Agriculture in The Upper Shenandoah:
An Outline from the 18th Century to the Present

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The Great Valley of Virginia has played a significant role in molding Virginia's and, to a lesser extent, the Nation's agricultural history. During early colonial times, the Valley was easily accessible to settlers as it was strategically located along the major interior settlement routes, beckoning the pioneers to move into the region and to abandon aspirations of moving further west. Once here, the settlers found the mild climate and fertile soils conducive to farming, allowing them to develop the Valley into the emerging Nation's breadbasket, a title it did not relinquish until the corn and wheat belts of the American midwest became well established in the mid and late 19th Century. Thus from the country's beginnings, the area welcomed and accommodated settlers who wished to remain and derive their livelihoods from the soil.

The Valley itself may be divided into two smaller valleys, the Roanoke and the Shenandoah Valleys, the former being to the Southwest of the latter. For the purposes of this paper, the authors will direct their attention on the Shenandoah Valley and then, as far as possible, only on the upper portion of the Valley with Rockbridge County being the specific area of focus. The Shenandoah includes an area of some 6,500 square miles which stretch from the Potomac River, southwest to Natural Bridge, Rockbridge County, Virginia. The eastern boundary of the valley is separated from the Piedmont by the Blue Ridge Mountains and it's west-
ern frontier is defended by the Alleghany Mountains. These two mountain systems meet in Rockbridge County, defining the valley's southern or upper terminus.

Ample documentation of the Shenandoah Valley and its people exist and from this one may gather much general, as well as specific, data about the agricultural systems of the region. It is from these records that the authors hoped to learn about, and trace, the agricultural development of the valley as it applied to western Rockbridge County. From these records we hope to determine what was raised in the research area, how and why it was grown, and what effect historical events had on the area's farming heritage.

The investigation of western Rockbridge County's agricultural past was not of haphazard choosing but was rather chosen because the area is currently under archaeological investigation by faculty and students of Washington and Lee University. The area consists of 9,000 acres of mountainous terrain in Rockbridge County bordered, to the west by Alleghany County line, to the northwest by North Mountain, to the Northeast by the town of Denmark, and to the Southeast by House Mountain. Within these confines are three environmental zones which include flood plains, hollow areas, and high hollow zones. Each of these, as the name implies, is a distinct zone characterized by the different altitudes and mountain slopes. Thus the crux of this paper is to determine the agricultural systems associated with each zone
of the research area and relate it to the people who de-
veloped and used the systems.

Upon first glance this undertaking will appear a rel-
atively simple one as much documentary material is avail-
able about the Shenandoah Valley, but when wading through
the records and accounts one quickly comes to realize the
complexity of the area he has applied himself to investi-
gate. One of the first problems that is encountered is
the fact that many of the records are generalizations about
Valley farming, seldom relating the material to a specific
county or area and then in cases for which they do, the
areas generally fall outside of Rockbridge County. If the
records do deal with the county, the accounts are again of
the wrong area, in the wrong environmental zones, thus
rendering much of the information useless with the excep-
tion of perhaps drawing analogies from it. Similarly those
reports which generalize about the county as a whole lend
little direct insight into our research area, and can only
be used through analogy and hypotheses formulating. The
generalizations seldom permit the demonstration of similar-
ities and differences between environmental zones.

Along similar lines, the whole or at least the major-
ity of Rockbridge County constitutes a different environ-
mental zone than the rest of the Shenandoah Valley. It
has been observed by these authors that different writers
tend to have differing ideas as to where the southern term-
inus of the Shenandoah is located and what it includes. Some write that the terminus is in and includes all of Rockbridge, others say it includes none or only part of the county. What then does this hold for our research? It indicates that the researchers must be aware of what the writer's perceptions of the valley's borders are and they must not interpret them too broadly. It appears that even if the recorder doesn't include Rockbridge as part of the Shenandoah that the information forwarded must still apply, at least in a small way, to what was going on in the county, but then again this idea must be approached carefully.

The reason this discrepancy arises is due to the fact that the Shenandoah narrows and disappears in Rockbridge County as the Blue Ridge and Alleghany Mountains converge. The valley that reappears on the opposite side of the county is not the Shenandoah but the Roanoke Valley. One must also ask himself how this convergence affects the agricultural accounts in Rockbridge County and the research area in specific, as the latter is almost entirely mountainous.

