Tobacco Farming: The Persistence of Tradition

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Tobacco Farming: The Persistence of Tradition

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TOBACCO FARMING: THE PERSISTENCE OF TRADITION

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The culture of tobacco has been associated with the history of Kentucky almost from the beginning, and remains to this day a vital force in the state's economy. In this age of scientific and technological advances--of increasing automation--we find that in tobacco farming, hand labor still figures prominently in the production of a major staple crop. This has resulted in the retention of traditional method, technology, and terminology, long since lost in the culture of other crops which lent themselves more easily to mechanization.

The study is divided into three parts. Chapter I deals briefly with the validity of a folkloristic study of tobacco farming, the origin and cultural diffusion of tobacco, the history of tobacco in Kentucky, and the focus of the present study. Chapter II describes the traditional methods used in raising Burley tobacco during the general period between the Civil War and the Second World War, noting later innovations where appropriate. Chapter III examines as a case study the growing of a Burley crop on a specific farm in order to make a firsthand evaluation of the relative strength and persistence of tradition in a present-day farming situation.
I. INTRODUCTION

Tobacco Farming as an Object of
Folkloristic Study

The production of tobacco has been an important facet of the economic life of Kentucky throughout all of its history, and today, the value of manufactured tobacco products is second only to that of foodstuffs.¹ For many years the Bluegrass state led the nation in the production of tobacco and is still the largest producer of Burley, the most important constituent of cigarettes. It has been estimated that approximately a quarter of the United States’ tobacco farm population is engaged in the annual round of chores needed to bring the Kentucky tobacco crop to market and that it takes almost 340 hours of labor per acre to produce the Burley crop² (in contrast to cotton coming closest with 66 and wheat requiring only 4 man-hours per acre³).

The major factor responsible for such an expenditure of time is that the processes governing the cultivating,


harvesting, and curing of the crop are still largely carried out by hand—involving more hand labor than any other major agricultural activity—prompting farmers "to complain that they must work 'thirteen months a year to make a crop of tobacco.'" (This is a major reason why, despite a national trend towards the displacement of the traditional family farm by large commercial farms, the tobacco farm remains a stable exception.) One noted tobacco historian has stated it succinctly: "Tobacco was the translation of aching backs into marketable produce." This has resulted in a situation in which the raising of tobacco illustrates a greater retention of traditional method, technology, and terminology in its production than is reflected by the raising of most other crops. For this reason, tobacco farming is a legitimate area of study within the discipline of folklore, which, in general terms, is concerned with "that part of any culture which depends more on imitation and oral transmission than on formal instruction or written sources." More specifically, tobacco farming is a part of material folk culture—of growing concern to folklorists in this country—which "responds to techniques,

4Tobacco Institute, p. 7.
5Hart, p. 28.
skills, recipes, and formulas transmitted across the generations and subject to the same forces of conservative tradition and individual variation as verbal art. 9

The question might well be raised, however, as to how tobacco could achieve such great economic importance in the state of Kentucky (and elsewhere in the world for that matter), particularly in view of the fact that it requires so many man-hours per acre in its cultivation that any other crop entailing a similar expenditure of time would simply be unprofitable. Before discussing in depth the production of a tobacco crop, therefore, preliminary information will be presented which will help to shed some light on the historical transformation of this non-food plant into a major staple crop.

That "Bewitching Weed"

The date when tobacco was first discovered will probably never be known but its use may extend back in time almost 2,000 years, certainly 1500 years. 10 It belongs to the family Solanaceae—incorporating plants which carry various toxic alkaloids such as solanine in the eyes and sprouts of the common Irish potato and nicotine in tobacco 11—and more


10A famous Mayan carving, accurately dated to the latter time period (432 A.D.), depicts a priest blowing smoke out of what appears to be a tubular type of pipe. Sources indicate that the substance burned was tobacco. See Axton, p. 7.

11Ibid., p. 128.
specifically, the genus *Nicotiana* of which there are over fifty species. Only two species of this latter group achieved widespread use, both hybrids and of South American origin. The first, *Nicotiana rustica*, was grown by the North American Indians, principally in the eastern portion of the continent. It was the harsher of the two, which partially explains why the Indians would often "mix the tobacco with other substances, such as dried willow bark, the inner bark of dogwood, sumac leaves, pungent herbs, and oil." The second, *Nicotiana tabacum*, was cultivated only as far north as Cuba.

Little is known about the diffusion of tobacco during pre-Columbian times; however, the use and culture of tobacco was general among the Indians by the time Columbus discovered America in 1492. The rapid cultural diffusion of tobacco after this date—a fait accompli in little over 200 years—is fairly well documented and a particularly fascinating process in that it was based on a plant whose value rested on its non-food status. *Nicotiana tabacum*, primarily as a result of its superior smoking qualities, was to be the object of this diffusional process. Spain, France, and England all contributed to the spread of tobacco but perhaps the most important influence in its diffusion was Portugal, which "had trading posts established all along the coasts of Africa, India, and China. Tobacco diffused to the continental interiors via

trade routes."\(^{13}\) By the early 1600s, tobacco had reached the Far East--China and Japan--and within another century had come full circle when it was introduced into Alaska via Siberia.

Why tobacco should have spread so rapidly is a difficult question to answer. Smoking was by no means an alien practice to the Eastern Hemisphere because "many substances were smoked for both medicinal and hedonistic purposes. Among these were henbane... colt's foot, cow dung, wax, resin, pitch and hemp."\(^{14}\) Part of the answer must be sought in light of the intellectual climate of Europe in the late fifteenth and early sixteenth centuries. This climate manifested itself in two ways. First, the Europeans were confronted by an alien form of behavior and society in the American Indian, and sought to understand him in terms of their own society and concept of human behavior. Where the Indians used tobacco ritually both in religion and medicine--often an inseparable combination--the Europeans "tended to separate the two, discounting the religion, but giving tentative consideration to the medical uses."\(^{15}\) Secondly, with the initial impetus given by the French Ambassador, Jean Nicot (from whom the genus *Nicotiana* was to ultimately derive its name), tobacco quickly developed into a cure-all: "No ailment could resist


tobacco if the doctors prescribe it properly, and smoking itself was excellent because it expelled superfluous moisture and became a preventative for all sorts of ills."16 A true panacea had at last been discovered. Its ready and widespread acceptance as such, however, was intimately tied up with European medical theory at the time—the theory of humours.

Couched in modern terms, the theory essentially postulates that "health is a state of bodily equilibrium and that sickness is a departure from this norm;"17 tobacco, in various applications, was the agent in correcting any imbalance between the humours (the body was composed of four, each one manifesting one of the four basic elements composing all things—earth, air, fire, and water—with its attendant properties18) and thus re-establishing that equilibrium. Although tobacco eventually lost its claim to being a cure-all by the late seventeenth century, it continued to enjoy widespread use as a disinfectant. This was the most influential of the various tobacco cures—its most dramatic "successes" were in connection with plagues—and has "lasted at least in folk thinking down to the present time."19

There are other reasons for the rapid diffusion and widespread use of tobacco. As a narcotic, its habit-forming

16Ibid., p. 102.
17Ibid., p. 103.
18For a fuller discussion of the theory and the nature of the humours, see Kell, pp. 102-105.
19Ibid., p. 105.
properties certainly should not be underestimated. It also has a recognized therapeutic effect in releasing tensions. And as an invaluable aid to socializing, it has no equal. Whatever the reasons, its economic value is unquestioned. In fact, it was "evident right at the beginning... the settlement of Virginia would have been a failure but for the rapid expansion of Rolfe's tobacco-growing venture... tobacco became the currency on which all other values were based." Even the Indians had developed the cultivation of tobacco into a commercial undertaking: "it is stated that one of the great North American tribes which dwell just south of Lake Huron was known as the 'tobacco nation' from the fact that its members cultivated tobacco on a large scale and sold it to other tribes." Among the major staple crops, tobacco is unique in that the leaf is the most valuable part of the plant; it maintains "a high unit value, which is important on its own but also enables it to bear transport costs that would cripple other commodities." Almost from the beginning, tobacco was recognized by the world's economic councils as a source of revenue--through taxes, customs, excise duties, and the like--and to this day it figures prominently in the financial and economic policies of many countries.

22Akehurst, p. 15.
The commercial culture of tobacco in the United States first developed in the colony of Virginia. In 1612, John Rolfe (famous as the husband of Princess Pocahontas) produced the first tobacco crop for export. Within four years, almost the entire colony was engaged in the culture of tobacco (a preoccupation which resulted in a serious neglect of food crops). By 1631, the culture of tobacco had spread into Maryland, and within a short period of time it was started in such states as New York, Pennsylvania, and Connecticut. Virginia, however, was to dominate all other states in tobacco production during the 1700s. Not until the mid-nineteenth century was it to relinquish that position, and then to the Bluegrass state of Kentucky.

