

Land, Labor, and Reform: Hill Carter, Slavery, and Agricultural
Improvement at Shirley Plantation, 1816-1866

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(ABSTRACT)

As one of antebellum Tidewater's most prominent planters, Hill Carter and the world he and his slaves made at Shirley occupy an important place in Virginia history. Few scholars, however, have analyzed their roles adequately. Previous studies' overwhelming concentration on the architectural and material culture history of the plantation has left Carter's role as one of Virginia's preeminent agricultural reformers virtually unexplored. Assuming ownership of Shirley in 1816, Carter quickly established himself as a leading proponent of agricultural improvement, both embracing and building on the ideas of other reformers like John Taylor and Edmund Ruffin. He diversified his crops and changed their rotations, used new equipment and improved methods of cultivation, reclaimed poor or unproductive lands, and employed a variety of fertilizers and manures to resuscitate his soils. Significantly, Carter efforts to improve Shirley transformed not only the physical landscape of the plantation. The changes produced in the work and lives of his slaves also were considerable. This study, then, investigates the relationship between agricultural reform and slavery. Instead of looking at reform in terms of how slavery affected (or inhibited) it, this work argues that reform must also be understood in relation to how it affected slavery, for changes manifested in attempts to improve lands had important ramifications on slave work routines, which, in turn, affected slave life in important ways.

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Note on the Sources

Hill Carter's plantation journals, cash and bank account books, and scattered writings and letters in the Shirley Plantation Papers Collection at Colonial Williamsburg's Rockefeller Library served as rich sources for much of this research. Carter's numerous articles in the *Farmers' Register*, as well as those of Edmund Ruffin and several other Tidewater planters, also provided material on Shirley.

Quoted passages in this work appear exactly as they did in the original source. No alterations or corrections, such as in grammar or punctuation, have been made unless noted. As well, throughout this work I have used the various abbreviations below to represent the different sources cited.

SPJ	Shirley Plantation Journal
SPP	Shirley Plantation Papers
FR	<i>Farmers' Register</i>
AAB	Annual Account Books
CAB	Cash Account Books

Introduction

On March 20, 1816, Hill Carter arrived from New York at his ancestral estate, Shirley plantation, in Charles City County, Virginia. Carter had recently resigned from the Navy, where he had served during the War of 1812. Now, not quite twenty years old, he returned to claim ownership of the James River plantation that had been in his family's possession since the early eighteenth century. His arrival that spring began a new period in Shirley's history, for Carter would spend the next sixty years there, during which time he became one of Virginia's most prominent planters.

Carter initially found the plantation to be "much impoverished," suffering from the poor management of overseers who had run it for "many years previous." He confessed that when he "first came home to live [he] knew nothing of agriculture,"¹ but within three years, Carter began to make fundamental reforms in Shirley's farming system. He abandoned the wasteful practices of former overseers and past generations, and turned instead to "book farming" and experimentation to resuscitate his property. He diversified his crops and changed their rotations, reclaimed poor or unproductive lands, and employed a variety of fertilizers in the struggle to improve his soils. Carter believed sound agricultural knowledge, proper management, planter initiative, and efficient use of labor to be the cornerstones of reform, for with "economy, enterprise, and industry," he remarked, "we may affect anything, even restore our deserted and exhausted lands."²

Carter eventually came to consider himself a farmer first and foremost, and he directed most of his energies toward this end. Aside from improving Shirley, Carter promoted reform through public channels. He served as president of the Agricultural Society of Lower Virginia in 1827, and he became a frequent contributor to Edmund Ruffin's *Farmers' Register*, the most important agricultural journal in the South during its ten year existence. Carter's writings here illuminate the intense efforts he undertook to revive his plantation, and they offer invaluable insight into his general views *and* methods behind agricultural improvement. Moreover, they attest to his success as a farmer and his role as a leader in a group of Tidewater planters committed to serious agricultural reform. Carter earned the

¹Hill Carter, "The Four Shift System: The best rotation for James River lands, or any good wheat and corn soils," *FR* 1, 3 (August, 1833), 132.

² Hill Carter, "Address to the Agricultural Society of Lower Virginia, July 1827," p.3, *SPP*, 80:1.

reputation of an "eminent agriculturalist," and many looked to him for guidance and direction. A fellow planter in 1840 remarked that Carter "very properly is actuated by a sense of duty to a community which *justly* looks to him as a bright exemplar in our profession."³

Hill Carter's success, however, did not come strictly from his designs for reform. The more than one hundred slaves who also called Shirley home played a significant role in the revitalization of the plantation's economy. These men, women, and children bore the heaviest burden of Carter's plans, for they were the ones who undertook the rigorous labors in the cultivated swamp lands, spent countless hours hauling and spreading manures and fertilizers, and harvested the array of crops that fueled Shirley's prosperity. As Carter stepped up efforts at improvement, they witnessed a marked increase in the diversity, complexity, and intensity of the jobs they were expected to perform. And although their labor provided the basis through which Carter implemented reform and maintained his position in Virginia society, Shirley's slaves resisted his exacting demands over their labor and person, and sought to carve out niches in which they could control some measure of their lives.

Although Hill Carter and slavery at Shirley plantation appear to occupy an important place in Virginia history, few historians have analyzed their roles adequately. Previous studies have centered around the architectural and material culture history of the plantation, as the mansion and surrounding Queen Anne forecourt remain one of the great examples of eighteenth century Georgian architecture in Virginia. Catherine Lynn's insightful "Shirley Plantation: A History," examined the plantation from its origins to the late nineteenth century and focused on establishing accurate dates for the construction and renovation of the mansion and out buildings. Theodore Reinhart's *The Archaeology of Shirley Plantation* relied on physical investigations of plantation fields, buildings, and grounds to explore the material culture and architecture of Shirley. Genevieve Leavitt's study, "Slaves and Tenant farmers at Shirley: Social Relationships and Material Culture," part of which Reinhart incorporated into his work, used anthropological perspectives and archaeological research to examine the material culture of slaves and tenant farmers in the nineteenth and early twentieth centuries.⁴

³ See Rivanna, "Remarks On Different Schemes Of Rotations," *FR* 8,2 (February, 1840), 122. On his reputation as an eminent agriculturalist, see R. "Remarks On Mr. Carter's Proposed Change Of Rotation. Insects And Weeds," *FR* 8,2 (February, 1840), p.111.

⁴ See Catherine Lynn, "Shirley Plantation: A History," MA Thesis (University of Delaware, 1967); Theodore Reinhart, *The Archaeology of Shirley Plantation* (Charlottesville, 1984); and Genevieve Leavitt, "Slaves and Tenant Farmers at Shirley: Social Relationships and Material Culture," MA Thesis (College of William and Mary, 1981).

One final and more recent study, Jennifer Ley's "The Slaves Story: Interpreting Nineteenth Century Slave History at Shirley Plantation," elevated slaves to a more central place in Shirley's history. Ley focused on the material culture of slavery, directing much of her inquiries into what kinds of food, clothing, shelter, and medical treatment Shirley's slaves received. She also explored the general characteristics of slave families at Shirley; here her work is illuminating. Her study, however, lacks detailed research, and it presents slave life as static or monolithic, failing to examine how slavery changed during the sixty years Carter presided over Shirley.⁵

While all of these works have made important contributions to understanding Shirley's past, their lack of historiographical context, coupled with their concentration on material culture, has left essential questions concerning Carter and slavery virtually unexplored. Most significantly, two fundamental areas have been neglected: Carter's role as a reformer and the overwhelming importance that work had for slaves on the plantation. This paper combines these ideas and argues that any real understanding of Shirley under Hill Carter must examine the relationship between agricultural reform and slavery. Reform was so central a component of Carter's philosophy and farming system that it undoubtedly influenced most facets of slave life, particularly labor. Carter's efforts to improve his plantation transformed more than just the physical landscape of Shirley. Changes in farming operations which accompanied reform had considerable implications for the work routines of Carter's slaves. Work, in turn, exercised a pervasive influence on slave life, and thus, the two become central issues to the topic of reform.

In recent studies, Philip Morgan and Ira Berlin have demonstrated the importance work had for slave life.⁶ Although they understand work as an almost omnipresent force, they argue its relationship to slave life emerged most clearly when changes in cultivation practices occurred. "At no time was the connection between slave work and slave life more evident," they contend, "than when the productive processes were altered."⁷ Reform obviously entailed critical changes in the productive

5 See Jennifer Ley, "The Slaves' Story: Interpreting Nineteenth Century Slave History at Shirley Plantation," MA Thesis (University of Delaware, 1995). As evident from her title, Ley also devotes a large portion of her study to illustrate how slave life can be better incorporated into the interpretation offered at Shirley today.

6 Ira Berlin and Philip Morgan, eds., *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas* (Charlottesville, 1991), 1-45. They point out that the focus on other aspects of slave life, such as they family, community, medicine, and religion, for example, has "obscured the activities that dominated slave life. After all, slavery was first and foremost an institution of coerced labor. Work necessarily engaged most slaves, most of the time." See p.1.

7 Ibid, p.21.

processes of a plantation. The particular requirements of Carter's improved agricultural system disrupted existing labor practices, *reshaping* the nature of work and the conditions of life for slaves.

Yet historians probing the connections between reform and slavery in other studies have largely omitted these concerns, focusing instead on the problems that slavery as a whole posed for successful agricultural improvement. Eugene Genovese first addressed reform in *The Political Economy of Slavery: Studies in the Economy and Society of the Slave South*. He argued that real improvement was not attainable within slave society. He maintained that the inefficiency and carelessness of slave labor, the lack of effective diversification and crop rotation,

shortages in livestock, problems of supervision, technological limitations, and lack of sufficient capital and markets all retarded reform. At the root of the problem, Genovese held, was the institution of slavery itself. It was altogether a static system, "without versatility" or the ability to foster the conditions necessary for improved agriculture.⁸

William Mathew's study, *Edmund Ruffin and the Crisis of Slavery in the Old South*, paralleled many of Genovese's conclusions. He, too, argued that the failure of reform, as embodied in the ideas of Ruffin, hinged on slavery's non-adaptability and its own internal limitations. Mathew, however, placed much of this failure behind poor planter entrepreneurship and ineffective transportation. While he did discuss the labor practices and skills involved in improvements like marling, he was concerned only with how they influenced the reform process.⁹

Thus, although both of these works explore agricultural reform and the South's peculiar institution, they examine it mainly from the perspective of how slavery *affected* (or limited) reform. This study, however, reverses the equation and argues that reform must also be understood in terms of how *it affected* slavery. Essentially, many of the characteristics of improved agriculture--diversification and rotation of crops, improved techniques of cultivation, new farming equipments, reclamation of poor lands, and increased use of manures, fertilizers, and livestock--had important influences on slavery, and recognizing this is vital to understanding the institution wherever reform was undertaken on a large scale.

Hill Carter was by no means a typical planter. In fact, he was quite exceptional. Successful reform did not spread to the mass of Virginia farmers. At Shirley, however, reform was a

⁸ Eugene D. Genovese, *The Political Economy of Slavery: Studies in the Economy and Society of the Slave South* (New York, 1967), *passim*, and especially chapters 1 and 6.

⁹ William M. Mathew, *Edmund Ruffin and the Crisis of Slavery in the Old South: The Failure of Agricultural Reform* (Athens, 1988), especially Parts Four and Five.

defining element of the plantation. It permeated the very core of slave work and life. Moreover, it functioned as a bridge between Carter and his black laborers; to a large degree, both ordered their lives in relation to it. Thus, investigation into the world Carter and his slaves made along the James allows for several important perspectives on antebellum Virginia slavery to emerge. Primarily, it affords the opportunity to explore the connections between agricultural reform and slavery from a new angle. Instead of viewing reform solely in terms of how slavery inhibited it, this study argues that reform must be examined in relation to how it affected slavery. Such a perspective not only presents a more comprehensive picture of "reform," but it also sheds light on the subject of slave work, another neglected topic in the vast literature on the South's peculiar institution.

The Case for Reform

When Hill Carter arrived at Shirley that spring of 1816, he encountered a plantation already some two hundred years old. Situated on the north side of the James River almost directly between Richmond and Williamsburg, Shirley had been home to native Indian groups for thousands of years. Englishmen, however, had first settled the property in 1613, when its lands were part of a larger grant to Thomas West, also known as Lord Delaware. Both West and his wife, Lady Cessalye Sherley, lent their names to the settlement, as it became known as "West and Sherley Hundred."¹ The principle occupation at Shirley in these early years was tobacco cultivation. In 1616, John Rolfe described the operations there in an account on the general state of Virginia which he had prepared for a trip to England. Rolfe noted that

At West and Sherley Hundred (seated on the North side of the ryver lower than the Bermuda 3. or 4 myles) are 25, commaunded by Captain Maddeson who are ymployed only in planting and curing Tobacco, with the profit thereof to cloth themselves, and all those who labor about the general business.²

In 1660 the property passed into the Hill family. In that year, Colonel Edward Hill patented nearly twenty-five hundred acres in Charles City County, four hundred and sixteen of which were on the Shirley lands.³ Hill established a modest home on the plantation, and the estate remained in the family until 1723, being passed down to three more generations.⁴ The death of the fourth Edward Hill at an early age placed the property in the hands of his eldest sister, Elizabeth.

Elizabeth Hill's marriage to John Carter, eldest son of Robert King Carter of Corotoman, in October 1723, marked a new beginning in Shirley's history. By virtue of their union, Carter acquired Elizabeth's lands at Shirley, and he moved quickly to

¹ Ulrich Troubetzkoy, "Welcome to Shirley," *Virginia Cavalcade* 9, 2 (Autumn 1959), 9.

² Quote taken from Troubetzkoy, "Welcome to Shirley," p.10. Troubetzkoy says it appeared in Rolfe's *A True Relation of the State of Virginia left by Sir Thomas Dale Knight in May last 1616*.

³ Quote taken from Troubetzkoy, "Welcome to Shirley," p.10. Troubetzkoy says it appeared in Rolfe's *A True Relation of the State of Virginia left by Sir Thomas Dale Knight in May last 1616*.

⁴ Troubetzkoy, p.12 and Lynn, "Shirley Plantation: A History," p.14.

⁵ For information on the Hill history at Shirley, see Troubetzkoy's article and Lynn's "Shirley Plantation: A History," pp.14-34. Theodore Reinhart's *The Archaeology of Shirley Plantation* also contains a section on the Hill house.

establish a residence there befitting that of a wealthy, Virginia planter. Carter spent much of the next fifteen years building the impressive Georgian mansion and surrounding Queen Anne forecourt that continue to define Shirley today. He engaged in the familiar pursuits of colonial life, trading in slaves, wine, and tobacco, and he served in the lucrative position of secretary to the Virginia colony.⁵ And like much of Virginia by this time, indentured servitude had declined dramatically at Shirley, as planters like John Carter embraced African slavery as a solution to their labor problems.⁶

Following John's death, Elizabeth Carter remarried and remained at Shirley for another thirty years. Both she and her husband, Bowler Cocke, died in 1771, and the property passed to Charles Carter, Elizabeth's son by John.⁷ Charles moved to Shirley shortly after his mother's death, making the plantation his primary residence. Like his father and grandfather before him, he rose to prominence in Virginia, becoming one of the largest planters in the Tidewater. He served in the House of Burgesses, where he supported the movement for independence from English rule. By the 1780s, he had over seven hundred and eighty slaves spread throughout his lands in seven different counties⁸. While these achievements were considerable, Charles is often remembered in connection with one of his daughters, Anne Hill Carter, the mother of Robert Edward Lee.

As expected, Charles Carter had originally intended for his lands at Shirley to be inherited by his one of his sons, Robert Carter. Robert, however, died in 1805, less than a year before his father. Charles, though, did little to alter his own will, drawing up a codicil instead that protected the conditions of his son's will.⁹ Few realized it at the time, but this proved to be a decision of monumental importance for Shirley, as Robert had dictated that his eldest son, Hill Carter, take over the estate.¹⁰

Although Hill Carter would eventually become one of antebellum Tidewater's great agriculturalists, he and his father shared little in their philosophies regarding plantation life. Robert Carter had eschewed the familiar pursuits of his ancestors and turned instead to medicine and the world of science. He

⁵For information on John Carter's life in Virginia, as well as his construction of the Shirley mansion and courtyard, see Lynn, pp.34-65.

⁶The literature on the Chesapeake's conversion from indentured to slave labor is vast. For an example of two competing interpretations, see Edmund Morgan, *American Slavery, American Freedom: The Ordeal of Colonial Virginia*, (New York: Norton, 1975), and Winthrop Jordan, *White Over Black: American Attitudes towards the Negro, 1550-1812* (New York: Norton, 1977).

⁷See Lynn, pp.65-69 for information on Bowler Cocke and his time at Shirley.

⁸See Lynn, pp.69-75.

⁹See Lynn, pp.85-86.

¹⁰Will of Robert Carter, 1805, SPP, 1:15.

explained how he chose such a course in a letter to his four children in October, 1803. He recalled that his father, "being anxious that I should betake myself to the mode of life commonly resorted to by men of independent fortunes in this country," gave him a large plantation on the York River, "with a competent number of slaves and stocks of various kinds, intending after his death to make my estate *at least* equal to that of his other sons, and perhaps superior..."¹¹ Carter, however, argued that he had "never *solicited*" this, having long maintained a dislike for certain aspects of the peculiar institution. He observed that

From the earliest point of time when I began to think of *right* and *wrong*, I conceived a *strong disgust* to the *slave trade* and all its *barbarous* consequences. This aversion was not likely to be *diminished* by becoming a slave-holder and witnessing many cruelties, even at this enlightened day, when the *rights* of man are so well *ascertained*.¹²

These beliefs obviously were not compatible with plantation life, yet Carter attempted to manage the properties given him by his father. He proved to be unsuccessful: "Suffice it to say...that my short trial of the agricultural line disgusted me entirely with the mode practiced in southern States." He added, in words that seem to contrast the life Hill Carter would later mold at Shirley, that the experience "almost obliterated the recollections of those pleasing sensations which most people must have experienced upon contemplating the happy husbandman, embosomed in his harvest field, collecting the well earned fruits of his industry..."¹³

Carter's turn to medicine, then, reflected his desire to pursue a "mode of life, [not] at once at *variance* with my *conscience* and secluded from every ray of scientific or rational social enjoyments..." Interestingly, this decision was determined to a small degree by an accident his son had early in his life. When Hill was around three years old, he slipped on a wet floor, injuring his leg severely. As the wound failed to heal properly, Robert Carter decided to take his son to Philadelphia for more professional attention. This afforded Robert the opportunity to engage his interest in medicine. He attended the University of Pennsylvania, where he studied under Benjamin Rush, a noted surgeon as well as abolitionist, earning his degree in 1803. The few years Robert spent in Philadelphia had strong influences on him. When he wrote his letter to his children, it was not from his plantation, but rather from a ship heading to Europe where he

¹¹Robert Carter, Letter to his children, October 14, 1803, SPP, 1:13.

¹²Ibid.

¹³Ibid.

planned to continue his medical studies.

Carter, however, could not escape the institution which defined so much of his state. He had become a slaveholder merely by his position in the Carter family, and although he did not become a resident planter per se, he still owned lands and slaves that provided his income. Moreover, his views on emancipation offered little escape from being a slaveholder, however far he distanced himself from actual plantation operations. He maintained that

Partial emancipation as it has been conducted in this state has certainly been attended with inconveniences to society, in a variety of respects, but the *circumstance* which has tended *most* to suspend my determination on this subject, is, that a *freed* man in this state, is often placed in a situation less desirable by emancipation, than by holding him in slavery, under humane treatment.

And this I am free to acknowledge was the chief argument with me....for deferring emancipation, so far as I was personally concerned, either until I was in a *situation* to give the *subjects* of it, something to begin with without injuring my children, or until my country had taken some steps towards this desirable end...¹⁴

Thus, although Robert Carter had scorned the life of a planter to become a doctor, a paternalistic attitude towards emancipation, coupled with a desire to provide for his family, necessitated his children's attachment to slavery. He lamented this, saying "Tho it has ever been a wish near my heart to have avoided entailing the miseries of slavery upon my children yet from circumstances which I could not entirely control it seems likely that you are to inherit this *misfortune*."¹⁵

By the beginnings of the nineteenth century, then, the foundations upon which Hill Carter would come to govern Shirley had been firmly established. With his father's death in 1805, followed less than a year later by his grandfather Charles', Hill stood poised to take his place in Virginia society. Only around ten years old (born April 14, 1796), however, Carter would not assume ownership of Shirley until nearly a decade later. During this time, he spent much of his boyhood at the plantation under the direction of his two uncles, Williams and Bernard, who functioned as his guardians. He also stayed with his

¹⁴Ibid. Virginia had allowed manumission of slaves from 1782 to 1806. In 1806, new laws were passed which ostensibly forced freed blacks to leave the state within one year.

¹⁵Robert Carter, Letter to his children. For information on Robert Carter's approach to managing slaves and his aversion to severe punishment, see Carter Berkeley's letter to Carter in Paris. November 9, 1804, SPP, 1:14.

grandparents, the Nelsons (Thomas) of Yorktown, at various times. Under these influences, and surrounded by Carter kin, Hill Carter matured, from a "fine boy, docile and amiable..."¹⁶ to a confident young man ready to carve out an existence along the shores of the James.

An important part of this maturation process was Carter's involvement in the War of 1812. Probably a combination of patriotism and a desire for adventure led him to join the Navy. Regardless of his motivations, however, the experience proved to be quite profound. Serving aboard the U.S.S. *Peacock* under the command of Captain Lewis Warrington, midshipman Carter and his fellow seamen were responsible for patrolling shipping lanes in the West Indies. In late April of 1814, the *Peacock* encountered the British sloop *Epervier*. The ensuing battle lasted only forty-five minutes, as American shells ripped apart the *Epervier*. Carter, described as "the little red headed midshipman with his cutlass between his teeth," was part of the boarding party to accept the *Epervier's* surrender. The event made Warrington a national hero, and Congress honored Carter with a sword commemorating the victory.¹⁷ The battle made an important impression upon Carter in at least one respect: he named his first born son after his commander on the *Peacock*.

With his duty completed and the war over, Carter returned to Shirley in March of 1816. He quickly ascertained that his nine hundred acre plantation was in extremely poor condition. Overseers had managed the property until Carter took control, and they had continued the wasteful and exhaustive practices characteristic of the eighteenth century. By their system, Carter recalled some seventeen years later, "the farm was so much impoverished, that it barely supported itself two years out of the three," and it "was covered with galls."¹⁸ The crops produced, as well as their yield per acre, fell well below their potentials. Self-sufficiency was not a reality, as corn and pork often were imported to the plantation.¹⁹ For Carter, the reasons behind these deficiencies were simple: poor management led to poor cultivation, which, in turn, could only lead to low productivity.

Carter understood that real changes had to be made if he was

¹⁶See Patrick Hendren, Letter to Robert Carter in London, June 19, 1804, SPP, 1:13.

¹⁷For accounts of the battle, see Edward F. Heite, "Honors to the Brave," *Virginia Cavalcade* 16, 4 (Spring 1967): 4-9, and John Lee McElroy, "Notes from the Curator," *Virginia Magazine of History and Biography* 55, 2 (April 1947):168-170. The sword awarded Carter once was at Shirley, but now is housed in the Virginia Historical Society. The quote describing Carter is taken from Lynn, p.104.

¹⁸Hill Carter, "The Four Shift System: The best rotation for James River lands, or any good wheat and corn soils," *FR* 1, 3 (August 1833), 132.

¹⁹Corn had to be imported during the third year of the three shift system. Carter also states that pork had to be purchased for the plantation slaves during the three shift system. See "The Four Shift System," pp.132-133.

to turn Shirley into a prosperous enterprise. He began with his overseer. Although Carter admitted he himself was largely ignorant of agriculture, he "soon saw that the overseer knew little or nothing of his trade, and what little he did know, did not practise; so I dismissed him as soon as his term expired."²⁰ In 1817, Carter hired Maze Lewellyn, who was known for his excellence in raising corn. Lewellyn did manage to produce a good crop of corn, but Carter observed that he "knew nothing of wheat, clover, and plaster, or any of the present modes of improvement."²¹ So Carter "began to read a little on the subject," and he frequently travelled up the James to Curles' Neck, where he sought the advice of friend and planter, John Mosby. From him, Carter learned the importance of using clover and plaster, and the necessity of fallowing his lands.²² By the fall of 1818, he had adopted a new system of cultivation. The following year, his wheat crop produced over thirty seven hundred bushels, a figure more than double any output since he had taken over the plantation.²³ Farming at Shirley had taken a new direction, as Hill Carter turned his attention to reform and improvement.

Carter was not alone in his pursuits of reform. It is significant that when he took over Shirley, many large planters in the Tidewater area, and parts of Virginia as a whole, had become keenly interested in agricultural improvement. Most had already abandoned tobacco culture (due to its exhaustive effects), and turned instead to wheat and grains. Few, however, clearly understood the overall seriousness of the problem. A general agricultural decline was affecting Virginia ²⁴, and it threatened to undermine more than just crops and soils. As the potentials offered by Tidewater lands dwindled, many simply migrated to virgin lands in the lower South, taking their slaves and capital with them, and in the process, lowering property values in the regions they abandoned.

Not until the second decade of the nineteenth century did a strong voice emerge which clearly addressed the fundamental

²⁰Ibid, p.132.

²¹Ibid, p.132. The *Shirley Plantation Journal* reveals that Lewellyn became overseer in 1817 and remained as such until 1822, when Charles Alvis assumed the job. Presley Ellett was overseer at Shirley in 1816. See SPJ, 1816-1822, SPP, 85:1.

²²Ibid, p.132. Carter called Mosby "one of the best farmers in the state." He also commented that Mosby was a man "to whom lower Virginia, or at least lower James river, is more indebted than to any other man in the state, for the introduction of clover and plaster, and the fallow system..."

²³Ibid, p.132. Carter reported his total crop as 3715 bushels. Shirley actually produced only 3223 bushels of wheat that year; Hardens, one of Carter's properties located near Shirley, produced 492 bushels. See SPJ, August 1819, SPP, 85:1.

