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AGRICULTURE ON THE BURROUGH PLANTATION

1856 - 1865

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by: Barry Mackintosh

MACKINTOSH: AGRICULTURE ON THE BURROUGHS PLANTATION

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**UNITED STATES
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**AGRICULTURE ON THE BURROUGHS PLANTATION
1856-1865**

by

**Barry Mackintosh
Historian**

December 13, 1968

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TO:

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*Approved by WBSO
2/17/69*

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I. INTRODUCTION

In order to accurately develop the living historical farm concept at Booker T. Washington National Monument, it is essential that we discover as much as possible about mid-nineteenth century agricultural practice as it would have been applied on the Burroughs plantation. The purpose of this study is not to compile an academic body of agricultural history data, but to collect practical farming information which will be useful in recreating the plantation's operation today. We are concerned with specifics: What did they raise here? How did they raise it? What did they do with it?

We are particularly fortunate to have two documents: the 1860 Census of Franklin County (Schedule 4: Productions of Agriculture), which tells us the general kinds and quantities of crops and livestock raised by James Burroughs during one year, and the plantation inventory, listing the farm implements and other personal property (including slaves) of Burroughs upon his death in 1861. While other crops may possibly have been raised on the plantation in other years and other implements used, we are safe in sticking pretty much to the items listed in these documents in our research. They are highly valuable starting points.

Beyond here, matters rapidly become less cut-and-dried, less certain. Nothing has been found to tell us exactly how farming was conducted on this particular plantation, in this particular community, or

even in this particular county during the particular years the Burroughs family and their slaves farmed this land. Thus, most of the conclusions we will attempt to make about agricultural practice on the Burroughs plantation will necessarily be arrived at through deduction from a study of sources relating to the general area of middle and Piedmont Virginia in the general period of the mid-nineteenth century. This is not entirely unfortunate, for a secondary purpose of this living historical farm (beyond its relationship with Booker T. Washington) is to portray a typical Piedmont tobacco plantation as a chapter in our agricultural and social history.

A survey of agricultural publications and journals of this period, including the Farmer's Register, the Southern Planter, and the writings of Edmund Ruffin, indicates that many were very much interested in experimentation, "scientific" farming, and the newest and most improved methods of operation. However, a list of newspapers and periodicals received at the back-country Hales Ford Post Office in 1861 contains no agricultural journals or similar items which might have kept the local farmers up with the latest practices. Despite numerous advances in farm machinery, Gray states that "the great majority of small farmers and, indeed, many of the middle-class planters were very slow to adopt improved implements."¹ The implements listed in the plantation inventory, compared with those discussed in contemporary journals, definitely bear

¹Lewis C. Gray, History of Agriculture in the Southern United States to 1860 (Washington, 1933), II, 794.

this out in the case of the Burroughs. In arriving at plausible conclusions about methods the Burroughs may have used to grow their crops, we will assume that they were not in the front ranks of agricultural reform.

II. THE BURROUGHS PLANTATION: AN OVERVIEW

In 1850, James Burroughs purchased 177 acres of land near Hales Ford, Franklin County, Virginia. Four years later he added another thirty acres, completing the 207 acre plantation upon which Booker T. Washington lived in slavery. James died in 1861, and his widow and remaining children continued on the land until sometime between 1865 and 1870. Our primary concern is with the years 1856 to 1865--the years of Washington's birth and early boyhood on the Burroughs plantation.

The 1860 Census lists the following data concerning the Burroughs plantation and its productions during the year ending June 1, 1860:²

Improved land: 107 acres
Unimproved land: 100 acres
Cash value of land: \$3105

Value of farming implements and machinery: \$75

Livestock, June 1, 1860: 4 horses
4 milch cows
5 other cattle
12 sheep
16 swine
(No asses, mules, or working oxen.)

Cash value of livestock: \$535
Value of animals slaughtered: \$120

Crops: 2000 lb. tobacco
450 bu. Indian corn
250 bu. wheat
100 bu. oats
20 bu. sweet potatoes
5 bu. Irish potatoes
30 lb. wool

²1860 Census, Schedule 4: Productions of Agriculture, Northeast Division, Franklin County, Va., p. 415.

1 bu. peas and beans
75 lb. butter
10 lb. flax
2 bu. flax seed

(No rye, rice, ginned cotton, barley, buckwheat, orchard products, wine, market garden produce, cheese, hay, clover seed, grass seed, hops, hemp, silk, maple sugar, cane sugar, molasses, beeswax, or honey--these columns left blank on the Census form.)

A crop not raised on the Burroughs plantation in 1860 but which was raised during the war years was sorghum cane. The cane was generally used as feed for stock and the syrup to supplement the diet of slaves.³ Washington recalled that during the war "a kind of black molasses was used instead of sugar," and that his greatest treat as a slave was the weekly offering of molasses from the "big house."

