

SOIL SURVEY OF THE PRINCE EDWARD AREA, VIRGINIA.

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LOCATION AND BOUNDARIES OF THE AREA.

Prince Edward County and the adjoining portions of Cumberland, Amelia, Nottoway, Lunenburg, and Charlotte counties included in the survey are situated in the south central part of the State. The area lies between $78^{\circ} 10'$ and $78^{\circ} 30'$ west longitude and 37° and $37^{\circ} 20'$ north latitude, is rectangular in shape, and comprises a total of 275,430 acres, or about 430 square miles. Of this the larger portion lies within Prince Edward County. (See fig. 7, p. 239.)

Tobacco is raised over the entire area, and is the money crop. Farmville, the county seat of Prince Edward County, is the market for the dark shipping variety. Bright tobacco is also grown, finding a market at Danville, 60 miles to the southwest.

PHYSIOGRAPHY AND GEOLOGY.

The area occupies that part of the Piedmont Plateau known as "Middle Virginia," and is a portion of an ancient continent which is gradually being reduced to sea level. It is characterized by its plainlike appearance, and is intersected by numerous small, rather slowly running streams which usually enter the larger ones at right angles.

The area is drained by two river systems. The Nottoway and the Meherrin, which flow into the Chowan, receive the waters of the southern part, while the Appomattox, which flows into the James, drains the northern part. The divide between these two systems is a ridge extending in a northeast direction from Keysville to Burkeville. This ridge has a gradual descent toward the northeast, the altitude of Keysville being 625 feet above tide, while that of Burkeville is about 100 feet less. With the exception of Leigh Mountain to the northward the divide is the highest part of the area. This mountain, which has an elevation of 715 feet above tide, is composed of more durable rock and hence has been more resistant to the agencies of weathering. Where the waters of the Appomattox leave the area the altitude is about 275 feet above tide; hence within the area there is a difference in elevation of nearly 450 feet.

With the exception of a small sedimentary strip belonging to the Newark system and extending from the vicinity of Redd Shop northward past Farmville, the whole area is composed of granites, gneisses, schists, quartz, and basaltic dikes. This sedimentary strip is composed mostly of carbonaceous and arenaceous shales, with a little red sandstone, but it is so narrow that it has practically no influence upon the soils. The underlying rocks of the area are seldom seen, except in road cuts and at the heads of streams. Fine-grained granites and garnetiferous and hornblendic gneisses are the important underlying rocks north of the divide. To the south of it phyllite schist is the most abundant rock. No quarrying is done, except for local uses. The hornblende gneiss in the vicinity of Farmville was quarried for the macadam road between Farmville and Hampden-Sidney College.

The soils vary from the residual soils of the ridges, which are usually red, to the heterogeneous soils of the bottoms. The stream bottoms are often wide and fertile. Many of the streams are building up temporary flood plains, while at the same time the rivers are cutting channels. The bottoms grow up to a dense growth of bushes and trees, while the slopes become badly washed. In the rainy season the bottoms are frequently flooded, because the water has not a free course. The result has been the building up of temporary flood plains.

Serious damage has been done to lands on lower slopes and heads of streams by washing. Where denudation has been kept in check by a growth of forest trees, or where it has been just enough to remove accumulating sand, red clay subsoils are found; where erosion has been as rapid as the natural decay of the rocks, yellow subsoils occasionally running into disintegrated rock are found; where it has been most rapid, disintegrated rock and sometimes the parent rock are seen outcropping at the surface. This last condition is especially true in the vicinity of Moran and High Rock. The best soils are found either on the ridges, where denudation has been slowest, or in the bottoms, where the soils have been washed down from above.

CLIMATE.

There is little variation in the climate of different parts of the area surveyed. The main features are brought out in the subjoined table. Figures drawn from the records of two stations of the United States Weather Bureau are given. Farmville lies within the area, but its records were broken, and for that reason the more complete observations made at Lynchburg have also been used. Although the latter station lies outside of the area surveyed, the conditions of altitude and situation are sufficiently similar to make the records relevant.

Normal monthly and annual temperature and precipitation.

