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VIRGINIA AGRICULTURE, 1840-1860

by

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The eighteen county sample mentioned in the paper refers to a list of counties scattered throughout the present state of Virginia. Records of the West Virginia counties were unavailable. The counties were:

**Tidewater**
- Hanover
- King and Queen
- Lancaster
- Nansemond
- Surry
- Westmoreland

**Piedmont**
- Albemarle
- Amelia
- Amherst
- Appomattox
- Halifax
- Fauquier
- Henry

**Valley and Trans-Alleg**
- Alleghany
- Augusta
Twenty-five farmers were chosen at random from each county and data taken on the number of improved and unimproved acres, the cash value of the farm, the value of machines and implements, the value of livestock, and whether or not the farmer grew clover seed. While this data was of some use qualitatively, it was my original intent to compile the data statistically. However, after running certain tests on it to see if any trends developed, my results were unreasonable and I came to the conclusion that a twenty-five farmer sample was too small and that the results obtained were too inconclusive to be used in this paper.

I still believe this approach to be valid and think that this subject would be an excellent topic for a computer study using the 1840 and 1860 census returns.

There is much valuable information contained in these census reports but it will take a person with a far greater knowledge of statistics to compile them properly.
There have been two schools of thought concerning the state of agriculture in Virginia in the two decades preceding the Civil War. Disagreement has arisen among both contemporary observers and modern historians. While the fact that Virginia had been in a depressed condition economically during earlier years has been accepted generally, conflicting opinions are heard whenever the period 1840-1860 is discussed.

Edmund Ruffin, an outstanding farmer of the era, wrote in an article which originally appeared in 1834, that profits were slim and land values were depressed. Later he wrote that the poorest lands were located in the "higher tide-water counties" where the farmers had plowed when the ground was still wet. The farmers did not drain the land or rotate their crops. Even the few who did drain their land failed to utilize crop rotation. Peas were not grown for manuring purposes. Many farmers did not sow land which had been in corn, in wheat that fall leaving it useless during the next spring and summer. These planters had no excuse for not using fertilizer although the region lacked accessible marl because of the rich deposits of shells and lime. On the positive side, truck-farming was being carried on quite successfully in Norfolk County. A demanding occupation, it was profitable and had caused land values to rise from 500 to 1000 percent.

The Northerner, Frederick Law Olmstead presented a differ-
ent view of Norfolk truck farming in one of his travel accounts. He accused the region of providing New York with poor produce raised on poor soil, and fertilized with manure shipped in from Baltimore.3

The State Board of Agriculture, in its report to the General Assembly in 1842 noted an "increasing knowledge and attention" in the state, particularly in the western counties. This progress was slow but some farmers were using fertilizers, their livestock were improving, they were growing artificial grasses and root crops, and they were using excellent machines and implements. Yet, in each county, there lived farmers who were fifty years behind time. As an indication of interest, only seven farmers answered the fifteen hundred circulars sent out by the Board.4

Olmstead had a rather pessimistic opinion of Virginia agriculture. Undoubtedly, he was affected by an anti-slavery bias. On a trip from Washington to Richmond, he found only about one-third of the land cleared and only about one-fourth of this land in cultivation. The rest of the land lay in pine forest or in a useless grass. The planter's houses were in a run-down condition.5

A planter of this period with estates in both Buckingham and Nelson counties, Robert T. Hubbard stated that,

Agriculture has improved immensely during the last twenty years and it is destined to much higher improvement... The land is now worked more judiciously than when I was a boy—it is not worked so frequently in corn and other crops. The ploughs and ploughing are much better. More manure is made, and more grass sown and an increased desire and determination for improvement is more common in Virginia than ever.
God grant that this state of things may be but the commencement of a career which will conduct this venerable old Commonwealth to that fertility which marked her virgin soil in bygone times.6

An eminent historian, Avery O. Craven, is a member of the group of scholars who believe the period 1840-1860 to have been one of reform and success. The years 1820-1840 merely laid the groundwork for a flourishing agricultural economy in the last twenty years of the ante-bellum period. After 1840, Virginia entered a period of prosperity, having established a diversified system. In fact, in 1860, according to Craven, Virginia was in the best condition agriculturally of her history. The two states, Virginia and Maryland had outstripped all other states in their advances.7

Another member of this school was Kathleen Bruce, late professor of history at the College of William and Mary. She was a proponent of the idea that Virginia had undertaken successful reforms and had revived her economy by 1860.8 Charles W. Turner agreed with Professor Bruce and expressed the view that Virginia was "diversifying her agricultural program, improving her property values, raising better varieties of crops and livestock, and increasing her production."9

A dissenting opinion was raised by Eugend D. Genovese, a Marxist historian. In a book concerned with the economy of the South as a whole, his idea was that the region had been unable to achieve any success with reform because of the slave system. He attacked the Craven thesis saying:

"...the assumption that the reform movement would have proceeded smoothly in the course of natural evolution if the war had not intervened neglects the contradictions in the reform process. The grave effects of slavery in
retarding capital formation, providing inefficient labor, and preventing the rise of a home market made the task of the reformers virtually impossible. Unless a conversion to free labor occurred, reform in one area only intensified the difficulties in another.\textsuperscript{10}

Which of these conflicting interpretations is correct? Does the truth lie, as it so often does, on both sides? In order to resolve the controversy one must first analyze the problems facing Virginia farmers in this era. Then one must study various attempts to correct these problems and finally, one must decide whether these efforts were successful or whether they failed.

Genovese's list of the characteristics of Southern agriculture—low efficiency of the labor force, poor soil, size of farms, lack of markets, quality of livestock, level of liquid capital and the one-crop system—suggests some of the difficulties which may have existed in Virginia.

One of the first considerations of any business operation is its labor force and Southern agriculture is no exception. Virginia, along with the other Southern states, had a labor system which was enslaved. Slaveholding was not as widespread as is commonly thought. However, the ideology of the minority who held slaves greatly affected the rest of the white population and the presence of these slaves had a detrimental effect on the free white laborers. Thus, slavery warrants a large place in any study of Southern agriculture.

