Sugar Along the Manatee: Major Robert Gamble, Jr. and the Development of Gamble Plantation

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During the Second Seminole War (1835-1842), various proposals were advanced for permanently extinguishing the Seminole threat. Many felt that the most feasible solution to the problem would be to encourage immigration and settlement by white families in East Florida.¹ Advocates of a system of established settlements realized that the citizensoldier would provide the most effective force in suppressing Indian uprisings.

The ardent expansionist Thomas Hart Benton of Missouri supported the concept and introduced a measure in Congress containing these features in 1839. Opponents stymied the bill for several years and it was 1842 before supporters were able to secure the passage of the Armed Occupation Act—the country's first homestead act.² As passed in August 1842, it provided that anyone who settled in certain sections of East Florida could receive 160 acres of land.³

One of the first areas settled was along the Manatee River, where in 1844, Major Robert Gamble, Jr. decided to establish a sugarcane plantation.⁴ His action probably represented a group decision and was certainly the result of a number of considerations.⁵

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Although cotton remained an important cash crop during the antebellum period in Florida, its precipitous decline during the 1840s prompted many planters to look for more profitable staple crops, including tobacco and sugar.⁶ Poor cotton prices, combined with Gamble's previous experience with sugarcane on his father's and uncle's plantations in Middle Florida, no doubt led him to search for lands suitable for the cultivation of this staple.

"No mystical glamour of gold lured the Manatee Settler...[;] it was the...[fertile] soil that lured him — the wonderful agricultural possibilities of the place, the charm and intrigue that lay in its scenic beauty and its ever delightful climate."⁷ Publicized as an agricultural paradise, it was the particular adaptability of this soil to the cultivation of sugarcane that attracted Major Gamble and other Middle Florida planters to the Manatee River.⁸ Apparently their expectations were satisfied. Major Gamble, writing in 1851, emphasized this point stating that: "The cane cultivated in this State... is more perfect than in any other territory of the Union."⁹

Major Gamble's first consideration in the establishment of his plantation was the purchase and continued acquisition of land. As stated above, the Armed Occupation Act provided most planters with 160 acres of free land, and more government land was available in quarter-sections, half-sections, and sections at a cost of \$1.25 to \$1.50 per acre.¹⁰ Land could also be purchased from private individuals at \$2.00 to \$4.00 per acre.¹¹ Between 1846 and 1855 Major Gamble obtained land from both these sources in quarter-section, half-section and section tracts. By 1856, he had acquired approximately 3,500 acres which he secured for about \$10,000.¹²

Besides the land, the workers — that is the slaves — constituted the most important factor in the operation of a sugarcane plantation. Operating with the most primitive equipment it was back-breaking work to raise, cultivate, and harvest the sugarcane. Patience and real skill were involved in the distilling of sugar and molasses from the cane plant. When not working in the cane fields or at the mill, the slaves were busy tending other crops or engaged in the myriad other plantation activities.

We do not know how many slaves Major Gamble brought with him from Middle Florida, but records show that in 1847, he had 70 slaves and by 1855, that number had increased to 151.¹³ Major Gamble probably purchased most or all of these slaves himself. Although fluctuating prices make it difficult to estimate the amount of money that Gamble paid for these slaves, they probably represented an investment of \$100,000 to



The Gamble mansion in the early twentieth century. Today it is restored and open to the public.

150,000. The were clearly the most costly factor in the establishment and operation of his plantation.¹⁴

All planters were faced with the problem of acquiring land and slaves. Some expenditures were also necessary for the equipment used in the transformation of the raw crop into a marketable product. The processing of sugarcane required an unusually large outlay of capital on the planter's part. Among the pieces of equipment included in the average sugar mill were a boiler, steam engine, horizontal mill (cane rollers), and kettles. All of these components had to be assembled and precisely integrated by a master craftsman, and located in specially designed buildings. It is not surprising that this apparatus could cost as much as \$30,000 and more.¹⁵

