

SOIL SURVEY OF PERRY COUNTY, ALABAMA.

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LOCATION AND BOUNDARIES OF THE AREA.

Perry County is situated in the central western part of Alabama, and lies between $32^{\circ} 15'$ and $32^{\circ} 52'$ north latitude and 87° and $87^{\circ} 30'$ west longitude. The county is of irregular shape and is bounded by Bibb County on the north, by Chilton and Dallas counties on the east, by Dallas County on the south, and by Marengo and Hale counties on the west. The towns of Marion and Uniontown lie within its borders. (See fig. 7.)

HISTORY OF SETTLEMENT AND AGRICULTURAL DEVELOPMENT.

The first visit of white men to the present State of Alabama took place in July, 1540, when De Soto entered the State at the northeastern border with a large expedition. From narratives of this invasion we learn that the native Indian tribes were comparatively well advanced in agriculture, their sown fields reaching from one village to another along the rivers. They also stored their crops for winter use in rude barns and in other ways were considerably ahead of the tribes inhabiting the country farther north.

The Creeks and the Cherokees were the principal Indian tribes, and they, together with the Chickasaws and Choctaws, continued to hold a part of the lands until 1830, 1832, and 1838, in which years, by treaties with the National Government, they ceded their lands to the United States and were removed to Western reservations. In this way a source of much irritation to the settlers and of no little hindrance to the growth of the country was eliminated.

In March, 1819, the enabling act for the admission of Alabama into the Union was passed, and at the first general assembly under the constitution, convened at Huntsville on October 25 of that year, Perry County was formed.

The early agricultural products of the county were principally indigo, tobacco, corn, rice, and cattle. Cotton is not mentioned as an article of export, but by 1772 was grown to some extent, and machines for separating the lint from the seed at a rate of about 70 pounds per day were then in use. Several gins were established in different parts of

the State in 1802. Almost from the first settlement of the county cotton has been the chief crop. It has been grown on all the different types of soils.