In 1860, only twenty-three percent of the white population owned slaves, while a mere one percent owned one hundred slaves or more. Fifty-two percent owned from one to five
slaves and thirty-six per cent owned from six to nineteen slaves. To be classified as a planter, a person had to own twenty or more Negroes, putting twelve per cent of the slave-holding population in this class. The rest of the people, even those in competition with the slaves, supported the system.\textsuperscript{11}

In Virginia, in 1850, there were 107 slaveholders who had from one hundred to two hundred slaves and by the end of the next decade, there were 105 of these planters. In both 1850 and 1860, there were eight planters with from one hundred to two hundred slaves and one with from three hundred to five hundred blacks.\textsuperscript{12}

Virginia had the largest number of slaveholders of any state. By far, the greater proportion of both slave and free Negroes was involved in agricultural labor.\textsuperscript{13} On one large plantation, "Belmead", owned by Phillip St. George Cooke, the breakdown of a labor force of 125 slaves was: twelve domestics, thirty-eight field hands (including two cooks), six stable and pasture hands, two carpenters, five stone masons, one miller, two blacksmiths, two shoemakers, five women spinners and a woman weaver. Of those not working there were forty-five children, one invalid, the nurse, three hired out and one listed as Nancy.\textsuperscript{14}

This type of system resulted in a low-quality white labor class as well as in a scarcity of skilled labor for industry.\textsuperscript{15} The whites who hired themselves out were contemptuous of doing menial tasks.\textsuperscript{16} The slaves were said to have
been careless, and wasteful with a low productivity level.\textsuperscript{17}

Whether slavery caused the one-crop system or whether the one-crop system fostered the growth of slavery has been a "chicken-egg" controversy of much discussion. It would seem most historically accurate to say that the problem of a dearth of labor in the South occasioned by the needs of a rapidly expanding one-crop agriculture was handily solved by the importation of African slaves. Then the institution which had adapted itself well to a one-crop system became so firmly entrenched that it was difficult for a planter to change his habits or indeed, if he were so inclined to change, to supervise slaves scattered over a large farm.

The question then becomes, not were slaves more efficient than free labor since that would be a moot question, but were they profitable at all? If they were, then the planter would be apt to keep the system which he had known all of his life. Although tradition was strong, few men could keep slaves when bankrupt. For Virginians the issue is the profitability of the system in the South. Either slavery was profitable in Virginia or it was unprofitable. If it were profitable in Virginia, then it would not present a grave problem to the state's agriculture. If it were not profitable there, but was profitable in the lower South, then a demand would be created to drain off Virginia's surplus labor, thus giving Virginia farmers the needed capital for reform or at least relieving them of a hindrance to their success. Of course, if slavery were unprofitable both to Virginia and to the
lower South, then slavery would act as a drag on Virginia's economy.

Alfred H. Conrad and John R. Meyer, Harvard economists, have attempted to measure the profitability of slavery. According to their argument, the newer regions were producing crops while the older regions were producing surplus slaves. This would mean that Virginia could obtain capital from the selling of any surplus slaves. Conrad and Meyer have concluded that slavery was profitable to the region as a whole and would have continued so long as there was available territory for expansion.18

This idea has been challenged by other historians. Genovese did not see any such balance and claimed their estimates of cost were too low.19

Another criticism leveled at the study was that the investigation was too narrow causing their conclusions to be wrong. Also, they did not separate social from economic factors.20 This is a valid criticism in the sense that slavery only represented a labor system to the authors. Yet, this alone does not necessarily invalidate their conclusion. Still, another criticism by David Dowd was of the authors' hypothesis of slavery either being profitable or acting as a deterrent to economic development. Dowd's criticism of this is a well justified one. Slavery could have been profitable and still have been a deterrent to the expansion of the economy.21 If it were unprofitable, it was definitely a deterrent. But if it were profitable, it may or may not have been a deterrent.although
evidence seems to show it was a hindrance to the total economic development of the state, not necessarily to its agriculture. Admittedly, it was difficult to separate the two in that age.

John E. Moe's criticism is not so valid as those of Dowd. According to him, slavery would have become more inefficient as the economy diversified because of its suitability to the one-crop system. According to him, slavery would have become more inefficient as the economy diversified because of its suitability to the one-crop system. This does not explain away those reformers who were successful with large slave-holdings.

Genovese attacked the system on the basis of its retardative effects on the total economy, and was a defender of Ulrich B. Phillips as a historian, a man who has been downgraded because of his racist views. Genovese is correct in realizing that one of the outstanding contributions made by Phillips to the study of Southern history was his recognition of slavery as more than just a labor system. It was a way of life predicated on the doctrine of white supremacy. Believing the institution to have hurt the economy of the South, Phillips quoted a contemporary observer as saying, "Half the population is employed in seeing that the other half do their work, and they who do work accomplish half what they might do under a better system."

Phillips weighted the disadvantages against the advantages of the system. Its disadvantages were it kept money scarce, caused the population to be scattered (this would be typical of any agrarian society), lowered land values, lessened opportunities for advancement, and caused resources to be neglected.
It had three advantages. It kept labor "controlled, provisioned, and mobile," any of which could have been accomplished under a free system. It also kept order and the white man supreme.25 While maintaining they were less productive, he gives credence to Ruffin's idea that they worked longer hours which made up for their inefficiency.26

Scholars who agree with the theory of the proven profitability of slavery include Robert W. Smith, Kenneth M. Stampp, and Lewis C. Gray. According to Smith, the master had the prerogative of controlling both the consumption and the production of the slave. By keeping consumption to a subsistence level, he could maintain a large gap between it and the slave's production, creating a large profit. Although he was forced to care for the slave during the unproductive times of infancy and old age, he could work the women and children. The worth of his holdings grew as the slaves multiplied. Smith also mentioned the border state's selling of slaves to the lower South.27

While saying openly that slavery was a financial burden, the pro-slavery people kept the system because of the hoped for profit, the lack of records, tradition, and the social status which it gave. Even with these forces for retaining it, it must have at least been self-supporting.28 This is proven by the high prices and the demand for Negro labor. Slavery did not cause most of the problems of Southern agriculture.28 Stampp exploded two myths regarding the institution. Free labor as well as slave had to be supported in good years and
in bad. Losses due to death and accident were calculated when the slave was purchased.\textsuperscript{29} A Virginia insurance company was insuring slaves with set premiums for each age bracket at a rate of three-fourths of the actual cash value of the slave provided that it did not exceed nine hundred dollars. Certain jobs carried higher risks.\textsuperscript{30}

The average maintenance for an adult slave seldom exceeded thirty-five dollars. To Stampp, slavery was profitable in Virginia. Land was cheap and the value of slaves was rising so many Virginians did not buy many new ones.