The process of extracting sugar and molasses from the sugarcane plant may have been developed among the prehistoric tribes in Asia.¹⁶ The procedure was perfected in Latin America during the late sixteenth and early seventeenth centuries, and Florida sugar planters, as well as those in the rest of the South, used similar techniques in refining their sugar.¹⁷ The only equipment advancement during the antebellum period was the use of a vacuum pan. An expensive piece of machinery, it produced better quality sugar which sold at a higher price.¹⁸ Its use, as well as the size and range of his equipment, indicates that Major Gamble was among the most progressive sugar planters in the antebellum South. Writing in 1868, he described his sugar works:

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I constructed two buildings.... No. 1 180 feet long and 40 feet wide... of brick: 40 feet of the length 22 feet high in the walls, ¹⁹ 40 do 17 do, 40 do 12 do and 60 do 8 do. The drainage room being [*sic*] 60 feet long and having a brick cistern on each side the full length of the house and an additional building having a cooling room 40 by 30 [feet] and a draining room 60 x 60 [feet] made of brick and covered with iron. I had two steam engines, one of fifty horse power to drive the cane mill which was a very fine and large one, as you may conceive, when I tell you that the top roller weighed 5 tons; everything on the premises was in unison. There were two ranges of boilers for evaporating canejuice [*sic*] each of 5 kettles, the largest in each range 500 gallons and at the head of each range a steam pan for granulating; a second engine of 8 horse power ran my grist and saw mill and supplied water to boilers which supplied the two steam pans with steam and ran a draining machine (centrifugal) during the rolling season.²⁰

The cultivation of sugarcane is generally considered to have originated among the prehistoric tribes of New Guinea. During subsequent centuries, the basic techniques were assimilated by the Asians. The Arabs, through their contacts with the Asians, learned these procedures and introduced them into western Europe. Columbus, during his second voyage in 1493 to Santo Domingo, planted the first crop of cane in the New World. It spread rapidly throughout Latin America and the Caribbean Islands. A combination of fertile land, slave labor, and an accessible market resulted in extensive cultivation of sugarcane in this area.²¹ Sugarcane was grown in various parts of the South, including Florida, during the latter part of the eighteenth century, but it was not extensively cultivated within the United States untill the nineteenth century. Then, as before, it required a good deal of expertise and a great expenditure of labor to produce a profitable crop.

The first task facing the planter was the clearing of his land.²² An arduous job, it was an odious assignment given to the strongest oxen and the hardiest slaves.²³ Once the land was cleared, a crop such as Indian corn was planted in the virgin soil. It was followed the next year by ribbon cane, a hardy variety that would produce a fine crop on almost anyone's soil and under most conditions.²⁴ Sugarcane required a great deal of water for it to reach maturity, yet, like many other crops, it could not survive immersed or partially submerged in water. The maintenance of this delicate balance necessitated the use of a costly and complex drainage system. Planters employed practical logic in placing their ditches and canals, striving to create a system which would quickly dispose of any excess water, never allowing it to remain in the cane fields and possibly destroy the planter's entire crop.²⁵

Planting was usually done in December or January, or sometimes as late as March. Four-, six-, or eight-horse plows were driven by the slaves and used to break up the ground and then harrow it. The plows were taken across the field a third time, in the process gouging out parallel rows of deep furrows. Cane stalks were laid in the furrows in pieces of 2½ to 4 feet in length placed to form two parallel rows in the furrow, 3 or 4 inches apart.²⁶ The cuttings were then covered with a layer of soil to protect them from the cold. As the young plants began to grow, the soil was slowly and carefully removed. Routine cultivation was continued, the cane remaining in the field as long as possible, and only the threat of frost drove the planter into the field to begin his harvesting. Seed cane, harvested at the same time, was planted as soon as it was cut or it was placed in long beds called mattresses and covered with four or five inches of dirt to protect it from the cold.²⁷

To the untrained eye, the harvested cane field looked like a devastated area. However, to the planter this seeming disarray was actually ordered chaos and he well knew that this stubble would shortly produce new plants, called ratoons, which would grow to maturity and repeat the cycle.²⁸ The limit of the cycle varied from a minimum of two or three years in Louisiana to four or five years in Florida.²⁹ Major Gamble, writing in 1851 in response to a query from the United States Commissioner of Agriculture, made the following comments about the cultivation of sugarcane on his Manatee plantation:

The culture of the sugar cane, on the large scale, is comparatively of recent date in Florida; our experience and knowledge of its culture are consequently imperfect. In South Florida, we find that our canes will rattoon [sic] well for five years; but I believe that the conviction is general, that we should not rattoon [sic] longer than three years; which, with the first or plant crop, makes a term of four years between each planting. The establishment of sugar plantations in South Florida is so recent, that no planter has succeeded in getting a full crop. Consequently no well digested system of rotation has been adopted. The system which I am adopting is, to divide my plantation into five equal portions, four-fifths of which will be planted in cane – the fifth to lie fallow. During the seasons of leisure, this portion will be prepared in the best possible manner for planting in the ensuing spring... The fallow land will be ploughed very deep, with four-horse ploughs, throwing it up into lands of seven feet, with deep water-furrows; into these furrows all the trash of the land and the rotten begassa [sic] of the preceding crop, together with any other manure which may have been prepared, will be collected. The land will be again ploughed with four-horse ploughs, bedding on the deposited manure; when this fifth is planted in cane, the oldest of the remaining sections will be ploughed out, and subjected to the same operation. By this system, a plantation will yield from 2,000 to 3,000 lbs. of sugar to the acre.³⁰

The first cutting of the cane inaugurated a season of frenzied activity that did not cease until the sugar and molasses had been sent to market. The cane was conveyed from the field in carts to the sugarhouse. This was generally a two-story structure and was usually 100 to 160 feet long by 50 to 60 feet wide.³¹ Cane arriving at the sugarhouse was

transferred from the bed of the cart through a large opening in the upper story of the sugarhouse where it was placed on a conveyor belt or fed directly into the sugar mill.

The sugar mill, consisting of three (or more) rollers arranged in a vertical or horizontal position — and driven by horse or steam power — crushed the cane stalks, in the process extracting the juice from them. Major Gamble's sugar mill employed a fifty-horsepower steam engine to turn his conveyor belt and drive his massive set of rollers.³²

While the bagasse (crushed cane stalks) continued along the conveyor belt, the juice was gravity fed through copper tubing or along a wooden sluice into two or more vats.³³ As the liquid flowed toward the vats filters collected the gross particles, separating them from the juice.³⁴ Clarification was thus begun. In an alternate method, the impurities were allowed to sink to the bottom of the vat; the liquid was transferred through a movable copper tube into the next vat and this procedure was repeated several times.35 The remainder of clarification, along with the next stage, evaporation, was done in a series of open kettles, from which the name "open kettle method" was derived. The kettles, made of cast iron, were set up in the center of the sugarhouse. Usually four (sometimes five) in number and arranged in order of size from largest to smallest (the largest kettle was called the grande, the second the flambeau, the third the syrup, and the fourth the battery), they were carefully positioned in a solid masonry foundation under which were contained the furnaces and the flue that conveyed heat to them. Precisely located, the furnace and flue were supposed to provide an even heat for the entire range of kettles.³⁶ On some plantations, like Major Gamble's, there were two sets of kettles to accelerate the manufacturing process.37

The raw cane juice was transferred from the vats to the waiting *grande* and a certain percentage of slake lime was added.³⁸ Applied to the boiling cane juice, the lime functioned as a catalyst, forcing further impurities from the liquid. As these particles bubbled to the surface they were skimmed off with wooden spoons and cast aside. When the sugar maker was satisfied that all these impurities had been removed, he motioned for the juice to be ladled into the *flambeau*.³⁹

Passed into the *flambeau* (in a five-kettle setup the *propre* would be the next kettle after the *grande*), foreign elements were continually removed from the boiling cane juice. The constantly evaporating liquid was moved down the line of kettles until it reached the *battery*. The sugar maker stood at this kettle watching the boiling liquid slowly turn into a viscous mass, waiting for the moment to "strike."⁴⁰ He looks into the *batterie*, but sees more than is accorded to the vision of the uninitiated. The dark tumbling mass of liquid sweet, appeals to his judgement in every throe it heaves from its bosom; a large and ominous bubble will perhaps fill him with dismay; if the mass settles down into quietude, he will yell frantically to the old Argus at the furnace, to "throw in more wood;" perhaps the liquid will then dance and frolic, whiten and coquette, and then comes over the face of the sugar maker a grim smile of satisfaction, as he, with his wooden spatula, beats down and breaks up the bubbles, that might otherwise rise too high. Now also the sugar maker observes the syrup as it cools upon his ladle, and also sees if it will string into threads, for the critical moment is approaching, the "strike" is at hand.⁴¹