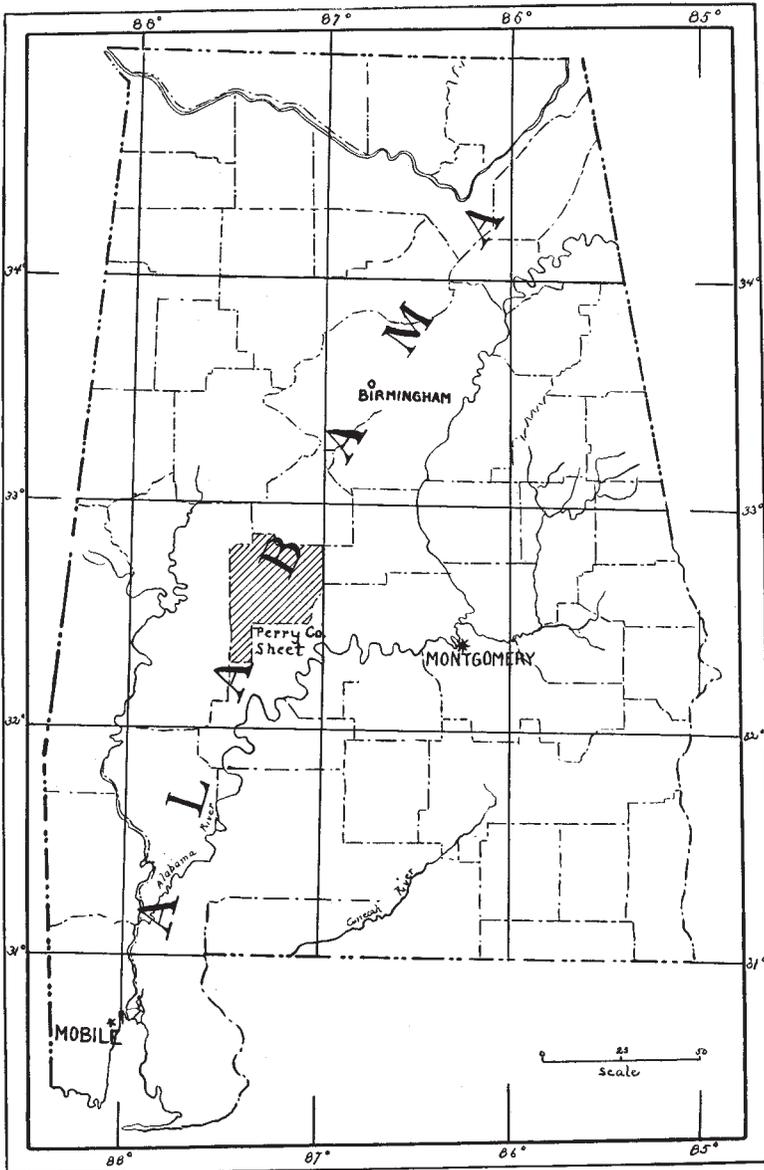


FIG. 7.—Sketch map showing area surveyed in Alabama.

CLIMATE.

From the official figures given below it will be seen that there is some difference in the normal temperatures and precipitation in the

two physiographic divisions of the area. The highest temperatures and least rainfall occur in the Cretaceous prairies to the north of Uniontown, while the lowest temperatures and greatest precipitation occur in the hill country, as shown in the records of Greensboro, Hale County.

The figures given are normals computed from records covering a period of ten years or more.

The rains are usually accompanied by east and southeast winds, while thundershowers usually approach from the west and southwest.

Normal monthly and annual temperature and precipitation.

Month.	Marion.		Uniontown.		Greensboro.	
	Temper- ature.	Precipi- tation.	Temper- ature.	Precipi- tation.	Temper- ature.	Precipi- tation.
	°F.	Inches.	°F.	Inches.	°F.	Inches.
January	47.7	3.95	47.1	4.75	45.4	5.22
February	47.0	5.86	49.1	5.47	49.6	4.55
March	55.9	4.62	56.3	5.34	55.4	5.15
April	64.5	3.50	66.3	64.0	4.28
May	72.6	3.03	73.5	2.74	71.7	3.27
June.....	79.3	3.73	80.1	4.61	78.1	3.95
July.....	80.7	4.89	81.6	5.58	79.9	3.60
August	80.6	4.88	80.8	4.85	79.1	4.40
September.....	75.4	3.08	76.7	2.42	74.8	2.82
October.....	65.5	2.63	67.2	1.91	64.2	2.11
November.....	55.0	3.04	56.1	3.09	55.3	3.98
December.....	48.2	4.24	50.6	3.69	49.1	4.80
Year.....	64.4	47.45	65.4	63.7	48.13

The last killing frost of spring usually occurs about the middle of March and the first in fall in the first week of November. This gives a growing season of two hundred and thirty-seven days, approximately.

PHYSIOGRAPHY AND GEOLOGY.

Perry County comprises two main physiographic divisions. One is known as the uplands, the other as the prairie region. Between these divisions and distinctly separating the one from the other is the Eutaw escarpment.

The prairie region presents little variation of topography, being level, or nearly so. Only here and there is the monotony of the surface broken by low elevations—sand knolls of the Lafayette formation and the Lime Hills. The prairies cover the whole of the southern and southwestern parts of the area surveyed and gradually ascend the easy grade and moderate elevation of the Eutaw escarpment to the rolling, roughly rolling, and hilly country of the geological formation to the north.

Throughout the uplands occur long, narrow divides. The country

is gently rolling along these divides, but between them the ravines are often deep and steep sided and along some of the streams even precipitous. In this part of the area the streams are constantly heading farther back into the hills and widening and deepening their channels.

The general slope of the surface and the drainage of the country is toward the south. Most of the smaller streams enter the Cahaba River within the county or in Dallas County to the south, while a few flow south into the Alabama River, and a few others, rising in the western part of the county, flow in a westerly direction and empty into the Black Warrior River. The Cahaba River flows through the county from north to south. Its course is tortuous and is bordered on one side or the other by broad bottoms and terraces. There are three of the latter, all well marked and giving rise to some of the important soil types of the area surveyed.

Perry County lies wholly within the Coastal Plain and is much more uniform geologically than the tide-water areas of the unconsolidated formations. The chief formations are the Tuscaloosa, Eutaw, Selma Chalk, and Lafayette. All belong to the Cretaceous period except the Lafayette, which is Post-Tertiary.