²⁴The literature here is considerable. For two of the more important works, see Avery O. Craven, *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1660-1860*, Urbanna: University of Illinois Press, 1926; Lewis C. Gray, *History of Agriculture in the Southern United States to 1860*. 2 vols. Washington, D.C.: Carnegie Institution of Washington, 1933.

issues facing Virginia farmers. John Taylor's *Arator*, published in 1813, represented the first important agricultural work by a southerner, and it was the first voice to call for reform in a public medium. Most importantly, as Kathleen Bruce points out, *Arator* forced Virginians to recognize that the prosperity they enjoyed with wheat farming was "artificial, that it had been created wholly by the European wars, and that...their agriculture was tragically declining."²⁵ Taylor suggested that the key to revitalizing exhausted lands was to utilize vegetable (and animal) manures as fertilizing agents, to rotate crops properly, and to practice non-grazing techniques which increased vegetable growth. He also encouraged experimentation and investigation in the struggle to restore soil fertility. Moreover, Taylor championed agriculture as an enlightened undertaking, elevating it to a more dignified position in society:

The capacity of agriculture for affording luxuries to the body, is not less conspicuous than its capacity for affording luxuries to the mind; it being a science singularly possessing the double qualities of feeding with unbounded liberty, both the moral appetites of the one, and the physical wants of the other.²⁶

Taylor's insight awakened Virginians to the realities of their agricultural depression, and his ideas resonated with many, including Hill Carter. While Carter did not necessarily agree with everything Taylor advocated, he did incorporate many of his more fundamental ideas into farming operations at Shirley, particularly the use of manures, deep ploughing, and experimentation. There was no doubt, however, that Carter, like virtually all Virginia planters, recognized the significance of Taylor's work. Carter commented in 1834 that Taylor

certainly ought to be considered the most useful man to the Virginia agriculturalist we have ever had, and is well entitled to our gratitude; for he was the first man in Virginia, who ever turned our attention to the subject of improvement, by his success in agriculture, as well as his writings on the subject.²⁷

Although John Taylor is considered the first major figure to

²⁵Kathleen Bruce, "Virginia Agricultural Decline to 1860: A Fallacy," *Agricultural History* 6, 1 (January, 1932), pp. 4-5.

²⁶John Taylor, *Arator, Being a Series of Agricultural Essays, Practical and Political: In Sixty-Four Numbers*, 6th edition, Edited and with an introduction by M.E. Bradford (Indianapolis: Liberty Classics, 1977), 315. *Arator* was originally serialized in a Georgetown newspaper in 1808, but it was published in one volume in 1813.

²⁷Hill Carter, "On the Pamunky Mode of Cultivating Corn," *FR* 1, 9 (February, 1834), 561. This article does reveal, however, that Carter differed with Taylor on some points.

promote agricultural reform in Virginia, Edmund Ruffin emerged as the undisputed leader of the movement. Ruffin's most significant contribution was his discovery that soil acidity was the major factor limiting the fertility of Virginia's lands. Just as important, however, was Ruffin's realization that many Tidewater areas had plentiful deposits of a natural remedy to this problem: marl, a calcareous carbonate substance. Ruffin employed marl as a neutralizing agent, understanding that acidity had to be ameliorated before manures and grasses could successfully fertilize his lands. In this sense, as Bruce illustrates, Ruffin surpassed, yet also complemented, John Taylor's ideas, for "neutralization enabled the soil to profit by manures and set Taylor's principles free."²⁸ In 1821, Ruffin first published reports of his experiments and successes with marl in John Skinner's *American Farmer*; it was not until 1832, however, that he put his research together in book form.²⁹ His *Essay on Calcareous Manures* represented a colossal achievement in American agriculture; it illuminated clearly Ruffin's ideas on reform and made him the great champion of marl.

Ruffin realized, however, that while his book had made some important contributions, most Virginians were still largely ignorant of his ideas. Consequently, in June 1833, he began to publish his *Farmers' Register*, a monthly periodical devoted to uplifting both the soils and farmers of his native state and the South as a whole. He intended his journal to be a vehicle for agricultural improvement, diffusing vital information on topics ranging from crops to farming technologies. During its ten year history, it stood at the forefront of agricultural reform.

Hill Carter became a regular contributor to the *Farmers' Register*. His articles detail his efforts to improve his lands at Shirley, providing critical insight into his overall designs for reform. One of his first papers submitted to Ruffin described the system of crop rotations he used at Shirley. Carter began by laying out his rationale behind this system, pointing out first the intrinsic relationship between increased productivity and reform. The passage essentially stands as a succinct summation of his overall philosophy:

I imagine no one will deny that the best rotation of

²⁸Bruce, "Virginia Agricultural Decline: A Fallacy," p.7. See also William Mathew, *Edmund Ruffin and the Crisis of Slavery in the Old South*, pp.21-22. Both point out that Taylor's ideas were really "stage two," whereas Ruffin's represented, necessarily, the first step to reform. Mathew's study also offers the most complete information of marl and the process by which it ameliorated soils.

²⁹See *American Farmer* 3 (December 1821):313-320, for Ruffin's initial reports on marling. Though he had prepared his book by 1826, his friend, Thomas Cocke, deterred him from publishing it, arguing that the public was not ready for, nor would it look favorably upon, such an ambitious and complex study from a unknown planter. See Betty Mitchell, *Edmund Ruffin, A Biography*, (Bloomington: Indiana University Press, 1981), pp.30-31 and Mathew, p.23 for comments on this.

Crops is that which yields the greatest profit to the farmer, and at the same time enables him to improve his land the most rapidly. The great object is to combine both *profit* and *improvement*.³⁰

He then elaborated on how his turn away from a three shift system towards a four shift had successfully restored his lands.

All together, Carter would send Ruffin sixteen articles for publication in his *Register*. The range of topics reveal a man deeply immersed in the management of his plantation. He addressed a variety of issues, from sheep shearing and marling, to farming implements and the dangers of insects. His larger writings concern both his more ambitious projects and his more fundamental practices: Carter wrote extensively on his project to reclaim swamp land and his ideas on crop rotation. Also important is his article written in 1834 which detailed his beliefs on the management of slaves.³¹

The motivation behind these writings was not simply agricultural improvement. As William Mathew has illustrated, reform had much broader and much more significant implications. Planters like Ruffin, Carter, John Selden, Benjamin Harrison, and James Henry Hammond³² were well aware of the higher stakes involved. Reform entailed not just a general revitalization of lands; it also functioned to protect slavery and a society built around the institution. Agricultural decline translated quickly into the larger context of a general deterioration of slave society. Problems in agriculture were symptomatic of the unproductivity of slavery. If the institution was to remain a viable part of Virginia life, and thus perpetuate planter hegemony and social dominance while also maintaining blacks' status in society, planters first had to reform their agricultural practices. When Hill Carter observed in 1834 that he considered "Virginia negroes as forming a most valuable class," and that "it only requires system and some little management to make them valuable as a class of laborers...",³³ he articulated similar concerns. Blacks, for Hill Carter, had a particular place in society, and just as he saw proper management of land and crops as integral components of reform, so, too, was

³⁰See "The Four Shift System," p.132.

³¹See the bibliography for a list of Carter's writings in the *Farmers' Register*.

³²John Selden and Benjamin Harrison were neighbors of Carter, and both contributed articles to Ruffin's *Register*. Selden's farm journals are located at both the Virginia Historical Society and in the Selden papers at Swem Library, College of William and Mary, Rare Books and Manuscripts. James Henry Hammond was a South Carolina planter. Drew Gilpin Faust's study, *James Henry Hammond and the Old South: A Design for Mastery*, (Baton Rouge: Louisiana State University Press, 1982), provides a good comparison with Hill Carter. See especially chapters 5-6.

³³Hill Carter, "On the Management of Negroes: Addressed to the Farmers and Overseers of Virginia," *FR* 1, 9 (February, 1834), 564.

proper management of slaves. The two essentially were symbiotic, for the man who could not manage his slaves was sure to fail at managing his lands.

The decline itself was a product of slavery, but few were willing to admit it. Like Ruffin and others, Hill Carter attributed the depressed condition of Virginia agriculture not to slavery but to poor management and ineffective farming practices.

Nonetheless, he did understand the situation was serious, as it threatened to decrease the power and significance long enjoyed by the Tidewater area:

We are fast losing our importance, and what is the cause of it; Why the colonisationists will tell you, it is owing to the existence of slavery; but that, I am very unwilling to believe. In my humble opinion, it is to be attributed to the bad system of cultivation heretofore pursued, which has exhausted our lands + reduced our incomes, without changing our expensive habits.³⁴

Carter refused to connect the problems plaguing agriculture to the institution which so dominated his life and world. Such an admittance would amount to an indictment of slavery; this was not something Carter or any other Virginia planters were ready to do.

Carter essentially saw slavery and reform as compatible. They both had to adjust to the changing conditions affecting Virginia farmers, and the survival of one depended on the other.

Moreover, Carter argued that the improvements in agriculture produced some positive benefits for slaves. In 1834, he observed that the "[a]melioration of the condition of the slaves in Virginia is very perceptible even within my time, that is, in the last sixteen or seventeen years, and will go on progressively with the improvement in agriculture."³⁵ This defense of slave treatment revealed how Carter's commitment to reform could merge with his paternalistic vision of the institution. It was important to make such a justification, particularly in the face of rising abolitionist or emancipationist sentiment. Hence, Carter observed that severity towards slaves had vanished in his area of Virginia, and it would remain so "if the fanatics will only let us alone; and there are fanatics south as well as north."³⁶

The message of reform, therefore, had to be carried to the

³⁴Hill Carter, "Address to the Agricultural Society of Lower Virginia," pp.1-2.

³⁵Hill Carter, "On the Management of Negroes," p.565.

³⁶Ibid, p.565. It is important to note that Carter wrote this article just three years after Nat Turner's revolt and the subsequent debates over emancipation in the Virginia Assembly. As scholars have pointed out, Virginians at this time began increasingly to view slavery as a "positive good." For Carter, then, the association of agricultural improvement and amelioration of slave life seemed natural. For more discussion of the social implications of Carter's attitude towards slavery, see below.

larger body of Virginia planters and farmers. Leading reformers had to utilize any public channels available to spread the gospel of agricultural improvement. Ruffin's *Farmers' Register* represented but one source; agricultural societies served as another. Six years before Hill Carter began writing in Ruffin's journal, Tidewater planters had elected him president of the Agricultural Society of Lower Virginia.³⁷ While the society apparently developed into little, Carter did prepare an address to the group after his selection as president. Whereas his writings in the *Farmers' Register* mainly describe the actual improvements and changes implemented at Shirley, his words here illustrate his overall philosophy behind agriculture and reform. He began with a statement of the central issue facing Virginia farmers: "That we have arrived at the period when there must be complete change in our system of agriculture; or give a death blow to the remaining productive powers; + value of our lands, is very certain."³⁸ The message was clear; the time for reform had come.

A general symptom of agricultural decline was planter emigration. Planters who saw little hope in eastern Virginia's exhausted soils looked to the expanding lower South. Fresh lands and a burgeoning cotton economy there offered them opportunities unrivaled in Virginia. A man with a little capital and some slaves could easily establish himself in this new region. Carter, echoing many reformers fears, argued that "we shall all be compelled to follow their example, unless we improve, + that very shortly." He encouraged those who were contemplating such a move to "make one small effort to improve, before they go, + see if they can't do better where they are." He believed that "enterprise, industry, + system," to be all that was required to undertake such improvements. He also pointed out that some lands in the Tidewater had sufficient natural resources that promoted reform, and applying one's energies to these areas, instead of emigration, was an act which benefitted more than just lands and crops:

Some parts of the lower country abound in swamps, + marshes, others in marl, + many parts in oyster shells. The same enterprise, + industry, which would carry you to the W.[est] applied in reclaiming your swamps, + marshes, or hauling out your marl, would give you as good lands here; as you will find abroad, save you the troubling of emigrating, and benefit your native country by remaining at

³⁷William F. Pierce informed Carter that he had been elected president of the Agricultural Society of Lower Virginia in a letter sent June 15, 1827. Carter was to serve for twelve months. See William Pierce, Letter to Hill Carter, SPP 3:10.

³⁸Hill Carter, "Address to Agricultural Society of Lower Virginia," p.1, SPP, 80:1.

home; + retaining her population.³⁹

A note inserted into his address complimented these ideas, as Carter wrote that "Any one who desires the means of improving poor land, deserves well of his country, because it would operate powerfully, as a cause to prevent emigration, + thereby increase the value of land in general, by keeping up an effectual demand for it."⁴⁰ Carter correctly perceived that the effects of emigration touched the whole of a region, depressing populations as well as land values.

Aside from discussing the social consequences of the failure to improve, Carter voiced other fundamental ideas on the course Virginians should take to become successful agriculturalists. He argued that all should embrace the idea of keeping accurate records of their farming operations. "There is a vital error in the Va. farmer," Carter remarked, "which is the wont of attention to book keeping. Few V[irginia]ns keep proper Acc[ount]s + of course use no economy, either in their household, or on their plantations, + are surprised at the end of the year to find themselves in debt..." or their provisions depleted. Carter felt that by "proper Acc[ount]s we should always know our situation, + be induced to economize in time."⁴¹ He understood economy to mean that

which would induce a man to wear a coarse coat, instead of a fine one, to be satisfied with his home made furniture, instead of foreign, to drink his own spring water, instead of expensive liquors, when he can't afford it; To refrain from going to town, court houses...when he ought to be attending to his business at home, and in fact to live within his income.

He warned against practicing "false economy, which would prevent a man from furnishing his plantation with proper utensils to cultivate it, or his negroes with plenty of food + clothing to enable them to work well..."⁴² A man who wasted money on luxuries and did not have the proper farming equipments or supplies for his slaves was destined to fail as a farmer, Carter deduced. Keeping accounts or journals also provided planters with important lessons for future times:

Every farmer should keep a journal or plantation Acc[ount] book, in which should be noted, not only the crops

³⁹Ibid, p.2

⁴⁰Ibid, Note A, p.10.

⁴¹Ibid, pp. 2-3.

⁴²Ibid, p.3. Carter added that "for independent of humanity a well fed, + clothed labourer is worth 2 badly fed + clothed..."

made, + sold, the corn, oats, provision...consumed on the plantation, but the daily occurrences [and] operations...by which he may gain experience + profit by it. By a journal noting every change, disaster, + ce. in the crops, one may frequently remedy it in the next, or be induced to change them for the better or more congenial ones to the soil, + climate.⁴³

Carter also believed that Virginia farmers committed another "vital error" in that many cultivated larger sections of land than their labor force could work efficiently. He felt that those who did so "were obliged to do it in a slovenly manner." He recommended that they cultivate less land and do it more "effectually."⁴⁴ For real improvements to be successful, farmers had to employ slaves in well organized and well supervised tasks on more manageable tracts of cultivated land.

Carter called on Virginians to incorporate the fundamental practices of improved farming into their operations. Proper use of manures was a bedrock of successful agriculture. He argued that "after all; the great secret in farming, is the art of making the most manure; + there is nothing, in which the V[irginia] farmer generally, is so deficient." Similarly, he encouraged farmers to maintain an ample supply of livestock, both to provide meat for slaves and to convert vegetable offal, such as straw, stalks, and weeds, into manure after the livestock had consumed it.⁴⁵

Crop diversification Carter also championed as a cornerstone of agricultural reform. He himself raised a variety of crops, from corn and wheat to cotton and oats. He argued that the dangers of raising only one staple crop were great, particularly because of the Virginia climate: "As our seasons are very variable, + when relying on a single crop, we are liable to failure, I would recommend mixed crops, so that when one failed, another might succeed..." Lack of diversification not only further eroded self-sufficiency, as planters turned to importations to meet the material needs of their plantations, but it also helped stifle the growth of urban markets. Carter voiced grave concern over this, pointing out, for example, that lower Virginia had the resources needed to become more self-sufficient, but few utilized them. "Our swamp lands," he argued, "are the finest potato lands in the world, + yet we rely on the Yankys, for a supply for our towns."⁴⁶

⁴³Ibid, p.4

⁴⁴Ibid, pp. 3-4.

⁴⁵Ibid, pp.5-6. Carter added that "It is hardly worth while to speak of the best mode of using manure, for all modes are good, the main point, is to make it in abundance, + you will soon find out the best way of using it;..."

⁴⁶Ibid, pp.7-8.

Decreased self-sufficiency had serious ramifications for the general process of improvement. Primarily, it removed capital away from the plantation, often diverting it to those who had little direct ties to the South and its peculiar institution. Carter recognized this when he stated

How disgraceful, that we should be obliged to import Hogs from the Western Country. I wish it was in my power to state the amount drawn annually from this state for the necessary supply of pork, + beef, all of which by good management might be saved, + added to the active capital of the farmer...⁴⁷

This obviously only limited the spread of reform, as capital was just as necessary to undertake improvements as was planter entrepreneurship; moreover, as Carter pointed out, it was a part of good management. He understood that many used the lack of sufficient capital as a justification for not reforming their operations. He felt, however, that this could be overcome, for although "want of capital is a very general excuse for not improving, ...if we would curtail the out goings in one direction..." and devote capital to such things as "a little clover seed + plaster, manures + good utensils;...[then] we should not be under the necessity of making that apology."⁴⁸ Carter concluded this section of his address with a statement that seemed to characterize his opinions succinctly: "It is a common but just remark, 'that every farm in good heart should be kept so, + every one not so, should be made so;' this should be a fundamental principle with every farmer."⁴⁹

Thus, to Hill Carter, agricultural reform hinged around efficient cultivation of appropriate acreage, economy and the diversion of capital towards improvements, utilization of the natural resources of Virginia, proper crop diversification, ample use of manures and livestock, and earnest efforts to implement changes instead of emigration. Geography also played a crucial role, particularly for Carter. As Shirley was located directly on the James River, transportation problems that plagued so many planters failed to burden Carter. Whether it was crops shipped out or marl brought in, Carter enjoyed the benefits of efficient transportation. Similarly, markets determined much about the extent of improvements. Carter had easy access to the markets at City Point, Petersburg, and Richmond. In 1819, he even ventured as far as New York to sell his wheat.⁵⁰ All of these factors,

⁴⁷Ibid, p.8.

⁴⁸Ibid, p.8.

⁴⁹Ibid, p.8.

⁵⁰See SPJ, August, 1819, SPP, 85:1 and "The Four Shift System," p.132. City Point is located at the conflux of the Appomattox and James Rivers, and it served as a major port and market for Carter.

however, revolved around the one quality Carter most represented and tried to instill in his fellow Virginia farmers: planter entrepreneurship⁵¹. Planters provided the direction to their farming operations, and it was they who had to devote themselves to reform. The resources for improvement were available to many, but only if they chose to take advantage of them.

Although it was the planter who had to initiate and undertake improvements, clearly there were other actors in the drama to reform Virginia agriculture. Slaves served as the principle means by which reforms were actually implemented. For Hill Carter, his birth into a leading Virginia family guaranteed his position as a large slaveholder, and it provided the labor necessary to pursue agricultural reform. When he first took over Shirley, he received one hundred and six slaves from the division of the estate.⁵² The 1820 census recorded Carter as owning one hundred slaves; fifty-three were males, and forty-seven were females.⁵³ This total made Carter the second largest slaveholder in Charles City County that year. Only John Minge Sr., with one hundred and fifteen, owned more.⁵⁴ For the county as a whole in 1820, there were 2,967 slaves out of a total population of 5,255. 538 free blacks were included in this number. Natural increase in his slave population provided Carter with a sufficient number of prime field hands throughout the fifty years he managed Shirley; from 1820 to 1860, his slaves ranged in number from a low of 98 in 1830 to a high of 139 in 1860.⁵⁵

Just as agriculture had experienced unprecedented changes during the eighteenth and early nineteenth centuries, so, too, had slavery. As Allan Kulikoff has demonstrated, the eighteenth century marked a crucial time for the development of black society. He points out that an increased number of native born blacks, a simultaneous decline in African importations, an improved balance of sex ratios, and the spread of larger plantations helped forge a more stable slave society than that which existed in the earlier part of the century. One important result of this was an increase in the formation of more cohesive slave families and communities.⁵⁶ By the time Carter inherited Shirley, these conditions had contributed to make well established slave families a recognized feature of the plantation.

⁵¹William Mathew places planter entrepreneurship at the center of his study on Edmund Ruffin.

⁵²See SPJ, April 1817, SPP, 85:1.

⁵³See 4th Census of the United States, 1820, Charles City County.

⁵⁴Ibid.

⁵⁵See United States Census Records, Charles City County, 1820-1860.

⁵⁶See Allan Kulikoff, "The Origins of Afro-American Society in Tidewater Maryland and Virginia, 1700 to 1790," *William and Mary Quarterly*, 3rd Series 35, 2 (1978): 226-259, and his "A 'Prolifick' People: Black Population Growth in the Chesapeake Colonies, 1700-1790," *Southern Studies* 16 (1977):391-428.

Another essential development during the late eighteenth and nineteenth centuries was what Willie Lee Rose calls the "domestication" of slavery. She argues that the ideas of the Revolution, combined with the closing of the African trade and the desire of planters to make slavery more humane, produced a general improvement in the conditions of life for most slaves. Paradoxically, however, as slaves enjoyed better treatment and safer daily lives, laws protecting the institution tightened, and the slave's position as chattel property became more entrenched into society.⁵⁷ Hill Carter's father, Robert, in his emotional letter to his children, revealed these sentiments exactly. He expressed the impact the enlightened ideas of the Revolution had on slavery, but, at the same time, he argued emancipation was not a reality.

For Carter, a major responsibility of the planter was to manage his slaves effectively. While there were social dimensions behind this, there also existed the practical concerns of making sure improvements were executed with a degree of skill and efficiency conducive to success. Carter wanted planters to mold a labor force that offered minimal resistance while working to ensure the prosperity of the slaveowner. At the same time, however, he recognized that there had to be a delicate balance struck between the interests of the planter and those of his slaves.

In his 1834 article to the *Farmers' Register*, Carter presented what he believed constituted the proper management of slaves. He stated that it was "a subject of some little difficulty, but which difficulty may be overcome by a judicious system..." He maintained that Virginia's slaves "have some of the best traits of character of any people on the globe...and are almost universally good hearted." His paternalism fostered the illusion that slaves were essentially content with their position: "they are generally grateful for favors, have the strongest local attachment, endure fatigue and hardships with great patience, are very contented, and cheerful--and in fact, are the happiest people in the world, unless tampered with by fanatics."⁵⁸ This illusion was a necessary component of the slaveholders' philosophy; they had to convince both themselves and others that the institution was a benevolent one that produced such "contented" and "happy" figures.

On the daily level of managing slaves, Carter discussed several important issues. First, he argued that there "should always be perfect uniformity of conduct towards them; that is, you should not be too rigid in your discipline at one time and too lax, at another." Slaves, Carter maintained, "should

⁵⁷See Willie Lee Rose, *Slavery and Freedom*, Edited by William Freehling, (New York: Oxford University Press, 1982).

⁵⁸Hill Carter, "On the Management of Negroes," p.564.

understand that real faults will not go unpunished," but he argued it was "the certainty of punishment, and not its severity, which deters misconduct..." In fact, he believed that the best testament to proper management was the maintenance of good order with no resort to the whip.⁵⁹ Carter also felt that slaves should be rewarded at times, and he recommended to overseers "to use a little flattery sometimes instead of stripes."⁶⁰ Carter was careful to draw distinctions between slaves. He thought slave women "are all harder to manage than the men." He also stated that he preferred to manage the "high spirited and...high tempered negro, full of pride..." as he felt the "slow, sulky" slave was "*the devil* to manage."⁶¹ Finally, he cautioned that masters and overseers should always "pull at the same end of the rope," as "Negroes soon discover any little jarring between the master and overseer, and are sure to take advantage of it."⁶²

Carter, however, did understand that slaves had certain "privileges" regardless of their status as bondsmen. He allowed them to cultivate gardens and raise livestock (mainly chickens), much of which he himself purchased. He argued that slaves "should have some of the luxuries of life too, such as fowls, eggs, &c. with which to buy coffee, sugar, a garden and fruit trees...". These sentiments were not unqualified, however, for Carter believed that such "luxuries" could "save the master's fowls, fruit, &c, and aid in the facility of managing slaves, and will serve to attach them to their homes."⁶³ This reveals the paradoxical nature of the slaves economy, for in reducing the harshness and dehumanizing aspects of the institution, it could also stifle resistance, forging stronger ties between master and slave and slave and plantation, and thereby give planters more control over their slaves. The independent, internal slave economy was paradoxical in another manner. Carter felt that the "greatest bar to good discipline in Virginia is the number of grog shops in every farmer's neighborhood..."⁶⁴ Yet he also felt that slaves should have gardens and chickens, with which they could purchase luxury goods. Obviously, slaves who travelled to markets or had relationships with other slaves, free blacks, or whites from whom they could find alcohol could use their earnings from garden products or chickens to purchase spirits instead of coffee or sugar.

Another basic element to effective management concerned the material provisions supplied to slaves. Carter commented several times that plentiful allotments of food, clothing, and shelter

⁵⁹Ibid, p.564.

⁶⁰Ibid, p.565.

⁶¹Ibid, p.565.

⁶²Ibid, p.565.

⁶³Ibid, p.565.

⁶⁴Ibid, p.565.

were fundamental to maintaining a productive labor force, and they better protected the health of slaves while saving extra medical expenses. Essentially, for slaves to carry out improvements in agriculture successfully, Carter recognized that planters first had to make improvements in the material life of their laborers. In his address to the Agricultural Society of Lower Virginia, Carter observed that

We should attend more to the comfort of our negroes, their quarters should be better built, + larger, + the overseers should be made to attend to their cleanliness, the quarters should be white washed now, + then, Pay such attention we should save many a Drs. Bill. It is very false economy not to feed + clothe well for well clothed + fed labourers are doubly efficient, particularly in the sickly season, from being less subject to ague + fever.⁶⁵

Carter also encouraged planters to feed their slaves in the morning, prior to beginning work, at times when they were most susceptible to illness. He had seen this practiced by the man who helped him reclaim his swamp, and he believed it to be good economy.

