NSSL Pedon Number: 80P0418 Soil Survey Number S80-GA-237-001
Location: Putnam County, Georgia
Putnam Co. 3 km N of Lake Sinclair 0.6 km N of dairy barn on US Hwy 441 6 m E of rd right of way in pasture.
Soil consists of very deep, well drained, moderately permeable soils that formed in materials weathered from dark colored rocks high in ferromagnesian minerals. These soils are on gently sloping to moderately steep uplands and high stream terraces in the Piedmont. Slopes are commonly 2 to 15 percent but range up to 25 percent.
DRAINAGE AND PERMEABILITY: Well drained; medium to rapid runoff; moderate permeability.
GEOGRAPHIC SETTING: on gently sloping to moderately steep uplands and high stream terraces in the Piedmont. Slopes are commonly 2 to 15 percent but may range up to 25 percent. Elevation is 500 to 1100 feet. Average annual temperature is 59 to 65 degrees F., and average annual precipitation is 43 to 50 inches.
USE AND VEGETATION: Cleared areas are used for small grain, corn, cotton, soybeans, grain sorghum, hay, and pasture. The original forest consisted of white oak, red oak, post oak, hickory, yellow-poplar, and cedar; reforested areas are in shortleaf and loblolly pine.
Particle Size Control Section: _____
Parent Material:
Classification: _____

Diagnostic Horizons: _____

-- 0 to 18 cm; dark reddish brown (2.5YR 3/4) interior moist loam; moderate medium granular structure; , friable; many fine roots throughout; strongly acid (pH=5.3); abrupt smooth boundary.
Worm cast evident.
80P2254

-- 18 to 28 cm; dark red (2.5YR 3/6) interior moist loam; moderate medium granular structure; , friable; many fine roots throughout; strongly acid (pH=5.3); clear smooth boundary.
Worm casts evident.
80P2255

-- 28 to 48 cm; dark red (2.5YR 3/6) interior moist clay; weak medium granular structure; , friable; common fine roots throughout; manganese or iron-manganese coats on faces of peds and clay films on faces of peds; very strongly acid (pH=4.8); gradual smooth boundary.
80P2256

-- 48 to 58 cm; dark red (2.5YR 3/6) interior moist clay; moderate medium subangular blocky structure; , friable; few fine roots throughout; many manganese or iron-manganese coats on faces of peds and clay films on faces of peds; very strongly acid (pH=4.8); gradual wavy boundary.
80P2257

-- 85 to 120 cm; dark red (2.5YR 3/6) interior moist clay; moderate medium subangular blocky structure; , friable; continuous clay films on faces of peds; very strongly acid (pH=4.8); gradual wavy boundary.
80P2258

--120 to 180 cm; dark reddish brown (2.5YR 3/4) interior moist clay; common medium mottles; moderate medium subangular blocky structure; , friable; continuous clay films on faces of peds; very strongly acid (pH=4.8).
80P2259

RANGE IN CHARACTERISTICS: Solum thickness is more than 60 inches and depth to bedrock is more than 6 feet. Reaction of all horizons ranges from very strongly acid to slightly acid, except those surface soils which have been limed. Concretions range from few to common in the upper part of most pedons. Flakes of mica are none to common. Thin gravel lines are in some pedons below 60 inches.