The Tuscaloosa consists of thick beds of joint clay and cross-bedded sand. The Eutaw overlaps the Tuscaloosa and is also a shallow-water deposit, consisting of cross-bedded sand and strata, varying in thickness, of laminated blue clays. The shell beds along the Eutaw escarpment, particularly east of Hamburg, are upper divisions of this deposit and mark a transition stage between the Eutaw formation and the Selma Chalk or Rotten Limestone.

The Selma Chalk, Rotten Limestone, or Prairie was the offshore deposit laid down in a rapidly deepening sea. This formation consists of beds of white limestone and gives rise to one of the important soil types of the area.

The Lafayette constitutes agriculturally the most important formation, giving rise to or modifying all the soils of the area. The origin of this formation, which is spread over the entire area of the Gulf States and consists of gravels, sands, and loam laid down over denuded areas of the Eutaw and Tuscaloosa formations, is somewhat doubtful. Whether the deposition took place during encroachment of the waters of the Gulf or while the country was covered by rapidly moving currents of water is not definitely known, but owing to the absence of marine fossils and judging from the structure of the deposits the latter theory seems the more plausible.

Following the deposition of the Lafayette formation the entire area was elevated and subjected to extremely severe erosion. So great was this that in many places the Lafayette was almost entirely removed—a condition existing, for example, in the prairie.

The most recent deposit is the Pleistocene, which forms a mantle of

sand over much of the area. This occurred during a depression of the land surface, when the waters of the Gulf extended up the rivers and estuaries. This deposit forms the second bottom lands.

SOILS.

There are six types of soil in Perry County. These are shown in color on the map accompanying this report. The table below gives the area of each type and the proportion which each forms of the total area surveyed:

Areas of different soils.

Soil.	Acres.	Per cent.	Soil.	Acres.	Per cent.
Orangeburg sandy loam.....	196,288	40.2	Sassafras sandy loam.....	14,720	3.0
Houston clay.....	136,128	28.0	Norfolk sand.....	4,160	.8
Orangeburg clay.....	82,752	17.0	Total.....	487,744	100.0
Meadow.....	53,696	11.0			

ORANGEBURG CLAY.

The most extensive areas of the Orangeburg clay occur between Oakmulgee Creek and Cahaba River north of Perryville, and isolated areas are found throughout the Orangeburg sandy loam. The soil is a gray or reddish-brown sandy loam or loam, having a depth of 8 inches, resting on a stiff red clay.

The type occupies rolling divides and rough, hilly country, where the sandy covering of the Orangeburg sandy loam can not accumulate to any considerable depth. These areas also indicate some of the largest settled districts and some of the first settlements of the area.

In general this soil, like all others found in Perry County, is used almost entirely for the production of cotton, although grain, vegetables, and fruit are reported to do well upon it. The Orangeburg clay produces from 800 to 1,500 pounds of seed cotton to the acre. The lint is of a little better quality than that produced on the Houston clay, but not so good as that grown on the more sandy types of soil.

The yield per acre of corn varies from 10 to 20 bushels. The corn is planted in hills 3 feet apart with rows 4 feet apart to allow of cultivation in both directions, which, owing to the occasional long and severe summer droughts, is considered necessary. Wheat and oats are successfully grown. The grain and straw are both used for hay, and very little of this is baled. The Orangeburg clay is the only soil in the area upon which wheat does not suffer from rust.

Of the fruits, grapes, peaches, and apples are grown to a limited extent for home consumption. The peach trees are short-lived, lasting only about five years. This is largely due to the methods used. The trees are seldom if ever pruned and are rarely cultivated. The

fruit, however, is of good quality and splendid color. The Orangeburg clay is subjected to severe washing and is deficient in organic matter.

