

SOIL SURVEY OF DAVIDSON COUNTY, TENNESSEE.

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LOCATION AND BOUNDARIES OF THE AREA.

The area surveyed includes all of Davidson County, comprising a little over 501 square miles. Davidson County lies in the northwestern-central part of Tennessee, and is bounded on the north by Robertson and Sumner, on the east by Sumner, Rutherford, and Wilson, and on the west by Williamson and Cheatham counties. The Cumberland River traverses the county in a winding course from east to west. The city of Nashville is situated on this river, in the center of the county. Several lines of railroad connect at this point, but the northwestern part of the county is without convenient railroad facilities.

The base map used in this survey was drawn from a county road map.

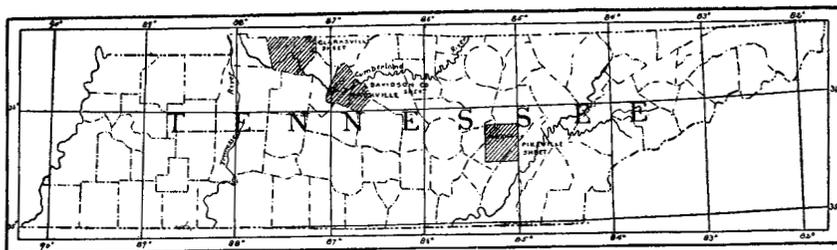


FIG. 28.—Sketch map showing location of the Davidson County area, Tennessee.

HISTORY OF SETTLEMENT AND AGRICULTURAL DEVELOPMENT.

Though adventuresome characters like Boone, Mansker, and others had already visited Davidson County, the first permanent settlements were not made until the spring of 1779. The early pioneers came mainly from North Carolina, Ohio, and other eastern and northeastern States. The usual hardships incident to the settlement of a new country were met and overcome. The settlements experienced much difficulty with the Indians, by whom they were at times nearly annihilated. Out of about 400 who settled in the vicinity of Nashville in 1779-80 there

were only about 70 left by 1781, most of the settlers having met death in Indian conflicts.

The early occupations consisted of hunting, clearing new land, and growing corn.

For a short time, about the year 1784, the territory embraced in Tennessee was known as the State of Franklin, but up to 1790 it was at least under the nominal jurisdiction of the North Carolina legislature. In 1790 it was ceded to the Federal Government, and in 1796 Tennessee was admitted to the Union. Davidson County was organized in 1783.

Before the civil war considerable cotton was produced, but at present it is grown to a limited extent only. The culture of tobacco is confined almost entirely to the Highland Rim portion of the county.

Nashville, which has from the first been the county seat of Davidson County, has a population of 80,865, or about two-thirds that of the entire county, and is the great commercial and social center of the area. The rural districts of the county, together with several small towns, contain about 42,000 inhabitants. Excluding Nashville, this gives a distribution of about 84 persons to the square mile.

An extensive railroad business is done, several large competing lines passing through the area. The financial rating of the farmers and business men is excellent.

CLIMATE.

The summers are long and the winters comparatively short. The summer temperature ranges from about 70° to 90°, with an occasional rise to 100° or over. Owing to a high humidity the days are often oppressive, but the nights usually afford some relief. The winter temperature seldom goes much below freezing, ice rarely forming to a thickness of more than 2 inches, while the soil may be frozen to the same depth for a few days at a time.

The average date of the last killing frost in spring is March 31, and of the first killing frost in the fall is November 9, giving a period of a little over seven months free from killing frost, while at other times the freezing is not severe enough to injure many of the forage crops. The frosts in the Highland Rim portion of the county occur, however, about a week later in the spring and a week earlier in the fall.

The distribution of the average annual rainfall of 50.43 inches is such that drought is not common and works little injury, except on the lighter soils. The greatest precipitation occurs during January, February, and March, being a little over 5 inches per month. October, November, and December have the lowest average precipitation, varying from 2½ inches to about 4 inches per month.