Were we to get into the habit of making our negroes in the sickly season breakfast at day break, before they were out to work, they would be much more healthy---Walsh the Irishman who reclaims swamps, keeps his men healthy throughout the sickly season, + it is to be attributed to that in a great measure.⁶⁶

While his overall designs for agricultural reform represent a man keenly focused, well informed, and deeply committed to restoring the lands of the Tidewater, elements of Carter's beliefs were paradoxical. A notable example, (aside from that concerning independent production by Carter's slaves) and one that reveals much about the larger slave society of which he was a part, concerns Carter's ideas on economy. As discussed earlier, Carter advocated a type of frugality in material objects and luxuries that promoted spending where it mattered most: on plantation utensils and essential supplies, and on improvements. Carter's annual account books, however, reveal a man who, like most large planters, frequently surrounded himself with elements

⁶⁵Hill Carter, "Address to the Agricultural Society of Lower Virginia," p.9. It is interesting to point out that seven years later, Carter's justifications for feeding and clothing his slaves had changed. In his article on management, he stated that slaves should be well clothed and fed "(to say nothing of the policy and humanity of the thing,)" but also because "...they will steal if they are not well fed, and the very best remedy for hog stealing is to give the rogues plenty of pork to eat."
⁶⁶Ibid, p.9.

of conspicuous consumption. Although his outlays each year began with the standard farming equipment, fertilizers, and provisions for slaves, he also spent large amounts on clothing, furniture, travels to the upper country (Fauquier county, Virginia), carriages and horses, and cards and races.⁶⁷

In 1833, a visitor, Henry Barnard, provided an intimate portrait of the opulence at Shirley. Barnard had travelled extensively through the Southeastern states that year. In March he stopped at Shirley, where he enjoyed the Carter's hospitality and gained "insight into the manners and customs of the higher classes of" Virginia.⁶⁸ He described his short visit in great detail, being thoroughly impressed with the eighteenth century mansion and its occupants:

When you wake in the morning, you are surprised to find that a servant has been in, and without disturbing you, built up a large fire--taken out your clothes and brushed them, and done the same with your boots--brought in hot water to shave, and indeed stands ready to do your bidding--as soon as you are dressed, you walk down into the dining room--At eight o'clock you take your seat at the breakfast table of rich mahogany--each plate standing separate on its own little cloth--Mr. Carter will sit at one end of the table and Mrs. Carter at the other--Mrs. C. Will send you by two little black boys, as fine a cup of coffee as you ever tasted, or a cup of tea--it is fashionable here to drink a cup of tea after coffee--Mr. Carter has a fine cold ham before him of the real Virginia flavor--this is all the meat you will get in the morning, but the servant will bring you hot muffins and corn cakes every 2 minutes--you will find on the table also, loaf wheat bread, hot and cold--corn bread--

After breakfast visitors consult their pleasure--if they wish to ride, horses are ready at their command--read, there are books enough in the Library,--write, fire, and writing materials are ready in this room--The Master and Mistress of the House are not expected to entertain visitors till an hour or two before dinner, which is usually at 3. If company has been invited to the dinner they will begin to come about 1--Ladies in carriage and gentlemen horseback--After making Their toilet, the company amuse themselves in the parlor--about a half hour before dinner, the gentleman are invited out to take grog. When dinner is ready (and by the way Mrs.

⁶⁷Incidentally, it appears Carter was not a very good cards player. Throughout his account books there are scattered references to his loses at cards. In 1826 and 1832, for example, he lost \$290 and \$182 respectively. See Hill Carter, AAB, 1826 and 1832, 85:1.

Only one time did he refer to winning any money: On February 22, 1834, Carter noted in his Cash Account Book that he won \$59. See Hill Carter, CAB, 1832-1837, 86:4.

⁶⁸Henry Barnard, "The South Atlantic States In 1833, As Seen By A New Englander," Edited by Bernard C. Steiner, *Maryland Historical Magazine* 13, 4 (December, 1918), 318.

Carter has nothing to do with setting the table, an old family servant, who for 50 years has superintended that matter, does all that) Mr. Carter politely takes a Lady by the hand and leads the way into the dining room, and is followed by the rest, each Lady lead by a gentleman. Mrs. C is at one end of the table with a large dish of rich soup, and Mr. C at the other, with a saddle fine mutton, scattered round the table, you may choose for yourself, ham--beef--turkey--ducks--eggs with green--etc--etc-for vegetables, potatoes, beets--hominy-- This last you will find always at dinner, it is made of their white corn and beans and is a very fine dish--after you have dined, there circulates a bottle of sparkling champagne. After that off passes the things, and the *upper* table cloth, and upon that is placed the desert, consisting of fine plum pudding, tarts, etc, etc,--after this comes ice cream, West India preserves--peaches preserved in brandy, etc,--When you have eaten this, off goes the second table cloth, and then upon the bare mahogany table is set, the figs, raisins, and almonds, and before Mr. Carter is set 2 or 3 bottles of wine--Madeira, Port, and a sweet wine for the Ladies--he fills his glass, and pushes them on, after the glasses are all filled, the gentlemen pledge their services to the Ladies, and down goes the wine, after the first and second glass the ladies retire, and the gentlemen begin to circulate the bottle pretty briskly. You are at liberty however to follow the Ladies as soon as you please, who after music and a little chit chat prepare for their ride home.⁶⁹

Certainly, this type of lifestyle reflected little of the economy that Carter championed. But there were reasons for this extravagance. As one of Tidewater's largest planters, Hill Carter had a social function to perform. This excessive display helped cement Carter's position in society, securing and perpetuating his hegemony over both smaller planters or farmers and non-slaveholding whites. It alluded to the success with which Carter had embraced agricultural reform. There could be little room for "economy" in the domain of the large planter. The confidence exuded from the dining rooms at Shirley manifested itself across the Tidewater, proclaiming faith in the totality of southern institutions, in particular slavery.

Another paradox in Carter's ideology concerns his views on the proper management of slaves. Carter argued that overseers should consult the "temper and disposition of each negro..." This, he believed, would facilitate the better management of slaves, as some required "spurring up, some coaxing, some

⁶⁹Ibid, p.319-320. Barnard also mentioned that Carter's "service is all silver, and you drink your porter out of silver goblets. See pp. 317-318.

flattering, and others nothing but good words."⁷⁰ In the same article, however, he maintained that "Too much familiarity with negroes ought never to be indulged in by the master or overseer, as it causes them to lose the proper respect for them."⁷¹ Understanding someone's "disposition" obviously requires a certain level of familiarity with that person; yet, for Carter, such close relationships were at one time seen as beneficial and at another only created an avenue for slaves to resist the conditions of bondage. Moreover, understanding the particular characteristics of individual slaves implied (necessarily) a recognition of each one's humanity, which potentially undermined the foundation of chattel slavery. Essentially, Carter failed to realize just how attached he was to the institution, and how the lives of his slaves permeated his own at Shirley.

Hill Carter clearly did not represent the typical Virginia farmer. He was, without a doubt, an exceptional figure. A letter to the *Farmers' Register* underscored this when "A Poor Farmer" reminded the editor "to recollect...that all your subscribers do not possess such estates as Wyanoke, Shirley, &c. But are small farmers, have but a weak force, and poor lands to cultivate...⁷² Carter's importance revolved around several factors. One, of course, was his position as one of Tidewater's largest slaveholders. But in the context of this study, his success with agricultural reform represents his most significant quality. As Eugene Genovese and William Mathew both illustrate, agricultural reform did not spread throughout Virginia or the South as a whole. In fact, the movement essentially failed. Only a small number of planters became leading reformers, and their ideas circulated mainly amongst themselves. As Genovese observes,

Here and there moneyed planters with a businesslike attitude and exceptional managerial skill achieved brilliant successes. The retardative effects of slavery were not absolute; no individual planter was condemned by fate to defeat. Slavery did establish conditions such that maximum efforts by exceptional men were required for significant agricultural improvements in general..."⁷³

Hill Carter was one of these exceptions. Even Ruffin's *Register*, arguably the most important agricultural publication in the antebellum South and one in which Hill Carter voiced his ideas

⁷⁰Hill Carter, "On the Management of Negroes," p.565.

⁷¹Ibid, p.565.

⁷²FR 1, 5 (October, 1833), 275.

⁷³Eugene Genovese, *The Political Economy of Slavery*, p.117-118.

frequently, did not inspire most Virginia farmers to embrace reform, mainly because it failed to reach them. Mathew comments that it was

essentially a paper in which Ruffin could address the larger tidewater planters of the border States on the virtues of marling and diversifying, and through which a few of these planters could exchange results and ideas of their own (gaining a bit of publicity and prestige as they did so). It was a thoroughly patrician exercise. The circulation figures make it clear that the great mass of Old South farmers were effectively unaware of its existence.⁷⁴

Agricultural societies also did little to facilitate reform. Although Hill Carter remarked "that agricultural societies have done good, there is no doubt, + that this society [Lower Virginia] may do the same, I am very confident...",⁷⁵ it never amounted to much. Edmund Ruffin thought that most societies simply talked about improvements and did little actual work to implement them. He felt that they would meet once a year, have several discussions they deemed important, and then members would retreat to their farms where little experimentation occurred. "All these societies, though in different degrees, have been deplorably unfit to stimulate inquiry and effort, elicit information, or in general, to promote the improvement of agricultural knowledge, in science or practice." Ruffin recommended that members of societies become "working" members who undertook experiments and presented their results, "however concise, or no matter how trivial the subject."⁷⁶

Through an analysis of his writings in both the *Farmers' Register* and his address to a local agricultural society, Hill Carter's philosophy embracing reform and improvement, as well as the management necessary to implement these programs, emerge. This analysis also places Carter in the larger context of Virginia and the movement to improve agriculture. This perspective, however, is limited by only exploring Carter's motivations behind reform. To understand another significant facet of reform--how his designs impacted the work and lives of

⁷⁴William Mathew, *Edmund Ruffin and the Crisis of Slavery in the Old South*, p.32.

⁷⁵Hill Carter, "Address to the Agricultural Society of Lower Virginia," p.9.

⁷⁶See *FR* 6, 12 (December, 1838): 705 -708

his slaves--we must examine the actual operations undertaken to carry out improvements. This is where we turn our attention in the next two chapters.

To Save the Ship: Reform and Improvement, 1816-1832

While Hill Carter advocated reform publicly, he understood that improving Shirley was his principal task. One could champion the merits of reform only if he had first demonstrated them on his own plantation. Carter documented his and his slaves' efforts to reform Shirley in daily journals of plantation activities, annual account books, cash books, inventories of farming utensils and provisions, and other various plantation notes.¹ Carter began his farm journals, the most important records of operations at Shirley, with a simple entry the first day he took over the plantation: "I arrived from New York and took possession on March 20, 1816."² From this auspicious beginning, these journals grew to encompass the sixty years of Carter's mastership at Shirley. They addressed a variety of issues, including the varied tasks slaves performed each day on the plantation, the weather, the sicknesses and deaths of slaves, relations with overseers, the results of experiments he made on his lands, and other such significant information. These voluminous writings, coupled with Carter's articles in the *Farmers' Register*, offer an intimate portrait of a plantation's journey towards agricultural reform.

Carter moved quickly to institute improvements once he took over the plantation. Overseers who had run Shirley prior to Carter had cultivated the land on a three shift system. Each of Shirley's three "shifts," or fields—two comprising two hundred acres and one consisting of two hundred and fifty—had a rotation of corn, wheat, and pasture on them every three years. Carter believed it to be "the most ruinous system that could be invented, taking into consideration the shallow ploughing, and waste of manure, or almost total disuse of it."³ The crops this rotation yielded were dismal considering the acreage cultivated. Carter remarked that

From twelve hundred to fifteen hundred bushels of wheat, (sometimes not merchantable,) and four hundred to six hundred barrels of corn on either of the best shifts of two hundred acres each, was

¹See the bibliography for a list of many of Hill Carter's records. Overseers also kept journals, but they are difficult to read and exist only for several years. The plantation notes deal with a range of topics, and they are dispersed throughout Carter's farm journals. Carter began to chronicle operations on a daily basis in the spring of 1822.

²See SPJ, March 20, 1816, SPP, 85:1.

³Hill Carter, "The Four Shift System: The best rotation for James River lands, or any good wheat and corn soils," *FR* 1, 3 (August 1833), 132.

considered great cropping by the overseers; and seven hundred to one thousand bushels of wheat, and three hundred to four hundred barrels of corn on the third shift of two hundred and fifty acres, was considered still better, as that was the poorest_so that it may be supposed the land must have been very much exhausted, and the management very bad.⁴

For three years Carter continued this system, but knowledge gained from both agricultural works and more skilled farmers convinced him it was "totally wrong."⁵ In the fall of 1818, he switched his lands over to a four shift system; it remained in use until 1840. He abandoned cultivation on the poorest field of two hundred and fifty acres, and he divided the remaining four hundred acres into four fields of one hundred acres each. The rotation of crops became corn, wheat, clover, and then wheat on the preceding clover fallow. The abandoned field Carter turned into a standing pasture, which reduced grazing on the cultivated portions of his fields. "The effect was like magic," Carter recalled. In 1819, he harvested 3,223 bushels of wheat from two hundred acres, an average of sixteen bushels an acre.⁶ Although his corn crop was only a "tolerable" 487 barrels, Carter was convinced of the potential his new rotation offered. He "now got fully into the clover, plaster and fallow system," the three constituting what Carter called "the sheet anchor on a farm; for when all seems to be lost they will save the ship."⁷

For Hill Carter, then, agricultural reform quickly became the pathway to revival of the Shirley economy. As embodied in Carter's four shift system, there were several essential requirements of an improved agricultural system. Proper crop rotation clearly was an extremely vital element.

Deep ploughing, heavy manuring, and clover also played a central role. Consequently, draft animals and other livestock assumed greater importance. Mules, oxen, and horses powered the ploughs and harrows needed to break up and fallow lands, while also converting fodder into manure and carting it to be spread on Shirley's fields. As well, fertilizers, including plaster, lime, oyster shells, and marl, complemented the clover and animal manure in promoting fertility. Crop diversification also figured prominently, and in the early 1820s Carter added oats and cotton to his

⁴Ibid, p.132. This, as Carter points out, was an average of a mere six to seven bushels of wheat and two or three barrels of corn per acre, and that on the best shifts.

⁵Ibid, p.132. See also pages 10-11 in chapter one. It is important to note that even though Carter continued the three shift for these three (harvest) years, he had begun to use deep ploughing methods, manuring, and plaster and clover.

⁶Ibid, p.132. See also p.10 n.24 in chapter one for comments on this.

⁷Ibid, p.132.

lands. Around this same time, Carter began reclaiming a huge tract of swamp land for corn cultivation. Experimentation and the use of new farming implements represented other components of improved agriculture, and Carter incorporated both into his operations. Underlying all of this, of course, was a system of management in which Carter sought near total control over his slaves while shaping them into efficient and productive workers.

Slaves must have looked somewhat askance at this young Carter who now guided the plantation by the light of agricultural improvement. Only twenty-two years old in 1818, Hill Carter had completely restructured farming operations at Shirley, and, as slaves soon came to realize, his embrace of reform would transform their lives in large measures. One of the earliest changes made in the fields which touched the quarters was Carter's initial reduction in the acres he cultivated.⁸ With less land to work, Carter could employ a smaller labor force, one which allowed for better supervision, management, organization, and ultimately, efficiency. Thus, in October 1818, Carter sold twenty-five slaves for \$4,500. Three years later, he sold another twenty-three for the same amount.⁹ Many of these slaves had formed close bonds at Shirley, and their sale fragmented the slave community, disrupting existing friendships and perhaps kinship or family ties.¹⁰

Fewer slaves now shouldered the numerous responsibilities which accompanied Carter's reforms; there would be a greater amount of work to do, and there would be less hands to do it. Ironically, however, slaves who remained at Shirley did benefit indirectly in several respects as a result of these sales. As Carter had argued in his address to the Agricultural Society of Lower Virginia, proper clothing and provisions were essential to a productive worker, and making sure slaves had sufficient supplies of them was part of good management. Accordingly, from 1817 to 1822, Carter invested some of this capital

⁸Carter would increase the acreages in his rotation in 1831, but is important that when he first undertook the four shift system he reduced his lands to a more manageable size. Ruffin noted that this was "one of the early steps taken by Mr. Carter, for the improvement of Shirley...", pointing out that it "was the reverse of our general practice of extended cultivation." See Edmund Ruffin, "Leaves From A Traveller's Note Book: A Walk Through Shirley Farm, Nov. 25th, 1832," *Farmers' Register* 1, 2 (July 1833), 105.

⁹For records of these sales, see SPJ, October 19, 1821, SPP, 85:1; Hill Carter's AAB for October 1818 and 1821, SPP, 85:1; and Hill Carter's CAB, October 20 and 21, 1821, SPP, 85:3.

¹⁰It is impossible to know exactly which slaves Carter sold and rather he broke families up or not, as he did not list the names of those sold. It would seem unlikely, though, that Carter separated families. As early as 1822, he listed slaves in family units, a recognition, perhaps, of the "rights" these families enjoyed. As well, the large numbers sold would have made it possible to sell entire family units together. What is certain, however, is that these sales fragmented the larger slave community at Shirley, regardless of whether they disrupted nuclear families.

raised from slave sales on slave clothing, blankets, and shoes.¹¹ Carter also had the resources to provide better medical attention to his "people," many of whom had probably been neglected under the management of overseers prior to Carter's arrival at Shirley. Expenditures on doctor's bills and medicine jumped from \$54.50 in 1817 and \$30.50 in 1818, for example, to \$113.40, \$88, \$132, and \$70.25 over the next four years.¹² As well, as Carter moved the plantation towards increased self-sufficiency, he began to purchase more livestock, including cattle, sheep, and hogs (instead of importing pork for food). This helped supply slaves with meat on a more consistent basis.¹³

The sale of these slaves not only provided Carter with a more manageable slave force and a more manageable area of cultivation, it also gave him capital with which to pursue improvements. To carry out reforms, however, Carter recognized that Shirley needed to both update and augment its array of farming implements. Much of his early investments, consequently, were directed towards plantation equipment, most notably ploughs. From 1817 to 1819, he spent \$540.01 on them and other instruments he listed as plantation utensils. Carter relied on a variety of ploughs; he also employed other devices, like harrows, coulters, rollers, and cultivators, in his operations.¹⁴ Many slaves, as a result, began to use a greater diversity of farming tools on the plantation.¹⁵ To power these implements, Carter added eight mules, two oxen, and seven work horses to his force in the first five years of his ownership.¹⁶ Carter also began to stock his lofts with

¹¹The years 1817-1821 saw Carter spend huge amounts on these items: 1817--\$454.67 on clothing and blankets and \$115 on shoes; 1818--\$474.30 and \$107.50 respectively; 1819--\$470.80 on clothing, \$95.17 on blankets, and \$146.78 on shoes and repairs to them; 1820--\$259.50 on clothing and \$145 on shoes; 1821--\$347 on clothing and \$62 on blankets. Some of these figures included clothes for house servants, but the average spent on them during this time was around \$30-40 only, although it did increase in subsequent years. Regardless, as compared to some of Carter's later expenditures on slave clothing and shoes, and considering inflation, it is clear that in the first five years of his mastership he moved to provide slaves with better material provisions. See his AAB, SPP, 85:1 for support of this and for these totals on expenses.

¹²See AAB, 1817-1822, SPP, 85:1. While Carter did vary considerably in what he spent each year on doctor's bills, and while some years slaves required more medical care due to sickness or injury, it is clear that Carter began to increase his medical expenditures in 1819.

¹³Carter bought some hogs "to raise from" from a man named Hobson in 1817. See SPJ, 1817, SPP, 85:1. His Annual Account Books reveal that he spent \$100 on hogs that year. See also 1821, where he spent \$133 on cattle, hogs, and sheep. Even with these purchases, from 1817-1819, Carter still spent over one hundred dollars each year on pork for his slaves, until he could rely on that which he raised at Shirley.

¹⁴For plough purchases, see AAB, SPP, 85:1. On the variety of ploughs, Carter used the single and double shovel, McKensies, Davis, and McCormack ploughs. See list of plantation utensils Carter made in 1823, 1828, 1835, etc..

¹⁵See below for implications of this for the division and organization of labor at Shirley.

¹⁶See Annual Account Books, 1817-1821. Carter sold three old mules in 1818 for \$128.25 to help finance these purchases, which totaled \$1,285. In addition, he

large quantities of clover seed and plaster (or gypsum), purchasing one hundred tons of gypsum and one hundred and ten bushels of clover seed from 1817 to 1820.¹⁷

Implements like ploughs or harrows, and fertilizers like clover or gypsum, were only some of the many instruments of reform on Shirley plantation. Slaves, too, in their own ways, functioned as tools for reform. After all, it was they who carried out Carter's improvements. Of this new equipment and new rotation Carter introduced slaves may have understood little initially; but as reforms took shape slaves understood clearly that their work routines on the plantation would be altered on a variety of levels and in a variety of ways.

Most fundamentally, slaves witnessed a marked increase in the volume of work. Whereas under the old three shift system practiced before Carter slaves had raised only corn and wheat at Shirley, the addition of clover, oats, and cotton, coupled with Carter's reliance on heavy manuring, deep and repeated ploughing, and fertilizers, meant that a host of new tasks became standard work. Moreover, slaves found that executing these tasks according to Carter's improved methods of cultivation increased the intensity and often the pace of their work. Chores became more strenuous and rigorous, as slaves struggled to carry out the demanding requirements of the four shift system efficiently. Similarly, improved cultivation techniques also heightened the complexity of work. Jobs became more complicated, and slaves had to learn the new skills and practices necessary to perform these tasks accurately and effectively. These changes, in turn, shaped other aspects of the nature of work at Shirley, particularly the organization and division of labor, the yearly cycles of work routines, and the levels of supervision to which slaves were subjected.

One of the most important elements of Carter's system was the clover fallow. Indeed, around it revolved the whole success of operations at Shirley. Clover acted as a fertilizing agent. Its nitrogen rich grasses helped to restore a field after three years of grain crops; just as importantly, it provided the wheat crop which followed the clover fallow with a fertile bed of vegetable manure, usually doubling the harvest of grain here as compared to the wheat which followed oats or corn in the rotation.

bought new plough harnesses and other accoutrements as needed. Obviously, Carter continued to purchase work animals throughout his time at Shirley, but the point here is that he invested large sums into them when he first took over the plantation.

¹⁷See Annual Account Books, 1817-1820. The gypsum cost Carter \$844.38, while the clover seed accounted for nearly twelve hundred dollars of Carter's budget during this period. Carter averaged between sixteen to eighteen bushels of clover seed purchased per year. During these four years, however, he bought six and one half, twenty-seven, twenty, and twenty-nine bushels. The decline in subsequent years was due in part to Carter gathering some of his own clover seed.

Clover added several new chores to slaves' work routines. To ensure a successful fallow, slaves first had to produce a healthy crop of the clover plant. Around the middle of February, slaves began to sow the clover seed across the shift's fifteen feet beds which the year previous had been under wheat. To promote fertility in his young clover, Carter sowed it with plaster, a fertilizer akin to lime. Carter purchased his plaster in lump form, arguing that it was "decided economy" to beat it out instead of buying it already ground. Not only was it cheaper, but it could be done indoors on rainy, winter days when planters had little else for their slaves to do.¹⁸ After breaking up the lumps into two-inch size fragments with sledge hammers or old axes, slaves hovered over a large pine trough wielding dogwood "rammers" to pound the plaster until ground finely enough to be spread over the clover.¹⁹ In addition to these tasks, slaves worked with clover in two other respects. First, along with wheat and oat straw, slaves cut clover to be used as hay for feeding livestock. Secondly, Carter, ever the pragmatist, gathered some of his stock of clover seed from his own crop of clover. Slaves originally employed horse rakes for this, but in July of 1820, when Carter began to gather the seed for "the first time on a large scale...", slaves used small hand clover rakes, which Carter discovered were more efficient.²⁰ While these new implements may have made the work easier, they also had the potential effect of speeding up the pace at which slaves worked to complete this task.

Although these various economies of clover were important, real work on the fallow began in earnest in late summer and early fall. Each August, just after completing the harvesting and threshing of wheat and oats, slaves began to fallow the shift for the next year's wheat crop. Teams of slaves drove three horse ploughs deeply to turn under the lays of clover and break up the land for wheat sowing. Ahead of the ploughs, other slaves carted and spread animal manure to be turned under with the clover. Harrows then ran after the ploughs, closing seams in the field to help ensure the manure's effects. Slaves also worked to bed, ditch, and

¹⁸Hill Carter, "Gypsum," *Farmers' Register* 5,1 (May 1837), 37. Carter noted that the lump cost about half of what the ground plaster did, and he could determine how pure the plaster was this way. He also observed that planters (excepting those who raised tobacco) who had no indoor work for their slaves often exposed them in bad weather. Although he had a mill on his estate which could have been used to grind the plaster, Carter remarked in his journals that he preferred beating it instead of hauling it to the mill. See SPJ, May 5, 1820, SPP, 85:1.
¹⁹Carter, "Gypsum," p.37.