Month.	Lynchburg.		Farmville.*	
	Temper- ature.	Precipita- tion.	Temper- ature.	Precipita- tion.
	°F.	Inches.	°F.	Inches.
January	36.8	3.95	38.2	2.38
February	40.0	3.53	38.6	4.25
March	45.2	3.67	47.8	4.60
April	55.9	3.36	55.5	3.27
May	66.0	3.91	67.0	4.89
June	74.2	3.46	75.4	4.33
July	77.5	3.90	80.3	4.77
August	75.3	4.01	79.0	3.46
September	69.0	3.81	72.2	2.41
October	57.1	3.26	60.2	2.65
November	46.3	2.94	47.7	1.78
December	39.3	3.05	39.9	2.57
Annual	56.9	42.85	58.6	41.36

* Records cover in some cases only three years.

Dates of killing frosts.

Year.	Farmville.		Lynchburg.	
	Last in spring.	First in fall.	Last in spring.	First in fall.
1897	Apr. 21	Nov. 8	Apr. 21	Nov. 7
1898	Apr. 3	Oct. 15	Apr. 6	Oct. 28
1899	Apr. 17	Nov. 5	Apr. 19	Nov. 7
1900	Apr. 14	Nov. 6	Mar. 22	Nov. 10

SOILS.

The subjoined table gives the area of each soil type and its percentage of the whole area surveyed:

Areas of different soils.

Soil.	Acres.	Per cent.	Soil.	Acres.	Per cent.
Cecil sandy loam	91,710	33.3	Durham sandy loam	20,710	7.5
Cecil clay	31,590	11.5	Meadow	19,830	7.2
Iredell clay loam	103,070	37.4			
Worsham sandy loam	8,520	3.1	Total	275,430

CECIL SANDY LOAM.

The Cecil sandy loam occupies a third of the area surveyed. The areas are large and connected, following the ridges of the Piedmont belt. In the northern part it occupies solely the tops of the ridges, but in the central and the southern parts it occasionally occurs on the slopes and even extends down to the creek banks. The soil is of residual origin, derived from the weathering of granites, gneisses,

schists, or other metamorphic and igneous rocks. The soil consists of a gray or yellow sandy loam from 4 to 15 inches in depth, averaging over the whole area about 8 inches, underlain by clay. Upon the broader ridges in the north and east portions of the area the soil is deeper than in the southern portion, where it is quite shallow and in small, scattered areas. The sand particles in the soil vary from fine to coarse, although, as a rule, they are coarse and sharp, and mostly quartz. The subsoil varies from a yellowish to red clay loam, with the clay content increasing in lower depths and finally becoming a stiff, tenacious red clay. Sharp quartz sand and mica are usually present in varying quantities even in the heavy clay. Angular fragments derived from quartz dikes are found in both soil and subsoil, and sometimes as high as 60 per cent of these fragments are found strewn on the surface.

The texture of typical samples of Cecil sandy loam is given in the table below:

Mechanical analyses of Cecil sandy loam.

[Fine earth.]

No.	Locality.	Description.	Soluble salts, as determined in mechanical analysis.	Organic matter and combined water.	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>	<i>P. ct.</i>
6199	2 miles S. of Farmville.	Coarse sandy loam, 0 to 8 inches.	0.01	2.92	6.94	17.16	10.50	22.52	9.68	19.42	10.95
6201	$\frac{1}{4}$ mile W. of Saco.	Sandy loam, 0 to 10 inches.	.02	3.40	8.26	12.16	8.14	22.88	8.68	23.70	11.74
6200	Subsoil of 6199....	Clay loam, 8 to 30 inches.	.01	7.52	3.46	8.72	5.80	13.04	4.70	20.48	36.37
6202	Subsoil of 6201....	Heavy clay loam, 10 to 36 inches.	.01	9.46	2.98	3.80	2.96	9.98	3.56	20.36	46.85

As to fertility the Cecil sandy loam is regarded as one of the best soils of the area, and is desirable both because of the ease with which it can be cultivated, and because of its quick response to fertilizers and the retentive power of its subsoil. The principal crop grown on this soil is the dark shipping tobacco, yielding from 600 to 1,500 pounds to the acre, a fair average being about 800 pounds. By the use of fertilizers and with proper attention the yields often average over 1,000 pounds. Usually with tobacco a three-year rotation is practiced on this soil. The tobacco is followed by wheat and then clover, the clover being allowed to stand one year after the wheat. The fourth

year the field is planted to tobacco again. From 400 to 600 pounds of fertilizers are used to get a fair yield. Wheat after tobacco yields on an average from 15 to 20 bushels to the acre, while yields of 35 bushels have been obtained. When no fertilizer is used with tobacco wheat seldom yields much over 12 bushels; the average then is about 8 bushels. Clovers grow well, and when allowed to stand two years a cutting of hay is taken the second year. As corn is not used in the rotation, it is usually not grown on places especially adapted to tobacco, but when it is grown it yields from 15 to 20 bushels. Cowpeas are often grown with the corn—either cut along with it for fodder or turned under by the plow. Cowpeas greatly improve the land, as do all leguminous crops. Whenever the soil is of sufficient depth Irish and sweet potatoes do well.

