	65	7	28	.78				1.50	26.4	17.2
					6-12	SCL	63	17	20	.46	21	11	10	1.36	31.6	19.1
					12-18	SCL	59	19	22	.32						
Ruston	318	Headland, Henry	Grasses-weeds, undisturbed	Upland 8 percent	0-6	SL	71	18	11	2.08		Non-plastic		1.46	25.5	15.0
					6-12	SL	74	12	14	.70				1.71	17.5	12.4
					12-18	SL	72	14	14	.38						
Ruston	349	Eufaula, Barbour	Pine, undisturbed	Upland 8 percent	0-6	SL	78	15	7	1.98		Non-plastic		1.42	30.6	20.3
					6-12	SL	73	11	16	.86				1.56	23.6	18.0
					12-18	SCL	64	12	24	.70						
Sawyer	308	Thomasville, Clarke	Pine, undisturbed	Upland 5 percent	0-6	LS	80	16	4	1.88		Non-plastic		1.36	31.5	17.8
					6-12	LS	80	16	4	.70				1.51	27.1	15.6
					12-18	LS	76	20	4	.46						
Stough	358	Marion Junction, Dallas	Pine, undisturbed	Terrace level	0-6	SL	52	39	9	3.13		Non-plastic		1.57	20.6	16.8
					6-12	SL	69	17	14	.38				1.68	17.7	12.8
					12-18	SL	64	22	14	.38						
Sumter	359	Marion Junction, Dallas	Grasses, moderately grazed	Upland 6 percent	0-6	C	13	31	56	3.62				1.36	34.9	32.6
					6-12	C	8	25	67	1.32	51	24	27	1.50	29.6	28.8
					12-18	C	9	29	62	.86						
Sumter	361	Uniontown, Marengo	Grasses, moderately grazed	Upland 8 percent	0-6	C	12	34	54	1.25				1.42	31.6	30.4
					6-12	C	13	31	56	.70	60	22	38	1.46	31.2	30.7
					12-18	C	10	34	56	.70						
Sumter	362	Demopolis, Marengo	Grasses, moderately grazed	Upland 3 percent	0-6	SiC	13	47	40	2.35				1.40	30.6	28.3
					6-12	SiC	14	46	40	1.45	58	26	32	1.38	34.8	34.3
					12-18	C	13	37	50	.95						
Susquehanna	352	Union Springs, Bullock	Pine, undisturbed	Upland 6 percent	0-6	SCL	72	7	21	1.88				1.37	33.6	30.4
					6-12	C	41	14	45	.55	57	28	29	1.34	38.0	36.7
					12-18	C	43	17	40	.38						
Stratified Clays and Muck	319	Dothan, Houston	Cypress, undisturbed	Bottom level	0-6	SiC	3	43	54	7.45				1.00	58.3	48.2
					6-12	C	3	34	63	11.33	61	38	23	1.00	56.6	52.8
					12-18	C	24	35	41	5.80						