"In short, on both the large and small estates, none but the most hopelessly inefficient masters failed to profit from slavery.\textsuperscript{31}

L. C. Gray stated that slavery retarded the use of technology, hurting industry and keeping the South in a situation in which the region had the various problems commonly associated with an aquarian economy such as bad roads, schools and churches. Yet, slavery was profitable to the individual and could be justified economically.\textsuperscript{32}

Conrad and Meyer summed up all of the various opposition arguments to the profitability of slavery:

\begin{itemize}
  \item[(i)] slaves were inefficient and unwilling to work
  \item[(ii)] slave labor supported during years when times were hard
  \item[(iii)] it absorbed plantation earnings
  \item[(iv)] there was an economic decline because the numbers could not be maintained
  \item[(v)] the labor force was capitalized
\end{itemize}
Their answer and it seems conclusive was that slavery brought returns which were equal to those brought by other forms of investment. 33

Virginia was a slave exporting state. In 1859, Edmund Ruffin wrote that slaves were being sold for debts and sent to newer regions. He believed it was most profitable to buy fieldhands to work in Virginia. According to Frederick Bancroft, "Few, if any persons with slaves were settling in Virginia, and hardly any Virginians were going to the markets of the other states to buy for their own use." 34 Estimates of the number of slaves for whom trade was the reason for their removal from the state range from two-fifths to four-fifths. 35

The largest slave-traders in Virginia were Franklin and Armfield. Their agents were Rice G. Ballard and Company, later called Ballard, Franklin and Company of Richmond and J. M. Saunders and Company of Warrenton. 36 The firm was dissolved in 1841. 36

The standard used for measuring slave prices is the amount of money paid for a young prime field hand which were bringing $1800 in 1860. An artisan would bring twice as much and prime women brought three-fourths to four-fifths as much. Slaves in their early teens brought about one-half as much; infants were worth only one-eight to one-tenth. 37

Slave prices were probably lower in Virginia than they were in New Orleans. In 1854, the appraisal of slaves on "Belmead" was eight hundred dollars for an ox driver, seven
hundred dollars for plowmen and field hands; no women were appraised above four hundred dollars. 38

A survey of New Orleans prices for prime field hands reveals that in 1840, one sold for $1020. This price dropped and leveled off at seven hundred dollars from 1843 to 1845. After 1845, the prices rose at intervals until a high of $1800 was reached in 1860. 39

This steady rise in price has been used as an argument for the unprofitability of slavery. 40 This argument cannot be substantiated. The prices would not have been so high if a demand for labor had not existed. Farmers would not have been so willing to make so large an investment if they did not expect to earn a profit. As Conrad and Meyer stated, "A rising trend of slave prices coupled with a growing slave population is, in and of itself strong evidence of the profitability of slavery." 41 Clement Eaton also subscribed to this theory. 42

Another means of disposing of a surplus slave population in Virginia besides selling it to the lower South was to hire it out, either to other farmers or to industry. This provided another outlet for unprofitable slaves and another opportunity for the Virginia farmer to relieve himself of a possibly unprofitable burden. Most of the slave-hiring in the South was done in Virginia with the center in Richmond. The leading brokers were Lewis and Robert Hill. This availability of slaves for hire was caused by the surplus on old plantations and by shifts in farming, eliminating the need for gangs. 43
While most slaves were hired for industry, some were hired by other farmers, showing a surplus of slaves on some farms and a demand for labor on others. During the 1850's, ten per cent of the total number of slaves in agricultural labor were hired while only five per cent and six per cent were hired in Albemarle and Cumberland respectively. In 1858, between ten and twelve per cent of the slave labor force in Fauquier and Fairfax were hired, in contrast with fifty per cent in Lynchburg.44

The expense of hired labor varied according to the value of the slave and the risks involved in the job he was to perform. In 1858-1860, the rates of hire in Virginia were:

| Male Field Hands   | $80-140  |
| Railroad Hands    | $150     |
| Women             | $40-80   |
| Mechanics         | $150-175 |
| Boys and Girls    | $25-75   |

The estimate of hired slaves in Virginia in the 1850's was at least 15,000.45

Having obtained his labor force by inheritance, purchase, or hire, the planter found it necessary to supervise in some way. Most slave-holding farmers with a few slaves merely worked along beside them. But, the large planter was forced to utilize other means. He would hire a manager or an overseer. The overseer class in Southern society has been made scapegoat of the slave system. Always the villain in romantic literature, the overseer has been blamed for much that was wrong with slavery. He was accused of neglect and of only looking for immediate returns.46 Contemporary observers
and agricultural reformers degraded the class. Olmstead quoted a farmer as saying, "They are the curse of this county, sir, the worse men in this community."

Virginia had more overseers than any other state with 3,747 in 1850 and 5,459 in 1860. A survey of the overseers in Richmond County revealed an average age of 34.2 years. Fifty-eight per cent were married and the illiteracy rate was ten per cent. Sixty-three per cent owned personal property, eleven per cent owned real property, but there was no substantial ownership of either. Five per cent owned slaves; the average number held was three.

There were three classes of overseers: planter's sons who managed for the experience, amateurs particularly in the newer regions, and professionals. It was the second group which managed to gain a bad reputation for the others as well.

An interesting contemporary opinion was voiced by R. T. Hubard. Overseers were "like men in other pursuits, some are good and others worthless." The best age for an overseer was from twenty-five to forty; those under twenty-five lacked judgement and those over forty lacked energy. He listed the qualities of a good overseer as "fine constitution and health, ability to withstand the weather, active, industrious, honest, sober, firm, truthtelling, fond of home and calling, plainly dressed, economical and free from debt." Other comments made by Hubard include, "The master should never interfere between slave and overseer," and "The overseer should be treated with civility and respect but nothing more."
Another Virginian, John Hartwell Cooke, advised his overseer to be strict and to abide by fixed rules.50

The overseer might be paid by salary or given a share of the crop or some combination of the two. The salary method was the best in preventing the exploitation of the land or the slaves. Hubard paid a salary to his overseers believing that to be the better system. He complained of wages being too high by at least one-third. On his Tye River plantation in Nelson County, he paid a George Jones four hundred dollars per year for the supervision of eighty Negroes and much stock.51 At Rosny, in Buckingham County, he only paid from two hundred to three hundred dollars. For example, he paid Thomas Davis and David Reese three hundred dollars in 1840. In 1841 and 1842, he paid the same amount to George Stinton. Another overseer received $225 in 1843, and in 1844, still another one, George Fortune, received $225. His salary was raised in 1845 to $250 where it remained the next year.52

Another problem which Virginia faced besides her labor and labor management system was her land. Some of these problems were beginning to be solved in the two decades before the Civil War, but many still existed.

Avery O. Craven, in his classical work on soil exhaustion in Maryland and Virginia, outlined two separate problems: "the factors which work immediately upon the soil to lower its yielding capacity," and the "forces which determine the use of such agricultural practices as permit destruction."53
Other historians have disagreed, saying that soil exhaustion was the result of slavery and the plantation system, but Craven was convinced that the problems of soil exhaustion in Virginia were typical of any frontier where abundance bred exploitation. He listed five factors which caused soil exhaustion: the frontier, governmental action or inaction, markets and agencies, ignorance and habit, all of which were present in the Old Dominion.

A more recent writer has taken an opposite view.

The one-crop system perpetuated by slavery prevented crop rotation; the dearth of liquid capital made the purchase of fertilizer difficult; the poor quality of the implements that planters could entrust to slaves interfered with the proper use of available manures; and the carelessness of slaves made all attempts at soil reclamation or improved tillage of doubtful outcome.

Genovese's contention may have been right in practice, but the theory is not correct. As Craven pointed out, the greatest reformers were large slaveholders who could practice a greater division of labor proving that the slave system could lend itself to diversification.