The normal monthly and annual temperature and precipitation at Nashville are shown in the following table compiled from Weather Bureau records:

Normal monthly and annual temperature and precipitation.

Month.	Nashville.		Month.	Nashville.	
	Temper- ature.	Precipi- tation.		Temper- ature.	Precipi- tation.
	° F.	Inches.		° F.	Inches.
January	38.4	5.06	August	77.3	3.50
February	42.9	5.51	September	70.7	3.95
March	48.5	5.20	October	60.4	2.51
April	59.7	4.86	November	58.4	3.91
May	67.7	3.65	December	41.8	3.72
June	75.9	4.36	Year	59.3	50.43
July	79.4	4.20			

PHYSIOGRAPHY AND GEOLOGY.

Davidson County lies mainly within that physiographic division known as the Central Basin of Middle Tennessee, though a portion of the western part is situated upon the Highland Rim. The topography of the Central Basin is characterized by a moderately rolling surface, elevated from 400 to 700 feet above sea level, while the Highland Rim lies from 700 to 800 feet above sea level, and is quite hilly, being marked by many narrow ridges, with intervening steep-sided valleys from 50 to 200 feet deep. All of the area is well drained by small streams emptying eventually into the Cumberland River, which flows west through the county, dividing it into two nearly equal parts. The river is very winding in its course, and its normal level is 50 to 100 feet below the level of the upland. It is navigable about nine months in the year, the water being usually too shallow for navigation during the summer and early fall.

The Central Basin is embraced in the Hudson River and Trenton groups of limestone of the Lower Silurian era. These rocks are usually reached at depths of from 3 to 10 feet, and in many exposures along stream valleys limestone for road ballast, building material, and for burning is easily accessible. Some of the rock has been found to contain phosphate in paying quantities.

Two important upland soil types, the Hagerstown loam and the Davidson loam, have been derived from these groups of limestone. They have also contributed considerable material to the building of the bottom lands.

The Highland Rim portion of the county is formed by a siliceous rock of the Lower Carboniferous period. This rock is reached at 3 to

8 feet from the surface, and outcrops on hillsides, where it is quarried for road surfacing and building material, to which purpose it seems very well adapted. It is quite hard and brittle, and when associated with iron and mixed with limestone it cements into a solid and durable road surface.

One important soil type, the Clarksville stony loam, is derived from this rock.

Many excellent springs, some impregnated with sulphur and other mineral salts, are found near the foot of the hills on all the formations.

SOILS.

Five soil types were recognized in this area, two being derived from limestone, one from a siliceous rock, and two formed by stream action and sedimentation. Most of them have been recognized previously in other surveys in Kentucky, Tennessee, and Pennsylvania. Four have been cultivated for a century or more, and their crop adaptabilities are therefore well established. The Clarksville stony loam and the stony phase of the Hagerstown loam have only recently been brought into use for farming purposes, and these seem to be adapted to special crops which may prove of considerable importance to the area.

The following table shows the extent of each type occurring in the area:

Areas of different soils.

Soil.	Acres.	Per cent.
Hagerstown loam.....	123,264	38.4
Clarksville stony loam.....	99,840	31.1
Cumberland loam.....	44,992	14.0
Davidson loam.....	39,936	12.5
Clarksville loam.....	12,864	4.0
Total.....	320,896

HAGERSTOWN LOAM.

The Hagerstown loam is the most extensive soil type of the area. It consists of a surface soil of grayish, dark-brown, or black silty loam, from 6 to 10 inches deep, underlain by a yellow, reddish-brown, or brown silty clay, which in turn rests on the solid limestone rock. There are some areas practically free from rock fragments, but a very large area is occupied by a stony phase of the type, where limestone fragments from 1 inch to 2 feet in diameter are thickly scattered on the surface and distributed through the soil and subsoil, and where the massive limestone in place is exposed on the surface. This phase is indicated on the map by the rock symbol.