²⁰See SPJ, July 1820, SPP, 85:1. For some examples of cutting clover hay, see SPJ, May 1818 (the first year Carter did so), July 17, 1821, and June 4-7, 1822, SPP, 85:1. It is important to note that as Carter's attempts at reform became more intense, and as work in the swamp assumed precedence, Carter abandoned cutting clover hay and gathering or cutting his own clover seed. See Carter, "The Four Shift System..." p.133 and his farm journals.

furrow the shift during this time to get the land ready to be sown in wheat.²¹

Preparing the clover fallow represented one of the most labor intensive operations in Carter's four shift system. The intensity sprang from several factors. Most obvious was the ploughing under of the entire lay of clover over a one hundred acre field. In addition, slaves still had to harrow the field repeatedly and plough shallowly at other times.²²

Moreover, manuring the fallowed shift required enormous efforts. Carter used vast amounts of winter farm pen and stable yard manure, as well as manure collected from the slave quarters and other areas, to enrich the fallow for the wheat crop. The late summer and early fall of 1829 and 1830, for example, saw slaves gather, haul, and spread over one thousand loads of manure before the ploughs on the clover lay.²³ Carter annually manured anywhere from thirty to fifty acres of his fallow shift, and typically, as in 1829 and 1830, slaves carted around one thousand loads to cover this acreage.²⁴

Manure occupied a central place in Carter's system, and like clover, it brought with it a range of new tasks for slaves at Shirley. One of the most important jobs fell to slave carpenters. Each year, around the middle of November, carpenters began to build the winter farm pen that would house the plantation's one hundred head of cattle until the spring, when they returned to their summer stable yards. They constructed the pen on the field to be fallowed the succeeding fall, allowing the cattle to deposit a winter's worth of manure along the shift. Ruffin observed that the pen consisted of

Dry sheds, made of long rived slabs, [which] stretch along the whole north side of the yard, and partly along the adjoining east and west sides. The straw and other food is placed in different parts of the yard, in

²¹For accounts of these operations see the Shirley Farm Journals, *passim*; see also Edmund Ruffin's observations made at Shirley in "Leaves From A Traveller's Note Book," pp.105-107, and "Memoranda of Hasty Visits To The Country: Crops and Farming at Shirley, June 16th, 1837." *Farmers' Register* 5, 3 (July 1837): 184-187.

²²See Ruffin, "Leaves From A Traveller's Note Book," p.105. Carter's journals also reveal that there were times when his slaves "refallowed" the shift. See, for example, his journals for August and September, 1823, SPP, 85:1. On turning under the clover, it was imperative, as Carter and Ruffin both observed, that the whole crop of clover, or nearly as much as was possible, be returned to the land. ²³SPPJ., September, 1829 and 1830, SPP, 86:2. On the manure being collected from various sites, Carter noted in 1829, for example, that it came from the following sources: 106 loads to bay field; 673 loads of Farm Pen; 46 from Bake House; 285 from Stable Yard; 41 from Quarters.

²⁴Carter stated that he manured about fifty acres a year, putting twenty-two loads of stable manure and thirty loads of farm pen to the acre (See "The Four Shift System..." p.135). Ruffin remarked similarly in his "Leaves From A Traveller's Note Book," p.105. Yet Carter's records in his journals frequently reveal that he manured on the average closer to thirty acres. In 1829 and 1830, for instance, Carter states that thirty acres were manured with 1045 and 1076 loads respectively.

racks formed of fence rails crossed over a low horizontal pole: and these racks when full, form additional shelters for the cattle from wind and driving rains.²⁵

By spring, the manure stood about two feet thick. As it remained on the field until August or September, slaves covered it with a hearty coat of straw to shelter it from the summer sun.²⁶ When the ploughs started to work the clover lay, slaves would dig up and cart this manure across the fallow.

The winter farm pen provided Carter with just one source of the rich manure he used to fertilize his fields. The second major supply came from the stable yards, which offered cattle residency in the spring and summer seasons. While slaves left the manure produced in the winter pen on the ground until the fall, that dropped in the stalls of the stables had to be cleaned out daily and scattered lightly over the small stable yard. Slaves did not allow this manure to form in thick piles (to prevent it from heating); instead, they went through the yard during the late spring and summer, thinning out the large deposits and spreading some of this manure as a top dressing on the clover field.²⁷

As if these labors with clover and manure to prepare the fallow were not enough, a variety of things, such as the weather or pestilent grasses, could impede the work significantly. Describing operations at Shirley in his *Farmers' Register*, Edmund Ruffin remarked that "the great toil of the clover fallow may be doubled by the uncertain, but not rare occurrence of drought, and consequent hardness of the soil." Carter's journals attested to Ruffin's observations. In the midst of a mild drought in the fall of 1832, for example, Carter noted that the clover land was "so hard it breaks up in clods as big as a man's body."²⁸ The only way to remove these clods was to have hands break them up with hoes, spades, rollers, or shovels.

Weather, though, was not the main factor which increased the difficulty of working the clover fallow. The greater problem slaves faced lay in the growth of unwanted

²⁵Ruffin, "Leaves From A Traveller's Note Book," 107.

²⁶Ibid, p.107.

²⁷Ruffin, "Memoranda Of Hasty Visits To The Country," p.186. Ruffin felt that "this mode of management is far from being perfect..." arguing that top dressing clover as late as June or July did little good; Carter, however, did not believe that he lost any "enriching parts of the manure" through this system. Ruffin, though disagreeing, stated that as long as "the main points of the true doctrine on this subject are kept steadily in view, there is not much danger from variations, and even from considerable imperfections in the practices pursued." For more comments on this, see chapter three.

²⁸For Ruffin's remarks, see "Memoranda Of Hasty Visits To The Country," p.185. For Carter's, see SPJ, September 10, 1832, SPP, 86:2.

grasses, such as the partridge pea, blue and wire grasses, or onions. Ruffin called the partridge pea "one of the worst pests on soils as that of Shirley..."²⁹ To combat these, slaves dragged or harrowed the field after the deep ploughing of the clover lay. Next, they waited until cold weather had brought the partridge pea close to the surface to sow wheat, whereupon more harrowings or perhaps a light ploughing covered the wheat seed while simultaneously cutting away the partridge pea.³⁰ In any case, as Carter acknowledged, the work was demanding:

The dragging ought to have been begun sooner, say by the 25[th] or 28[th] of Sept[ember] + carried on more rapidly, so as to allow the partridge pea to come up before we begin to sow wheat + then we can kill it by shovelling; or harrowing, or ploughing in the wheat, by taking great pains in doing either of them.³¹

As these comments reveal, the labors slaves undertook in the fallow not only were marked by difficulty, but they also had to be executed at a particular, and at times, intense, pace. It was imperative that slaves complete the fallow by the middle of October so as to have the land ready to receive the wheat seed. And as Carter noted, it was essential to finish dragging the fallow in time to help the partridge pea surface during the first signs of cold weather in early October. Even though Carter himself left for the mountains of Fauquier county each August after the harvest, he mandated that his slaves execute these tasks efficiently.

Thus, when Carter returned from Fauquier that second week of October 1831 and found a general neglect and slowness to the fallow work, he lamented that the dragging should have started earlier and been conducted "more rapidly." Moreover, Carter's discontent here was amplified by the fact that a year earlier he had purchased two new three-horse ploughs and three new young mules "for the express purpose of forwarding" the work.³²

After struggling to prepare the fallow, slaves next turned their attention to putting the land in wheat. Like ploughing under the clover lay and manure, working the wheat entailed heavy labors for slaves. But the methods Carter employed in cultivating wheat also heightened the complexity of the work. Moreover, because wheat was the most important cash crop at Shirley, Carter demanded a certain level of

²⁹Ruffin, "Leaves From A Traveller's Note Book," p.106.

³⁰Ibid, p.106.

³¹SPJ, October 1831, SPP, 86:2.

³²Ibid. Carter had had much difficulty with the partridge pea the year before. He had used the double shovel in an attempt to eradicate the plant, but found that it did not work well; he was "obliged to plough up the land again with two horse ploughs +even they...[did]... not turn under the pea well." Thus, the next year Carter purchased the two three horse ploughs, although his efforts were frustrated by the slow pace at which his slaves labored on the fallow.

accuracy from his slaves tilling the wheat shifts, and consequently, slaves were more carefully supervised during the most important stages of wheat cultivation.

Sowing began shortly after the ploughing and bedding on the fallow, usually in the beginning of October, and it continued for roughly a month. With draft animals pulling the stock of wheat seed, slaves sowed around three hundred bushels on the average across the fifteen feet beds dotting the fields.³³ After covering the sown wheat, slaves began to open furrows which served to keep the beds well drained of surface water by using ploughs and spades to cut ditches or grips across the beds. Ruffin observed that "great care" was used to accomplish this, remarking that each furrow was "well and neatly opened and cleaned out by the ploughs, and small shallow ditches." He pointed out that when slaves opened these furrows they had to make sure that the grips were small enough not to affect future ploughing.³⁴ Such precision required close supervision, and Carter or an overseer would have kept a keen eye on slaves performing these critical tasks. picking out onions and cheat---pace of work keeping us back harvest /threshing/cleaning screenings load and delivery of crop travel and supervision

The same intensity and complexity found in the cultivation of the fallow and wheat crop also emerged in Carter's system of growing corn. Corn had been raised at Shirley before Carter, but, as with wheat, Carter's devotion to the methods of improved farming ensured that the work here was both very complicated and extremely laborious. Carter had learned his technique--the Pamunkey mode--from the first overseer he hired in 1817. His writings on the subject in the *Farmers' Register* some seventeen years later reveal the meticulous care Carter demanded of his slaves when working corn.³⁵ Ploughing in winter and spring broke up the soil into roughly six feet beds. Planting usually began around the third or fourth week of April. A one or two horse plough ran a furrow across the length of the bed or ridge. Hands followed, dropping the corn in the furrow in three feet increments determined by a stick measure guided either by an overseer or the hands themselves; hands next covered the corn with hoes. ³⁶

By the mid to late May, Carter had started to weed his corn. Ploughs and hands each went over the corn three

³³See SPJ, *passim*, for accounts of total bushels of wheat sowed. On the beds being fifteen feet, see Ruffin, "Leaves From A Traveller's Note Book," p.106.

³⁴Ruffin, *Leaves From A Traveller's Note Book*, p.106.

³⁵See Hill Carter, "Pamunky Mode of Cultivating Corn: The simplest, and best on flat land, and on a large scale, because the most labor-saving," *Farmers' Register* 1, 9 (February 1834): 560-562.

³⁶Carter felt that with the overseer regulating the steps of the hands, they would "soon acquire great accuracy" in stepping off three feet increments in the corn rows. See SPJ, April 24, 1834, SPP, 86:2, for an example where slave women dropped the corn by the measure while slave men followed to cover it with hoes.

times. In the first step, two-horse ploughs ran next to the beds, throwing dirt away from the corn in what was called "siding down." Slaves directed the ploughs so as to create a six to eight inch ridge on which the corn now stood. Hands then moved behind, "ridging out" this area by removing any weeds and grasses surrounding the young plants while also exposing them to the sun. At the same time, they would reset or replant the corn.³⁷ Next, the two-horse ploughs moved a sizable furrow back to the corn while scraping up the earth around the base of the stalks, being careful not to damage the plant. The hoe hands followed to weed the corn again, squaring or flattening the ridge to help eradicate weeds or grasses. Finally, the ploughs threw a third, deeper furrow to each side of the corn; once again, the hoes lagged behind to weed over the crop and shape the earth around it into a large but flat hill in what Carter called "laying by."³⁸ From here, the corn began to tassel and shoot.

This system required near constant attention and placed heavy demands on slaves, but Carter defended it as requiring less labor as compared to other methods. He argued that "Although three times going over the corn with the hoes, appears very often for a mode of making corn which pretends to be the simplest and most labor-saving...", where grasses did not flourish, "the hoe work in this mode of making corn is very quickly done, and the three hoeings are not more than equal to once and half the times of hoeing over corn in other modes of cultivation."³⁹ Carter maintained that as the first weeding was performed on only a narrow ridge (created by the ploughs), and with the ploughs in the second weeding throwing most of the dirt and weeds from across the foot of the corn--both leaving little work for the hoes--only the third weeding was difficult. In this final step, the plough would leave more weeds to clear than in the other stages, but Carter concluded it still was "not more than a common hoeing." He added that this was not altogether unexpected, as it was "the most tedious of the three" anyway.⁴⁰

Carter also noted that by using a two-horse instead of a one-horse plough less furrows had to be run in each working of the corn. Moreover, Carter pointed out that running the ploughs before the first hoeing, instead of after it as John Taylor argued in *Arator*, helped reduce the growth of weeds. Thus, although the Pamunkey mode required enormous attention and diligent effort from slaves, at the

³⁷Carter, "Pamunkey Mode Of Cultivating Corn," p.560. Carter remarked that the "ridging out" was the most important step in the entire process of cultivation., for it allowed the young roots of the corn to soak up the sun.

³⁸Ibid, pp.560-561.

³⁹Ibid, p.561.

⁴⁰Ibid, p.561.

same time, improved tillage practices, carefully yet efficiently executed, could lessen some of slaves' work load at particular stages in the production process. pace of work/ plough culture--very quickly done turn attention elsewhere get over land more rapidly like double shovel--like the express purpose of forwarding work in fallow with ploughs

Carter raised his corn crop on his main shifts, but from 1818 to 1823 he periodically used part of an island located about a mile from Shirley for corn cultivation.⁴¹ Whereas slaves gathered and hauled the corn and fodder raised in the fields to storage lofts using horse or mule teams, that harvested from the island had to be collected, carted to boats and loaded, floated back to Shirley, where it was then unloaded and hauled to the lofts.⁴² Getting to the island prepared and organized was more demanding than the traditional daily journey slaves made to the fields surrounding the plantation. Carter demonstrated this in the spring of 1823. As it came time to plant, he ordered "...5 Ploughs + 10 horses + all Hands to Suit up Clean up + get ready to Plant Corn in the Island."⁴³

The island may have produced a healthy supply of corn, but as 1824 opened, Carter looked curiously towards another area of the plantation as a potential site for corn cultivation. Situated near the bayfield used in Shirley's regular rotation lay a large, uncleared swamp of over one hundred acres. Slaves had worked in the swamp area before, clearing and ditching small tracts for pumpkin and homony corn crops.⁴⁴ But in 1824, Carter embarked on a massive project to reclaim an eighty acre section of the swamp land, intending to place it under corn once cleared, drained, and diked. As word spread to the quarters that Carter planned to reclaim this boggy expanse, there could be little mistaking that the work here would be some of the most intensive slaves faced.

Carter initiated the project on January 13, 1824.⁴⁵

41 Carter definitely grew corn in the island from 1818-1820 and in 1823; his journals fail to mention the island specifically when discussing corn in 1821-1822. Carter's addition of oats and cotton to his lands in 1821 and 1822 may have assumed precedence over working the island, leading him to abandon cultivation there for these two years. His journals also mention "island hogs," so perhaps as hogs used the island for a foraging ground, Carter feared damage to his crop. Regardless, his output of corn in 1818-1820 averaged over 560 barrels and in 1823 was 520. In 1821 and 1822, however, the total dropped to around 375 barrels, so it seems reasonable to conclude he had less land under cultivation in these two years. See SFJ, 1818-1823, SPP, 85:1; for notes on hogs see October 8, 1822.. For totals produced see journals as well as Carter's "The Four Shift System," p.132.

42 See SPJ, November 12, 1823, SPP, 85:1, for an example. Carter carried some of the fodder up to Hardens, one of his properties located about five miles from Shirley, to feed livestock he kept there. See November 9, 1823 and December 31, 1823 entries for examples.

43 SPJ, April 14, 1823, 85:1.

44 See SPJ, February and March, 1819, as well as May 1822, SPP, 85:1, for some examples.

45 Carter's journal entry for this day states "Commenced to clear up swamp to

Slaves' first task was to remove the dense growth of ash and gum trees covering the swamp. Throughout much of January, February, and March, hands worked hard clearing these trees, while draft teams hauled the wood out of the swamp and back to the plantation. High tides which flooded the swamp land on a daily basis complicated the work of these hands and teams.⁴⁶ By April and May slaves had turned largely to their traditional spring chores, but Carter still found time to plant a two-acre patch in the swamp land with pumpkins. And in June, just before the harvest began, slaves began to put up a bank on the river as part of the reclamation project.⁴⁷ The rest of the year, however, slaves devoted to harvesting the wheat and oat crops, preparing the fallow, and ploughing for the next year's crops, leaving little time to work in the swamp.

1825 began in much the same way for slaves as did the preceding year, as they started in January to clear the swamp. A "most violent snow storm" on the 23rd, however, halted work in the swamp for about a week, giving slaves a brief respite from the difficult labors they knew lay ahead.⁴⁸ After work resumed, slaves continued to clear the swamp of trees, and they also started to burn some of the brush still standing in the swamp.⁴⁹ In mid-February, an Irishman named Walsh, whom Carter had contracted to build a dike around the reclaimed area, sent the first group of his workers to Shirley. These men, who most likely were slaves⁵⁰, needed places to live while they constructed the dike, so Carter instructed his carpenters to build two cabins for them on the river, which they completed on March 3rd.⁵¹ This delayed work on the new quarters Carter intended to build for his own slaves.⁵² Although they may

reclaim." See SPJ, January 13, 1824, SPP, 85:1.

46 See SPJ, March 1824, SPP, 85:1, for many examples. Carter also remarked that the swamp "overflowed twice every day by the tide water at the flood, but [was] left free from water at ebb tide." See Hill Carter, "Account of the Embankment and Cultivation of the Shirley Swamp," *Famers' Register* 1, 3 (August, 1833), 129.

47 See SPJ, May 1822, SPP, 85:1, for notes on the pumpkins; see June 3 for comments on the riverbank.

48 See SPJ, January 23, 1825, SPP, 85:1. Slaves spent the week filling the ice house with straw, taking fodder to Hardens, and hanging up bacon in the smokehouse. Work in the swamp started again on the 31st.

49 See SPJ, February 1825, SPP, 85:1. Carter also notes that he boated some of the wood from the swamp during this period. See entry for February 23 for an example.

50 It is likely that Walsh's workers were slaves, for Carter, in his address to the Agricultural Society of Lower Virginia, mentioned that Walsh kept "his men healthy throughout the sickly season..." by preparing them breakfast each morning before work. Carter commented on this in his discussion of how planters should take better care of slaves, so it seems probable that when Carter used Walsh as a comparison he was referring to Walsh's slaves.

51 SPJ, March 1825, SPP, 85:1. Walsh and his family did not arrive at Shirley until March 13.

52 Slaves had started hauling timber for new quarters in November 1824 and continued throughout January of 1825. Carter's journal reveals that on February 22, 1825 his teams began to haul poles from the quarters to the river for Walsh's mens' quarters. On March 11, 1825, Carter's carpenters began to construct new

have resented this, the presence of new faces at Shirley offered slaves both a chance to acquire a greater understanding of life outside the confines of the plantation as well as opportunities to form new friendships, however brief they may have lasted.

Walsh and his men worked through November to build the dike, a massive structure some seventeen hundred yards long, with a base sixteen feet wide and a height of six feet.⁵³ The burden of constructing the dike fell to Walsh's workers, but it was Carter's slaves who were left with the equally daunting task of cultivating the land. In the winter of 1825-1826 slaves completed clearing fifty acres of the now partly reclaimed swamp. They cut down all remaining trees, burned them in large piles, but left the stumps, as Carter, always searching for ways to economize on labor, argued that they prevented the growth of grasses and thus saved work in weeding the ground. Carter also noted that stumps and roots would rot much quicker on swamp land (as compared to high land), and in this way, he spared his slaves "the endless labor of grubbing them up."⁵⁴

So by the spring of 1826, Carter was finally ready to put the swamp land under corn. Even with the labor saved by leaving the stumps and roots in the swamp, the work of preparing the ground and planting the crop was exceedingly difficult. Whereas corn cultivation on Shirley's main shifts relied heavily on the plough, the low, saturated condition of the swamp land forced slaves to rely solely on the hoe.⁵⁵

Each winter slaves shaped the ground into six feet beds.⁵⁶

Slaves next ditched and furrowed the swamp in its entirety, a chore made much harder considering the lack of plough power; moreover, Carter required that his slaves execute this step with a great degree of accuracy, as it was essential to keep the land free of water.⁵⁷ Planting then started early in the spring, most often towards the end of April. Weeding commenced with the first sign of obtrusive grasses, and slaves usually tried to get over the crop twice before they began the always rigorous wheat harvest.

quarters for Shirley's slaves; five new cabins were finished on August 13, 1825.
53For the process of building this dike, see Carter, "Account of the Embankment and Cultivation of Shirley Swamp,," p.129. Walsh finished the dike on November 10, 1825.

54Carter, "Account of the Embankment and Cultivation of Shirley Swamp," p.129 and Note B on p.131. Carter also observed that removing stumps and roots when first clearing the swamp reduced the surface level of the land significantly.

55Ibid, p. 130. This was the case for all the swamp land except, as Carter noted, ten acres "on the margin of the high;and."

56Bedding the land did not actually start until 1829, as the presence of stumps and roots kept the land from sinking very much, and slaves merely listed the ground into six feet rows instead of beds. In 1829, after the stumps and roots had decayed, Carter directed that his slaves work the swamp land into six feet beds. See "Account of the Embankment....," p.129-131, and SPJ, January 1829, SPP, 86:2, where Carter first mentions bedding the swamp.

57Carter remarked that the land was "well ditched and water-furrowed from one end to the other, so as to make it as dry as possible." See Ibid, p.130.

As he did in his article describing the Pamunkey mode of cultivation, Carter held that working the swamp corn was not as demanding as it seemed. After the two weeding before the harvest, Carter maintained that the growth of corn is so rapid that it overshadows the land, and keeps the grasses and weeds under, so that the cultivation of this sort of land is much less laborious than any one would suppose from not being able to use the plough, provided you begin to weed as soon as any grass or weeds appear: but if you let them get the start of you, you many bid adieu to your corn, for all the hoes in Virginia would not save it.⁵⁸

Regardless, however, of the crop's ability to stave off the spread of weeds, there can be little doubt that listing or bedding, ditching, furrowing, and draining, and weeding the entire eighty acres of swamp land without the aid of ploughs was quite a laborious task. Moreover, at times, even the "rapid" growth of the plants did not ensure the swamp corn remained free from pestilent grasses. In June of 1830, for instance, Carter noted that the weeding was moving slowly, "so foul + grassy in the swamp that we can't get along."⁵⁹ Ironically, the work here became more difficult, but by its very difficulty, the pace of work slowed considerably. in midst of oat and wheat harvest--would carter try to make his slaves work really hard now to get through this difficult weeding?

Slaves' inability to utilize ploughs in cultivating the swamp land was but one reason the nature of work in the reclaimed area was characterized by high levels of intensity and difficulty. Another factor was the weather. Because the swamp was such a low lying area, heavy storms which brought extremely high tides and flooding threatened to destroy the dike and the crop grown within its borders. In both 1827 and 1831, Carter experienced firsthand the danger such storms posed for his swamp project.

On August 26, 1827, while Carter was away in Fauquier county, Virginia, a terrific northeaster struck Shirley. Flooding "caused a tide higher than ever known before," overflowing the swamp, shattering the bank to the dike in three places, and destroying much of the corn.⁶⁰ Carter recalled that his overseer, "despairing of saving any part of the crop, did not pretend to repair the damages."⁶¹ Once word of the disaster reached Carter, he immediately returned home, determined to save the swamp. Carter made it back to Shirley on September 12. He learned that the tide had

⁵⁸ Carter, "Account of the Embankment....," p.130.

⁵⁹SPJ, June 21, 1830, SPP, 86:2.

⁶⁰SPJ, August 27, 1827, SPP, 85:1.

⁶¹Carter, "Account of the Embankment....," p.129.

flowed through the swamp unabated for about fifteen days; overall, he considered the effects of the storm "very dreadful."⁶²

Saving the swamp land Carter recognized as paramount to Shirley's prosperity. To repair the damages wrought by the flooding, Carter called for extraordinary efforts from all members of Shirley's slave community; not only would the work be difficult, but it would have to be executed at a frantic pace. The day after his return, slaves began cutting the corn crop in an attempt to save any they could.

This continued for four days, and even though the 16th was a Sunday, Carter had all hands in the swamp cutting and stocking the corn. Slaves spent the next week moving countless wheelbarrow loads of highland dirt and some swamp mud to the dike in hopes of repairing the breaks in the bank. Continued northeast winds and high tides, however, led Carter to conclude that "our work in stopping [the] break in swamp land is all in vain."⁶³

These efforts proved not to be in vain, however. By the beginning of the next work week, slaves, with the assistance of three loads of rocks Carter had procured, finally managed to bring the dike under control.⁶⁴ Fortunately, the corn had largely matured before the storm struck, and Carter harvested about half a crop. For Carter's slaves, however, there was little celebration. From sunup to sundown, for nearly twenty straight days, they had worked feverishly to save the reclaimed swamp, a project for which they were quickly developing much disdain. Even on the one day which slaves customarily regarded as theirs, Sunday, they were not immune from Carter's demands. Aside from the rest Sunday brought, it gave slaves time to work their garden patches, care for chickens and hogs, and look for salvation from their condition through worship. Although Sunday work was never typical on the plantation, for these two weeks, Shirley's slaves enjoyed none of the privileges usually accorded them on the sabbath; moreover, they received no compensation, even though Carter had in the past paid slaves for extra labor, such as holiday work.⁶⁵ The preservation of improvements at critical times, not slaves' customary rights, took precedence at Shirley.

Another serious storm struck the swamp in late April of

⁶²SPJ, September 12, 1827, SPP, 85:1; see also "Account of the Embankment...", p.129.

⁶³SPJ, September 20, 1827, SPP, 85:1; the next two days' entries reveal similar sentiments: "Working in vain owing to high tides." and "Trying to stop break in swamp but to very little purpose."

⁶⁴Carter brought the loads of rocks to Shirley on Sunday the 23rd, and on the next day he could finally note that they had "stopped the water in the break at last with rocks mud + dirt." Slaves continued through the remainder of the month making more minor repairs to the dam. See SPJ, September 1827, SPP, 85:1.

⁶⁵For some examples, see AAB, 1819, SPP, 85:1, where Carter paid some slaves \$48 for "my people's holyday work;" see also CAB, May 27, 1822, SPP, 85:2 and CAB, April 4, 1825, SPP, 85:6.

1831, "making a perfect wreck of the bank..." driving the water some six feet over the swamp, and destroying all the corn.⁶⁶ This time Carter was "very near giving it up in despair..." but the swamp had come to symbolize Carter's devotion to agricultural improvements, and with his characteristic determination, he decided to "make another tiral" with corn in the area.⁶⁷ Once again, slaves worked at a rapid pace to stop the breaks in the dike. By the middle of May, they had replanted the swamp. With the corn growing well, and with repairs to the dike finished by the end of the month, Carter counted on a good crop. Several days after slaves began to weed the corn, however, worms had killed every plant.⁶⁸

Carter admitted that he "was pretty well tired of planting for one year..." surely his slaves were more exhausted. Even though the wheat harvest was to begin within days, Carter made a third attempt to secure a crop. Two days before slaves started to cut wheat, Carter "made a great push, working night and day..." planting the swamp for the third time. The worms, however, had not disappeared, and as soon as the corn began to sprout, they again destroyed the entire crop.⁶⁹ A fourth planting, undertaken in the time between the wheat and oat cuttings, took well as the worms had disappeared. Carter made close to half a crop of corn for the year, but the toll on slaves had been heavy. They had gone through the rigors of planting four times, labored for two days and nights straight at one point, and in the midst of this, begun to harvest Shirley's bounties of wheat and oats.

