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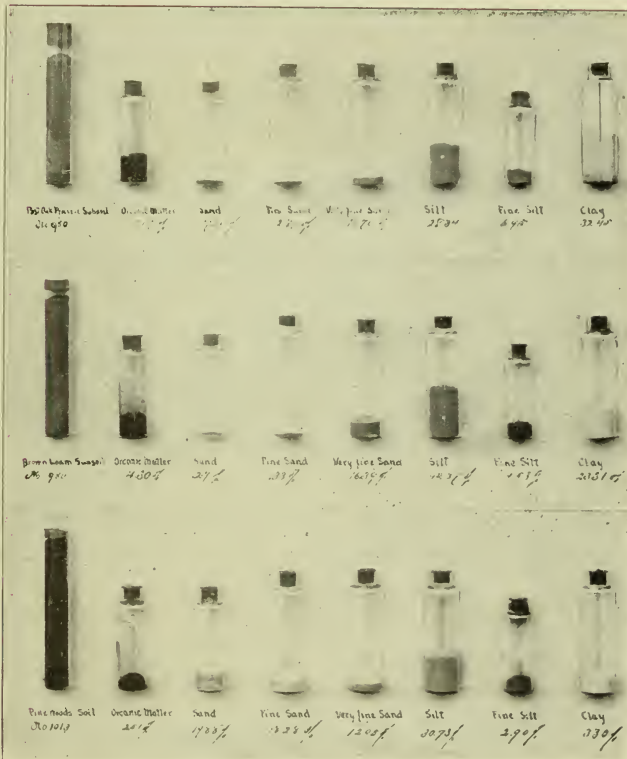
# Mississippi Agricultural Experiment Station.

Bulletin No. 65.

## SOILS OF MISSISSIPPI: CHEMICAL AND PHYSICAL COMPOSITION.

—BY—

W. L. HUTCHINSON, W. R. PERKINS AND E. B. FERRIS

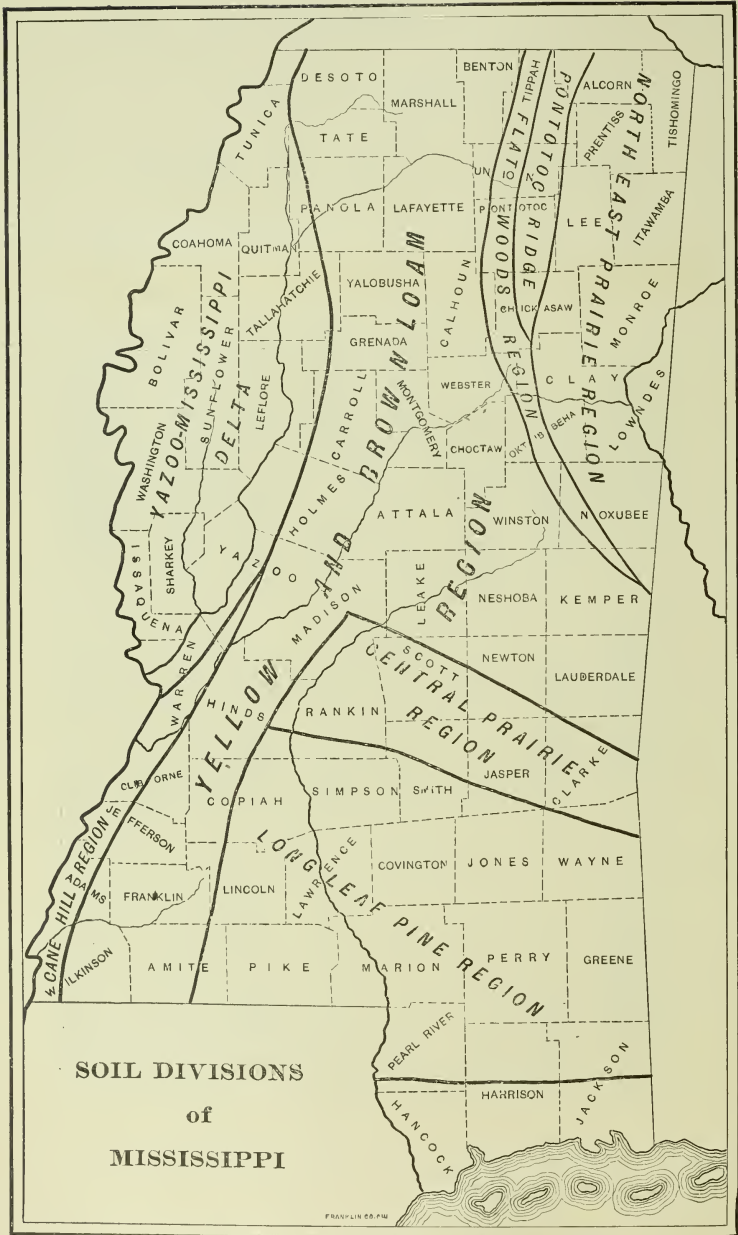


PHYSICAL COMPOSITION OF THREE TYPICAL SOILS.

AGRICULTURAL COLLEGE, MISS.

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# SOILS OF MISSISSIPPI:

## CHEMICAL AND PHYSICAL COMPOSITION.

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**Introduction.**—How to maintain lands in a high degree of productiveness and how best to improve those that are depleted and worn, are the important soil problems in this State, and a study of these subjects is one of the principal lines of work being pursued by the Station. We desired to obtain all the valuable information we could concerning the different soils of the State, and the first thing we did was to take a hack and go and see the different lands, how they were tilled and managed and the approximate yield of crops. As we traveled we collected samples of representative soils for analysis, and the analytical results are reported in this bulletin. The data given in the tables, together with the map, which shows the location and extent of the different soil areas, will, we hope, furnish full and satisfactory information concerning all samples.

**Washing or erosion.**—The heavy rains, which occur all over the cotton belt, together with the system of farming pursued, have resulted in an abnormal and unusual washing of the hill lands in this section. In this State the original surface soil, or virgin soil, of the hills, has been largely washed down into the valleys, so that the soil now tilled, in the valleys, was formerly hill soil, and the soil now tilled on the hills was formerly subsoil. On the College farm the original surface soil of the valleys is covered from one to four feet deep with washings from the hills. In some sections of the State the washing of the surface of the hills into the valleys has been much greater than here, and in other sections, less. As a rule the valley lands are very productive, even when the analysis shows comparatively small amounts of plant food ingredients. The reason is apparent. They are made, to quite a depth, of material that was once productive, surface soil, and, when prop-

erly drained, the water conditions are good. Plants root deep in these soils.

**Uplands.**—As before stated, the tendency, in the cotton section, has been for the original surface soil of the hills to wash down



FIG. 1.—Small stalks show relative productiveness of soil (formerly subsoil) with only two years' exposure.

to lower levels. In many places the entire surface soil and even the upper subsoil have been washed away, and this wholesale erosion of the surface, varying in degree, gives for the existing surface soils very different periods of exposure as such. It matters not how rich they may be in plant food, subsoils are not productive when first exposed at the surface. The influence of these facts on the productiveness of our uplands is manifest in the "spotted" or irregular crop-yields on every cultivated hillside in the cotton belt.

**Prairie soils.**—The prairie lands in the State contain com-

paratively large amounts of clay, lime and humus, which determine their texture. As a rule they are rich in potash and phosphoric acid, though there are small areas that do not contain large amounts of these substances. Commercial fertilizers are not used on these lands. They have been tried, and do not pay. Melilotus, cowpeas and clover help these lands very much, where they have become unproductive by many years of cotton culture and improper tillage.

**Brown-loam soils**—The soils of the brown-loam region generally have a very desirable texture, due to a large amount of



FIG. 2. --Small stalks show effect of poor water conditions. Soils from which two samples were taken were equally fertile.

silt. Their content of phosphoric acid is small, but the supply of potash seems ample. These soils were once very productive. Except in the extreme southern part of this area, farmers are just be-



ginning to use commercial fertilizers on these lands. At a depth of from two to twenty feet this section is underlaid by sand and gravel, and some parts of it are the worst washed lands in the State. Cowpeas, clovers and superphosphates improve the worn lands of this section.

**Sandy and sandy-loam soils.**—The soils of the long-leaf pine region are of a sandy or sandy-loam character with a clay or sandy-clay sub-soil. Comparatively they contain but a small amount of phosphoric acid, and farmers habitually use commercial fertilizers on all these lands. The fertilizers used consist mainly of superphosphates with a small amount of nitrogen and potash. Some fertilizer tests, made in this section, indicated that potash was not needed on these lands for the crops usually grown. We have never seen soils respond so well to cowpeas and superphosphates as do the light loamy soils of this section.