This soil type occurs in a wide belt extending through the central part of the county from northeast to southwest, and in another large body in the southeastern part of the county. A few comparatively small areas are found in the large area of Davidson loam, which lies between the two extensive areas of the Hagerstown loam just described. The surface of the type varies from level to gently rolling and hilly. The elevation ranges from 400 feet to 700 feet above sea level.

The surface is well drained by numerous streams. The physical characteristics favor moderate subdrainage, but the soil has good moisture-retaining qualities and does not suffer from drought. The soil is quite loamy and admits of cultivation under a fairly wide range of moisture conditions. If, however, it is plowed when very dry or very wet, clods form to a considerable extent and do not readily crumble.

The Hagerstown loam is derived from the weathering of a blue fossiliferous limestone of the Trenton or Lebanon group of the Lower Silurian, and consists of the relatively insoluble materials which are left behind after the limestone has gone into solution. These materials in the typical soil form a covering of from 3 to 10 feet in thickness, resting on the fresh, massive limestone. In the stony phase the depth to bed rock ranges from a few inches to about 2 feet.

Commercial fertilizers are but little used on this type, the growing of clover crops, green manuring, and stable manuring being relied upon almost entirely for maintaining the productiveness of the soil. Good yields follow the judicious practice of this method. The Hagerstown loam has been cultivated for a century or more, and is naturally one of the most productive of the upland soils. Nearly all of the less stony areas of the type are cleared and under cultivation, and upon these may be seen some of the best farms in the county. It has a valuation of from \$50 to \$100 an acre, and but little seems to be for sale. Not more than one-fifth of the stony phase is farmed at present, the remainder being in forest. The price of this phase ranges from \$3 to \$30 an acre.

The natural adaptability of the type to the growing of grain, corn, bluegrass, and other forage crops makes it especially favorable for stock raising. It is also a favorable soil for the growing of small fruits and vegetables. Wheat yields from 15 to 25 bushels; oats, 30 to 60 bushels; corn, 40 to 70 bushels; and hay 1 ton to 2 tons per acre. The growing of corn, nonsaccharine sorghums, etc., for curing as dry fodder does not prevail to any extent in the area, but the conditions are such on the Hagerstown loam as to warrant an extension of this practice. Red clover does very well on this type, as does alfalfa, also, where tried. The acreage of alfalfa could be profitably extended.

The following table shows the texture of the fine earth of the Hagerstown loam:

Mechanical analyses of Hagerstown loam.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
9248	$\frac{1}{2}$ mile N. of Old Hickory.	Brown silty loam, 0 to 8 inches.	1.03	1.02	1.78	1.38	7.42	18.63	49.90	19.70
9250	5 miles SW. of Nashville.	Brown silty loam, 0 to 8 inches.	2.65	1.20	1.60	1.28	2.78	3.54	57.00	32.48
9249	Subsoil of 9248.....	Brown silty loam, 8 to 36 inches.	.72	1.30	1.02	.90	9.70	20.62	50.26	20.86
9251	Subsoil of 9250.....	Brown silty loam, 8 to 36 inches.	.55	1.00	1.46	1.76	4.04	3.24	58.06	30.50

DAVIDSON LOAM.

The Davidson loam, to a depth of from 8 to 12 inches, consists of a brown to reddish-brown silty loam. This material, which is sometimes more sandy in character, is underlain by a brown to reddish-brown silty clay subsoil. Both soil and subsoil usually contain from 5 to 20 per cent of limestone fragments and siliceous rock particles, about $1\frac{1}{2}$ inches in diameter. The soil is usually considerably lighter in texture than that of the Hagerstown loam. The subsoil of the two types is in many cases similar, though that of the Davidson loam is sometimes sandy and is generally rather more porous and friable.