A slightly different method was to thrust a massive wooden spoon into the kettle, and if, when the spoon was withdrawn the syrup on it had a grained appearance and was so thick that it covered the spoon in a film and drained slowly from it, the mixture had reached granulation. Various methods, mostly unscientific and depending upon empirical observation, were used to determine when to strike. These techniques varied from plantation to plantation and the skilled sugar maker was extremely secretive about his procedure, realizing that to divulge his formula would result in the loss of his employment. On some plantations like Major Gamble's, a vacuum pan was used in the final stage of evaporation.⁴² The cane juice was transferred to the vacuum pan, where it was placed under pressure. The pressure enabled the juice to boil at a lower temperature, thus providing several advantages. The lower boiling point could be reached more rapidly, and reduced the possibility of the syrup burning, as it might in the battery. Also more sugar was obtained by this process, and it was of better quality. Because of the lower boiling point, of course, less fuel was needed.43

With the strike, the syrup was transferred into shallow wooden tanks, usually made of cypress, called "coolers." It was common to have at least six such coolers for each set of kettles. Following the completion of granulation, the sugar was transferred from the coolers to hogsheads and placed in the "draining room."⁴⁴ The floor was composed of wooden scantling placed crosswise about a foot apart. Cypress or brick cisterns, 16 to 20 inches deep, were built under the flooring, completely encompassing it.⁴⁵ The freshly filled hogsheads were placed on the scantlings, and allowed to drain. For the next 20 to 30 days, the molasses slowly seeped through the open joints of the hogsheads.⁴⁶ Then the hogsheads were calked and sent to market. The molasses was recovered from the floor of the cistern, placed in hogsheads, and shipped to market.⁴⁷

New Orleans remained the most important market for sugar and molasses during the antebellum era. Planters sometimes transported their crop to other markets, where they hoped to receive a higher price. This practice does not seem to have been a viable alternative for most planters, with the result that they returned to the cheap market prices usually prevailing in New Orleans.⁴⁸ Although there is no direct evidence, Major Gamble probably shipped his sugar and molasses to New Orleans on one of the vessels that regularly plied the waters between this port and the Manatee River.⁴⁹

Major Gamble in 1850, using the equipment and techniques described above, was able to produce 230,000 lbs. of sugar (230 hogsheads) and 10,000 gallons of molasses from 320 acres of land, using 89 slaves. From an investment of \$82,650 (\$25,000 for the sugarhouse and equipment, \$5,000 for the land, and \$53,000 for the slaves), he was able to realize a net profit of \$9,000.⁵⁰ Gamble, at this time, was apparently very optimistic and the following year stated that 2,000 to 3,000 lbs. of sugar were possible from each acre cultivated.⁵¹ Although his return from the land never approximated this total, he felt secure enough in his venture to continually increase his holdings in the early 1850s and before he left the area he had doubled his holdings both in land and slaves.⁵²

Although the price for Florida sugar averaged 7 cents a pound between 1845 and 1860, the 1850s was a period when the price of sugar fluctuated dramatically—reaching a low of 3¹/₂ cents per pound in 1853 and averaging for the decade about 6 cents per pound.⁵³ Even with careful management and a little luck most planters could not produce sugar for less than 4 to 6 cents per pound.⁵⁴ Gamble was one of those who was not able to survive at these low prices. He left the plantation in the spring of 1856, "when it was placed in other hands.⁵⁵

Had Major Gamble been financially solvent he might have continued to eke out a living, hoping that sugar prices would rise, as they eventually did; however, facing a situation where he had creditors to pay, he could not wait for the market to adjust. The plantation was thus placed in the hands of his principal creditor, his brother-in-law Allan Macfarlan. Two years later, the plantation was sold to two Louisiana planters.