**Tobacco in Kentucky**

The first significant impetus given to the development of Kentucky's tobacco industry resulted from the removal of the Spanish export barrier at Natchez and New Orleans. The man responsible for this diplomatic coup was James Wilkinson, who not only succeeded in securing the release of his own impounded cargo shipments but in effecting the subsequent opening of the Mississippi for American export trade in 1787. Prior to this landmark event, Kentucky farmers had been faced with a situation in which the shipment of goods to the east by water, via the Ohio, was simply impossible, and by land,

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23 The following general discussion is based on information derived from two basic sources: Axton, pp. 32-108 and Tobacco Institute, pp. 26-56.
prohibitively expensive, but at last they had access to markets in both the eastern United States and Europe.

The principal leaf markets were in Europe, however, and consequently Kentucky's fledgling tobacco industry was to be directly affected by the international revolutionary upheavals and the vacillating foreign policies of the various European governments during the next twenty-five years. Only three years after the long sought after opening of the Mississippi had apparently been achieved, the Spanish imposed a limit on the amount of tobacco which would be purchased annually. Mounting complaints from Kentuckians over Spain's disruptive policies may very well have been partly responsible for bringing about the Treaty of San Lorenzo in 1795 which was to insure free navigation of the Mississippi and the duty-free deposit of goods at New Orleans. Then, however, not only did it take almost three years for the deposit to open but just four years after that, in 1802, it was promptly shut down again. This was undoubtedly related to Spain's cession of Louisiana to France in 1800 but only served to further infuriate the Kentuckians. Once again their complaints reached the government in Washington and helped to expedite the decision to purchase the Louisiana Territory from France in 1803. Now that the Mississippi was completely in the hands of the Americans, Kentucky's tobacco farmers looked forward to a new era of prosperity. Their hopes soon faded as Jefferson's Embargo Act of 1807-1808 and the Non-Intercourse Act of 1809 wreaked havoc with American export trade already suffering from the British attacks on shipping on the high seas.
The end result of the repeated uncertainties attendant with the export of tobacco during the period of 1790-1815 was an increasing diversification of agriculture within the state. This trend was further intensified by the War of 1812, during which time the British effectively curtailed almost all exports by blockading American ports. Not until 1817 was a second impetus given to tobacco production--since the initial opening of the Mississippi in 1787--when record prices were paid for Adair County tobacco. This was short-lived, however, and except for consequent increased production in several counties of the state, tobacco production on the whole was poor during this period of time, and the resulting low prices further curtailed tobacco production. Experiences with fluctuating and unpredictable foreign markets during the previous twenty-five years had forced Kentucky farmers to turn to more profitable crops for which there was an assured and dependable market in the United States, particularly in the South.

Finally, in the late 1830s, Kentucky embarked on its first great period of expansion in tobacco production as the result of numerous factors: greater access to markets through development of navigable rivers; the opening of the Portland Canal at Louisville, which stimulated extensive trade with the South; an improved quality in tobacco itself and the development of new types; and a steadily increasing demand for tobacco products both at home and abroad. By 1839, Kentucky was second only to Virginia in tobacco production, and in 1840, American exports of tobacco exceeded those of 1790 for the first time.
In 1860, Kentucky more than doubled its output of 1850, and during the Civil War the Bluegrass state was to finally take the lead in tobacco production. Virginia and North Carolina—major producers of tobacco and its finished products—had suffered extensive destruction to their land and industry, while Kentucky emerged from the conflict relatively unscathed. What insured Kentucky of its supremacy in tobacco production up to 1929 (when it was overtaken by North Carolina) and initiated its second great period of expansion was the development of a new type of tobacco—"White (or Bright) Burley," now simply referred to as Burley. Grown first in Ohio in 1864, it was to take first and second prizes for cutting leaf at the St. Louis Fair in 1867 and thereafter its cultivation spread rapidly, particularly in the Bluegrass region of Kentucky. This area now turned its attention once again to the production of tobacco because it was found that Burley grew best on the phosphatic limestone soils of central Kentucky (and southern Ohio) which "by nature of its possession of the most extensive areas of such soils, has a natural monopoly of White Burley tobacco."

Why this type of tobacco was to be in such great demand is directly related to the social usage of tobacco at the time. The nineteenth century was the era of "the chaw," with the demand for chewing tobacco reaching its apex during the last quarter of the century: "the difficulty was that,

before the discovery of White Burley, no variety of leaf was capable of absorbing the quite extraordinary quantities of sweetening and flavoring agents . . . demanded by this new and growing taste.  

Burley has a number of characteristics commending itself to the tobacco farmer, but most important for the tobacco trade in general is its high absorptive quality resulting from a low sugar content, thus making it ideal for use in chewing and smoking tobaccos. By 1889, Kentucky was producing over half the national production of tobacco, and this was directly related to the demand for the state’s Burley crop.

Prior to 1900, "the commercial pattern of tobacco consumption seemed fairly well fixed. . . manufacturers felt that nothing would change. There could be only more tobacco chewers, pipe and cigar smokers," but events were to prove otherwise. By the early 1900s, tobacco farmers were suffering from a decline in prices paid for their crops, caused by such factors as overproduction, poor quality leaf, a federal tax on cured natural leaf, and the trend away from chewing tobacco to other forms of smoking, primarily cigarettes, which depended less on Kentucky leaf. The discontent among the state’s tobacco farmers manifested itself in the so-called "Black Patch War," the result of efforts to force recalcitrant

25Axton, p. 73.
26Tobacco Institute, p. 50.
27The "Black Patch" refers to that area covered by the south/southwestern parts of Kentucky and the north-central/northwestern parts of Tennessee.
farmers to join the Dark Tobacco District Planters' Protective Association, which hoped to force up the price of tobacco by pooling the crops of its members. Although the Association enjoyed limited success, circumstances were such that it began to lose substantial membership by 1908: rising prices for leaf, elimination of the above mentioned tax, and in particular, the demand for tobacco products brought on by World War I, ushered in a new era of prosperity for the tobacco farmer.

An event of momentous importance for Kentucky's tobacco industry was the appearance, in 1913, of the first blended cigarette, "Camel," manufactured by R. J. Reynolds. Formerly, cigarettes were composed almost entirely of Turkish leaf; now they were to contain an appreciable quantity of Burley of which Kentucky was by far the major supplier. With an increasing consumer demand and preference for the blended cigarette over the other forms of smoking and the means by which to mass produce it—the Bonsack Cigarette machine had been patented in 1883—the tobacco farmers of Kentucky produced a record crop in 1919. By 1920, the price for tobacco had dropped after reaching a record high the year before, primarily because the state had suffered a long rainy season causing poor leaf quality. Additionally, the war was over, resulting in a temporary decline in demand for tobacco products. Despite such setbacks, however, the tremendous popularity of the cigarette—with its dependence on Burley tobacco—was to insure Kentucky's tobacco farmers an overall prosperity lasting to the present day and for the foreseeable future.
Focus of Present Study

Chapter II will investigate the traditional methods employed in raising a crop of Burley tobacco during the general period between the Civil War and the Second World War, noting later innovations in tobacco farming where appropriate. It must be borne in mind, however, that Burley is only one type of tobacco. During the Colonial period only two types were recognized, Virginia and Spanish, but twenty-six distinct types were to eventually receive official recognition by the United States Department of Agriculture.\(^{28}\) These developed primarily as the result of "three factors: (1) the spread of the culture to new soil types, (2) the inevitable hybridization, and (3) the development of three distinct curing methods. Foreign and domestic consumer demands also came to play an important role"\(^{29}\) (as already noted in the demand for Burley, first for chewing tobacco, then for the blended cigarette).

Air-curing was one of the earliest of the curing systems and remains the most widespread even to this day. It eventually evolved into the use of barns with hinged ventilators which enabled some degree of control over temperature and humidity. Air-curing is essentially carried out under natural weather conditions but sometimes heat is employed during particularly damp, humid weather to re-establish normal curing conditions. Developing along with air-curing


\(^{29}\) Ibid., p. 408.
was a second type of curing system which actively used fires in the curing process. Fire-curing entailed curing the tobacco in a barn made reasonably airtight and by creating as much smoke as possible from hardwood fires set up on the floor of the barn. Understandibly, this imparted a smoky flavor and aroma to the tobacco. Europeans had developed a preference for this type of cured leaf but by the time White Burley started to appear on the market, domestic demand had turned against it. Consequently, in certain sections of the fire-curing districts (Kentucky and Tennessee), the process of air-curing had been reverted to and thus White Burley was to develop as an air-cured type.30 The third curing system—flue-curing—was perfected after the Civil War in an effort to eliminate the smoky flavor of fire-cured leaf yet still enable a Bright or "yellow" tobacco to be produced.31 The end result was an air-tight barn into which heat was conducted via "flues" (this particular method utilizes the "priming" method, that is, the leaves of the tobacco plant are removed as they ripen and then cured immediately—within four to six days—to make room for the next "priming"). Flue-curing is primarily concentrated in eastern North Carolina but reaches as far south as Florida. It was the advent of the blended cigarette which was to insure the prosperity of the flue-curing districts because over half of the blend is composed of Bright-tobaccos.