These unremitting toils in the swamp placed enormous strains on slaves. Undoubtedly, the work drained many slaves of their energies, leaving them with little motivation to work for themselves once returned to their cabins. Ruffin, though arguing that improvements other than reclaiming tidal marshes were more vital for real reform, recognized this when he cautioned that

all who are unable to resist the most besetting temptation of tidewater proprietors, will do well to practise the same liberal expanse of labor, the care and watchfulness, and the perseverance through difficulties and disasters, that have concurred to secure the success and profit of the embankment and cultivation of the Shirley swamp.

In spite of these burdens the swamp work placed on slaves, the enterprise was a successful one for the Shirley

⁶⁶SPJ, April 27, 1831, SPP, 86:2, and Carter, "Account of the Embankment..." p.130.

⁶⁷Carter, "Account of the Embankment..." p.130.

⁶⁸SPJ, May 1831, SPP, 86:2, and "Account of the Embankment..." p.130.

⁶⁹"Account of the Embankment..." p.130, and SPJ, June 1831, SPP, 86:2.

economy. From 1826 to 1833, the swamp made on the average over 470 barrels of corn a year, which earned Carter about \$1,265 annually.⁷⁰ Just as important, however, the project allowed Carter to make a major change in his system. With the swamp producing Shirley's entire crop of corn, Carter moved oats into his regular four shift rotation. Slaves had raised oats on a forty acre tract of the corn land since 1821, but now Carter devoted the whole shift to oats. His rotation became oats, wheat, clover, and wheat on the clover fallow.⁷¹ The oats Carter used strictly for home consumption, feeding horses and other livestock with them. And with the "toll" corn Carter received from neighbors who used Shirley's mill feeding his slaves and hogs, the corn produced in the swamp was almost entirely taken to market.⁷²

Carter made two other important changes during this period which must be addressed before evaluating the full impact his reforms had on slave work routines. In addition to oats, Carter had begun to raise cotton at Shirley in the early 1820s. From 1822 to 1825 slaves had planted cotton on various sites around the plantation. In 1826, Carter started to use sections of the reclaimed swamp for cotton cultivation, planting anywhere from one to ten acres.⁷³ Like the oats and the toll corn, cotton allowed Carter to move the plantation towards increased self-sufficiency, as slave women spun the harvested fibers into clothing for members of Shirley's black community.

In the fall of 1831, Carter made another adjustment in his system. The two hundred and fifty acre field he had relegated to a standing pasture in 1818 Carter now divided up four ways. To each of his four fields, he added one section of the standing pasture, increasing to one hundred and sixty two and a half acres the size of each shift. In 1833, Carter purchased two hundred and thirteen acres from neighbor T.E. Demoville's "River Tract," which he used to replace his old standing pasture.⁷⁴ Proposing to clear another twenty-five acres the next winter to be used for grazing lots, Carter could count over seven hundred acres of cultivated land at Shirley. He considered the original four hundred acres as "permanently improved," and with the standing pasture he brought under the plough adding an ample

⁷⁰See "Account of the Embankment...", p. 130 and Hill Carter, "The Progress Of Sinking And Loss In The Embanked Marsh Of Shirley," *Famers' Register* 5, 1 (May 1837), 40.

⁷¹See "The Four Shift System...", pp.132-133, as well as SPJ, 1821-1825, SPP, 85:1. There was one exception to this. In 1831, Carter planted corn on a twenty-five acre section of the oat land in his rotation.

⁷²"The Four Shift System...", p.133.

⁷³On the various sites where slaves worked cotton until 1825, Carter's journals reveal that he used the boat lot, the island, and the pigeon lot. See SPJ, 1822-1825, SPP, 85:1. Carter raised cotton in the swamp from 1826 to 1831, on patches ranging from 7/8 of an acre to 3 acres to 10 acres. See SPJ, 1826-1831, SPP, 85:1 and 86:2.

⁷⁴See "The Four Shift System...", p.133, and AAB, 1833, SPP, 85:1.

growth of clover to his four shifts, Carter believed his crop yields would increase greatly over the coming years. With much pride, he could look across his vast domain along the James and remark that "I now expect to begin to reap the full benefits of my system of cultivation."⁷⁵

There is little doubt that the changes Carter made at Shirley effected a substantial increase in both the fertility of his lands and the profits of his plantation.⁷⁶

But while the impact his improvements made on his fields emerged over many seasons, slaves felt their seasonal and yearly cycles of work routines changed abruptly. The old three shift system, with two major crops and basically no diversification, was hardly labor intensive on a year round basis. Beginning in the fall of 1818, however, slaves began to work throughout the calendar year more regularly (and more intensely). The diversified, increasingly self-sufficient system Carter introduced, with its numerous and varied seasonal requirements⁷⁷, meant that slaves now had to perform a multiplicity of tasks over the course of each year. In the process, slaves lost more of both the control they exerted over their daily lives as well as the time they enjoyed away from work.

Winter work, once seen by slaves as a period for only relatively light chores such as gathering wood, hauling rails and running fences, clearing ditches, filling ice houses, repairing cabins, and feeding livestock, took on wholly new dimensions. Slaves now ploughed for oats and cotton, beat out plaster, began to sow clover seed, sloped the riverbank, and hoisted corn into lofts and began to beat some out for sale. Winter was also the time for butchering and salting hogs, carrying fodder to sheep at Hardens, hanging up bacon, and completing work on the winter farm pen. Carpenters coopered barrels and repaired the sheep shelter at Hardens, and, together with other men, they made repairs to the mill and its dam. Women spun clothes, made brooms and mats, and beat out plaster when cold weather kept them inside. When working outside women cleaned up fences and cleared lands of briars, picked out oats from wheat, completed picking out the cotton, and assisted men in the

⁷⁵"The Four Shift System..." p.133.

⁷⁶Ruffin attested to the success of Carter's improvements in 1833. He referred to the "...unquestionable general and great increase of fertility which...[Carter]...has thus produced, are alone sufficient to command much respect for his opinions..." See Ruffin, "Leaves From A Traveller's Note Book..." p.107. Ruffin also remarked in 1837 that "Continued success, shown in increasing annual products, and also increased fertility of the soil, both of which Mr. Carter is confident he has attained, are certainly strong evidences of the value of the system or general plan." See Ruffin, "Memoranda Of Hasty Visits To The Country..." p.185. See also appendix.

⁷⁷In the discussion which follows, I have grouped the seasons accordingly: winter-December, January, February; spring-March, April, May; summer-June, July, August; fall-September, October, November. See appendix for more information on these seasonal variations.

other standard jobs of winter.

While these various tasks added much to winter routines, the labors of the swamp emerged as the defining feature of work at Shirley during January and February. Even though the land began producing abundant corn crops after slaves had cleared the reclaimed area in the winters of 1825 and 1826, there remained much work to do with each new year. The low lying condition of the swamp subjected the swamp to considerable sinking annually. To combat this, Carter had his slaves lay a foot of dirt around the bank of the dike each winter. Slaves gathered then hauled countless loads of dirt and mud from areas outside the dike, carting it with wheelbarrows across planks to the top of the mile long dike.⁷⁸ Requiring the "constant attention" of the hands during winter, this work, as well as the other tasks Carter's improvements necessitated, provided him with a way to maximize the value of his slaves, utilizing them to the utmost in seasons normally reserved for more mundane labors.

For slaves, the relative freedom from day long labors, and subsequently, the greater control over their daily lives which winter traditionally afforded them, eroded in the face of Carter's reforms.

Since the shift away from tobacco in the late eighteenth century, planting corn had always dominated spring work. With Shirley's growing diversification, however, spring now saw slaves take on a variety of other duties. Slaves sowed oats, planted cotton, plastered young growths of clover, and planted the peas, pumpkins, and potatoes Carter used for home consumption. Weeding these crops usually commenced in May, and that month was also when slave men sheared sheep and cut and spayed lambs and shoats.

Water furrows had to be opened in oat lands, and the swamp had to be ditched, drained, and bedded in the spring before planting. Carpenters prepared tools for working the corn and harvests and built or repaired slave quarters. Hands, particularly women, removed onions from wheat in what was known as cockling, other hands trimmed fruit trees, and some worked on ditches. For their part, slaves also saw spring as a time for planting crops in the small patches they kept.

With the substantial increase in their spring assignments, however, time slaves enjoyed for cultivating their own vegetables probably diminished⁷⁹; moreover, slaves also must

⁷⁸For comments on these operations, see Carter, "Account of the Embankment...", p.131.

⁷⁹Carter gave the Mondays following Easter and Whitsuntide (usually in May) as holidays to his slaves, and they definitely used this time for cultivating their own gardens. These holidays were standard and given annually, so slaves could almost always count on this time to work on their spring crops; but certainly an increase in spring duties would have contributed to a reduction in other time slaves may have used to work their patches, such as in the evening or on Saturdays, both of which probably saw working hours extended as compared to before Carter came to Shirley

have seen their energy levels decline considerably as spring chores grew more burdensome, and consequently, they were left with less physical motivation to work their patches after laboring for Carter.

As summer approached, so did the harvest. Shirley's slaves had learned to spend long hours in shadeless fields cutting the dense growths of grain which ripened in early June. With the addition of oats as a major crop, however, the rigors of the harvest basically doubled. Maturing around the same time as wheat, slaves had to cut oats just after cradling and shocking the bountiful rows of wheat. Frequently, there was little time to rest between the two. Sometimes, like on June 27, 1825, slaves completed cutting the wheat and started on the oats the same day, but Carter usually spaced them several days to a week apart. Still, though, slaves enjoyed few breaks in the days both between and surrounding the cutting of the two grains, as other crops claimed their attention. Corn, while harvested in the fall, had to be weeded regularly throughout the summer. In addition, slaves weeded the small patches of cotton, as well as the peas, beans, and pumpkins planted with the corn in the swamp or fields. Moreover, after cutting the wheat and oats, both crops then had to be threshed, the wheat delivered to markets, the oats hauled to storage, and the screenings from the poorer quality wheat cleaned to be used by slaves themselves. Finally, several other chores, not part of the harvest, added to the summer's labors. Men cleaned out the stable pen manure daily, women washed the wool that men had sheared in May, and until 1825, when slaves began to work swamp corn, slaves cut clover hay and gathered clover seed in June and July. By the end of August, the first stages of work on the always demanding clover fallow began. The demands of summer, while always heavy, had increased significantly, and, compounded by the often oppressive Tidewater heat and the ague and fever which frequently struck the quarters, summer at Shirley was exhausting and offered slaves few breaks from work.⁸⁰

The cooling temperatures fall brought did not lessen slaves' duties. Whereas the harvest dominated summer work, fall's labors revolved chiefly around the clover fallow. Slaves spent long days ploughing and manuring the clover shift and then sowing it in wheat. At the same time,

simply because there was so much more to do under his mastership.

⁸⁰Carter often recorded the temperatures during the harvest, and it was not uncommon to see it reach the mid or even high nineties. Because the grain had to be cut, there was usually little choice but to work in such trying heat, although the effects could be great. In June of 1824, as just one example, after noting that it was the "hottest day ever experienced here," Carter recorded that "some of the cradlers fainted in the field; several hands [were] laid up + the Harvest progressing slowly." The next day, Carter stated that it was "excessively hot; [they] Cut very little, [and] all hands gave out from the heat...." See SPJ, June 29-30, 1824, SPP, 85:1.

however, they still cut the corn crop, hauled and hoisted it up into storage lofts, and collected stalks for fodder, which they also carried to lofts. Picking out cotton took place in the late fall, and livestock, too, demanded attention, as carpenters constructed the winter farm pen and teams hauled fodder to sheep and carted pumpkins to hogs which had been penned up for fattening in the fall. Hauling timber, fencing, and other regular chores rounded out fall's work. Once again, the demands of improved farming had radically altered the nature of a particular season's labors.

Throughout the seasons which structured work and life at Shirley, slaves also carried out various experiments Carter undertook aimed at improving his farming practices. Like other leading agriculturalists, he recognized that successful reform required knowledge gained from practical experience and observation as well as experimentation. He had started experiments early in his farming career. In 1820, for example, he had soaked his corn in a mixture of boiling tar and water and then rolled it in lime "with a view of keeping off birds." Other years saw Carter conducting experiments with blue grass lands and manures, and when he sowed his plaster, his "constant practice" was to leave some beds unplastered for "experiment sake." At times experiments may have added to slaves' duties, as in 1820 when the corn had to be replanted, but in the long run they promoted the greater productivity Carter sought while teaching slaves more effective methods of cultivation.⁸¹

Some experiments even contributed to the health of Carter's slaves. In 1833 Carter reported one such case to the *Farmers' Register*. Using the same seed oats for many successive years without varying them, Carter reported that his crops had become so infested with a type of black dust head that he not only lost about one-half of the crop, but after thrashing the oats, the black dust "was so suffocating, that the laborers were made sick by it." Changing the seed in the spring of 1832, Carter purchased one hundred bushels of the "purest seed" Richmond had to offer. Finding that it did not cover all the land he intended to sow, Carter used some of his "impure" seed after washing it in a strong solution of lime water to fill out his field. The experiment proved successful, as the crop of oats from these limed seeds was much cleaner after harvesting than that from the Richmond seed, and the dust which so choked and suffocated Carter's slaves during threshing dissipated.⁸²

⁸¹For the experiment with the corn, see SPJ, May 9-10 1820, SPP, 85:1; for the other experiments, see Carter, "Blu Grass," *Farmers' Register* 1,10 (March 1834), 580.; "The Four Shift System...", p.133-134; and "Gypsum," *Farmers' Register* 5,1 (May 1837): 36-37, respectively.

⁸²See Hill Carter, "An Experiment On Oats." *FR* 1, 5 (October 1833), 275. See

The extent to which Shirley diversified under Carter had important implications for the plantation's division and organization of labor. The assortment of jobs meant that some slaves began to work individually or in small groups in what approached task based labor. Jobs like sheep shearing, sowing plaster, marking out muskrat holes, washing wool, salting pork, and at times, even cutting wood in the winter, Carter entrusted to just a few slaves skilled in the particulars of each task. Carter could not afford to supervise these tasks directly, but he could exert some influence over the labor here by monitoring what slaves produced in each assignment. While this task labor did not give slaves the remainder of a day off after completing a specific chore, like in the South Carolina lowcountry task system⁸³, what is significant is that slaves remained free of direct supervision much of the time when engaged in these jobs. This allowed slaves more control over the pace of their work and it provided them an escape from the constant surveillance of overseers or Carter himself, something slaves recognized as an avenue to gaining more autonomy in their daily lives.

Slaves Tom How and Young, for example, two wood cutters who Carter frequently had felling and gathering timber on their own throughout the winter, clearly would have attested to the benefits such organization allowed. How and Young often remained working in the woods by themselves until late February or early March, while other slaves labored in the swamp.⁸⁴ The swamp, though, did create at least one opportunity for a man to work on his own. Carter noted that one slave went around the dike daily, marking out muskrat holes for hands to fill at a later date.⁸⁸ Sheep shearing, too, slaves did more on a task system, as it was obvious to Carter how many each man had sheared each day. Shearers usually numbered between two and four, and each May Carter pulled them away from weeding corn to go over his flock, which numbered between one hundred fifty and two hundred. While they escaped work in the fields, Carter had learned a much better and faster way of shearing from an Englishman, and consequently, he expected a high level of productivity from men like Talbot, Joe, and William when they served as shearers.

Another of Carter's regular sheaers, Big Phill, also served as seedsman. When Phill sowed plaster or clover seed, he usually worked independently. After more than

also SPJ, March 31, 1832, SPP, 86:2.

⁸³ See Philip D. Morgan, "Work and Culture: The Task System and the World of Lowcountry Blacks, 1700-1880," *William and Mary Quarterly* 39 (1982): 563-599.

⁸⁴ For examples, see SPJ, February-March, 1828, and January-March, 1829; in 1831 they returned on March 5th after repairing some fences at Hardens. See SPP, 86:2 for this.

⁸⁸ See "Account of the Embankment...," p.131.

fifteen years experience with plaster, Carter felt that Phill had become so accurate at the task that it was not necessary for him to go behind Phill and measure the work, as had been his habit. In one instance, Phill even corrected Carter about the some of the plaster work on one shift; in the process, Phill not only contributed to an experiment Carter subsequently conducted, but he also asserted his humanity to his master, revealing that slaves, too, were capable of independent thought and action. 89

The sheer diversity of jobs at Shirley meant slaves moved away from working in large gangs and began to labor more regularly in small gangs with specific assignments. On any given day, slaves engaged in a number of different jobs.

An overseer's log detailed the various tasks slaves undertook at Shirley in the early years of Carter's mastership. In March, 1822, Carter's overseer observed that a part of the hands sowing clover seed and a part of the Teams dragging them in. Balance of the hands and women breaking clods in oat land and balance of the Teams ploughing land for oats.

The next day, some hands cleaned out ditches, others sowed clover seed, women hoed on ditches, teams dragged in oats, and carpenters sawed timber.⁹⁰ Regardless of the disparities in the types of work slaves performed, the increased division of labor at Shirley meant that most slaves periodically experienced lowered levels of supervision at some points, as Carter or his overseer could not possibly maintain strict surveillance on so many varied activities.

As the overseer's observations illustrate, Carter's diversification also shaped the organization of labor in other ways. The increased reliance on ploughs and draft animals created more opportunities for some slaves to advance to the specialized positions of ploughmen or drivers. Carter organized slaves who worked with the ploughs, drags, harrows, and other like instruments into teams. Using horses, oxen, and mules, the teams were responsible for breaking up, harrowing, and dragging lands, running furrows, and turning under the clover and animal

89 Carter learned from Wilson in May of 1822, and he argued that with this method "a man may shear one-third more sheep per day, in this way, than in the old fashioned way." His hands, he stated, "frequently shear fifteen or twenty sheep per day, in this way, and formerly...they never exceeded twelve sheep per day, to the hand." See Hill Carter, "Sheep Shearing," *FR* 5, 1 (May, 1837), 36. Carter's journals reveal that his men averaged closer to fourteen or fifteen a day, and sometimes, like on June 1, 1831, there could be "slow work indeed" in the shearing. On Big Phill working by himself with plaster and clover seed, seed April 16 and 18, 1823, SPP, 85:1, and March 19, 1824, SPP, 85:1, respectively, for examples. On Phill's correction of Carter, see Carter, "Gypsum," *FR* 5, 1 (May, 1837), 36.

90 See Overseer Journal, March 19-20, 1822, SPP, 85:4.

manures. Teams also hauled crops, rails, clover, oats, and wheat seed, and fodder and manures. The jobs assigned to those who remained classified primarily as hands, however, both more unskilled and back-breaking, contrasted sharply with those given to teams. Hands performed more of the drudgeries of field labor: hand cast sowing, weeding, and hoeing crops, cleaning furrows and ditches, breaking clods, collecting fodder, and spreading manures before the ploughs. Hand tools, sweat, and muscle, not the power of ploughs and strong work animals, powered these efforts.

Divisions of labor did not end simply with hands and teams. Those assigned to direct the ploughs were exclusively slave men. Women, often listed separately in work descriptions in Carter's journals, and never by their individual names, functioned mainly as field hands (aside from those who served in the house). The hoe or spade stood as their principal tool. Carter gave women some of the least desirable chores on the plantation. They cleared up fences of briars, picked oats and onions from wheat, weeded blue and wire grasses, sloped the riverbank, beat out clover seed, hoed and burned roots in the swamp, and toted corn stalks to the winter farm pen. When teams hauled out manures, it was often women who spread it before the ploughs; when harvesting the wheat, men cradled it while women shocked and wind rowed it alongside of those men not serving as cradlers.⁹¹ Men, aside from their roles in the teams, also filled the other skilled positions of carpenters, millers, and blacksmiths, and one slave named Bob even learned how to make shoes in 1823.⁹² As well, whether delivering wheat to markets or going to Richmond to procure supplies like parts for a threshing machine, men gained a much greater knowledge of life outside the plantation than women.⁹³

⁹¹ These comments are based on a thorough reading of Carter's journals. Carter usually employed about fifteen or sixteen cradlers in the harvest while the rest of the hands served as shockers and gatherers. Lorena Walsh's ideas on the connections between gender and the increased division of labor which accompanied diversification have been especially helpful here. See, for example, "Slave Life, Slave Society, and Tobacco Production in the Tidewater Chesapeake, 1620-1820," in Ira Berlin and Philip Morgan, eds., *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas*. (Charlottesville, University of Virginia Press, 1993):170-199.

⁹² See receipt of Richard Johnston from Hill Carter, July and August, 1823, SPP, 2:9, where Johnston received \$25 from Carter for one hundred pairs of wooden soles and for "teaching his man Bob how to make them." A slave named Daniel served as the miller, and Carter employed two men full time as carpenters.

⁹³ For just one example, see the overseer journal where one mentions sending two waggons to Richmond for machine castings during May 19-20, 1822; that August men were delivering wheat to local markets while women stayed on the plantation gathering clover seed. See SPP, 85:4 for both. Carter several times went to New York to sell his wheat; surely slaves who made the trip with him enjoyed a view of life seldom realized by most on the plantation. For one example, see Carter's article, "The Four Shift System," p.132. Carter's carriage driver, Anthony, made regular trips to Richmond alone, for which Carter gave him travelling money and sometimes even paid his tavern bills. See CAB, 1821-1832, SPP, 85:3 and 85:6 for

Carter's diversification also allowed him to incorporate other segments of his labor force more fully into plantation work. Older slave women Carter found useful in picking out cotton. He used sucklers, or women whose recent delivery of child prevented them from taking on heavy duties, to plant peas and occasionally weed cotton. Old age or childbirth did not remove one completely from the pains of work.⁹⁴ Carter also expanded the duties slave children had on the plantation. Boys planted peas sometimes when working with men running cultivators, and they also gathered peas and beans. Boys and girls both minded birds away from corn, and together with women, boys moved dirt, loaded straw, and cleaned cheat out of clover and wheat fields. Finally, boys and girls probably made much of the butter and milk produced on the plantation, the former which Carter sold to local markets in City Point or Petersburg.⁹⁵ For Carter, utilizing children in these ways allowed him greater profits in proportion to his slave population, but just as importantly, it helped him inculcate children into the rudiments of work at an early age.

In spite of the changes Carter's agricultural reforms engendered in work at Shirley, slaves struggled against the increasing demands Carter made on them. Their most direct expression of resistance was running away. Slaves recognized the chances of escaping successfully were slim. More often than not, slaves ran away to avoid work or simply because they had reached their breaking points. Slaves often chose the harvest time to flee, as it offered a break from some of the year's most demanding work. One day into what was a difficult harvest in June of 1825, for example, Joe Lyons fled Shirley; two weeks later, John Washington followed him.⁹⁶ Although both were eventually apprehended, Washington's defiance was supported by the slave community indirectly. Captured by the end of August, Washington still managed to sell twelve chickens to Carter on September the 9th. In his absence, other members of the slave community had taken care of Washington's birds sufficiently while he enjoyed the limited freedoms running away presented.⁹⁷

numerous examples.

⁹⁴ For examples of older women picking cotton, see the overseer journal, September 30, 1822, SPP, 85:4 and Carter's SPJ, October 12, 1822, SPP, 85:1. For comments on the sucklers, see SPJ, May-June, 1823, SPP, 85:1.

⁹⁵ For examples of the boys working with cultivators and gathering peas and beans, see SPJ, May 16, 1822, SPP, 85:1 and overseer log, August 16, 1822, SPP, 85:4, respectively. The references to boys and women working with dirt and straw also appear in the overseer log. Making milk and butter was ideally suited for children because it was relatively light labor. Carter began selling butter in 1821, and annually about four hundred and fifty pounds found its way to local markets like City Point or Petersburg, netting Carter about \$90 each year. See AAB, 1821-1833, SPP, 85:1.

⁹⁶ See SPJ, June 1825, SPP, 85:1. Carter noted that the harvest was particularly intensive due to both the intensive heat and the tangling and lodging of the wheat.

⁹⁷ See CAB, September, 1825, SPP, 85:6.

Four years later, Carter witnessed a mass exodus of slaves. Quite naively, Carter noted on March 14, 1829, that "Sam [Smith had] run off this morning without cause." Joe Lyons caught him nearby and returned Sam to Shirley a day later, for which Carter paid Lyons a dollar. This proved to be little incentive to Lyons, however, for less than a month later, with Sam and his brother Charles, John and William Sampson, and Billy Tanner, Lyons again ran away after John Sampson, with some help from the others, had robbed one of Carter's neighbors. Except for William, Carter stated that all were apprehended within a month. But this incident proved clearly that slaves' loyalties lay with the community and not their master, regardless of the money Carter paid them for catching each other.⁹⁸

A more realistic way for slaves to resist was to slow down the pace of work. Aside from taking advantage of the limited supervision diversification could foster, slaves found an excellent opportunity to slow down work whenever Carter traveled outside the plantation for extended periods, such as his annual pilgrimages to Fauquier County or trips to New York to deliver wheat. With only the one overseer Carter employed to monitor work, slaves felt less direct pressure to perform their jobs diligently or fully. Carter's journals make it clear that his slaves used his absence to do exactly that. Carter often complained about neglected or poor work once he returned to Shirley after long absences. In October, 1824, for example, after returning from New York, Carter remarked that his slaves had not done "as much as they ought to have done in any department of the plantation." In October, 1830, after a respite in the mountains of Fauquier, Carter observed that his slaves had not patched up the muskrat holes in the swamp, they had "improperly fanned" the wheat seed, and the fodder "they neglected very much, not having gathered a quarter of what they ought to have."⁹⁹

Slaves clearly saw slowing down work as a pathway to resistance, and it gave them satisfaction to be sure, but it did not really removed them from their fundamental obligations of working for Carter. Independent production, however, offered them a chance to work for themselves, somewhat removed from their master's control, and in this

⁹⁸ For accounts of these escapes, see SPJ, March-May, 1829, SPP, 86:2, and the Richmond Enquirer, April 14, 1829. Carter also paid a slave named Talbot \$1.00 for his efforts to catch the runaways. For this payment as well as Lyon's see CAB, March, 1829, 85:6. Another slave named Cimon also "ran off without cause" on March 31st. Carter fails to mention specifically whether he or William Sampson were ever apprehended.