On December 18, 1858, Major Robert Gamble, Jr., Nancy P. Gamble (John G. Gamble's wife), Catherine J. Hagner (John G. Gamble's daughter) and Allan and Julia Macfarlan sold the entire plantation to John Calvin Cofield and Robert McGroyson Davis for the sum of \$190,000.⁵⁶ Included in the sale were 3,450 acres of land, 185 slaves, 41 of which were from the Nehamathla plantation in Leon County, and "all the mules, oxen, cattle, wagons, carts, and farming utensils of every description on or pertaining to the Manatee plantation ... To have and to hold the

lands as described with the sugar houses, machinery, engines, sawmill, gristmill, dwelling house and other improvements."⁵⁷ Major Gamble, after the sale of his Manatee property, returned to Middle Florida and married Laura Wirt Randall, the daughter of Judge Thomas Randall and Laura Wirt Randall, and lived out the remainder of his life in relative obscurity in Tallahassee.⁵⁸

NOTES

1. East Florida included all land east and south of the Suwannee River.

2. One scholar maintains that the Armed Occupation Act was not a homestead act but a bounty law offering an incentive, land, to those who would settle along the Florida frontier. George Stephenson, *The Political History of the Public Lands* (New York: Russell and Russell, 1917), pp. 115-116.

3. The complete act can be found in Richard Peters, ed., *The Public Statutes at Large of the United States of America from the Organization of the Government in 1789, to March 3, 1845, 8 vols.* (Boston: Charles C. Little and James Brown, 1850), 5:502-504; Dorothy Dodd, "Letters from East Florida, *Florida Historical Quarterly, 15 (July 1936):51-53; James W. Covington, "The Armed Occupation Act of 1842," Florida Historical Quarterly, 40 (July 1961):41-52; John Mahon, <i>History of the Second Seminole War* (Gainesville, Fla.: The University of Florida Press, 1967), pp. 313-314.

4. Tallahassee *Floridian*, September 28, 1888. Gamble was born in Richmond in 1813 and died in Tallahassee in 1906. He lived on and helped to manage his father's and uncle's sugarcane, tobacco, and cotton plantations, and served briefly during the Second Seminole War. Michael Schene, "Gamble Mansion," Mimeographed (Tallahassee, Fla., 1972), pp. 27-30.

5. Major Gamble was joined by Joseph and Hector Braden, William Wyatt, and William and John Craig, among others. Hillsborough County Deed Book A, pp. 16, 48, 81-82, 163, 179, Hillsborough County Courthouse, Tampa, Florida. One authority states that: "Many of the settlers in the Manatee section were men from Leon County who, reduced to financial straits by the failure of the old Union Bank, hoped to recoup their fortunes on fertile sugar lands of the Manatee." Edwin L. Williams, "Florida in the Union, 1845-1861" (Ph.D. diss., University of North Carolina, 1951), p. 88.

6. E[zekiel] J. Donnell, *Chronological and Statistical History of Cotton* (New York: J. Sutton, 1872), pp. 206, 216, 230, 231; J.D.B. [James Dunwoody Brownson] DeBow, *The Industrial Resources, Etc., of the Southern and Western States*, 3 vols. (New Orleans, 1852-1853):1, p. 149; Dodd, "Letters from East Florida," pp. 54-55. Williams, "Florida in the Union," p. 227, states that "low cotton prices had caused some Florida planters to turn to sugar culture."