The Census placed Burroughs in about the middle of the local farmers in terms of improved acreage, value of land, and production of tobacco--the universal cash crop of the region. In the past, we have often spoken of the Burroughs plantation as being a particularly small one. It was a small one, but not so small as it appears when improperly compared to the Deep South cotton, cane, and rice domains frequently associated with the term "plantation." Of the Southern staples, tobacco was most characteristically produced on small units. This was determined by the limited acreage which one hand could cultivate, the close supervision required for such intensive cultivation, and the high value of the yield per acre. A good hand could effectively cultivate no more than two or three acres of tobacco (compared with eight to ten of cotton), at an average yield

³Gray, II, 629.

of 660 pounds per acre.⁴ The typical plantation in the Virginia-North Carolina tobacco district contained only five and a half acres in tobacco, which required the work of two hands.⁵ Since the Burroughs had two adult male fieldhands in 1861 and produced 2000 pounds of tobacco the year before, either their acreage or their yield during the Census year was something less than the overall average, though not so much so as to make them unusually small. Probably they had between three and five acres in tobacco.

The two crops next in prominence on the Burroughs plantation were corn and wheat. Gray states that in piedmont areas, good farmers made from thirty-five to fifty bushels of corn per acre.⁶ Assuming Burroughs to have been on the low side, he must have raised ten to thirteen acres of corn in the Census year. Wheat probably yielded something under fifteen bushels per acre,⁷ so Burroughs likely planted somewhere between twenty and twenty-five acres in wheat.

Sweet potatoes were an important subsistence crop, both for the slaves and as a supplement for corn in fattening stock. Washington's recollection in Up From Slavery about how he would "often come into

⁴Joseph C. Robert, The Tobacco Kingdom: Plantation, Market, and Factory in Virginia and North Carolina, 1800-1860 (Durham, 1938), pp. 17-18, 249.

⁵Clement Eaton, A History of the Old South (New York, 1949), p. 232.

⁶II, 815-816.

⁷Ibid., p. 820.

possession of one or two" illustrates their significance in his young life. An acre ordinarily yielded from 100 to 200 bushels of sweet potatoes,⁸ so Burroughs must have had between one-fifth and one-tenth of an acre in this crop.

In recreating a portion of the Burroughs plantation as a living historical farm, it would be impractical to attempt to grow the same quantities of crops originally planted by the Burroughs. The purpose of determining the acreages devoted to some of the principal crops is simply to gain an idea of the relative amount of space consumed by each. In this way we will not end up with a disproportionate allotment of land occupied by any one crop, and should be able to give a fairly accurate (though scaled down) representation of the way things were.

⁸Gray, II, 827.

III. TOBACCO

A. Varieties. Tobacco was the cash crop on the Burroughs plantation, as it was throughout central Virginia and northern North Carolina in 1860. By this time, "bright" tobacco had been discovered and was being grown on the thin, sandy, grayish soil of Caswell County, North Carolina and Pittsylvania County, Virginia; but it was limited to those two counties until after the Civil War.⁹ Even then, bright tobacco culture never spread into northern Franklin County, where the heavy clayey soil was more suitable for the dark leaf variety.¹⁰ Therefore, the Burroughs would have raised dark tobacco, probably one of the Oronoko or Pryor strains--the two most common for manufacturing.¹¹

B. Sowing. The tiny tobacco seed could not be sown directly in the field, but had to be laid in a carefully prepared plant bed. The site for the bed was normally chosen on virgin soil on a sunny slope, often cleared out of the woods, preferably near a stream for ease in watering. The preferred soil was fresh loam with a slight mixture of sand. Several beds in different locations provided a degree of insurance in case one proved unsuccessful. A total of 600 to 1000 square yards would

⁹Robert, Tobacco Kingdom, p. 49; Milton Whitney and Marcus L. Floyd, "Growth of the Tobacco Industry," Yearbook of the U. S. Department of Agriculture, 1899 (Washington, 1900), p. 430.

¹⁰Charles W. Mooney et al., "Soil Survey of the Bedford Area, Virginia," Report on Field Operations of the Bureau of Soils (Washington, 1901), p. 244; W. W. Garner et al., "History and Status of Tobacco Culture," U. S. Department of Agriculture Yearbook, 1922 (Washington, 1923), pp. 406, 410. (Some bright tobacco is grown in this area today.)

¹¹Gray, II, 769.

be needed for an eventual five acre tobacco lot.¹²

In January, February, or early March the beds were readied for the seed. Parallel poles were laid down two to four feet apart for skids. Then wood was piled on and burned over each area for an hour or so before being pulled with long hooked poles to other parts of the bed. This was done to kill any competing seeds or sprouts in the earth, though some believed the fire also served as a fertilizer. After the burning, a "breaking plow" was sometimes used to tear up the blackened area, followed by the pulverizing action of the grubbing hoe.¹³

The sowing itself probably took place near the first of March.¹⁴ Four tablespoons of the seed were enough for a hundred square yards of plant bed. To facilitate even distribution, the seed was mixed with sand, ashes, plaster of paris, or some other substance. After sowing, the seeds were lightly coated with finely prepared soil, and the bed patted down with a beard or trod underfoot by the slaves. Then a strong fertilizer was applied as a top dressing: guano (a commercial nitrate), plaster, and henhouse or stable manure were among those used. Finally, rows of bushes or brush were laid on the bed to protect against frost, arranged so that the sun could filter through during the warm hours of

¹²Robert, Tobacco Kingdom, p. 33; E. N. Berkeley, Why Is Virginia Poor? (Richmond, 1884), p. 22.