The following table gives mechanical analyses of soil and subsoil of this type:

Mechanical analyses of Orangeburg clay.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
7893	1½ miles E. of Felix.	Sandy loam, 0 to 5 inches.	0.89	1.96	15.60	21.38	32.42	9.64	14.42	4.58
7895	4 miles W. of Marion.	Sandy loam, 0 to 6 inches.	.92	.20	1.70	8.54	45.04	14.24	19.88	10.78
7897	1 mile N. of Chadwick.	Brown loam, 0 to 9 inches.	2.56	.74	4.90	10.20	27.46	12.70	22.50	22.14
7896	Subsoil of 7895....	Stiff red sandy clay, 6 to 36 inches.	.43	Tr.	.88	5.08	28.14	11.92	25.94	28.48
7894	Subsoil of 7893....	Heavy red clay, 5 to 36 inches.	.34	1.84	9.18	13.12	21.42	6.96	18.00	29.60
7898	Subsoil of 7897....	Red sandy clay, 9 to 36 inches.	.69	.50	3.50	8.16	19.70	8.68	25.52	34.06

ORANGEBURG SANDY LOAM.

The Orangeburg sandy loam has the largest distribution of any soil in the area surveyed, occurring to the north of the Eutaw escarpment and occupying the rolling country. The soil consists of a gray sandy loam, from 8 to 24 inches deep, resting upon a red or reddish-yellow clay, extending to a depth of 3 feet or more and of the same character as the subsoil of the Orangeburg clay.

The Orangeburg sandy loam is used for cotton production to the general exclusion of other products, except corn. The yield of cotton on this soil varies considerably, the average under fair conditions of season and cultivation being not far from a third of a bale to the acre. Corn will yield from 10 to 20 bushels to the acre, but wheat can not be grown successfully, on account of the rust.

A short-staple cotton is produced, although the product of this soil is superior to that of the Houston clay or Orangeburg clay and grades about three points above middling in the market. Small patches of cigar tobacco, for home use only, are grown on this soil.

The Orangeburg sandy loam is adapted to truck crops, of which sweet corn, sweet and Irish potatoes, cantaloupes, watermelons, asparagus, and peas of fine quality are produced. Of the fruits, Kieffer

pears, peaches, and some varieties of grapes have a special adaptation to this soil.

The soil is not usually well protected by vegetation or position from the effects of the severe rains, and the areas are very generally washed. A great deal of the surface soil has been deported to the lower levels. Washing is most noticeable in the cleared areas where there is no protection of the slopes by terraces or sidehill ditches.

The following table shows the mechanical analyses of soil and subsoil of this type:

Mechanical analyses of Orangeburg sandy loam.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
7905	2 miles SE. of Perryville.	Sandy loam, 0 to 8 inches.	0.38	0.40	4.32	9.84	43.30	19.58	19.36	2.98
7903	4 miles NW. of Marion.	Sandy loam, 0 to 22 inches.	.70	.14	1.22	8.96	55.40	6.44	22.90	4.52
7899	2 miles E. of Brush-creek.	Sandy loam, 0 to 11 inches.	.54	.34	.70	3.06	55.52	22.80	11.00	6.44
7901	4 miles SE. of Brush-creek.	Sandy loam, 0 to 8 inches.	.67	.30	1.24	3.76	36.78	16.30	22.14	19.40
7904	Subsoil of 7903.....	Stiff sandy clay, 22 to 36 inches.	.26	.02	.88	7.18	47.82	5.96	17.78	20.08
7906	Subsoil of 7905.....	Red sandy clay, 8 to 36 inches.	.37	.24	2.56	5.62	25.74	11.44	27.66	26.10
7902	Subsoil of 7901.....	Red sandy clay, 8 to 36 inches.	.58	.06	.70	2.98	30.30	10.72	25.38	29.26
7900	Subsoil of 7899.....	Stiffred sandy loam, 11 to 36 inches.	.33	.00	.18	1.84	41.04	10.50	7.24	39.00

HOUSTON CLAY.

The Houston clay, commonly known as the "black belt" or "cane brake," constitutes nearly one-third of the area surveyed and lies south of the Eutaw escarpment. The soil is a brown, reddish-brown, black, or gray clay loam, from 4 to 8 inches deep, grading into a yellow or mottled clay subsoil of a stiff, plastic character and underlain at a depth varying from 1 to 3 feet by blue or gray joint clays.

This soil owes its origin to a Cretaceous sediment laid down in a rapidly deepening sea and known as the Rotten Limestone or Selma Chalk formation. This marine deposit was laid down in horizontal beds, and its nearly level surface extends for miles with monotonous uniformity, relieved only here and there by knolls of the Lafayette sands—remnants of a former mantle covering the whole area, or by the moderate elevations of the Lime Hills—areas of more resistant

limestone. The soil cracks in the summer heat, but is very plastic when wet.