Table 3. Arkansas soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Boswell	125	Monticello, Drew	Pine-oak, undisturbed	Upland 8 percent	0-6	L	42	35	23	2.35				1.19	42.3	37.3
					6-12	C	15	35	50	.70	61	30	31	1.21	47.8	46.8
					12-18	C	11	37	52	.55						
Calhoun	121	Marvell, Phillips	Grasses, moderately grazed	Terrace level	0-6	Si	2	86	12	.78				1.45	29.6 -	26.9
					6-12	SiL	2	82	16	.46	Non-plastic			1.49	26.7	24.0
					12-18	SiL	2	76	22	.46						
Clack	119	Marianna, Lee	Grasses, lawn	Terrace level	0-6	L	47	40	13	1.05				1.51	25.3	19.1
					6-12	SL	70	20	10	.55	Non-plastic			1.56	22.3	14.2
					12-18	SL	71	19	10	.38						
Dulac	124	Monticello, Drew	Grasses-weeds, undisturbed	Upland 4 percent	0-6	SiL	26	61	13	1.65				1.45	27.3	24.4
					6-12	SiL	25	55	20	.70	26	18	8	1.49	26.3	24.4
					12-18	SiL	22	53	25	.46						
Forestdale	120	Marianna, Lee	Grasses, moderately grazed	Terrace level	0-6	SiCL	18	52	30	2.23				1.39	31.9	28.8
					6-12	L	46	38	16	1.65	27	18	9	1.59	22.7	18.8
					12-18	SL	64	29	7	.46						
Grenada	116	Forrest City, St. Francis	Hardwood, undisturbed	Upland 3 percent	0-6	SiCL	2	70	28	.38				1.56	26.8	25.5
					6-12	SiCL	1	67	32	.25	37	22	15	1.54	28.1	26.8
					12-18	SiCL	1	69	30	.25						
Lafe	127	Crossett, Ashley	Grasses-weeds, lightly grazed	Terrace level	0-6	SiL	28	67	5	.70				1.57	21.6	19.9
					6-12	SiL	30	60	10	.38	Non-plastic			1.56	22.2	19.0
					12-18	SiL	26	62	12	.32						
Lexington	126	Crossett, Ashley	Pine, undisturbed	Upland level	0-6	SiL	31	58	11	1.33				1.51	24.8	22.5
					6-12	SiL	22	60	18	.38	24	17	7	1.60	22.3	20.8
					12-18	SiL	19	56	25	.32						
Lexington	129	Crossett, Ashley	Pine, undisturbed	Upland 3 percent	0-6	SiL	32	57	11	.62				1.52	25.4	21.7
					6-12	SiL	17	62	21	.32	28	18	10	1.58	24.6	21.7
					12-18	SiL	16	59	25	.32						
Lexington	130	Crossett, Ashley	Grasses-weeds, lightly grazed	Upland 4 percent	0-6	SiL	18	66	16	1.25				1.54	24.2	22.7
					6-12	SiL	17	60	23	.55	27	18	9	1.52	24.6	23.3
					12-18	SiL	18	57	25	.46						
Lintonia	118	Marianna, Lee	Grasses, moderately grazed	Terrace 8 percent	0-6	SiL	3	79	18	2.87				1.46	28.9	26.5
					6-12	SiL	2	74	24	1.45	32	22	10	1.56	25.6	24.1
					12-18	SiCL	1	71	28	.78						
Loring	115	Forrest City, St. Francis	Hardwood, undisturbed	Upland 2 percent	0-6	SiL	3	81	16	2.35				1.32	36.5	32.6
					6-12	SiL	2	79	19	.62	26	22	4	1.41	30.9	26.4
					12-18	SiL	1	73	26	.38						
Loring	117	Forrest City, St. Francis	Hardwood, undisturbed	Upland 35 percent	0-6	SiL	4	74	22	1.33				1.32	36.2	32.0
					6-12	SiL	1	75	24	.46	36	23	13	1.46	30.8	29.3
					12-18	SiL	1	79	20	.25						
Waverly	122	Marvell, Phillips	Hardwood, undisturbed	Bottom level	0-6	SiCL	3	69	28	2.60				1.31	34.2	31.6
					6-12	SiL	1	79	20	.70	28	22	6	1.42	29.1	27.6
					12-18	SiL	1	73	26	.55						
Waverly	123	Marvell, Phillips	Hardwood, undisturbed	Bottom level	0-6	SiL	2	80	18	2.87				1.24	40.4	35.0
					6-12	SiL	4	74	22	1.45	34	23	11	1.31	35.6	32.6
					12-18	L	33	49	18	.95						
Waverly	128	Crossett, Ashley	Hardwood, undisturbed	Bottom level	0-6	SiL	7	67	24	2.75				1.36	30.4	28.4
					6-12	SiL	11	71	18	.70	Non-plastic			1.52	22.4	20.4
					12-18	SiCL	10	58	32	.38						

Table 4. Florida soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Barth	326	Chattahoochee, Gadsden	Grasses-weeds, hay	Terrace level	0-6	LS	86	10	4	1.25				1.57	21.8	18.0
					6-12	LS	87	9	4	.46	Non-plastic			1.57	20.8	15.6
					12-18	LS	87	9	4	.25						
Congaree	324	Chattahoochee, Gadsden	Hardwood, undisturbed	Bottom level	0-6	CL	36	28	36	2.75				1.29	35.6	32.2
					6-12	CL	33	29	38	1.25	38	19	19	1.54	24.8	23.9
					12-18	C	16	26	58	.78						
Faceville	321	Marianna, Jackson	Grasses, moderately grazed	Upland 5 percent	0-6	SL	80	10	10	.95				1.54	23.7	17.6
					6-12	SCL	68	10	22	.78	Non-plastic			1.51	24.8	20.2
					12-18	SCL	54	14	32	.38						
Faceville	328	Tallahassee, Leon	Pine, undisturbed	Upland 3 percent	0-6	SCL	75	5	20	1.25				1.50	24.8	21.1
					6-12	SCL	66	4	30	.70	Non-plastic			1.45	29.5	27.5
					12-18	SC	46	10	44	.55						
Grady	322	Marianna, Jackson	Pine-oak, undisturbed	Upland level	0-6	SCL	66	14	20	4.34				1.26	28.8	20.6
					6-12	SCL	69	11	20	.95	Non-plastic			1.71	17.4	14.9
					12-18	SCL	67	11	22	.55						
Jonesville	334	Madison, Madison	Grasses-weeds, moderately grazed	Upland 3 percent	0-6	L	41	49	10	2.60				1.33	32.5	18.8
					6-12	LS	82	8	10	2.87	Non-plastic			1.36	30.0	20.7
					12-18	LS	85	7	8	1.98						
Klej	323	Marianna, Jackson	Pine, undisturbed	Upland level	0-6	LS	82	12	6	2.60				1.33	33.6	20.2
					6-12	LS	85	11	4	1.05	Non-plastic			1.64	19.8	13.8
					12-18	LS	85	7	8	.55						
Lakeland	331	Monticello, Jefferson	Grasses, moderately grazed	Upland level	0-6	S	87	11	2	1.55				1.52	27.2	20.1
					6-12	S	91	5	4	.70	Non-plastic			1.61	22.3	13.2
					12-18	S	89	5	6	.38						
Lakeland	333	Madison, Madison	Pine, undisturbed	Upland 12 percent	0-6	SL	49	47	4	1.05				1.48	26.7	10.4
					6-12	S	89	9	2	.55	Non-plastic			1.56	23.7	10.0
					12-18	S	88	8	4	.32						
Leon	332	Monticello, Jefferson	Pine, undisturbed	Upland level	0-6	S	89	9	2	2.60				1.38	32.5	19.5
					6-12	LS	86	8	6	1.45	Non-plastic			1.53	23.4	13.2
					12-18	LS	83	11	6	.95						
Ochlockonee	329	Tallahassee, Leon	Grasses, moderately grazed	Bottom level	0-6	SL	68	16	16	2.75				1.50	24.9	20.4
					6-12	SCL	67	11	22	1.05	Non-plastic			1.45	27.4	21.0
					12-18	SCL	67	11	22	.46						
Plummer	330	Monticello, Jefferson	Hardwood-pine, undisturbed	Upland level	0-6	LS	82	10	8	4.34				1.38	31.7	20.0
					6-12	S	88	8	4	1.98	Non-plastic			1.60	21.4	14.2
					12-18	LS	87	7	6	1.15						
Red Bay	327	Quincy, Gadsden	Grasses-weeds, hay	Upland level	0-6	LS	81	13	6	1.98				1.50	26.3	18.8
					6-12	SL	76	12	12	.62	Non-plastic			1.60	20.5	15.7
					12-18	SL	69	17	14	.46						
Vaucluse	325	Chattahoochee, Gadsden	Pine, undisturbed	Upland 12 percent	0-6	S	90	4	6	.62				1.56	21.6	12.5
					6-12	LS	82	8	10	.32	Non-plastic			1.71	18.4	14.1
					12-18	SL	81	5	14	.25						