Geography and generalized records are not the only obstacles encountered while attempting to reconstruct the research area's agricultural heritage as historical events also present problems. Prior to 1791 the County of Rockbridge did not exist, but was rather a part of Augusta County, Virginia. This means all early accounts of farming in the county are associated with Augusta's records
further adding to the difficulty in defining Rockbridge's agricultural development.

At present, the best path by which to gain specific details to our research area is through mention of place names in the area. Unfortunately, few articles have been found that relate any agricultural development to the research area due perhaps to what is today viewed as a "dull" area of the county. Another promising path which we hope to follow in the near future is to trace specific past inhabitants of the area to their place of habitation, and associate the known agricultural data related to them to the acreage they farmed. This research design has yet to be implemented as the documentary research associated with it has not been made available to the authors.

The "famous" person provides the exception to the inhabitant/habitation design but unfortunately we know of no "famous" people in the research area who have been well documented. It appears most of the inhabitants of the area were yeoman farmers who gained little recognition as they etched out their existence from the land. A further note about this last statement is the fact that much of the land of the research area is of secondary or worse quality and it would appear that second rate, johnny-come-latelies inhabited this area.

As mentioned above, "famous" people do draw much attention and their lives are fairly well documented, thus
they provide much source materials about life in a specific area. H. B. Jones was one such Rockbridge farmer. While he was not from our research area, but rather the rich agricultural area of Brownsburg, Rockbridge County, the diary he left, which has since been published, allows a rare insight into farm activity in at least one area of Rockbridge County between the years 1842-1871. It seems doubtful that Jones' farm would be typical of the research area farms, nevertheless the diary provides more information with which to let one derive hypothesis through analogy about farming in the House/North Mountain region of the county.

Up to this point it appears for the most part that the documentary sources needed to trace the agricultural development of the hollow dwellers does not exist or, if it has been found, does not provide a hard, just set of data. It must, at this point, be admitted that the authors as researchers have left many stones unturned and have at times probably failed to grasp the significance of some sources. As this is the preliminary portion of what we hope is a more indepth and conclusive paper we are aware of our deficiencies and hope in the near future to correct them.

As mentioned earlier, we have looked at some diaries of county residents as well as partial excerpts of traveller's diaries about the county but there are many more that we know of which we have yet to record. These we hope will provide a wealth of information for us in the near future.
Similarly we have come across accounts of the Rockbridge Agricultural Society, which operated from 1820 until the late 1800's, but we have yet to discover their resting place or they do exist. This source of material, if it exists, would provide tremendous insight into the county and our research area if we can locate it. We also place tremendous emphasis on our belief that we will be able to place specific people, who we know something about agriculturally, in our hollow areas which has previously been mentioned. At this point we have what we think are the names of some of the inhabitants of the research area but until we can trace them to the hollow through deed/title searches we will refrain from using this bit of data. Other sources of potentially useful data which we have failed to look at are census reports, Augusta County records, wills, elderly inhabitants of the area who may recall the farming systems used in the area of interest, mill records and store ledgers.

Our current paucity of specific information about the House/North Mountain area is real we believe only because we have not looked hard enough for the information we need. While it may be true that the information does not exist, we believe that it does and that through persistance and imaginative research designs we will uncover the information we need to construct a more complete and accurate agrarian history of our research area. The research thus
far conducted focuses mostly on the upper Shenandoah Valley and Rockbridge County, but when possible on our research area specifically, exploring what was grown in these areas and determining the effects different historical events had on the farming sectors of the region.

The first settlers into the Shenandoah Valley and Rockbridge County found rich and fertile lands that were capable of supporting many different crops, but not all areas were suitable for crop raising, these being the sloped areas. What was soon discovered though was that land not broken by the plow provided excellent livestock pastures once they were planted in grasses (Morton 1980:4-5). Diversity, both in crop raising and livestock breeding, marked the region's farming and provided a solid base which permitted the farmer a wide growing base lessening his dependency on anyone crop or farm animal. Under the favorable conditions of rich soil and mild climate, the pioneers of the mid 18th Century began producing the major crops of tabacco, wheat, and hemp; the lesser crops of flax, ginseng, rye, oats and indian corn; the major farm animals: horses and cows; and the lesser ones, sheep and swine.

