REPORT

ON

COTTON PRODUCTION IN THE STATE OF MISSOURI,

WITH A BRIEF DESCRIPTION OF

THE AGRICULTURAL FEATURES OF THE STATE IN GENERAL, AND ESPECIALLY OF THE COTTON-PRODUCING COUNTIES.

BY

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LETTERS OF TRANSMITTAL.

BERKELEY, CALIFORNIA, *June* 1, 1883.

To the SUPERINTENDENT OF CENSUS.

DEAR SIR: I transmit herewith a report on cotton production in the state of Missouri, with a description of the agricultural features of the cotton-growing counties of the state, by Dr. R. H. Loughridge.

The information on the latter subject, having been derived entirely from correspondence and the somewhat scattered data contained in published reports, is not as full as could be desired, or as it has been possible to make it in other cotton-growing states. The obvious fact that, in order to compete with the cotton belt proper, the culture of the staple in Missouri is being more and more confined to the early and highly-productive bottom lands of the southeastern extremity, renders the minor details of less importance in this case, the cotton-producing area being altogether similar in its surface features to the northeastern corner of Arkansas.

Very respectfully,

E. W. HILGARD,
Special Agent in charge of Cotton Production.

BERKELEY, CALIFORNIA, *May* 1, 1883.

Professor E. W. HILGARD,
Special Agent in charge of Cotton Production.

DEAR SIR: I have the honor to submit herewith my report on cotton production in the state of Missouri. The acreage of cotton within the state is limited to so small an area that it was not thought necessary to give more than a very brief description of the agricultural and physical features of the state, and for the same reasons the county descriptions are limited to the few on the south which produce more than 100 bales each. I have followed in this report the plan proposed by you and followed in other state reports, viz, placing the subject-matter in the following divisions, preceded by the tabulated enumeration results for the cotton-producing counties:

Part I. General (though brief) description of the physical features of the state and of each agricultural region.

Part II. Descriptions of the chief cotton-producing counties, accompanied by abstracts from such answers to question schedules as have been received from correspondents.

Part III. Cultural details of cotton production, as embraced in the answers to the schedules.

I have been compelled to depend entirely upon the *Hand-book of Missouri*, issued by the state board of immigration in 1880, the published reports of the state geological survey (especially that of 1873–'74), and the state agricultural report of 1878, as well as upon the answered question schedules mentioned above, for the data contained in this report, and regret that more detailed descriptions could not be given.

Very respectfully,

R. H. LOUGHRIDGE.

TABULATED RESULTS OF THE ENUMERATION.

TABLE I.—AREA, POPULATION, TILLED LAND, AND COTTON PRODUCTION.
TABLE II.—ACREAGE AND PRODUCTION OF LEADING CROPS.

TABLE I.—AREA, POPULATION, TILLED LAND, AND COTTON PRODUCTION.

COUNTIES HAVING 100 ACRES AND OVER IN COTTON.

Counties.	Area.	POPULATION.						TILLED LAND.		COTTON PRODUCTION.							
		Total.	Male.	Female.	White.	Color'd.	Average per square mile.	Acres.	Per cent. of area.	Per cent. of tilled lands.	Acres.	Bales, 500 lbs.	Product per acre. Fraction of bale.	Product per acre. Seed-cotton.	Product per acre. Lint.	Acres per square mile.	Bales per square mile.
	Sq. mls.												*Lbs.*	*Lbs.*			
The State	68,735	2,168,380	1,127,187	1,041,193	2,022,826	145,554	31.5	13,203,756	30.0	0.2	32,116	20,318	0.63	945	315	0.5	0.3
Cotton counties	8,240	94,499	49,942	44,557	89,140	5,359	11.5	467,858	8.9	6.8	31,947	20,226	0.63	945	315	3.9	2.5
ALLUVIAL REGION.																	
Pemiscot	480	4,299	2,300	1,999	4,031	268	9.0	19,810	6.4	19.1	3,787	2,848	0.75	1,125	375	7.9	5.9
Dunklin	500	9,604	5,162	4,442	9,440	164	19.2	42,648	13.3	26.0	11,100	7,361	0.66	990	330	22.2	14.7
New Madrid	620	7,694	4,145	3,549	5,813	1,881	12.4	49,338	12.4	5.1	2,518	1,649	0.65	975	325	4.1	2.7
Mississippi	430	9,270	5,130	4,140	7,116	2,154	21.6	63,092	22.9	0.3	213	132	0.62	930	310	0.5	0.3
Scott	440	8,587	4,631	3,956	8,036	551	19.5	57,103	20.3	0.5	294	165	0.56	840	280	0.7	0.4
Stoddard	850	13,431	6,923	6,508	13,396	35	15.8	61,516	11.3	9.1	5,576	3,202	0.57	855	285	6.7	3.8
Butler	580	6,011	3,221	2,790	5,871	140	10.4	20,475	5.5	2.2	445	235	0.53	795	265	0.8	0.4
Total	3,900	58,896	31,512	27,384	53,703	5,193	15.1	313,982	12.6	7.6	23,933	15,592	0.65	975	325	6.1	4.0
UPLAND COUNTIES.																	
Ripley	620	5,377	2,803	2,574	5,367	10	8.7	23,181	5.8	3.7	866	471	0.54	810	270	1.4	0.8
Oregon	740	5,791	2,995	2,796	5,773	18	7.8	27,672	5.8	6.7	1,848	1,128	0.61	915	305	2.5	1.5
Howell	920	8,814	4,495	4,319	8,723	91	9.6	40,065	6.8	4.5	1,800	1,075	0.60	900	300	2.0	1.2
Ozark	740	5,618	2,919	2,699	5,604	14	7.6	18,538	3.9	8.1	1,500	800	0.53	795	265	2.0	1.0
Taney	800	5,599	2,897	2,702	5,594	5	7.0	24,384	4.8	5.3	1,300	760	0.58	870	290	1.6	0.9
Stone	520	4,404	2,321	2,083	4,376	28	8.5	20,036	6.0	3.5	700	400	0.57	855	285	1.3	0.7
Total	4,340	35,603	18,430	17,173	35,437	166	8.2	153,876	5.5	5.2	8,014	4,634	0.58	870	290	1.8	1.1

COUNTIES HAVING LESS THAN 100 ACRES IN COTTON.

Counties.	Acres.	Bales.	Counties.	Acres.	Bales.	Counties.	Acres.	Bales.
Barry	4	2	Douglas	12	5	Reynolds	1	1
Bollinger	29	20	Hickory	9	5	Washington	10	6
Carter	3	1	Laclede	45	20	Wayne	19	13
Cedar	3	2	Miller	5	2	Wright	8	5
Christian	5	2	Osage	10	5			
Dallas	4	2	Perry	2	1	Total	169	92

TABLE II.—ACREAGE AND PRODUCTION OF LEADING CROPS.

COUNTIES HAVING 100 ACRES AND OVER IN COTTON.

Counties.	COTTON.		INDIAN CORN.		WHEAT.		OATS.	
	Acres.	Bales.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
The State	32,116	20,318	5,588,265	202,414,413	2,074,394	24,960,027	968,473	20,670,958
Cotton counties	31,947	20,226	256,301	7,575,337	63,726	603,386	10,841	289,213
ALLUVIAL REGION.								
Pemiscot	3,787	2,848	11,936	406,999	208	3,020	80	1,613
Dunklin	11,109	7,361	20,121	603,009	2,905	24,160	1,066	19,869
New Madrid	2,518	1,640	37,463	1,116,696	4,326	49,273	691	11,345
Mississippi	213	132	42,298	1,509,055	8,276	110,448	1,130	24,420
Scott	294	165	24,453	721,366	16,227	200,376	1,119	19,639
Stoddard	5,576	3,202	28,815	917,694	11,875	97,811	3,186	48,724
Butler	445	235	11,825	281,770	1,604	10,025	1,695	23,283
Total	23,933	15,592	176,911	5,557,489	45,421	496,013	8,916	148,393
UPLAND COUNTIES.								
Ripley	866	471	13,140	317,140	1,745	12,196	1,709	14,984
Oregon	1,848	1,128	12,749	338,539	2,053	16,295	1,118	13,027
Howell	1,800	1,075	21,486	576,332	5,441	37,667	3,846	48,220
Ozark	1,500	800	10,445	236,572	2,133	13,608	1,547	19,910
Taney	1,300	760	11,627	294,602	3,196	19,943	1,729	29,678
Stone	700	400	9,943	254,663	3,737	38,264	976	14,492
Total	8,014	4,634	79,390	2,017,848	18,305	137,373	10,925	140,320

PART I.

PHYSICAL AND AGRICULTURAL DESCRIPTION

OF THE

COTTON-PRODUCING REGION

OF

MISSOURI.

OUTLINE OF THE PHYSICAL GEOGRAPHY

OF THE

STATE OF MISSOURI.

The state of Missouri covers an area of about 69,415 square miles, of which 68,735 is land surface. This is divided into 114 counties with areas varying from 280 to 1,145 square miles. The state is bordered on the east by the Mississippi river, while the Missouri river, entering at the northwest corner, flows in an irregular course southeastward to the former, and is the chief recipient of the waters of the state. The Osage river on the west, one of the largest tributaries of the Missouri, flows eastward and unites with it near the center of the state. On the extreme south, Saint Francis and White rivers and tributaries carry off into Arkansas the waters from an area of about 12,000 square miles, the Ozark mountains forming the water divide between this basin and that of the Missouri. The state is naturally divided into two separate and distinct physical divisions, viz, open prairies and timbered lands. The former embrace all that part of the state lying north of the Missouri river, excepting the timbered belts along the Missouri, the Mississippi, and other streams; also that part lying west of a line from Jefferson City, the capital, to Stone county, on the Arkansas line, though this is interspersed with much timber. The remainder of the state, or that part on the southeast, comprises the timbered division, having a heavy growth of oaks, hickory, and, on the south, short-leaf pine, each variety irregularly distributed.