7. Lillie B. McDuffee, *The Lures of Manatee* (Bradenton, Fla.: The Manatee Historical Society, 1960), p. 14.

8. In 1837, John Lee Williams wrote that the area possessed an abundance of hammock lands and a "soil [that] appears to be rich." John Lee Williams, *The Territory of Florida* (1837; reprinted with an introduction by Herbert J. Doherty, Jr. in the Floridiana Facsimile and Reprint Series, University of Florida Press, Gainesville, 1962), pp. 136-137. Hammock lands were considered to be the best cane lands in Georgia and Florida. The soil was lighter, warmer, and drier, so cane matured earlier there. "Moreover, sugar from such lands was equal to any in the South; its grains were not so soft and its proportion of molasses not so large as in sugar made on swamplands." Carlyle Sitterson, *Sugar Country* (Lexington, Ky.: University of Kentucky Press, 1953), p. 122. In 1843 Sam Reid surveyed the Manatee area for the United States government. He stated, at that time, that Gamble's land had an abundance of "1st rate hammock lands." Surveyor's Field Notes, United States Survey of Section 17, T34S, R13E, Survey conducted by Sam Reid in 1843. Originals on file at the Internal Improvement Fund, Elliott Building, Tallahassee, Florida.

9. Report of the Commissioner of Patents for the Year 1851, Part II Agriculture, p. 327.

10. Williams, "Florida in the Union," pp. 88-89.

11. An examination of Major Gamble's indentures reveals that he paid between \$2.00 and \$4.00 an acre for the land that he purchased from individuals. Manatee County Deed Books, Manatee County Courthouse, Bradenton, Florida.

12. A careful examination of relevant sources indicates that Major Gamble did not receive any land under the provision of the Armed Occupation Act. James W. Covington, *The Story of Southwestern Florida*, 2 vols. (New York: Lewis Historical Publishing Co., 1957:1, Appendix B, pp. 422-451, includes a complete list of those receiving land. Also, the authoritative source is *House Executive Documents*, 28 Congress, 1st Session, No. 70, which includes the official list of persons having received land. Gamble may have been barred due to the Act's provision that anyone owning land was not eligible.

13. Hillsborough County Tax Books, 1847, p. 2; 1855, p. 7, microfilm at Florida State Library, R.A. Gray Building, Tallahassee, Florida.

14. The price paid for a slave varied widely during the antebellum period, ranging from \$500 in the early part of the period to \$1000-1500 during the 1850s. Julia F Smith, *Slavery and Plantation Growth in Antebellum Florida*, *1821-1860* (Gainesville, Fla.: University of Florida Press, 1973), pp. 103-104.

15. Sitterson, Sugar Country, p. 160.

16. A.C. Barnes, *The Sugar Cane* (New York Interscience Publishers, Inc., 1964), pp. 1-7; Noel Deerr, *The History of Sugar*, 2 vols. (London: Chapman and Hall, 1949):1, 12, *passim*.

17. Deerr, History of Sugar, 1:10.

18. Sitterson, Sugar Country, pp. 145-146.

19. We have substituted "do" (ditto) for Gamble's abbreviation (. .). The first number in each of the following pairs represents the length and the second indicates the height along that length.

20. Major Robert Gamble, Jr. to George Patten, May 5, 1868, Charles Patten Papers, Patten family, Sarasota, Florida, copies on file at Florida Division of Archives,

History and Records Management, Tallahassee, Florida [hereafter cited as Patten Papers]. Gamble also reported on his equipment in the Tallahassee *Floridian*, September 28, 1888.

21. W.R. Aykroyd, *The Story of Sugar* (Chicago: Quadrangle Books, 1967), pp. 10-17, *passim;* Deerr, *History of Sugar*, p. 12, *passim*.

22. Along the Manatee River, the planter had to drain his land before it could be cleared. In his letter to George Patten, Major Gamble stated that he "devoted vast labour to draining [his] lands," Gamble to Patten, May 5, 1868, Patten Papers; Tallahassee *Floridian*, September 28, 1888.

23. Sitterson, Sugar Country, p. 116.

24. *Ibid.*, 123. H.B. Croom, a Middle Florida Planter, reported in the 1830s that both ribbon and otaheite were grown in the peninsular state. Croom, "Some Account of the Agricultural Soil and Products of Middle Florida, In a Letter to the Editor," *The Farmers' Register*, 2 (June 1834):1.