⁹⁹ See SPJ, October, 1824, SPP, 85:1 and SPJ, October, 1830, SPP, 86:2, respectively. If the overseer was sick and in bed when Carter was absent, as was the case in 1831, work slowed considerably. Carter also experience repeated problems with his threshing machine, but whether slaves sabotaged it or it was simply a poor piece of equipment is unknown.

sense, it gave them a sense of self-esteem they could never have in their relations with their master. Raising vegetables provided slaves with valuable supplements to the meager rations Carter provided. Selling chickens, ducks, and turkeys, brooms, and mats, as well as salting fish or working holidays, allowed slaves to earn money, some of which they might use to buy luxury goods when the opportunity arose. Moreover, earning money taught slaves the value of property in labor, an important lesson for those regarded by their master as chattel property. While the amounts slaves earned appeared scant to a man of Carter's means, to men like John Washington or women like Sarah Pride, it helped mitigate the difficulties of a life enslaved.¹⁰⁰

¹⁰⁰ For voluminous evidence of Shirley's slaves independent production, see Carter's Cash Account Books, for he bought much (if not most or all) of what slaves produced on the plantation. On evidence of gardens, see chapter three.

Searching for Stability: The New Faces of Reform, 1833-1860

The first seventeen years of Hill Carter's mastership had been a period of radical transformation. Both his plantation's fields and his laborers had witnessed important change. But while Carter had indeed "saved the ship," his system remained far from perfect. To outside observers Carter's success with improved farming was clear and impressive, yet his system still contained particular flaws which, in their eyes, threatened to limit the full potential of his reforms.

In the pages of the *Farmers' Register* there emerged a running debate among Tidewater planters over what constituted the best system of improved farming. Carter had first championed what he considered the great merits of the four-shift system in the inaugural volume of Ruffin's journal.¹ In what was his first published writing on agriculture, Carter had presented a strong case for the utility of the system. To Edmund Ruffin, the "peculiar advantages of the four-shift rotation...[had]...been ably maintained by Mr. H. Carter...," as well as his neighbor, John Selden. Ruffin, however, recognized that not all planters along the James agreed with Carter or Selden. He encouraged others who employed different systems to use his journal as a forum to voice their opinions and oppositions, cautioning that "if those who object to that rotation...remain silent, it is a natural inference that their silence amounts to admission of the inferiority of their own systems."²

Ironically, Ruffin had made these remarks at the end of what was one of the initial responses given to the four shift hailed by Carter. Authored by William B. Harrison, the article spelled out a variety of objections to the rotation Carter had used so skillfully to revive his plantation. Harrison's first criticism centered around what he termed the four shift's "expensiveness." He argued that it required "an unusually large [amount of] horse-power" to fallow a quarter of an entire farm annually, and keeping a large number of horses, mules, and oxen throughout the year, when they did little else, was a drain on a plantation's economy. Moreover, Harrison observed that the fallow work became "an undertaking of great labor" in the dry seasons which frequented the Tidewater. A second objection of

1 See Hill Carter, "The Four Shift System: The best rotation for James River lands, or any good wheat and corn soils," *FR* 1, 3 (August, 1833): 132-135.

2 See Ruffin's comments on p. 466 of William B. Harrison's "On The Rotation Of Crops, And The Pamunky Plan Of Cultivating Corn," *FR* 2, 8 (January 1835): 464-468. Ruffin remarked that while it was not his intention "to express any opinion as to the superior value of either of the rotations in question...," he wished "the views on both sides to be fully presented..."

Harrison's was that corn, a crop which he believed commanded better market prices and was less likely to fail due to climatic conditions as compared to wheat, was relegated to secondary importance in the rotation. A third problem Harrison saw was that the large labor force required to plant and harvest the wheat crop was excessive for corn cultivation and thus employed inefficiently. Accordingly, the labor was "overwhelmingly accumulated at one or two seasons, instead of being properly distributed throughout the year, which should be the constant aim of every farmer."

But the rotation's greatest problem, Harrison maintained, was its succession of three grain crops in a row, something "opposed to the universal practice and experience of all good cultivators of the soil..." Harrison concluded his criticisms by observing how "strange" it was that any planter could assert that the Pamunky mode of cultivating corn, combining the plough with two or three hoeings, could be less laborious than where the crop was cultivated entirely with ploughs. 3

Not waiting long to defend his system from these criticisms, Carter's response appeared three issues later.

Building on the knowledge that Harrison (as well as John Wickham, a neighboring planter who, like Harrison, objected to Carter's system) had actually used the four-shift system on several satellite farms, Carter admitted that he was almost ready to yield that the four-field system...would not answer as a general system, after seeing its condemnation by such enlightened and practical agriculturalists as Mr. John Wickham and W.B.H.; but upon a little reflection, I have come to the conclusion that there cannot be any thing very bad in a system which those intelligent gentlemen, and most successful farmers, have adopted themselves. 4

Although Carter felt that this in itself spoke "volumes" for the rotation, he still provided a careful defense of his system.

To Harrison's first criticism, Carter argued that the number of draft animals required to fallow one fourth of a plantation in the autumn equaled that required to plough a third of the same plantation for corn during the spring and continue cultivating it throughout the summer. As well, Carter pointed out that in Harrison's three-shift, horses were not used in the time between the wheat threshing in August and the corn cutting and wheat sowing in October, and

3 See William B. Harrison, "On The Rotation Of Crops...", pp. 464-466. On the Pamunky mode, Harrison considered the labor "fully double," and if there was "a cheaper way of making corn than with the plough, it must," he argued, "be by the agency of steam."

4 Hill Carter, "Remarks On The Comparative Advantages Of The Three-Shift And Four-Shift Rotations," *FR* 2, 11 (April 1835), 657.

thus, "the very thing that W.B.H. complains of in the four-field system occurs---that is, the feeding [of] idle horses."⁵ Harrison's second point Carter dismissed easily, pointing out that over the last fifteen years wheat had fetched far better market prices than corn. Moreover, the corn produced under the four-shift constituted a larger sale crop than Harrison recognized, as the heavy manuring generated by the system promoted abundant yields. Similarly, while Carter admitted that the only sound objection to his rotation concerned the three grain crops in succession, he contended that the substantial manuring did "away in a great measure the bad effects..." and exhaustion caused from wheat, corn or oats, and then wheat following each other on a shift over three years. Although Carter failed to address specifically Harrison's comments about his labor being spread unevenly throughout the year, the various jobs Carter's slaves performed under his diversified system ensured that his labor was more properly and efficiently distributed than Harrison recognized. Finally, in response to Harrison's assertion that the Pamunky mode was so labor intensive, Carter reminded him that the plough was still the principle instrument of cultivation and that the weedings were no greater than what was common in other systems.⁶

While Carter's and Harrison's debates reflected the growing recognition that an open dialogue on improved farming was essential for the continued success and spread of reform, at times their writings strayed away from pure discourse over agriculture and assumed more personal dimensions. Edmund Ruffin, however, was more concerned with bringing reform to Virginia than with pursuing personal grievances against neighboring planters, and when he visited Carter's plantation, his comments reflected this pragmatism. Appearing in the summer of 1833, Ruffin's first published observations on Shirley resulted from a tour he took of the plantation the preceding November. Like Harrison after him, Ruffin held that the rotation of three grain crops in succession, with only the one ameliorative crop of clover, exhausted the land considerably, regardless of Carter's skills as an agriculturalist. He held that "but few soils could resist exhaustion under this severe rotation, even with all the aid here derived from manure and good management." Ruffin pointed out, however, that Carter's unyielding conviction in the power of clover and extensive

⁵ Ibid, p. 658. Carter added that in the four-shift the horses and mules were put to good use in the fall with the fallow work.

⁶ This portion of Carter's response appeared a little later in the same issue of the *Register* as his "Remarks on the Comparative Advantages..." Carter wryly stated that "if W.B.H has been able to dispense entirely with the hoe, and substitute the plough altogether in making corn, then indeed I must give up 'that nothing but the agency of steam' can compete with him." See Pamunky [Hill Carter], "On The Pamunky Mode Of Making Corn," *FR* 2, 11 (April 1835), p.709-710.

manuring "led him to form a very different opinion." 7

Besides what he considered its exhaustive effects, Ruffin also supposed that since the reclaimed swamp allowed Carter to substitute oats for corn in his rotation, the lack of a hoed or "cleansing" crop in his fields encouraged the growth of weeds and grasses. When he first made these observations, Ruffin stated that although Carter complained "loudly of his annoyance from blue grass, and partridge peas, the appearance of his fields when seen under grain...", and the bountiful crops Shirley produced, indicated that these pests did little damage.⁸ In a footnote, however, Ruffin revealed that after visiting Shirley and making these notes, Carter informed him that his plantation did, indeed, face real problems with these scourges. Ruffin remarked that he learned from Carter that the "increase of blue grass is so great, and its growth so destructive to the clover crop, and impedes so much the preparation of the land for wheat, that some horse-hoed crop, or cleansing tillage, must be adopted."⁹

Lost in these dialogues over Carter's system were his slaves. As Ruffin's comments demonstrated, however, in spite of the improvements Carter's rotation brought to his lands, it also produced some particular problems of cultivation, the burdens of which fell to his slaves. Three years before Ruffin's commentary appeared, Carter noted in despair the difficulties he and his slaves faced with blue grasses. He remarked that the shift recently harvested of wheat and being readied for oats that spring was "so full of blue grass that I do not know what to do with it." Once slaves started to sow oats, Carter decided to leave out thirty acres of the most infested sections of the shift to cultivate it in corn as a cleanser. Thus, in addition to working the swamp corn and planting a small patch of cotton, slaves spent much of the spring engaged in the difficult task of ploughing for, planting, and weeding corn in these entangled blue grass lands;¹⁰ ironically, this was the indirect result of their excruciating, yet successful, labors in the swamp itself.

Although the substitution of oats for corn in his rotation forced slaves to cope with the ills of blue grasses, Carter found oats helped to cleanse his fields of another scourge--onions. Besides choking ploughs when preparing the land for sowing and making the wheat cutting at harvest more difficult, growths of wild onions, if mixed in with the wheat when threshed, lowered the quality of the grain when taken to market. As he did with blue grasses,

7 Ruffin, "Leaves From A Traveller's Note Book," *FR* 1, 2 (July, 1833), 105.

8 *Ibid*, p. 106.

9 *Ibid*, p.106.

10 See *SPJ*, March-May, 1830, *SPP*, 86:2.

when Carter discovered parts of his lands overgrown with onions, he ordered slaves to plough up large tracts and put them in oats for cleansing. In the spring of 1833, for example, Carter began to break up twenty acres of his stable field lot to clean it of the "onions + filth." Seeing that the onions had infested the entire shift, within several days Carter had "started 7 ploughs to plough up [the] balance of [the] stable field for oats as it is so foul it would not make wheat without a spring crop."¹¹ Spring ploughing for oats was nothing unusual for Shirley's slaves, but that spring, they had gone through the process twice on separate shifts; moreover, after completing these labors, Carter's slaves had to move quickly to get both the bayfield and the swamp ready for corn cultivation. Not only did the pace of work rise that spring, but slaves also saw a reduction in the time they had for preparing their own spring crops.

Oats proved to be an "effectual cleanser" of the wheat crop, but they did little to prevent the continued spread of blue and wire grasses.¹² Slaves' attempts to check these grasses by cultivating corn in certain tracts of Shirley's main fields had proved rather futile. In the summer of 1833, Carter observed that "I have this year lost one third on my wheat by blue grass."¹³ Carter lamented that the "only remedy" was a hoed crop of corn, stating that "I shall now be compelled in my sorrow to abandon oats as a cleanser, and substitute the corn crop, so foul had my land become of every thing except the onion..." In at least one respect, Carter did not mind abandoning the oat crop, for he considered it, "if a heavy one, fully as exhausting as the corn crop." On the other hand, however, Carter recognized that his slaves would certainly encounter problems with onions in the future, and, more importantly, he argued that he would "find it too laborious to cultivate one fourth of my land in corn, in addition to my swamp land..." Regardless of these concerns over how much spring work would now be required of his slaves, Carter felt he had little choice. He remarked that "it must be done—there is no alternative, for the blue grass must be checked."¹⁴

As 1834 opened, then, the prospects slaves faced were bleak indeed. Fortunately for them, Mother Nature forced her hand into matters of the reclaimed swamp. The continuous sinking of the land, as well as persistent winds and driving rains which washed the dam to pieces the previous December, had allowed water to completely inundate the reclaimed area. This, coupled with the heavy demands

¹¹ SPJ, March 27-April 1, 1833, SPP, 86:2.

¹² Carter, "The Four Shift System," p.134.

¹³ Ibid, p. 134. Carter produced only 3, 060 bushels of wheat in 1833, as compared to 5, 800 the previous year.

¹⁴ Ibid, p.134.

each winter brought in making repairs to the dike, forced Carter, "with very great reluctance, to abandon the greater part of the reclaimed land..."¹⁵ Ruffin had always said this would be the inevitable result of the Shirley swamp, but at the same time, he understood that the project had been a profitable one, so long as Carter did not labor to keep the area reclaimed past what nature allowed. Ruffin stated that what is most important in the matter [is that] the clear profit from the crops has already overpaid the whole expense of making and preserving the embankment; and therefore the usual loss attending such improvements will be avoided—unless the proprietor should too long endeavor to defend his work from its inevitable end, the water resuming possession of the whole space.¹⁶

This inevitable end had come by the winter of 1833-34. As a result, Carter moved corn back into his regular rotation, growing oats only on a sixty-acre tract of the wheat shift which now followed corn. The issue of blue grasses and the need for a hoed crop in the rotation had seemingly worked itself out. More importantly, the loss of the swamp spared slaves the incredible labors Carter knew cultivation of both the swamp and a quarter of his fields in corn entailed.

Work in the swamp, however, did not end there. Carter was not ready to concede total defeat to the swamp, and as he had done throughout his farming career, he attempted to make some sort of profits from what appeared a hopeless situation. He recalled that as the swamp "had been a hobby with me for so long a time, I [was] determined to try to save a portion of the land..." for corn.¹⁷ During the winters and early springs of 1833-34 and 1834-35, Carter had his slaves, men and women alike, construct a new bank of eight hundred yards within the boundaries of the old, eroded one in an attempt to reclaim permanently twenty acres closest to his high lands.¹⁸ The harvest from these twenty acres revealed to Carter that he had enclosed too much low ground. Thus, in February of 1837, slaves again worked to put up a new dike, this time a cross bank to reclaim seven to ten acres of the "highest and driest part of the swamp land..."¹⁹ In March, slaves rolled dirt in the swamp's low areas in an

15 Hill Carter, "The Progress Of Sinking And Loss In The Embanked Marsh Of Shirley," *FR* 5, 1 (May, 1837), 40.

16 Ruffin, "Leaves From A Traveller's Note Book," p.107.

17 Carter, "The Progress Of Sinking And Loss...", p.40.

18 *Ibid*, p.40. See also SPJ, 1834-1835, SPP, 86:2.

19 See "The Progress of Sinking and Loss," p.40 and SPJ, February 1837, SPP, 86:2. Carter's journals also reveal that in February 1836 slave men put up a new bank "to reclaim a small piece of land by the quarter spring." Presumably, the work here was done on the same land where slaves put up the cross-bank in 1837.

attempt to elevate them high enough to grow corn.²⁰

By April of 1837, Carter felt he had finally secured these ten acres. He pointed out that although having only ten out of the original eighty-five acres left was exactly what Ruffin predicted, he did "not regret it, now it is done and over, as it has paid very well for itself, and it was an experiment, which sooner or later, I should have made, for I could not have withstood the temptation of reclaiming so fine a piece of land..."²¹ Carter observed that along with the ten acres he now had (in place of the swamp) a marsh which harbored wild ducks and other birds.²² For Shirley's slaves, the grueling labors of the swamp finally were over.

Although their work was the backbone of the profits garnered from the swamp, they were left with little to show for their efforts other than the physical and psychological scars of laboring under such trying conditions. The ducks which they took from the swamp and sold to Carter, as well as the peas which slave women planted there and some of which probably found their way back to the quarters,²³ hardly erased their less than fond memories of the days and nights they spent in Shirley's swamp.

In June of 1837 Ruffin paid another visit to Shirley, again publishing his observations in his *Register*. Viewing the plantation in the midst of a prolonged drought, Ruffin remarked that the "crop of wheat on the Shirley farm is [still] very fine for this bad season." While the wheat that followed corn in Carter's rotation suffered from the ravages of the Hessian fly, the fallow wheat seemed immune from both that "scourge" and the poor weather. Ruffin attributed this to the ploughing under of the entire clover crop as well as the year's stock of farm pen and stable yard manures, which he felt "seems to enable the wheat to withstand all attacks, and sources of great damage, usual to the crop elsewhere..."²⁴

Ruffin was careful to point out, however, that Carter's wheat crop was still subject to the "evils produced by luxuriance of growth." By this, Ruffin meant that because Carter ploughed all of his plantation's manure in each fall with the fallow, his wheat lodged or became severely entangled due to its high density of straw. Ruffin maintained that this produced extra work for Carter's

20 SPJ, March 10, 1837, SPP, 86:2.

21 "The Progress of Sinking and Loss," p.40-41.

22 Ibid, p.41. Carter added that he was "determined to have the wood [which he had originally removed] back again, and I have this spring set out several hundred ash trees, and shall continue to set out every spring, until I cover the whole marsh with trees, and be able to say 'Richard is himself again.'" Ruffin doubted this planting would succeed, as the soil's surface had sunk too deeply to sustain any growth; Carter's journals fail to mention any planting after 1837.

23 For Carter's purchases of ducks from his slaves see his Cash Account Books.

24 Edmund Ruffin, "Memoranda Of Hasty Visits To The Country," *FR*, 5, 3 (July, 1837): 184-185.

slaves, and amounted to a loss or inefficiency of labor. He asserted that

I doubt much whether his manure does not serve to increase the product of straw in a far greater proportion than of grain—and while it increases the risk of rust and of lodging, and the labors of harvest, and of thrashing, this increase of straw is of no value except as increasing the materials for manure.²⁵

Once again, particular features of Carter's rotation created additional burdens for his black laborers. When compounded by rains, the problems of lodging could be almost insurmountable, as Carter discovered just one week after Ruffin's visit. Two days into the harvest, Carter revealed the difficulties lodging posed for the work: "Cut such a harvest I never before saw; the wheat [is] flat + tangled + we can only cut 6 or 8 acres per day." The next day, Carter commented that he and his slaves were "cutting wheat whenever we can but never was there such a harvest; the whole crop [is] flat + tangled; God only knows when we shall finish..."²⁶ Once slaves did finish this rigorous cutting, they still had to complete shocking the tangled wheat; moreover, the work of weeding corn and cutting and hauling up oats remained. The delays produced by these problems with the wheat would have led Carter to push his slaves harder to meet these other requirements throughout the rest of July and August.

Ruffin did not limit his comments on Carter's manuring practices to his concerns over lodging. Ruffin argued that Carter's lands would benefit greater if he applied his manure either to the wheat shift which followed corn—as it was always inferior to that on the fallow—or as a spring top-dressing to his clover. Ruffin felt the latter, by increasing the growth of clover, would give the land a stronger and steadier supply of manure.²⁷ Instead of increasing the wheat crop, which was valuable only for its grains or seeds, Ruffin held "it is best always to give our farmyard and stable manures to crops of which we wish to increase the *general bulk...*" like clover or corn. He stated that Carter agreed his manure would be more useful if applied in the spring on young clover instead of the fallow, but "he is still compelled to pursue the latter practice, because his rotation and general system require so much labor in the spring, that he has none to spare for carrying out his manure at the time he would prefer."²⁸ Although

²⁵ Ibid, p.185.

²⁶ SPJ, June 26, 1837, SPP, 86:2.

²⁷ Ruffin, "Memoranda Of Hasty Visits...", p.185.

²⁸ Ibid, p.185. Ruffin added "This then is certainly *one* serious objection to his system, however admirable it may be in other respects."

Carter had abandoned cultivation of the swamp and cotton,²⁹ both of which required great attention in April and May, spring remained a demanding time for slaves.

Ruffin obviously recognized Carter's achievements as a farmer, and his intention was not to lambaste him. As the leading voice of agricultural reform in the South, however, Ruffin felt it his duty to illustrate the strengths as well as the weaknesses in any planter's system. He admitted that while "much has been said...both for and against this very productive and very scourging four-shift rotation..." the increased profits and fertility Carter produced are "still more a proof that the plan, whether good or otherwise, is carried through in the best manner, in regard to good execution, and economy of labor, and other means." ³⁰ Regardless of the particulars of one's rotation, then, good management, which facilitated industrious use of labor and sound cultivation practices, went a long way to producing the successful agriculturalist.

As the deficiencies in Carter's system emerged more clearly in his lands, these factors became more important. Accordingly, slaves felt increased pressures placed on the quality and efficiency of their work. Problems of blue grasses, onions, or lodging were one thing. Sloppiness, carelessness, or inefficiency in executing tasks were quite another, for they only compounded existing problems in the rotation. Ruffin's observations attested to this. He noted that

as perfect as the tillage seems under this rotation, when well executed, and as clean and heavy as may be the crops, it will not bear neglect, or defective work of any kind. Imperfectly executed, the rotation would be a wretched one, both for annual profits and improvement of the land.³¹

Moreover, Ruffin pointed out that good execution necessitated that jobs be carried out "in proper time." For slaves, all of this meant they had to perform their jobs skillfully, with attention to accuracy and detail, and according to a particular schedule. In the face of these concerns, slaves felt even more constrained in their daily lives. They saw fewer opportunities to escape work, and

²⁹Carter ended cotton cultivation in 1831, as his journals make no mention of it after that date.

³⁰ Ruffin, "Memoranda of Hasty Visits...," p.185.

³¹ Ibid, p.185. In an article on marling, Carter raised the obvious question of "What system, badly executed, would not be..." a wretched one for profits and improvements? See Hill Carter, "Marling," *FR* 5, 4 (August 1837), 248.

they found their actions monitored more closely by the overseer or Carter.

While Ruffin observed that the sustained drought which struck Shirley in the spring and early summer of 1837 had done little damage to Carter's wheat crop, he could not say the same for the oats, clover, and corn raised on the plantation. The oats Ruffin considered "inferior," while the clover, even in its best growths, was "scarcely more than a foot high." The corn, however, had suffered the most. Ruffin argued that this crop, "in general, is worse, compared to the producing power of the land, than any well tilled field I ever saw at this time of the year."³² Ten days before Ruffin had come to Shirley, Carter had made similar remarks concerning the devastation inflicted by the drought. On June 6, Carter wrote that

The drought is so great that the corn does not grow at all, + is in fact perishing, so that we are afraid to work it. The oats + clover are nearly, if not quite destroyed by the drought, + the wheat suffering very much; pastures burnt up, + everything looks like a long drought in August + September.³³

As Ruffin and Carter both recognized, however, the real threat to the corn was not so much the drought but the increased presence of insects which ate up Carter's corn in its infant stages of growth. Whether it was the wire (or bud) worm, the cut worm, or the corn flea, by the middle of the 1830s, these insects had begun to wreak unprecedented havoc on Shirley's fields. Like the problems Carter encountered with blue grasses, Ruffin pointed out that the increase of insects resulted partly from the lack of a hoed crop in Shirley's rotation.³⁴ Carter recalled that even though "by dear-bought experience" he had learned that a hoed crop was necessary to cleanse his lands of blue grasses, he still "suffered in having additional labor and trouble...[from the] great difficulty in getting my corn to stand early in the year, owing to insects."³⁵

No finer a demonstration of this did Carter see than in the summer of Ruffin's visit. Two days after slave women began weeding his corn, wire worms had destroyed so much of it that Carter undertook to replant the majority of the field. Once slaves commenced with the replanting, however, Carter found that the worm had caused greater damage than he imagined. As a result, he directed his teams to plough up "all the badly eaten parts of the field + plant it over again." On about forty-five acres, slaves again laid off

³² Ruffin, "Memoranda Of Hasty Visits," p.185.

³³ SPJ, June 6, 1837, SPP, 86:2.

³⁴ Ruffin, "Memoranda Of Hasty Visits," pp. 185-186.

³⁵ Carter, "Marling," p.248.

the rows, dropped in the corn, and harrowed it in, which Carter remarked did "very nicely."³⁶ But less than two weeks after this planting, another bug, the corn flea, "appeared in myriads," eating up the entire forty-five acres and forcing slaves to replant this section for a third time.³⁷ The corn fleas disappeared after this third planting, and although Ruffin argued that "the injury to, and inevitable diminution of the crop, must be very great," Carter reported in August that his corn, even on these forty-five acres, "is now very promising; and if we have a seasonable fall, will make a full crop after all."³⁸

For slaves, the tasks of replanting or reploughing infested lands, not to mention the heightened pace of work these additional labors often encouraged,³⁹ were emerging as all too familiar features of life at Shirley. Spring and summer, always demanding times with the rigors of planting and harvesting, were quickly becoming periods for working out kinks in Carter's rotation. The added burdens this placed on slaves further diminished the time they enjoyed for working their own small gardens, and it increased the heavy physical tolls already taken on them. Moreover, there was a psychological impact to this, as slaves' resentment of Carter would have deepened in the face of his increased demands over their labor, when, at times, this labor itself appeared to be wasted or in vain or perhaps, in their eyes, even the fault of Carter himself. Reform was a learning process, for Carter and his slaves alike. And as slaves were continuously discerning, even some twenty years after their master had first come to Shirley, Carter's desire to achieve both maximum profits and sustained improvements meant that work and life on the plantation was subject to all sorts of changes and instabilities.