The Houston clay is used largely for cotton culture, but is not so well adapted to this crop as the Orangeburg clay. In a favorable season it produces from one-half bale to a bale per acre, but this yield can be counted on only about once in five years.

In times of drought this type is said to suffer much more than the sandy types.

The soil is admirably adapted to stock raising. Johnson grass yields an average of about $1\frac{1}{2}$ tons of hay to the acre. This hay brings from \$8 to \$14 a ton. This grass, which is very nutritious, well withstands the severe droughts so common to the area.

Corn and oats do well. Corn yields from 25 to 30 bushels and oats from 25 to 40 bushels to the acre. Wheat rusts badly and is not much grown on that account. The legumes, including alfalfa, are well adapted to this soil. Alfalfa yields a ton to the acre at each cutting, and three cuttings are made during the season.

The Houston clay is very difficult to work. Experience has shown that the best practice is to break it up thoroughly in the fall when dry, using a two-horse turn plow or disk plow. It is then said to give a very good tilth when prepared for a crop the following spring.

The following table gives mechanical analyses of the soil and subsoil of this type:

Mechanical analyses of Houston clay.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
7889	1½ miles SE. of Uniontown.	Clay loam, 0 to 5 inches.	1.04	2.44	2.72	1.12	2.30	19.42	51.94	20.06
7887	3 miles E. of Hamburg.	Clay loam, 0 to 8 inches.	1.35	.52	1.66	2.84	13.30	9.40	45.86	26.42
7891	6 miles NE. of Uniontown.	Clay loam, 0 to 6 inches.	.92	4.40	11.64	8.18	12.30	8.18	27.56	27.36
7888	Subsoil of 7887.....	Mottled clay, 8 to 36 inches.	.74	.32	.76	.84	5.82	8.82	47.22	36.22
7892	Subsoil of 7891.....	Stiff clay, 6 to 36 inches.	.70	.06	.28	.26	.96	9.64	36.82	51.68
7890	Subsoil of 7889.....	Mottled clay, 5 to 36 inches.	.58	1.02	1.44	.46	.90	7.84	34.10	53.32

SASSAFRAS SANDY LOAM.

The Sassafras sandy loam occurs along the second bottoms of the Cahaba River and in parts of the bottoms bordering Oakmulgee

Creek, at an elevation of about 20 feet above high-water mark. The soil is a gray or brown sandy loam from 8 to 24 inches in depth, grading into a sticky sand and resting upon a yellow or reddish-yellow sandy clay.

The surface of this soil is level or gently rolling, and the areas lie between the first bottom and the rolling country in narrow bands or, when the bayous and streams surround them, in detached patches. This soil owes its origin to the Pleistocene sands laid down during the encroachment of the Gulf waters at a period of subsidence of the land. The subsoil is derived from the sands reworked with the underlying gray clay.

The soil is very easy to work, but requires very careful management to maintain its fertility. It is well drained during the summer season, but wet and spongy in winter. The subsoil is compact and firm in the dry season, but loses its coherence when wet. The use of fertilizers is of only temporary benefit.

Cotton is the chief crop produced on the Sassafras sandy loam within Perry County. The yield per acre ranges from one-third to one-half bale. In favorable years the yield is considerably greater than this. Corn yields from 15 to 25 bushels per acre. However, this soil is much better adapted to truck crops than to any others.

The following table gives the mechanical analyses of the soil and subsoil of this type:

Mechanical analyses of Sassafras sandy loam.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
				<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
7909	Sprott	Sandy loam, 0 to 10 inches.	2.01	1.64	12.78	14.20	27.18	9.92	25.88	8.62
7907	4 miles S. of Sprott.	Sandy loam, 0 to 24 inches.	1.00	.12	1.22	6.54	54.24	15.02	18.34	4.38
7910	Subsoil of 7909....	Yellow sandy clay, 10 to 36 inches.	.57	1.44	14.24	13.96	22.70	7.56	26.38	13.52
7908	Subsoil of 7907....	Sandy clay, 24 to 36 inches.	.34	.04	.46	3.68	43.12	12.90	20.92	18.48

NORFOLK SAND.