25. Barnes, Sugar Cane, p. 120; Sitterson, Sugar Country, pp. 113-114.

26. Sugarcane can be grown from seeds but then, as now, it was generally grown from cuttings. These were stalks about a foot long, each stalk having several joints or nodes. Once planted these cuttings could produce additional plants for several years. The cuttings were placed in the soil at intervals of 2 to 8 feet, depending on the fertility of the soil. Sitterson, *Sugar Country*, p. 114; Croom, "Some Account of the Agricultural Soil and Products of Middle Florida," p. 1; Tallahassee *Floridian*, September 28, 1888.

27. Sitterson, Sugar Country, pp. 116-117.

28. At the harvest, the cane stalks were cut as close to the ground as possible. Most of the stalks were taken to the sugar mill and processed. The remainder, called seed cane, were planted as indicated above. The cane plant or ratoon did not die with the cutting of the stalk. Several crops could be harvested from the first cutting. The ratoon was cultivated in the same manner as the cutting.

29. Sitterson, Sugar Country, p. 119.

30. Report of the Commissioner of Patents for the Year 1851, Part II Agriculture, p. 327. Major Gamble disagreed with those planters who did not use their "trash" (cane leaves, cane stalks) and the bagasse as fertilizer. "Very few planters return their begassa [*sic*] to the land on which it grew... These planters do not reflect that they are removing from their lands those essential salts, without which it is impossible to produce a good cane, and of which there is only a limited quantity in any soil." Ibid., p. 328. Writing to George Patten in 1868, he called the removal of the trash and bagasse the "Louisiana method" and stated that those who tried it along the Manatee River failed. Patten Papers. He used the same techniques, indicated above, for the cultivation of both the seed cane and the ratoons.

31. Sitterson, *Sugar Country*, p. 137. Major Gamble's sugar works were contained in two separate structures, the main building (180 feet long and 40 feet wide), and an additional structure 100 feet long and 90 feet wide. Gamble to Patten, May 5, 1868, Patten Papers; Tallahassee *Floridian*, September 28, 1888.

32. Gamble states that his "top roller weighed 5 tons"; with two or three attached rollers, the set weighed at least 15-20 tons. Gamble to Patten, May 5, 1868, Patten Papers; Tallahassee *Floridian*, September 28, 1888.

33. These vats were shallow, rectangular boxes of cypress plank, usually lined with copper or lead. Sitterson, *Sugar Country*, p. 140.

34. Various methods were used in collecting these gross elements. Some planters used fine wire sieves placed at regular intervals along the length of the sluice. Other planters placed gauze sieves, such as cheesecloth, along the sluice, while others placed their sieves over the top of the vats. Sitterson, *Sugar Country*.

35. Ibid.

36. Ibid., pp. 137-141.

37. Gamble to Patten, May 5, 1868, Patten Papers.

38. This was figured at 6 to 24 cubic inches for every 2 to 3 gallons of juice.

39. Sitterson, Sugar Country, p. 141.

40. The "strike" was the exact moment when the sugar maker felt that this rapidly solidifying mass had achieved granulation.

41. T.B. Thorpe, "Sugar and the Sugar Region of Louisiana," *Harpers New Monthly Magazine*, 7(June 1853):765.

42. Sitterson, *Sugar Country*, p. 143. Major Gamble stated that he had a steam (vacuum) pan at the end of each set of kettles. Boilers, driven by an eight-horsepower steam engine, furnished steam to these pans. Gamble to Patten, May 5, 1868, Patten Papers; Tallahassee *Floridian*, September 28, 1888.

43. Sitterson, *Sugar Country*, p. 146. With the boiler furnishing steam heat an even temperature over the bottom of the kettle could be maintained. Thus the planter could readily predict when granulation was achieved.

44. On some plantations, the draining room was located in a separate building, while on others it was located in the sugarhouse and separated from the grinding and evaporating equipment by a partition. Sitterson, *Sugar Country*, pp. 143-144. Major Gamble had a draining room in the main building and an additional building that contained a cooling and draining room. Gamble to Patten, May 5, 1868, Patten Papers; Tallahassee *Floridian*, September 28, 1888.

45. Sitterson, *Sugar Country*, p. 143. Major Gamble's draining room had a "brick cistern on each side the full length of the house and an additional building having a cooling room ... and a draining room ..." Gamble to Patten, May 5, 1868, Patten Papers; Tallahassee *Floridian*, September 28, 1888.