Table 5. Georgia soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Byars	347	Eufaula, Ala. Quitman	Grasses, moderately grazed	Terrace level	0-6	CL	41	29	30	4.52				1.31	36.6	33.1
					6-12	SCL	46	25	29	2.87	31	19	12	1.59	23.2	21.5
					12-18	SCL	53	18	29	1.25						
Goldsboro	335	Valdosta, Lowndes	Grasses-weeds, undisturbed	Upland level	0-6	S	89	7	4	1.15				1.48	24.6	13.8
					6-12	LS	87	7	6	.78	Non-plastic			1.62	19.9	13.3
					12-18	LS	85	3	12	.25						
Grady	342	Cordele, Crisp	Pine, undisturbed	Upland level	0-6	SCL	50	24	26	6.04				1.22	44.6	32.2
					6-12	SCL	55	22	23	1.25	Non-plastic			1.80	16.3	13.7
					12-18	SCL	50	23	27	.46						
Greenville	344	Americus, Sumter	Pine, Grasses and weeds, undisturbed	Upland 3 percent	0-6	SL	70	13	17	1.15				1.56	23.0	14.4
					6-12	SCL	60	14	26	.70	21	12	9	1.72	19.1	16.2
					12-18	SCL	58	14	28	.38						
Henderson	346	Americus, Sumter	Grasses-weeds, undisturbed	Upland 4 percent	0-6	SCL	54	23	23	3.41				1.57	23.6	18.7
					6-12	SCL	51	24	25	1.33	Non-plastic			1.64	21.0	17.8
					12-18	CL	43	22	35	.70						
Irvington	340	Tifton, Tift	Grasses-weeds, moderately grazed	Upland 5 percent	0-6	S	88	10	2	1.50				1.66	21.2	10.9
					6-12	LS	85	10	5	.75	22	13	9	1.80	18.4	12.6
					12-18	SL	77	9	14	.50						
Lynchburg	337	Alapaha, Berrien	Pine, lightly grazed	Upland level	0-6	LS	83	14	3	2.08				1.59	19.9	13.5
					6-12	LS	84	11	5	.70	Non-plastic			1.63	19.6	12.2
					12-18	LS	83	14	3	.38						
Lynchburg	338	Alapaha, Berrien	Grasses, moderately grazed	Upland level	0-6	S	94	2	4	1.45				1.55	21.7	13.3
					6-12	S	90	4	6	.62	Non-plastic			1.67	18.9	12.4
					12-18	LS	84	10	6	.32						
Lynchburg	343	Cordele, Crisp	Grasses, moderately grazed	Upland level	0-6	SL	71	18	11	1.88				1.60	21.7	15.7
					6-12	SL	68	17	15	.70	Non-plastic			1.78	16.9	13.7
					12-18	SCL	62	17	21	.25						
Magnolia	345	Americus, Sumter	Grasses-weeds, undisturbed	Upland 5 percent	0-6	LS	85	11	4	.38				1.48	27.2	13.1
					6-12	SL	68	14	18	.38	20	11	9	1.72	18.2	14.8
					12-18	SCL	62	14	24	.38						
Rains	336	Valdosta, Lowndes	Pine, undisturbed	Upland level	0-6	SL	57	29	14	4.05				1.25	32.6	22.4
					6-12	S	94	4	2	.25	Non-plastic			1.51	23.3	12.7
					12-18	S	92	4	4	.32						
Tifton	341	Cordele, Crisp	Grasses-weeds, undisturbed	Upland 5 percent	0-6	LS	80	16	4	1.05				1.63	22.2	9.0
					6-12	SL	72	13	15	.55	15	12	3	1.72	17.9	10.4
					12-18	SCL	63	12	25	.46						