The type is limited almost entirely to the southeastern part of the county. The surface is gently rolling and, like that of the preceding type, has an elevation above sea level of from 400 to 700 feet, averaging possibly a little higher than the Hagerstown loam. The stream valleys are not very deep, nor are their sides very steep.

The surface is naturally very well drained by many streams, and the physical condition of the soil and subsoil allows adequate, though not excessive, underdrainage. The soil may be cultivated under a very wide range of moisture conditions without much danger of the formation of clods.

The Davidson loam is derived from the weathering of blue fossiliferous limestone, in which occurs an interbedded siliceous rock having in some instances the character of sandstone. To the material derived through the weathering of the latter is probably due the lighter, more open texture of the type as compared with the Hagerstown loam.

This type, while naturally not quite so productive as the Hagerstown loam, has also been cultivated more or less for a century, and

ranks high in local estimation. The greater proportion of it is cleared and under cultivation, and some of the best-equipped and best-managed farms in the area are located upon it. The acreage valuation is about the same as that of the soil last described.

The principal products are corn, sweet and Irish potatoes, cantaloupes, melons, small fruits, orchard fruits, and hay and forage crops. Corn yields from 20 to 50 bushels; wheat, 15 to 20 bushels; oats, 20 to 40 bushels; and hay, 1 ton to 1½ tons per acre; while vegetables and small fruits yield well and are usually of good quality. As compared with the Hagerstown loam this is the better truck soil, though it is also well adapted to general farm crops.

The following table shows the texture of samples of the fine earth of the Davidson loam:

Mechanical analyses of Davidson loam.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
9252	2 miles S. of Donelson.	Brown loam, 0 to 10 inches.	1.33	1.00	1.58	0.84	4.36	25.06	51.60	15.30
9254	5 miles SE. of Nashville.	Brown loam, 0 to 12 inches.	2.13	1.18	1.84	1.34	8.70	14.08	48.60	23.60
9253	Subsoil of 9252.....	Brown silty loam, 10 to 36 inches.	.58	.80	1.58	.96	3.26	18.60	45.38	29.26
9255	Subsoil of 9254.....	Brown silty loam, 12 to 36 inches.	.66	2.40	2.80	1.96	8.80	12.20	40.00	31.30

CLARKSVILLE STONY LOAM.

The surface soil of the Clarksville stony loam consists of from 6 to 10 inches of ashy-gray silty loam, having a feel not unlike that of quartz flour. It is underlain by a yellow to reddish-brown or red subsoil, similar in texture to the soil, except that the clay content is more pronounced. Both soil and subsoil usually contain some trace of sand, while fragments of siliceous rock from one-fourth of an inch to several inches in diameter are invariably present to the extent of from 10 to 40 per cent. The soil and subsoil usually overlie the massive siliceous rock to a depth of from 3 to 8 feet, on hill and slope alike. There are occasional rock exposures at the crest of the hills, and excessively stony areas unsuited to other than forestry purposes, but these could not be indicated on the map.

The type is limited entirely to the western part of the county, occurring as a plateau from 2 to 10 miles wide, and ranging from 100

to 400 feet higher than the other types. The elevation above sea level is from 700 to 800 feet.

The surface of the type is quite rugged, being made up of narrow ridges separated by stream valleys 50 to 200 feet deep, the sides of which are usually quite steep. In the northwestern part of the county the topography is marked by rather broader ridges, better adapted to agriculture.

The surface of the Clarksville stony loam is naturally very well drained. Its texture makes it retentive of moisture, and it is not regarded as being particularly subject to drought.

The soil owes its origin to the weathering of a siliceous rock of the Lower Carboniferous age, being a portion of what is termed the Highland Rim, surrounding the Central Basin of Middle Tennessee. The relatively slower weathering of the siliceous rock may account for the higher elevation of the areas of this soil.