Of the three major crops, hemp became the most important during the arly and mid 1700's. By the 1750's valley hemp had become quite important in the local economies and had attracted much attention. In 1739 Governor William Gooch stated ". . . our inhabitants on the other side of the moun-
tains from the Blue Ridge make very good linen from hemp which they sell up and down the country" (Herndon 1963:90). Then in 1748 the General Assembly established two hemp warehouses in the lower valley, one in Frederick and one in Luxenburg, to store the hemp that was being produced in the Shenandoah Valley and in the areas drained by the Staunton River and its tributaries.

The rapid popularity of hemp in the valley is not surprising as hemp will grow in almost any type of soil and the rich valley floor would be especially accommodating, producing a very vigorous hemp plant with long fibers. Attesting to hemp adaptation to the valley, it was noted that valley hemp at maturity averaged heights of 12 to 14 feet while that of the rest of the state attained heights between 8 to 10 feet (Herndon 1963:86).

The heyday of valley hemp occurred between the years of 1765 and 1783, as the crop became the major staple of the valley which established Virginia as the leading hemp producer in North America (Herndon 1963:92). With the onset of the American Revolution the demand for the cultivation and supply of hemp became even greater as it became the chief source of American sail cloth and textile material. The American war effort depended on the valley's hemp to continue the struggle (Herndon 1963:93). As this time, the "enlarged" county of Augusta was the leading upper valley producer of hemp, producing 250-300 tons of hemp annu-
ally (Mitchell 1977:169).

At the end of the war the production of hemp fell greatly in the valley as the industry moved west into Kentucky and cheaper Russian hemp began to flood the American market. Bounties on hemp production, offered by the government prior and during the war had stimulated the production of the crop but these supports were beginning to fade after the war (Mitchell 1977:234). In post war years, farmers blamed the absence of "comprehensive inspection systems" to the growing demise of hemp, with the end of grading, the market was flooded with inferior hemp which drove the price down. Similarly hemp no longer, due to inferior quality, was as readily accepted for tax purposes, further pushing its future into the grave.

As hemp was always subject to price cycles it would not take many years of depressed prices with a growing new money crop, wheat, to cause farmers to shift their plowed acreage to wheat. After the war this is exactly what occurred, land that was once planted in hemp was converted to wheat because after the war hemp prices fell. In 1776 hemp was selling for 30 s. per hundred-weight in Augusta (Mitchell 1977:169), then in October 1778, the Rockbridge agent, Alex Sinclair, was paying 180 s. (9L) per hundred-weight while fourteen years later the going price of a hundred-weight of hemp was 38 s. (Mitchell 1977:170-171). As the price dropped, many farmers no doubt saw the folly
of relying exclusively on one crop, realizing the need to diversify.

By 1830 the Valley hemp output was fading quickly, teetering on the brink of extinction. This fact was driven home by the slow sales of power hemp breakers. The industry was so far gone that this invention of Robert McCormick, Cyrus' father, could not revive it with new technology (Herndon 1963:89).

Tobacco, like hemp, grows in almost any type of soil. Of the three major crops in the upper valley's early agricultural systems, tobacco was the least important. The crop was probably brought into the valley as a carry over from the Piedmont and Tidewater traditions. Large planters were the chief producers of tobacco in the valley and they were located mostly in the lower valley. It is not until 1775 that tobacco begins to make its appearance in the upper valley and even then farmers did not devote much time to its cultivation (Mitchell 1977:179). With the outbreak of the American Revolution, tobacco's production in the upper valley was greatly curtailed so more time and land could be shifted to the cultivation and raising of hemp, wheat and livestock.

Not until after the war, beginning about 1783, did farmers turn their attentions to tobacco again. This renewed interest was partly brought about due to the decline in hemp prices and partly due to the Virginia Legislature's
financial aid to tobacco growers. The state also allowed farmers to pay off taxes in tobacco, and if tobacco prices were up it would appear to be cheaper in the long run to pay off in this crop, which was grown more economically, as opposed to hemp. During the late 1780's and early 1790's 30,000 to 35,000 pounds of tobacco were collected annually for tax purposes from Rockbridge farmers. Such was the quantity of tobacco grown in the county that in the early 1790's the growers petitioned the state legislature for a warehouse at the James River Gap. It is unknown at this time if funds for the warehouse were granted.