The general character of the country north of the Missouri is that of a broad, undulating plain, rising northwestward from 428 feet to an elevation of about 1,200 feet above the sea. It is somewhat hilly and broken midway across the northern part of the state, and bluffs also occur along the largest streams. The most of this territory, as well as that between the Missouri and the Osage rivers on the west, is an open prairie, interrupted now and then with timbered lands. On the south of the Missouri and the Osage rivers the country is more hilly and broken, the Ozark range of mountains forming a water divide between the tributaries of the Missouri and those of the White river. This range is thus described:

From the state of Kansas this important range enters Missouri in Barton county and traverses the state in a course slightly north of east, reaching the Mississippi river in Perry county opposite Grand Tower. In Kansas this ridge divides, and the northern branch passes into Missouri in Cass county, and soon disappears near the headwaters of La Mine river. From Barton county on the west, for nearly three-fourths of the distance across the state, the Ozarks widen out into broad, arable plateaus, and are best described as a series of high table-lands, possessing none of the essential characteristics of a range of mountains. The highest point in this part of the state is at Marshfield, Webster county, where an elevation of 1,475 feet above the sea is reached. Advancing eastwardly the ridges become more narrow, irregular, and precipitous, and abound in isolated hills and knobs, the highest of which, Pilot Knob, Iron county, is 1,490 feet. South of the Ozark divide, from Springfield, Greene county, on the west, to about Marble Hill, Bollinger county, on the east, extending to the Arkansas line, the country presents a series of alternating ridges and valleys. Below Cape Girardeau the alluvial bottom lands become very extensive and embrace several counties on or near the Mississippi, with the lowest elevation in New Madrid county, about 250 feet above the sea-level.

This region south of the Osage and the Missouri rivers is very generally well timbered.

CLIMATE.—A long series of observations taken at Saint Louis shows the average yearly temperature of that part of the state to be about 55°. The mean winter temperature is 33°, varying from 26° in the coldest to 40° in the mildest winters. The temperature occasionally falls to 20° and 24° below zero. The mean summer temperature is 76°, varying from 72° in the coldest to 80° in the warmest summers. An extreme of 100° to 104° has sometimes occurred. The average annual rainfall in Saint Louis is about 41 inches, varying in different years from 25 to 55 inches. The chief rainfall and also the greatest number of thunder-storms occur between the last of April and the first of July.

The south and southeast winds are the prevailing ones, especially in the warmer seasons; in winter they are as often west and northwest winds. These winds are usually brisk, but rarely very high; but occasionally tornadoes are formed and devastate narrow strips of country, invariably taking a southwest to northeast course.

The climate of southern Missouri is a dry one. In the spring heavy rains fall, and in the latter part of that season the state is visited by continuous showers, known to farmers as "the long season in May". In June summer showers fall, but not in excess, seldom lasting longer than a few hours. The average rainfall in southern Missouri is 41 inches; in the southeast larger; in the northwest less. The rains come generally from the southwest. The amount of fair weather is very large, and, while a few of the summer days are excessively hot, an electrical disturbance generally occurs, and a thunder-storm and a copious shower bring a refreshing change of temperature. Killing frosts occur, on an average, on the 10th of October, and late frosts on the 7th of April.—*Agr. Report.*

Snow rarely falls, and then to an average depth of 2⅓ inches, and disappears in a day or two. The winters are short and pleasant.

TIMBER GROWTH.—Most of northern Missouri and of the western counties consists of prairie. The prairies, during the spring and summer seasons, are covered with a natural and luxuriant growth of many different species of grasses and other plants, many of them having beautiful flowers. These counties have generally belts of timber extending along the streams, affording a sufficient supply for fuel and other neighborhood uses. The Missouri bottoms are generally heavily timbered with cottonwood, hickory, walnut, hackberry, and bur and red oaks. The counties along the Missouri, from the Platte eastward, often have heavy bodies of fine timber, but, until Howard county is reached, these are interspersed with occasional extensive bottom prairies. Howard and the counties eastward have timbered belts of from 10 to 20 miles wide, extending parallel to the Missouri river, which include the finest varieties of hard-wood timber, such as ash, oak, walnut, sugar-tree, hackberry, hickory, elm, etc. A similar belt, from 15 to 20 miles wide, lies parallel to the Mississippi, while along the Osage are heavy bodies of excellent timber. All the counties to the south contain large tracts of good timber, chiefly oak. Yellow poplar and sweet gum are common in the counties south of Madison. The swamps abound in cypress, oak, catalpa, tupelo gum, walnut, and sycamore.

In southern Missouri open prairies are rare, except on the extreme southwest; but in their stead are occasional tracts of barrens, or hilly districts covered with tall grass, on which are scattering, stunted oaks, including black-jack and post oaks and black hickory.

UPLAND AGRICULTURAL REGIONS.

The geological survey of the state has recognized and described (*a*) the following upland agricultural regions in addition to the bottom lands:

First class.—Black calcareous prairies of the northwest.
Second class.—Sandy prairies and timbered lands.
Third class.—Gravelly and red-clay prairies.
Fourth class.—Timbered magnesian-limestone lands and barrens.

BLACK CALCAREOUS PRAIRIES.

These, the richest uplands of the state, lie in northwestern Missouri, and consist mostly of prairie, and are underlaid by the Upper Coal Measures, with the Middle Measures beneath and appearing along its southeast and eastern margin. A line entering the state from the northwest, in the northwestern part of Vernon county, passing north and east through the western part of Bates, thence eastwardly through the southern part of Cass, northeastwardly to the central part of Johnson county, eastwardly through La Fayette and Saline, thence northwardly to Chariton in the direction of Salisbury, and a little west of north to the northern boundary of the state in Mercer county, will include, on the west, the richest farming land in Missouri. There are, of course, occasional tracts of inferior land included within these limits, but the soil is generally of uncommon fertility. The soil is generally based on a deep bluff deposit or on limestone, and is, for the most part, calcareous. It is generally at least a foot thick and quite black, yielding good crops of corn, grass, pumpkins, squashes, potatoes, turnips, etc. The yield of corn will average from 50 to 75 bushels per acre with ordinary cultivation, and lands that have been in cultivation thirty years yield as abundantly as when first cultivated. Blue-grass grows well when the prairies have been grazed down. This is probably no better for wheat than the lands in eastern Missouri; in fact, during similar seasons, the yield is not always as large per acre, but fine crops of wheat are often raised, frequently 25 bushels per acre, the general yield being from 15 to 25 bushels. Apples and some small fruits succeed very well, and occasionally there is a good crop of peaches. There seems to be no better soil for the gooseberry, and the cultivated grape becomes of a large size, but the vines grow too luxuriantly.

SANDY PRAIRIES AND TIMBERED LANDS.

This region lies just east and south of the first named. Its southern and eastern boundary passes through Barton into the western part of Cedar, thence through Saint Clair, Benton, the northwest part of Morgan, through Cooper, the southern part of Boone and Callaway, and eastward, parallel to and within 10 miles of the Missouri river, to a point opposite the central part of Saint Louis county. This district may also include extensive areas of the other counties lying southward along the Mississippi river.

a Geol. Surv. Mo. 1873–'74, page 42.

There are several well-marked varieties among the soils of this district. That in the western and northern portions consists chiefly of prairie, often spreading out, in north Missouri, into flat prairies. That in the southwest is a rolling country, with generally a sandy soil. The yield is usually from 30 to 50 bushels of corn per acre. The timbered lands in eastern Missouri and in the counties along the Missouri river produce very fine crops of wheat, sometimes yielding over 25 bushels per acre.

GRAVELLY AND RED-CLAY PRAIRIES.

This class occurs chiefly in southwest Missouri, becoming a narrow belt to the northeast, barely dividing the second from the fourth. It may include part of McDonald, Barry, Lawrence, Christian, Greene, Polk, Dade, Jasper, Barton, Cedar, Hickory, Saint Clair, Benton, Morgan, Cole, Moniteau, Osage, Gasconade, Franklin, Saint Louis, and Jefferson counties, and a band passing southwardly. Some of the lands in Jasper, Lawrence, and Greene are as good as those of the second class. The soil is generally somewhat gravelly and often mingled with red clay. Good crops of wheat and corn and fine crops of fruit are produced, especially in those counties along the Missouri river, whose hills yield fine peach and grape crops every year.

TIMBERED MAGNESIAN-LIMESTONE LANDS AND BARRENS, OR UPLAND COTTON REGION.

This class includes the main body of southern Missouri, excepting the swamp counties of the southeast and the other counties above named. It constitutes an extensive tract elevated higher than other parts of the state (plateau lands of the Ozark range), it being from 1,200 to 1,500 feet above the sea. It is underlaid by the primordial sandstones and magnesian limestones, with an occasional elevation or peak of porphyry or granite in the eastern part. The country is broken by stream channels cutting down from 200 to 300 feet below the tops of the bluffs, with valleys often as much as 400 feet below the main distant ridges. Near the streams it is generally very rugged, with either abrupt or long, steep ascent to the hills. When the main streams are wide apart the country spreads back into a flat land with light-colored soil, supporting chiefly a growth of post oak; when a little more hilly, black oak and black hickory are common. With more soil there is often a fine growth of white oak mingled with sassafras, dogwood, etc. South of the main Ozark ridge, where the hills are either covered with sandstones or chert fragments, we find but little soil, and often a heavy growth of pine. On the slopes from the magnesian limestones are often seen fine cedar groves. There are extensive tracts within this district where the soil is either too thin or too rocky to admit of present cultivation; but all these lands will grow the grape. Corn yields from 20 to 35 bushels per acre, and wheat from 15 to 20 bushels. The valleys along the streams near the south line produce fine crops of corn and cotton.