The Clarksville stony loam seems naturally productive, while the application of manures increases crop yields very materially. Commercial fertilizers are seldom used. Only about one-fifth of the area of this soil is at present used for cultivated crops. The principal products are corn, tobacco, vegetables, and orchard and small fruits. The greater part of the tobacco produced in the county is grown upon this soil. It is a heavy export type, characterized by a strong, elastic, silky-textured leaf, free from coarse veins and fibers, and rich in nicotine. It is cured by open fires built upon the floor of the barn, which imparts to the tobacco a smoky flavor fancied by foreign consumers, who use it both for smoking and chewing. The yield is from 1,000 to 1,200 pounds per acre. In the last few years the crop has been sold to European buyers, mainly through the Clarksville market, for from 8 to 12 cents a pound, giving a net profit to the farmer of from \$40 to \$60 an acre.

Though until recently the Clarksville stony loam was regarded as undesirable for general agricultural purposes, and was valued chiefly for its forest products of oak and chestnut, and for range purposes, both the hillsides and upland flats have come into cultivation within the last few years. A large part of the apples and raspberries brought to the Nashville market comes from that portion of the Clarksville stony loam area locally termed "Paradise Ridge." The chestnut timber is used for firewood and fences, and the oak is used in the manufacture of barrel staves.

While the soil in general is adapted to about the same crops as are grown upon the other upland types, it is believed that the slopes should be reserved for the growing of apples, plums, and black and red raspberries, the more level area being used for corn, grain, forage crops, vegetables, etc. The recognition of the value of this

type for agricultural purposes has of course enhanced the price of the land during recent years, and at present it sells for from \$10 to \$50 an acre.

The following table shows the texture of fine-earth samples of the Clarksville stony loam:

Mechanical analyses of Clarksville stony loam.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
9258	3 miles SW. of Ridgetop.	Silty loam, 0 to 8 inches.	0.76	0.50	1.24	0.82	1.74	4.00	69.90	21.80
9256	4 miles S. of Joelton.	Gray silty loam, 0 to 8 inches.	4.21	2.60	3.08	1.38	2.32	8.72	50.32	31.56
9257	Subsoil of 9256.....	Brown silty clay, 8 to 36 inches.	4.22	2.20	2.68	1.10	2.46	6.58	53.30	31.64
9259	Subsoil of 9258.....	Brown silty clay, 8 to 36 inches.	.45	.38	1.14	.66	1.36	3.16	56.50	36.80

CLARKSVILLE LOAM.

The Clarksville loam occurs as bottom land and consists of from 8 to 15 inches of dark silty loam, underlain by brown or black silty clay loam. The phase nearest the Cumberland River and in the Mill Creek bottoms is somewhat sandy in texture, while a wet, sticky phase, locally termed "crawfish land," is found in some depressions along the Cumberland River. Along the latter stream it occurs as interrupted areas from one-fourth of a mile to nearly a mile in width, while along the small streams it varies from one-eighth to one-fourth of a mile in width. The type is locally termed "first bottom," and lies from 5 to 20 feet above the normal level of the streams. Its surface is generally level and is naturally quite well drained, though during excessive floods much of it is subject to overflow. Open ditches are used to some extent on the wide bottoms.

The Clarksville loam owes its origin to material brought down by the streams and deposited along their courses. It is the youngest type in the area, and indeed is still in process of formation, each successive overflow adding new material. Along the Cumberland River it is flooded nearly every spring, while the areas bordering the smaller streams are overflowed two or three times in five years. The damage done to crops is usually not very great, and is regarded as more than counterbalanced by the increased productiveness caused by the sediments left by the flood waters. Along the smaller streams the soil, at a depth of from 2 to 4 feet, usually rests on a mass of angular and subangular rocks,

while along the Cumberland River it is more often from 8 to 20 feet in thickness.

Owing to its manner of formation the type is naturally one of the most productive in the area. It receives an accumulation of organic matter washed from the upland, and is also favored by reason of its moisture conditions. As a rule, little heed is given to fertilizing or manuring this land, dependence being placed on thorough cultivation.