The position of this soil is such that its natural drainage is good. Improved farms sell as high as \$15 an acre, but the usual price is from \$3 to \$10

CECIL CLAY.

The Cecil clay is found associated with the Cecil sandy loam, and like that soil is of residual origin and derived from the weathering of similar rocks. It occurs in isolated areas on the higher parts of the ridges, except in a few instances where it extends down the slopes. In the northwest portion small areas of only a few acres, too small to map, are found on knobs of the ridges which have probably been formed by the washing away of the sandy covering, exposing the subsoil and making what are called "galled spots." The largest area of Cecil clay occurs to the north of Meherrin. Other large areas are found in the southeast part of the area. The soil of this formation is generally shallow, averaging about 6 inches in depth, but ranging from a mere covering to a depth of about 10 inches. In many areas, especially where forested for some time, there is a covering of sandy loam from 2 to 3 inches in depth, but when brought under cultivation the red clay subsoil is brought to the surface by the plow. The soils vary from a reddish-brown loam or clay loam to a red or bright-red stiff, tenacious clay. The former phase is more desirable for cultivation, because it is less difficult to work and also because it produces much better. These loamy soils are regarded as the best of the area. The more clayey phase breaks up lumpy, and care has to be taken to plow and cultivate it at the proper time. This stiff clay becomes hard and cracks upon drying; hence it is difficult to get a stand of most crops upon it; but after a stand has been obtained the land is strong enough to produce a good crop. Plants suffer greatly from drought upon this soil. The surface is usually free from stones, but in some areas a large percentage of angular quartz fragments are found on the surface and in the soil and subsoil. These fragments are rarely over a few inches in diameter. These stony areas are always regarded

as poor. Coarse quartz sand is found in both the soil and subsoil. The subsoil varies from a heavy red clay loam, increasing in clay content in lower depths to a stiff, tenacious red clay, with mica in varying quantities always present. This soil gives better yields than the other soils of the area. Tobacco will average 200 pounds more and wheat will average at least 5 bushels more to the acre than on Cecil sandy loam. Clover and grasses grow well, but corn is not usually grown upon it. The stiff character of this formation can be improved greatly by the use of green manures. Where forested it has a heavy growth of hard woods. The subjoined table shows the texture of typical samples of this soil:

Mechanical analyses of Cecil clay.

[Fine earth.]

No.	Locality.	Description.	Soluble salts, as determined in mechanical analysis.	Organic matter and combined water.	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>	<i>P. ct.</i>
6195	1½ miles E. of Farmville.	Clay loam, 0 to 6 inches.	0.01	4.14	3.76	7.86	6.98	26.18	13.16	20.84	17.25
6193	1½ miles W. of Double Bridges.	Heavy clay loam, 0 to 6 inches.	.01	10.58	.84	1.56	.92	8.72	10.82	31.08	35.53
6196	Subsoil of 6195....	Red clay, 6 to 36 inches.	.01	9.20	3.88	5.82	3.80	15.10	4.44	20.18	37.99
6194	Subsoil of 6193....	Red clay loam, 6 to 36 inches.	.01	9.4072	.36	2.12	5.52	38.10	43.95

IREDELL CLAY LOAM.

The Iredell clay loam is the most extensive of the soils of the area. It is a prominent feature of slopes of the broader ridges and the tops of slopes of the narrower ones. Occasionally it stretches across the larger ridges where they are divides between two streams. It has been derived from the weathering of granites, gneisses, and schists. Hornblende gneiss is the most abundant rock found in this formation. Disintegrated rock is usually found at 30 inches below the surface. The soil is a grayish to yellowish sandy loam, with a texture varying between fine and coarse, and with a depth rarely exceeding 10 inches and averaging about 8 inches. The subsoil is a sticky yellow clay loam underlain by a waxy or plastic yellow clay. The color of this clay varies from bright yellow to a dark greenish yellow, the latter color being due to particles of finely disintegrated hornblende gneiss and schist. The impervious character of the subsoil causes the soil

after rain to remain for some time too wet for growing crops. When it finally dries it bakes, forming a hard crust on the surface, and in dry weather crops suffer much from drought.