The extreme southern part of this region is the upland cotton region of the state, and, together with the alluvial region of the Mississippi river, is that which is of greatest interest in this report. It occupies the southern slope of the Ozark water-shed, whose width varies from about 40 miles on the west to more than 75 miles on the east. The streams, therefore, that flow southward have as yet attained no great width, and while the greater number are tributary to White river of Arkansas, those on the east of Saint Francis river, including that stream, enter the Mississippi alluvial region.

In its general features the surface of the country is very similar to the adjoining portions of Arkansas. On the east and west the upland surface is made hilly and broken by the numerous streams that find their way southward; and narrow gravelly and rocky ridges with a black-jack-oak growth are a feature of the country. The same is partly true of the southern parts of the central counties of Howell and Oregon, while the northern portions of all the counties have more of the character of broad table-lands, from 200 to 500 feet above the larger streams, their surfaces undulating and largely timbered with forests of short-leaf pine and other growth. On the extreme west the country opens out into the more level red-clay prairies of the third class of lands already mentioned. The lands of these uplands may be classed in three groups:

1. *Pine lands* of the table-lands, already mentioned, resting upon sandstone, and timbered with a growth of short-leaf pine, post, white, and red oaks, hickory, and sassafras. The soil is a sandy loam, best adapted to grain crops, though not much in cultivation. 2. *Black-jack lands* upon the narrow and rocky ridges; these have a stunted growth of black-jack and post oaks. 3. *White and post oak lands* derived chiefly from the magnesian limestone; they occupy the valleys and gradually sloping hillsides, and are dark in color, light and warm in character, with red-clay subsoils. They are well timbered with oaks, hickory, and other growth, and are the principal farming lands of the region. Cotton is grown only on these valley lands, and, in spite of the disadvantages of the high latitude and consequent short seasons, yields an average of about 900 pounds of seed-cotton per acre. That this high average is not due to the *experimental* culture of the crop is shown by the fact that the upland county having the highest cotton acreage (Oregon, 1,848 acres) has also the highest product per acre—915 pounds of seed-cotton; the two counties next in acreage being also next in product per acre.

Small open prairies occur in the southern part of Howell county, the soil of which is a black, tenacious clay, impervious, and needing drainage to insure fertility.

MISSISSIPPI ALLUVIAL REGION.

The most prominent as well as most important region of southeast Missouri is the broad alluvial plain that reaches in length from the Arkansas line to Cape Girardeau, and in width from the Mississippi river westward beyond the Saint Francis river, a distance of from 50 to 75 miles or more. It covers an area of about 3,500 square miles, and is the northern portion of the great alluvial region that borders the Mississippi river southward to Helena and thence to the Gulf. In this state it includes all of the counties of Pemiscot, Dunklin, New Madrid, Mississippi, Scott, Stoddard, and a large part of Butler. The surface is undulating and interspersed with low sandy ridges and flat and open prairies, and on the south and east with bayous and lakes. A portion of the lands is said to be liable to overflow. The prairies are silty in character, and seem to be similar to those of the Crowley's Ridge region of Arkansas and still southward in Louisiana. The ridges are from 10 to 15 feet above the swamp, and are continuations of Crowley's ridge of Arkansas; they vary in width, sometimes being 2 or 3 miles wide. The principal ridge is that on which Charleston is situated, and which extends for 90 miles through Dunklin and Stoddard counties.

In Stoddard county there are said to be numerous island-like tracts or so-called "hills", having circumferences varying from 10 to 25 miles. Hillocks and solitary hills covering several hundred acres also rise abruptly to a height of 100 or 200 feet above the swamps.

The region is traversed by the Saint Francis, the Castor, the Whitewater, the Black, the Little Black, and other smaller rivers and many creeks, all of which are said to have ample fall, when not obstructed by decayed timber and rafts, to carry away the water rapidly, except in a few very low portions of the country, which can be easily drained.

The soil is a black loam, rich in decayed vegetation, easily tilled, and capable of yielding, under cultivation, fine crops of cotton, corn, potatoes, and small grain. The region is, however, sparsely settled, and but 12.5 per cent. of its lands are in cultivation.

The following subdivisions have been thus described by Professor G. C. Swallow, of the agricultural college of Missouri, in the *Agricultural Report* for 1878:

The bottom has several natural divisions, well recognized by the people of the country, and designated as *high bottoms*, *low bottoms* or *swamp*, and *cypress*.

High bottoms have a deep, porous, and rich sandy soil, which produces a gigantic growth of elm, sugar maple, white ash, cherry, locust, linden, sweet gum, buckeye, bur, red, Spanish, swamp, and scarlet oaks, thick shellbark hickory, hackberry, pecan, black walnut, plum, catalpa, and mulberry. Grape-vines, trumpet and Virginia creepers, poison oak, and wistarea climb the highest trees and mingle their scarlet and purple flowers and fruits with their highest foliage.

Low bottoms have a soil similar to the high bottoms, but they are so low as to be covered by water at ordinary overflow. Sycamore, cottonwood, white maple, box-elder, red birch, buckeye, hackberry, willow, river and frost grapes, and poison ivy are the most common vegetation. The overflows render these lands useless for farming purposes, but when the floods are kept out by levees they are most productive and valuable.

Swamp or *wet bottoms* are terms usually applied to a variety of bottom lands very similar to the two preceding, but differing in being so located as to be saturated with or nearly covered by water. They sustain a heavy growth of pin, swamp, and red oak, holly, spice bush, white and black ash, red birch, box-elder, button bush, sycamore, cottonwood, wahoo, elm, sweet gum, water locust, white and red maple, poison oak, frost and river grapes. The name "*cypress*" is given to low bottoms which are covered with standing water for a large part of the year. The decomposition of vegetable matter in these waters adds a new deposit of vegetable mold annually to their rich soil, which sustains a very heavy growth of cypress, tupelo, sour gum, water locust, white and red maple, pin and Spanish oaks. These cypresses are numerous and very extensive in southeast Missouri. Buffalo cypress and honey cypress are good examples. The central and wettest portions of them usually have deposits of bog ore. These soils are useless for ordinary farming purposes, but their timber is unique, abundant, and most valuable.

The ridge lands within this region have sandy soils with clay subsoils and a timber growth of oaks and hickory, and are said to be very productive under tillage. The same ridge lands (or Crowley's ridge) in Arkansas yield about 800 pounds of seed-cotton per acre.

The prairies are quite level, and with their excellent grasses afford fine pasturage for stock.

REMARKS ON COTTON PRODUCTION IN MISSOURI.

As a cotton-producing state Missouri may be classed with Kentucky and Virginia, which have been styled "penumbral", from the scattered and isolated areas in which that crop is planted.

The maximum of production thus far reached was in the years preceding the late civil war, the crop of 1859, according to the Eighth Census, being 41,188 bales. Various causes have contributed to very greatly reduce this production, and we find that cotton is not so prominent a crop now as then. Among these causes may be mentioned the disturbed condition of the state during the war, the demoralization of the negroes (almost the only cotton-field laborers) consequent upon freedom, the intensity of cotton production in the southern states, and the low market prices which made other products far more profitable. The area over which cotton cultivation is extended embraces a far less territory now than in 1859, for in that year cotton was planted in a few counties as far north as the Iowa state line, while in 1879 the Missouri river formed its northern limit.

The census of 1870 showed a very great falling off in the production—from 41,188 bales in 1859 to 1,270 bales in 1869—though its territory still extended to the northern boundary-line of the state (in Scotland and Harrison counties, 7 bales). In that year cotton was reported in thirty-three counties, seven of which are north of the Missouri river. The greatest production was naturally on the southeast, Stoddard county reporting 487 bales, and the entire alluvial region 948 bales. Twenty-four counties produced less than 10 bales each, two from 10 to 50, four from 50 to 100, and three counties above 100 bales each.

In 1879, as shown by the Tenth Census, the yield again increased to 20,318 bales, though the area of production was greatly lessened and embraced twenty-nine counties, all of which are south of the Missouri river. Of these but thirteen, along the Arkansas line, can properly be called cotton counties, as the others have a production of less than 25 bales each (thirteen less than 10 bales each), and form simply an outlying region. A few are entirely separated from the cotton region, and cotton is planted either as an experiment or for domestic uses alone.

The cotton region proper embraces portions of two agricultural regions of the state, viz, the Mississippi alluvial lands and the uplands of the magnesian-limestone region, and the former, naturally the richest, not only gives the greatest yield per acre, 975 pounds of seed-cotton, but has the greatest acreage in cotton, 23,933 acres. The uplands, or rather the valley lands of the upland counties, give remarkably high averages in products per acre (from 795 to 915 pounds of seed-cotton) for so high a latitude, where the seasons are necessarily short; and these counties excel the greater number of those of other states more favored in this regard.

The high products of seed-cotton per acre in both the alluvial lands and the valley lands of the uplands has placed Missouri at the head of all of the cotton states in general average of product per acre.

The cotton-growing region embraces the following counties: Pemiscot, Dunklin, New Madrid, Mississippi, Scott, Stoddard, Butler, Ripley, Oregon, Howell, Ozark, Taney, and Stone. The counties that border this region report a small cotton acreage, but not sufficient to entitle them to be called cotton counties. Dunklin stands at the head of the list of counties with regard to cotton acreage and production, Stoddard and Pemiscot following; but Pemiscot ranks first in product per acre, its average being 1,125 pounds of seed-cotton. Of the upland counties, Oregon is first both in production and in average product per acre.

PART II.

AGRICULTURAL DESCRIPTIONS

OF THE

COTTON-PRODUCING COUNTIES

OF

MISSOURI.

AGRICULTURAL DESCRIPTIONS

OF THE

COTTON COUNTIES OF MISSOURI.

The cotton counties of the state are embraced within two agricultural divisions, and they are here grouped under these heads and arranged as nearly geographically as possible. When a county embraces within its area portions of each of the regions its description will be found under that to which it predominantly belongs, while its name only will appear in the proper place in the other region. In the list of counties at the head of each division an asterisk (*) placed after a county shows that its description will be found in the other region.