Carter, for his part, continued to study his lands for ways to strengthen them and the crops they yielded. His experience with insects convinced him that more drastic measures were required to cleanse his lands of the legions of bugs infesting them. Carter originally felt that the addition of corn to his lands, in due time, would rid his soils of both pestilent grasses and insects. Just after Ruffin's second visit, Carter stated that he "expect[ed] no more difficulty with insects, than farmers with other rotations; for I am sure that a hoe crop, once in four

36 See SPJ, May 1837, SPP, 86:2.

37 The quote comes from Ruffin's "Memoranda," p.186; see this as well as SPJ, June 1837, SPP, 86:2 for information on these replantings.

38 See Ruffin's "Memoranda," p.186 and Carter's "Marling," p.247, respectively.

39 Delays to work necessarily meant that Carter's slaves had to make up lost time at some point to stay on the seasonal schedule his crops mandated. In 1837, for example, after all of this replanting due to insects, Carter noted that although on the small areas of swamp corn slaves tended that year the land was "quite wet," slaves "had no time to lose between now, + harvest," and thus, they "were compelled to work the land wet."

years, will be sufficient to cleanse the land of both weeds and blue grasses...and insects of all kinds."40

Once more, however, experience proved to be the real teacher. Two years later, in the summer of 1839, Shirley again fell victim to the prey of insects, this time in the form of the chinch bug. The chinch bug, previously unknown on the plantation, forced Carter and his slaves to employ new techniques to combat insects. After finishing the wheat harvest early in the day on July 1st, slaves started that afternoon to kill the chinch bugs they found ravaging Carter's corn. On the fourth and the fifth, Carter had all hands whitewashing the corn in an attempt to remove the insects. The work here was both very tedious and laborious, and coming just after the harvest, slaves must have looked upon it with particular disgust. After slave men started cutting oats and ploughing other lands on the sixth, women and boys continued the whitewashing for several days until they began to tie up the cut oats.41 These efforts finally eradicated the chinch bug, but again, slaves' duties, especially those for boys, had expanded owing to defects in Carter's system.

By the winter of 1839, Carter had come to a grim realization. While his exalted four shift had produced both profits and real improvements in his lands, it had also encouraged the growth of insects. The turning under of all the clover for more than two decades had filled Carter's fields with dense vegetable matter, creating "a perfect bed for insects." Coupled with the limited grazing the four shift allowed, there was little in the way to check these insects. Carter remarked that although he was confident that under the rotation his lands had "increased four-fold in fertility...", the insects have multiplied an hundred-fold, or perhaps I might justly say one thousand-fold; and so numerous have they become, that I find my crops [even] on highly improved land have become very precarious in consequence."42

Faced with such persistent problems from insects, Carter found himself forced to make a major change in his system. He recognized that close or rigid grazing was the only way to cleanse his lands of the various bugs invading them. The four-shift system, however, in that it was essential that the entire lay of clover be returned to the land, did not really allow for this. Grazing the clover shift would deprive the soil of some of this one restorative crop. Reluctantly, Carter understood that he had no choice but to abandon his beloved four-shift system and adopt one

40 Carter, "Marling," p.248.

41 SPJ, July 1839, SPP, 87:2.

42 Hill Carter, "The Increase Of Insects Caused By The Non-Grazing System," *FR* 7, 12 (December 1839), 710.

which afforded close grazing. He stated he did "not know of any one [system] which will answer so well as a five-field rotation..."⁴³

Thus, after twenty-two years with the four-shift, Carter changed Shirley's rotation over to the five field system. Instead of having just one field in clover, Carter now had two. The first year's would not be grazed but rather allowed to remain on the ground as an improver; the following year, Carter would graze this clover shift heavily to remove insects and then fallow it for wheat. Corn would succeed the fallow wheat a year later, to be followed by wheat again the fifth year. Thus, the rotation would be corn, wheat, clover, clover pastured off, and fallow wheat.⁴⁴

To accomplish this, Carter converted his standing pasture, the tract purchased from his neighbor Demoville and used under the four shift, into the fifth field of his new rotation. Early in December of 1839, men and women started running and cleaning furrows to drain the standing pasture.

Slave men then began to clear some new ground around the pasture to square out the field, forcing the women, along with one man, John Sampson, to complete the heavy job of hoisting the balance of corn up into storage lofts.⁴⁵ With men cutting and hauling wood from this new ground to make a cross fence that March to divide one of Carter's fields for grazing purposes, the burden of grubbing the land fell mainly on slave women. In addition, the year before this work on the pasture started, slaves had also cleared a twenty-acre section called "the pines," which adjoined Carter's stable field. This work Carter noted was made more demanding because after clearing, grubbing, ditching, and burning stumps and roots on the land, ploughing was still so difficult that at one point slaves had to abandon their ploughs and wield hoes instead to complete the task.⁴⁶ Shirley's landscape had assumed a new look, but for slaves, the results had been much the same whenever Carter made major changes in his lands: more intensive work under less than favorable conditions, undertaken this time both during the cold days of winter and without the benefit of ploughs.

Carter's new rotation did not last very long. In just the first year after adopting the five-shift, Carter discovered a fundamental flaw with the way he had implemented the system. The problem lay in the fallow work.

After heavily grazing the clover pasture, Carter found that the constant trampling of his livestock, coupled with the dry weather fall brought, had rendered the land too hard for

43 Ibid, p.710.

44 Ibid, p.711.

45 See SPJ, December 1839, SPP, 87:2.

46 For work on "the pines," see SPJ, December 1838-January 1839; on the use of hoes instead of ploughs, see SPJ, May 22, 1839, SPP, 87:2.

the ploughs to turn it up effectively. He remarked that it was almost impracticable to fallow it up for wheat.

And as we generally have dry seasons at that time, it makes an unsurpassable objection to the system, for the labor of fallowing up a hard trampled field, in a dry season (the land breaking up in large clods, which clods have to be reduced by the rollers, harrows, hoes, &c.) is immense, on our stiff river lands.. 47

When Carter first adopted the five-shift, several Tidewater planters voiced their concerns over the system. Some condemned the rotation outright; others criticized only particular elements of it specific to the way Carter intended to use it.⁴⁸ From one of these communications, Carter found what he believed a solution to his problems, the "'beau ideal' of a system." He would change his rotation to corn, wheat, clover, wheat, and clover pasture grazed heavily. The trampling effect from livestock still existed, as did the threat of dry seasons, but the land itself would not lie unworked for two years as in the previous rotation, and thus, it would be less likely to become too hard for slaves to fallow.⁴⁹

Although Carter complemented "Rivanna," the planter who recommended this form of the five-shift rotation, "for his better judgment," their rotations did vary to a small degree. Whereas "Rivanna" grazed both of his clover shifts partially, Carter grazed only the second one. He recognized that turning under a full growth of clover was more laborious, as "it is very difficult and tedious to plough, chokes the ploughs, and makes bad and slow work..." but Carter held to the belief that for at least one year, all of the clover must be returned to the soil to keep up fertility. Carter commented that he would "prefer to encounter the trouble of turning in the clover to robbing the land of it."⁵⁰ As well, while slaves may have found difficulty in ploughing the fallow, Carter did point out that the heavy grazing of the other clover shift made their work easier when ploughing for corn in the winter.⁵¹

By 1842, then, it appeared that Carter had resolved the various problems plaguing his lands. He had settled on a

47 Hill Carter, "Rotation of Crops," *FR* 10, 3 (March 1842), 114.

48 See, for example, Rivanna, "Remarks On Different Schemes Of Rotations," *FR* 8, 2 (February, 1840): 121-122; C. Braxton, "The Five-Shift Rotation," *FR* 8, 2 (February, 1840):122-124; and R. "Remarks On Mr. Carter's Proposed Change Of Rotation. Insects and Weeds," *FR* 8, 2 (February, 1840): 111-112.

49 Carter stated that if his lands had been "light and rolling" he would have preferred the other rotation, as he felt it important that the land should remain in clover more than a year for amelioration. He believed that with such land, the fallow work would necessarily be less laborious, as it would never get very hard, regardless of the dry seasons.

50 Carter, "Rotation Of Crops," p.115.

51 *Ibid*, p.115.

new rotation, and from his writings in the *Farmers' Register*, it seemed that work and life at Shirley had moved towards a new stability. Carter's slaves, however, would have told a very different story. Their master's embrace of the five-shift system had produced no major overhauls in their work routines, and they continued to cultivate the same crops under this rotation as they did previously. But in the late 1830s, just as Carter was ironing out the flaws in his rotation, he had also embarked on a crusade of a different nature, one that would transform work on the plantation irrevocably.

Ever since Ruffin's publication of his *Essay On Calcareous Manures* in 1832, there had been a new word in the vocabulary of the Virginia planter: marl. Although most did not understand nor initially embrace Ruffin's doctrines on marl, as the message spread and as testimony to its effects poured in, many leading planters, including Hill Carter, became converts. Carter's first trial with marl came in 1833, when slaves spread some three thousand bushels across fifteen acres.⁵² Four years later, Carter remarked that he "had no idea the marl would have produced so great an effect..." pointing out the superiority of the marled land to that still untouched by the substance.⁵³ Convinced of marl's ability to lower acidity in his soils and open the doorway to unprecedented fertility at Shirley, Carter moved to cover all his arable lands with the product. Beginning in 1838, slaves began to marl one hundred acres each year, depositing two hundred bushels per acre. Within four years they had gone over roughly one half of the plantation. From 1842 to 1845, Carter used lime taken from burnt shells which, in addition to marl, allowed him to complete marling and liming the other half of his nine hundred acres of cultivated land.⁵⁴

Even after going over Shirley's lands once, slaves were far from finished with marling. Carter understood that continued improvements required continued application of calcareous manures. In 1846 he determined to re-lime the entire plantation with stone lime purchased from Northern vessels. Completing this job in 1853, Carter had no doubt that all of his and his slaves' efforts over the last twenty

⁵² See Hill Carter, "Reply to Edmund Ruffin's Queries on Marl and Lime," p.1, SPP, 12:8. Carter had used some lime in 1830, employing five hundred casks brought in from Maine to lime about forty acres, but 1833 marked the beginning of his associations with marl. Carter notes in his reply to Ruffin's queries that he first marled in 1833, and his account books reveal that he spent \$217 on marl that year, but his journals fail to note any such work. 1835 is the first year in which marling work appears in his journals, so perhaps this is when Carter actually used the marl he purchased two years earlier.

⁵³ Carter, "Marling," p.247. Carter added that because he was unaware of marl's power, he did not "plant it thick enough." He believed if he had the land "would make as much corn to the acre as any land is capable of, in this part of the world."

⁵⁴ See Carter, "Reply to Edmund Ruffin's Queries," p.1.

years had proved extremely beneficial. He remarked that
Since marling + liming my crops of corn have doubled
per acre, my crops of wheat have improved very much, +
my clover has surpassed both corn + wheat in
improvement. The crops of wheat are much more certain,
+ less liable to rust than before marling + liming, +
the clover which frequently failed formerly, now never
fails, + makes much heavier lays, + that is the great
advantage of lime, that it ensures the clover which
never fails to increase the grain crops.⁵⁵

Not surprisingly, liming remained a vital part of Carter's operations for the rest of the decade. Only the outbreak of hostilities in the spring of 1861 put an end to Carter's relentless pursuit of liming and marling.

While Carter may have looked with great favor upon the benefits lime and marl had for his lands, his slaves viewed the situation in a very different light. They saw the work as painstakingly laborious, only adding to the great demands Carter already made on them. Once Carter commenced marling regularly in 1838, his slaves loaded, carted, and spread anywhere from fifteen to twenty thousand bushels of marl or lime across Shirley's lands annually. Although in re-liming with the Northern stone lime slaves only scattered around six thousand bushels each year,⁵⁶ the work still was very demanding.

Though pleased with the effects of marling, Carter generally found the actual work itself no more agreeable than did his slaves. He considered it a "very tedious thing," and he struggled to find the best method to carry out his extensive marling. He discovered that the principle difficulties with marling revolved around several issues, foremost of which was slaves' antipathy to the work. Carter remarked that "It is the most difficult thing to scatter marl regularly in the world...," stating that once slaves had hauled the marl out to the field and were ready to begin spreading it, "then comes the tug of war."⁵⁷ Carter held that his slaves did not perform the work well, and added to their poor execution, he pointed out that it was difficult to gauge how effectively they had scattered the substance.⁵⁸

⁵⁵ Ibid, p.1

⁵⁶ Carter noted in his reply to Ruffin that from 1838 to 1842 he marled annually one hundred acres at the rate of two hundred bushels per acre. From 1842 to 1845 the ratio was one hundred bushels slacked lime or two hundred bushels marl per acre on roughly one hundred and fifty acres annually. When using the Northern lime, the ratio dropped to about thirty to thirty-five bushels per acre.

⁵⁷ See Carter's "Remarks on Marling," SPJ, 1839, pps. 2-3, SPP, 87:2. On the tedious nature of the work, see Carter's journal for October 29, 1839, SPP, 87:2.

⁵⁸ Carter found that his "hands will not scatter so large a pile regularly." Depending on the condition of the land, determining how well slaves had scattered marl was difficult at best. He said that "If the land is run together with rains you can tell whether it is well scattered, but if it is fresh ploughed, + no rain to run it together, it is almost impossible to tell how it is scattered, + in

The only solution to this was careful supervision, or if needed, a resort to the lash. Carter commented that for the work to be done properly "it requires that they should be closely watched or they will not scatter it well, in fact some of them will require whipping before they will do it well."⁵⁹

Carter's comments here are revealing for several important reasons. Primarily, they illustrate the central conflict between master and slave, the one that lay at the heart of their relationship: the "tug of war," or the struggle over control of the slave's labor. Slaves had always found ways to resist their master's encroachments over their labor and person, whether it was slowing down the pace of work, breaking equipment, feigning sickness, stealing, or running away. In this instance, slaves' refusal to meet Carter's demands in work vital to his operations was a significant form of resistance, a clear challenge to his desired authority. Moreover, throughout Carter's journals there is virtually no mention of punishing slaves; in fact, he refers to it only once when he sold some slaves (in family units) for stealing a neighbor's hogs.⁶⁰ This is not to say that punishments were not inflicted, and it would be incredibly naïve to assume so. Certainly slaves who skipped out on work, stole, or ran away would have faced either Carter or the overseer upon their detection or apprehension, but for whatever reason, Carter failed to record meting out punishments. What is critical, however, is that slaves must have regarded marling as something particularly laborious and disliked it so intensely that it moved them to resist, even at the cost of facing the lash. Similarly, Carter must have encountered resistance to marling frequently enough to warrant specific comments about whipping slaves.

Getting slaves to scatter marl "regularly" was just one of the problems Carter encountered when it came to working with the substance. A related concern was making sure slaves carried out the work efficiently. The large quantities of marl Carter used ensured that the work was very time consuming. And as there were always other jobs of equal importance that also revolved around a set schedule, there could be little margin for slow or inefficient work when marling.⁶¹

fact, it is impossible to do it well, + you had better wait for a rain to run it together." Waiting for rains clearly was not always an option if Carter expected to meet the seasonal demands of his system. For these comments see Carter's "Remarks on Marling," pp. 1-2.

⁵⁹ Ibid, p.3. Carter had said earlier on the same page that the "negroes will not do it well, without the closest attention."

⁶⁰ See SPJ, April 15, 1841, SPP, 87:2.

⁶¹ Carter complained frequently of the problems marling produced for keeping on schedule with other plantation duties. In 1839, for example, Carter stated that his slaves had not gathered "near enough" fodder, "+ they had cut up very little

In Carter's initial trials with marl, after ox carts had hauled the marl out to the fields, slaves would unload it and deposit it in ten bushel piles on spots marked by sticks, whereupon they would then scatter it across Shirley's beds. After some time with this method, however, Carter found his slaves were not depositing the bushels in sufficient increments and the process was very slow. To speed up the work, Carter devised a new system. When the carts hauled out the marl (as much as they could carry), he now began to place three or four hands near the cart ready to receive what were half bushel measurements filled by the cart driver. The hands would then carry these measured amounts directly to the marks or sticks. Simultaneously, the driver would fill more half-bushel measures to have ready for the hands after they dumped what he had just given them. This kept both "well employed," and Carter remarked that

a smart man in the cart can keep 3 or 4 persons on the ground employed by having 4 or 5 bushels, so as always to be filling one while the hands are carrying off the others, and in this way no time is lost, + you need not measure in the loads.

Carter cautioned that it was imperative always to have some hands taking off the marl from the ground "as fast as the driver fills the measures, for he must not get out of the cart to carry the marl himself; if he does, he loses all the time, + it will be a slow business..."⁶²

Extensive marling, then, required close supervision and the power of numerous hands, well organized, for the work to be both productive and efficient. As such, it was ideally suited to gang labor. Carter usually employed all hands in the work. The only real division in labor was between the men who functioned as drivers and the bulk of Carter's hands who scattered the marl. Essentially, almost all hands performed the same job, and all felt the close supervision of Carter or the overseer, who monitored the work closely to ensure slaves executed it quickly but accurately.

Like the introduction of clover, marling added a new dimension of intensity to slave work. And also like clover, it created several new jobs on the plantation. Before slaves could even begin to spread marl or lime, they first had to unload the thousands of bushels brought in by the James, the burdens of which fell to slave men. When Carter began burning shells and rock marl to augment his supply of imported marl, slave men had to cut wood and haul poles to

corn + just begun to plough corn land for wheat...The marling I suppose kept them back..." See SPJ, October, 1839, SPP, 87:2. Similarly, in April 1845, Carter noted that planting corn was moving slowly as marling "175 acres has kept us very much back." See SPJ, April 29, 1845, SPP, 97:2.

⁶² For these comments, see Ibid, p.1.

set up a kiln, which, after fired, would reduce the shells to what Carter called slacked lime.⁶³ Women also saw their jobs on the plantation expand. Carter employed women to beat out lump marl into a finer form before scattering.⁶⁴ In 1836, Carter tried to procure some marl from his own estate, directing women to uncover a type of marl along Shirley's river bank known as green sand marl. This marl, much harder and more difficult to remove from the earth than typical marl, Carter used as an experiment on his corn lands.⁶⁵

Carter turned to slacked lime produced in the North when he began to re-lime his plantation in 1846. To better handle the volume of lime coming in from the river, Carter had his carpenters construct a wharf. When vessels arrived, a couple hands worked in the hole of the ship bringing the lime out to deck, where three or four men used wheelbarrows to roll the barrels of lime to the plantation.⁶⁶ While men performed these heavy labors of unloading the lime, women also had specific jobs in liming which were no less demanding. With the help of boys, they carried out one of the more important tasks associated with the work. In late February and early March, women and boys made pats, or stick markers, which they would place around the fields marking off the spots where the lime was to be deposited. Establishing the proper increments in the field accurately was essential, and it seems likely that the work here was monitored closely.

In contrast to Carter's trials with marl in the late 1830s, when liming he seems to have divided the labor more along lines of gender and age. Because he chose to lime in the spring on corn or oat lands, men were engaged in ploughing and dragging these lands, laying off corn rows, and sowing oats, clover seed, and plaster. Accordingly, in addition to pattering the land, women and boys bore the burdens of scattering the lime before the ploughs. For women, performing some of the least desirable chores on the plantation continued to be their lot. For boys, this was some of their first true tastes of what life as a field hand offered; they could not have seen their future as very promising.

If the late 1830s and 1840s were characterized by an increased reliance on marling and liming, the 1850s were characterized by Carter's introduction of new technologies on the plantation. Throughout the decade, Carter

63 For work with the lime kilns, see SPJ, 1840-1845, SPP, 87:2.

64 For examples, see SPJ, January-February, 1836, SPP, 86:2; see also, SPJ, February, 1843, SPP, 87:2.

65 See SPJ, February-April, 1836, SPP, 86:2.

66 See SPJ, November 7, 1845, SPP, 87:2, for construction of the wharf; see SPJ, November 20, 1849, SPP, 87:2 and April 18, 1854, SPP, 91:1 for work unloading the lime.

incorporated many new instruments into work at Shirley. He used Pennock drills for sowing wheat, reapers, including Hussey and McCormack, for cutting the wheat, Pitts machines for threshing the grain, horse shellers for shucking corn, and rollers for breaking up clods in his fallow lands.⁶⁷ Slaves had to learn the new skills required of these implements, and many times, adjusting to these devices proved difficult. In July 1854, for example, when threshing began with a new Pitts machine, Carter noted the problems he and his slaves faced in getting the machine to run properly.

He remarked that "it gave us [a] great deal of trouble, bands slipping, horse wheel out of fix, + many things going wrong owing to it not being put up properly + our not understanding it." Three years later, when slaves employed two reapers to cut the wheat, Carter complained that the "they are constantly getting out of order," and that the "reapers break so often, that we put them aside, + started 15 cradlers to cutting the wheat." Thus, even with the advent of new technologies, the problems Carter and his slaves encountered in getting them to function effectively were so great that many times the new instruments failed to save slaves any labor, and they found themselves resorting to older methods or implements. 68

When new devices worked, they did lessen slaves' workload, but at the same time, they had the effect of speeding up the pace of work. Carter's embrace of the five-shift system and the addition of new lands to his plantation meant that the nine hundred acres slaves cultivated in the 1840s and 1850s were more than double what they had worked under the four shift rotation. Moreover, not only did slaves have more land to work, but the size of the crops they planted and harvested had grown substantially due to the expansion in cultivated acres and the effects of marling and liming.⁶⁹ With the use of new implements like wheat drills and reapers, slaves could get over this land much more quickly. Compared to the harvest under the four-shift, where slaves usually cut two hundred acres of wheat in anywhere from fifteen to twenty days, slaves wielding reapers now harvested wheat from almost three hundred acres

67 See Carter's journals, 1849-1860, SPP, 87:2 and 91:1 for information on these instruments. Carter used rollers on the fallow to roll and drag it repeatedly to break up the land and removed clods. For one of many examples, see SPJ, September 27, 1848, where Carter says "The fallow is so hard + cloddy that we shall have to roll it all this season."

68 For Carter's comments on the Pitts machine, see SPJ, July 21, 1854 SPP, 91:1; for the reapers, see SPJ, June 24-25, 1857, SPP, 91:1. In both cases, slaves went back to older machines or devices, using an old threshing machine in 1854 and resorting to cradles in 1857. See also June 18, 1852, where Carter says that the reapers "get out of order so often we lose a great deal of time."

69 See Carter, "Replies to Ruffin's Queries," p.2-4, for information on the size of Carter's lands and the increase in crop yields. Carter stated that under the five-shift rotation, he had three fields of one hundred and ninety acres and two fields of one hundred and sixty.

in an average of eleven or twelve days. Clearly, the pace of work rose significantly with the introduction of reapers.⁷⁰

Carter did not fail to notice his slaves' increased productivity. Beginning in 1851, he started to give slaves regular holidays after they completed the harvest. Until that time, Carter had restricted holidays essentially to time off following Whitsuntide, Easter, and Christmas, and slaves had enjoyed few breaks after completing the harvest.

But with slaves now working both harder and faster cutting the wheat (in addition to the sixty-acre tracts of oats), as well as ploughing and weeding a larger shift of corn in the days surrounding the harvest,⁷¹ Carter rewarded slaves with a day off after the harvest. The holiday varied, falling after slaves completed cutting either the wheat or the oats, but regardless, it became standard during the 1850s.⁷² Slaves used this time not only to rest from the strenuous labors of the harvest, but also to work their gardens and care for their livestock. It was time they could count as their own, and it left them free to pursue their own interests on the plantation. Technologies, slaves learned, could produce some benefits in their daily lives.

Cultivation of more acres and subsequent increases in crop yields reflected Carter's growing move towards concentration on staple production. The plantation became less diversified in the 1840s and 1850s. Cotton had long since been abandoned, pea and pumpkin production declined, and there was no work in the swamp; slaves directed most of their energies towards producing bountiful crops of wheat and corn through working more lands and covering them in marl and lime. Accordingly, slaves found themselves laboring in less diverse ways, performing the same jobs for many days on end. Whereas Carter's journals in the 1820s and 1830s often detailed a range of activities slaves undertook each day, his entries for the next two decades reveal a marked decline in the diversity of tasks. Many times, he notes simply that slaves were "employed as before."

Slaves' seasonal routines reflected this growing lack of diversity. Winter work consisted mainly of ploughing corn land, cutting corn stalks on land for oats, hauling out manures on corn land, and completing the hauling up and

70 The averages are based on Carter's journals for 1822-1833 and in the 1850s, when slaves first started to use reapers. Carter, himself, saw clearly the speed with which his slaves cut the wheat, for he began to note the number of days it took to complete the harvest, something he never did before the 1850s.

71 Slaves worked shifts of corn under the five-shift of either one hundred sixty or one hundred ninety acres. See Carter's "Reply to Ruffin's Queries," p. 3-4.

72 See SPJ, June-July, 1851-1860, SPP, 87:2 and 91:1. Sometimes these holidays fell on a Saturday, which allowed slaves two days off from work. Obviously, it was easier for Carter to give holidays when he had witnessed such a great increase in his crop yields and profits.

shelling out of the previous year's corn crop. Spring saw slaves ploughing oat lands, sowing clover seed, plaster, and oats, scattering lime and marl, delivering corn, planting corn, and beginning to weed it. In the summer, slaves cut the wheat and oats, continued to weed corn, and began the first stages of work on the fallow. In the fall, slaves worked mostly to fallow lands, pull the vast amounts of fodder Carter required for his livestock and manure, cut and haul up the corn crop, and sow wheat. Work, regardless of the season, revolved chiefly around the dual economies of corn and wheat.

This focus on staple production meant that there was less opportunity to work in small, relatively unsupervised gangs. Instead, slaves often worked in large gangs executing one task, like cutting fodder, cutting and hauling up corn, beating and shelling out corn for sale, or hauling and spreading marl, lime, and manures out on corn lands. Distinctions still existed between the teams and hands, but they declined to a degree, as those men who directed the ploughs, drags, and harrows more frequently engaged in the above tasks with all the hands. On September 15, 1847, for example, Carter noted that he began to cut the tops off his corn plants for fodder "with all [the] hands, ploughmen + all."⁷³ For Carter, such organization benefited him in that it allowed for closer supervision. For slaves, however, the result was less freedom in their daily lives, more monotony in their work routines, and fewer opportunities to slow down work or avoid the careful supervision of Carter or the overseer.