The following table shows the texture of this soil:

Mechanical analyses of Iredell clay loam.

No.	Locality.	Description.	Soluble salts, as determined in mechanical analysis.	Organic matter and combined water.	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.	P. ct.
6211	1½ miles NW. of Farmville.	Sandy loam, 0 to 6 inches.	0.01	2.38	2.76	4.30	5.40	23.20	24.12	28.58	9.27
6207	1½ miles SW. of Farmville.	Fine sandy loam, 0 to 10 inches.	.01	2.74	1.40	3.26	4.48	21.40	24.10	31.70	10.33
6212	Subsoil of 6211....	Waxy yellow clay, 6 to 32 inches.	.01	6.52	1.12	1.42	2.42	14.88	7.04	32.02	34.65
6208	Subsoil of 6207....	Stiff yellow clay, 10 to 36 inches.	.01	5.78	1.34	1.36	1.40	7.86	12.36	33.00	36.33

The occurrence of this soil on the slopes and the sticky, impervious character of its subsoil makes it an undesirable land for cultivated crops. The soil is poor and thin and at present is not generally cultivated. Where formerly farmed it has been abandoned and consequently has washed badly, and much trouble will be experienced in bringing it back to cultivation.

Formerly these slopes were much cultivated, and with slave labor were made fairly productive, but the land finally became impoverished and was thrown out of cultivation and allowed to grow up to broom straw, old-field pine, and black-jack oak. This forest growth is characteristic of this soil type, which is often spoken of as black-jack land.

Upon the uplands, in favorable years, it will yield shipping tobacco nearly as well as other soils. The tobacco is of a finer texture, but the yield not so great. Corn and some of the grasses do best on this type of soil. For any permanent improvement the land should be tile drained, but the subsoil is so very close and impervious that this would be difficult and expensive, and at the present land values it certainly would not pay.

WORSHAM SANDY LOAM.

The Worsham sandy loam, or, as it is known locally, "post-oak land," is found on broad, level, or basin-shaped uplands occurring in

the western and southern parts of the area surveyed. Some of these uplands slope toward the center, where a small stream usually heads. In all situations this formation is wet, due to the extremely impervious character of the subsoil. After rains, water stands upon the surface for some time, the soil becomes like mortar, and, upon drying out, cements together.

The soil is a gray sandy loam, generally fine, but varying, and sometimes even becoming coarse. The depth varies from 10 to 18 inches, the average being from about 12 to 14 inches. When dry the surface has a soft, whitish appearance, but in swampy places in woods it sometimes has a greenish cast. The subsoil grades from a yellowish sticky sandy loam or loam to a stiff, plastic yellow clay, mottled with white, the white material being a nearly pure decomposed feldspar, locally called "white pipeclay." The depth of soil and subsoil rarely exceeds 30 inches, as it usually runs into the disintegrated rock at that depth. It is of residual origin, being derived from the weathering of granites, gneisses, and schists, but the rock entering most into its composition is a granite made up mostly of feldspar, which upon decomposing forms the white part of the clay. These lands can be improved greatly by underdrainage.

The following table shows the texture of typical samples of this soil:

Mechanical analyses of Worsham sandy loam.

No.	Locality.	Description.	Soluble salts, as determined in mechanical analysis.	Organic matter and combined water.	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>	<i>P. ct.</i>
6215	5 miles S.E. of Meherrin.	Sandy loam, 0 to 12 inches.	0.01	1.56	4.00	8.16	11.00	26.18	18.96	24.12	5.53
6217	One-fourth mile E. of Worsham.	Sandy loam, 0 to 12 inches.	.01	2.06	1.70	8.20	6.88	19.66	19.84	32.58	8.03
6216	Subsoil of 6215....	Clay, 12 to 30 inches.	.01	4.42	4.70	7.92	6.38	17.88	8.38	19.20	30.53
6218	Subsoil of 6217....	Sticky sandy loam, 12 to 30 inches.	.01	4.56	1.46	2.98	3.74	12.78	13.40	28.46	32.05

Because of its wetness this soil in this section is best adapted to clover and the grasses for pasturage and hay. With the exception of the bottom lands, the Worsham sandy loam produces the largest crops of timothy hay. Herd's-grass or red-top, tall meadow oat grass, and orchard grass also do well. Fair crops of dark shipping

tobacco are raised. In favorable years this soil produces nearly as large crops as other lands. Wheat does well when the soil is not too wet.