Abstracts from answered schedules from correspondents will be found appended to their respective counties. They are made to embrace only matter descriptive of the qualities of the lands and the character of the country. Those parts referring to cultural details will be found in Part III of this report.

The statistics at the head of each county are made up from reports in the Census Office, and are the results of the work of the Tenth Census.

Those counties whose total yield for 1879 was less than 100 bales each are not included in these descriptions.

MISSISSIPPI ALLUVIAL REGION.

(Includes the counties of Pemiscot, Dunklin, New Madrid, Mississippi, Scott, Stoddard, and Butler.)

PEMISCOT.

Population: 4,299.—White, 4,031; colored, 268.

Area: 480 square miles.—Woodland, all.

Tilled lands: 19,810 acres.—Area planted in cotton, 3,787 acres; in corn, 11,936 acres; in wheat, 208 acres; in oats, 80 acres.

Cotton production: 2,848 bales; average cotton product per acre, 0.75 bale, 1,125 pounds seed-cotton, or 375 pounds cotton lint.

Pemiscot, the extreme southeastern county of the state, and in what is known as the "Panhandle", has a level surface, bordered on the east by the Mississippi river, and is entirely included in the alluvial plain of that stream. Portions of the county are subject to overflow; lakes and bayous occur extensively, but the greater part of the country is said to be easily drained to the Saint Francis and reclaimed from its present swampy character, the fall being 6 inches per mile from east to west, and 7 inches from north to south. The lands are heavily timbered with black, red, overcup, and willow oaks, cypress, ash, walnut, cottonwood, persimmon, elm, sycamore, black and sweet gums, black and honey locusts, maple, hickory, hackberry, mulberry, pecan, and catalpa, with an undergrowth of dogwood, spicewood, ironwood, etc.

The soils are those characteristic of the Mississippi alluvial region, and embrace the yellowish or reddish silty loams along the front-lands of the river and dark or black loams farther back, both very rich and productive when in cultivation.

The county is sparsely settled, and has 41.3 acres of land under cultivation per square mile. Corn, wheat, and cotton are the chief crops. As a cotton county it ranks third in total acreage, though second in the number of acres (7.9) per square mile, and also second in the percentage of tilled lands in cotton, viz, 19.1 per cent.

The lands, with fair cultivation and good seasons, are capable of yielding as much as 1½ bales of lint per acre, though a 500-pound bale of lint, or 1,500 pounds of seed-cotton, is said to be the usual yield, above the average for the county for 1879.

ABSTRACT OF THE REPORT OF ROBERT G. FRANKLIN, OF BRAGGADOCIO.

All of this county is a rich sandy deposit from former overflows of the Mississippi river and Pemiscot bayou. The uplands are level table-lands, some above the overflow along the waters of the bayous and some in places along the river.

The chief crops of the region are corn, all the grasses, wheat, oats, potatoes, and cotton. The soils cultivated in cotton are the sandy loam, lying along the borders of bayous and lakes, and the black buckshot. There are also some hard, stiff spots too difficult to

cultivate. The most important land is the cottonwood bottoms above overflow, comprising about three-fourths of the area of the county, and extending from the foot of the hills in Scott county to the Arkansas line, taking in Mississippi, New Madrid, Pemiscot, Dunklin, and a part of Scott counties.

The timber growth is black walnut, hickory, elm, cottonwood, sycamore, oak, ash, mulberry, and sassafras. The soil varies, but is mostly a black sandy loam, from 3 to 10 feet deep, and is underlaid by sand and gravel. The soil is easy to till if the weather is not wet, and is variable as regards warmth and drainage. It is apparently best adapted to corn, cotton, wheat, and grasses; three-fourths of the crops are in cotton. The plant is usually 3½ feet high, sometimes 10 feet, inclining to run to weed on new land or during wet weather; shallow tillage and early topping restrain it. The seed-cotton product from fresh land is from 600 to 1,000 pounds; 1,520 pounds make a 475-pound bale of lint which does not rate well. After four years the product per acre is less on account of the land becoming richer. Sometimes 1,615 pounds make a 475-pound bale of lint which rates better than that from fresh land, for the older the land the better the staple. Crab-grass, cockleburs, wild cucumbers, and morning-glories are the most troublesome weeds. None of this land lies turned out except for want of labor; it has to be grown in corn a while to wear it a little.

An early, dry, and warm spring is best for cotton culture here. Twenty years ago cotton was never planted before the 1st to the 10th of May, but we now plant from the 1st of April to the 10th of May. Sometimes it happens that the Mississippi river overflows, and if the water goes off by the 1st or 10th of May a fair crop is expected. On the black buckshot land it is hard to get a stand of cotton, but a large yield of from 1,500 to 2,100 pounds of seed-cotton per acre is certain if a stand is obtained.

Cotton is shipped, as fast as it is ginned, by river to Memphis, Saint Louis, or New Orleans, at from 75 cents to $1 per bale.

DUNKLIN.

Population: 9,604.—White, 9,440; colored, 164.

Area: 500 square miles.—Woodland, nearly all.

Tilled lands: 42,648 acres.—Area planted in cotton, 11,100 acres; in corn, 20,121 acres; in wheat, 2,905 acres; in oats, 1,066 acres.

Cotton production: 7,361 bales; average cotton product per acre, 0.66 bale, 990 pounds seed-cotton, or 330 pounds cotton lint.

Dunklin, one of the Panhandle counties of the southeastern part of the state, is bordered on the west by the Saint Francis river. A large proportion of the county is included in the alluvial region of that river, and is well timbered with ash, walnut, oak, hickory, etc. These lands have mostly a dark loam soil, capable of yielding a bale of cotton per acre when properly cultivated. In the eastern part of the county there is a narrow belt of open upland with sandy soils and a growth of oak and hickory. Open prairies occur on the southwest, Grand Prairie, in which the village of Cotton Plant is situated, being the most important. On the northwest Crowley's ridge passes northward from Chalk bluff into Stoddard county; it has the sandy lands and poplar growth, with oak and hickory, that characterize it in Arkansas.

Dunklin county has an average of 85.3 acres of lands in cultivation per square mile. The crops comprise corn, wheat, cotton, etc. It is the chief cotton county of the state, the average being 22.2 acres and 14.7 bales per square mile; 26 per cent. of its tilled lands is devoted to cotton culture.

ABSTRACT OF THE REPORT OF E. J. LANGDON, OF COTTON PLANT.

The lowlands of the county are the bottoms of the Saint Francis and Little rivers, Buffalo creek, and Honey Cypress, Kinemore Seneca, and Ragland sloughs, and are generally called sunken or overflowed lands. They were caused by the earthquakes of 1811, and are too low to be available for cultivation without a general system of drainage by clearing out the bogs and sand-bars in the old channels of the rivers and creeks.

The uplands are mostly timbered, level table-lands and some prairie lying in large tracts between the above-named rivers and creeks, varying in width from 1 mile to 4 miles, with a uniform soil. Although these lands are above the overflow, in wet seasons they are sometimes covered with water and it is late before the lowest upland can be planted. A general system of drainage would be very beneficial; it has been tried, locally, with success.

Sand-blows on our uplands were caused by the earthquake of 1811 forcing water and sand up through the subsoil to the surface. Some of them can be plowed through and the surface soil turned up; others are deeper, and in order to be reclaimed must be scraped off upon the surrounding soil. These sand-blows are very scarce on some lands; on others, as many as ten to fifteen per acre.

The chief crops of the county are corn and cotton; sweet and Irish potatoes, oats, and wheat are also raised. The most important cotton land is that with dark prairie soil, uniform in timber and prairie land; it comprises all of the area of the region excepting small patches of clay soil in low places, and the sandy soil of the sand-blows. This land extends south into Arkansas, west to Saint Francis river, north into Stoddard county, and east nearly to the Mississippi river, with the exception of changing to a lighter color in some parts after going north 6 miles. The timber growth is sassafras, black walnut, cottonwood, hackberry, black, red, overcup, and white oaks, dogwood, hickory, mulberry, pecan, and a large amount of sweet gum.

The soil is a fine sandy loam, with some clay, brown and black, and alternating or mixed in color, with a depth of 22 inches. The subsoil is a heavy, yellow, brittle clay, occasionally mixed with sand, and is leachy when undisturbed; it mixes easily with the surface soil. The soil is easy to till in wet or dry seasons, is early, warm when well drained, and is best adapted to corn and sweet potatoes; cotton comes next after these. One-third of the cultivated land is in cotton; the plant grows from 3½ to 6 feet high, and is most productive at from 4 to 5 feet. On all new or highly-manured land the plant inclines to run to weed; topping in August does very little good toward restraining the plant; it is preferable to plant on medium soil. From 600 to 1,200 pounds, according to the season, is the seed-cotton product per acre from fresh land; 1,580 pounds make a 475-pound bale of low to middling lint. After five years' cultivation the product is from 1,200 to 2,000 pounds, according to the season, and 1,520 pounds make a 475-pound bale of lint, generally one grade better because a large portion of the crop is well matured. Crab-grass is the most troublesome weed. None of this land lies turned out now; but after the land has been cultivated, say twenty years, two years' rest will increase the crop one-fourth.

The growing and maturing seasons for cotton are too short in this latitude. On new or very rich land, in wet seasons, it grows too large, keeps green, and early frost overtakes it with very few bolls open or matured. We prefer to plant on land that has been in cultivation from five to ten years. The production of cotton has increased fully one-third in the last ten years; this is mostly due to emigration and increase in acreage.

Cotton is shipped throughout the season, by water and by rail, mostly to Saint Louis, at $2 25 for hauling and $2 for freight per bale

EXTRACT OF A LETTER FROM WILLIAM F. SHELTON, OF KENNETT.