Even though tobacco production was up during the twenty years following the war, it did not represent an increase in acreage usage but rather, indicated better cultivation techniques. It seems unlikely that more than 500 acres were ever planted in tobacco at one time and this represents, we believe, the total tobacco acreage of Rockbridge and its surrounding counties (Mitchell 1977:180). As the price of tobacco dropped to 12s to 15 s per hundred weight, during the 1790's, it shortly thereafter met its demise at the beginning of the next century, in Rockbridge as well as other upper valley counties. Again wheat probably played a role in its disappearance.

While tobacco and hemp were disappearing from the upper valley's fields after the Revolutionary War, wheat seemed to be making major inroads. Wheat had always played an im-
important role in the Valley's economy but after the war it was to play a more important role. One of the main reasons for wheat's popularity at this time was that it was easier to manage than hemp. Another advantage was that an export market for wheat was developing. Before 1790 most wheat produced in the upper valley never left the area, then in 1790 a two million pound surplus of flour was produced and promptly earmarked for export (Morton 1977: 176-177). Ten years later in 1800, the upper valley doubled its export of flour, shipping out four million pounds. All, or at least part, of this surplus was intended to be used by the United States to pay off debts owed to France from the Revolutionary War. By the turn of the century, wheat took up 15,000 to 16,000 acres of upper valley land, twice that of hemp acreage at its peak years.

As wheat production charged ahead, so to did the growth of Alexandria and Richmond as major flour milling centers. These centers produced a demand for wheat and encouraged the price of wheat to increase, to 8 to 10 s per bushel in 1800, up from 3 to 4 s. per bushel in the 1780's (Mitchell 1977:174).

Besides driving "foreign" mills, valley wheat also drove and stimulated the growth of Valley mills as indicated by the following excerpts of a letter to Thomas Jefferson from Robert Gamble in 1798:

Our planters are turning farmers. Our
itself as another dominate valley industry. The inventories of Augusta residents of 1740 to 1760 indicate that 94% of the people (remember these are for inventories only) owned horses and 80% possessed cattle. The inventories of this time further indicate that cows were the most numerous farm animals while sheep were the least numerous (Mitchell 1977:139). Sheep were not to make up a significant population in the upper valley until the 1750's and even then swine still out numbered them (Mitchell 1977:139).

As did many other industries, livestock production in the valley fell during the war years but then rebounded during the post war years to become one of the state's most important livestock raising areas. An indication of the importance of livestock is exemplified by Augusta county in 1782, which possessed 13,000 head of cattle and 6,000 horses. This ratio of 2 to 1 was similar in Rockbridge County as well. However by 1800 the ratio had increased to 5:2, and cattle outnumbered all other types of farm animals (Mitchell 1977:185).

During the post war years the swine population was reduced and sheep breeding expanded. The sheep population grew at such a rate, that by the 1790's efforts were underway to establish a factory wool industry in the upper valley. The efforts were a success and the industry took root in and around the Staunton area (Mitchell 1977:185).

The agricultural flavor of the upper valley of the Shen-
andoah Valley had been pretty well established by the early 1800's, with wheat and livestock production taking preeminence. It was also at this time that men of the county and state began to realize that almost a century of agricultural practices were taking their toll on the productivity of the land. It was with this occurrence in mind that a major agricultural reform movement was to grip the upper valley, beginning in 1820 and lasting with dramatic and not so dramatic results until the late 1800's.

Throughout Virginia, soil exhaustion had become the most serious problem for farmers, and not until around 1820 did any sort of agricultural reform come into being (Turner 1952:81). This reform was made through the efforts of agricultural societies which encouraged new, scientific farming methods and the use of mechanized farm implements. In addition, the emergence of the many railroads helped promote the agricultural reform movement by offering cut rates to those farmers who endeavored to utilize the new methods.

Specifically, in Rockbridge County, Virginia, the agricultural societies were formed between 1800 and 1820. These societies held discussions on agricultural education, crop rotation, and the proper use of the environment. Outside of Rockbridge County, we have evidence that in the 1840's societies were started in what is now West Virginia. One such society was the Berkley Agricultural Society,
which was founded in 1845. This society, as the records show, promoted what was called "deep plowing" and scientific soil analysis (Turner 1952:82). In the beginning, interest in these Virginia societies vacillated, but in the 1820's the societies popularity soared. During the 1830's the interest once again tapered off, rose in the 1840's, and then peaked in the 1850's. The larger societies enjoyed more success than the smaller ones because many of the smaller societies had such a low working membership that they could not support themselves. Nonetheless, in 1858 the large and small societies which numbered around 68, united in making regular contributions to the Virginia State Agricultural Society. This unified funding helped build a strong system of agricultural societies and prevented local sectionalism (Turner 1952:82).