Corn, forage crops, and late summer crops are most commonly grown on this type. Corn yields 40 to 80 bushels per acre; hay, 1 to 2 tons; and, on the lighter-textured phases of the type, vegetables do very well. By reason of its liability to overflow in winter and spring this soil is not well adapted to the winter grains, but many crops, such as corn, sorghum, fodder corn, and vegetables, which can be planted after the danger from spring overflow is past, can safely be grown. The grasses also produce well, as the floods do not seem to be of sufficient duration to injure them.

The greater part of these bottoms is cleared and under some form of cultivation. The type ranks high in the estimation of the farmers and was one of the earliest brought into use for agricultural purposes.

The following table shows the texture of samples of the Clarksville loam:

Mechanical analyses of Clarksville loam.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.05 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.0001 mm.
			<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
9236	1½ miles NE. of Donelson.	Brown silty loam, 0 to 10 inches.	2.11	0.00	0.18	0.10	1.48	6.50	62.60	29.14
9238	2 miles NW. of Nashville.	Brown silty loam, 0 to 12 inches.	1.72	.38	1.02	.62	2.36	3.98	34.80	56.08
9237	Subsoil of 9236.....	Brown silty clay loam, 10 to 36 inches.	.36	0.00	.16	.22	1.56	6.04	40.84	51.40
9239	Subsoil of 9238.....	Brown silty clay loam, 12 to 36 inches.	1.11	.60	1.50	.80	2.98	4.18	30.30	59.84

CUMBERLAND LOAM.

The Cumberland loam is the higher bottom land along the Cumberland River, locally termed "second bottom." The surface soil consists of from 6 to 15 inches of rather mellow silty loam, usually brown in color, containing a trace of sand. This is underlain by a brown to reddish-brown silty clay subsoil, which also contains some sand. In both soil and subsoil appear rounded pebbles.

The Cumberland loam occurs mainly in the bends of the Cumberland River. It is situated from 10 to 100 feet above the lower bottom (Clarksville loam), and the surface, like that of the adjoining upland, is rolling, having none of the usual topographic features of second bottom land. It is naturally well drained, but retains moisture well and is not subject to drought. It is seldom, if ever, inundated.

This soil probably originated at a time when the Cumberland River occupied a higher position than it does at present, and was formed by a reworking of the upland material in connection with sedimentation. The presence of rounded pebbles and the absence of any well-defined terrace seem to indicate that overflows were not of long duration, but that the soil-building process went on during repeated rapid rises and recessions of the stream.

The staple crops, such as corn, grain, and forage crops, the vegetables, small fruits, and orchard fruits are successfully grown on this type. It is in good demand for truck and fruit growing, and some of the most extensive apple orchards and truck farms in the country are located upon it.

Corn yields from 20 to 40 bushels; wheat, 15 to 25 bushels, and hay, 1 ton to 1½ tons per acre. The yield and quality of Irish and sweet potatoes, strawberries, raspberries, cantaloupes, melons, and other truck crops are reported good.

Some areas of Cumberland loam have been in use for more than a century, and at present practically all of this type is cleared and under some form of cultivation. Some of the best farms in the county are located on this type.

The acreage valuation is equal to any in the county, ranging usually from \$50 to \$100.

The following table shows the texture of samples of the fine earth of this soil:

Mechanical analyses of Cumberland loam.

No.	Locality.	Description.	Organic matter.	Gravel, 2 to 1 mm.	Coarse sand, 1 to 0.5 mm.	Medium sand, 0.5 to 0.25 mm.	Fine sand, 0.25 to 0.1 mm.	Very fine sand, 0.1 to 0.06 mm.	Silt, 0.05 to 0.005 mm.	Clay, 0.005 to 0.001 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>
9246	4½ miles NW. of Old Hickory.	Brown sandy loam, 0 to 10 inches.	1.03	0.32	1.40	8.84	34.54	16.50	28.80	10.22
9244	1¼ miles NW. of Nashville.	Brown loam, 0 to 8 inches.	2.02	1.02	1.88	2.50	3.72	25.16	45.32	20.06
9247	Subsoil of 9246.....	Clay loam, 10 to 36 inches.	.95	.20	1.08	6.32	11.74	21.76	29.60	29.00
9245	Subsoil of 9244.....	Silty clay loam, 8 to 36 inches.	.77	.40	1.16	2.00	12.52	10.92	42.50	30.00

AGRICULTURAL CONDITIONS.