One way of resolving this controversy is to compare land values of soil used for strictly agricultural purposes. By 1840, land values had risen from $80,000,000 or $90,000,000 in 1829 to $211,930,538 in 1839 or $216,401,543 after inflation. This is an incredible leap. From 1838 to 1850, land values in the Tidewater increased over $17,000,000.

In an eighteen county sample (see preface), fifteen of the counties experienced an increase in the value of their land per
acre between 1840 and 1850. Nansemond, located in the Tidewater
region experienced a slight decrease in value per acre. Two
tobacco growing counties, Halifax and Amelia saw land values go
down in the decade.60 (See Appendix for chart of land values.)

The South had much of its capital tied up in slaves and
some historians have named this as one of the reasons why the region
was unable to make needed agricultural reforms. The plan-
ters would overcapitalize and thus accumulate wealth more slowly
than did the North.62

The lack of liquid capital meant the South was slow to use
machinery. Southerners refused to attribute the lack of capital
to the slave system, but instead blamed it on other forces such
as the tariff. Genovese doubted that the planter was a capital-
ist because a capitalist would sink his funds into machinery
while a planter spent his money on more land or in slaves.63

It is definitely true that the planter sank relatively little
money into implements as the manuscript census returns show, but
Genovese has not given a very good definition of the word,
capitalist. A capitalist is one who controls wealth—not necessarily
in cash. Thomas P. Govan saw the planter as a capitalist64 as
did Lewis C. Gray.

Gray resolved the conflict between the profitability of
slavery on one hand and the dearth of liquid capital's effect
on the total economy on the other, by stating, "Hence, we have
the near-paradox of an economic institution competitively
effective under certain conditions but essentially regressive in
its influence on the socio-economic evolution where it prevailed."65
Another problem was the poor quality of the livestock in the region. Hogs were not of as good quality as those in the Middle West. They ran wild and weighed below 140 pounds, at the same age as hogs which weighed two hundred pounds in other regions. The Southern planter brought beef and his milk cows were inferior. However, Delaware, Virginia, and Maryland were the best milk producers of the area.66 The South had one-half of the cattle in the United States, sixty per cent of the oxen and ninety per cent of the mules, but these figures do not describe the animals themselves. The Negroes were supposed to have mistreated the animals and the lack of capital kept farmers from importing improved breeds.67

In order to improve livestock breeds, the farmer must have high profits and there must be improved breeds from which to select. It is hardest to improve cattle because of the amount of capital required to buy a cow and because they multiply slowly. The Virginia Piedmont and Shenandoah Valley were getting better breeds of beef cattle.68 Ruffin described the cattle in Princess Anne as ranging around in the open swamp where there were reeds to eat. He was of the opinion that if the farmers had kept their cattle well, one could yield as much as did four.69 The Report of the Agricultural Board stated that the cattle was of a "non-descript breed" and the livestock were only "one-half alive for two-thirds of the year."70

The flocks in middle Virginia did not yield more than three and one-half pounds of wool apiece, a poor yield when compared with New England, Pennsylvania, and New York.71 In
1845, A. W. Nolting of Richmond imported sheep.\textsuperscript{72}

The number of horses and mules decreased between 1840 and 1850 but increased in the next decade. In 1845, a farmer complained that no horses were being raised in eastern Virginia but were being bought from other sections.\textsuperscript{73}

Even though there were a number of innovations in implements made in the state\textsuperscript{74}, in general the implements were crude and the farmers invested little money in them relative to the cash value of their farms.\textsuperscript{75} The 1842 report of the Agricultural Board summed up the situation as "...with us Virginia farmers and planters the acknowledged utility of an agricultural implement is very far from introducing it into general use."\textsuperscript{75A}

There was a decline in the manufacture of agricultural implements between 1850 and 1860.\textsuperscript{76} The slaves broke the tools so their masters gave them heavier and cheaper tools than they might otherwise have used. The poor equipment was due only in part to the carelessness of the blacks. Other reasons were a dearth of liquid capital and a prejudice against innovation.\textsuperscript{77}

Olmstead did not think that the tools used in the North would last one day if brought to the South.\textsuperscript{78}

Plows which were worth from three to five dollars\textsuperscript{79} were perfected and even subsoil plows were being used. Gideon Davis of Georgetown had made the subsoil plow and by 1845, there were several different makes.\textsuperscript{80}

R. T. Hubard was using a cultivator plow with three to five points to kill grass in the corn fields. He, at first,
liked wrought plows in preference to cast ploughs, but by March 1857, had changed his mind.81

Reapers and drills were used in the growing of grain.82 Two makes of reaper in use were Hussey's and McCormick's.83

Probably the three principle crops grown in Virginia were corn, wheat, and tobacco. A study of conditions of these three crops would illuminate the entire agricultural picture during this period. The prices of these crops affected many farmers both directly and indirectly. Indirectly, since in them may be seen some of the reasons why a farmer might decide to diversify or might continue to grow only one crop for income.

Corn was a subsistence crop on many Virginia farms. Some considered it to be the greatest exhauster of Virginia's soils;84 to others it was regarded as "meat, meal and manure."85 As one historian stated, "...corn is as basic to Southern history as Thomas Jefferson and John C. Calhoun."86

Trends in the price of corn seem to follow those of wheat fairly closely so a brief survey of the wheat prices along with their determining factors would roughly suffice for both crops. A large crop in the United States in 1839 brought low prices that year and still lower ones followed the next year. A small crop in 1841 caused higher prices, but another large yield forced them back down in 1842. This trend continued from 1842 until 1845. The repeal of the English Corn Laws and the Irish famine affected prices favorably the next two years. Unfortunately, this caused the farmers to overproduce, adversely affecting prices for the next five years. Subsequently, poor European crops and
the Crimean War forced up prices from 1853 to 1855. Again overproduction resulted in lower prices for the remainder of the period. \(86^\text{a} \) (See Appendix for Albany wheat prices, 1840-1854.)

In 1849, the wheat grown in Virginia was worth twice as much as the tobacco, \(87^\text{b} \) but tobacco for many years had been the main money crop and still was a major part of the economy of many Piedmont counties located in an area bounded on the south by North Carolina, on the West by the Blue Ridge, on the north by Fredericksburg and on the east by the fall line. The growing season in this area was 120 to 200 days with a rainfall of from forty to fifty inches. The needed soil was Cecil sandy or Cecil clay loam. It was an ideal crop for small farms because it required small numbers of laborers, close supervision, and it had a high yield per acre. \(88^\text{c} \)

Tobacco may not be planted more than three or four years on the same soil, \(89^\text{d} \) necessitating either a move to new soil or a renewing of the old. Another problem with growing tobacco is that there is an eighteen month period between planting and selling. Thus, the farmer plants again before he knows how much he has received from his previous crop. In 1839, Virginia produced 34.4 per cent of the nation's total; in 1849, 29.4 per cent; and in 1859, 28.4 per cent. \(90^\text{e} \)

The major price movements in the crop were important in Virginia agriculture. The years, 1841, 1842, and 1843 saw large crops and low quality. Western competition hurt Virginia tobacco prices in 1844. The smallest yield in seven years followed in 1845, contrasted by a huge crop in 1846. The English
Corn Laws' repeal caused farmers to raise wheat. The 1848 crop was larger than the one of 1847, but the two were small enough to cause an upward price swing in combination with the small crop of 1849. There were generally high prices in the 1850's until the Panic of 1857 and overproduction in the three years before the War caused a decline.