**Determining factors.**—Plants must have food and they must have water. Either phosphoric acid, potash or nitrogen may determine the crop yield. The yield may be determined by the supply of water in the soil. Hurtful or poisonous substances or excessive quantities of otherwise harmless substances may determine the yield. By determining the water supply, seasons and tillage may determine the yield, and the yield may also be determined by the use of fertilizers or plant food. It is desirable to have deep surface soils; former subsoils, recently exposed at the surface, are not desirable because they are not productive. In this State nitrogen, phosphoric acid and water are generally the determining factors in the production of crops.

**Lime and organic matter.**—Both lime and organic matter tend to change the texture of a soil and doubtless to increase its productiveness, but for improving the soils of this State, organic matter seems to be much more economical and efficient. Organic matter helps the water supply and the food supply; the crops are surer and less sensitive to the evils of adverse seasons. So far we have no evidence that any of the soils analyses of which are reported in this bulletin require the addition of lime to make them satisfactorily productive. In some pot experiments we have tried lime on most of our typical soils without any beneficial effect except on spongy reedbrake which contained abnormal amounts of organic matter and was very acid. The data given in the tables show further, that some of our most productive soils do not con-

tain more than one-tenth of one per cent of lime, while many of them do not contain more than two-tenths of one per cent. We believe that the evidence is conclusive that from one-tenth to two-tenths per cent. of lime is ample for the soils and crops of this State.

**Interpretation of soil analyses.**—Interpretations of analytical results should be reliable and accurate.

The plant food in a soil may determine the yield of crops, but it is not the on'y thing that may determine the yield.

Other things being equal, soils containing the largest total amounts of plant food will have the most plant food available for crops.

Other things being equal, surface soils, with many years' exposure as such, will yield larger crops than former subsoils recently exposed as surface soils.

Other things being equal, the deepest surface soils give the best yields.

Seven-hundredths to one-tenth per cent of phosphoric acid is sufficient for a productive soil.

The work reported in this bulletin fails to show the minimum amount of lime or potash that is necessary for productive soils.

Except on spongy reedbrake soils, consisting largely of organic matter, the application of lime has not helped any crop on any soil in this State.

There is no evidence that the application of potash, as a food for plants, has helped or increased the yield of any crop on any soil in this State.

Soils containing .05 per cent. of phosphoric acid or less require the use of superphosphates if large yields are to be obtained.

Leguminous crops, which add nitrogen to the soil and improve the water conditions, increase more than any other one thing, perhaps, the productiveness of cotton soils.

We have not found a cultivated soil, which analysis showed to be rich in plant food, that was not productive if other essential conditions were good.

It is desirable to have soil material as fine as is consistent with good texture,

It is desirable to have soils maintain a uniform water supply. Wide variations in the amount of soil water are hurtful.

As botanists collect herbariums to be used in identifying un-



known plants, so chemists may obtain such a store of information concerning the soils in a State as will be of very great service in dealing with samples sent by farmers and others for examination and advice as to treatment.





# Soils of the Northeastern Prairie Region.

LAB. NO.	COUNTY.	LOCATION OF LAND; ADDRESS OF OWNER.	TOWNSHIP, RANGE AND SECTION.	CHARACTER OF SOIL.	Showing Depth in Sample was Taken.	APPROX. Yield per Acre Unfertilized.				Chemical Analysis.										Physical Analysis.				
						Corn, lbs.	Cotton, lbs.	In Bushels.	lint.	Moisture.	Volatile and Organic Matter.	Insoluble Matter.	Soluble Silica.	Iron and Alumina Oxide.	Calcium Oxide.	Phosphoric Acid.	Potash.	Nitrogen.	Gravel.	Sand.	Fine Sand.	Very Fine Sand.	Silt.	Fine Silt.
926	Kemper.	2 mi ne Scooba.	T 12, R 18 e, Sec 27.	Ash-gray prairie.	5	166		0.05	0.60	5.82	192	110	0.76	0.50	15.87	31.69	24.72	17.03			2.38	4.46		
927		2 mi ne Scooba.	T 12, R 18 e, Sec 27.	Subsoil of 926.	7	185		83.85	0.75	11.12	2.80	0.79	1.05	0.40	10.82	22.96	13.55	27.40			4.23	16.43		
928		2 mi ne Scooba.	T 12, R 18 e, Sec 23.	Prairie valley, black.	11	333		72.80	0.09	15.86	1.68	1.56	1.85	1.30	6.12	13.13	1.71	35.40			8.04	10.45		
929		Binnsville, se	T 12, R 18 e, Sec 12.	Postoak prairie	6	125		50.73.71.	0.06	15.64	0.80	0.72	1.45	0.70	6.11	13.13	1.71	35.40			3.93	8.72		
930		Binnsville, se	T 12, R 18 e, Sec 12.	Subsoil of 929.	10										7.06	4.25	9.63	31.98			4.43	32.15		
931		Binnsville, n.	T 12, R 18 e, Sec 12.	Postoak prairie.	6	250		78.22	0.77	11.37	3.57	0.65	2.63	0.60	3.40	4.55	3.60	58.65			4.68	17.25		
932		Noxube Ferry	T 13, R 19 e, Sec 29.	Ash-gray prairie.	6	366		57.15.54.	0.93	13.92	9.00	1.88	4.42	1.55	2.50	10.80	12.42	4.33	6.00			19.02	6.06	
933		F A Denton, Cooksville	T 13, R 19 e, Sec 30.	Noxube bottom	3	250		93.70.	0.65	13.92	2.10	0.84	1.48	0.50	34.89	17.70	14.04	24.21			1.14	4.92		
934		F A Denton, Cooksville	T 13, R 19 e, Sec 9.	Red upland	3			88.72	0.60	7.09	2.00	0.77	1.71	0.40	24.45	11.46	15.26	29.89			1.95	13.43		
935		2 mi ne Cooksville.	T 13, R 19 e, Sec 3.	Subsoil of 933.	3	200		72.30.	0.69	15.61	3.25	0.90	2.01	0.70	8.54	4.13	17.32	29.10			6.97	23.58		
936		2 mi ne Cooksville.	T 14, R 19 e, Sec 33.	Postoak prairie	3			65.20	0.69	22.98	3.90	0.85	2.53	0.45	4.95	1.98	4.11	26.35			7.08	19.16		
937		2 1/2 mi ne Cooksville	T 14, R 19 e, Sec 28.	Subsoil of 935.	6	366		42.68.55.	0.65	16.68	0.85	0.85	0.48	0.53	5.16	7.46	13.03	21.54			8.57	31.83		
938	2 1/2 mi ne Cooksville	T 14, R 19 e, Sec 28.	Black prairie.	8			55.08.	0.56	21.94	1.50	1.89	4.75	0.53	17.05	7.09	4.45	18.28			10.20	22.96			
939	Fox Trap Prairie, J Binton.	T 14, R 19 e, Sec 11.	Black prairie.	7	250		92.00.84.	0.57	18.66	0.85	0.48	2.57	0.53	4.60	10.24	5.03	29.17			8.33	25.48			
940	10 mi e Macon	T 15, R 19 e, Sec 1.	Black prairie.	7	333		8.16.69.12.	1.14	19.57	1.45	1.21	4.63		4.61	5.60	15.40	37.51			9.41	23.67			
941	10 mi e Mac n	T 15, R 19 e, Sec 1.	Black prairie.	6	250		62.64.	1.03	20.63	1.18	2.63	4.00		7.88	8.94	12.18	23.63			8.40	35.25			
942	Cliftonville	T 16, R 18 e, Sec 10.	Ash prairie.	3	333		8.36.43.91.	0.85	15.81	15.57	3.02	5.00		8.00	7.2	6.46	11.40	25.76		9.50	18.70			
943	S D Lee, Cliftonville	T 16, R 18 e, Sec 10.	Ash prairie, after mellilotus	5	333		9.64.56.49.	1.79	18.01	5.24	3.21	5.00		1.33	8.45	11.29	21.63			7.28	31.31			
944	S D Lee, Cliftonville	T 16, R 18 e, Sec 10.	Prairie bottom, black.	4	250		63.10.	0.44	56.49	5.15	2.96	5.74		7.41	4.2	8.60	11.55	23.26		6.46	20.88			
945	S D Lee, Cliftonville	T 16, R 18 e, Sec 10.	Lime-pebble prairie.	4	250		73.65.07.	0.71	21.13	0.45	1.05	4.50		4.21	6.83	12.35	29.90			7.70	26.72			
946	S D Lee, Cliftonville	T 16, R 18 e, Sec 10.	Postoak prairie.	4	106		5.27	8.81	62.89	0.96	1.48	0.46	3.60	5.94	6.48	11.07	28.34			6.63	29.25			
947	2 mi w Doerbrook	T 16, R 17 e, Sec 13.	Black prairie.	4	125		67.17.	0.86	21.28	4.85	1.05	3.72		7.26	2.80	10.70	28.34			7.95	32.45			
948	3 mi e Brooksville	T 16, R 17 e, Sec 14.	Postoak prairie.	8			65.67.39.	1.17	18.80	3.25	0.51	3.46		2.98	1.66	7.45	36.81			7.82	33.32			
949	3 mi e Brooksville	T 16, R 17 e, Sec 14.	Subsoil of 949.	8	100		4.18.82.39.	0.50	10.80	5.35	0.70	2.45		13.99	18.31	18.01	33.24			2.76	7.80			
950	3 mi n Brooksville	T 16, R 17 e, Sec 5.	Postoak prairie	5	100		78.33.	0.63	10.30	3.20	0.67	2.45		7.30	9.81	10.76	38.77			6.01	19.75			
951	3 mi n Brooksville	T 16, R 17 e, Sec 5.	Subsoil of 951	5	255		66.10.	1.34	13.25	3.56	1.11	3.88	1.22	1.55	7.46	18.65	35.45			4.79	16.08			
1153	Steve Thrower, Mayhew	T 19, R 16 e, Sec 5.	Prairie bottom, yellow	8			3.90.62.62.	1.32	13.99	3.71	1.40	3.87	1.10	9.67	13.10	14.07	22.44			5.37	19.14			
1154	Steve Thrower, Mayhew	T 19, R 16 e, Sec 5.	Black prairie, Johnson grass	10			7.72.69.64.	0.315	11.59	3.15	0.93	2.83	0.70	6.39	10.31	14.07	22.44			5.30	27.28			
1155	Steve Thrower, Mayhew	T 19, R 16 e, Sec 5.	Postoak prairie	8	250		8.22.62.80.	1.69	19.61	3.70	0.50	3.75	0.39	3.50	6.42	9.86	16.42			4.25	14.32			
1156	Steve Thrower, Mayhew	T 19, R 16 e, Sec 5.	Subsoil of 1155.	8			8.58.72.91.	2.20	12.71	3.60	1.23	3.68	1.40	9.12	12.19	14.77	25.42			4.55	21.92			
1157	Steve Thrower, Mayhew	T 19, R 16 e, Sec 5.	Postoak prairie, improved.	6	500		33.81.3.	20	8.96	5.55	3.33	4.45		5.04	12.19	14.77	25.42			4.55	21.92			
526	Hort Depart. College.	T 18, R 14 e, Sec 1.	Subsoil black, original surf.	36			2.20.89.94.	16	5.98	11.41	0.96	3.9		9.92	13.17	24.49	15.12			3.6	14.37			
581	W L Hutchinson, College.	T 18, R 14 e, Sec 12.	Sandy upland	6	125		80.75.48.	0.11	81.85	29	49			1.00	35.04	11.22	15.02			5.21	44.17			
582	W L Hutchinson, College	T 18, R 14 e, Sec 12.	Black subsoil	15			75.48.	0.63	15.11	3.15	2.47	3.8		1.62	26.02	17.81	12.45			17.88	2.26			
583	W L Hutchinson, College	T 18, R 14 e, Sec 12.	Subsoil red upland.	9			71.61.	0.09	10.88	0.50	3.7			3.25	14.75	12.53	21.23			27.05	1.64			
584	W L Hutchinson, College	T 18, R 14 e, Sec 12.	Black upland	4	300		79.55.	0.09	10.88	0.63	3.0			3.52	17.80	18.92	12.21			5.50	1.84			
585	W L Hutchinson, College	T 18, R 14 e, Sec 12.	Branch bottom	7	60		85.00.	-0.4	8.78	2.35	1.15	2.10		3.52	17.80	18.92	12.21			5.50	1.84			
586	W L Hutchinson, College	T 18, R 14 e, Sec 12.	Yellow upland, pasture.	12	10		85.00.	-0.4	8.78	2.35	1.15	2.10		3.52	17.80	18.92	12.21			5.50	1.84			