Table 6. Louisiana soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Bowie	139	Pollock, Grant	Pine, undisturbed	Upland 4 percent	0-6	L	46	44	10	1.88				1.46	25.8	20.7
					6-12	L	36	42	22	.78	24	15	9	1.51	26.2	21.0
					12-18	L	37	43	20	.38						
Caddo	142	Glenmora, Rapides	Grasses, moderately grazed	Upland level	0-6	SiL	15	74	11	3.27				1.38	32.3	29.6
					6-12	SiL	7	74	19	1.05	Non-plastic			1.48	29.9	26.0
Calhoun	145	Covington, St. Tammany	Grasses-weeds, lightly grazed	Terrace level	0-6	SiL	32	58	10	2.23				1.40	29.8	28.1
					6-12	SiL	32	56	12	.70	Non-plastic			1.54	24.2	22.3
					12-18	SiL	30	52	18	.55						
Ochlockonee	138	Pollock, Grant	Hardwood, undisturbed	Bottom level	0-6	SiL	31	50	19	2.87				1.11	45.1	36.0
					6-12	SiL	34	51	15	1.65	Non-plastic			1.18	43.6	34.9
					12-18	L	44	42	14	.95						
Olivier	143	Livingston, Livingston	Pine, undisturbed	Terrace level	0-6	SiL	15	71	14	2.47				1.35	33.2	29.4
					6-12	SiL	11	73	16	.55	27	21	6	1.54	27.6	24.2
					12-18	SiCL	8	56	36	.46						
Olivier	144	Livingston, Livingston	Grasses-weeds, lightly grazed	Terrace level	0-6	SiL	27	61	12	2.60				1.37	30.0	28.2
					6-12	SiL	21	63	16	.70	26	20	6	1.65	21.9	20.2
					12-18	SiL	16	62	22	.38						
Orangeburg	134	Calhoun Exp. Station, Ouachita	Grasses, moderately grazed	Upland 2 percent	0-6	SL	53	31	16	1.55				1.74	17.4	15.1
					6-12	L	46	36	18	.78	18	12	6	1.78	16.2	15.3
					12-18	L	40	36	24	.25						
Richland	146	Covington, St. Tammany	Pine, undisturbed	Terrace level	0-6	SiL	28	60	12	1.65				1.32	34.4	30.1
					6-12	SiL	26	54	20	.95	Non-plastic			1.60	22.6	21.0
					12-18	SiL	28	52	20	.70						
Ruston	136	Calhoun Exp. Station, Ouachita	Pine, undisturbed	Upland 6 percent	0-6	SL	69	23	8	.78				1.64	18.3	13.8
					6-12	SL	60	24	16	.38	Non-plastic			1.74	16.3	13.4
					12-18	SCL	54	19	27	.46						
Ruston	137	Pollock, Grant	Pine, undisturbed	Upland 6 percent	0-6	SL	64	26	10	1.05				1.56	20.4	15.7
					6-12	SCL	48	26	26	.70	24	14	10	1.58	22.8	18.5
					12-18	L	46	30	24	.38						
Savannah	141	Glenmora, Rapides	Grasses, moderately grazed	Upland 6 percent	0-6	SiL	39	51	10	2.81				1.38	30.2	26.2
					6-12	L	32	48	20	.62	28	18	10	1.59	23.0	21.2
Thompson	135	Calhoun Exp. Station, Ouachita	Grasses-weeds, hay	Terrace 4 percent	0-6	SL	55	35	10	1.25				1.59	20.9	17.3
					6-12	SL	62	29	9	1.05	Non-plastic			1.68	19.7	15.8
					12-18	SL	66	25	9	.55						
Vian	131	Bastrap, Morehouse	Hardwood-pine, undisturbed	Terrace 4 percent	0-6	LS	80	18	2	.78				1.50	24.8	14.2
					6-12	SL	64	23	13	.46	Non-plastic			1.60	21.4	15.8
					12-18	L	51	32	17	.38						
Vian	132	Bastrap, Morehouse	Grasses-weeds, undisturbed	Terrace level	0-6	SiL	31	53	16	1.65				1.54	23.5	21.2
					6-12	SiL	29	50	21	1.15	22	16	6	1.63	21.1	19.0
					12-18	SiL	24	54	22	.78						
Wrightsville	133	Bastrap, Morehouse	Hardwood-grasses, undisturbed	Terrace level	0-6	L	41	45	13	1.33				1.61	21.1	19.1
					6-12	L	40	46	14	.70	Non-plastic			1.68	19.3	17.8
					12-18	L	39	47	14	.38						
Yahola	140	Alexandria, Rapides	Grasses-weeds, hay	Bottom level	0-6	SiL	29	59	12	2.08				1.44	28.6	27.0
					6-12	SiL	29	57	14	.55	Non-plastic			1.51	29.8	25.9
					12-18	SiL	25	61	14	.32						