S80GA-237-001 PRINT DATE 04/27/00

USDA-NRCS-NSSC-SOIL SURVEY LABORATORY ; PEDON 80P 418, SAMPLE 80P 2254- 2259

SAMPLE NO.	DEPTH (CM)	HORIZON	(- - -TOTAL - - -) CLAY LT .002	SILT .002 -.05	SAND .05 -2	FINE LT .0002	CO3 LT .002	(- -CLAY- -) FINE -.02	COARSE -.05	(- -SILT- -) VF -.10	F -.25	(- - - - - -SAND- - - - - -) M -.50	C -1	VC -2	(-COARSE FRACTIONS(MM)-) (>2MM) - - - - WEIGHT - - - - 1 -5	2 -20	5 -75	20 75	WT .1-	PCT OF WHOLE SOIL
			<- - - - - - - - - - - - PCT OF <2MM (3A1) - - - - - - - - - - - - - - - ->												<- PCT OF <75MM(3B1)->					
80P2254S	0- 18		20.4	21.8	57.8	7.8		11.4	10.4	25.2	23.2	6.2	2.3	0.9	1	TR	--	33	1	
80P2255S	18- 28		30.4	21.2	48.4	13.4		12.6	8.6	21.3	19.8	4.8	1.7	0.8	TR	1	--	28	1	
80P2256S	28- 48		39.8	19.7	40.5	19.9		11.8	7.9	18.7	16.3	3.5	1.4	0.6	1	1	--	23	2	
80P2257S	48- 85		44.6	17.3	38.1	21.5		9.3	8.0	18.2	14.9	2.9	1.3	0.8	1	2	--	22	3	
80P2258S	85-120		44.7	21.3	34.0	17.1		14.2	7.1	17.9	12.2	2.3	1.0	0.6	TR	TR	--	16	TR	
80P2259S	120-180		39.4	29.2	31.4	15.5		19.1	10.1	19.4	9.6	1.9	0.5	TR	TR	TR	--	12	--	

DEPTH (CM)	ORGN C 6A1c PCT	TOTAL N 6B1b <2MM	EXTR P 6S1a PPM	TOTAL S 6R3a	(- - DITH-CIT - -) EXTRACTABLE FE 6C2b <- PERCENT	AL 6G7a OF	MN 6D2a <2MM -->	CEC 8D1	(RATIO/CLAY) 15 BAR 8D1	(ATTERBERG) - LIMITS - LL 4F1 PCT	PI 4F <0.4MM	(- BULK DENSITY -) FIELD MOIST 4A3a <- - G/CC	1/3 BAR 4A1d - - ->	OVEN DRY 4A1h CM/CM	COLE WHOLE SOIL 4D1	(- - -WATER CONTENT - -) FIELD MOIST 4B4 <- - -PCT	1/10 BAR 4B1c OF	1/3 BAR 4B1c <2MM	15 BAR 4B2 - ->	WRD WHOLE SOIL 4C1 CM/CM
0- 18	1.07	0.081			1.7	0.2	0.3	0.30	0.40	25	8		1.67	1.71	0.008			14.9	8.2	0.11
18- 28	0.43	0.040			1.9	0.2	0.2	0.18	0.35				1.53	1.59	0.013			16.8	10.6	0.09
28- 48	0.24	0.030			2.3	0.2	0.1	0.14	0.33	38	18		1.48	1.56	0.018			17.5	13.3	0.06
48- 85	0.09				2.4	0.2	TR	0.12	0.36				1.56	1.63	0.014			19.3	16.2	0.05
85-120	0.06				2.9	0.2	--	0.13	0.42				1.59	1.68	0.018			22.5	18.6	0.06
120-180	0.07				2.6	0.2	--	0.19	0.51	59	24		1.54	1.65	0.023			25.0	20.1	0.08

-1-- -2-- -3-- -4-- -5-- -6-- -7-- -8-- -9-- -10- -11- -12- -13- -14- -15- -16- -17- -18- -19- -20-

DEPTH (CM)	(- NH4OAC EXTRACTABLE BASES -) CA 5B4a 6N2e	MG 5B4a 6O2d	NA 5B4a 6P2b	K 5B4a 6Q2b	SUM BASES	ACID- EXTR ITY 6H2b	AL 6G1e	(- - - -CEC - - -) SUM CATS 5A3a	NH4- OAC 5A8a	BASES + AL 5A3b	AL SAT 5G1	-BASE SAT- SUM 5C3	NH4 OAC 5C1	CO3 AS CACO3 <2MM 6E1b	RES. OHMS /CM 8E1	COND. MMHOS /CM	(- - - -PH - - -) CACL2 .01M 8C1e	H2O 8C1a
	<- - - - - - - - - - - -MEQ / 100 G - - - - - - - - - - - - ->										<- - - - -PCT - - - ->						1:2	1:1
0- 18	2.7	0.7	TR	0.2	3.6	6.8		10.4	6.2			35	58				5.4	5.9
18- 28	2.3	0.4	TR	0.1	2.8	5.5		8.3	5.5			34	51				5.3	5.7
28- 48	2.6	0.5	TR	0.1	3.2	5.6		8.8	5.6			36	57				5.5	5.8
48- 85	2.1	0.8	--	TR	2.9	4.5		7.4	5.3			39	55	--			5.6	5.8
85-120	0.3	0.6	--	TR	0.9	6.8	1.5	7.7	6.0	2.4	63	12	15	--			4.5	4.9
120-180	--	0.8	TR	0.1	0.9	7.9	3.6	8.8	7.5	4.5	80	10	12	--			4.4	4.9