## Physical Analysis.

## Chemical Analysis.

50	ion plat, E. Laboratory	T 18, R 14 e, Sec 1	300	.88	2,08	91.59	.691	5.08	.180	.14	.177	3.50	34.14	32.29	15.53	16.19	1.81	4.57
51	ort Dept, near old pckg. house	T 18, R 14 e, Sec 1	200	.68	2.53	89.53	.078	6.19	.25	.108	.20	4.10	24.11	24.26	13.98	21.30	3.42	6.21
52	ort Dept n'r new pckg. house	T 18, R 14 e, Sec 1	10	1.65	3.70	84.21	.079	9.40	1.19	.229	.42	11.35	21.35	19.63	14.90	14.59	2.98	11.57
53	ort Dept n'r new pckg. house	T 18, R 14 e, Sec 1	10	3.28	5.03	73.82	.090	15.84	.175	.345	.58							
54	orn plat, Steward's Dept.	T 19, R 14 e, Sec 1	6	1.58	3.80	84.93	.085	8.62	.322	.147	.165							
55	orn plat, Steward's Dept.	T 19, R 14 e, Sec 1	14	2.49	4.74	82.08	.105	8.96	.453	.185	.164							
56	ohn Ervin, Muldrow	T 19, R 15 e, Sec 1	40	3.00	4.03	72.90	.062	4.49	.888	.144	.30	3.50	7.47	15.60	27.05	27.87	4.66	8.26
57	ohn Ervin, Muldrow	T 19, R 15 e, Sec 1	30	3.22	7.53	67.20	.044	12.18	5.90	.093	.28	3.45	27.00	22.46	14.20	24.05	1.55	5.26
58	ohn Ervin, Muldrow	T 19, R 15 e, Sec 1	30	2.68	8.25	69.50	.114	15.79	1.03	.26	.30	2.15	8.01	12.14	51.96	6.08	20.48	
59	H L Muldrow, Muldrow	T 19, R 15 e, Sec 2	35	3.00	4.63	62.57	.091	10.55	.385	.108	.21	3.08	4.01	7.31	26.92	9.84	33.19	
60	H L Muldrow, Muldrow	T 19, R 15 e, Sec 2	4	2.68	6.25	79.11	.143	10.55	.385	.108	.21	1.59	10.85	32.16	30.35	5.70	10.72	
61	H L Muldrow, Muldrow	T 19, R 15 e, Sec 2	10	3.34	5.13	76.98	.111	13.36	.235	.088	.24	10.71	19.36	12.74	20.25	5.75	20.40	
62	Station plat near White's.	T 18, R 14 e, Sec 1	400	2.28	4.04	82.33	.121	10.15	.21	.105	.21	19.41	23.35	18.52	22.25	2.93	8.38	
63	Jossey Creek bottom	T 18, R 14 e, Sec 29	300	8.68	10.59	58.24	.160	16.71	2.69	.528	.491	9.65	12.33	18.52	22.25	2.93	8.38	
64	Trin Cane bottom	T 18, R 13 e, Sec 24	8	8.50	7.15	69.18	.108	13.35	.265	.143	.470	16.15	15.26	14.36	25.66	3.38	14.84	
65	Branch bottom	T 18, R 14 e, Sec 28	18	3.47	7.15	73.70	.140	11.42	2.25	.274	.423	10.71	13.89	16.33	26.42	3.52	19.50	
66	3 mi e Starkville	T 19, R 15 e, Sec 3	500	5.05	5.01	58.60	.095	8.97	12.52	.121	.480	19.41	23.35	18.52	22.25	2.93	8.38	
67	M J Ames, 3 mi e Starkville.	T 18, R 14 e, Sec 1	200	1.46	3.74	82.83	.135	5.42	.117	.160	.250	9.65	12.33	18.52	22.25	2.93	8.38	
68	ort Dept near Bardwell's.	T 18, R 14 e, Sec 1	300	2.30	2.82	88.82	.075	3.53	.800	.055	.107	2.65	2.53	14.98	21.21	4.16	30.39	
69	Ames & Perkins, near College.	T 18, R 14 e, Sec 1	300	6.29	3.68	88.82	.075	3.53	.800	.055	.107	1.78	2.65	16.32	28.59	4.50	29.87	
70	C T Ames, near College.	T 18, R 14 e, Sec 1	375	5.00	7.09	72.53	.102	12.96	.305	.080	.305	16.15	15.26	14.36	25.66	3.38	14.84	
71	Love place, 1 mi se Osborn.	T 19, R 15 e, Sec 23	6	8.15	8.13	64.23	.116	16.84	1.06	.070	.108	18.79	17.99	15.29	16.32	3.53	17.35	
72	Garth-Cannon place	T 19, R 15 e, Sec 24	8	7.42	7.59	66.36	.116	16.84	1.06	.070	.108	12.95	11.99	10.06	19.41	3.50	25.44	
73	6 mi e Starkville.	T 19, R 15 e, Sec 32	10	4.00	6.89	70.04	.050	16.04	.960	.075	.276	17.67	19.57	16.48	26.91	3.36	9.88	
74	C T Ames, near College.	T 18, R 14 e, Sec 13	100	6.39	4.00	77.57	.051	10.58	.260	.332	.454	7.13	8.78	11.68	21.64	4.75	28.68	
75	Dr Ames, near College.	T 18, R 14 e, Sec 12	10	10.26	5.29	69.64	.047	14.23	.230	.403	.422	3.33	3.95	13.27	25.24	8.75	26.67	
76	Dr Ames, near College.	T 18, R 14 e, Sec 12	250	2.26	3.17	87.22	.062	8.88	.170	.119	.177	5.73	19.65	13.27	25.24	8.75	26.67	
77	Station plat, near Magruder's.	T 18, R 14 e, Sec 1	10	9.66	5.75	69.16	.083	14.51	.210	.195	.285	3.33	3.95	13.27	25.24	8.75	26.67	
78	Station plat, near Magruder's.	T 19, R 15 e, Sec 25	12	6.52	8.50	63.52	.185	19.29	1.20	.114	.398	5.73	19.65	18.02	21.72	4.26	18.38	
79	Garth's place.	T 19, R 15 e, Sec 35	6	5.50	6.39	74.24	.106	11.72	.800	.080	.262	1.90	18.07	21.30	23.96	4.18	17.50	
80	1 mi n Hickory Grove.	T 19, R 15 e, Sec 35	12	6.24	6.39	74.24	.106	11.72	.800	.080	.262	6.59	7.00	22.21	24.75	6.17	18.83	
81	1 mi n Hickory Grove.	T 17, R 7 e, Sec 17	8	4.39	4.39	73.35	.142	11.26	.940	.188	.331	10.00	12.17	18.05	21.12	5.98	19.28	
82	2 1/2 mi n West Point.	T 17, R 7 e, Sec 4	6	5.00	4.47	509.725	.079	9.80	.650	.051	.193	10.00	12.17	18.05	21.12	5.98	19.28	
83	5 mi n West Point.	T 17, R 7 e, Sec 4	8	3.91	5.11	78.70	.116	11.10	.590	.051	.193	3.04	3.04	19.25	22.57	10.22	23.81	
84	5 mi n West Point.	T 17, R 7 e, Sec 4	8	5.00	8.42	67.99	.108	14.51	1.53	.184	.395	5.76	12.80	24.87	20.44	8.47	23.25	
85	5 mi n West Point.	T 17, R 7 e, Sec 4	8	5.00	8.42	67.99	.108	14.51	1.53	.184	.395	5.76	12.80	24.87	20.44	8.47	23.25	
86	5 mi n West Point.	T 17, R 7 e, Sec 4	8	5.00	8.42	67.99	.108	14.51	1.53	.184	.395	5.76	12.80	24.87	20.44	8.47	23.25	
87	5 mi n West Point.	T 16, R 6 e, Sec 22	4	125	6.89	7.21	66.73	.098	12.08	.430	.115	6.86	4.80	21.44	34.10	5.35	16.84	
88	6 mi n West Point.	T 16, R 6 e, Sec 22	10	6.89	7.21	66.73	.098	12.08	.430	.115	.088	5.00	5.00	14.16	23.13	4.28	32.90	
89	1/2 mi n Muldon.	T 15, R 6 e, Sec 26	10	6.52	11.33	60.44	.136	18.48	1.82	.191	.562	1.27	16.63	11.45	9.80	17.81	4.24	20.74
90	1 mi n Muldon.	T 15, R 6 e, Sec 26	10	6.52	8.93	67.00	.102	15.73	1.11	.109	.364	6.62	11.45	18.53	24.84	4.86	19.02	
91	2 mi e Prairie Holiday	T 15, R 6 e, Sec 1	12	5.76	9.83	55.68	.174	25.27	6.26	.114	.401	3.50	7.60	12.63	21.89	10.60	19.77	
92	2 mi e Prairie Holiday	T 15, R 6 e, Sec 1	15	7.76	7.16	36.11	.102	17.81	2.20	.115	.340	2.14	6.41	8.88	18.33	11.31	26.41	
93	3 mi w Prairie Holiday	T 15, R 6 e, Sec 1	6	7.38	8.81	62.44	.062	11.83	1.59	.080	.128	5.51	9.56	14.29	24.72	9.00	24.62	
94	3 mi w Prairie Holiday	T 15, R 6 e, Sec 1	8	7.30	7.80	68.70	.029	9.92	.680	.153	.270	2.11	7.37	8.68	34.55	4.02	23.16	
95	6 mi s Gibson.	T 14, R 6 e, Sec 23	8	7.30	8.51	67.11	.042	14.84	1.06	.115	.305	1.62	7.82	12.15	15.67	3.86	21.55	
96	1 mi n Okolona, Chickasaw Co.	T 12, R 5 e, Sec 24	8	4.00	5.21	67.68	.056	11.60	.615	.036	.198	2.68	10.91	30.66	28.68	1.36	11.89	
97	1 mi n Okolona, Chickasaw Co.	T 12, R 5 e, Sec 24	8	5.50	6.18	74.05	.050	11.98	.890	.054	.258	7.70	9.00	23.66	30.83	1.65	14.81	