It is certain that the South had a particular ideology regarding the slavery question, and it, in turn, had an ideology concerning innovation in agriculture based, in part, upon the slavery ideology, in part, upon Southern society, and, in part, upon the basic conservatism of agrarian societies in general. No matter how euphemistic one chooses to be, slavery was based upon white supremacy. The proof is that there were no white slaves in the South and even the poorest white regarded himself as superior to the Negro slave or Negro free man. U. B. Phillips has seen this trait of the Southern mind as clearly as any other historian. He based the solidarity of the South solely upon white supremacy; divorcing it from issues expounded by politicians or from agriculture.

Men have romanticized much of Southern thought and, to be sure, there was some virtue in it, but certain aspects of the Southern mind may be criticized. The attitude of the farmers was compared to a disease by a contemporary observer and "The characteristics of this disease are, a kind of antipathy to every new process in husbandry, a strong aversion to the study of agriculture as a science, an overweening attachment to our own opinions and practices, an extreme backwardness to adopt any
Obviously, there were certain men who did not have this attitude and who recognized the need for solving the problems of Virginia agriculture. The South produced some outstanding reformers, the main early one being John Taylor of Caroline who published the *Arator*, a collection of sixty-one essays dealing with politics and agriculture. He advocated enclosure, the growing of clover and field peas and the use of gypsum, lime, and marl.

Other early reformers were James M. Garrott, Thomas Mann Randolph, Stephen McCormick, Fielding Lewis, Phillip Tabb, John Singleton, William Merriweather, and W. C. Nicholas. Another group of men who were active in the 1840-1860 period were Theodorick McRoberts, T. C. Botts, J. M. Daniels, R. B. Gooch and F. G. Ruffin.

Edmund Ruffin was, by far, the most prominent agriculturist of his day. Ruffin originally lived at Coggin’s Point in Prince George, then moved to "Marlbourne" on the Pamunkey in the winter of 1843-1844. He was a pioneer in the use of marl with which experimented after Taylor's methods had been unsuccessful for him. He also used manure, cow peas, and clover as fertilizer. Attributed with lifting "his section from the nadir of agricultural depression to an abundant prosperity," he was chosen, but declined to accept, as president of the Virginia State Agricultural Society. Later, he accepted the position. In 1854, he was made its commissioner.

He believed the Negro slave could be just as effective in
a diversified system as he could be in a one-crop system as long as the farmers reduced the number they held to an efficient level.

Along with the extensive use of fertilizer, he used a six-field rotation, rotating corn with peas, wheat, mowed clover, grazed clover, wheat, and pasture. As evidence of his success, in 1845, he made 1,977 bushels of wheat on 134 acres of land, and, in 1848, made 5,127 bushels on 254 acres. In 1845, he grew 1,600 bushels of corn on 112 acres and his yield in 1848 was 3,080 bushels of corn from 106 acres.96

Another reformer of this era was John Hartwell Cooke. He approved popular education and prohibition and opposed duelling and slavery. Not only was he opposed to the growing of tobacco because of its effects on the soil, but also he was against it because of its effects on the body. He was unable to free his slaves due to a law preventing emancipation, but he did stop growing tobacco in 1855.97 He wrote a monograph entitled Tobacco in 1860 and was the vice-president of the American Colonization Society.98

Another man, Robert T. Hubard, was interested in reform and change. He advocated the deepening of soils through increasing the depth of plowing. Together with deep plowing, he suggested using farm pen manure, stable manure, and clover. He recommended the practice of using large hills for tobacco be abandoned as well as using human labor when animal and machine labor would be more efficient. Believing that the North understood the economy of labor much better than did the South, he
criticized his native region for failing to realize the value of human labor. A relative of his, J. L. Hubard, was also a reformer, deciding to alter his four crop rotation to a six crop system. He was a critic of tobacco growing, saying that it wore the land out.

Agricultural societies were organized to further reform. The first local society had been the Albemarle Agricultural Society, begun in 1817. After 1849, it had a rival in the Albemarle Hole and Corner Club. There were clubs formed in the 1850's which had only twelve members apiece. Each member had a yearly project and invited the rest of his group over to his farm for a tour. Organizations in the 1840's and 1850's included ones in Henrico, Port Royal, Tappahannock, King William, Orange, Hanover, and Prince George. Societies formed in the present state of West Virginia were advocates of separation. There were also clubs in Charles City, Loudon, and Gloucester with regional clubs in both the Tidewater and Southside portions of the state.

Efforts to form a state agricultural society commenced in 1811 when the Virginia Society for Promoting Agriculture was founded. By the 1850's, there was a rival society located in Petersburg. A scheme proposed by Phillip St. George Cocke to have a three professor department at the University of Virginia was rejected by the Board of Visitors and by the General Assembly even after he agreed to give $20,000 for the project.

The efforts to found and perpetuate a state society are indicators of the interest in the Old Dominion for such an
enterprise. In 1839, there were too few people present to make a quorum. Two years later, an attempt to form a new society failed. Although a movement to revive it failed in 1847-1848, it was reorganized in 1850. Early 1853 found it with less than two hundred members, but the list steadily grew with 2,000 members in 1855 and a phenomenal increase to 10,103 farmers in 1856.108

Another incentive for reform were the fairs. Albemarle again was the pioneer in 1819. The first state fair was held November 1-4 in 1853. Grounds were donated by the Richmond City Council in addition to $6,000. Successful the first year, it was given $20,000 the following year. The two rival state societies held a joint fair in 1858 in Petersburg.103

Publications also aided reform. The Farmer's Register began publication in 1833, ceasing to exist in 1842. The Southern Planter, still operating, began its publication in 1841.104

Governmental action by an Assembly made up of farmers or men with farming interests was slim. The state granted funds for surveys of internal improvements and of minerals, but not of agriculture. A report made by Ruffin and Richardson in 1855 was paid for by the State Agricultural Society.105 The Colonial Fence Law which called for the enclosing of every field by a fence was repealed in part by 1840 but bills for agricultural education failed.106

On March 20, 1841 an act was passed setting up a State Board of Agriculture with an eight man membership made up of
two men from each of the four divisions of the state. It was to meet once a year with three constituting a quorum. It was to hold one session each year. Its duties were to present an annual report, to collect information on soil, to watch home and foreign markets, and to suggest legislation to the General Assembly. Their renumeration was to be \$3.00 for each day while in session plus expenses.