The most crucial functions these societies carried out were the regular, ever popular fairs. All over the state, both local and state societies sponsored these fairs. The fairs were held for several reasons. The county fair in Lexington was held so that the more successful farmers could show others their exceptional crops, livestock, and farming methods. All fairs gave prizes for the farmer who had the best livestock, crops, and a prize was even given to the man who could plow the best furrow. Aside from mere fun, the fairs also gave prizes to those who submitted the best essays on soil exhaustion.
Although the fairs were a "big deal" in most farmer's lives, there was some need to give incentive to those who did not plan to attend the events. In eastern Virginia, the Richmond City Council appropriated $6,000 to General Richardson to tour the state. In hopes of stirring up interest, he offered $100.00 prizes at the fairs (Turner 1952: 87). In addition to large cash prizes provided by the societies, the railroads also did their part to urge the county residents to attend the fairs. Since many farmers lived some distance from the fairs, the railroad offered cut-rates to those who wanted to ride the train or carry freight to these agricultural gatherings.

In essence, the fairs provided a place for the farmers to gather, tell stories, and display the fruits of their labor, but more importantly, the fairs were a place where the farmers, from all over the county, could gather to learn all about the latest techniques. Many farmers, no doubt, were up to date on these new techniques, but it's also evident that many others were not. For this reason the fairs were particularly valuable to the farmer who still had problems with erosion and soil exhaustion. To help the farmers who still had troubles with their soil, the societies taught methods of terracing, plowing, hillside ditching, and fertilization.

For many farmers who had fields which were on hills, the societies promoted the use of terracing. Terracing
was useful in helping to control water and topsoil runoff (Kohlmeyer 1947:13). One such terracing method, "horizontal bench terracing" was theoretically good but it seldom worked correctly. This "bench terracing" created a series of "steps" on the hillsides. In theory, the water runoff would be held in place on the steps and thus, the water and soil would not run down the slope. Unfortunately this method did not work too well. The soil just collected on the bottom terrace. In addition, too much land was taken out of cultivation (Kohlmeyer 1947:101). This method also obstructed cultivation and harbored the arch enemy of all farmers -- weeds and grass.

Since "bench terracing" was not a good way to keep water, soil, and fertilizer from eroding down the hillsides, and because with the increasing use of reapers, tractors, and mowers, the "broad-base terrace" method became more useful (Kohlmeyer 1947:103). With these "broad based terraces," a farmer would dig broad banks and gently sloping ditches. Broad based terraces made water retention greater and allowed for easy access by cultivating equipment.

Ploughing methods, which helped prevent erosion were also taught by the societies. The most effective of these plowing methods was "horizontal ploughing." If, when a farmer layed out his rows, some of the rows happened to run up and down a hillside the work was much more difficult for man and beast. Furthermore, these vertical rows car-
ried water, soil, and fertilizer away too quickly. To comb- bat this problem, farmers were taught to plow along and at angles to the slopes. This would help conserve water and soil. To aid in this hillside ploughing, special hillside plows were available. Eventually, the practice of planting clover and grass between the rows made horizontal ploughing less necessary (Kohlmeyer 1947:98).

A less successful method of water, soil, and fertilizer retention was that of "hillside ditching". Hillside ditching meant that a u-shaped ditch was cut into the hillside. This ditch was supposed to carry water off gradually. Hillside ditching was used as early as 1813 and divided the farmer's land into convenient strips. Unfortunately, this method still carried off too much soil and fertilizer. The ditches usually ran directly into a creek and so the water and soil went into the creek as well. Some farmers also disliked this method because it made their plantations look run-down.

While terracing, ploughing and hillside ditching were used to control water and topsoil run-off, scientific fertilization was introduced during the agricultural reform period to help curb soil exhaustion. Lime was far and away the most important fertilization technique to hit Virginia's fields during the reform. Limestone was and still is so abundant that virtually all farmers in Rockbridge County had access to it:
Limestone abounds in all parts of our county; Scarcely a farm that is destitute in it, and in many places it can be collected in great abundance on top of the ground.

(Turner 1979:5)

Although this lime was so abundant, it was apparent that not all farmers were appraised of its usefulness:

The use of lime is not generally resorted to in our county . . . I flatter myself the day is not far distant when it will be extensively used.