30 Ibid., p. 410.
31 Ibid., p. 411.
Chapter III of this study will take a close look at the recent production of a Burley crop on a specific farm in order to evaluate the relative strength and persistence of tradition in a current farming situation. The Forbes farm was chosen primarily because it illustrates a typical situation in which a minimal amount of farmland is devoted to tobacco cultivation. There are two major reasons for this. First, as already indicated, tobacco farming involves a great deal of hand labor reflecting an intensive sort of agriculture: "compared with most types of farms, the tobacco farm is small. Average acreage handled by one family runs a little under three acres."32 Secondly, from the very beginning of tobacco cultivation in this country, farmers have had to contend with "unstable markets and the inability to adjust production to market demand in such a way as to stabilize prices."33 Efforts to overcome these problems were initiated under Roosevelt's New Deal and eventually resulted in an acreage-allotment and leaf-support system. The farmer was not to be daunted—despite himself—because "there was . . . a loophole . . . . No limitation was placed on the total pounds of leaf a planter might be able to harvest and market from the acreage base he was allowed by the latest referendum. Production, therefore,

32Wrather, p. 1.

became an end to be sought as never before; . . . ." The end result was a tripling of the per-acre yield of Burley tobacco between the years 1939 and 1971. In a further effort to curb such excesses, a new program was started in the early 1970s which limited both acreage planted and tobacco poundage produced by the individual farmer.

34 Axton, p. 123.
35 Ibid., p. 120.
36 Ibid., p. 125.
II. TRADITIONAL METHODS UTILIZED IN RAISING A CROP OF TOBACCO

The Tobacco Plant Bed

The life of a tobacco plant started as a minute seed, approximately 25,000 of which could be held in a teaspoon and sufficient for the planting of one acre. Before these seeds could be sown, however, a specially prepared "plant bed" had to be set up first. Tobacco, as we know it, could not grow in the wild state because the seedlings could not compete successfully with other plants nor survive the vagaries of the weather. Consequently, the seeds were not planted directly in the field but in a bed varying in size from 6 to 12 feet in width and from 50 to 120 feet in length (its size necessarily dependent on the amount of tobacco to be grown). In contrast to the North where a permanent type of bed is common, plant beds in the South, even to this day, are characteristically moved to a new site each year or two. The bed was best situated "on a south hillside where the young plants would be protected from the cold and where the early

1Garner, pp. 59-60.
2Ibid., p. 114.
spring sun would germinate the tiny seeds more quickly."³ Often newly cleared forest land was utilized for several reasons: "protection against cold and wind was provided by the forest and the leafmold-like soil favored good drainage, possessed good moisture-holding powers, did not bake, and was comparatively free from weed seeds and diseases."⁴ A side benefit of this practice was an increased supply of lumber for farm buildings.⁵

A major concern was to treat the bed in such a way so as to kill weed seeds and insect larvae. This was accomplished by "burning" the bed. Logs and brush provided the fuel--"some thought fire benefited the soil, while others believed the benefit due to the ashes."⁶ Increasingly, farmers are using steam or chemicals to sterilize the beds, yet a Kentucky newspaper, published in the so-called "Burley Belt" (comprising almost two-thirds of the state, it essentially covers the central portion), acknowledges "burning" to still


⁴Garner, p. 119; additionally, it was also found that "land which had 'tired' of tobacco would yield good crops of corn, wheat, and other grains." Ibid., p. 24.

⁵Marcia Miller, "Farming Methods," Folklore and Folklife Collection, Western Kentucky University Library, Kentucky, 1972, p. 5. (Typewritten.)

be a commonly used method of weed control. Some farmers have struck a compromise by treating the wood to be burned with a weed controlling agent. Burning the beds was sometimes a night-time activity and often took on the overtones of a community get-together:

"People came to talk crops, fox hunting, and politics, while they smoked pipes or chewed tobacco and spit in the edge of the fire. Others, boys usually, brought 'arsh taters' to roast in coals, and even slices of ham to spit on green sticks like wiener. These evenings lasted quite late, for the owner 'set up with the fire' to make sure it didn't 'get out.'"

Although it was once common practice to prepare the beds in late winter, it is now claimed that "some 60 per cent of Kentucky's 170,000 tobacco plant beds are usually prepared in the fall."

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8 Dennis Baird, "The Changing Methods of Tobacco Farming," Folklore and Folklife Collection, Western Kentucky University Library, Kentucky, 1972, p. 1. (Typewritten.)

9 Jim Wayne Miller, "Words and Ways: Raising Burley Tobacco in Western North Carolina," Jim Wayne Miller Manuscript Collection, Manuscript Division, Kentucky Library, Western Kentucky University, Bowling Green, Kentucky: 2a-3. A condensed version of this study appeared under the title "The Vocabulary and Methods of Raising Burley Tobacco in Western North Carolina" in North Carolina Folklore 17:1 (May 1969): 27-38. Although Miller deals with the growing of Burley in a different state, and despite some differences in practices and terminology, there are many similarities between the two areas in the handling of this traditional crop. Consequently, information will be drawn from this study to the extent that it illuminates the general culture of Burley tobacco.

After burning, the ground was broken up by the use of a hoe or plow. Seed was and is often mixed with fine wood ashes to facilitate an even distribution (although farmers are increasingly using lime, fertilizer or sand for this purpose) and then sown by hand in March or April. Many years ago the farmer might even mix the seeds with "lettuce and mustard seed to protect the young seedlings against the fly and other insects."¹¹ The seeds were "tamped" into the loose soil with a flat board fastened to a handle or "tromped" in, that is, the farmer literally stamped down every inch of the bed with his feet.¹²

Seedlings must be protected from the elements--primarily frost--and consequently the beds were covered with "tobacco canvas" (cheesecloth) which replaced the former crude coverings of brush. The canvas was stretched tautly over the bed and nailed to a six to ten inch high log or board frame around which a ditch had been dug to prevent water from flooding it. Introduced in the 1870s, the use of tobacco cloth proved to be a major advancement in the cultivation of tobacco during the nineteenth century, prompting one tobacco expert to comment: "'Nothing that has ever been invented or devised has effected so much for the tobacco grower, at such a small cost, as a canvas-covering for the seed bed.'"¹³ Its most

¹¹Axton, p. 28.

¹²See Guthrie, p. 38 and Miller, p. 4, respectively.

immediate benefit was in greatly reducing the ravages of the "flea beetle" (also called the "fly"), so-named because "it can hop like a true flea," which eats holes into the leaves of the tobacco plant and can be particularly damaging in the plant bed. The seedlings were allowed to attain a height of about six to eight inches before they were transplanted to the "tobacco patch" (field).

Transplanting

While the seedlings were growing in the bed, attention was turned to preparing the "tobacco patch." As a guiding principle, "preparation given the soil before transplanting is of greater importance than the cultivation of the crop after it has been set." Again, "new-ground" was utilized if possible and first plowed, then repeatedly disked and harrowed. Finally, rows were laid off in ridges (although in the North it is the general rule to leave the rows level with the soil surface).

Transplanting usually took place in late April or May. About a week or ten days before this next major step was taken, the tobacco canvas was removed permanently to allow the plants to toughen up. Farmers might wait for a "tobacco season," a period of time following a rain when the ground was moist enough to prevent the death of the transplanted

tobacco seedlings.\textsuperscript{16} And this might arrive as late as June. Otherwise, those not waiting for such conditions simply took on the additional task of watering the plants by hand during the process of transplanting. During this stage of tobacco cultivation it was particularly evident the extent to which the entire family, from children to grandparents, became involved. After the plants had been pulled from the bed and transported to the field in "wash-tubs," a simple division of labor was applied:

... tasks fell to children, adolescents or grownups according to the degree of skill or strength involved. A small girl could 'drop,' since little strength was required to walk down the row with an armload of tobacco plants and drop them on the ridge from 12 to 18 inches apart. But she might not be permitted to pull plants from the bed if she could not judge which were the proper size, the healthiest looking, and which had the straightest shanks. Yearling boys could carry big buckets of water up from the branch or from the sled or trunk, placing them at stations in the patch where smaller boys and girls with smaller buckets could fill up and go behind the 'setter,' pouring a dipper of water into the hole.

Moving behind the 'dropper,' the setter put the plant into the earth by taking the plant by the roots and using the index and middle fingers, making a hole in the soil and slipping the plant into a standing position. Since the ground was often rocky, a row or two of this would wear the fingernails to the quick. So, many people used a 'wooden peg' \textsuperscript{7} the ancient dibble \textsuperscript{7} to make a hole \textsuperscript{67}.

Behind the setter came the 'waterjack' or 'waterboy' with bucket and long-handled dipper or gourd, watering the plants. Behind the waterjack came the 'coverer,' who like the setter, bent over from one end of the row to the other, and raked dirt around the plant with a flip of the hand.\textsuperscript{17}

Although today a power-drawn transplanting machine sees extensive use--two setters, sitting in low seats, alternately

\textsuperscript{16}Guthrie, p. 29.