Table 7. Mississippi soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Alligator	109	Clarksdale, Coahoma	Grasses, lawn	Bottom level	0-6	C	13	21	66	4.15				1.10	57.0	53.1
					6-12	C	4	22	74	1.15	76	30	46	1.22	50.2	48.4
					12-18	C	4	25	71	.86						
Brooksville	219	Brooksville Exp. Station, Noxubee	Grasses, cultivated previously, now lightly grazed	Upland level	0-6	SiCL	15	51	34	1.98				1.50	30.2	27.4
					6-12	SiC	11	48	41	1.25	51	23	28	1.57	29.8	28.2
					12-18	SiCL	18	48	34	.86						
Calhoun	205	Oakley Exp. Station, Hinds	Hardwood, lightly grazed	Terrace 2 percent	0-6	SiL	1	82	17	3.13				1.34	33.2	29.8
					6-12	SiL	1	84	15	.95	Non-plastic			1.38	36.4	30.3
					12-18	SiL	4	78	18	.70						
Calloway	209	Oakley Exp. Station, Hinds	Hardwood, undisturbed	Upland level	0-6	SiL	5	77	18	1.25				1.31	36.1	32.2
					6-12	SiL	7	81	12	.46	29	22	7	1.27	41.9	34.0
					12-18	SiCL	6	60	34	.38						
Calloway	246	Holly Springs, Marshall	Grasses, lawn	Upland level	0-6	SiL	15	68	17	.86				1.50	*28.2	25.4
					6-12	SiL	9	65	26	.55	34	24	10	1.41	*33.2	29.4
Calloway	248	Holly Springs, Marshall	Grasses, moderately grazed	Upland 3 percent	0-6	SiL	6	72	22	1.25				1.47	29.1	25.9
					6-12	SiCL	2	70	28	.46	35	24	11	1.46	30.0	28.0
					12-18	SiCL	2	70	28	.38						
Carroll	252	Sardis Dam, Panola	Hardwood, undisturbed	Terrace level	0-6	SiL	13	74	13	1.65				1.34	*36.2	28.5
					6-12	SiL	11	62	27	.55	34	19	15	1.38	*34.6	27.4
Collins	251	Sardis Dam, Panola	Grasses, hay	Bottom level	0-6	SiL	2	84	14	1.25				1.29	38.8	32.7
					6-12	SiL	3	83	14	1.77	Non-plastic			1.34	38.3	30.7
					12-18	SiCL	1	71	28	.32						
Collins	253	Batesville, Panola	Grasses, moderately grazed	Bottom 3 percent	0-6	SiL	2	82	16	1.65				1.48	29.2	26.4
					6-12	SiL	2	83	15	.46	29	24	5	1.51	28.4	25.7
					12-18	SiL	2	83	15	.38						
Commerce	102	Rolling Fork, Sharkey	Grasses, lawn	Terrace level	0-6	SiL	35	59	6	1.55				1.31	36.4	30.0
					6-12	SiL	23	61	16	.62	29	25	4	1.53	30.0	26.2
					12-18	SiL	22	66	12	.32						
Commerce	103	Rolling Fork, Sharkey	Grasses, hay	Terrace level	0-6	L	25	49	26	1.15				1.30	*38.5	29.0
					6-12	SiL	26	54	20	.38	32	23	9	1.48	*29.9	27.1
					12-18	SiL	31	53	16	.32						
Dowling	259	Lambert, Quitman	Cypress-gum, undisturbed	Bottom level	0-6	C	2	25	73	6.17				.86	79.7	62.4
					6-12	C	2	24	74	5.10	91	42	49	.95	71.5	68.6
					12-18	C	1	24	75	2.23						
Dubbs	111	Clarksdale, Coahoma	Grasses, hay	Terrace level	0-6	CL	21	45	34	4.80				1.45	29.2	26.3
					6-12	CL	28	43	29	2.23	34	19	15	1.64	24.0	22.8
					12-18	CL	23	47	30	1.33						
Dubbs	112	Tunica, Tunica	Grasses, lightly grazed	Terrace level	0-6	CL	28	44	28	3.69				1.51	26.5	24.9
					6-12	L	37	39	24	1.45	37	21	16	1.51	27.9	26.4
					12-18	L	42	36	22	1.05						
Dundee	101	Rolling Fork, Sharkey	Grasses, hay	Terrace level	0-6	SiCL	15	57	28	1.88				1.50	31.2	27.0
					6-12	SiCL	10	56	34	.95	38	22	16	1.56	27.6	26.2
					12-18	SiCL	5	57	38	.46						
Dundee	104	Rolling Fork, Sharkey	Grasses, hay	Terrace level	0-6	SiC	9	47	44	4.52				1.37	35.6	28.0
					6-12	SiCL	13	59	28	3.96	52	23	29	1.49	30.8	29.5
					12-18	SiL	24	52	24	.55						
Dundee	257	Lambert, Quitman	Pecan-grasses, hay	Terrace level	0-6	SiCL	11	55	34	2.47				1.39	32.8	27.3
					6-12	SiCL	10	52	38	1.45	46	24	22	1.50	30.0	28.2
					12-18	SiCL	13	53	34	.70						
Dundee	261	Vance, Quitman	Pecan-grasses, lightly grazed	Terrace level	0-6	SiCL	21	52	27	3.27				1.54	26.0	34.2
					6-12	SiCL	19	45	36	.86	42	22	20	1.53	30.4	28.6
					12-18	SCL	58	18	24	.61						
Ecru	229	Pontotoc Exp. Station, Pontotoc	Pine, undisturbed	Upland 3 percent	0-6	SiC	11	47	42	1.45				1.50	25.6	21.6
					6-12	SiL	14	60	26	.86	30	17	13	1.58	23.2	21.6
					12-18	SiCL	11	55	34	.86						
Eutaw	212	Forrest, Scott	Pine-hardwood, undisturbed	Upland level	0-6	L	43	45	12	1.25				1.64	20.4	18.4
					6-12	L	32	46	22	.32	25	13	12	1.74	18.4	17.4
					12-18	CL	24	40	36	.32						

* Moisture content at theoretical maximum determined from computed total pore space. Saturation value was not determined for this depth.