The original forest was mostly post oak, from which it has derived the popular name of "post-oak land." The second growth is old-field pine and black-jack oak. This land is classed with the heavier lands. It rarely brings over \$3 an acre.

DURHAM SANDY LOAM.

The largest area of Durham sandy loam occurs as a Y-shaped area in the northeastern part of the area surveyed. The lower part of the Y commences about 3 miles to the west of Burkeville and extends to the north until it divides at the head of Saylers Creek, the right arm following the ridge between the main and right fork of Saylers Creek and both slopes of the right fork. The left arm of the Y occupies all the territory, with the exception of a narrow rim along the lower slopes, between Saylers Creek and Bush River. Another area follows the ridge to the northeast of Burkeville. The topography of these ridges is high and rolling. The soil in general follows this ridge, and occupies the slopes only along the east fork of Saylers Creek. It occurs also in ravines at the heads of streams.

The soil is residual, being derived largely from the weathering of granites and gneisses. A muscovite schist also enters into its formation to some extent.

The Durham sandy loam is a grayish to yellowish sandy loam, approaching a pure sand, of which the particles are mostly coarse quartz. It has an average depth of from 10 to 20 inches. The subsoil is a coarse yellow sandy loam, somewhat sticky, and containing some mica. The sand particles become coarser in the lower depths, and the soil often runs into the disintegrated rock at less than 36 inches. In the vicinity of Moran and High Rock huge boulders outcrop. Upon the surface small, angular fragments of quartz are found, which in places give the soil a gravelly appearance. A characteristic of the soil is its white and glittering surface.

The following table shows the texture of both soil and subsoil of this type:

Mechanical analyses of Durham sandy loam.

[Fine earth.]

No.	Locality.	Description.	Soluble salts, as determined in mechanical analysis.	Organic matter and combined water.	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>	<i>P. ct.</i>
6203	3 miles S. of High Rock.	Sandy loam, 0 to 15 inches.	0.01	2.84	10.92	9.88	11.14	29.52	17.88	13.10	4.77
6205	3½ miles NE. of Rice Depot.	Coarse sandy loam, 0 to 12 inches.	.01	3.22	16.00	20.52	10.58	16.54	6.76	17.62	7.71
6204	Subsoil of 6203....	Yellow sandy loam, 15 to 30 inches.	.01	1.66	5.42	9.50	14.54	36.54	13.62	10.94	7.45
6206	Subsoil of 6205....	Coarse sandy loam, 12 to 36 inches.	.01	5.04	10.70	15.34	8.80	15.24	4.08	17.00	23.87

The Durham sandy loam does not produce large yields of any of the general farm crops, yet, as a rule, a crop of some sort is assured. It is adapted to the growing of bright tobacco, and this is the crop mainly raised. The soil produces a bright tobacco of fine texture that yields about 600 pounds to the acre. Where large quantities of fertilizer are used larger yields are not uncommon, as much as 1,000 to 1,200 pounds being reported. In some areas, where the subsoil is more retentive of moisture, good yields of most crops are grown, and even dark shipping tobacco is produced. The texture of the soil is such that it is leachy. The rotation followed is for two years, wheat following tobacco. Neither the clovers nor the grasses are grown. This is because of the difficulty of getting these crops to catch. As the price of seed is high the farmers consider it wiser to omit these crops from the rotation and to depend upon commercial fertilizers for maintaining the fertility of the land.

Wheat does not yield, on an average, more than 6 bushels to the acre, although yields of 20 bushels have been obtained. Very little corn is grown on this soil, and the yield is not over 12 bushels.

The forest growth is mostly pine, with a scattering of oak. This land rarely sells for more than \$5 an acre, the general selling price being from \$1 to \$3.

MEADOW.

This is a name given to a class of heterogeneous soils found along the wide, level bottoms of the larger streams. These soils consist of the wash from the hills in the immediate vicinity and of material deposited by streams in times of flood. The value of meadow land varies according to its fertility. It is all naturally wet and poorly drained, but with proper drainage it produces good crops of corn and grass. The higher and drier parts are now cultivated to corn, and when the season is not too wet good yields are obtained. At present the meadow is mostly covered with swamp grasses, weeds, willows, birch, and other bushy growths.