\textsuperscript{17}Miller, p. 7.
place plants on a conveyor belt which then drops them in holes already dug and watered by the machine—plants must still be removed from the beds by hand.

**Maintenance of the Tobacco Field**

Invariably a number of plants did not survive transplanting. Within about a week, by which time the plants would have had a chance to become established, the farmer would go through the planted field and "re-set" it. In anticipation of this recurrent problem, the farmer would grow more seedlings in his plant bed than he would normally expect to use in the "patch." Additionally, if his own plants did not fail, someone else's might. It was part of the community spirit to offer these without charge to those in need.

Also at this time, the first efforts to cultivate the field were begun. A cultivator was run between the rows as close to the plants as possible without damaging their roots, and then the hoe was used in the spaces between the plants to draw additional soil to them and to remove grass and weeds. Cultivation was then generally carried out every week to ten days until the height of the plants (about knee-high) precluded further plowing. Cultivating is now largely carried out with modern machinery, namely the tractor, but some farmers still insist on keeping a mule on the farm solely for the purpose of working the tobacco field; mules cause less damage to the tobacco leaves and are preferable over horses, for the same reason, because they do not take as wide a step. A tractor, however, means a saving in both time and labor; one farmer
confesses:

Out of earshot of the horses . . .

'When I finish a day's work now, I simply drive the tractor under the shelter and turn off the ignition. Thus I don't have to unhitch, unharness, feed or water horses. I don't have to pitch hay into their stalls, and I don't have to clean out the manure. In the middle of a hot day in the field, I don't have to worry about whether I have overworked Old John.'

Probably two of the most dreaded tasks in the cultivation of tobacco were "topping" and "suckering." "Topping" was a critical step in the cultivation of tobacco because "the time and height of topping . . . could have great effects on the yield and quality of the cured leaf." A flower develops at the top of the tobacco plant which contains seeds; since it draws off nutrients from the rest of the plant the farmer cuts it off, thus diverting that energy back into the plant's leaves, thereby making them heavier and larger. To obtain seeds for the next year's crop, farmers would tie a paper sack around the flower on several plants to prevent cross-pollination, and as the "seeds matured they would stay in the sack instead of falling on the ground." Now seeds are obtained commercially, the only way to take advantage of the new improved hybrid strains. Topping also results in the


20 John Conner, "Development of Tobacco," Folklore and Folklife Collection, Western Kentucky University Library, Kentucky, 1970, p. 4. (Typewritten.)
growth of shoots between the stalks and leaves which in turn had to be removed, i.e., "suckered." The field, thereafter, had to be suckered on a regular basis. With the application of a chemical (MH-30) developed in the early 1950s, suckering has now been almost totally eliminated. In certain areas the term "suckering" now designates the previously described process of "topping."21 Both jobs were unpleasant for a number of reasons—"if one worked the patch early, the dew was usually so heavy he emerged wet. If he waited until the sun dried the patch off he suffered the heat and tobacco gum."22 The gum was black and sticky, adhering to anything that touched it but was believed to have the virtue of increasing the weight of the cured tobacco.23 (One method to remove it entails crushing a green tomato in one's hands.24) Both before and after transplanting, tobacco plants were susceptible to damage from a myriad of diseases, numerous types of insects, and the vagaries of the weather.25 "Frenching,"

21 Hughes, p. 42.
22 Miller, p. 10.
23 Guthrie, p. 40.
24 "From the Editor's Desk," Liberty (Ky.) Casey County News, 15 August 1974, p. 2.
25 See The American Tobacco Company, Burley Tobacco (New York: The American Tobacco Company, 1958) which covers the various diseases to which the tobacco plant is prone, insect pests, injuries from weather, etc. Particularly useful because the accompanying photographs are in color which are supposed to be very accurate when viewed in daylight (!) See also, University of Kentucky Cooperative Extension Service, Agriculture and Home Economics, Tobacco Diseases, by W. D. Valleau; E. M. Johnson, and Stephen Diachun, Circular 522-A (Lexington, Kentucky: University of Kentucky, rev. ed., July 1963) which concentrates almost completely on plant diseases—very detailed.
the cause of which is still not entirely understood, resulted in narrow leaves which curled at the edges and exhibited near-white tips. Present day fertilization practices have greatly decreased its harmful effects. "Black root rot" affected the roots. Once a major disease of Burley tobacco, it could destroy an entire crop through wilting and stunting the growth of the plants but has now been largely eliminated by the use of disease resistant seeds. "Black shank" attacked the tobacco stalk, spreading rapidly in wet weather (it could even infect a field for several years). It, too, caused the plant to wilt and is still a serious problem to this day. "Wildfire" destroyed the leaves. A very destructive disease, it manifested itself as yellow spots on the leaves and spread during periods of prolonged wet weather or even during rainstorms when the plants were fully developed.26

The insect causing the most trouble in tobacco fields was the "flea beetle" mentioned previously. It could also attack the bed, and prior to the use of tobacco canvas, some farmers used "sulphur, and others an infusion of sassafras bark to destroy these pests."27 Various species of "cutworms"--"the larval, or caterpillar, stage of certain moths."28--were also attracted to tobacco. These insects would feed on both leaves and stalks, "causing the plants to topple over or wilt

26American Tobacco Company, pp. 4-14.
27Gray, p. 217.
and die."\textsuperscript{29} Some considered the "hornworm" (the larva of the Sphinx moth, and commonly referred to as the "tobacco worm") to be the worst offender. Farmers "wormed" the plants by hand by several methods. One was to catch "the two-to-four inch long worms, bright green in color . . . and crush them between the thumb and fore-finger."\textsuperscript{30} Another method would be for a person to simply "pick 'em off, throw 'em on the ground and stomp 'em to kill 'em."\textsuperscript{31} The widespread use of insecticides by present farmers has largely obviated this problem but they are not infallible, and a certain amount of "worming" may still have to be carried out. "Budworms" had to be diligently watched for, and slugs and snails were especially damaging to young plants. Obviously, tobacco plants are involved in a constant struggle for survival and seem to be such attractive hosts to so many diseases and insects that the situation prompted the composition of the following jingle, incorporating the names of a number of them:

Nematodes, dodder, sore shin and spot,
Black shank, blue shine, curly top and rot,
Not to mention etch, wilt and frogeye!\textsuperscript{32}

There was also the weather with which to contend. A late frost could destroy a plant bed. Too much or too little

\textsuperscript{29}\textit{Ibid.}
\textsuperscript{30}\textit{Guthrie, p. 39.}
\textsuperscript{31}\textit{Miller, M., p. 9.}
\textsuperscript{32}\textit{Hart, p. 29.}
rain would take its toll in drowning or "sun scald," respectively. Continued damp, wet weather only encouraged numerous diseases to which the tobacco plant was naturally prone. Lightning could cause damage to tobacco plants but rarely matched the havoc wreaked by a hail storm which could all but destroy an entire crop. One farmer was reported to have said that he had not suffered any losses to hail in five years but his father had "lost tobacco to hail for 15 straight years."  

Harvesting

In some tobacco producing areas tobacco leaves would be "primed," that is, removed from the stalk as they ripened, but for Burley tobacco the whole plant was generally allowed to ripen and then the entire stalk was cut down at harvest time. This usually took place by the end of August or in September but it was "not easy to tell when a field was ripe for harvesting. There was an old saying in the Burley country that when the farmer thought his tobacco ripe he should go fishing for a week!"  In reality, the stalk to be harvested was composed of leaves in various stages of maturation, the lower ones being generally over-ripe, the upper ones, somewhat immature. And if disease or a cold spell threatened, the crop might have to be harvested before it was fully mature. Harvesting tobacco at the proper time was extremely important because "much of the success in curing tobacco depends on its

33"the editor says," Liberty (Ky.) Casey County News, 29 May 1975, sec. 1, p. 2.

34Robert, p. 218.
being harvested at just the right stage of maturity—neither too ripe nor too green. This is the critical point in the production of good quality tobacco."\(^{35}\) The leaves of the tobacco plant would undergo specific changes which aided the farmer in judging the degree of ripeness, but in the end it was the experience derived from many years of growing and harvesting a tobacco crop that was the final arbiter.

Farmers at one time would use a "tobacco knife"\(^{36}\) (Figure 7) to split the stalk to within a few inches of the ground, which was then cut off at the base, inverted and "hung" over a "tobacco stick" (approximately 4 1/2 feet in length). These knives could be purchased in local stores but "old-timers generally consider them inferior to tobacco knives such as ... one ... made by a blacksmith from a piece of a broken cross-cut saw set in a stout ash handle."\(^{37}\) With improved strains of Burley tobacco, however, which are both larger and taller, a different method of cutting was necessitated. Now, most farmers utilize a "spear," a hollow, pointed piece of metal (Figure 8) which is positioned over one end of a tobacco stick that has already been forced into the ground at an angle. Then the stalks of tobacco are cut off near the base of the plant with a long-handled "tomahawk" (or a similar type of cutting tool, such as a corn chopper) and the butt end

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\(^{37}\) Miller, p. 12.
pushed onto the point, sliding on down the stick (Figures 11 and 12). Usually five or six stalks would be skewered onto a tobacco stick in this fashion. Just prior to "cutting," sticks would have been placed end to end down the rows, a task often carried out by a child.