Norfolk sand has only a very limited distribution in Perry County, occurring chiefly along Boguechitto Creek, west of Hamburg. The soil consists of a fine to coarse gray sand, from 1 to 3 feet deep, underlain by a sticky sand of the same texture, in turn resting upon the

Houston clay. Where this type merges into the Houston clay the areas are characterized by a shallow deposit of sand.

The Norfolk sand owes its origin to the Lafayette sands, which at one time entirely covered the Houston clay. Subsequent erosion on a tremendous scale denuded nearly the whole of the area, leaving only traces of the Lafayette in the little knolls of sand scattered throughout the prairie along the margins of Boguechitto Creek. This area has all the characteristics of a delta.

The Norfolk sand produces cotton of better lint than any of the other soils in the county, but the rate of yield is very low, a bale to every 6 acres being considered a good average yield. Naturally this soil is best adapted for producing early truck, but the industry is as yet practically undeveloped.

The following table shows the texture of this soil:

Mechanical analysis of Norfolk sand.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
7917	2½ miles NE. of Newbern.	Fine loamy sand, 0 to 36 inches.	2.37	0.04	0.38	6.42	66.60	9.88	13.42	3.20

MEADOW.

The Meadow lands of this area consist of low-lying and poorly drained tracts, chiefly found along the Cahaba River, usually occupying the first and second terraces subject to overflow.

In favorable seasons this type, which consists of a waxy clay or clay loam, is the most productive cotton soil in the area, yielding with little or no fertilization from three-fourths to 1 bale per acre.

AGRICULTURAL METHODS.

In cultivating cotton the land is plowed in the winter or early spring and laid out in beds with a half-shovel plow. A diamond-scooter plow is next used to open up the center of the bed, and this is followed by a mechanical cotton planter which drops and covers the seed in one operation. When the plants are about ten days old the beds are barred off and the unnecessary plants are cut out with a hoe. The rest of the cultivation, which is frequent enough to keep down the weeds, is done with a sweep plow.

There have been marked improvements made in recent years in the methods of ginning and handling cotton. Formerly the cotton was hauled to a horsepower gin, unloaded by hand into bins, and thence carried to a platform and fed into the gin by hand. The lint was blown into a lint room and allowed to accumulate until there was enough for about three bales, when it was conveyed by hand to the old "buzzard-wing" press, of which a few are to be seen at the present time. As the ginning progressed the seeds fell upon the floor and were shoveled through a chute to a pile outside the building, where they were allowed to rot. To-day a suction tube is used to elevate the cotton from the wagon. Through this the cotton is passed directly to the gin. The seed falls into a box, whence it is by belt elevators or blowers carried to storage bins. The lint passes into a condenser and from this to a steam-power press, where it is baled, tied, weighed, and made ready for shipment.

Some of the most improved gins have a "cleaner-feeder" attachment, which gives the cotton a more thorough cleaning. This effects a higher grading, and occasionally makes a difference of a cent a pound in the price received for the cotton.

The production of corn does not receive the attention it deserves, but still this product is one of the chief crops of the county. It is planted in 3-foot hills with 4-foot rows, which allows cultivation in both directions. The rate of yield is very low, but is in proportion to the seed sown and the natural productivity of the soils. Grass is confined almost entirely to the prairie section and is usually Johnson grass. It is cut with horse mowers and manipulated with horseshakes. The partly cured grass is thrown up in small cocks overnight, spread out the following day, and if the weather is favorable it is then hauled to the barn or stacked in the field. Oats are grown, but mainly for forage. This crop is usually sown broadcast during the fall months.

Sugar cane is grown chiefly in the hilly country. The crop is grown from cuttings planted annually. The stalks from which cuttings are made are buried in the ground during the winter and dug out in the spring. At maturity the leaves are stripped from the stalks and the stalks cut and sent through a mill. The juice is evaporated and made into sirup, which brings from 20 to 50 cents a gallon. Sorghum is also grown largely, in both the hill and the prairie country.

AGRICULTURAL CONDITIONS.

The most prosperous part of the area, as indicated by the character of the farm buildings, is confined to the second bottoms of the Cahaba River. Next in development come the farms located in the Orangeburg clay, the Houston clay, and the Orangeburg sandy loam, in the order named. Existing conditions do not indicate that Perry County has enjoyed unbroken prosperity.