¹³Robert, Tobacco Kingdom, pp. 33-34; Berkeley, p. 23.

¹⁴Andrew Steinmetz, Tobacco: Its History, Cultivation, Manufacture and Adulterations (London, 1857), p. 31.

the day.¹⁵ (The cloth in use today for this purpose was not used until near the end of the century.)¹⁶ The brush was removed when the time for frost was past and the plants had appeared.

Unusually dry weather required artificial watering of the plant bed, often with a bucket brigade from a nearby stream. This was also the period when the "fly," now known as the tobacco flea beetle, hit the young plants. The usual remedy was to sprinkle the bed with ashes or newly-slaked lime.¹⁷

C. Transplanting. The field to be planted in tobacco, if new land, had to be cleared, raked, plowed, and perhaps grubbed by hand. The Burroughs would have used their grubbing hoes here, and then their hilling hoes to raise a mound for each plant. Planting in hills was done to keep the plants from "drowning" (though some claimed this was unnecessary).¹⁸ The hilling hoe had a large blade, six to eight inches by ten to twelve inches. Its user chopped up the earth with it, then placed his foot where the hill was to go and used the hoe to pile up earth around his leg nearly to the knees. Then he withdrew his leg and gave the mound a pat with the flat of his hoe.¹⁹ The hills in a row averaged from three

¹⁵Robert, Tobacco Kingdom, p. 34; Gray, II, 775; Berkeley, p. 23.

¹⁶Joseph C. Robert, The Story of Tobacco In America (New York, 1949), p. 184.

¹⁷Gray, II, 775.

¹⁸Berkeley, p. 24.

¹⁹E. R. Billings, Tobacco: Its History, Varieties, Culture, Manu-

to three and a half feet apart, with a bit more space between rows in order that the plow might be used as long as possible. Between four and five thousand hills were made per acre; planters commonly referred to their crop as so many thousand plants, rather than so many acres.²⁰

If it were not new land, the tobacco field was fertilized, generally with plaster or guano. (Cattle panning on tobacco ground had been tried, but was found to produce an inferior leaf.)²¹

The transplanting, called "pitching," came in May or June, when sufficient rain had fallen to reduce the danger to the plants.

When the rain came, all available hands must work at the transplanting. Some drew the plants carefully from their beds; others carried them in baskets through the fields, dropping one at each hill; and the rest of the gang set them in the ground, making a little hole in the hill, inserting the roots of the seedlings and lightly packing the mud around them. The return of dry weather would suspend this work, and call for gentle scraping of the hills to break the crusts of mud. Another rain and another would bring transplanting again, including the replacement of dead plants in the previous plantings.²²

D. Cultivation. When the roots of the "pitched" plants took firm hold, the tobacco got its first working, known as the "weeding out" or

facture and Commerce (Hartford, 1875), pp. 431-432. Billings says that hills were "later" made by cross-plowing, so the Burroughs may have tried the newer method if it were practiced by their time.

²⁰Robert, Tobacco Kingdom, p. 35.

²¹Ibid., pp. 30-31.

²²U. B. Phillips, Life and Labor in the Old South (Boston, 1935), p. 112.

"trimming down." Plow and hoe were used almost continuously from now on, and the Burroughs may have supplemented these implements with their harrow.²³

"Priming"--removing several of the bottom leaves made dirty and bruised from working--was a subject for debate, some claiming that these leaves took nourishment from the better portion of the plant, others claiming that this time-consuming practice bled the plant. The Burroughs may have primed just before the whole plant was ready for cutting, selling the stripped-off leaves as "lugs."

"Topping" was done about six weeks after transplanting, in order to keep the plants from going to seed and to allow fuller development of the remaining leaves. The top of the plant was pinched off by specially trained slaves when it began to bud, usually with eight or ten leaves allowed to remain. A contemporary writer stated that twelve leaves should be left at the most.²⁴ For chewing tobacco such as the Burroughs produced, the plant was often topped higher, sometimes to as many as sixteen leaves.²⁵

Following topping, the plant sends out sprouts called "suckers" from the junctions of leaves and stalk. These must be removed before

²³Robert, Tobacco Kingdom, p. 36.

²⁴Steinmetz, p. 33.

²⁵Robert, Tobacco Kingdom, p. 37.

they sap the nutriment from the leaves. Next came the frequent task of worming--the battle against the green horn worm. Their several onslaughts were called "gluts," and every plant had to be examined for them. Turkeys were often called into the field to aid in the kill.

Enemies against which the planter was defenseless (and which therefore will require no action beyond description in our living historical farm) were disease, flood, drought, wind, and hail. Leaf diseases were generally called "firing." The threat of an early frost might force harvest before the leaf was entirely ripe, and an unexpected frost would ruin the whole crop. The danger of frost was particularly great if a spring drought had delayed transplanting.