The white farmers are generally very prosperous, and own about 85 per cent of the farms of the county. The colored people, who comprise about one-third of the population of the county, have somewhat less productive farms, but they are in general quite well-to-do. According to the Twelfth Census, the average value of the farms and buildings in Davidson County is about \$3,800, or \$40 an acre.

About 64 per cent of the white farmers own their farms, in full or in part, while the remainder are about equally divided between cash and share tenants. A very small number of the farms are worked by managers and by tenants who are part owners. About half the negroes own their farms. The number of farms in Davidson County under the direction of managers is above the average for the State, and is thought to be increasing. Land rental seems unusually high in this county, ranging from \$5 to \$10 an acre. On a share basis the owner receives from one-fourth to one-half of the crop. The credit system is not so generally prevalent as in many parts of the South.

The farms of the country operated by white farmers range in size from about 50 to 500 acres, the average, according to the Twelfth Census, being 91.3, which is about the average for the State. The farms operated by the negroes are smaller, ranging usually from 10 to 20 acres.

Much of the unskilled labor is colored, and is of moderate efficiency. Considerable white labor also is available, and on the whole the condition of agriculture as regards labor is rather better here than in many parts of the South. The wages paid farm laborers, including board, range from 40 to 80 cents a day, the average rate being about 60 cents.

The extensive agricultural development of Davidson County seems to be dependent, in part at least, upon the commercial activity of Nashville. The value of farm products—horses and mules, beef, pork, poultry, orchard and small fruits, vegetables, and grain, hay, and forage crops—aggregated, amounts to about one-fourth as much as the value of all farm property in the county. The horse and mule sales at Nashville are large. A fine grade of animals is handled, the prices ranging from \$50 to \$300, with the average price ranging between \$100 and \$200. Some famous trotting and pacing stock is raised on the Belle Meade farm in this area.

The different soils and their adaptability to certain crops have already been mentioned in the discussion of the soil types, but a brief review is thought proper in this place. The Hagerstown loam is the corn, grain, and forage crop type of the area, and is well suited to stock raising. The Davidson loam, by reason of its lighter texture, is adapted to truck crops, corn, and small fruits.

Only about one-fifth of the stony phase of the Hagerstown loam is suited to cultivated crops. This phase of the type is better adapted to raspberries, orchard fruits, and forestry, as well as to wild pasture.

While the Clarksville stony loam is of value for the production of staple crops, it seems to be best adapted to the growing of raspberries, apples, and small truck crops, such as snap beans and sweet and Irish potatoes.

The Clarksville loam is the best corn land of the county, giving the highest yield in the area—40 to 80 bushels. On the sandier phases late summer crops of vegetables do well.

The staple crops do well on the Cumberland loam, but owing to its mellow character it is far more desirable for vegetables and small fruits, as well as for such orchard fruits as apples and plums.

The rotation of crops is quite generally practiced on all the soil types of the area. The usual order of rotation is grain, grass, and corn, which is varied to suit the needs of tobacco, truck crops, and stock raising.

The wagon roads of the county are very good, the work of construction and repair being mainly done by convict labor. Several good stone-surfaced pikes radiate from Nashville, while a number of railroads connect various parts of the county with Nashville, thus affording ready transportation facilities to near and distant markets.

Though there are several small country stores scattered throughout the county, in small villages of from 25 to 100 inhabitants, Nashville is the sole market of importance in the county.

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