Okktibbeha

Clay

Monroe











959	1 mi w of Vaiden.....	T 17, R 5 e, Sec 14.....	12	.....	5.21	4.21	76.93	.042	11.66	.075	111	.....	522	.....	78	1.33	15.02	50.04	3.40	19.18	
960	W 1 Stone, 5 mi w of Vaiden.....	T 17, R 4 e, Sec 12.....	10	.....	2.67	3.10	87.35	.065	6.03	.135	188	.....	276	.....	139	2.16	19.19	60.74	2.43	8.00	
961	W 1 Stone, 5 mi w of Vaiden.....	T 17, R 4 e, Sec 12.....	5	30	5.15	3.97	84.60	.125	5.43	.160	104	.....	226	.....	2.40	1.96	23.31	54.89	2.89	10.83	
962	W 1 Stone, 5 mi w of Vaiden.....	T 17, R 4 e, Sec 12.....	3	.....	3.02	2.72	86.47	.125	6.85	.105	.092	.....	2.36	.....	1.82	1.06	15.98	61.18	2.69	5.63	
963	Ramsay Heggie, 6 mi w Vaiden.....	T 17, R 4 e, Sec 9.....	4	250	2.05	2.41	90.03	.100	4.68	.100	.051	.....	2.98	.....	.91	1.78	31.44	50.77	3.69	7.09	
964	Ramsay Heggie, 6 mi w Vaiden.....	T 17, R 4 e, Sec 9.....	10	.....	5.90	3.70	79.80	.078	9.35	.105	1.00	.....	408	.....	1.96	.48	17.79	16.94	3.79	17.74	
965	3 mi n of Carrollton.....	T 19, R 4 e, Sec 5.....	5	.....	3.90	2.66	84.03	.094	8.02	.110	.078	.....	408	.....	.31	.44	17.26	56.42	3.84	15.14	
966	3 mi n of Carrollton.....	T 19, R 4 e, Sec 5.....	10	.....	3.13	3.48	85.94	.045	6.62	.150	.079	.....	366	.....	.53	.50	24.75	52.13	3.47	12.05	
967	5 mi n of Carrollton.....	T 20, R 4 e, Sec 20.....	4	10	4.13	4.13	75.40	.045	10.20	.350	172	.....	322	.....	1.28	2.13	12.92	46.75	3.25	21.14	
968	3 mi n of Grenada.....	T 20, R 4 e, Sec 20.....	6	.....	4.77	5.29	82.70	.063	6.20	.350	172	.....	322	.....	1.28	2.13	12.92	46.75	3.25	21.14	
969	3 mi n of Grenada.....	T 21, R 4 e, Sec 28.....	10	.....	4.32	2.82	85.34	.063	6.76	.135	.025	.....	1.21	.....	1.30	1.80	15.02	50.04	3.40	19.18	
970	3 mi n of Coffeaville.....	T 21, R 4 e, Sec 28.....	4	For est	2.77	2.18	92.06	.061	4.43	.015	.025	.....	1.21	.....	1.30	1.80	15.02	50.04	3.40	19.18	
971	4 1/2 mi n of Coffeaville.....	T 21, R 6 e, Sec 10.....	10	.....	2.77	3.54	84.36	.067	8.54	.085	.035	.....	2.90	.....	1.04	20.81	23.49	27.99	2.65	7.56	
972	4 1/2 mi n of Coffeaville.....	T 21, R 6 e, Sec 10.....	8	.....	3.32	3.22	84.45	.052	7.88	.065	.044	.....	3.11	.....	.82	18.05	10.04	21.15	24.30	27.99	
973	1 mi n of Water Valley.....	T 20, R 6 e, Sec 6.....	10	.....	3.32	3.22	84.45	.052	7.88	.065	.044	.....	3.11	.....	.82	18.05	10.04	21.15	24.30	27.99	
974	3 mi nw of Water Valley.....	T 27, R 6 e, Sec 32.....	8	.....	3.06	1.59	93.35	.055	3.31	.140	.055	.....	2.12	.....	13.36	16.49	27.97	34.55	2.22	16.48	
975	5 mi nw of Water Valley.....	T 27, R 6 e, Sec 32.....	10	.....	3.66	1.59	93.35	.055	3.31	.140	.055	.....	2.12	.....	13.36	16.49	27.97	34.55	2.22	16.48	
976	Batesville.....	T 27, R 7 e, Sec 35.....	6	.....	1.25	4.01	90.61	.091	4.46	.170	.102	.....	.293	.....	8.50	9.80	16.39	42.37	4.53	23.31	
977	3 mi n of Batesville.....	T 8 s, R 7 w, Sec 35.....	6	.....	1.66	3.96	75.86	.052	6.01	.130	.117	.....	.333	.....	13.36	16.49	27.97	34.55	2.22	16.48	
978	3 mi n of Batesville.....	T 8 s, R 7 w, Sec 35.....	5	.....	1.25	4.01	90.61	.091	4.46	.170	.102	.....	.293	.....	8.50	9.80	16.39	42.37	4.53	23.31	
979	5 mi n of Batesville.....	T 8 s, R 7 w, Sec 25.....	10	.....	2.84	3.46	86.90	.063	11.96	.170	.136	.....	.511	.....	1.50	1.51	34.20	43.92	5.02	19.35	
980	5 mi n of Batesville.....	T 8 s, R 7 w, Sec 25.....	6	.....	2.84	3.46	86.90	.063	11.96	.170	.136	.....	.511	.....	1.50	1.51	34.20	43.92	5.02	19.35	
981	5 mi n of Batesville.....	T 8 s, R 7 w, Sec 1.....	15	.....	3.57	3.81	81.16	.071	9.97	.300	102	.....	563	.....	.32	28.27	45.00	49.2	5.02	19.35	
982	3 mi s of Sardis.....	T 8 s, R 7 w, Sec 1.....	4	10	3.91	2.56	83.72	.064	6.38	.120	.106	.....	470	.....	.64	7.50	30.00	45.00	3.59	11.65	
983	3 mi s of Sardis.....	T 8 s, R 7 w, Sec 1.....	5	10	2.61	2.02	89.10	.077	5.05	.185	.089	.....	.373	.....	.50	28.24	30.45	40.2	4.13	19.25	
984	2 mi n of Sardis.....	T 7 s, R 7 w, Sec 15.....	10	.....	4.04	2.92	82.44	.069	5.08	.160	.163	.....	430	.....	.27	.58	24.42	41.00	3.58	17.10	