The manner in which the sticks themselves were made was of importance. They could either be milled or "rived out" with a froe from oak, hickory or even pine logs (Figures 9 and 10):

The sticks which are split run with the grain of the timber while those sawed are frequently cross-grained and will break. It is annoying to be handling tobacco only to have a stick loaded with tobacco split in the bar \(\text{sic}\) or even on the wagon.\(^{38}\) Stalks would slide much more easily on split sticks, following the grain of the wood, than on those which had been sawed. Furthermore, "a thousand sticks which had been used for a season were more highly prized than new ones, for the pesky splinters had been worn off the strong ones and the weak ones had been broken and discarded."\(^{39}\) Farmers could supplement their income by making tobacco sticks. Some men, in fact, make it a full-time job even to this day, as there is a constant demand for split sticks. One such individual claims "he could split 1,000 sticks a day if necessary. He admits he generally makes from 700 to 800 and calls it a day. He is own boss, after all.\(^{40}\)


\(^{39}\)Robert, p. 219.

"Cutting" required both strength and skill and thus often involved only the adult members of a family. It was at times like these that the farmer's wife had a particularly heavy burden of work. In addition to preparing the meals, sewing, cleaning, canning vegetables, etc., she was also expected to pitch in and help with the raising of the tobacco crop. Often she would help with the "setting" of the plants, and especially at "cutting time," when "every 'hand' was needed, she worked a full day, often in overalls and a blue denim shirt and straw hat, practically indistinguishable from the men."41 She had little access to the leisure activities afforded the men but instead divided her time "between house and field, kitchen and barn . . . ."42 The task of cutting tobacco--as with setting also--might very well not be the task of the family alone. Often fellow members of the community would pitch in and form a work crew, cutting one man's field, its owner then helping to cut his neighbor's crop. This spirit of cooperation was particularly important at cutting time because a farmer's tobacco crop "might be 'hurtin' (ripening fast) [and] swapping work made speedy harvesting possible."43

Cutting had to be carried out in sunny weather or the plants would not "fall" (wilt). As one author has noted:

41 Miller, p. 32.
42 Ibid.
43 Ibid., p. 34.
Wilt ing was necessary if the plants were to be handled after they were cut down without breaking the leaves accidentally. The tobacco plant contains much watery sap, and since it is herbaceous rather than woody, the leaves break off easily until they have wilted.\textsuperscript{44}

Consequently, the sticks of tobacco would be left in the field anywhere from several hours to several days depending on how long it took the leaves to wilt. The farmer had to be careful, however, not to allow the tobacco to lie in direct sunlight too long, otherwise it would suffer "sunburn" which caused the tobacco to "cure up green and be of low quality."\textsuperscript{45} Poor weather, as already indicated, could seriously damage a tobacco crop during any of its stages of development. One farmer seemingly diverted disaster through his own ingenuity:

Having cut the tobacco it stood for days in rain and mud and then the creek got up. He pitched the cut sticks into the creek and let them float down stream to a good loading location. In the process he washed off most of the mud hanging to the leaves.\textsuperscript{46}

After the tobacco had wilted, it was ready to be "cured," that is:

... tobacco has a water content of 80 to 90 percent, which the farmer must reduce to around 20 percent before the leaf is ready for market. The rate of desiccation must be controlled to facilitate the rather complex chemical process whereby the plant consumes some of its accumulated food reserves and produces a leaf of the desired character. This

\textsuperscript{44}Guthrie, p. 40.

\textsuperscript{45}Ibid.

\textsuperscript{46}"From the Editor's Desk," Liberty (Ky.) Casey County News, 19 September 1974, p. 2.
control is ensured, in considerably measure, by hanging the tobacco in a special curing barn, ... 47

The most distinctive feature of a barn constructed for the air-curing of tobacco was the series of hinged boards (usually every third or fourth board), either vertical or horizontal, on the outside of the structure; these functioned as ventilators. This type of barn varied greatly in size but could be fairly large and noticeably higher than other barns. Additionally, it was usually placed in the open, away from other structures and preferably on a hilltop, in order to take advantage of the free movement of air. With such characteristics, then, it was not surprising that such a structure should become an "unusually prominent feature of the rural scene." 48 Many farmers, however (and this is still the case today), could not afford to construct a barn which would only see limited use during the year. Consequently, the particular barn used for air-curing tobacco would often serve other purposes as well, such as the storage of farm equipment and feed, during other times of the year. And this building might very well lack the hinged ventilators described above. With the increasing development of hybrid strains of tobacco, farmers are even being confronted with tobacco which, due to its size, has now literally outgrown the traditional

47 Hart, p. 29.

48 Ibid., p. 30.
size tobacco barn; there simply is not enough space to properly house and cure it.\textsuperscript{49}

Despite outward appearances, the interiors of the barns were very similar with a framework of horizontal "tier poles" for supporting the sticks of tobacco (Figure 18). Barns might range from 3 to 6 tiers in height. The poles were positioned approximately 4 feet apart horizontally and from 4 to 4 1/2 feet vertically. One writer has vividly described the difficulty of the work:

Hanging burley tobacco, especially anywhere near the top tier, was an even hotter, gummerier and more unpleasant task than suckering and topping, for it could be hotter right under the tin or tarpaper or shingle roof (to say nothing of the high incidence of bumping into wasp and hornet nests!) than out in the sun.\textsuperscript{50}

Some farmers attempted to partially cure the tobacco crop before placing it in the tobacco barn by leaving it in the field for a period of time longer than that which was necessary for wilting. This might be done for several reasons. If a farmer was in need of additional barn space he could first partially cure the crop outside the barn and thus be able to "house" the tobacco closer together. Also, hanging the tobacco sticks too close together could cause "houseburn" ("barn scald") resulting from inadequate air ventilation, and consequently partial curing could act as a preventative measure.\textsuperscript{51} Proper spacing of the sticks, therefore, is very

\textsuperscript{49}"plum up to here," Liberty (Ky.) Casey County News, 5 September 1974, p. 13.

\textsuperscript{50}Miller, p. 18.

\textsuperscript{51}Ibid., p. 17.
important "because there must be unimpeded circulation of heat and air. Then, too, uniform and uncrowded spacing is necessary to prevent crushing of the leaf in later handling when it may be drier than when first stored."52

Preparation of Tobacco Crop for Market

Burley was air-cured by the dry, autumn air and resulted in reddish-brown, brittle leaves. (Air-curing might have to be supplemented with artificial heat should unfavorable curing conditions prevail, such as dampness.) Once sufficiently cured, it took the damp, foggy and rainy weather of late October and November to bring the tobacco "in order" or "in case," that is, impart enough moisture to the leaves so that they could be handled without breakage. For many farmers, "stripping" (the removal of the leaves from the stalk) was thus necessarily dependent on the weather. The tobacco might be "in order" one day, and "out of order" the following day if the weather should happen to clear up. To avoid this problem, farmers might construct "casing houses":

work rooms dug into a bank or the side of a hill. Earthen floors and walls afforded an atmosphere constantly damp and moist. These 'casing houses' were equipped with tierpoles so tobacco could be brought there in 'low case' (moist enough to handle if you were careful, but not moist enough to work off) and brought into 'higher case.'53

The actual stripping process involved removing the tobacco leaves from the stalk by hand and "grading" them

52 Hughes, p. 44.

53 Miller, p. 20.
according to such characteristics as color, texture, and physical condition (Figure 20). Most farmers preferred to do their stripping in daylight versus the use of artificial light which was considered "inadequate for making the sometimes subtle distinctions necessary in grading." Sometimes an individual would strip and grade all the leaves from a single stalk or he might only strip one particular grade, passing the stalk on to another person who in turn would only strip those of a certain grade and so on, progressing from the base of the stalk to the top, whichever method was used. (Sometimes a strip of pork rind would be hung in a convenient spot for the workers to rub their hands on in order to cut the stickiness of the tobacco gum.)

Starting from the bottom, commonly used grades were "flyings," "trash," "lugs," "bright leaf," "red leaf," and "tips." Tobacco leaves were tied into "hands" (consisting of approximately twelve to fifteen leaves), which were bound together at the butt end with a "tie leaf" of the same grade, either at the time they

54Ibid.
55Landon Wills, "Observations of a Country Boy," 18 January 1968, unidentified newspaper clipping from vertical file, Kentucky Library, Western Kentucky University, Bowling Green, Kentucky.
56Over the years the number of grades, their names, and relative value have been subject to change, often in direct relation to the current consumer preference for certain forms of smoking. For example, during the chewing era, there was little demand for the then lighter leaves at the base of the tobacco stalk--the "trash"--but with the advent of cigarette smoking these became the most valuable part of the plant. As already noted in Chapter I, consumer preference could also affect the relative value of the different types of tobacco.
were stripped from each individual stalk or after all the stripping and grading had been done (Figure 21).