Occasional comfortable old mansions are seen. These are usually built of wood, with large central halls extending from front to back. On each side of this hall open exceptionally large rooms, each provided with an ample fireplace. Few of these buildings are kept in good repair, while many of them are occupied by negroes, and their dilapidated appearance tells the story of broken fortunes.

Aside from these old mansions the greater number of the dwellings occupied by the whites are small one-story structures, sometimes clapboarded, but more often faced with logs and usually unpainted. There are large areas in which the log cabins of the negroes are the only dwellings to be seen.

The barns and outbuildings are generally small, but in proportion to the number of stock kept and the crops to be housed. Occasionally barb-wire fences are seen, but more often the stake-and-rail construction is made use of where any fencing at all is necessary. The greater part of the lands are without fences of any kind. The farming implements are generally inadequate, although there has been some improvement in this respect within the last few years.

In the part of the county below Marion and to the west of the Cahaba River, known as the prairies, not over one-third of the land-owners live on and till their land. In the hill country probably three-fifths of the lands are occupied by the owners. The proprietors of the farms usually reside in Marion or Uniontown, the only important towns in the county. About one-third of the prairie is rented to white tenants, of whom probably three-fourths pay a stated cash rental, while the remainder work on shares. Under the latter method the tenant agrees to plant one-half or more of the tillable land of the farm and to give the owner from one-fifth to one-fourth of the cotton and cotton seed produced. Many owners lease, and often white or colored tenants sublet the lands to negroes at prices ranging from \$1 to \$3 an acre. Another common method of working the land, locally known as the "tenants-in-common system," is followed. By this system the owner or superintendent rents land to a "squad," consisting of negroes enough to work two or more mules. The usual allowance of land to each mule is 25 acres. Under this method the owner furnishes the land, implements, and seed, while the tenant furnishes the labor. Fertilizers are seldom used. The area to be put in each crop is stipulated in the agreement, and the tenant is entitled to one-half the cotton and cotton seed and one-third of the corn and fodder.

In Perry County the amount of land owned by the negroes is less than 5 per cent. The farms vary much in size. Of the total acreage, only about 5 per cent is included in farms containing from 80 to 160 acres, while 55 per cent is in plantations of 160 to 800 acres and 40 per cent in plantations of from 800 to 1,500 acres.

Land values are variable. The Houston clay is worth from \$7 to

\$25 an acre, the Orangeburg sandy loam south of Marion from \$3 to \$25 and in the northern part of the area from \$3 to \$5 per acre. The Sassafras sandy loam brings from \$7 to \$15 and the Orangeburg clay from \$3 to \$10 an acre.

The planters depend entirely upon negro labor, of which 90 per cent is employed under some form of tenantry. The remaining 10 per cent is hired by the month, receiving from \$7 to \$10 a month with rations, or 40 cents a day without rations. Much of this labor is inefficient, but some of it is very satisfactory, and many planters believe it the only labor suited to the cultivation of cotton. As long as it is employed so generally no other kind of labor can be obtained, and the planters consider it fairly efficient where proper supervision can be had.

Alabama ranks third among the States in the production of cotton, with an annual output of about 1,000,000 bales. Of this great total, Perry County produces from 20,000 to 30,000 bales. Cotton is the one important staple of the county, and it is grown almost to the exclusion of any other crop. Corn and hay are the secondary products.

The grading of cotton is based upon the length and quality of the lint, the amount of trash it contains, and the color. In classification the cotton grown in this area will grade from straight middling to middling. The prices received by the planters have ranged anywhere from 5 to 8 cents a pound.

The Houston clay occupies the largest area, but is a very uncertain soil for cotton on account of its liability to drought. With a favorable season the soil returns large yields, but year in and year out the Orangeburg clay or the Orangeburg sandy loam produces more. Houston clay is adapted to oats, corn, and Johnson grass. Cattle are brought in from Tennessee and from the sandy uplands of the county and fattened upon pastures of this grass, and there is great opportunity for the development of this industry. The Johnson grass is one of the few grasses that can withstand the severe droughts of this section.