985	2 mi n of Sardis.....	T 7 s, R 7 w, Sec 15.....	6	.....	3.85	2.51	83.31	.092	9.20	.125	.151	.....	335	.....	.52	1.18	38.59	54.93	1.66	44.56	
986	2 mi n of Como.....	T 6 s, R 7 w, Sec 29.....	10	.....	3.29	3.47	87.20	.095	4.40	.120	.135	.....	320	.....	4.00	2.05	22.35	59.44	3.54	14.12	
987	2 mi n of Como.....	T 6 s, R 7 w, Sec 29.....	7	15	2.31	2.81	86.69	.090	7.27	.100	.142	.....	320	.....	1.18	.50	21.86	55.87	2.84	11.88	
988	2 mi n of Como.....	T 6 s, R 7 w, Sec 29.....	12	.....	3.00	3.52	83.08	.059	8.91	.120	.092	.....	472	.....	.56	1.20	23.93	51.82	2.95	13.49	
989	3 mi n of Como.....	T 5 s, R 7 w, Sec 6.....	6	.....	1.66	1.36	2.43	91.54	.050	4.19	.190	.....	.066	.....	1.50	.87	34.33	55.74	1.88	3.07	
990	1 mi s of Senatobia.....	T 5 s, R 7 w, Sec 30.....	12	.....	1.00	3.03	89.30	.070	5.50	.220	.069	.....	329	.....	.50	.40	24.63	52.90	2.70	13.11	
991	1 mi s of Senatobia.....	T 5 s, R 7 w, Sec 30.....	7	.....	3.35	3.05	83.58	.058	8.52	.265	.108	.....	439	.....	.38	.40	24.63	52.90	2.70	13.11	
992	1 mi n of Senatobia.....	T 5 s, R 7 w, Sec 19.....	12	.....	4.32	2.97	83.74	.064	3.94	.140	.055	.....	241	.....	1.10	.49	66.32	44.52	1.38	4.92	
993	1 mi n of Senatobia.....	T 5 s, R 7 w, Sec 19.....	6	15	1.59	2.47	90.32	.111	4.72	.130	.161	.....	203	.....	1.85	.90	65.17	76.00	3.79	6.66	
994	2 mi s of Coldwater.....	T 5 s, R 7 w, Sec 5.....	12	.....	6.38	3.40	80.21	.210	4.11	.220	.064	.....	1.70	.....	4.1	34.16	51.45	52.5	2.39	18.54	
995	2 mi s of Coldwater.....	T 5 s, R 7 w, Sec 5.....	12	.....	4.90	3.40	81.50	.090	8.92	.170	.132	.....	444	.....	2.15	.54	22.30	51.41	21.22	32.8	18.45
996	3 mi e of Coldwater.....	T 4 s, R 7 w, Sec 25.....	10	30	1.47	2.30	90.57	.086	4.77	.165	.101	.....	303	.....	.14	.60	27.45	60.73	1.68	5.15	
997	3 mi e of Coldwater.....	T 4 s, R 7 w, Sec 24.....	9	.....	2.90	4.57	81.39	.070	11.76	.160	.033	.....	271	.....	.50	12.50	1.13	17.27	2.93	20.09	
998	4 mi e of Coldwater.....	T 4 s, R 7 w, Sec 24.....	6	.....	1.05	2.25	88.49	.060	6.79	.265	.068	.....	174	.....	.71	13.55	1.55	20.80	45.62	4.38	9.95
999	4 mi e of Coldwater.....	T 4 s, R 7 w, Sec 24.....	4	10	4.03	3.61	79.51	.210	10.91	.050	.097	.....	.43	.....	.44	.31	17.52	58.74	3.00	6.96	
1000	3 mi e of Independence.....	T 4 s, R 5 w, Sec 29.....	10	.....	1.93	3.20	88.38	.14	5.89	.15	.069	.....	.281	.....	1.13	1.18	27.55	55.78	3.00	6.96	
1001	3 mi e of Independence.....	T 4 s, R 5 w, Sec 29.....	6	.....	5.49	4.11	87.54	.14	6.85	.155	.028	.....	2.26	.....	.44	.47	17.20	50.35	4.54	18.21	
1002	3 mi e of Wall Hill.....	T 4 s, R 5 w, Sec 24.....	12	.....	5.16	3.08	87.86	.076	6.20	.041	.253	.....	428	.....	2.50	1.92	24.84	54.75	5.30	8.69	
1003	3 mi e of Wall Hill.....	T 4 s, R 5 w, Sec 24.....	9	.....	2.10	2.30	88.93	.058	5.62	.14	.066	.....	246	.....	3.00	2.26	1.09	18.50	46.08	5.30	15.55
1004	2 mi e of Orion.....	T 4 s, R 4 w, Sec 23.....	4	.....	1.80	1.66	90.03	.058	5.69	.125	.044	.....	360	.....	.60	63.53	9.29	2.80	3.13	17.5	11.84
1005	2 mi e of Orion.....	T 4 s, R 4 w, Sec 23.....	12	.....	5.74	2.87	81.85	.052	8.24	.275	.083	.....	260	.....	.44	.47	17.20	50.35	4.54	18.21	
1006	2 mi e of Orion.....	T 4 s, R 4 w, Sec 23.....	8	.....	1.66	5.74	2.87	81.85	.052	8.24	.275	.....	.079	.....	2.07	.48	20.26	44.89	4.41	16.18	
1007	4 mi nw of Water Valley.....	T 4 s, R 3 w, Sec 9.....	10	.....	3.62	3.22	87.92	.080	4.37	.275	.079	.....	252	.....	1.44	1.42	20.26	44.89	4.41	16.18	
1008	4 mi nw of Water Valley.....	T 4 s, R 3 w, Sec 9.....	5	.....	3.62	3.22	87.92	.080	4.37	.275	.079	.....	252	.....	1.44	1.42	20.26	44.89	4.41	16.18	
1009	4 mi nw of Water Valley.....	T 4 s, R 3 w, Sec 9.....	10	.....	3.62	3.22	87.92	.080	4.37	.275	.079	.....	252	.....	1.44	1.42	20.26	44.89	4.41	16.18	
1009	4 mi nw of Water Valley.....	T 4 s, R 3 w, Sec 9.....	10	.....	3.62	3.22	87.92	.080	4.37	.275	.079	.....	252	.....	1.44	1.42	20.26	44.89	4.41	16.18	