(Turner 1979:5)

Above were the words of the successful farmer, H. B. Jones in a letter to Edmond Ruffin's Farmer's Register. The letter, dated 1842 indicated that the agricultural reform was slower in Rockbridge County than it was in the greater part of the Shenandoah Valley where lime was used extensively before 1842. Another method of fertilization was offered by Edmond Ruffin himself in 1832. In his Essay on Calcareous Manures, Ruffin tried to show that manure, mixed with calcium carbonate would neutralize harmful vegetable acids and yield plant food instead (Va. Magazine, Vol. 73, 1965:261).

The use of fertilizer increased crop production, and during the reform, certain mechanical plowing and cutting methods were introduced to escalate production even higher. In 1820, the new iron plows were beginning to replace the old wooden moldboard plows. With this new iron plow, a farmer could plow an acre and a half faster than he could
plow one acre with the wooden plow. In addition, the McCormick Reaper was available in the 1840's. The reaper saved valuable hours during the short harvest season. In 1830, it took five hours to cut an acre by hand, but with the use of a reaper, one could cut an acre in one hour -- a definite advantage to large scale farmers who could afford McCormick's invention.

Before the coming of the railroads, farmers in Virginia had to depend on the horse drawn carts or canals to ship their goods. Furthermore, importing lime and other fertilizers was not as profitable before railroads were utilized. In 1848-1860, new rails in Virginia joined existing ones and a western railroad system began to form (239). These lines charged 6 cents per mile for travelers and 4 cents a ton per mile for freight. To the farmer, these low rates meant that he could import seed and fertilizer and export his crops for relatively little.

The railroads helped the agricultural societies in several ways. First of all, some lines would lower the rates for passengers on return from the fairs. For example, the Richmond/Danville and the Virginia/Tennessee lines gave free return tickets to official members of societies who were returning from the 1859 Virginia State Fair (239). The Richmond, Fredericksburg and Potomac line, in working closely with the agricultural societies, reduced rates on lime so as to encourage its
use. The Virginia Central line went so far as to carry lime at cost in hopes of coaxing the farmers into using the chemical (Turner 1979:245).

The influences that the railroads generated are largely responsible for the success of the entire reform period. By merely crossing a person's land, the land's value shot up five to fifty percent, thus the lucky person's land became a veritable gold mine. Farm land value was also increased by the coming of the rails because a farmer, who had already utilized the new farming techniques, could export crops cheaply and import lime for little or nothing. Therefore, this prosperous farmer had income from crops, and he knew that the cheap fertilizer would prolong the life and increase the value of his land. As important as land value, the railroads also enabled the farmers, from all over the state, to travel to the assorted fairs and find out what they were doing wrong or show what they had accomplished. To many farmers, who were uneducated in the new methods of farming, the railroad proved to be quite valuable.

A prime example of a reform-age farmer was Henry Boswell Jones. Although we realize that Jones was not the typical Rockbridge County farmer, he did exemplify the new agricultural techniques.

H. B. Jones operated a weather bureau, he was a horticulturist, and he experimented with animal feed and crop fertilization. He utilized lime, deep furrow plowing
(water control) and he successfully rotated his crops. In a letter to Edmund Ruffin Jones noted that the man who previously owned his farm had been starved out. Because Jones created a successful farm from the run down land, it's logical to assume that the previous owner did not utilize the agriculture reform methods. When Jones took over the land he had poor crop production, but as he wrote in his letter to Ruffin in 1842:

Last year I took much more pains in preparing my ground after fallowing, plowed lime of about to bushels per acre, touned in my wheat after rolling heavily in lime, say one of lime to three of wheat . . . good farmers say I will have, at least, 20 bushels to the acre.

(Turner 1979:4)

The outbreak of the Civil War and the following five years of fighting produced a weakening of many of the agricultural reforms initiated in the previous four decades, as war strains appeared in the region. The upper valley, and indeed, the whole of the Shenandoah Valley, grew in importance during the war as it became a vital area to the Confederacy's war effort, producing much wheat and livestock for the Rebel forces. Many historians believe that these war demands were so great on the valley that they matched the area's agricultural methods for the three decades following the conflict, and these historians are no doubt correct in their assumptions.
The war greatly disrupted the rail links the valley used to import and export its needs and surpluses. One of the most important imports which fell to the war was fertilizer. This lack of artificial fertilizer coupled with the fact that many farm animals were being taken by both sides for the war efforts produced a lack of natural fertilizer; consequently, farmers returned to the pre-1820 habit of not fertilizing their fields and replenishing its nutrients. Thus began a trend which lasted until a new reform movement began in the 1890's.