46. Molasses was a by-product of the granulation process. A thick syrup, it naturally separated from the solid sugar crystals.

47. Sitterson, Sugar Country, pp. 143-144.

48. Ibid., pp. 185-192.

49. Major Gamble stated that "schooners can lay and take in cargo drawing 7½ feet 100 yards from the landing [his dock] which is within three hundred yards of the residence and three miles lower down [south of his dock] a vessel drawing 10½ feet can receive her cargo." Phrases in the brackets were added by the author. Gamble to Patten, May 5, 1868, Patten Papers. His brother-in-law, Allan Macfarlan, also writing to George Patten in 1868, stated that "I have sat at the front of the house and seen a schooner landing with sugar from the plantation ... Further, I have landed and embarked at a wharf about two miles from the house at a place belonging [to] one [Captain Joe] Atzeroth and from [the dock] the large Gulf steamers... [run] between N. Orleans and Key West." Allan Macfarlan to George Patten, December, 1868, Patten Papers. In the last sentence two words have been omitted and bracketed words substituted to correct an awkward construction. McDuffee, *Lures of Manatee*, pp. 78-79, says that Captains Tresca and McNeill transported the sugar manufactured along the Manatee River to market at New Orleans.

50. Hillsborough County Tax Books, 1850, p. 3, microfilm at Florida State Library, R.A. Gray Building, Tallahassee, Fla., show that Gamble had 89 slaves and 1,208 acres of land. U.S. Census Office, Seventh Census, 1850, Agricultural Schedules, Florida, Hillsborough County, p. 111. U.S. Census Office, Seventh Census, 1850, Industrial Schedules, Florida, Hillsborough County, p. 203. These records show that Gamble had \$82,650 invested in his business (Industrial Schedule) which included \$25,000 invested in machinery (Agricultural Schedule). Taking the average cost of a slave at \$600, the 89 slaves would have cost him \$53,000, and thus his 1,200 acres of land would have cost him about \$5,000, an acceptable and reasonable figure. The census data also show that he had 1,280 acres of land but only 320 were under cultivation (Agricultural Schedule).

51. Report of the Commissioner of Patents for the Year 1851, Part II Agriculture, p. 327.

52. In 1855, he had 151 slaves and approximately 3,500 acres of land. Hillsborough County Tax Books, 1855, p. 7, microfilm at Florida State Library, R.A. Gray Building, Tallahassee, Fla.

53. Smith, Slavery and Plantation Growth in Antebellum Florida, p. 215.

54. Sitterson, Sugar Country, p. 159.

55. Gamble to Patten, May 5, 1868, Macfarlan to Patten, December, 1868, Patten Papers. One scholar maintains that only those planters relatively free from debt were able to survive the low prices of the early 1850s. Sitterson, *Sugar Country*, pp. 162-165. We know that Major Gamble had incurred mortgages with R.L. Maitland and Co., William L. Donnell, and Alexander M. McConochice. Apparently unable to continue his payments, these mortgages of Gamble's were foreclosed on by these individuals. Macfarlan then intervened, assuming the mortgages himself. Manatee County Deed Book A, pp. 183-184, Manatee County Courthouse, Bradenton, Florida. These foreclosures occurred before 1854, indicating that Gamble was having problems in the early 1850s.

56. The family retained a mortgage on the plantation, thus enabling them years later to foreclose on Cofield and Davis. The mortgage was really held by Macfarlan since he had paid or was paying all the existing mortgages outstanding on the plantation. Manatee County Deed Book A, pp. 78-93, Manatee County Courthouse, Bradenton, Florida. This indenture is quite extensive and includes information not only about the sale of the property in 1858, but also alludes to the financial arrangements made by Major Gamble for his Manatee plantation, as well as other important pieces of family history.

57. Manatee County Deed Book A, pp. 78-81.

58. He married Laura Wirt Randall on April 28, 1857. Leon County Marriage Record Book A, p. 8, on file at Leon County Courthouse, Tallahassee, Florida. They had three children, two died as infants, a daughter, Katherine Elizabeth, was his only child to survive the rigors of childhood.

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