# Soils of the Brown and Yellow Loam Region.

LAB. No.	COUNTY.	LOCATION OF LAND; ADDRESS OF OWNER.	TOWNSHIP, RANGE AND SECTION.	CHARACTER OF SOIL.	Showing Depth in In.	APPROX. Yield per Acre Un-fertilized	
						Corn in Bushels	Cotton, lint.
1021	Amite	W. B. Mercier, 3 mi e Centrev.		Brown loam.	4	10.16	
1022		W. B. Mercier, 3 mi e Centrev.		Subsoil of 1021.	18.00	4.11	
1023		W. B. Mercier, 3 mi e Centrev.		Surface soil.	13.23	3.00	
1024		W. B. Mercier, 3 mi e Centrev.		Subsoil of 1023.	13.23	4.80	
1025		W. B. Mercier, 3 mi e Centrev.		Gray fish bottom.	9.04	3.34	
1025½		W. B. Mercier, 3 mi e Centrev.		Subsoil of 1025.	10.81	3.67	
1026		J. A. Redhead, 3 mi s Centrev.		Brown loam.	6.90	2.26	
1027		J. A. Redhead, 3 mi s Centrev.		Subsoil of 1026.	8.56	2.62	
871	Hinds.	2 mi n of Jackson.	T 6, R 1 e, Sec 28	Yellow loam.	1.27	2.92	
872		.....	T 6, R 1 e, Sec 28	Subsoil of 871.	1.27	3.55	
873		.....	T 6, R 1 e, Sec 4	Branch bottom.	8.83	3.80	
874		.....	T 6, R 1 e, Sec 4	Subsoil of 873.	8.59	2.11	
875		Near Madison county line.....	T 6, R 1 e, Sec 4	Brown (pasture)	7.76	2.97	

## Chemical Analysis.

Moisture.	Volatile and Organic Matter.	Insoluble Matter.	Soluble Silica.	Iron & Aluminum Oxide.	Calcium Oxide (Lime).	Phosphoric Acid.	Potash.	Nitrogen.
10.16	2.98	83.07	.06	3.92	.095	.055	.125	.....
4.11	3.00	79.42	.043	1.33	.08	.048	.309	.....
18.00	4.80	73.16	.064	3.16	.175	.067	.17	.....
13.23	4.34	74.19	.065	1.50	.095	.059	.401	.....
9.04	3.67	81.83	.061	5.06	.125	.057	.242	.....
10.81	3.96	77.52	.069	6.30	.155	.064	.24	.....
6.90	2.26	85.29	.047	3.69	.08	.033	.166	.....
8.56	2.62	82.12	.074	6.42	.125	.041	.28	.....
.64	2.92	91.59	.102	4.08	.190	.040	.168	.....
1.27	3.55	85.81	.085	1.40	.140	.052	.336	.....
8.83	3.80	89.41	.114	5.21	.210	.057	.182	.....
8.59	2.11	92.43	.099	4.20	.140	.041	.165	.....
7.76	2.97	89.29	.071	6.15	.105	.050	.271	.050

## Physical Analysis.

Gravel.	Sand.	Fine Sand.	Very Fine Sand.	Silt.	Fine Silt.	Clay.
.....	7.08	2.37	19.15	52.97	2.13	3.03
.....	6.50	1.78	15.26	49.96	6.75	12.72
.....	8.59	4.86	17.69	41.66	1.90	2.34
.....	6.49	3.06	15.02	44.39	2.09	11.87
.....	3.10	3.16	24.27	48.45	1.93	5.75
.....	4.62	5.13	18.90	45.59	2.48	7.58
.....	12.09	9.31	21.27	39.13	1.62	5.90
.....	10.44	6.60	15.60	43.27	3.15	9.96
.....	.99	1.38	25.92	61.70	2.05	4.81
.....	.65	.59	17.24	57.99	4.05	15.10
.....	2.82	3.66	16.34	67.04	2.39	3.13
.....	4.47	9.71	26.87	61.01	2.00	3.78
.....	5.80	1.22	26.45	50.98	2.13	7.3



# Sundry Types of Soils Mainly from Southern Part of State.

## CHARACTER OF SOIL.

### TOWNSHIP, RANGE AND SECTION.

#### LOCATION OF LAND; ADDRESS OF OWNER.

LAB. NO.	COUNTY.	LOCATION OF LAND; ADDRESS OF OWNER.	TOWNSHIP, RANGE AND SECTION.	CHARACTER OF SOIL.
834	Neshoba	C. W. Cannon.....	T 10, R 10 e, Sec 2	Surface gray loam.....
835	Neshoba	C. W. Cannon.....	T 10, R 10 e, Sec 2	Red subsoil.....
836	Neshoba	J. M. Cooper, Dixon.....	T 9, R 11 e, Sec 6	Stiff basin.....
837	Neshoba	J. M. Cooper, Dixon.....	T 9, R 11 e, Sec 6	Subsoil of 836.....
838	Neshoba	J. M. Cooper, Dixon.....	T 9, R 11 e, Sec 6	Sandy basin.....
839	Neshoba	J. M. Cooper, Dixon.....	T 9, R 11 e, Sec 6	Subsoil of 838.....
853	Scott	R. H. Campbell, Harpersville.....	T 8, R 8 e, Sec 22	Stiff Basin.....
854	Scott	R. H. Campbell, Harpersville.....	T 8, R 8 e, Sec 22	Subsoil of 853.....
855	Scott	R. H. Campbell, Harpersville.....	T 8, R 8 e, Sec 22	Brown sandy basin.....
856	Scott	R. H. Campbell, Harpersville.....	T 8, R 8 e, Sec 22	Branch bottom.....
857	Scott	R. H. Campbell, Harpersville.....	T 8, R 8 e, Sec 22	Subsoil of 856.....
848	Scott	Lewis Lyle, Cash.....	T 8, R 7 e, Sec 3	Crayfish bottom.....
849	Scott	Lewis Lyle, Cash.....	T 8, R 7 e, Sec 3	Loam typical for section.....
850	Scott	Lewis Lyle, Cash.....	T 8, R 7 e, Sec 3	Subsoil of 850.....
851	Scott	Lewis Lyle, Cash.....	T 8, R 7 e, Sec 3	Burned reedbrake.....
841	Ne-shoba	R. E. Majare, High Hill.....	T 9, R 10 e, Sec 6	Spongy reedbrake.....
842	Ne-shoba	R. E. Majare, High Hill.....	T 9, R 10 e, Sec 6	Timbered reedbrake.....
843	Ne-shoba	R. E. Majare, High Hill.....	T 9, R 9 e, Sec 6	Timbered reedbrake.....
844	Leake	Irvin Miller, Walnut Grove.....	T 9, R 8 e, Sec 23	Sandy loam.....
845	Leake	Irvin Miller, Walnut Grove.....	T 9, R 8 e, Sec 23	Subsoil of 844.....
846	Leake	1/2 mi sw Walnut Grove.....	T 9, R 8 e, Sec 23	Sandy-loam bottom.....
847	Leake	2 1/2 mi sw Walnut Grove.....	T 9, R 8 e, Sec 34	Subsoil of 846.....
852	Scott	Mr. Mapp, Harpersville, Scott Co.....	T 10, R 8 e, Sec 30	Branch bottom.....
954	Copiah	2 mi se Fair Ground, Nesh' Co.....	T 12, R 1 w, Sec 30	"Rawhide" land.....
955	Copiah	2 mi se Fair Ground, Nesh' Co.....	T 12, R 1 w, Sec 30	Light silt-loam.....
801	Copiah	J. J. Pritchett, Crystal Springs.....	T 12, R 1 w, Sec 30	Subsoil of 801.....
802	Copiah	J. J. Pritchett, Crystal Springs.....	T 12, R 1 w, Sec 30	Dark silt-loam.....
803	Copiah	J. J. Pritchett, Crystal Springs.....	T 12, R 1 w, Sec 30	Subsoil of 803.....
804	Copiah	J. J. Pritchett, Crystal Springs.....	T 12, R 1 w, Sec 30	Light silt-loam.....
805	Copiah	J. J. Pritchett, Crystal Springs.....	T 12, R 1 w, Sec 30	Subsoil of 805.....
806	Copiah	J. J. Pritchett, Crystal Springs.....	T 12, R 1 w, Sec 30	Silt-loam, with gravel.....
807	Copiah	J. W. Day, near Crystal Sprgs.....	T 12, R 2 w, Sec 34	Subsoil of 807.....
808	Copiah	J. W. Day, near Crystal Sprgs.....	T 12, R 2 w, Sec 34	Dark silt-loam.....
809	Copiah	H. B. Day, near Crystal Sprgs.....	T 12, R 2 w, Sec 28	Silt-loam.....
810	Copiah	H. B. Day, near Crystal Sprgs.....	T 12, R 2 w, Sec 28	Silt-loam.....
811	Copiah	H. B. Day, near Crystal Sprgs.....	T 12, R 2 w, Sec 28	Silt-loam.....
812	Copiah	G. R. Gwamel, 4 mi w.....	T 12, R 2 w, Sec 31	Subsoil of bottom.....