Some of the reforms advocated by these men and their agencies should be discussed to see whether or not they were successful. If they were, then the degree of their implementation may be used as a measure of the reform accomplished in the last two decades of the ante-bellum period.

Different plows were suggested for use on different lands and different lands also required plowing at different depths. Plowing should be done around a hill and never when the soil is wet.

"Belmead" in Powhatan County used a rotation on its bottom land of tobacco and corn the first year, wheat the second year, and clover the third year. Guano, land-plaster, barnyard manure, and straw were also used.

Ruffin suggested the ideal crop rotation as one which would give the largest profit, add to the fertility of the soil, and in which each crop prepared the ground for the crop to follow.

Ruffin advocated the growth of the southern pea which he had begun growing as a manuring crop in 1839. However, he felt that Virginia was too far north for a more productive pea. The pea was used in a small but expanding part of southeast
Virginia for manure. In an essay on the pea, Ruffin credited Virginia with having an improved agriculture for twenty years. The essay was published in 1855. Ruffin stated that clover's usefulness although a recent discovery had been generally accepted.

Some of the most exciting reforms were made in fertilizer. A masterpiece on the subject was written by Edmund Ruffin, entitled an Essay on Calcareous Manures. In this acclaimed work, Ruffin stated five propositions; some soils are naturally rich and others are naturally poor; soils which were originally rich and have been reduced to being poor lack calcareous earth; calcareous earth neutralizes acidity; putrescent manures will not improve this soil until after calcareous manures are applied; calcareous manure is best improvement to be used in lower Virginia.

The use of marl caused land values to increase by seventeen million dollars from 1838 to 1850. It had a double purpose as explained by Ruffin's five propositions; to neutralize soil acidity, and to cause organic manure to be more effective. Many farmers plowed the manure under but Ruffin did not recommend it.

Some specific examples of successes achieved by the use of marl include the eighty-nine farmers in King William county who used marl on a total of 9,370 acres with a $483,020 increase in gain. The average increases in corn and wheat were eight bushels in corn and four bushels of wheat. More efficient application resulted in increases of sixteen bushel of corn and eight bushels of wheat. It was used in thirteen counties in the Tidewater.
Other kinds of fertilizer were lime and guano. According to Olmstead, lime was used at the rate of twenty-five to fifty bushels per acre at a cost of seven and one-fourth to seven and one-half cents per bushel. Land using two hundred weight of guano yielded as much as fifteen bushels of wheat.

R. T. Hubard did not use much Peruvian guano on his Tye River Quarter because the land produced with the application of plaster combined with the growing of clover. However, he did use guano at "Rosny" and "Chelowe" in Buckingham in plant beds at the rate of three hundred pounds per acre and on tobacco land at the rate of two hundred pounds per acre.\textsuperscript{117}

Hubard used progressive methods and kept extensive records which clearly show his profit for each year. His profits at Tye River ranged from a low of $1139.20 in 1843 to a high of $4446 in 1852. This estate contained 2160 acres plus another 133\textfrac{1}{2} acres purchased adjoining it. In 1838, the farm was assessed at eight dollars per acre with improvements worth $1,000.

Farming his home estate, "Rosny," he made a high profit of $3144 in 1851 and a low of $555.23 in 1841. He inherited this farm from his father-in-law in 1836. In 1838, it was assessed at ten dollars an acre with improvements of $3,000. This farm contained 2,651 acres.\textsuperscript{119}

He made a profit each year on both of these farms from 1840 to 1856 at Tye River and from 1840 to 1851 at "Rosny." During the earlier part of each period, he enumerated the gross profits and expenses. Toward the end, he became careless
about writing down expenses. He did separate agricultural expenses from personal expenses, a practice seldom followed in the keeping of farm records.

It has been proven that the reformers were able to achieve successes. The central question in Virginia agriculture in the period should be did the average farmer, the backbone of the state, practice these reforms? Did he significantly change his methods of husbandry and if he did, were enough changes made to affect the agricultural picture of the state?

Since there is a scarcity of records which were kept by small farmers either because they failed to keep them or because they have been destroyed, an inadequate portrayal of Virginia agriculture has been made since too much of it has been based on large plantation records. The yeoman farmer was not the prominent man of his day and in many cases, was not active in the various agricultural societies. To the masses, not the articulate few who made the answers to many questions concerning Virginia agriculture. An approach to the subject, therefore, must be a statistical one.

"...a social group consists of a great mass of men, each an individual human being, and as such a partial variant from the norm. Statistical measurement is the only means of extracting a coherent pattern from the chaos of personal behavior and of discovering which is a typical specimen and which is a sport. Failure to apply such controls has led to much wild and implausible generalizations about social phenomena based upon a handful of striking or well-documented examples."

Paul W. Gates provides some revealing statistics in his book on agriculture, The Farmer's Age. During the 1850's, the
area in improved land increased ten per cent and the number of farmers increased 15,592. Twenty-four counties lost population. The counties which did not undergo losses were those with large farms and plantations where some were being divided. The average size of farms in 1860 was 324 acres but there were more farms larger than five hundred acres than in any other state except Georgia. Yet, a Virginia farm of 324 acres was worth less than a New York farm of 106 acres. While Virginia had more land in farms than did any other state, she ranked fifth in total value of farms, twentieth in average value per acre, eighth in livestock value and seventh in the value of machinery.\footnote{121}

Olmstead reported a speech made in a farmer's convention in 1852, in which the speaker, basing his statistics on the 1840 census, stated that Virginia only farmed twenty-six and one-fourth per cent of her land. The number of acres in improved land was 10,360,135 in Virginia compared with 8,626,619 in Pennsylvania. However, there were 15,792,176 acres of unimproved land compared with only 6,294,728 acres in Pennsylvania. The cash value of Virginia farms was eight dollars per acre and that of Pennsylvania was twenty-five dollars per acre.\footnote{122}

Corn and cattle production increased nine per cent from 1830 to 1860 and the tobacco crop was being restricted more to the Southside.\footnote{123}

One measure of economic conditions is population figures. As Edmund Ruffin stated, "...it is not only the impoverishment of our farmers that acts so injuriously upon the land
and the condition of the county generally. The emigration which this impoverishment induces is itself a tax...."\(^{124}\)

Virginia was one of five states listed as having the least growth in the ten year and sixty year periods before 1850.\(^{125}\) In 1850, there were 388,059 Virginians living outside the state.\(^{126}\)

Breaking the population down by race and status, Virginia ranked first in the number of free colored in 1790 and 1800, second in 1810, 1820, and 1830, third in 1840 and second in 1850. In regard to slaves, statistics were:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Ratio of Slaves to Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1790</td>
<td>293,427</td>
<td>39.2</td>
</tr>
<tr>
<td>1800</td>
<td>345,796</td>
<td>39.2</td>
</tr>
<tr>
<td>1810</td>
<td>392,796</td>
<td>40.2</td>
</tr>
<tr>
<td>1820</td>
<td>425,153</td>
<td>39.9</td>
</tr>
<tr>
<td>1830</td>
<td>469,757</td>
<td>38.7</td>
</tr>
<tr>
<td>1840</td>
<td>449,087</td>
<td>36.2</td>
</tr>
<tr>
<td>1850</td>
<td>472,528</td>
<td>33.2</td>
</tr>
</tbody>
</table>

Virginia ranked first from 1790 to 1850 in the number of total colored population. As far as white population was concerned, the state ranked second in 1790, fourth in 1800, and 1810, third in 1820, fourth in 1830 and 1840 and sixth in 1860.