(Continued)

Table 7. Mississippi soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Eutaw	213	Forest, Scott	Grasses-weeds, hay	Upland level	0-6	SiCL	16	56	28	2.08				1.52	26.0	24.5
					6-12	SiCL	14	54	32	.62	40	18	22	1.52	25.6	24.6
					12-18	SiCL	15	47	38	.32						
Eutaw	224	Dancy, Webster	Hardwood, undisturbed	Upland 2 percent	0-6	SiL	21	57	22	3.86				1.07	*55.0	41.2
					6-12	SiCL	14	51	35	1.05	45	25	20	1.40	*33.7	30.4
Eutaw	225	Dancy, Webster	Pine-grasses, undisturbed	Upland 3 percent	0-6	SiCL	10	62	28	1.45				1.41	31.6	29.1
					6-12	SiCL	13	57	30	.55	45	22	23	1.47	32.4	31.0
					12-18	SiCL	10	54	36	.46						
Falaya	201	Utica, Hinds	Grasses, moderately grazed	Bottom level	0-6	Si	10	80	10	1.25				1.34	33.8	31.0
					6-12	Si	7	83	10	.55	Non-plastic			1.37	33.4	29.4
					12-18	Si	9	85	8	.38						
Falaya	204	Utica, Hinds	Grasses-weeds, moderately grazed	Bottom level	0-6	Si	3	86	11	1.25				1.34	35.4	31.4
					6-12	SiL	1	85	14	.86	Non-plastic			1.40	34.8	30.0
					12-18	SiL	1	81	18	.86						
Falaya-Collins	228	Pontotoc Exp. Station, Pontotoc	Hardwood, undisturbed	Bottom level	0-6	SiL	17	61	22	3.27				1.46	32.6	25.2
					6-12	CL	26	44	30	.55	38	21	17	1.51	27.1	24.0
					12-18	SiL	24	50	26	.38						
Falaya-Collins	232	Booneville, Prentiss	Grasses, moderately grazed	Bottom level	0-6	SiL	17	65	18	2.29				1.42	*31.9	28.6
					6-12	L	38	49	13	1.20	30	19	11	1.57	*26.0	23.8
Falkner	227	Pontotoc Exp. Station, Pontotoc	Grasses, lawn	Upland level	0-6	SiL	30	58	12	2.60				1.53	23.6	19.8
					6-12	SiL	18	62	20	.55	21	17	4	1.63	22.0	19.3
					12-18	SiL	25	61	14	.55						
Forestdale	258	Lambert, Quitman	Grasses, lawn	Terrace level	0-6	SiCL	20	53	27	1.45				1.47	28.1	25.3
					6-12	SiC	13	46	41	.62	43	25	18	1.53	32.4	29.3
					12-18	CL	24	39	37	.55						
Franklinton	230	Booneville, Prentiss	Grasses-weeds, undisturbed	Upland level	0-6	SiL	26	59	15	2.08				1.36	*35.1	26.6
					6-12	SiL	22	52	26	.62	32	20	12	1.45	*31.2	26.3
Geiger	226	Dancy, Webster	Grasses-weeds, undisturbed	Terrace level	0-6	SiCL	5	58	37	1.05				1.39	33.0	31.4
					6-12	SiCL	6	56	38	.55	46	26	20	1.39	35.3	34.0
					12-18	SiL	22	62	16	.55						
Grenada	207	Oakley Exp. Station, Hinds	Grasses, hay	Upland 5 percent	0-6	SiL	6	82	12	2.08				1.40	31.5	28.5
					6-12	SiL	2	74	24	.38	34	22	12	1.46	30.1	26.8
					12-18	SiL	5	73	22	.18						
Grenada	247	Holly Springs, Marshall	Grasses, moderately grazed	Upland level	0-6	SiL	3	83	14	1.77				1.48	29.2	27.0
					6-12	SiCL	2	65	33	.50	34	23	11	1.48	29.0	27.1
					12-18	SiCL	1	67	32	.38						
Grenada	249	Holly Springs, Marshall	Grasses, moderately grazed	Upland 6 percent	0-6	SiCL	4	62	34	3.41				1.48	29.1	26.9
					6-12	SiCL	1	71	28	.70	34	23	11	1.48	29.4	27.7
					12-18	SiCL	2	70	28	.38						
Henry	208	Oakley Exp. Station, Hinds	Grasses, hay	Upland level	0-6	SiC	3	56	41	1.77				1.46	28.7	26.5
					6-12	SiC	6	54	40	.62	34	20	14	1.44	30.2	27.6
					12-18	SiC	1	55	44	.38						
Hunt	221	Brooksville Exp. Station, Noxubee	Grasses, moderately grazed	Upland 4 percent	0-6	SiL	19	59	22	3.96				1.57	28.0	26.4
					6-12	SiL	19	57	24	1.88	50	22	28	1.55	30.4	28.4
					12-18	SiCL	10	50	40	1.77						
Hymon	256	Batesville, Panola	Hardwood-grasses, lightly grazed	Bottom level	0-6	SiL	3	80	17	1.45				1.46	29.0	24.8
					6-12	SiL	8	73	19	.55	Non-plastic			1.48	30.9	26.0
					12-18	SiL	27	60	13	.38						
Kaufman	222	State College, Oktibbeha	Clover-grasses, cultivated previously, now lightly grazed	Bottom 3 percent	0-6	L	32	46	22	2.75				1.51	26.8	21.4
					6-12	L	34	44	22	1.98	29	17	12	1.64	22.0	20.1
					12-18	L	31	45	24	1.55						
Leeper	223	State College, Oktibbeha	Grasses, cultivated previously, now in hay	Terrace 3 percent	0-6	CL	31	35	34	2.35				1.38	33.9	31.8
					6-12	CL	27	35	38	.86	50	21	29	1.57	25.8	24.9
					12-18	CL	23	37	40	.70						