The Orangeburg sandy loam has been to a large extent exhausted, but it is a soil which responds readily to fertilization. It produces a much finer lint than either the Orangeburg clay or the Houston clay, but the rate of yield is very low. The soil is better adapted to corn, sweet and Irish potatoes, tomatoes, and other truck crops, stone and cane fruits, and wrapper tobacco.

The Orangeburg clay produces on an average the highest yield of cotton of any of the Perry County soils. It is admirably adapted to the general farm crops, including grass and grain, and to peaches and grapes. This soil is generally considered difficult to till, and consequently insufficient preparation of lands before planting and inefficient cultivation of the crops afterwards greatly lessen the yield.

The Sassafras sandy loam of the second bottoms has a crop value somewhat similar to the Orangeburg sandy loam, with the exception that it will withstand drought better. It is very difficult, however, to keep up the fertility of this soil, owing to the character of the subsoil. It produces fair yields of cotton and corn.

The Meadow, or overflowed bottom land, in favorable seasons produces very heavy yields of cotton and corn. It is adapted to pasturage and the production of sugar cane and sorghum. The cane grown on the sandy bottoms is much better than that produced on the clay, making a superior quality of sirup. The presence of lime in the soil of the prairies is said to be detrimental to the growth of sugar cane.

Perry County offers unsurpassed possibilities for the development of agricultural industries. At present the local methods are of an crude and in most cases inefficient. There is need for greater care to prevent the washing of soils and to preserve their fertility. Deeper plowing is recommended, and more careful cultivation, especially on areas of Orangeburg clay and Houston clay. More perfect drainage systems would greatly improve the bottom soils, and contour cultivation and terracing should be more largely employed on the slopes.

The production of cotton year after year on the same fields, accentuated by the clean culture employed in the production of this crop, has more or less exhausted all the lands. The soils generally are deficient in organic matter, a condition which could be alleviated greatly by the use of green manures. Nearly all of the legumes do well upon the clay soils of the area, and especially on the Houston clay, while upon the more sandy types cowpeas and the California bur clover are successful soil renovators.

Many farmers would find it to their advantage to produce more of the subsistence crops, both for themselves and for the work stock, and to make cotton not the sole crop but the money crop. Large shipments of corn are now brought into the county. These and other imported agricultural products could and should be produced at home. The Houston clay and Orangeburg clay yield cotton of a longer staple than the other types of soil, and it seems that the long-staple cotton could be produced to advantage here. This cotton brings a considerably higher price than the cotton now grown in the area.

At the present time there are but one or two thrashing machines in the county, and wheat and oats are generally cut for hay. There are no flouring mills in the area, but nearly every gin has a gristmill for cracking corn and grinding corn meal.

At the present time the available markets for Perry County products do not warrant a more intensive agriculture, yet with the development of the mining section of the State to the north a greater demand for truck and fruit crops will eventually arise and a greater diversification of the industry will follow. The development of the

trucking and fruit industries of the uplands and of the growing of grain and raising of stock in the prairies is only a question of time.

The transportation facilities are not what they should be. A branch of the Southern Railway, extending from Selma to Akron, passes through Marion, a town near the center of the county. A more important line passes through Uniontown, situated in the panhandle of the southern extremity of the county. The service is poor and freight rates high. In fact, the latter are a serious handicap on the development of agriculture and other industries in the county.

The wagon roads in the prairie section of the area are excellent when dry, but in the wet season they become practically impassable, as is evidenced by the fact that a pair of good mules is required to haul a single buggy. Consequently but little traveling is done, and that on horseback. The roads in the other parts of the county are very poor. Many districts are settled so sparsely that only enough repairing is done to keep the roads passable. The streams are subject to very sudden rises; only the larger ones are bridged, and fording of many of them is often impossible for a day or more following heavy rains. Under these conditions a 500-pound bale of cotton is considered a heavy load for a pair of mules.

Marion is the only market for the central part of the county. While Uniontown, in the southern extremity of the county, is a good market for cotton, it is too remote to serve as a point of shipment for cotton grown in the northern part of the area. Greensboro, a few miles west of the county line, in Hale County, is the market town of the northwestern part of the county. The eastern and southeastern sections depend largely upon Selma, although this town is situated 12 miles distant in Dallas County.

These three towns have cotton-seed oil mills, while Uniontown also possesses a cotton compress.

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