During the 1890's a smaller reform movement did occur, arising during agriculturally prosperous years. At the time, V.P.I. professors organized the "farmer's institute" train and began touring the state during the winter, spreading the new scientific reforms, especially those of alfalfa growing and livestock breeding for profit (Kirby 1965:262). Whether the alfalfa and livestock breeding schemes had any effect on the Rockbridge County or any areas within its boundaries is at the moment unknown. It seems likely that the reformers would have stressed the use of calcereous fertilizers to enrich the areas farm lands which were fast becoming depleted. By World War I, the reforms had largely corrected the farming problems brought about by the Civil War.

During the years between 1873 and the early 1890's, the nation's farmers suffered economically due to a sharp
decline in agricultural prices. This decline spawned the formation of many farmer organizations and movements which attempted to rectify the problem, attaining great popularity in the western United States. It is unlikely that any of these organizations and movements enjoyed much support from upper valley farmers as the people were not as hard hit as their western counterparts. The western farms were becoming very modernized in the years prior to the price fallout, thus when it hit many farmers went into debt as a result. In the Valley this indebtedness and the related discontent this brings did not occur to any great extent as most farmers in the area did not rely on or purchase farm equipment. One must remember this is only a few years after the War and the Valley was still attempting to recover from it (Sanders 1971:491). The agrarian movement of the late 1800's thus quietly bypassed the Valley as people there attempted to reestablish their farms following the destructive consequences of the war.

Concerning the period from 1900 to the depression, we can finally offer some insight on the mountain hollows located in our research area. We found no written documents concerning these specific hollows, but Milton Chalkley taped some oral histories from previous hollow dwellers in the fall of 1981. The two people he interviewed were Mrs. Minnie Ayers age 80 and Clarence Wilhelm (age unknown). It would be dangerous to rely too heavily on either of
these oral histories because peoples' memories cannot be expected to remain absolutely clear after 60 or 70 years of life. Nonetheless, the information Chalkley obtained can be valuable if considered along with the possible flaws.

Minnie Ayer's memory did not appear to be bad, but she had trouble giving specific answers to Chalkley's questions; that is, she tended to go into some unrelated digressions. According to Ayers, there were no jobs but farming in the hollows. The farmers grew corn, wheat, barley, oats—"everything" (Chalkley 1981:6-7). In addition, the hollow dwellers grew strawberries and cultivated peach and apple orchards. We were able to conclude that her father grew and then ground his corn at a nearby mill (Chalkley 1981:9). Along with crops, the dwellers raised domestic turkeys, pigs, and chickens. Essentially, this was all the information we could get from the Chalkley/Ayers interview.

The interview with Clarence Wilhelm was more valuable with regards to farm life in the hollows. He told what was grown, where it was grown, how it was cultivated, and why, in his opinion, the farms disappeared.

Ayers and Wilhelm both said that the hollow dwellers grew wheat, corn, oats, and that they had smaller gardens. According to Wilhelm, and as a visual survey of the hollows will support, the hollow dwellers used the land on the slopes and utilized the slopes all the way to the top of
the hollow. Wilhelm commented that some of the slopes were "so steep" (Chalkley 1981:9). Wilhelm also stated that when he was a young boy he used to watch the steam powered thrashers work the hollows. This use of steam powered thrashers indicates that for some of the more level fields in the hollows sophisticated machinery was being used. It seems likely, however, that these thrashers would not be able to work in the fields which were on the steep hollow walls.

Some good information on soil exhaustion and erosion also came out of the Wilhelm interview. When Chalkley stated that there must have been terraces in the hollows, Wilhelm said "No, no terraces" (Chalkley 1981:9). He added that because there were no terraces, the soil washed away. The interview also indicated that the hollow dwellers just wore out the land. Wilhelm noted that all that now exists in the hollows is brush and cedars where there once were crops and before that hardwood trees.

In 1929, the collapse of the economy was a far removed concern of the people as the nation was emerging from a decade that had proved to be unusually prosperous, for Rockbridge County as well. Prices for farm products had been good during the 20's and no one saw any reason why this trend should not continue into the 1930's, but in late 1929 the disaster struck, hurling the nation into a major depression and shattering everyone's illusions of continued pros-
perity. No one during those early years were harder hit than the farmer of Rockbridge County.