* Moisture content at theoretical maximum determined from computed total pore space. Saturation value was not determined for this depth.

(Continued)

Table 7. Mississippi soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Lexington	234	Corinth, Alcorn	Pine-hardwood, undisturbed	Upland 4 percent	0-6	SiL	30	56	14	1.88				1.33	32.8	25.3
					6-12	SiL	20	68	12	.62	26	18	8	1.45	29.3	24.3
					12-18	SiCL	18	52	30	.55						
Loring	202	Utica, Hinds	Pine-oak, undisturbed	Upland 5 percent	0-6	SiL	3	83	14	1.25				1.26	37.1	30.6
					6-12	SiL	2	82	16	.78	Non-plastic			1.33	37.0	31.2
					12-18	SiL	3	75	22	.55						
Loring	203	Utica, Hinds	Oak-pine, lightly grazed	Upland 5 percent	0-6	SiL	2	80	18	2.08				1.27	38.7	32.9
					6-12	SiL	1	75	24	.86	32	21	11	1.39	32.4	27.6
					12-18	SiCL	1	65	34	.55						
Loring	250	Sardis Dam, Panola	Hardwood, undisturbed	Upland 3 percent	0-6	SiL	4	76	20	1.50				1.36	32.2	28.0
					6-12	SiCL	1	63	36	.50	Non-plastic			1.39	31.0	27.3
					12-18	SiCL	1	65	34	.45						
Mantachie	215	Newton Exp. Station, Newton	Grasses, hay	Bottom level	0-6	SL	69	21	10	1.65				1.55	22.2	19.2
					6-12	SL	74	20	6	.32	Non-plastic			1.53	24.2	19.3
					12-18	SL	74	16	10	.18						
Memphis	254	Batesville, Panola	Grasses, moderately grazed	Upland 5 percent	0-6	SiL	3	73	24	1.33				1.52	27.4	23.9
					6-12	SiCL	2	68	30	.38	42	24	18	1.46	32.6	28.1
					12-18	SiL	3	73	24	.35						
Oktibbeha	210	Forest, Scott	Pine, undisturbed	Upland 5 percent	0-6	CL	23	41	36	2.08				1.48	29.0	24.4
					6-12	C	16	36	48	.70	59	20	39	1.49	28.0	25.7
					12-18	C	13	35	52	.46						
Olivier	206	Oakley Exp. Station, Hinds	Grasses, moderately grazed	Terrace 2 percent	0-6	SiL	4	78	18	1.65				1.46	27.4	25.2
					6-12	SiL	3	73	24	.07	34	23	11	1.46	29.9	26.9
					12-18	SiCL	1	67	32	.18						
Olivier	235	Corinth, Alcorn	Grasses, hay	Terrace level	0-6	SiL	22	62	16	2.23				1.46	30.0	27.4
					6-12	SiL	32	52	16	.46	29	19	10	1.61	24.3	22.4
					12-18	SiL	12	64	24	.32						
Olivier	255	Batesville, Panola	Grasses, moderately grazed	Terrace level	0-6	SiL	14	71	15	1.05				1.43	*31.5	27.2
					6-12	SiL	14	64	22	.55	34	23	11	1.44	*31.7	27.4
Prentiss	214	Newton Exp. Station, Newton	Grasses, hay	Terrace 2 percent	0-6	SiL	33	53	14	1.05				1.59	22.4	19.3
					6-12	SiL	18	56	26	.32	33	20	13	1.58	24.8	22.0
					12-18	SiL	12	70	18	.07						
Sawyer	149	Poplarville Exp. Station, Pearl River	Grasses, hay	Upland 6 percent	0-6	SL	53	39	8	1.05				1.50	25.3	20.2
					6-12	SiL	27	59	14	.55	Non-plastic			1.75	18.0	16.1
					12-18	SiL	23	57	20	.32						
Savannah	147	Poplarville Exp. Station, Pearl River	Grasses, lawn	Upland level	0-6	L	45	47	8	2.87				1.48	25.4	21.8
					6-12	L	37	43	20	1.33	25	17	8	1.56	24.4	21.0
					12-18	L	34	42	24	.70						
Sharkey	106	Stoneville Exp. Station, Washington	Hardwood, undisturbed	Bottom level	0-6	C	2	21	77	3.62				1.02	63.6	54.7
					6-12	C	3	23	74	1.45	82	32	50	1.14	57.7	55.7
					12-18	C	2	17	81	1.65						
Sharkey	107	Stoneville Exp. Station, Washington	Hardwood, undisturbed	Bottom level	0-6	C	3	25	72	3.00				1.00	66.0	57.6
					6-12	C	3	23	74	1.33	81	32	49	1.11	56.6	55.2
					12-18	C	2	22	76	1.33						
Sharkey	108	Stoneville Exp. Station, Washington	Hardwood, undisturbed	Bottom level	0-6	C	6	32	62	3.77				1.21	46.6	43.1
					6-12	C	6	26	68	1.33	74	28	46	1.22	48.5	47.2
					12-18	C	6	22	72	.95						
Sharkey	110	Clarksville, Coahoma	Grasses, moderately grazed	Bottom level	0-6	C	4	28	68	2.47				1.36	40.1	38.3
					6-12	C	1	32	67	.78	72	28	44	1.24	49.1	46.5
					12-18	C	1	22	77	.86						
Sharkey	113	Tunica, Tunica	Grasses-weeds, undisturbed	Bottom level	0-6	SiC	3	47	50	3.96				1.39	32.2	30.8
					6-12	SiC	3	45	52	1.88	57	25	32	1.41	32.2	31.5
					12-18	SiCL	1	65	34	1.25						
Sharkey	260	Lambert, Quitman	Grasses, moderately grazed	Bottom level	0-6	C	1	37	62	1.25				1.36	36.5	34.8
					6-12	C	1	34	65	1.15	82	28	54	1.34	43.0	40.1
					12-18	C	1	35	64	.95						
Shubuta	218	Newton Exp. Station, Newton	Pine-oak, undisturbed	Upland 10 percent	0-6	SL	71	25	4	.86				1.40	34.2	25.5
					6-12	SL	65	21	14	.55	22	18	4	1.50	26.9	21.2
					12-18	SC	46	16	38	.55						