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-1--  -2--  -3--  -4--  -5--  -6--  -7--  -8--  -9--  -10-  -11-  -12-  -13-  -14-  -15-  -16-  -17-  -18-  -19-  -20-
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          FRACT < - - - - - - X-RAY - - - - - - -><  - - - THERMAL - - - -><  - - - - - - - - ELEMENTAL - - - - - - - -><  - -> EGME  INTER
SAMPLE      ION <                                 ><  - DTA - -><  - TGA - -> SiO2 AL2O3 Fe2O3  MgO   CaO   K2O   Na2O <    > RETN  PRETA
                < - - - - - -  7A2i - - - - - - -><  - 7A6  - ><  - 7A4b - ><  - - - - - - - - - - 7C3 - - - - - - - - -><    >  7D2   TION
NUMBER    <- - ><  - - - - - peak size - - - - -><  - - - Percent - - - -><  - - - - - - - - - Percent - - - - - - - -><  - -><  - ->

80P2254     TCLY  KK 3  GI 1  VR 1              KK39  GI 1                          9.3              0.3
80P2256     TCLY  KK 5  VR 2  HE 2  GI 1  GE 1  KK44  GI 1                         10.7              0.5
80P2259     TCLY  KK 5  MI 1  HE 1              KK59                                11.7              0.7

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          < - - - - - - - - - - - - - - - - - - - - - - - - SAND - SILT MINERALOGY (2.0-0.002mm) - - - - - - - - - - - - - - - - - - - - - - - - >
          FRACT < - - - - - - X-RAY - - -><  - - - THERMAL - - - -><  - - - - - - - -  OPTICAL - - - - - - - - -><                 > INTER
SAMPLE      ION <                        ><  - DTA - -><  - TGA - ->TOT RE<  - - - - - GRAIN COUNT - - - - - -><                 > PRETA
                < - - - - 7A2i - - - - -><  - 7A3b - -><  - 7A4b - -><  - - - - - - - - -  7B1a - - - - - - - - -><                 >  TION
NUMBER    < - -><  - - - Peak Size - - -><  - - - Percent - - - -><  - - - - - - - - - Percent - - - - - - - -><  - - - - - - - -><  - ->

80P2256     VFS                                                    99  QZ96  OP 2  KK 1  MStr  EPtr  FK 1
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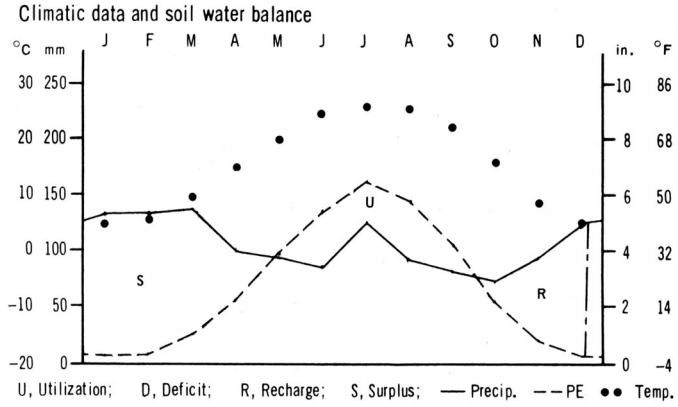
FRACTION INTERPRETATION:

TCLY Total Clay, <0.002mm VFS Very Fine Sand, 0.05-0.10mm

MINERAL INTERPRETATION:

KK	kaolinite	GI	gibbsite	VR	vermiculite	HE	hematite	GE	goethite	QZ	quartz
OP	opaques	MS	muscovite	EP	epidote	FK	potas feldsp	MI	mica	BT	biotite
CL	chlorite										

RELATIVE PEAK SIZE: 5 Very Large 4 Large 3 Medium 2 Small 1 Very Small 6 No Peaks