The decennial increase for the total population of Virginia was:

<table>
<thead>
<tr>
<th>Year</th>
<th>Decennial Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800</td>
<td>17.63</td>
</tr>
<tr>
<td>1810</td>
<td>10.73</td>
</tr>
<tr>
<td>1820</td>
<td>9.31</td>
</tr>
<tr>
<td>1830</td>
<td>13.71</td>
</tr>
<tr>
<td>1840</td>
<td>2.34</td>
</tr>
<tr>
<td>1850</td>
<td>14.67</td>
</tr>
</tbody>
</table>
In the eighteen county sample, only Albemarle, Augusta, Floyd, Nansemond and Russell registered significant increases in population between 1840 and 1850. Appomattox figures were invalid because it was formed from Buckingham in 1845.\textsuperscript{127} 

There was a gradual decrease in the ratio of slaves to total population after 1810, but in 1850 approximately one out of every three Virginians was a slave. This points out the vast importance of the institution in affecting Virginia agriculture even though not all farmers used slave labor.

More importantly, the loss of rank of Virginia in regard to her population had grave results on her political power and consequently, on her ideas regarding slavery, especially when she was forced to take a defensive position regarding the institution.

The per cent of increase of population dropped drastically between 1830 and 1840 indicating emigration, but had recovered somewhat in the next decade.

Since the one-crop system was considered one of the greatest evils of Southern agriculture, a survey of the degree of crop diversification in the eighteen county sample would reveal to some extent reform of Virginia's agriculture, particularly of these crops—

Except for Hanover which grew more peas and beans and hay in 1860 than it had in 1850, the other Tidewater counties showed little change within ten years. Nansemond farmers grew peas and beans in the ratio of about one out of every two in both years.
A more varied pattern occurred in the seven Piedmont counties. Amelia county saw an increase in the number of farmers growing peas and beans. While approximately one-half of the farmers grew them in 1850, most grew them in 1860. About the only changes occurring in Amherst were an increase in peas and beans and in orchards. There was a substantial increase in the number of farmers growing peas and beans in Appomattox. Fauquier grew much more rye and hay in 1860 than in 1850. Halifax, a predominantly tobacco-growing county saw nearly no change. Albemarle, a prosperous county went forward with increases in rye, orchards and hay, but grew more tobacco and fewer peas and beans.

The western part of the state was more diversified in 1850 than the other sections. The greatest difference in Alleghany was an increase in the number of orchards. Augusta was growing clover seed in 1860, an innovation for that county. Russell county experienced a large increase in peas and beans and in orchards. Shenandoah and Floyd showed little change in the ten year period.

There are some conclusions to be drawn about agricultural progress in Virginia in the 1840-1860 period. It would seem that the Craven school has been a bit over zealous in their claims for Virginia's success especially when the state is compared with her northern neighbors. Yet, there were reforms made and the successes of the large slaveholders lead one to believe that a general reform could have been accomplished under the slave system, not withstanding the
many hindrances which "the peculiar institution" caused and which were so admirably pointed out by Genovese and others. While many farmers resisted change, eventually they would have been forced to diversify and mechanize as technology moved forward in order to make the best use of their land and their labor.

Whether or not, without the Civil War, Virginia would have continued to prosper is not within the scope of this paper. It seems an exercise in futility to even discuss the possibility.

Even though some reform did occur in the twenty year period it is quite clear that Virginia had a long way to go in 1860 in taking full benefit from her natural resources and her people.
## Appendix

### Value of Land per Acre in the Eighteen County Sample

<table>
<thead>
<tr>
<th>County</th>
<th>1800</th>
<th>1820</th>
<th>1840</th>
<th>1850</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanover</td>
<td>$1.66</td>
<td>$10.75</td>
<td>$7.70</td>
<td>$8.05</td>
</tr>
<tr>
<td>King and Queen</td>
<td>1.66</td>
<td>5.42</td>
<td>6.68</td>
<td>7.04</td>
</tr>
<tr>
<td>Lancaster</td>
<td>1.65</td>
<td>6.62</td>
<td>7.45</td>
<td>9.69</td>
</tr>
<tr>
<td>Nansemond</td>
<td>1.50</td>
<td>4.63</td>
<td>5.27</td>
<td>5.12</td>
</tr>
<tr>
<td>Surry</td>
<td>1.65</td>
<td>4.81</td>
<td>4.07</td>
<td>4.55</td>
</tr>
<tr>
<td>Westmoreland</td>
<td>1.70</td>
<td>6.98</td>
<td>6.37</td>
<td>7.71</td>
</tr>
<tr>
<td>Appomattox</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>5.24</td>
</tr>
<tr>
<td>Albemarle</td>
<td>1.13</td>
<td>10.75</td>
<td>8.93</td>
<td>10.46</td>
</tr>
<tr>
<td>Amelia</td>
<td>1.36</td>
<td>7.98</td>
<td>6.92</td>
<td>6.05</td>
</tr>
<tr>
<td>Amherst</td>
<td>1.00</td>
<td>7.11</td>
<td>5.25</td>
<td>6.47</td>
</tr>
<tr>
<td>Fauquier</td>
<td>1.19</td>
<td>15.28</td>
<td>11.95</td>
<td>14.70</td>
</tr>
<tr>
<td>Halifax</td>
<td>1.12</td>
<td>7.58</td>
<td>8.10</td>
<td>7.45</td>
</tr>
<tr>
<td>Henry</td>
<td>.90</td>
<td>3.25</td>
<td>3.59</td>
<td>4.25</td>
</tr>
<tr>
<td>Augusta</td>
<td>.355</td>
<td>10.39</td>
<td>8.70</td>
<td>13.37</td>
</tr>
<tr>
<td>Shenandoah</td>
<td>.75</td>
<td>8.06</td>
<td>8.32</td>
<td>10.71</td>
</tr>
<tr>
<td>Floyd</td>
<td>----</td>
<td>----</td>
<td>.49</td>
<td>.88</td>
</tr>
<tr>
<td>Alleghany</td>
<td>----</td>
<td>----</td>
<td>1.52</td>
<td>1.74</td>
</tr>
<tr>
<td>Russell</td>
<td>.05</td>
<td>.24</td>
<td>.49</td>
<td>1.67</td>
</tr>
</tbody>
</table>