This county is specially adapted to cotton-raising. Frosts seldom come early enough to injure the crop, and we have been remarkably exempt from the boll-worm and other injurious insects. Close investigation will show that we can successfully compete, in the cultivation of this staple, with any part of the south. The soil, for the most part, is a sandy loam, most of the clay land being found on the islands formed by the Saint Francis and its tributaries. But comparatively little of the county is in cultivation. The yield is good, the average being three-quarters of a bale per acre, and, when picked early and handled well, classes as good middling. Since I commenced business here in 1865 the staple has gradually improved, and there is no doubt that the introduction of improved machinery and closer cultivation would increase both quality and quantity of staple. The system of cultivation employed is rude, and vast improvements can and will undoubtedly be made in this direction.

NEW MADRID.

Population: 7,694.—White, 5,813; colored, 1,881.

Area: 620 square miles.—Woodland, nearly all.

Tilled lands: 49,338 acres.—Area planted in cotton, 2,518 acres; in corn, 37,463 acres; in wheat, 4,326 acres; in oats, 691 acres.

Cotton production: 1,649 bales; average cotton product per acre, 0.65 bale, 975 pounds seed-cotton, or 325 pounds cotton lint.

The surface of New Madrid county is quite level, with but a gentle slope southward, and is diversified with broad alluvial lands along the Mississippi river, and timbered uplands interspersed with small and open prairies in the northern and central parts of the county. The soil of the Mississippi alluvial region is a dark loam, from 1 foot to 5 feet deep, and heavily timbered with a large variety of growth. These soils are very highly productive, and yield, with cultivation, over three-fifths of a bale of cotton per acre. They extend westward from the Mississippi to the sunk lands of Little river, which are subject to overflow. A large region of the northeastern part of the county also suffers from yearly inundation. The prairies that occur in the rest of the county seem to be quite similar in character to those of the Crowley Ridge region of Arkansas, of which these uplands are but a continuation. Their soils are light or silty in character, overlie an impervious clay, and are easily tilled. The timbered uplands have sandy soils with clay subsoils, and are generally preferred to the prairies as farming lands.

Of tilled lands there are 79.6 acres per square mile. Corn and cotton and small grain are the chief crops. Cotton has an average of 4.1 acres and 2.7 bales per square mile, the county ranking as fourth in the state. Its comparatively high yield per acre is attributable to the large proportion of alluvial lands, which can produce as much as a bale per acre. The yield of the uplands is from 600 to 800 pounds per acre.

MISSISSIPPI.

Population: 9,270.—White, 7,116; colored, 2,154.

Area: 430 square miles.—Woodland, nearly all.

Tilled lands: 63,092 acres.—Area planted in cotton, 213 acres; in corn, 42,298 acres; in wheat, 8,276 acres; in oats, 1,130 acres.

Cotton production: 132 bales; average cotton product per acre, 0.62 bale, 930 pounds seed-cotton, or 310 pounds cotton lint.

The surface of Mississippi county is very level; it is bordered on the east by Mississippi river, and is nearly all included within the alluvial lands of that stream. Three small open prairies occur in the county, Mathews, Long, and East prairies, each with an area of from 4 to 6 square miles, and occasionally interspersed with small groves of timber.

The soil of the county is mostly a dark alluvial loam, several feet in depth and heavily timbered. Cottonwood, walnut, locust, white, red, black, overcup, and post oaks, maple, mulberry, sweet and black gums, persimmon, dogwood, and papaw. Alon.. the water-courses cypress is very abundant. The lands are very productive, yielding, it is said, from 40 to 130 bushels of corn, 20 to 40 of oats, 20 to 55 of wheat, 200 to 500 of potatoes, and from 1,200 to 1,500 pounds of seed-cotton per acre. Fruits also do well.

The average of lands under cultivation is 146.7 per square mile, the highest average in the region. Cotton has an average of but half an acre per square mile.

SCOTT.

Population: 8,587.—White, 8 036; colored, 551.

Area: 440 square miles.—Woodland, all.

Tilled lands: 57,103 acres.—Area planted in cotton, 294 acres; in corn, 24,453 acres; in wheat, 16,227 acres; in oats, 1,119 acres.

Cotton production: 165 bales; average cotton product per acre, 0.56 bale, 840 pounds seed-cotton, or 280 pounds cotton lint.

Scott county is bordered on the east by the Mississippi river and on the west by Little river. The northern part of the county is hilly, and broken by a spur of the Ozark Mountain range; its soil is a clayey loam, well adapted to wheat. The eastern portions south of the hills, and the western portion along Little river, are rich, wide, and productive river bottoms, embracing black alluvial loam soils of the Mississippi River region.

The southern and central parts of the county have sandy loam soils, easily cultivated, well timbered, and very productive, yielding about 1,000 pounds of seed cotton per acre.

The average of tilled lands is 129.8 acres per square mile. The crops embrace corn, small grain, potatoes, and cotton. The acreage of the latter is, however, very small, averaging six-tenths of an acre per square mile.

ABSTRACT OF THE REPORT OF B. DICKERSON, OF BLODGETT.

This county is nearly square and about 30 miles each way. The northern part is hilly and well adapted to grain, grass, and fruit. The western part is watered by Little river, and has swamp and rich black alluvial soil. The eastern portion has the black loamy lands of the Mississippi river, excellent land for grain and grass. In the southern and central part of the county is the cotton region. This region seems to have been produced by some great convulsion of nature; it is unique, being surrounded on all sides by an entirely different soil.

The chief crops of the region are wheat, corn, oats, barley, cotton, clover, hay, watermelons, and pease. The land is low and level, and the soil cultivated in cotton is sandy, from whitish to blackish in color. It comprises about three-fourths of the area of the region, extending 20 miles one way and 15 miles the other, with a timber growth of sumac, hickory, ash, hazel, papaw, oak, and dogwood.

The soil is a fine and coarse sandy loam, from 4 to 10 inches deep, sometimes 2 feet, with a heavy, coarse, yellow sandy subsoil sometimes mixed with clay. The soil is easy to till in wet or dry seasons, is early, warm, and generally well drained, and well adapted to all of the crops of the county. One-twentieth of the tilled lands is devoted to the culture of cotton, which usually grows from 3 to 6 feet in height, but is most productive at from 3 to 4 feet, inclining to run to weed during very wet weather, and is restrained by topping. From 1,000 to 1,500 pounds is the seed-cotton product from fresh land; 1,900 pounds make a 475-pound bale of low middling lint. After five years' cultivation the product is not reduced more than one-fourth, and the same amount is necessary for a 475-pound bale of lint, which is somewhat shorter and not so white as that from fresh land. Burs, rag-weed, nettle, and grass are the troublesome weeds. Very little of this land lies turned out, but it produces well when again cultivated. The slopes wash, but not seriously.

The great warmth of the land causes cotton to mature much sooner than it otherwise would. This county is north of the cotton region proper, some 2 degrees at least.

Cotton is shipped, as soon as it is ginned, by railroad to Saint Louis at $1 per bale.

STODDARD.

Population: 13,431.—White, 13,396; colored, 35.

Area: 850 square miles.—Woodland, nearly all.

Tilled lands: 61,516 acres.—Area planted in cotton, 5,576 acres; in corn, 28,815 acres; in wheat, 11,875 acres; in oats, 3,135 acres.

Cotton production: 3,302 bales; average cotton product per acre, 0.57 bale, 855 pounds seed-cotton, or 285 pounds cotton lint.

Stoddard county lies between two streams, Whitewater on the east and Saint Francis on the west, along whose borders are broad and heavily-timbered bottom lands. The surface of the rest of the county is rolling or hilly and somewhat broken, and is a continuation of Crowley's ridge of Arkansas. The soil of this ridge is a sandy loam over clayey subsoils, and is well timbered. It is said to be best adapted to wheat and other grain. The bottom lands with their dark loam soils are highly productive, yielding an average of from 1,200 to 1,500 pounds of seed-cotton with fair seasons and good cultivation. The average for all the lands of the county, 855 pounds of seed-cotton, is quite high. The timber growth of these lands comprises oak, hickory, gum, maple, ash, and cypress, some walnut, elm, catalpa, etc.

The county has an average of nearly sixteen persons per square mile, and of tilled lands an average of 72.4 acres per square mile. In total cotton acreage the county ranks as second in the state, but in the average of that crop per square mile, 6.7 acres, it ranks third, or below Dunklin and Pemiscot.

ABSTRACT OF THE REPORT OF JAMES P. WALKER, OF DEXTER CITY.

The lowlands of the county are the first bottoms of the Castor river, comprising alluvial plain, front-land, and cypress swamp. The uplands are hilly and rolling, with prairies in the southern part of the county. The hill land is very productive. Corn, cotton, and wheat are the chief crops of the region. The soils cultivated in cotton are the black sandy loam and the clay.

The most important soil is the swamp land, comprising two-thirds of the county area, extending for a distance of 100 miles with a width of 12 miles. The natural timber growth is all kinds of oaks, sweet gum, ash, and walnut. The soil is a fine sandy clay loam, mostly black colored, with a depth of 2 feet. The subsoil is heavier than the soil. The soil is very easy to till in all seasons, is early and ill drained, and well adapted to all of the crops of the region. About one-fourth of the crops is of cotton, which usually grows 4 feet high and is most productive at that height. Wet weather inclines the plant to run to weed; topping restrains it. One thousand eight hundred pounds is the seed-cotton product per acre both from fresh land and land that has been cultivated ten years; 1,600 pounds make a 475-pound bale of good middling lint. Cockleburs are the most troublesome weeds. None of this land lies turned out.