* Moisture content at theoretical maximum determined from computed total pore space. Saturation value was not determined for this depth.

(Continued)

Table 7. Mississippi soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	.06 Atmosphere tension
Shubuta	231	Booneville, Prentiss	Hardwood, undisturbed	Upland 8 percent	0-6	CL	31	41	28	1.88				1.34	33.6	29.2
					6-12	C	35	17	48	1.25	55	28	27	1.30	45.3	41.9
					12-18	SCL	50	24	26	.55						
Susquehanna	148	Poplarville Exp. Station, Pearl River	Grasses, hay	Upland 3 percent	0-6	SL	56	34	10	1.88				1.54	24.6	20.6
					6-12	SCL	56	14	30	.78	34	20	14	1.63	22.8	21.0
					12-18	CL	35	31	34	.55						
Susquehanna	217	Newton Exp. Station, Newton	Grasses, moderately grazed	Upland 5 percent	0-6	SiL	22	64	14	1.65				1.50	25.4	22.6
					6-12	SiL	14	60	26	.55	34	20	14	1.51	28.6	25.2
					12-18	SiCL	12	54	34	.25						
Tilden	216	Newton Exp. Station, Newton	Grasses, hay	Terrace 8 percent	0-6	SiL	37	51	12	.70				1.56	23.4	20.4
					6-12	SiL	22	52	26	.55	53	18	35	1.56	24.7	22.4
					12-18	SiL	26	50	24	.18						
Tunica	114	Tunica, Tunica	Grasses-weeds, undisturbed	Bottom 3 percent	0-6	C	5	29	66	1.55				1.34	37.0	35.9
					6-12	C	8	28	64	.95	57	24	33	1.38	35.0	34.0
					12-18	C	9	33	58	.55						
Vaiden	211	Forest, Scott	Pine, undisturbed	Upland level	0-6	SiC	8	52	40	2.47				1.22	*43.5	34.8
					6-12	C	7	38	55	1.05	53	23	30	1.28	*40.4	38.9
Vaiden	220	Brooksville Exp. Station, Noxubee	Grasses, moderately grazed	Upland 6 percent	0-6	SiC	11	48	41	1.25				1.46	33.0	31.5
					6-12	SiC	9	45	46	.62	53	21	32	1.52	32.6	30.2
					12-18	SiCL	11	55	34	.62						
Waverly	233	Corinth, Alcorn	Grasses-weeds, hay	Bottom level	0-6	SiCL	7	63	30	1.88				1.45	30.1	27.8
					6-12	SiL	8	70	22	1.05	29	21	8	1.52	27.7	26.1
					12-18	SiCL	15	51	34	.86						

* Moisture content at theoretical maximum determined from computing total pore space. Saturation value was not determined for this depth.