Women continued to perform more of the most unskilled and unwanted jobs on the plantation. They spent much of the winter cutting corn stalks from land that would go in oats, and during much of the spring they cockled wheat. When Carter manured his lands, it was mainly women who spread it while teams of men hauled it and other men ploughed behind them. Women minded birds off corn, they cleaned Carter's fields of St. Johnsworth, and they leveled the hog lot after the animals rooted it up. To an extent, though, when working with all hands in larger jobs like cutting corn and gathering fodder, women began to notice less differences in the work they and men did. Still, for women, as had been the case throughout Carter's mastership, weather continued to be one of their best allies. As men struggled to perform winter jobs like ploughing for corn and cutting wood, Carter often kept women inside when the weather turned too cold, giving them a chance to control how they spent their days. Such was the case, for example, in December 1845, when Carter observed that the "women [were] in [their] houses

⁷³ See SPJ, September 15, 1847, SPP, 87:2.

working for themselves."⁷⁴

Another significant result of Carter's concentration on staple production was that slave boys became more ingrained into work traditionally regarded as the domain of adults. Carter usually employed his boys in activities with slave women. Together, they cut corn stalks before teams ploughed land for oats, planted corn, hauled straw on pasture fields, minded birds off corn, cleared fields of cheat and St. Johnsworth, spread manures and lime on lands, and even used horse shellers to prepare sale corn. With men and women, boys worked to clear lands at Hardens, which one of Carter's sons began to cultivate in 1846.⁷⁵ With men, boys dug up flood gates and cut wood for wagon teams to haul.

The increased roles boys played reflected not only Carter's decision to incorporate them more into the rudiments of adult work, but also the shifting demographics of the slave community. Carter came to rely on both boys and girls more in part due to a cholera epidemic that ravaged Shirley in 1849. The epidemic struck down thirty of Carter slaves in a little under a month. Of those who perished, nine were men age eighteen to thirty-nine; two other men were in their fifties and two were boys age ten; five women age fourteen to thirty-nine also died.⁷⁶ The loss of these men and women, some of Carter's prime field hands, increased the responsibilities of other slaves, most particularly children.

This need for hands, coupled with the increasing demands of harvesting larger tracts of land and heavier crops, combined to draw children more into the work of the harvest⁷⁷. Just two years after the cholera epidemic, Carter began to mention children regularly with the harvest. Throughout the decade his entries typically noted that those harvesting consisted of "little, + big; [and] many were children." In 1853, he observed that he had forty-five hands in all, "including children + broken down women."⁷⁸ Thus, in addition to children, Carter began to use older women in the harvest, just as he had used them for picking out cotton in the 1820s.

74 See SPJ, December 6, 1845, SPP, 87:2. This is just one of many examples throughout Carter's journals.

75 See SPJ, March 11, 1846, SPP, 87:2. These comments on boys' activities are taken from Carter's journals, 1835-1860. Carter outfitted his eldest son, Lewis Warrington, at Hardens, and he used his slaves to do much of the work with corn and liming, expanding duties for all slaves, boys being no exception.

76 See SPJ, June-July, 1849, SPP, 87:2.

77 Carter purchased three new hands (Frank, Jesse, and Billy) during 1850-1851, and he hired at least one slave, Amos, in 1850, to help compensate for his loss in force in 1849. See AAB, 1850-51, SPP, 85:1, and SPJ, March, 18, 1850, SPP, 87:2, respectively. Children's roles certainly would have grown in the face of the cholera epidemic, but the increased pace of the harvest also meant that Carter required more hands to pick up, shock, and wind row the wheat, and children could do these jobs sufficiently.

78 For these quotes, see SPJ, June 19, 1856 and June 10, 1853, SPP, 91:1.

Hill Carter's expansion of his lands, his turn to marl and technologies, and his increased concentration on corn and wheat had brought important changes to his slaves. Yet, like they had done in the first twenty years of Carter's mastership, slaves continued to find ways both to resist their master and to carve out niches in which they could find greater control over their lives. While his journals fail to note any slaves running away during this period, Carter did document several examples of slave theft. In 1837, after returning from his annual respite in Fauquier, Carter returned home to find that his miller, Phill, had stolen forty or more barrels of corn, robbed a barn at nearby Curles Neck, and fled.⁷⁹ In April of 1841, two slaves stole hogs from a neighbor, an act which led Carter to sell them and their families to Richmond.⁸⁰ These men, Billy Tanner and Billy Jackson, had challenged the system and lost. The price they paid was separation from their friends and relatives at Shirley's slave community and sale to an unknown land. Their only solace was that their wives and children would make the trip with them.

While theft was important, it was not a sustained way to mitigate the dehumanizing conditions slavery imposed. Cultivating gardens and raising livestock, however, slaves saw as avenues to developing their own identities, to creating a life somewhat removed from their status as bondspeople. Gardens, hogs, and chickens provided their families with extra foodstuffs, allowed slaves to earn money, and gave them and their families a great sense of self worth and accomplishment independent of Carter. Not surprisingly, slaves came to regard their gardens as customary rights, not privileges, and they defended them fiercely.⁸¹ In April 1836, for example, Carter noted that he gave his slaves a holiday on Wednesday "to work [their] patches because it had rained on Monday."⁸² That Sunday had been Easter, and as slaves customarily had the next day off, they had planned to use it to cultivate their gardens. That Carter gave them another day off indicates how clearly he recognized the importance gardens had for his slaves. More significantly, it illustrates how adamantly slaves defended such opportunities to work for themselves and the limited "rights" they enjoyed in the face of enslavement.

In 1854, Carter recorded another similar example. Early that June he observed that he and his slaves were "so backward with our corn that we could not give [the] holyday"

79 See October 5, 1837, SPP, 86:2. Carter noted that Phill had engaged in this with the assistance of some of the slaves at Curles Neck.

80 See SPJ, April 15, 1841, SPP, 87:2.

81 See Eugene D. Genovese, *Roll, Jordan, Roll: The World The Slaves Made*, (New York, 1972), p.538-539. For evidence of slaves raising hogs, see Carter's corn accounts made in his journals for the years 1836-1838, SPP, 87:2.

82 See SPJ, April 6, 1836, SPP, 87:2.

for the Monday after Whitsuntide. Slaves undoubtedly voiced their complaints, for that summer after the harvest Carter gave them two days off, something unprecedented on the plantation.⁸³ While to Carter these days off help quell resentment and encourage productivity, for slaves they were tiny victories in the day to day struggle to overcome the difficulties of a life enslaved. Agricultural reform had affected slaves adversely in many ways, but it could not crush their will to make some semblance of a life of their own.

⁸³ See SPJ, June 4-30, 1854, SPP, 91:1.

The End of Reform: A Measure of its Impact

In February of 1860, Carter directed some of his slave men, and all of the women, to begin "leveling [the] ditch banks to move fences upon to change the fields into four shifts."1 Some twenty years after he had abandoned the rotation, and some forty-two years after he had first adopted it, Carter had come full circle, once again placing his lands under the four-shift rotation. As the decade began, Carter, now sixty-four years old, continued to make plans for improvements. The opening guns at Fort Sumter a year later, however, spelled an effective end to continued agricultural reform in the Old South. As the nation found itself engulfed in war, many Southern lands, particularly Virginia's, became marked more by their stains of bloodshed than by marl or clover or other signs of improved farming. Shirley was no exception, as its location placed it directly in the pathway of Federal drives on Richmond. Twice during the war Shirley witnessed the Union army roll up the James.

For Hill Carter, the war brought with it serious disruptions of his farming operations. For Carter's slaves, the war afforded them unprecedented opportunities, the likes of which none of them had ever experienced.

McClellan's Peninsula campaign brought the horrors of war into full view for all at Shirley. Following the battles of the Seven Days, the plantation served as a hospital to thousands of wounded Federal soldiers. While the care Carter and his family provided to McClellan's men earned the family a safeguard, Federals looted the plantation, taking livestock, destroying crops, and stealing bacon from Carter's smokehouse. Carter requested from McClellan that his slaves "not be prevented from carrying on their usual occupations." 2 Slaves, however, had little interest in performing their work, as they recognized the opportunity the advance of the Union armies offered. When Federals first came to Shirley on June 30th, 1862, Carter noted that his slaves were "running helter skelter owing to the Yankee army occupying the plantation."3 Many slaves fled to Union lines, including at least fifteen men and boys. 4

1 SPJ, February 20, 1860, SPP, 91:1.

2 See Hill Carter, "Letter to G.B. McClellan, July 12, 1862," SPP, 17,8 for this and comments on the destruction Federal armies caused. See also Carter's journals, June-July, 1862, SPP, 91:1. It is interesting to note that some of Carter's slaves worked on the fortifications at Jamestown preparing for the defense of the Peninsula. See SPJ, January 11, 1862, and April 1, 1862, SPP, 91:1.

3 SPJ, June 30, 1862, SPP, 91:1.

4 SPJ, July 14, 1862, SPP, 91:1.

A year later, Federal gunboats steamed up the James, and slaves again took the opportunity to escape Shirley. Carter recorded on July 14, 1863, that "10 of the best negro men ran off to the gunboats this morning." Carter noted this loss of the blacksmith, carpenter, and eight others "breaks up the operations on the farm."⁵ Five more men, William Bates, Fill, William Buck, and two boys, Jack and Harry, ran away two days later, leaving Carter to remark that "nearly all the men have gone off," and "since last year this makes about 30 men + boys, + one woman + her two children in all 33 negroes have gone" to the Federals.⁶ When the oat harvest began on July 20th, after the gunboats had left, Carter had just twenty-five hands in the fields. The overseer found himself working as a cradler alongside of those he managed.⁷

Less than a year later, the last major drive on Richmond began. For those slaves who had failed to join the Federals earlier, the lessons other members of Shirley's slave community provided in 1862 and 1863 were not lost on them. When Benjamin Butler's Army of the James started landing at Bermuda Hundred directly across from Shirley on May 5, 1864, slaves again found their route to freedom. This time, men, women, and their children took flight. Butler ordered Carter to his headquarters and placed him in the guardhouse for two days.⁸ By the tenth of June, Carter noted that thirty-nine slaves had made the journey to Butler's lines, making a total of seventy-two since 1862; eight more would leave within the week. On June 20th, when Carter began the harvest, he had four cradlers and ten "broken down men and women," what he called "a poor business."⁹

By the summer of 1864, then, slavery at Shirley was on its deathbed. The presence of thousands of black soldiers in the Army of the James, as well as the mass exodus Carter had witnessed from "his people," must have left him little doubts as to the future of the institution. For those slaves who did not manage (or did not want) to escape to Union armies, they found themselves in a unique position. The combination of Shirley lying within Federal lines and the fact that Carter had only a handful of laborers on the plantation resulted in those few who remained on the property earning money for their work in that summer's harvest. In a letter to Butler in which Carter asked permission to ship his crop of wheat (only two thousand bushels) to the North, Carter remarked that he would give

5 SPJ, July 14, 1863, SPP, 91:1.

6 SPJ, July 16, 1863, SPP, 91:1.

7 See SPJ, July 20, 1863, SPP, 91:1

8 See SPJ, May 19, 1864, SPP, 91:1; for the slaves and families fleeing here, see May 9-15.

9 See SPJ, June 13-20, SPP, 91:1.

"a share of the crops to the few laborers, some 6, or 7, who still remain with me + the sale of the wheat is necessary for them as well as my self."¹⁰ Carter's annual account books reveal that he paid his slaves \$435.00 as their share.¹¹ The war, whether in offering freedom or the opportunity to labor for profit, had changed slaves' life dramatically.

In 1866, Hill Carter, now seventy years old, turned effective control of Shirley over to his second eldest son, Robert Randolph. The man who had become one of Virginia's most accomplished agriculturalists had ended his farming days. Carter continued to maintain an interest in his sons' farming, but he greeted the changes the war brought less than enthusiastically. Robert, himself, "fear[ed] the business of agriculture in Virginia will be a dull one for a year or so during the change in the system of labor," and he hesitated to return from Rio de Janeiro, and later England, to undertake farming at Shirley.¹² His father trusted no one else with Shirley, commenting that "I will be the last Carter to own Shirley if Robert does not take it." Like his son, Carter wondered whether it would be wise for Robert to leave business opportunities in England for "uncertain one[s] here, in farming with our present precarious, + lazy labourers..."¹³ Hill argued that his son "might be ruined by it, with our present expensive, unproductive, [and] lazy labour, in which there is no dependence at all." For Hill Carter, a central part of his relations with his slaves—now ostensibly freedmen—had been his role as provider and their inherent dependency on him. The war had removed that, and with it, a key element of Carter's life. Farming would continue at Shirley, and many of the faces running the ploughs and spreading manures in the postbellum years would be familiar ones, but the golden days of reform which had so shaped life on the plantation had ended abruptly.

Hill Carter died ten years after Appomattox put an end to the world he had labored so hard to mold along the James.

During the fifty years of his mastership at Shirley, however, Carter's pursuits of agricultural reform had transformed life on the plantation in great measures. No one felt this more directly than the men, women, and children who carried out Carter's improvements. Just two years after Carter came to Shirley slaves began to witness many important changes in the way they worked and lived. One of the first impacts reform had was the sale of members of Shirley's slave community. At the same time, slaves also

10 Hill Carter, "Letter to Benjamin Butler, September 25, 1864," SPP, 18:3.

11 See AAB, 1864, SPP, 85:1.

12 For Robert's comments, see his "Letter from Rio de Janeiro to Hill Carter, September 15, 1865," SPP, 18:7. Robert spent some time in Rio and England contemplating his prospects for both work and a pardon.

13 See Hill Carter, Letters of November 7 and November 8, 1865, SPP, 18:7.

saw a marked increase in the intensity of their work routines. Many of their new responsibilities, such as working the clover fallow or cultivating the swamp, added a degree of intensity to labor previously unseen on the plantation. As well, the improved techniques of cultivation Carter employed, coupled with the introduction of new technologies, heightened the complexity of work. With more detailed and complicated tasks, slaves felt greater pressures placed on the accuracy of their work.

The varied requirements of Carter's system meant that slaves now worked more regularly throughout the seasons. The amount of time slaves counted as their own declined dramatically. They spent more time in the fields and less in the quarters with their families. As well, the diversity of requirements often effected an increase in the pace of work, as slaves struggled to carry out an array of jobs efficiently and in accordance with a schedule set both by their master and the seasons. Compounding all of this, reform was a learning process for all on the plantation, and problems which developed with improvements only created additional burdens for slaves. In the face of such demands, slaves felt the control they exerted over their daily lives diminish greatly.

For slave men, reform meant harder work but also more opportunities for advancement. All men saw the intensity of their jobs increase, but at the same time, many rose to specialized positions like seedsman, ploughmen, shearers, and drivers, escaping frequently the more exhausting work typical for regular field hands. As a result, they found at times that they enjoyed less supervision in their daily lives. Women also witnessed great changes in the work they performed, but they saw few benefits in the process. They continued to be assigned most of the least desirable jobs on the plantation, and they usually worked together in one large gang, as opposed to the smaller gangs which often characterized the work men undertook. Women remained the quintessential field hands, performing unskilled work with simple implements like hoes and spades, and experiencing less freedom in their daily lives than their male counterparts. Finally, children, particularly boys, saw their duties expand greatly. Boys and girls began to work in more adult tasks, like the harvest, gathering fodder, planting corn, and scattering fertilizers. In the process, they spent more time engaged in heavier work in the fields and less in the quarters or around the house performing light chores.

Whether cultivating corn or cotton in the swamp land, spreading manures and ploughing the fallow, sowing plaster or scattering lime and marl, and harvesting wheat and oats, slaves felt the impact of their master's commitment to

agricultural reform permeate the core of their work and lives. While the tolls reforms exacted over their bodies and minds were great, slaves refused to capitulate completely to Carter. Instead, they cultivated gardens, raised hogs, slowed down the pace of work, and even ran away, signifying ultimately that regardless of how much improvements transformed their lives, the struggle between master and slave remained fundamental to life at Shirley.

Bibliography

Primary Sources

Barnard, Henry. "The South Atlantic States in 1833, As Seen By A New Englander." Bernard C. Steiner, ed. *Maryland Historical Magazine* 13,4 (December, 1918): 317-320.

Braxton, Carter. "The Five-Shift Rotation." *Farmers' Register* 8,2 (February, 1840):122-124.

Carter, Hill. "Account of the Embankment and Cultivation of the Shirley Swamp." *Farmers' Register* 1,3 (August, 1833):129-131.

_____. "Address to the Agricultural Society of Lower Virginia, July, 1827." Shirley Plantation Papers, Container 80, Folder 1. Rockefeller Library, Colonial Williamsburg.

_____. "An Experiment in Oats." *Farmers' Register* 1,5 (October, 1833):275.

_____. Annual Account Books, 1816-1866. Shirley Plantation Papers, Container 85, Folder 1. Rockefeller Library, Colonial Williamsburg.

_____. "Blue Grass." *Farmers' Register* 1,10 (March, 1834):580.

_____. Cash Account Books, 1816-1866. Shirley Plantation Papers. Rockefeller Library, Colonial Williamsburg.

_____. "Gypsum." *Farmers' Register* 5,1 (May, 1837):36-37.

_____. "Letter to Benjamin Butler, September 25, 1864." Shirley Plantation Papers, Container 18, Folder 3. Rockefeller Library, Colonial Williamsburg.

_____. "Letter to G.B. McClellan, July 12, 1862." Shirley Plantation Papers, Container 17, Folder 8. Rockefeller Library, Colonial Williamsburg.

- _____. "Letters of November 7-8, 1865." Shirley Plantation Papers, Container 18, Folder 7. Rockefeller Library, Colonial Williamsburg.
- _____. "Marling: The Four-Shift Rotation." *Farmers' Register* 5,4 (August, 1837):247-248.
- _____. "On the Degenerating, and Necessary Changes of Seed Wheat." *Farmers' Register* 9,12 (December, 1841):705-706.
- _____. "On the Management of Negroes: Addressed to the Farmers and Overseers of Virginia." *Farmers' Register* 1,9 (February, 1834):564-565.
- _____. "On the Pamunky Mode of Making Corn." *Farmers' Register* 2,11 (April, 1835):709-710.
- _____. "Pamunky Mode of Making Corn: The simplest, and best on flat land, and on a large scale, because the most labor-saving." *Farmers' Register* 1,9 (February, 1834):560-562.
- _____. "Remarks on the Comparative Advantages of the Three-Shift and Four-Shift Rotations." *Farmers' Register* 2,11 (April, 1835):657-659.
- _____. "Reply to Edmund Ruffin's Queries on Marl and Lime." Shirley Plantation Papers, Container 12, Folder 8. Rockefeller Library, Colonial Williamsburg.
- _____. "Rotation of Crops." *Farmers' Register* 10,3 (March, 1842):114-115.
- _____. "Sheep Shearing." *Farmers' Register* 5,1 (May, 1837):35-36.
- _____. Shirley Plantation Journals, 1816-1866. Shirley Plantation Papers, Rockefeller Library, Colonial Williamsburg.
- _____. "The Five-Field Rotation and Grazing." *Farmers' Register* 8,3 (March, 1840):183-184.
- _____. "The Four Shift System: The best rotation for James River lands, or any good wheat and corn soils." *Farmers' Register* 1,3 (August, 1833):132-135.
- _____. "The Increase of Insects Caused by the Non-Grazing System." *Farmers' Register* 7,12 (December,

1839):710-711.

_____. "The Progress of Sinking and Loss in the Embanked Marsh of Shirley." *Farmers' Register* 5,1 (May, 1837):40-41.

Carter, Robert. "Letter to his Children, October 14, 1803." Shirley Plantation Papers, Container 1, Folder 13. Rockefeller Library, Colonial Williamsburg.

Harrison, William B. "On the Rotation of Crops, and the Pamunky Plan of Cultivating Corn." *Farmers' Register* 2,8 (January, 1835):464-466.

Rivanna. "Remarks on Different Schemes of Rotations." *Farmers' Register* 8,2 (February, 1840):121-122.

Ruffin, Edmund. "Leaves From a Traveller's Note Book: A Walk Through Shirley Farm, November 25, 1832." *Farmers' Register* 1,2 (July, 1833):105-107.

_____. "Memoranda of Hasty Visits to the Country: Crops and Farming at Shirley, June 16, 1837." *Farmers' Register* 5,3 (July, 1837):184-187.

_____. "Remarks on Mr. Carter's Proposed Change of Rotation. Insects and Weeds." *Farmers' Register* 8,2 (February, 1840):111-112.

Taylor, John. *Arator, Being a Series of Agricultural Essays, Practical and Political: In Sixty-Four Numbers*. 6th edition. Edited by M.E. Bradford. Indianapolis: Liberty Classics, 1977.

Secondary Sources

Berlin, Ira and Philip Morgan, eds. *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas*. Charlottesville: University of Virginia Press, 1993.

_____. *The Slaves' Economy: Independent Production By Slaves in the Americas*. Great Britain: Frank Cass & Co. Ltd., 1991.

Boles, John. *Black Southerners, 1619-1869*. Lexington, Ky.: The University of Kentucky Press, 1983.

- Bruce, Kathleen. "Virginia Agricultural Decline to 1860: A Fallacy." *Agricultural History* 6 (January, 1932):3-13.
- Carr, Lois G. and Lorena Walsh. "Economic Diversification and Labor Organization in the Chesapeake, 1650-1820." In Stephen Innes, ed. *Work and Labor in Early America* (Chapel Hill: University of North Carolina Press, 1988):144-188.
- Craven, Avery O. *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860*. Urbana: University of Illinois, 1926.
- _____. "The Agricultural Reformers of the Antebellum South." *American Historical Review* 33 (1927-1928):302-314.
- Faust, Drew Gilpin. *James Henry Hammond and the Old South: A Design for Mastery*. Baton Rouge: Louisiana State University Press, 1982.
- Gates, Paul W. *The Farmers' Age, 1815-1860*. New York: Hart, Rinehart, and Winston, 1960.
- Genovese, Eugene D. *The Political Economy of Slavery: Studies in the Economy and Society of the Slave South*. New York: Pantheon Books, 1967.
- _____. *Roll, Jordan, Roll: The World the Slaves Made*. New York: Vintage Books, 1974.
- Gray, Lewis C. *History of Agriculture in the Southern United States to 1860*. Washington: Carnegie Institution of Washington, 1933.
- Heite, Edward F. "Honors to the Brave." *Virginia Cavalcade* 16,4 (Spring, 1967):4-9.
- Irwin, James R. "Exploring the Affinity of Wheat and Slavery in the Virginia Piedmont." *Explorations in Economic History* 25 (1988):295-322.
- Johnson, Michael P. "Work, Culture, and the Slave Community: Slave Occupations in the Cotton Belt in 1860." *Labor History* XXVII (Summer, 1986):325-355.
- Kolchin, Peter. *American Slavery, 1619-1877*. New York: Hill and Wang, 1993.

- Leavitt, Genevieve. "Slaves and Tenant Farmers at Shirley Plantation: Social Relationships and Material Culture." MA Thesis, College of William and Mary, 1981.
- Ley, Jennifer. "The Slaves' Story: Interpreting Nineteenth Century Slave History at Shirley Plantation." MA Thesis, University of Delaware, 1995.
- Lynn, Catherine. "Shirley Plantation: A History." MA Thesis, University of Delaware, 1967.
- Mathew, William M. *Edmund Ruffin and the Crisis of Slavery in the Old South: The Failure of Agricultural Reform*. Athens: University of Georgia Press, 1988.
- McDonnell, Lawrence T. "Money Knows No Master: Market Relations and the American Slave Community." In Windred B. Moore, Jr., Joseph F. Tripp, and Lyon G. Tyler, Jr., eds. *Developing Dixie: Modernization in a Traditional Society*. (Westport, Conn.: Greenwood Press, 1988):31-44.
- Mithcell, Betty. *Edmund Ruffin: A Biography*. Bloomington: Indiana University Press, 1981.
- Morgan, Philip D. "Work and Culture: The Task System and the World of Lowcountry Blacks, 1700-1800." *William and Mary Quarterly* 39 (1982):563-599.
- _____. "Task and Gang Systems: The Organization of Labor on New World Plantations." In Stephen Innes, ed. *Work and Labor in Early America* (Chapel Hill: University of North Carolina Press, 1988):189-220.
- Phillips, Ulrich B. *American Negro Slavery*. Baton Rouge: Louisiana State University Press, 1918.
- _____. *Life and Labor in the Old South*. Boston: Little, Brown, and Company, 1929.
- Reinhart, Theodore. *The Archaeology of Shirley Plantation*. Charlottesville: University of Virginia Press, 1984.
- Rose, Willie Lee. *Slavery and Freedom*. Edited by William Freehling. New York: Oxford University Press, 1982.
- Rubin, Julius. "Limits of Agricultural Progress in the Nineteenth Century South." *Agricultural History* 49 (1975):362-373.

Shammas, Carole. "Black Women's Work and the Evolution of Plantation Society in Virginia." *Labor History* XXVI (1985):5-28.

Swem, Earl Gregg. "An Analysis of Ruffin's *Farmers' Register*, with a Bibliography of Edmund Ruffin." *Bulletin of the Virginia State Library*, 11. Richmond: Davis Bottom, Superintendent.

Turner, Charles W. "Virginia Agricultural Reform, 1815-1860." *Agricultural History* 26 (July, 1952):80-89.

_____. "Virginia Agricultural Societies, 1811-1860." *Agricultural History* 38 (July, 1964):164-177.

Walsh, Lorena. "Plantation Management in the Chesapeake, 1620-1820." *Journal of Economic History* 49 (1986):393-406.

_____. "Slave Life, Slave Society, and Tobacco Production in the Tidewater Chesapeake, 1620-1820." In Ira Berlin and Philip Morgan, eds. *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas* (Charlottesville: University of Virginia Press, 1993):170-199.

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