Division of labor was once more evident. If the one-person-to-one-grade method was utilized, then the removal of the tips, which "required the least amount of skill as they were the only leaves left on the stalk, . . . usually was the lot of the younger, less experienced children."57 And if tying the leaves was the last stripping task to be carried out, then the "older and more experienced members of the family usually tied the more valuable grades."58 These "hands" were then usually placed back on the stick, "bulked down," i.e., piled up in layers which "improved quality and induced uniformity of color,"59 and covered to keep the tobacco in order.

The stripping process was a tiring and time-consuming job because the tobacco had to be worked when it was "in order"; if this involved working late hours on top of a hard day's work on the farm, it was a task accepted without question. Antagonisms might easily and understandably develop among the work force under those conditions but it could also be a time of entertainment:

... usually there would be one or two in the group who were natural story tellers, imitators, or joke recouters. . . . Stories of old times, bits of history, . . . reports of local crimes, killings and trials, anecdotes on local personages, interesting

57 Guthrie, p. 41.
58 Guthrie, p. 41.
59 Miller, p. 23.
experiences of the story-tellers and their families. These and a thousand other subjects were disposed of one after another. No rush . . . there was plenty of time . . . no one was going anywhere.

And so, those of us who grew up on tobacco farms found that the stripping room was a part of our life and culture . . . .

Stripping the stalks of tobacco and tying the leaves into hands demanded a discriminating eye, yet this process "went on automatically while the real attention was on the tale in progress." 61

Finally, the culmination of all the back-breaking efforts directed towards producing a year's tobacco crop came in the act of packing the hands of tobacco on "tobacco baskets" which would then be sold at a "loose-leaf" auction. The farmer would transport his tobacco to a warehouse which supplied wooden baskets, nearly flat and approximately forty inches square:

'packing' required know-how. The packer filled the bottom of the basket (whose sides were no more than 2 or 3 inches high) with hands of tobacco in a more or less haphazard fashion until the tobacco was level with the top of the basket. Then, as someone passed him the hands, he placed them side by side, butt-ends hanging a little over the baskets' edge, pressing each one down with his knee, working clockwise, packing the basket to a height of 5 or 6 feet. A basket packed in this manner might weigh 500 pounds or more. 62

Farmers took great pride in the way in which they packed a basket, and its resultant appearance could, in fact, favorably influence potential buyers.

60 Wills.

61 Miller, p. 31.

It has been estimated that approximately ninety-five percent of the tobacco grown in the United States is now sold under this type of auction system, but this was not always the case. For over three centuries, tobacco had been sold in "hogsheads," huge oaken barrels weighing as much as a thousand pounds: "originally, the grower received a negotiable receipt for each hogshead delivered, before inspection and final sale. In the early 1800s the practice of sampling the hogsheads and selling by auction established the first form of sale by the auction system." The loose-leaf auction system originated in Virginia around 1830 when loose-leaf tobacco first started to be bought from the farmer, and within a short time this tobacco was being admitted to the warehouse for inspection. The popularity of this method of marketing tobacco continued to grow, expanding into almost all tobacco-producing areas. Even as late as 1929 hogsheads could still be found at the market, but already by the turn of the century it was a method of selling that was on its way out--"loose leaf in hands, placed in baskets on auction floors, looked better, smelled 'sweeter,' and sold better than in hogsheads." 

63U. S. Department of Agriculture, Publication No. 867, p. 28.

64Ibid., p. 36.

65Tobacco Institute, p. 58. There still is a hogshead market in existence, located in Cheltenham, Maryland, but it only sells small quantities of Maryland tobacco. See U. S. Department of Agriculture, p. 36.

66Tobacco Institute, p. 58.
The marketing season varied for the different types of tobacco; for Burley, it generally ran from the end of November until the first part of February. A number of farmers liked "to have tobacco worked off and 'on the floor' (of the warehouse) in time for the opening sale. Failing that, they might have it ready for the first sale after the holiday break, ..." feeling that better prices could be expected at the beginning of the market season. As a result of the Tobacco Inspection Act of August 23, 1935, the farmer can now take advantage of governmental grading and market news services and

readily keep informed as to the conditions of the market and at the time of sale ascertain whether proffers made on his tobacco are in line with prevailing prices. He is free to reject prices offered and if there is no sale no costs are incurred. He may reoffer his tobacco for sale, transfer it to another warehouse, or take it back home.68

If the farmer rejected a bid price offered on a basket of his tobacco, it was done so in the belief that it could be resold later at a higher price, but there was always the element of chance involved in such a decision:

If you didn't think it brought enough, you could reject it and rehandle it and put it back on the floor and maybe you'd get more for it the next time.

... If you were lucky and knew your tobacco and knew the demand and everything, you could make some money sometimes by it and sometimes you'd lose money. But still that's the thing of farming; you got to know your quality, ...69

67 Miller, pp. 24-25.


69 Miller, M., p. 11.
With any luck at all, the farmer could unload his tobacco at the warehouse, finalize its sale and be on his way back home in a matter of several hours.
III. PRODUCTION OF A TOBACCO CROP ON THE FORBES FARM: A CASE STUDY

The Study Area

The Forbes farm is located in the northwest section of Warren County, Kentucky (a major producer in the Burley Belt\(^1\)), approximately six miles outside of Bowling Green on the Barren River-Westbrook Road (Figure 1). The farm is approximately 298 acres in size, consisting of large wooded areas made principally of oak, cedar, and poplar.\(^2\) About fifty acres are under cultivation. Eugene Forbes was born in 1911 in Riverside, Kentucky and has spent all of his life in this general area of the county. He and his wife, Nellie, and their family, moved to the present location in 1941. At first renting the property, they later purchased it in 1946. The farmstead (referring to the immediate area of the farm's buildings) is composed of three main structures—the house, a feed barn, and a tobacco barn—and numerous other subsidiary buildings (Figures 2 and 3).

\(^1\)Axton, p. 142.

\(^2\)Information presented in this chapter is largely derived from interviews conducted with Eugene Forbes at his farm, primarily those of October 10, 17 and November 13, 15, 1975.
FORBES FARM GEOGRAPHIC SETTING

Fig. 1
old corn crib

feed barn

storage shed

chicken house

barn

outhouse

storage shed

storage shed

house

FORBES FARMSTEAD

Fig. 2
Fig. 3. Forbes farmstead
Forbes maintains fifteen head of cattle and approximately seventy-five chickens. He also raised hogs and grew corn until about four years ago. He has a fair-sized garden (located near the house and about 1/4 of an acre in size) and a number of bee hives which provide honey for family consumption. Land under cultivation is devoted almost entirely to the growing of hay. His cash crop is tobacco, of which he has approximately one acre under cultivation. He had been raising dark tobacco prior to his move to Bowling Green but then changed to the raising of Burley in 1941.

The Plant Bed

About three years ago Forbes was still "burning" his plant bed, in February or March, by piling brush--weighted down with poles--on the area to be treated. He discontinued this practice primarily because he reached the point where good areas for burning were lacking, that is, those with a southern exposure providing the morning sun (the evening was considered "too stout"). Now he prepares his "plant bed" during October if at all possible (otherwise waiting until

3The production of both air- and fire-cured dark tobacco, grown almost exclusively in the western sections of Kentucky and Tennessee, has markedly declined since the 1920s as the result of a drop in foreign demand and, in particular, a major shift in consumer preference away from chewing tobacco--of which it was the major ingredient--to cigarette smoking. An interesting side-note is that authors Hart and Mather consider dark tobacco of this area to be "closer than any other modern tobacco to the original type which was planted at Jamestown in 1612." John Fraser Hart and Eugene Cotton Mather, "The Character of Tobacco Barns and Their Role in the Tobacco Economy of the United States," Annals of the Association of American Geographers 51:3 (September 1961): 279.
the following March if the ground is too wet) through the use of cold methyl bromide gas. The plant bed area, approximately twelve feet wide and seventy-five feet long, is first plowed, then disked down, and finally worked over with a garden rake. Next, a ditch is dug around the bed which is covered by a gas-proof cover (polyethylene) and sealed at the edges with soil (Figure 4). Trays holding small gas canisters are placed on the bed just prior to the spreading of the cover and are so constructed that they can be punctured after the cover is in position. If the bed is prepared in the fall, this cover is left on the bed until the spring; if prepared in the spring, however, it is only kept on the bed for approximately seventy-two hours. He would still prefer to burn his plant bed if it were possible because that would automatically mean that it was in "new-ground" with its attendant advantages.