E. Harvesting and Curing. When the leaves were ripe--normally in late August or early September--the plant stalk was split down vertically with a knife, and the stalk then cut off near the ground below the split. Usually several cuttings were necessary in each field, as the plants would vary in ripeness. The cut plants were left in the field until they had wilted to the point where they could be moved without breaking. They were then hung by their splits upside down on sticks, or laths, and the laths were placed across poles in the tobacco barns. (In some sections, the plants were first left on outside scaffolds exposed to the sun and air for several days, but this was probably not done in this area.)²⁶

²⁶Robert, Tobacco Kingdom, p. 38.

Three main types of curing were practiced in the 1850's and 1860's: air, fire--both with wood and charcoal, and flue. In determining the method used on the Burroughs plantation, we may dismiss air curing, which in Virginia was centered around Louisa County,²⁷ and flue curing, which was not widely adopted until after the Civil War and even then was done chiefly in the bright tobacco region.²⁸ (There was no evidence of flues on the remains of the original Burroughs barns.) Fire curing was by far the most common method in the dark tobacco area of middle Virginia.²⁹ So the Burroughs would have cured their tobacco with fire--and, almost certainly, with wood fire.

Since we have long interpreted the curing here as having been done with charcoal (and since a charcoal-making exhibit is currently planned for the living historical farm), some explanation of this conclusion is obviously in order. Charcoal was indeed used for curing tobacco at this time, but to a much lesser extent. Numerous accounts, both contemporary and later, discuss fire curing only as being done with wood.³⁰ Others, by their failure to mention the type of fuel in firing, may be assumed to be describing wood curing; the use of charcoal would probably be

²⁷Robert, Tobacco Kingdom, p. 40.

²⁸Ibid., p. 46; Garner, p. 408; Whitney, p. 429; The Tobacco Institute, Virginia and Tobacco (Washington, 1960), p. 26.

²⁹Gray, II, 777.

³⁰See Robert L. DeCoin, History and Cultivation of Cotton and Tobacco (London, 1864), p. 283; Mrs. H. P. Handy, "On the Tobacco Plantation" (Article at Lynchburg Public Library, n.d. but between 1865-1869), p. 653; A. M. and J. Ferguson, All About Tobacco (Colombo, Ceylon, 1889), pp. 18-19.

specified if it were used.³¹ When charcoal was employed, it was almost exclusively for curing bright tobacco in the period before flues came into common use (bright tobacco requiring a minimum of smoke).³² A pair of letters to the Southern Planter also recommended the use of charcoal in curing for its strong regular heat, absence of smoke smell or taste imparted to the tobacco (though others desired this), and safety in the barn; but the suggestions themselves indicate that curing with charcoal was not common practice.³³

For their fire curing, the Burroughs would have selected oak, hickory, or other hard, dry woods that burned slowly and smoked little.³⁴ Old stumps, rotten wood, and bark were sometimes used.³⁵ The plants were first allowed to yellow in the barn; then small fires were started on the dirt floor and kept burning with a gradual increase of heat over a period of days. One writer made the flat statement of ten days,³⁶ but the length of time for firing varied with the individual farmer and the

³¹Berkeley, p. 29; Ferguson, pp. 29, 163; George T. McWess et al., "Improvement of Virginia Fire-Cured Tobacco," Bureau of Soils Bulletin No. 46 (Washington, 1907), pp. 37-38.

³²Southern Planter, XIX (1859), 492; B. W. Arnold, Jr., History of the Tobacco Industry in Virginia from 1860 to 1894 (Baltimore, 1897), p. 34; Whitney, p. 429; Garner, p. 408; Nannie May Tilley, The Bright Tobacco Industry, 1860-1929 (Chapel Hill, N. C., 1948), pp. 27-28, 63-64; Virginia and Tobacco, p. 26.

³³Southern Planter, III (1843), 230; XVIII (1858), 565.

³⁴DeCain, p. 283; Handy, p. 653.

³⁵Ferguson, pp. 18-19; Interview with Grover Robertson, December 1964.

³⁶Berkeley, p. 29.

weather, high humidity requiring a greater application of heat. During particularly damp days throughout the fall and early winter, the fires would have to be rekindled.

F. Striking and Marketing. The curing process made the leaves too brittle for further handling, and they were not normally taken down, or "struck," until after a wet day the following spring, when they had come in proper "case," i.e., had absorbed enough moisture to be handled without breaking. Then the laths were lifted down, and the plants removed and bulked in piles to retain their moisture during the slow stripping process. The leaves were usually stripped from the stalks during rainy days when outside work was impossible, and were simultaneously sorted into three or more different qualities. In performing this operation, the slaves sometimes used lard or grease to keep their fingers from becoming gummy.³⁷ The sorted leaves were bound into small bundles or "hands" of from four to six leaves each,³⁸ and then might be piled in bulk again to await packing or "prizing" into hogsheds.

The hogsheds, equipped for rolling tobacco to market drawn by horse or mule, has been a key ingredient in the interpretation of the Burroughs plantation since the monument was opened to the public. Unfortunately, the Burroughs never used this picturesque conveyance, at least during the period of our concern. In 1852, Samuel Mordecai had already placed

³⁷Southern Planter, XX (1860), 40, 89.