The better areas of meadow are the highest priced lands of this section.

AGRICULTURAL CONDITIONS.

In an area having as little diversity in physiography as this; where there are only six different soils, and these occurring together over the whole area; where throughout the whole area the same crops are grown, and where the people are all of the same origin, it is to be expected that the agricultural conditions will be similar. Although the same crops are grown generally over the area, the soils vary greatly as to fertility in different parts of the area, and yields are affected accordingly. The distribution of the soils is such that from three to four types are found upon practically every farm, which permits of a diversified system of agriculture. The people belong largely to the older families of Virginia, and are as a rule a conservative class. Settlement began soon after 1700, by pioneers, generally of English extraction, who came from the more eastern communities of the State. From the very first they grew tobacco, which soon became the staple product. After the introduction of slaves labor was plentiful, and as a consequence large areas were cleared and planted to tobacco. Up to the time of the building of the railroad, Richmond, 60 miles away, was the market for the tobacco, which was transported either overland by wagon or by boat down the Appomattox and James rivers. The plantations in the early days were large, and with the large number of slaves usually carried each plantation formed practically an independent community. Enough cotton and flax were grown to make homespun clothing. Shoes were made from home-tanned leather. In fact, nearly every necessity was produced and manufactured on the plantation, and very little indeed was required from outside sources. The profitableness of tobacco growing induced the planters to greatly extend their arable fields, and fifty years ago at least two-thirds of the land had been cleared and put under cultivation. At that time the farms were well fenced, well equipped, and

well supplied with live stock, and the land had a value from four to five times its present rating. At the close of the civil war the farms were in a poor condition, the owners, lacking capital and labor to carry on extensive operations, were compelled to throw much of the cleared land out of cultivation, and many abandoned fields were badly washed. Such lands, usually on slopes, are thin to this day, and in consequence are allowed to remain in old-field pine.

The conditions prevailing at the close of the war have not yet been entirely removed. There is still a lack of capital and a scarcity of efficient labor. The farms are still too large, averaging about 300 acres. With the exception of the main dwellings, the farm buildings are mostly small. The owners usually live upon their farms, a part of which they work with what labor they can hire, renting the remainder on shares. Some, however, realize that it is better to work smaller farms and follow more intensive methods. It would seem that this class of farmers are particularly prosperous, and largely because they do more work themselves and depend less upon hired labor.

The low price of land and the consequent small investment of capital needed to buy farms have attracted many Germans and others from the North and West to middle Virginia. Some of these home seekers have bought small tracts of land in the southwest part of the area surveyed. They generally do their own work and are usually successful. Fences are being built and live stock raised.

The principal crops are tobacco, wheat, corn, oats, clover and grasses, and sweet potatoes. Shipping tobacco is grown upon all the soils having clay subsoils, the largest and best yields being upon the lands having the red clay subsoils. The land most in demand is that which has the sandy covering, because of the ease with which it can be worked. Bright tobacco is grown upon the sandy soils. These soils are also adapted to sweet potatoes.

The bottoms produce the best corn, which is grown year after year upon the same fields. In fact, rotation is seldom practiced on any but tobacco lands, and not always there, except by the best farmers. The usual rotation is, tobacco one year, then wheat, followed by clover, which is sometimes allowed to stand two years. Alfalfa has been grown successfully. Liming is practiced to some extent, and commercial fertilizers are largely used, while but little or no effort seems to be made to make and use stable manure. Old fields grow up in broom grass and old-field pines, and later in oak.

The sandy soils and those of the slopes underlain by plastic or "pipe" clay are the lowest in value, selling from \$1 to \$5 per acre. These cheaper lands are being bought up by the negroes in small tracts, usually containing from 10 to 25 acres. The better lands,

which are found on the ridges and in the bottoms, sell for from \$3 to \$15 per acre, but this price is occasionally exceeded where the land has been improved.

The main roads usually follow the ridges, and some of them have been corduroyed through boggy areas. The best road of the area is the new macadam road running from Farmville to Hampden-Sidney College, a distance of 7 miles, and since its construction the value of lands along it has increased.

There are no large cities within the area. Farmville, the county seat of Prince Edward County, is the largest, and has a population of about 2,500. It is the market for the heavy shipping tobacco grown in this and adjoining counties. Two railroads run through the area, giving easy communication with Richmond, Lynchburg, Petersburg, and Danville.

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