#### Showing Depth in Sample was Taken.

Showing Depth in Sample was Taken.	Corn, in Bushels.	Acre Un-fertilized.	APPROX. Yield per Acre.
4	333	333	56
12	333	333	123
10	40	40	145
15	200	200	315
6	200	200	121
10	40	40	127
15	25	25	123
12	500	500	41
12	166	166	134
4	15	15	76
10	75	75	110
12	75	75	176
12	150	150	345
4	500	500	84
10	500	500	89
18	500	500	12
3	500	500	105
6	500	500	417
12	500	500	90
24	40	40	102
18	40	40	222
8	100	100	189
12	100	100	76
17	100	100	206
6	100	100	96
15	100	100	77

Moisture.	Volatile and Organic Matter.	Insoluble Matter.	Soluble Silica.	Iron and Alumina Oxide.	Calcium Oxide.	Phosphoric Acid.	Potash.	Nitrogen.	Gravel.	Sand.	Very Fine Sand.	Silt.	Fine Silt.	Clay.
5.6	3.49	89.33	1.30	5.36	.075	.52	170	0.80	2.82	37.16	9.06	10.58	30.84	1.55
1.23	3.14	82.85	0.80	11.56	.225	.61	347	1.03	1.79	29.21	7.33	8.57	28.94	2.66
1.45	4.20	85.80	1.32	7.92	.165	.087	247	1.04	9.26	7.88	6.47	58.74	3.95	7.55
3.15	3.1	84.37	1.28	7.93	.170	.077	457	.095	12.25	9.93	7.24	46.87	4.07	12.06
1.21	1.32	85.44	1.09	2.40	.080	.045	163	.049	33.90	18.59	4.87	34.75	3.54	14.86
1.21	3.11	86.65	0.62	7.62	.180	.036	180	.059	20.03	10.85	4.87	41.43	3.43	14.86
1.27	4.27	81.48	0.67	2.35	.077	.020	270	.085	11.59	4.51	14.50	56.74	2.62	4.94
1.27	3.55	85.02	0.62	8.97	.203	.073	324	.044	16.31	5.87	9.99	44.41	3.78	14.43
1.08	3.24	91.40	0.35	5.75	.10	.044	309	.10	36.12	11.29	9.88	29.76	1.99	8.19
1.23	4.72	85.94	0.86	6.66	.210	.103	441	.223	4.28	6.22	18.62	14.70	2.47	3.90
41	2.02	94.10	1.92	3.01	.095	.025	190	.05	14.11	22.92	11.57	43.53	.72	3.97
1.34	6.34	84.20	1.59	10.31	.285	.066	202	.120	15.39	27.10	18.11	26.37	2.02	3.06
7.6	2.62	94.25	0.54	2.38	.135	.049	150	.07	7.46	25.60	19.41	40.67	1.34	2.22
40	4.19	83.73	0.70	10.31	.165	.089	283	.048	4.31	13.26	13.29	44.48	3.55	15.86
76	2.45	83.15	0.71	8.95	.310	.284	300	.065	13.05	18.13	11.17	43.90	2.96	3.88
110	98.58	82.15	0.82	4.60	.100	.129	267	.20	8.88	9.96	15.14	24.97	1.89	6.67
1.76	7.28	87.69	0.76	2.57	.060	.041	163	.13	7.47	13.76	5.61	41.62	2.76	6.77
2.02	8.18	84.75	1.19	4.96	.125	.064	113	.20	7.47	20.30	11.05	41.07	2.60	11.11
1.46	3.65	88.15	1.06	6.19	.205	.058	189	.080	3.17	17.09	1.85	43.01	2.00	11.11
3.45	4.47	79.83	1.08	11.66	.210	.038	280	.189	1.81	15.93	13.29	39.49	5.96	14.78
8.9	2.11	92.23	1.24	3.20	.170	.048	105	.280	3.26	24.89	15.51	39.47	4.00	9.06
84	2.11	92.23	2.28	4.26	.055	.044	236	.105	11.74	31.55	11.59	31.93	3.37	7.22
12	1.67	95.07	0.57	2.53	.085	.032	130	.05	15.57	53.07	17.50	21.52	1.03	2.78
4.96	10.30	45.61	1.22	3.37	.560	.117	563	.016	18.42	8.74	4.55	8.56	3.50	40.45
4.17	6.04	62.59	0.88	24.61	.315	.195	616	.075	18.48	5.10	6.98	15.07	3.50	40.45
1.05	4.06	87.45	1.5	6.20	.115	.064	203	.075	3.28	3.82	8.98	65.80	2.16	6.75
1.72	4.47	81.70	1.0	5.81	.11	.083	323	.060	31.21	3.52	5.96	63.49	3.11	15.88
90	3.35	80.73	1.2	10.15	.075	.058	223	.07	24.76	3.78	8.02	65.94	2.63	6.88
1.02	3.47	83.75	0.6	9.79	.106	.106	377	.07	11.44	2.40	2.73	62.30	1.00	17.55
1.02	3.75	88.00	0.7	6.30	.175	.046	397	.07	8.0	4.80	1.48	6.23	0.11	5.50
2.22	3.82	82.36	0.94	5.25	.100	.091	300	.05	1.04	1.97	3.23	67.16	3.15	16.96
1.89	4.67	88.93	1.96	3.51	.175	.061	190	.05	6.76	8.64	1.93	18.57	2.22	3.86
1.89	5.62	82.60	1.58	10.02	.100	.064	277	.01	9.6	3.98	.67	149.523	3.15	21.55
76	4.67	90.57	1.82	3.81	.140	.040	170	.075	1.44	6.01	1.88	14.25	2.35	3.87
2.06	3.66	84.24	1.24	8.85	.145	.047	286	.04	2.50	3.24	1.10	54.50	8.14	8.74
96	4.55	90.05	1.58	3.50	.120	.068	263	.095	.18	9.21	7.56	13.35	57.28	3.18
77	2.48	91.39	1.54	4.40	.135	.095	197	.048	11.25	9.32	10.98	52.25	6.07	6.80

## Physical Analysis.

## Chemical Analysis.

# Soils of the Brown and Yellow Loam Region.

LAB. No.	COUNTY.	LOCATION OF LAND; ADDRESS OF OWNER.	TOWNSHIP, RANGE AND SECTION.	CHARACTER OF SOIL.
1021	Amite	W. B. Mercier, 3 mi e Centrev.		Brown loam.
1022		W. B. Mercier, 3 mi e Centrev.		Subsoil of 1021.
1023		W. B. Mercier, 3 mi e Centrev.		Surface soil.
1024		W. B. Mercier, 3 mi e Centrev.		Subsoil of 1023
1025		W. B. Mercier, 3 mi e Centrev.		Cray fish bottom
1025 1/2		W. B. Mercier, 3 mi e Centrev.		Subsoil of 1025
1026		J. A. Redhead, 3 mi s Centrev.		Brown loam
871		2 mi n of Jackson.		Subsoil of 1026
872		T 6, R 1 e, Sec 28		Yellow loam
873		T 6, R 1 e, Sec 28		Subsoil of 871
874	T 6, R 1 e, Sec 4		Branch bottom.	
875	T 6, R 1 e, Sec 4		Subsoil of 873.	
		Near Madison county line.....	T 6, R 1 e, Sec 4	Brown (pasture)