³⁸Robert, Tobacco Kingdom, p. 47.

tobacco rolling in the category of ancient history:

The primitive mode of bringing tobacco to market was curious: road wagons were scarce, roads bad, and transportation high. The hogshead of tobacco was actually rolled to market on its own periphery, through mud and mire and stream.

He continued by describing the method in which the hogshead had been rigged for rolling--all in the past tense to an unfamiliar audience.³⁹

Robert states that "by the first of the nineteenth century, when finer distinctions in quality were evidenced, buyers showed marked objections to rolled tobacco. As a result, the colorful practice of rolling, widespread the last of the eighteenth century, rapidly dwindled...."⁴⁰ A book of 1859 says that tobacco was rolled "fifty years ago."⁴¹ An illustration of tobacco rolling in an article published just after the Civil War is captioned "Manner of carrying tobacco to market forty years ago."⁴² Phillips remarks that tobacco rolling was done "when wagons were few"⁴³--certainly not the case with the Burroughs, who had three wagons in 1861.

Not only did the Burroughs not roll their tobacco to market in hogsheads, they did not use hogsheads for their tobacco at all. With the expansion of tobacco manufacturing into the country districts, the

³⁹Southern Planter, XII (1852), 364.

⁴⁰Tobacco Kingdom, p. 54.

⁴¹F. W. Fairholt, Tobacco: Its History and Associations (London, 1859), p. 302.

⁴²Handy, p. 655.

⁴³p. 143.

planters within easy distance could deliver their tobacco loose to these manufacturers without the prizing required for compactness and preservation on long distance shipments.⁴⁴ "Small manufacturers in certain sections, like Henry County and its neighbors, in the 1940's and 1850's took virtually all of the leaf grown around them, buying it loose and selling much of the manufactured product in the Southern and Western back country."⁴⁵ In 1850 there were five tobacco factories in Franklin County (a neighbor of Henry), and by 1860 there were five factories in the local Gill's Creek District of the county, one of which was only two and a half miles from the Burroughs plantation.⁴⁶ The Burroughs undoubtedly carried their tobacco loose to these factories by wagon. (A final note on the subject: no tobacco hogsheads appear on the plantation inventory.)⁴⁷

G. Manufacturing. The local factories, like ninety-eight percent of the tobacco factories of Virginia and North Carolina in 1860,⁴⁸

⁴⁴Robert, Tobacco Kingdom, p. 102.

⁴⁵Ibid., p. 176.

⁴⁶1850 and 1860 Censuses, Schedule 5: Products of Industry, Northeast Division, Franklin County, Va.

⁴⁷Peter and Grover Robertson recalled that a "prize tree" (into which a lever was inserted for packing tobacco into hogsheads) stood on the plantation during their early years here around the turn of the century. From this it was assumed that the Burroughs used hogsheads. Actually, this prize tree must have been used by the tenants who intermittently farmed the land between 1870 and 1890: the local tobacco factories all disappeared before and during this period, and the farmers would have had to prize their tobacco for more distant shipment.

⁴⁸Robert, Tobacco Kingdom, p. 170.

manufactured plug and twist chewing tobacco. The majority of this product was prepared from low-grade and average tobacco⁴⁹--evidence that the Burroughs probably topped their plants high and were not excessively concerned with a prime-quality leaf.

While beyond the scope of the living historical farm, a brief description of the manufacturing process may be in order, especially since it was conducted so close by within the community. Slaves were hired from their owners by the factories to perform this seasonal labor. The four basic operations were as follows:⁵⁰

1. Stemming. After moistening the leaves to make them pliable, the stemmers ripped the mid-vein from each leaf, after which the leaves were again dried. The stems were used in the manufacture of snuff--a fading by-product by 1860.

2. Flavoring. Dippers soaked the stemmed leaves in a black, syrupy compound of licorice and sugar, then placed them in the open air to dry. "To obtain a final bouquet the factorymaster prepared a fragrant concoction of rum, sweet oil, and sundry spices, which some chosen worker sprinkled on the leaves."⁵¹ Flavoring formulas varied with the manufacturer.

⁴⁹Robert, Tobacco Kingdom, p. 114.

⁵⁰From Robert, The Story of Tobacco In America, pp. 83-85.

⁵¹Ibid., p. 84.

3. Lumpmaking. Lumpmakers, seated at benches, molded the flavored leaves into rectangular plugs of a fixed size and wrapped each in a choice unflavored leaf. Trimming knives and scales were used to insure correct weight--from a few ounces to over a pound, depending upon the brand. To make twists instead of plugs, workers fashioned the leaves into the standard chewing twist.

4. Prizing. After the plugs were inspected, they were ready to be pressed. "Prizers or scrowmen, as strong as the lumpers were nimble, placed the lumps in multi-divided wooden 'shapes,' or pattern-boxes and, heaving and chanting as they worked, swung giant wingscrew presses with tremendous impact, forcing the plugs into proper shape and firmness."⁵²

The plugs were then packed into boxes and shipped to markets for sale. A look through the Lynchburg Virginian newspaper of the 1850's reveals many commission merchants advertising for the receipt of manufactured tobacco and other produce--likely markets for the production of the local tobacco factories around the Burroughs plantation.