The hill land comprises one-third of the area of the county, extending for 100 miles with a width of 6 miles, and having a timber growth of oak, hickory, ash, and poplar. The soil is a blackish, heavy clay loam, 6 inches deep, with a heavier clay hard-pan subsoil containing pebbles, and underlaid by sand and gravel. The soil is easy to till, is early, warm, well drained, and best adapted to cotton, wheat, and tobacco. One-fourth of the crops is of cotton; the usual and most productive height of the plant is 3 feet. When the land is very fresh the plant runs to weed. It is best to raise corn for two years and then plant cotton. The seed-cotton product from fresh land is 1,200 pounds; about 1,660 pounds make a 475-pound bale of good middling lint. Ten years' cultivation only reduces the seed-cotton product to 1,100 pounds, the amount necessary for a bale, and the rating is the same as that from fresh land. Crab-grass is the most troublesome weed. None of this land to amount to anything lies turned out. It washes readily on the slopes, but not seriously; neither are the valleys injured by the washings. No efforts have been made to check the washings. Early frost occasionally injures the cotton crop.

Cotton is shipped as soon as it is ready, by the Iron Mountain railroad, to Saint Louis, at $2 50 per bale.

BUTLER.

Population: 6,011.—White, 5,871; colored, 140.
Area: 580 square miles.—Woodland, all.
Tilled lands: 20,475 acres.—Area planted in cotton, 445 acres; in corn, 11,825 acres; in wheat, 1,604 acres; in oats, 1,695 acres.
Cotton production: 235 bales; average cotton product per acre, 0.53 bale, 795 pounds seed-cotton, or 265 pounds cotton lint.

The surface of Butler county is hilly and broken, and is well watered by numerous streams flowing nearly due south, and tributary to Black and White rivers. Saint Francis river forms the eastern boundary of the county, but is turned eastward by Crowley's ridge. The county is well timbered with a large variety of growth. The streams are bordered by bottom lands, embracing a first bottom, or low cypress swamp, and a second bottom, or bench, with very productive loam soils. The timber growth is poplar, walnut, maple, ash, gum, etc. The uplands comprise the flatwoods, or barrens, and hills of the magnesian-limestone region, which covers nearly all of southern Missouri. The barrens are usually timbered with a scrub growth of oaks and hickory, the hills, when sandy, often having a predominance of short-leaf pine, accompanied by a heavy growth of oaks.

The county is comparatively sparsely settled, with an average of about ten persons per square mile. The average of tilled lands is 35.3 acres per square mile. The crops are corn, wheat, and cotton, the acreage of the latter being very small—its average eight-tenths of an acre per square mile. The average yield is about 800 pounds of seed-cotton per acre.

UPLAND COTTON COUNTIES.

(Includes the cotton counties of Butler,* Ripley, Oregon, Howell, Ozark, Taney, and Stone, besides border counties not described.

BUTLER.

(See "Mississippi alluvial region".)

RIPLEY.

Population: 5,377.—White, 5,367; colored, 10.
Area: 620 square miles.—Woodland, all.
Tilled lands: 23,181 acres.—Area planted in cotton, 866 acres; in corn, 13,140 acres; in wheat, 1,745 acres; in oats, 1,709 acres.
Cotton production: 471 bales; average cotton product per acre, 0.54 bale, 810 pounds seed-cotton, or 270 pounds cotton lint.

The surface of Ripley county is partly gently undulating, and in part rough, hilly, and rocky, especially along and near the large streams, and is well timbered with red, post, and other oaks and a variety of other growth. It is well watered by the Current river and other streams, all flowing south and tributary to the White river of Arkansas.

The lands of the uplands are derived from the sandstones and magnesian limestones of the region, and are therefore varied in character, presenting sandy or clayey soils, some suitable chiefly for grazing purposes, and others well adapted for cultivation, producing good crops of grain, though best for fruit-growing and especially for grapes. The bottom lands are rather narrow, but have very productive soils, and are the lands chiefly cultivated. They are the cotton lands of the county, yielding an average in good seasons of nearly 1,000 pounds of seed-cotton per acre. The county is sparsely populated, with an average of not quite nine persons per square mile. The lands under cultivation comprise 5.8 per cent. of the area, and average 37.4 acres per square mile. The cotton crop averages but 1.4 acres per square mile.

OREGON.

Population: 5,791.—White, 5,773; colored, 18.
Area: 740 square miles.—Woodland, all.
Tilled lands: 27,672 acres.—Area planted in cotton, 1,848 acres; in corn, 12,749 acres; in wheat, 2,053 acres; in oats, 1,118 acres.
Cotton production: 1,128 bales; average cotton product per acre, 0.61 bale, 915 pounds seed-cotton, or 305 pounds cotton lint.

The surface of Oregon county is rolling and hilly, well timbered, and well watered by the Eleven Points river and other smaller tributaries of the White river. The lands of the county are derived from the sandstones and magnesian limestones of the region, and have soils varying from sandy to clayey in character. The northern and northeastern part is a high and rolling plateau, principally covered with pine forests. In the southern and southwestern part the greater portion of the land is arable and fitted for cultivation, the timber consisting mostly of hickory and oak, and the soil being a rich sandy loam. South of the Eleven Points river there is a vast amount of valley and uplands or hickory flats, all of which is good farming land and easily cultivated.

The county is sparsely populated with an average of about eight persons per square mile. The lands under cultivation comprise 5.8 per cent. of the area, and average 37.4 acres per square mile. The cotton crop of 1879 had an average of 2.5 acres per square mile.

HOWELL.

Population: 8,814.—White, 8,723; colored, 91.

Area: 920 square miles.—Woodland, nearly all.

Tilled lands: 40,065 acres.—Area planted in cotton, 1,800 acres; in corn, 21,486 acres; in wheat, 5,441 acres; in oats, 3,846 acres.

Cotton production: 1,075 bales; average cotton product per acre, 0.60 bale, 900 pounds seed-cotton, or 300 pounds cotton lint.

The surface of Howell county is rolling, and along the streams broken, and is embraced in the region of sandstones and magnesian limestones; small prairies occur in the southern portion of the county. The hills are irregular in their direction and cannot be said to lie in ranges; their elevation is gradual from the valleys at their base to their summits. Irregular valleys, some of which have streams of water, lie among the hills; others are dry, though containing springs whose waters run a few rods away and disappear in the subterraneous passages. The soil of the county is varied, and might properly be classified as follows:

1. *Pine lands* with a sandy loam, which occupy the most broken part of the county on the north and northwest, underlaid by the sandstone of the magnesian-limestone series. These lands produce well in wheat, corn, rye, and tame grasses. The timber is pine, post, white, and red oaks, black hickory, with sassafras and summer grapes.

2. *White and post oak soil* covers a large territory. Its character is dark, warm, and light, and in the valleys it is very productive; on the slopes it is lighter in quality and not so productive for the heavier crops. The subsoil of these lands is often richer than the surface, and consists of dark red clay. Some of the lands are covered with flint and conglomerate, and in many places where these occur the soil is the most productive.

3. *Black-jack soil* is generally the poorest of all; it covers the narrow and rocky ridges, and has a stunted growth of black-jack and post oaks. The soil is dark in color, thin and cold, and is underlaid with pale yellow or slate-colored clay.

4. The soil of the *black prairies* in the southern part of the county is black, tenacious, and rich, but lacks drainage to produce well. The lowlands are said to be gradually closing in with a thrifty growth of black elm, hickory, ash, water oak, walnut, sycamore, and hazel. The valley lands are the most productive in the county, and in these the cotton is produced.

The average population is 9.6 persons; tilled lands, 43.5 acres per square mile. Cotton has an average of 2 acres per square mile.

OZARK.

Population: 5,618.—White, 5,604; colored, 14.

Area: 740 square miles.—Woodland, nearly all.

Tilled lands: 18,538 acres.—Area planted in cotton, 1,500 acres; in corn, 10,445 acres; in wheat, 2,133 acres; in oats, 1,547 acres.

Cotton production: 800 bales; average cotton product per acre, 0.60 bale, 900 pounds seed-cotton, or 300 pounds cotton lint.

The surface of Ozark county is hilly, with large areas of gently rolling country. The dividing ridges between the larger streams have a general elevation of from 150 to 200 feet, though some rise as high as 500 feet. The county is well watered by many streams which are tributary to the White river on the south in Arkansas.

The county is included in the region of magnesian-limestone lands and barrens, the sandstones and limestones of which give variety to its lands and general features. In some localities where the surface rock is sandstone or one of the limestone series (third), the lands are too rough and rocky and the soil too thin and light to be well fitted for cultivation.

The surface of the county is well timbered, mostly with a growth of white, red, post, and black-jack oaks, and in the northern and northeastern parts with short-leaf pine. The lands under cultivation are confined chiefly to the bottoms along the streams, though these are generally very narrow, averaging not more than 300 or 400 yards, and sometimes half a mile. These lands are very productive and are timbered with water oak, walnut, cypress, elm, etc.

The average population of the county is 7.6 persons, and the average of tilled lands 25 acres per square mile. The cotton crop averages only 2 acres per square mile.

TANEY.

Population: 5,599.—White, 5,594; colored, 5.

Area: 800 square miles.—Woodland, nearly all.

Tilled lands: 24,384 acres.—Area planted in cotton, 1,300 acres; in corn, 11,627 acres; in wheat, 3,196 acres; in oats, 1,729 acres.

Cotton production: 760 bales; average cotton product per acre, 0.58 bale, 870 pounds seed-cotton, or 290 pounds cotton lint.

The surface of Taney county is broken and hilly, with small valley lands, and is well watered by White river and its tributaries. The lands are well timbered and varied in character, and are derived from the sandstones and magnesian limestones that occur throughout the county. The former rock usually caps the hills and table-lands, producing a rough and broken surface, with sandy soils best adapted to fruit and grape culture, though to some extent planted in cereals and tobacco. The valley lands, with their excellent loamy soils, are those chiefly in cultivation, producing wheat, corn, cotton, and oats.

The county is sparsely populated, with an average of seven persons per square mile. The lands under cultivation comprise but 4.8 per cent. of the county area, and average 30.5 acres per square mile. This is one of the chief upland cotton counties of the state, though that crop only averages 1.6 acres per square mile, or 5.3 per cent. of the tilled lands. The comparatively high product per acre indicates that it is grown only in the better class of valley lands.