Following close on the heels of the depression of the early 1930's were two droughts, one in the summer of 1930 and one in the summer of 1932, which struck hard at the county's rural populace. Of these two droughts, the most damaging was the second as many people were attempting to adjust to the depression and recover from the 1930 drought. The drought greatly effected the prices of commodities, bringing prices down to the lowest levels in 132 years and cutting farmers' income by 20 to 25% (Herndon 1981:8).

In general, farmers of Virginia were hardest hit during the opening years of the depression, seeing their earning power decreasing by as much as 61%, and were among the first to receive local and federal aid (Herndon 1981:7-8). Shortly after the 1930 drought, Virginia, along with eleven other states, was offered aid by Herbert Hoover to ease the plight of the farmer. The majority of the aid money was used to employ rural workers in projects to build "farm to market roads," a pet peeve of Harry Flood Byrd, who thought of these as highway instead of relief funds (Herndon 1981:12). By the spring of 1933, the state's work relief programs, financed with federal funds, were ended on the assumption that the workers could and would return to their farms. Thus ended aid to farmers in Rockbridge County, at least for the time being (Herndon 1981:
In the summer of 1933, the Virginia Relief Administration (VERA) was established in order to meet conditions to gain government funds from the Federal Emergency Relief Administration (FERA). During 1934 and 1935 the Rockbridge branch of FERA supported twenty-three clients in rural areas, but who, and from what part of the county these people are from, are unknown. Besides offering direct aid the FERA branch in the county encouraged, with much success, a subsistence garden program, distributing boxes containing eighteen varieties of vegetable seeds, along with potatoes, onions and fertilizer (Herndon 1981:38). Again, to whom and to where this aid went is unknown.

It appears thusly that during the early and mid 1930's efforts were made to help relieve some of the hardships the Depression brought to the rural segment of Rockbridge County's population. At times this aid was quite effective, but at other times, owing to the state's traditional view against social welfare, it was ineffective or non existant, at some times when it was truely needed. With the onset of World War II, and the growing need for farm products, it seems reasonable to assume that the farm industry in Rockbridge County once again experienced prosperous times.

The Wilhelm interview indicated that the hollow dwellers wore the land out and that the soil just washed away down those "little hills." As I described earlier, there
has existed since the early 1800's, methods for conserving topsoil and water. There has also existed, since the early 1800's, scientific techniques for preventing soil exhaustion—namely fertilizer. It is possible that Wilhelm has touched upon an important reason why the hollows were eventually deserted. One could speculate that (1) the dwellers were ignorant of the methods used to prevent soil erosion and exhaustion; (2) that they could not afford the farming tools or fertilizers required to employ these preventative measures; or (3) that it was a combination of poverty and ignorance which led to the eventual wearing out and washing away of the farm land. Whatever the cause, the appearance of the land today indicates that the topsoil is thin or non existant and that if preventative erosion/exhaustion measures were taken they proved ineffectual.

What has been presented above is a general outline of the development of agriculture in the upper portion of the Shenandoah Valley. In attempting to apply this information to western Rockbridge County we encountered problems with source material which related to our research area. The problems encountered ranged from a distinct lack of resource material concerning the area to the fact that we have had to draw analogies from many generalized accounts. Nevertheless, we have defined several areas which we believe are sufficiently documented, i.e. early agriculture, and agricultural reforms, but we also believe many areas of the
paper warrant further investigation. Three points which we had hoped to develop, but were unable to because of the lack of data, were why farmers settled in the marginal hollow, why in later times they migrated out of the area, and were these two points related to agriculture. To answer these questions more research needs to be conducted associated with the following points:

1) Did soil exhaustion force habitants out of hollows?
2) Did reform techniques go unheeded accelerating soil depletion?
3) Did railroads and fertilizers force up prices of prime land?
4) Did mills in the late 19th and early 20th Century go out of business destroying the local wheat market?
5) Did transportation cost of goods drive the yeoman farmer out of business?
6) Did farmers return to their farms after participating in work relief programs of the depression?

Once these points have been addressed more thoroughly we believe we will have a better understanding of the agricultural systems in our research area and how they related to the settlement and abandonment of the hollow area.
Bibliography