⁵²Robert, The Story of Tobacco In America, p. 85.

IV. SUBSISTENCE CROPS AND LIVESTOCK

A. Corn. Corn was an important crop on the Burroughs plantation, serving as a source of food for master, slave, and livestock. White corn was the preferred type in the South, the two main varieties being "gourd seed" and flint.⁵³

The editor of the Southern Planter presented an essay on corn culture in 1859⁵⁴ which, for reasons mentioned earlier, probably described a more advanced state of practice than that reached by the Burroughs. (Many of those who did receive this publication could not have followed this exact procedure; if they all did, there would have been no point in the editor expounding his views on the subject.) Nevertheless, the essay is the best approximation we have at present of the way corn was raised on the Burroughs plantation, with further assistance supplied by Gray.⁵⁵

1. Planting. The Southern Planter recommended that the cornfield be plowed in the winter, after the first freeze and thaw. In heavy clay soil, the farmer was advised to plow no deeper than six inches.

It was frequent practice to plant the corn too early, before the

⁵³Gray, II, 815.

⁵⁴XIX, 258-264.

⁵⁵II, 813-815.

soil became warm enough. Some tried planting in early April, but the first ten days in May were preferable. The proper time was thought by many to be when the dogwood was in full bloom, and this obviously depended upon the weather and the locality.

The Southern Planter stated that the best method of planting corn was drilling it in rows. There was increasing recognition of the desirability of using plenty of seed, and depending upon thinning to reduce the crop to a stand:

One for the blackbird,
One for the crow,
One for the cutworm
And two to grow.⁵⁶

The number of stalks left to the hill varied from one to three, according to the fertility of the land and the distances of planting.

2. Fertilizing. Fertilizing corn was more common than in the case of any other crop except tobacco. The Southern Planter recommended the use of plaster of paris, applied in either of three ways:

a. Half mixed with ashes and dropped in the hill with the corn; the remainder sowed broadcast at the last plowing;

b. All mixed with ashes and dropped in the hill with the corn;

c. All sowed broadcast.

Gray states that barnyard manure was generally applied to the hill or

⁵⁶Gray, II, 814.

drill, and that peas were planted in a furrow near the corn row or broadcast at the last plowing.

3. Cultivation. The Southern Planter suggested that the farmer go over the field with a "common triangular harrow," removing the front and rear teeth so as not to disturb the corn. Next, the use of a double shovel plow was recommended, twice to the row, followed by one use of a cultivator. The corn should be gone over at least once with a hoe, and an effort should be made to keep the surface level. The field should be worked as often as time and weather would allow, with more working during dry periods. Many farmers believed in one deep cultivation in the early stages of the crop, followed by shallow cultivation thereafter.

4. Harvest. Although there were protests against the practice, it appears that the Burroughs were among those who pulled the blades from the cornstalk prior to harvest for use as fodder.⁵⁷

In areas where fodder was pulled there were several methods for the subsequent harvesting. Some snapped the ears from standing stalks, and either shucked them at the time or hauled them unshucked to the crib; others cut the stalks and shocked them, subsequently shucking the ears; still others hauled the stalks to the barn and carried on the shucking there.⁵⁸

The Southern Planter stated that the shocks of cut corn should be bound tightly around their tops with a band of rye straw, white oak split, or

⁵⁷See item in inventory: "1 Lot blade fodder."

⁵⁸Gray, II, 815.

wisp of fox tail.

Some farmers selected seed for the next year's crop from the double-eared stalks in the field. The Southern Planter advised against this, noting that the double-eared plants were smaller and could not be planted so close together. In their view, it was simpler to select the seed in the crib during the winter.

The old method of shelling the corn by beating it out with long poles on scaffolds made of rails was still widespread. Patent corn shellers were coming into use, but the Burroughs inventory does not list one. Many ground the corn and cobs together for feeding purposes.

B. Wheat and Oats. "Wheat had none of tobacco's limitations, for it required less attention than any other crop in our list," says Phillips.⁵⁹ "It was, and is, merely seeded and harvested with no work whatever demanded in the interim." The main problem came in dealing with various insects and diseases: the Hessian fly, the jointworm, smut, and rust. To prevent smut, it was suggested that the seed be soaked for six to eight hours in strong brine, then dried in newly-slaked lime.⁶⁰ However, most farmers just cleaned out the seed and sowed it.⁶¹ Winter wheat was chiefly grown, both white and red, bearded and nonbearded.

⁵⁹P. 127.

⁶⁰Southern Planter, IX (1849), 197.

⁶¹Ibid., I (1850), 354.