STONE.

Population: 4,404.—White, 4,376; colored, 28.

Area: 520 square miles.—Woodland, all.

Tilled lands: 20,036 acres.—Area planted in cotton, 700 acres; in corn, 9,943 acres; in wheat, 3,737 acres; in oats, 976 acres.

Cotton production: 400 bales; average cotton product per acre, 0.57 bale, 855 pounds seed-cotton, or 285 pounds cotton lint.

The surface of Stone county is hilly and broken, timbered throughout, and watered by White river and James fork, and tributaries. The lands of the uplands are rocky and but little under cultivation, and are now covered with wild grape-vines. The soil of the extreme northern part is said to be light and ashy, but underlaid at a few inches by a red loam, which in other portions of the county is the prevailing soil. On the south the soil is dark, the red loam appearing only at a depth of 30 or 40 feet, and short-leaf pine becomes a prominent growth. It is said that there are no prairie lands in the county, though in the northern part there are level or gently-undulating stretches of land that seem as if they might have been prairies at some former period, but are now covered with a growth of scrub oak, black-jack, and dwarf hickory. The crops of the county are corn, wheat, rye, oats, and some hay. Corn averages from 30 to 40 bushels per acre, wheat and rye about 15 bushels each, and oats about 30 bushels. Some cotton is also produced, the acreage being small, averaging 1.3 acres per square mile.

The country is sparsely populated, with an average of 8.5 persons per square mile, and has an average of 38.5 acres of tilled lands per square mile.

PART III.

CULTURAL AND ECONOMIC DETAILS

OF

COTTON PRODUCTION.

REFERENCE TABLE

OF

REPORTS RECEIVED FROM MISSOURI COUNTIES.

ALL OF THE MISSISSIPPI ALLUVIAL REGION.

Dunklin.—E. J. LANGDON, Cotton Plant, December 21, 1880; W. F. SHELTON, Kennett, November 26, 1880.
Pemiscot.—ROBERT G. FRANKLIN, Braggadocio, July 22, 1881.
Scott.—B. DICKERSON, Blodgett, July 26, 1881.
Stoddard.—JAS. P. WALKER, Dexter City, December 29, 1880.

ANSWERS TO SCHEDULE QUESTIONS.

The following answers are taken from schedules of questions on cotton culture sent to parties in the cotton counties. The alluvial region only has been heard from, and therefore these answers refer only to that part of the state.

TILLAGE, IMPROVEMENT, ETC.

1. Usual depth of tillage (measured on land side of furrow).

Stoddard county reports 3 inches. *Pemiscot:* 4 inches. *Scott:* From 5 to 7 inches. *Dunklin:* 6 inches.

2. What draft is employed in breaking up? Is subsoiling practiced?

Stoddard: One horse. *Dunklin:* One or two horses, according to the size of the plow. *Scott:* Usually two horses; sometimes one. *Pemiscot:* One or two horses or mules. Subsoiling is not practiced in any of these counties.

3. Is fall plowing practiced? With what results?

Scott: Yes, with fine results. *Stoddard:* Only when sowing wheat. *Pemiscot:* Not for cotton, although it is supposed to prevent the cut-worm from attacking the young plants in the spring. *Dunklin:* No; but it would be beneficial on stubble land.

4. Is fallowing practiced? Is the land tilled while lying fallow, or only turned out? With what results in either case?

Scott: Not to any extent; the land is only turned out. *Dunklin:* It is not practiced. In some years owners of large plantations fail to rent all of their land; it is then customary to leave the oldest and least productive portion idle. The effect on future crops is good, but it would be much better if the vegetation were plowed under before the frost appears. *Pemiscot* and *Stoddard:* No.

5. Is rotation of crops practiced? If so, of how many years' course, and in what order of crops? With what results?

Stoddard: Yes; with corn, sweet potatoes, oats, and wheat; results are good. *Scott:* With corn, wheat, oats, clover, and pease; there is no regular system, but the practice is attended with good results. *Dunklin:* Very little; with corn, oats, and wheat; no regular order of crops. *Pemiscot:* Rotation of crops is not practiced; cotton has been planted on the same land for many years; there is some land on which corn has been planted for forty years, which will now produce 35 bushels to the acre.

6. What fertilizers, or other direct means of improving the soil, are used by you, or in your region? With what results? Is green-manuring practiced? With what results?

Dunklin: Very few farmers use any fertilizers; I use cotton-seed, barn-yard manure, and, on very old land, occasionally some ashes; the results are good. All, or nearly all, the attention that has been paid to keeping up the land has been by using stalk-cutters on both corn and cotton fields, and then plowing in; the land improves under such treatment. *Stoddard:* A little cotton-seed is used, with good results. *Pemiscot:* No fertilizers are used. Green-manuring is practiced in *Scott* county, with clover, grass, pease to some extent, weeds, stubble, etc.

7. How is cotton-seed disposed of? If sold, on what terms, or at what price? Is cottonseed-cake used for feed or manure?

Dunklin: Cotton-seed is used mostly as feed for cattle; to some extent as fuel for gins running by steam-power; and the surplus, if any, is used as a fertilizer on old land. If not put on too thick it has a good effect on the crops for three or four years; but if used too freely it causes the ensuing crop to "fire". It is not salable in this district, as there are no shipping facilities. *Stoddard:* It is mostly shipped to Saint Louis, at $6 50 per ton; a little is used as feed. *Pemiscot:* Partly fed to stock and partly sold to the oil-mills at $9 per ton. Cottonseed-cake is not used in any of the counties.

PLANTING AND CULTIVATION OF COTTON.

8. What preparation is usually given to cotton land before bedding up?

Dunklin: Spring plowing is practiced by some planters; others bed directly by turning the old bed to the center. *Scott* and *Stoddard:* Sometimes spring plowing, but generally no preparation is given. *Pemiscot:* The old stalks are removed.

9. Do you plant in ridges? How far apart?

Planting in ridges is the practice in all of the counties. *Dunklin:* From 3 to 4 feet; prefers 4. *Stoddard:* Three and a half feet. *Scott:* From 3½ to 4 feet. *Pemiscot:* Four feet.

10. What is your usual planting time?

Pemiscot: From April 1 to May 10. *Dunklin:* From April 10 to May 1. *Stoddard:* From April 15 to May 1. *Scott:* Early in May.

11. What variety do you prefer?

Pemiscot: White seed. *Stoddard:* Green seed. *Dunklin:* Matagorda. *Scott:* Petit Gulf, or green seed.

12. How much seed is used per acre?

Dunklin: 1½ to 2 bushels. *Stoddard* and *Pemiscot:* 3 bushels. *Scott:* 3 to 4 bushels.

13. What implements do you use in planting? Are "cotton-seed planters" used in your region? What opinion is held of their efficacy or convenience?

Dunklin: The keg "cotton-seed planter", which gives perfect satisfaction, is the only one used. It consists of a perforated keg set in a frame so that it will revolve and allow the seed to drop out. Attached to the frame, in front, is a cultivator, toothed or crooked stick to open with; and, at the back, a board to cover with. *Stoddard:* "Cotton-seed planters" are used, but hand planting is considered the better. *Pemiscot:* Hand planting is mostly practiced; a few use the "cotton-seed planters", but they do not give satisfaction. *Scott:* A small plow and coverer. The "planters" are used, but the opinion held of them is not favorable.

14. How long usually before your seed comes up?

Dunklin: Five to seven days. *Pemiscot:* Five to ten days. *Scott:* Six to ten days. *Stoddard:* Eight days.

15. At what stage of growth do you thin out your stand, and how far apart?

Pemiscot: Thin out, when fourth leaf appears, to distance apart equal to the width of a wide hoe. *Scott:* When the plant is about 6 inches high, and from 8 to 12 inches apart. *Dunklin:* Chop out with a hoe as soon as it is fairly up; bring to a stand when 6 inches high, and from 10 to 15 inches apart. *Stoddard:* At the second hoeing, and 8 inches apart.

16. Is your cotton liable to suffer from sore shin?

Pemiscot: In wet weather. *Dunklin:* Not unless the weather is cold and wet, when the cotton is small. *Stoddard:* Yes, if the spring is cold. *Scott:* No.

17. What after-cultivation do you give, and with what implements?

Stoddard: The dirt is kept to the plant, and the weeds down, by using the double-shovel plows. *Scott:* After-cultivation is given with hoe, plow, and sweep. *Pemiscot:* The scraper, hoe, and sweep. *Dunklin:* Generally use scrapers and hoe twice, finishing by throwing dirt to the plant with sweep or shovel. Some finish with double-shovel, others with sweep.

18. What is the height usually attained by your cotton before blooming, and when do you see the first blooms?

Stoddard: 18 inches. *Scott* and *Dunklin;* 2 feet. *Pemiscot:* 3 feet. The first blooms are seen about the 20th of June in *Dunklin;* 24th of June in *Pemiscot;* 1st of July in *Stoddard,* and about the 4th of July in *Scott.*

19. When do the bolls first open?

Dunklin: Late in July or early in August. *Stoddard:* About the 10th of August. *Pemiscot:* The middle of August. *Scott:* The last of August.

20. When do you begin your first picking, and how many pickings do you usually make?

Dunklin: The first picking is begun between August 20 and September 1, and lasts until October 15, when the second picking commences; this continues until the crop is gathered. *Stoddard:* September 15, between which date and January 1 two pickings are made. *Pemiscot:* In September, if not too hot. Three pickings are made, being continuous. *Scott:* The first picking is made in September, the second in October.

21. Do you ordinarily pick all your cotton, and at what date does picking usually close? How much is paid for picking 100 pounds of seed-cotton?