Once the cover is removed, Burley Number 9 seeds are mixed with fertilizer and broadcast over the bed. He sows a teaspoonful of seeds (mixed in two gallons of fertilizer) lengthwise and the same amount crosswise to minimize the effects of the wind, followed by dispersing the remainder of a fifty pound bag of fertilizer. The soil is then gone over with a garden rake. (Many years ago he used to "tromp" in the seeds by walking sideways, covering the entire bed. The idea was to pack the soil so that it would hold moisture better and thus improve the chances of germination. Now, with adequate rainfall in contrast to former years, this has become unnecessary.) "Tobacco canvas" is then stretched over
Fig. 4. Plant bed (tobacco field at right)
the bed and nailed to poles which raise it approximately eight inches off the ground. Additionally, he uses twelve poles laid crosswise which give further support to the canvas. He uses baling twine, running lengthwise and evenly spaced across the bed, which can be tightened when needed in order to keep the canvas from sagging into the ground.

Between about May 15 and the end of the month the seedlings, now about six inches high, are transplanted to the "tobacco patch." Several preparations must first be made before this next major step in tobacco cultivation can be taken. Two weeks prior to transplanting, the canvas is removed in order to "harden up" the seedlings. They will normally gain another two inches during this time; however, those that grow too rapidly need to be trimmed down.

"Twisting them out" would cause them to "bleed," i.e., allow the "sap" to run out, and result in a longer growing period. The solution is to simply suspend a lawn mower with ropes from an aluminum ladder which is then carried up and down the rows by two men, one at either end, trimming the seedlings to the desired height (!); this will consequently hold the seedlings back to make them "stouter."

As for the tobacco field itself, about one week before transplanting it is plowed up, disked, fertilized, and disked again. Fertilization of the land is accomplished through the use of commercial fertilizers and farm manure. Cultivating is done in such a way as to result in a field that rises in the center, falling off to either side, to
facilitate drainage. Forbes has been growing tobacco in the present field for almost twenty years. And the plant bed, located beside it, has been used for about four years, making it more of the permanent type (characteristic of northern tobacco cultivation). Particular problems of the permanent versus the temporary plant bed are the control of weed seeds and plant diseases and Forbes realizes that he may have to consider moving the bed in the next couple of years for these reasons.

**Transplanting**

Transplanting involves pulling the seedlings from the bed, placing them in metal wash-tubs, and then transporting them to the "tobacco setter" either by hand or on a pick-up truck. For many years, from about 1952 to 1970, Forbes used a machine setter called a "Jackson setter" (Figure 5); in fact, he was one of the first farmers to use one in his area. This replaced the use of wooden pegs (Figure 6--they might often be simply whittled from the end of a hoe handle) and saved a great deal of time and back-work; a field could be set in a couple of hours or less with this machine. During the past five years he has used a new type of setter which has the main advantage of actually setting the plants, whereas before they had to be dropped by hand. He does not own this machine, however, but loans out his manure spreader to a local farmer in exchange for the use of the setter.

Particularly at this stage of tobacco cultivation it is evident to what extent the family becomes involved in
Fig. 5. Tobacco transplanter (Jackson Setter)

Fig. 6. Tobacco pegs
helping out. All of the Forbes children are grown now and the three sons have their own tobacco allotments in the immediate vicinity of their parents' farm (worked in addition to their full-time jobs in Bowling Green): Elbert farms 3/4 of an acre, and Roy and Frankie rent 1 1/2 acres from Frankie's father-in-law. They all pitch in to set each of the fields. The two daughters, who also hold down full-time jobs, help whenever they can although usually only on their parent's tobacco operation.

After transplanting has been completed, the plant bed can then be prepared, about mid-June, for next year's sowing by the planting of legumes: "permanent plant beds with a heavy growth of summer legume are helpful in controlling weeds, keeping the soil fertile and in good tilth, and in preventing wildfire in the plant bed and in the field."4 Forbes plows the bed, disks it, and then goes over it with a garden rake. He sows seeds for black-eye peas which can be picked as they ripen until as late as October.

Maintenance of the Tobacco Field

Cultivation of the tobacco field is primarily directed at controlling the weeds and keeping the soil loose. Very soon after transplanting the field is harrowed, an operation which is then repeated about a week later. Then the following

week the field is plowed and this too is repeated, on a weekly basis, until the plants become too high and damage is likely to result from any further cultivation. While one person is operating the machinery, others are using hoes to remove additional weeds. Forbes has had little trouble with the need to reset plants but if it should be necessary, he carries it out within a week of transplanting. In anticipation of such an eventuality, and also to have a supply of plants for neighbors, he actually sows two plant beds. At one time he would have supplied seedlings to those in need, free of charge; however, in recent years he has been forced to charge because people simply are not bothering to go to the trouble of preparing their own plant beds.

The next step in cultivation comes in "topping." When about two-thirds of the field is in bloom, the plants are topped down to leaves that are about six inches long. The tops are simply tossed on the ground. Through the use of a chemical, MH-30, "suckering" has been almost eliminated. It is usually applied immediately following topping, or it can be applied to the plant first, with topping following two days later. Forbes has been very fortunate in having little trouble with the various tobacco diseases which can affect plants in the bed and field, and even the tobacco worm has been largely eliminated by chemicals. Also, his tobacco has suffered little damage from adverse weather conditions such as hail or frost.
Harvesting

By the end of August—about ninety days after setting—the crop is ready for harvesting. If the leaves have begun to "heavy up" with most of them turning yellow (except perhaps the topmost leaves), then "cutting" can be started. Forbes had once used a short-handed "tobacco knife" (Figure 7) for cutting dark tobacco; in fact, he continued to use it for Burley tobacco for a number of years but because of the height and size of the plant, the knife had to be inserted in the middle of the stalk. Now he uses a different type of tobacco knife, commonly known as a "tomahawk" (Figure 7). Around 1944-45, he started using the "tobacco spike" (Figure 8) which is positioned over the end of the tobacco stick.

Sticks are first laid end to end—down every third row so that three rows can be cut at one time—just prior to cutting.

Forbes is one of the few farmers who still makes his own tobacco sticks. Black oak logs are cut from a young tree (approximately eight to ten inches in diameter) into 4 1/2 foot lengths, halved and then quartered with the use of a steel spike. A chopping axe is used to "bark them." Next, one quarter section is placed vertically in the crook of a forked branch resting on two supports, and split with a "froe and mallet" (Figures 9 and 10). Once the froe has started to split the log, the log is bent down towards a horizontal position—still held by the branches—and the froe is then pushed the length of the log section, being turned up or down depending on the grain of the wood. About
Fig. 7. Tobacco knives ("tomahawk" at top)

Fig. 8. Tobacco spikes (At left, old method of protecting the point of the spike with a corncob; at right, a piece of rubber tubing now used for the same purpose.)
Fig. 9. Forbes demonstrating the use of a froe in riving out a tobacco stick (forked branch cut only for demonstration—would normally be larger).
Fig. 10. Froe (used in riving out tobacco sticks)
twenty-five sticks can be "rived out" of this quarter section. Forbes did not make any sticks this year because those fashioned in this manner (opposed to those made by milling) are very durable and will last many years; he last rived out sticks about ten years ago.

The Forbes family tries to work in teams of three in cutting tobacco, with two men cutting the stalks (Figure 11) and handing them to a third man who spears them on to the tobacco stick (Figure 12). (Again, all the men help out--even Elbert's young son Anthony--especially during this operation.) When this stick is full, holding five or six stalks, the worker removes the spike, leans the loaded stick against his side and places the spike on another stick. Once this stick is also full, both sticks are leaned against one another for mutual support and remain in the field for four or five days until the plants wilt. During this stage of cultivation, as in topping, the farmer has to contend with the sticky tobacco gum produced by the plants. One way to reduce its tackiness is to rub one's hands in the dirt, which will help to keep it from building up.

Forbes was particularly concerned about cutting and housing the tobacco before it rained; one rainstorm could wash off a fair amount of the tobacco gum which adds desirable weight to the leaves. After wilting, the sticks of tobacco are loaded onto a flat-bed wagon and transported to the tobacco barn. Forbes's daughters also helped with this

Fig. 11. Forbes (at right) cutting a tobacco plant.

Fig. 12. Forbes's son, Roy (at left), then spikes the stalk onto the tobacco stick.
operation (Figure 13). Care had to be taken that the leaves
were not stepped on or dragged on the ground when being
placed on the wagon, otherwise such bruising would cause
those areas to "cure up green."

About two weeks after the wilted tobacco is removed
from the tobacco field, the field is disked and then seeded
with "31 fescue," a cover crop which keeps "the soil stabi-
HZed so that erosion hazard from winter and spring rains
will be lessened. . . . 

Tobacco stalks, left over from the later "stripping process,"
are never used by Forbes as fertilizer for the field--although
some farmers do use them--for fear of introducing such
diseases as "black shank" or "root rot."