Rust and the ravages of the fly led to the introduction of many new foreign varieties. Popular types were the "purple straw," "red bearded," and white "turkey wheat."⁶²

1. Sowing. Wheat was normally sown in October, on land just harvested in corn or tobacco. The more progressive farmers prepared the soil with plow and harrow, but the Burroughs were probably among the many who sowed the seed broadcast without preparation. Some covered with the plow, while others used a harrow. Small quantities, often not over three-quarters of a bushel, were sown.⁶³

2. Harvest. In June, the Burroughs would have used their cradles to harvest their wheat. "Agricultural reformers attempted to induce Virginia farmers to abandon the practice of having the cradler 'handle' the wheat as it was cut--that is, catch the wheat in the left hand with each sweep of the cradle--and urged the adoption of the Northern method of laying it in a swath, to be gathered up by the rakers and binders," says Gray;⁶⁴ the Burroughs probably did it the old way. The cradler averaged two and a half acres per day. After cutting, some bound the straw by hand and put it up in shocks, while others first put the wheat into stooks of eight or ten sheaves for a few days before removing them to larger shocks.⁶⁵

⁶²Gray, II, 819.

⁶³Ibid., 818.

⁶⁴Ibid.

⁶⁵Ibid.

3. Threshing. The Burroughs apparently owned no threshing machine. Numerous inventions for this purpose were in use by their time, and it is likely that they either borrowed or rented one from one of their larger neighbors or patronized itinerant threshers. Following the threshing, they would have used their fan mill to clean the chaff from the grain.

Oats were raised in a similar manner, but were normally planted in March.⁶⁶ Their main use was as feed for horses.

C. Rotation. The principle of crop rotation had become widely accepted in the Virginia tobacco district by 1840. The sequence usually recommended was tobacco, wheat, and one or two years of clover. Wheat was known to give a particularly good yield immediately after tobacco.

Since corn was sometimes grown in a corn, wheat, clover rotation, the plantation which grew tobacco, wheat, and corn frequently had two rotations; tobacco, because of its smaller space requirements, could be shifted from one rotation to the other, and thus no one plot would be in tobacco more than once in six years.⁶⁷

The Burroughs did not necessarily follow this practice of rotation. We know that they produced no clover or grass seed in the 1860 Census year. As late as 1901, Mooney wrote about this immediate area as follows:

Tobacco is the money crop, and often it is grown continuously upon the same lands without rotation or proper fertilization, which has impaired the fertility of the soils to a considerable extent. When

⁶⁶Barkeley, p. 24; Southern Planter, XIX (1859), 176.

⁶⁷Robert, Tobacco Kingdom, p. 30.

a rotation is followed it is tobacco two years, wheat, followed by clover and grasses for two or more years. Fertilizers are seldom used, except with the tobacco.⁶⁸

D. Flax. Flax was grown on the Burroughs plantation as a source of material for homespun linen and clothing. Washington's vivid recollection of his rough flax shirt makes this crop important in our interpretation.

The mature plant was harvested by pulling it up, rather than by cutting. The seeds were "rippled" or separated by pulling the stalks through large comb-like teeth. The stalks were then placed in water for several weeks to rot the woody portion.

After drying, the flax brake was used to crush the stalks. The remaining woody portion was removed by "swingling." Finally, the flax fibers were drawn through stiff-toothed brushes called "hatchels" or "hackles" (the plantation inventory lists a heckle). This prepared the flax for spinning into thread on the flax wheel and then weaving into linen.⁶⁹

E. Sweet Potatoes. No special information was found on nineteenth-century sweet potato culture. Gray states that they were often preserved by barking them with a covering of straw, tan bark, or pine needles,

⁶⁸pp. 256-257.

⁶⁹From the flax exhibit in the textile hall of the Smithsonian Institution. The process of swingling was not explained.

topped with dirt.⁷⁰ The Burroughs may have used this method for the bulk of their potatoes, moving some into the kitchen potato hole for ready access.

F. Livestock. "The animal husbandry of the typical...tobacco plantation districts was limited to the raising of hogs for the bacon consumed by the slaves, a few cattle to supply milk and beef for the planter's family, and occasionally a few sheep for mutton and for wool to manufacture into clothing for slaves."⁷¹ This description seems to fit the Burroughs plantation. Since livestock were maintained mainly for manure, meat, and milk for home use, there was little attempt to improve their quality before the Civil War. Unlike in some areas, however, the Burroughs and their neighbors cared for their animals to the extent of building barns and putting up hay for winter use.

Hogs were generally allowed to run at large and pick up mast and roots until October, with perhaps an occasional feeding of corn to keep them tame. They were often left completely alone; Berkeley complained that this made them tough, lean, wild, and difficult to pen when the time came.⁷² Following capture, they were fattened on corn, peas, and some root crops.

⁷⁰Gray, II, 827-828.

⁷¹Ibid., p. 836.

⁷²p. 13.

Sheep were also left to shift for themselves to a large extent, perhaps being fed a few corn blades in the winter if the snow got too deep.⁷³

Since the Census didn't even count chickens after they hatched, and since the inventory doesn't list any either, we don't know what the Burroughs had in this respect. From Washington's recollection of his mother cooking a chicken on the sly one night, we can only assume that they did have them.