Cotton is all picked in *Scott, Stoddard,* and *Dunklin* counties, but not in *Pemiscot.* Picking closes in November in *Scott;* on January 1 in *Stoddard,* and on the 1st of April in *Dunklin. Dunklin:* Seventy-five cents with board or $1 without board is paid for picking. At this price there is very little margin for profit left to the owner when picked by hired labor. *Pemiscot:* Seventy-five cents to $1 per day with board is paid. As soon as frost falls the natives go coon-hunting, and then picking stops until cold weather drives the men out of the woods, and the crops are ruined.

22. At what time do you expect the first "black frost"?

Scott: October 10. *Dunklin:* From the 10th to the 20th of October. *Pemiscot:* The 15th of October. *Stoddard:* November 1.

23. Do you pen your seed-cotton in the field, or gin as the picking progresses?

Pemiscot, Stoddard, and *Dunklin:* Pen in the field and haul from pen to gin as picking progresses, or at any convenient time. *Scott:* Seed-cotton is housed.

GINNING, BALING, AND SHIPPING.

24. What gin do you use; how many saws? What motive power; steam- or horse-power? How much clean lint do you make in a day's run of ten hours?

Stoddard: Phœnix's and Pratt's gins of from 60 to 80 saws, run by steam-power; making 4,000 pounds of clean lint. *Dunklin:* Pratt's gin of 80 saws, run by steam, will make 4,000 pounds of lint. The Eagle, Carver, and other gins of from 50 to 80 saws, with, in most cases, steam-power, are also in use in this county. *Scott:* The Eagle gin, of 60 saws, when run by horse-power, makes 1,250 pounds of lint; with steam, 2,500 pounds. *Pemiscot:* The old-fashioned gin of 80 saws with steam-power, making 2,500 pounds of lint.

25. How much seed-cotton, on an average, is required for a 475-pound bale of lint?

Pemiscot: 1,610 pounds. *Dunklin:* 1,520 pounds. *Stoddard:* 1,660 pounds. *Scott:* 1,800 pounds.

26. What press do you use for baling? What press is generally used in your region? What is its capacity per day?

Dunklin: Lever beam and arrow beam press (with a wooden screw), when run by two men and one mule, will pack ten 500-pound bales. The hand lever, old-fashioned screw, and iron screw presses are also in use, there being no preference for any one kind. *Pemiscot:* The old-fashioned lever packs 5 bales. *Stoddard:* Nearly all kinds are used.

27. Do you use rope or iron ties for baling? If the latter, what fastening do you prefer?

Scott and *Stoddard:* Iron ties. *Dunklin* and *Pemiscot:* Iron ties and buckle fastening.

28. What kind of bagging is used in your region?

Stoddard: Jute, 2 pounds to the yard. *Scott:* Mainly jute. *Dunklin:* Jute. *Pemiscot:* Kentucky hemp.

29. What weight do you aim to give your bales? Have transportation companies imposed any conditions in this respect?

Scott: 450 pounds. *Pemiscot:* 500 pounds. *Dunklin:* From 500 to 550 pounds. *Stoddard:* 550 pounds. None of the above counties report transportation companies as having imposed any conditions.

DISEASES, INSECT ENEMIES, ETC.

30. By what accidents of weather, diseases, or insect pests is your cotton crop most liable to be injured? At what dates do the several diseases or pests usually make their appearance? To what cause is the trouble attributed by your farmers? What efforts have been made to obviate it, and with what success?

Dunklin: Shedding from July 20 to August 20, attributable to drought; rot of bolls late in the seasons, caused by too much wet weather; and rust in August, the cause of which is unknown. Rust seldom injures the crop in this locality. When it does, it is in small patches scattered over the field, or sometimes in one corner or at one side. *Pemiscot:* Shedding; rot of bolls in wet weather; rust, blight, and severe storms. *Scott:* The cotton crop is subject to few injuries of any kind. *Stoddard:* Rust in August, attributable to the weather changing from an extremely wet state to a very dry one.

31. Is rust or blight prevalent chiefly on heavy or ill-drained soils? Do they prevail chiefly in wet or dry, cool or hot seasons? On which soil described by you are they most common?

Pemiscot: They occur on all soils, but are prevalent chiefly on heavy ones, and in both cool and hot seasons. *Dunklin:* Rust prevails chiefly on light, dry soils, in seasons with sudden changes. It is more common on lands which have been under cultivation for twenty years than on new lands. *Stoddard:* Rust is prevalent chiefly on ill-drained soils, in hot seasons. It is most common on the sandy prairie lands.

LABOR AND SYSTEM OF FARMING.

32. What is the average size of farms or plantations in your region? Is the prevalent practice mixed farming or planting?

Stoddard: 40 acres. *Pemiscot:* From 40 to 100 acres. *Scott:* From 40 to 400 acres. *Dunklin:* 80 acres. There are some larger farms, from 100 to 1,000 acres, but they are generally rented in subdivisions of from 20 to 100 acres each. Mixed farming is the prevalent practice in all of these counties.

33. Are supplies raised at home or imported; and if the latter, where from? Is the tendency toward the raising of home supplies increasing or decreasing?

Stoddard and *Pemiscot:* Supplies are raised at home. *Scott:* All except groceries are raised at home. *Dunklin:* Mostly at home; some flour and bacon are occasionally imported from Saint Louis. The tendency toward the raising of home supplies is increasing in all of the above-named counties.

34. Who are your laborers chiefly?

Laborers are Americans chiefly in all the counties. Negroes are reported as working on the rivers in *Pemiscot;* there are a few negroes in *Scott;* very few in *Dunklin;* none are reported in *Stoddard.*

35. How are wages paid? At what rates? When payable?

Pemiscot: Wages are from $12 to $15 per month; payable at the end of the month. *Dunklin:* $12.50 to $15 per month or 75 cents per day with board, and from $20 to $26 per month or $1 per day without board. Wages are generally paid as the work progresses. *Scott:* From $15 to $20 per month or from 50 cents to $1 per day; payable when the work is done. *Stoddard:* $20 per month; payable at the end of each month.

36. Are cotton farms worked on shares? Are any supplies furnished by the owners?

Cotton farms are worked on shares; the owner furnishing teams, feed for same, and all necessary implements for making and gathering the crop, and receiving one-half the crop, in *Stoddard*, and one-third, delivered at the gin, in *Dunklin*. The share system is practiced to some extent, the owner furnishing teams and all implements, excepting gin and press, in *Pemiscot*. In *Scott* county the cotton farms are not worked on shares, but generally by hired labor.

37. Does your system give satisfaction? How does it affect the quality of the staple? Does the soil deteriorate or improve under it?

Stoddard: The share system gives satisfaction, and lowlands seem to improve under it. *Scott:* The share system is satisfactory, having no effect on the quality of the staple, but the soil deteriorates. *Dunklin:* The share system is being replaced by the renting system. Under the share system the quality of the staple is not affected, and the soil maintains its fertility. *Pemiscot:* If the crop is gathered early and dry, a staple of good quality results; but if late, a low quality of the staple is obtained. The soil improves.

38. Which system (wages or share) is the better for the laborer?

Scott: The share system, because it stimulates the laborer to greater diligence. *Dunklin:* Under the share system the laborer can make more than under the wages system. *Stoddard:* The share system is better, because under it good crops are usually made. *Pemiscot:* The wages system, as he then receives more than he earns.

39. What is the condition of the laborers?

Stoddard: Fair. *Scott:* Generally comfortable. *Dunklin:* All conditions are represented; good, indifferent, and bad. *Pemiscot:* Their life is easier than that of the farmer.

40. What proportion of negro laborers own land, or the houses in which they live?

Negroes are reported as not owning land or houses in any of the counties.

41. What is the market value of the land described in your region? and what rent is paid for such land?

Pemiscot: Price—From $5 to $25 per acre. *Scott:* From $8 to $30 per acre. *Dunklin:* From $10 to $20, according to improvements. *Stoddard:* $15 per acre. *Scott:* Rent—$2 50 to $3 per acre. *Pemiscot:* $2 50 to $5 per acre. *Stoddard:* $3 per acre. *Dunklin:* $3 50 to $4 per acre.

42. How many acres, or 500-pound bales, per hand is your customary estimate?

Pemiscot: 10 acres; from which, in 1880, I made 8 bales and raised 300 bushels of corn. *Stoddard:* When cotton alone is tended 15 bales is the estimate. *Scott:* There is no regular estimate, as cotton is not the leading business. *Dunklin:* A mixed crop is raised; no definite estimate can be given.

43. To what extent does the system of credits or advances upon the growing cotton crop prevail in your region?

Scott: To a very small extent. *Stoddard:* About one-half the farmer's supplies are advanced. *Dunklin:* Merchants make liberal advances; often to too great an extent for the good of all parties concerned. *Pemiscot:* Generally; when it is done it is ruinous both to the merchant and laborer, as the latter buys more than he can pay for.

44. At what stage of its production is the cotton crop usually covered by insurance?

Dunklin, Scott, and *Stoddard:* The cotton crop is not insured at any stage of its production. *Pemiscot:* When it is shipped; the practice is general.

45. What are the merchants' commissions and charges for storing, handling, shipping, insurance, etc., to which your crop is subject? What is the total amount of these charges against the farmer, per pound, or 500-pound bale?

Stoddard: 2½ per cent. commission by Saint Louis merchants; county merchants charge nothing. The total charges are about $4 25. *Dunklin:* No charges are made, except for actual expense incurred, by home merchants. It costs about $4 50, including marine insurance, to place a bale in Saint Louis, Memphis, or Cincinnati. The total amount of charges, including commission on sales, is about $7 per bale. *Pemiscot:* The charges are about $5 25 per bale.

46. What is your estimate of the cost of production in your region, exclusive of such charges, and with fair management?

Scott: About $12 50 per bale of 500 pounds. *Stoddard:* $23 per bale. *Dunklin:* $30. *Pemiscot:* $39 50 per bale, as follows: Picking, $20; ginning and hauling, $10; rent of land, $3 50; cost of cultivation, $6. This does not include wear of tools and expense of teams. Laborers are greatly needed here.

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