*Taken from "A Statement Shewing the Average Value of Lands per Acre..." in Documents Containing Statistics of Virginia..., Richmond, 1851, p.p.*

### Albany Wheat Prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1840</td>
<td>$1.12\frac{1}{2}</td>
</tr>
<tr>
<td>1841</td>
<td>1.00</td>
</tr>
<tr>
<td>1842</td>
<td>1.25</td>
</tr>
<tr>
<td>1843</td>
<td>1.87\frac{1}{2}</td>
</tr>
<tr>
<td>1844</td>
<td>2.00</td>
</tr>
<tr>
<td>1845</td>
<td>.93\frac{1}{2}</td>
</tr>
<tr>
<td>1846</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Taken from a newspaper clipping glued by Robert T. Hubard in his manuscript notebook on farming, UVa Library.**
Footnotes


3 Frederick Law Olmstead, *A Journey in the Seaboard Slave States* (New York, 1856), p. 158. Note: To avoid confusion with the 1904 edition, this will be hereafter cited as Olmstead, 1856.


6 R. T. Hubbard, Manuscript Notebook of Farming Advice, Knowledge, Observations, etc. and kept by R. T. Hubbard for the education of his sons. Hubard Papers, University of Virginia.


8 Kathleen Bruce, "Virginia Agricultural Decline to 1860: A Fallacy," *Agricultural History, VI*, (January, 1932), p. 3.


11 Edgar A. Toppin, "Lecture Given on March 5, 1969 on Americans from Africa."
13. Ibid., p. 125.
17. Ibid. pp. 43, 46.
19. Ibid., p. 276.
22. Ibid. p. 106.
25. Ibid. p. 401.
29. Ibid., p. 402.
34. Conrad, pp. 67-68.
36. Wendell Holmes Stephenson, Isaac Franklin: Slave Trader and Planter of the Old South (University, La., 1938), pp. 24, 67, 228.
37. Phillips, American Negro Slavery, p. 370; Smith, p. 64.
40. Smith, p. 64. Note: Smith disagrees with this argument.
41. Conrad, p. 78.
43. Ibid., pp. 663, 665, 667, 677.
44. Ibid., pp. 673-675.
45. Bancroft, pp. 158, 405.
47. Scarborough, pp. 67-73.
48. Olmstead, 1856, p. 46.
49. Scarborough, pp. 10, 55.
50. Ibid. p. 5.
51. Hubard, Notebook on Farming
52. R. T. Hubard, Rosny Agricultural Memoranda, 1836-1853. Hubard Papers, University of Virginia.


77 Genovese, pp. 55, 60.

78 Olmstead, pp. 50-51.

79 Genovese, p. 57.

80 Craven, Soil Exhaustion, p. 152.

81 Hubard, Notebook on Farming.

82 Craven, Soil Exhaustion, p. 152.

83 Olmstead, p. 45.

84 Hubard, Notebook on Farming.


87 Gates, p. 100.


89 Gates, p. 100.

90 Robert, 135.

91 Ibid., pp. 148-151.


95 Ibid., pp. 308-309.
Craven, Ruffin, pp. 58-60, 73, 83-90, 140.

Phillip A. Bruce, History of the University of Virginia (New York, 1920), I, 158-163.


R. T. Hubard, Notebook on Farming

J. L. Hubard, Account Book, 1860-1872, Hubard Papers, University of Virginia.


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Hubard, Notebook on Farming


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Ruffin, Essays and Notes on Agriculture, pp. 345, 348-349, 369-370, 376, 393.

Ibid. p. 125.

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Hubard, Notebook on Farming.

Hubard, Tye River Memoranda,
119 Hubard, Rosny Agricultural Memoranda


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122 Olmstead, 1856, pp. 166-168, 170.


125 DeBow, Compendium, p. 171.

126 Graven, Soil Exhaustion, p. 123.

127 DeBow, Compendium, pp. 46, 65, 82, 85, 98, 320-329.

128 U. S. Census, 1850 and 1860.
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DeBow, J. D. B., A Statistical View of the United States... being a Compendium of the Seventh Census.... Washington, 1854.

A concise way of gaining needed statistics. Well-arranged.

Documents Containing Statistics of Virginia ordered to be printed by the State Convention sitting in the City of Richmond. Richmond, 1851.

Land Values per acre and per cent of increase and decrease of population by counties.

Hubard Papers, Alderman Library, University of Virginia

A substantial collection of items dealing with the operation of large plantations as well as data on the Hubard family. The farm records were well kept and easy to decipher. An excellent source for anyone working on history of this period.


Slave insurance.


Interesting for his impressions of Southern life. Has an anti-slavery bias.


Section in volume XXII is not helpful. A good part in volume XXIII on how farming was done in the Tidewater.


Essays by Ruffin and others. Good essays on the southern pea and on clover. Survey of Tidewater attitudes and practices.


Very little information by states.


Good for finding other sources of statistics.


Excellent source. Each farmer asked about forty-three questions.


Most figures deal with 1910. Not enough by states.


Acts setting up State Board of Agriculture, outlining its duties and remuneration.


Valuable for its opinions. Very subjective.
Secondary Sources


Deals mainly with political issues and sectional feeling.


Some information on hiring and prices.


Very disappointing. On the Bruce papers.


A basic source for this paper.


Short life of John Hartwell Cocke.


Only deals with early history. Before this period.


Deals with the profitability of slavery.


Scholarly.


Definitive study of outstanding agriculturalist.
Craven, Avery O. *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1803-1860.* Urbana: University of Illinois Press, 1926.

Classic work in agricultural history.


Good information on agriculture and ideology.


Best secondary source on the subject.


Very sound book.


Controversial and interesting. Must be dealt with.

Govan, Thomas P. "Was the Old South Different?" *Journal of Southern History,* XXI (November, 1955), 447-455.

Only sectional difference was slavery. Planter was capitalistic.


Classic and massive in range.


Does not even mention the census returns as being valuable.

A few useful statements regarding livestock and capital.


Lists all master's theses and doctorates done in agricultural history. Very useful.

Peterson, Arthur G. "Notes and Documents Wheat and Corn Prices Received by Producers in Virginia, 1801-1928." Journal of Economic and Business History, II (February 1930), 382-391.

Has a chart of all wheat and corn prices.


Introduction to any study of slavery. Based too much on large plantations but did a thorough job and understood the system.


Good statement of Phillips' thesis on slavery and white supremacy.


Leaves little to be said on the subject.


Sympathetic view of the overseer. Heavily documented.


Good at explaining how profit should be counted.

Profit and loss section is helpful. Also some good bibliography.


Not much information here on Virginia.


Toppin, Edgar A. Lecture Given on March 5, 1969 on Americans from Africa.

Slave-holding statistics.


Good on agricultural societies.


Straightforward and documented.