⁷³For livestock, see Gray, II, 835-845,

V. INCONCLUSION

This paper makes no pretense of being the last word on all aspects of agriculture on the Burroughs plantation. It should be considered as no more than an interim report. There remains much to be discovered about all subjects touched upon herein, and the process of discovery will be a long-continuing task.

Nevertheless, it is hoped that the present study will provide a foundation for this continuing effort and, more important, for the further development of the living historical farm itself. With the elimination of certain inaccurate notions and the addition, hopefully, of many sound ones, we should now be able to progress with fewer errors than would otherwise be the case.

Since all is not yet known, we will still make mistakes. But this should be no cause for timidity in the flexible, easily corrected field of agriculture.

APPENDIX

Inventory & appraisement of the estate personal of James Burroughs
Decd. taken the 23d Day of November 1861

Articles	Value
1 Lot Scantling & plank	\$1.50
Shovel Digger & 3 forks	1.00
5 Turning plows & 3 double trees	10.00
7 Hilling hoes & 3 grubbing hoes	2.50
6 plows (shovel)	3.00
3 Coulters & Stocks	.75
1 Lot single trees & double trees	1.75
3 wedges & frow	1.00
1 Lot of old irons	.50
1 Jack screw ox yoke & jointes	.50
1 Lot Barrels	.50
3 plough points	1.50
2 Scythes & cradles	2.50
1 Jack screw & Bolt pin & tar bucket	2.00
1 Lot flax	1.00
2 hides	7.50
1 harrow	3.00
1 Bell cow & calf	12.00
1 Muly cow whitish	10.00
4 yearlings 5\$	20.00
3 Cows & calves 12\$	36.00
1 Sow & shoats	15.00
16 fat hogs	128.00
1 Top stack & shucks	10.00
1 Straw rick	5.00
1 Lot blade fodder	15.00
1 Lot Cleaned oats & hogsheds	20.00
1 Fan mill	2.50
1 Lot flax Seed	1.50
120 bus. wheat	102.00
1 Lot Hay	8.00
1 cutting Knife & barrel brand	1.80
1 Lot oats in tobacco house	30.00
85 barrels corn 2\$	170.00
1 Wagon & log chain	15.00
1 Wagon	50.00
4 axes	2.25
1 Carriage & Harness	100.00
1 lot old irons & Bell &c	1.00
1 Grind stone	1.50

1 Lot tools	2.00
1 Lot mowing blades	1.50
1 Loom	5.00
1 Reel & flax wheel	4.00
3 cotton wheels	3.00
1 Lot Sleighs & Harnesses	2.50
3 bbls & lot corn & 1 box	2.50
1 $\frac{1}{2}$ bushel measure & 2 hammers	1.00
1 Bed & Furniture	25.00
1 Gun & shot pouch	2.00
1 table & candle stand	1.25
1 Lot of leather & shoe makers tools	20.00
1 Desk & clock 5 $2\frac{1}{2}$	7.50
1 Lot vials bottles &c	2.00
10 Windsor chairs	10.00
10 Split chairs	1.25
2 tables	7.50
2 Settees	5.00
2 Candle Sticks & Looking glass	5.00
1 Waiter & pitcher	.50
1 pr shears & hackle	1.25
1 Strainer jar soda &c	1.00
1 Lot coffee	4.00
1 Lot spun cotton & thread	1.50
1 Wash Stand Bowl & Pitcher	2.25
1 Chest	.50
1 Bed & furniture	25.00
1 Bed & furniture	12.50
1 Trunnel Bed & furniture	3.00
3 looking glasses	.50
1 Bed & furniture	25.00
1 Bed & furniture	20.00
1 Bed & furniture	20.00
1 <u>trunnel</u> bed & furniture	2.50
1 <u>chair</u> & lot counterpanes	20.00
1 Chest & box	1.50
1 trunk & contents	5.00
1 <u>trunnel</u> bed & Furniture	6.00
1 Bowl & pitcher & 6 bottles	.50
1 Looking glass	.50
1 <u>Loot</u> cooking vessels	15.00
10 pcs water vessels	2.50
contents & smoke house	5.00
1 Bay mare (Fan)	90.00
1 Sorrel horse (Jack)	140.00
1 bay horse (Sam)	130.00
1 <u>Sett</u> wagon & plough harnett	30.00
2 Flat irons trivet baker & table	1.25
Cupboard & contents	40.00
1 Lot dining tables	4.00

2 sacks salt	7.00
Cupboard & Contents	4.00
Lot bbls Kegs &c	2.00
Lot jars jugs & baker	5.00
1 Negro man (Munroe)	600.00
1 negro woman (Sophia)	250.00
1 negro woman (Jane)	250.00
1 negro man (Lee)	1000.00
1 negro boy (Green)	800.00
1 negro girl (Mary Jane)	800.00
1 negro girl (Sally)	700.00
1 negro boy (John)	550.00
1 negro boy (Booker)	400.00
1 negro Girl (Amanda)	200.00
	<u>200.00</u>
	\$7083.80

(From Will Book 12, pp. 148-150, Franklin County Courthouse, Rocky Mount, Virginia.)

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