When Forbes first moved to this farm there was only
the tobacco barn he uses today. There had been a log barn
located in an area just in front of the present "feed" barn
(Figure 14) but this had been torn down prior to his arrival
in 1941. Consequently, the tobacco barn had to function both
as a tobacco and stock barn until the present feed barn was
constructed in 1951. The tobacco barn, measuring approximately
thirty feet by thirty-two feet excluding the shed appendage,
is of the transverse-crib type with the central driveway
running from gable end to gable end (Figures 15 and 16). Its
framed construction is of the "pole" style, that is, a series

6 "Seeding winter cover crops," Liberty (Ky.) Casey
Fig. 13. Loading tobacco for transport to tobacco barn.
Fig. 14. Feed barn (tobacco barn at right in background)
Fig. 15. Tobacco barn
FORBES TOBACCO BARN:
FLOORPLAN

KEY: • post

(Approx. Scale)

Fig. 16
of posts set in a dirt floor provide the basic framework of the structure (Figures 16-18). There are three tiers on either side of the driveway, two above it, and one in the shed appendage. Characteristic of barns of this type which, for example, were not purposely built for housing tobacco or, in this case, were at first probably used for fire-cured dark tobacco, is the lack of hinged ventilators. Consequently, the amount of control that can be exercised over humidity conditions is limited and is almost entirely confined to the closing of two barn doors on the northwest end of the barn driveway at night (generally); there are none on the southeast side but this poses less of a problem because the prevailing winds issue from the north and northwest. During particularly humid weather Forbes used to build small fires in metal tubs filled with dirt to help remove excess moisture but has not resorted to this practice for several years.

The wagon loaded with tobacco is drawn into the barn and the sticks handed up to workers positioned on the tier poles (figure 19). This barn was originally used for dark tobacco which takes up considerably less room than Burley—"some farmers argue that a barn which holds an acre of Burley will hang three acres of dark tobacco"—and consequently the structure is actually too crowded once all of the available tier space is filled up. The tier poles are approximately 3 1/2 feet apart both vertically and horizontally, whereas they should be about 4 to 4 1/2 feet apart vertically and

7Hart, p. 279.
FORBES TOBACCO BARN:
CROSS-SECTION

KEY: -----tier poles

Fig. 17
Fig. 18. Interior of tobacco barn
Fig. 19. Forbes's son, Frankie, hanging tobacco.
about 4 feet horizontally; in fact, with the introduction of new hybrids, a number of farmers who are building new tobacco barns are spacing the tier poles 6 feet apart vertically. This year, Forbes has more tobacco than he can house in this barn and consequently has to use one of the shed areas of his feed barn for the overflow.

**Preparation of the Crop for Market**

By the end of October the tobacco had sufficiently cured to be "stripped." Forbes did, however, rush the stripping process a little as the stalks still had not cured as much as he would have liked, but he wanted to get the crop stripped while the unseasonably warm weather of this year persisted. Stripping could not take place until rain or a fog brought the tobacco "in order." Once this condition prevailed, Forbes and his wife set up a temporary stripping table in the southeast opening of the barn. They were later joined by their sons after the end of their working day in the city. Years ago Forbes would strip the tobacco into five grades--"trash," "lugs," "bright leaf," "red leaf," and "tips"--but now only three are made--"trash," "lugs and bright leaf," and "red leaf" (there are very few tips because of topping practices). He stripped the lugs/bright leaf grade, and his wife the "trash" and "red leaf" grades, into hands of approximately fifteen or twenty leaves (Figures 20 and 21). These hands were placed back on tobacco sticks

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^8^University of Kentucky Cooperative Extension Service, Tobacco Production in Kentucky, p. 47.
Fig. 20. Forbes stripping a tobacco stalk.

Fig. 21. Forbes tying a hand of tobacco. (His wife is stripping the "red leaf" grade.)
which when full are put "in bulk," stacked on a plank base on the ground and covered with a tarpaulin to keep the leaves in order. This also served to press the leaves down and to stretch them out, improving appearance and enabling them to lie better in the tobacco basket in which they were to be marketed. A certain number of these sticks had first to be replaced back on the tier poles because the tobacco was in too high an order. The stripped stalks were loaded onto the wagon and later tossed onto an open field. The entire stripping process-dependent as it was on the weather—took over a week.

After all the tobacco had been stripped and bulked for at least a week, Forbes obtained "tobacco baskets" from "Ray's Tobacco Sales" (a tobacco warehouse in Bowling Green) in final preparation for the market season. The baskets are first placed on a pick-up truck which has either been pulled into the barn or parked at the driveway opening. A basket is "packed" directly on the truck, and when the tobacco hands reach a height of about five to seven feet, they are topped with an inverted tobacco basket which is tied to the one on the base with four pieces of baling twine; this is to help keep the tobacco in place when it is transported to the warehouse (Figures 22 and 23). Building up the baskets with the hands of tobacco has to be done carefully; if too wide a circle is made as one progresses up the pile, it may start to "crawl," i.e., shift and start to fall apart on one or more sides. Forbes made up 6 baskets: 1 of trash, 4 of
Fig. 22. Packing a tobacco basket. (This photo shows the loading of tobacco from Frankie and Roy's allotment.)

Fig. 23. Tying on an inverted tobacco basket.
lugs/bright leaf, and 1 of red leaf. He is purposely waiting for the second sale of the tobacco market in the hopes that his tobacco will bring higher prices, but then, the first sale might bring the best prices--always an unavoidable gamble. When all of the tobacco has been placed on baskets, these are then trucked to the tobacco warehouse. There they are weighed in and set out on the floor "in the break"--in a straight line with other baskets--to await final sale at the auction.
IV. CONCLUSION

The culture of tobacco has not remained untouched by advances in science and technology, as evident from the preceding study, and important strides have been made since the Second World War in improving the lot of the tobacco farmer. The development of new hybrid strains of Burley has resulted in tobacco which is not only more disease-resistant but of higher quality and yield as well. Advances in the use of fertilizers have also improved quality and yield and enabled the utilization of formerly marginal lands. Mechanization, in the form of the tractor and transplanter, has improved planting efficiency and contributed to lessening some of its back-breaking work. Through the use of a chemical, MH-30, suckering has been all but eliminated. Finally, weed control has been facilitated by the use of herbicides; the ravages of insect pests--particularly the tobacco worm--have been greatly reduced through the use of insecticides; and the various diseases attacking the roots of plants have been largely controlled by fungicides.\(^1\)

Eugene Forbes has taken advantage of many of these improvements--the use of hybrid tobacco, the mechanized transplanter, and a sucker-controlling chemical, to name a

\(^1\)Axton, p. 124.
few. Despite some technological innovations, the cultivation of tobacco is still largely a "hand, leg, back, and shoulder proposition. Of all crops, it lends itself least to mechanized aids."² Hand labor still figures prominently in the production of tobacco: in preparing the bed, pulling the plants, topping, cutting, transporting to the barn, hanging, stripping, and finally, packing the tobacco for market. In today's fast-paced world, this somewhat ironic situation has made possible a substantial persistence of tradition with respect to method, technology, and terminology in the production of tobacco.

Although tobacco yields a higher cash return per acre than any other crop (on a national average it grosses $630 per acre versus its closest competitor fruit and nuts at $380 and wheat at only $38 per acre³), it also demands a tremendous number of man-hours per acre. There are other crops, such as soybeans or even cucumbers and peppers, which are far less demanding in that respect, and yet, can be very remunerative in their own right.⁴ Why, therefore, would a farmer still prefer to raise tobacco in light of viable alternatives? In the case of the Forbes farm, growing these other crops on a scale to approach the profitability of tobacco is not possible due either to poor soil conditions or lack of tillable land.⁵ Yet even if these factors

²Hughes, p. 41.
³Hart, Signs of the Tawny Weed, p. 28.
⁴Interview with Kelcy Driskill, County Agricultural Agent for Warren County, Kentucky, Bowling Green, Kentucky, 19 November 1975.
⁵Ibid.
were not operative, one strongly suspects that Eugene Forbes
would still persist in growing tobacco and for reasons other
than the profit motive.

There is an intangible factor at work here, reflected
in the following anecdote:

A long-time Henry County grower told me about an
acquaintance who in 1915, took his crop to Shelbyville
to sell and it lacked $1.80 in even paying the floor
charges. The warehouseman told him he could bring a
chicken to cover the extra $1.80 the next time he was
in town.

Two days later the farmer appeared with two
chickens. The warehouseman explained that one chicken
would cover the debt.

'I know,' the grower replied, 'but I've got
another load I'm bringin' in to sell today!'6

Traditions die hard. In tobacco cultivation we see the
persistence of many traditional (hand) methods, which have
not been so readily displaced by the machine as is the case
in other areas of farming. This situation, coupled with the
fact that tobacco farming is essentially a year-round activity
involving most members of the family (and which easily
promotes social gatherings), has resulted in a practice which
has, for all intents and purposes, become an ingrained part
of the culture.

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