Approx. Yield per Acre Unfertilized	Corn in Bushels	Cotton, lbs., lint.	Showing Depth in Sample was Taken
10.19	2.98	83.07	4
4.11	3.00	79.42	10
18.00	4.80	73.10	6
13.25	4.34	74.19	12
9.04	3.67	81.83	
10.81	3.96	77.52	
6.90	2.26	85.29	
8.56	2.62	82.12	
.64	2.92	91.59	
1.27	3.55	85.81	
.83	3.80	89.41	
.59	2.11	92.43	
.76	2.97	89.29	

Moisture.	Volatile and Organic Matter.	Insoluble Matter.	Soluble Silica.	Iron & Aluminum Oxide.	Calcium Oxide (Lime).	Phosphoric Acid.	Potash.	Nitrogen.
.....	.....	.....	.....	.....	.....	.....	.....	.....
10.19	2.98	83.07	.06	3.92	.095	.055	.125	.....
4.11	3.00	79.42	.043	3.33	.08	.048	.309	.....
18.00	4.80	73.10	.064	3.16	.175	.067	.17	.....
13.25	4.34	74.19	.065	7.50	.095	.059	.401	.....
9.04	3.67	81.83	.061	5.06	.125	.057	.242	.....
10.81	3.96	77.52	.069	6.30	.155	.064	.24	.....
6.90	2.26	85.29	.047	3.69	.08	.033	.166	.....
8.56	2.62	82.12	.074	3.62	.125	.041	.28	.....
.64	2.92	91.59	.102	4.08	.190	.040	.168	.....
1.27	3.55	85.81	.085	8.35	.140	.052	.336	.....
.83	3.80	89.41	.114	5.21	.210	.057	.182	.....
.59	2.11	92.43	.099	4.20	.140	.041	.165	.....
.76	2.97	89.29	.071	6.15	.105	.050	.271	.....

Gravel.	Sand.	Fine Sand.	Very Fine Sand.	Silt.	Fine Silt.	Clay.
.....	.....	.....	.....	.....	.....	.....
.....	7.08	2.37	19.15	52.97	2.13	3.03
.....	6.50	1.78	15.26	49.96	6.45	12.72
.....	8.59	4.80	17.69	41.66	1.90	2.34
.....	6.49	3.66	15.02	44.39	2.09	11.87
.....	3.10	3.16	24.27	48.48	1.93	5.75
.....	4.62	5.13	18.90	45.59	2.48	7.58
.....	12.09	9.31	21.27	39.13	1.62	5.90
.....	10.44	6.60	15.60	43.27	3.15	9.96
.....	.99	1.38	25.92	61.70	2.05	4.81
.....	.65	.59	17.24	57.99	4.05	15.10
.....	2.82	3.66	16.34	67.04	2.39	3.13
.....	.47	.97	26.87	61.01	2.00	6.78
.....	1.51	1.22	26.45	50.98	2.13	7.34

## Physical Analysis.

## Chemical Analysis.







Rankin	801	2 mi w Pelahatchie.....	Loam.....	1.11	3.94	88.59	1.08	5.19	.220	.052	2.90	1.40	.....	6.18	21.97	24.02	39.29	1.47	2.75	
	802	1 mi s Brandon.....	Sandy loam.....	.87	3.22	90.54	1.54	4.33	.185	.040	1.94	.055	.....	3.78	10.01	26.59	48.78	1.67	14.88	
	803	4 mi s Brandon.....	Subsoil of 802.....	1.51	4.29	81.58	0.72	11.00	.260	.054	3.70	.050	.....	1.58	3.64	21.44	43.76	3.77	19.99	
	804	6 mi s Brandon.....	Chocolate loam.....	1.42	4.86	84.50	.090	8.23	.115	.080	2.40	1.00	.....	2.90	7.26	18.86	48.37	3.34	3.11	
	805	1 mi s Steen's Creek.....	Silt-loam.....	1.44	4.35	85.87	.058	7.11	.135	.097	2.30	1.08	10.00	3.72	3.28	11.69	56.03	2.50	7.44	
	806	1 mi s Steen's Creek.....	Subsoil of 805.....	.65	1.96	91.98	.061	4.76	.085	.032	1.87	.030	9.86	1.35	1.78	14.82	57.92	3.54	7.88	
	807	1 mi s Steen's Creek.....	Sandy-loam bottom.....	3.00	6.65	3.27	91.00	.056	1.62	.193	0.62	1.97	.075	2.36	.....	1.52	17.57	57.46	3.51	10.30
	808	1 mi s Steen's Creek.....	Subsoil of 807.....	1.00	2.92	88.47	.093	5.88	1.30	.033	1.97	.04	2.50	2.56	.....	8.75	11.96	50.70	5.64	10.30
	833	Dr. Bevil, Pugh, Oktibbeha Co.....	Surface Noxubee bottom.....	1.80	6.76	82.48	.132	7.47	.185	.079	.337	.14	.....	3.64	.....	.....	.....	.....	.....	.....

### Physical Analysis.

Gravel.....	1.69	6.11	19.40	14.90	43.65	2.09
Fine Sand.....	4.23	7.96	17.54	15.53	39.14	2.79
Very Fine Sand.....	.....	.....	.....	.....	.....	.....
Silt.....	.....	.....	.....	.....	.....	.....
Fine Silt.....	.....	.....	.....	.....	.....	.....
Clay.....	.....	.....	.....	.....	.....	.....

### Chemical Analysis.

I.A.B. No.	COUNTY.	LOCATION OF LAND; ADDRESS OF OWNER.	TOWNSHIP, RANGE AND SECTION.	CHARACTER OF SOIL.	Showing Depth in In. Sample was Taken.	Corn in Bushels	Cotton, lbs., lint.	APPROX. Yield per Acre Unfertilized													
								Moisture.	Volatile and Organic Matter.	Insoluble Matter.	Soluble Silica.	Iron & Alumina Oxide.	Calcium Oxide	Phosphoric Acid.	Potash.	Nitrogen.					
869	---	3 mi. s. e. Jackson, Rankin Co.	T 5, R 1 e, Sec 22	Pearl River bottom	6	500	.....	1.12	5.26	88.27	.10	4.77	.15	.057	.115	.....	.....	.....	.....	.....	.....
870	---	3 mi. s. e. Jackson, Rankin Co.	T 5, R 1 e, Sec 22	Subsoil of 869	10	.....	.....	1.02	2.91	91.61	.082	4.79	.10	.037	.120	.....	.....	.....	.....	.....	.....
269	---	I. J. Duncan, Washington Co.	Mississippi bottom.	Surface	.....	.....	.....	15.07	11.33	.....	12.74	.34	.16	.55	.....	.....	.....	.....	.....	.....	.....
270	---	I. J. Duncan, Washington Co.	Mississippi bottom.	Subsoil of 269.	.....	.....	.....	.....	13.00	72.38	.....	13.90	.20	.16	.77	.....	.....	.....	.....	.....	.....
676	Bolivar	Chas. Scott.....	Mississippi bottom.	.....	.....	.....	.....	2.09	3.80	84.48	6.68	.126	.17	.46	.....	.....	.....	.....	.....	.....	.....
677	---	.....	Mississippi bottom.	.....	.....	.....	.....	4.27	7.72	73.41	.082	11.17	.92	.192	6.87	.....	.....	.....	.....	.....	.....
678	---	.....	Mississippi bottom.	.....	.....	.....	.....	3.53	9.16	73.42	1.45	10.83	.89	.195	6.92	.....	.....	.....	.....	.....	.....
679	---	.....	Mississippi bottom.	.....	.....	.....	.....	5.16	11.78	63.24	.065	13.35	.97	.216	.941	.....	.....	.....	.....	.....	.....
700	Coahoma	.....	Mississippi bottom.	.....	.....	.....	.....	2.95	3.26	81.50	.11	9.59	.41	.14	.54	.....	.....	.....	.....	.....	.....
701	---	.....	.....	.....	.....	.....	.....	4.12	5.84	72.50	11	13.54	.59	.134	.84	.....	.....	.....	.....	.....	.....
702	---	.....	.....	.....	.....	.....	.....	1.22	2.70	88.08	.12	6.15	.34	.115	.36	.....	.....	.....	.....	.....	.....
703	---	Near Garlandsville, Jasper Co.	T 4, R II e, Sec 1.	Black prairie	.....	.....	.....	4.65	10.43	64.47	1.04	13.28	.372	.118	.415	.....	.....	.....	.....	.....	.....
658	---	Near Garlandsville, Jasper Co.	T 4, R II e, Sec 1.	Black prairie.	.....	.....	.....	6.70	10.64	61.25	1.13	17.39	.245	.109	.50	.....	.....	.....	.....	.....	.....

## Sundry Types of Soils.