The Rice Paper is the electronic newsletter of the CGRF. Published periodically, it collects the most recent findings in the botany, cultivation, material culture, culinary preparation, and history of Carolina Gold Rice and associated heritage grains. Contributions and editorial correspondence should be directed to Dr. David S. Shields at the University of South Carolina: dshields@mailbox.sc.edu. The information published here appears as a public service. CGRF encourages republication of The Rice-Paper’s contents provided there is no alteration of the substance of the material being reproduced, that the reproduced product does not profit from the republication, and that a clear and full credit is given to author and source of the material.

Charleston Gold in the Field

By David S. Shields

In April of 2011 Charleston Gold Rice, the aromatic offspring of classic Carolina Gold, received approval for production growing—in time for planting in the 2011 growing season. The USDA approved the variety name, and The CGR Foundation released seed for cultivation. The product of 10 years of breeding and refining by Foundation board member and Clemson University scientist Merle Shepard and rice breeder Gurdev Kush, with growouts overseen by Dr. Anna McClung, Charleston Gold combines the classic gold hulls and wholesome mouth feel of Carolina Gold, with the short stature, disease resistance and productivity of two important modern rice strains. Heeding the global turn in taste toward aromatic rice, Shepard and Kush insured that the grain would have an earthy fragrance similar to that of the best Indian rices. The qualities immediately attracted growers.

Its qualities attracted Jimmy Hagood to enter for the first time into rice planting. Proprietor of Southern Food for the Soul and an award-winning Barbecue pit master, Hagood visited with members of the Foundation Board who offered seed and assistance on the project. The crop at Lavington Plantation on the Ashepoo River, an ideal rice habitat, proved productive and vigorous. At harvest time, CGR Foundation board members again stepped in to assist Jimmy Hagood and his crew in the harvest, milling, and packaging of the crop. Since both Glenn Roberts and Campbell Coxe had grown the variety, they knew first hand Charleston Gold’s qualities in the field and in the mill. [See Jimmy Hagood’s account of working with Charleston Gold in this issue.]

At harvest time the news of the splendid crop of Charleston Gold found a ready audience in the meeting of The American Food Journalists Association at Middleton Place. Dr. Merle Shepard spoke to the assembly of the creation of the variety. The food writers had the opportunity to see for themselves the splendors of the new rice. The Charleston Post & Courier underscored the importance of the rice’s introduction in a feature article dated October 15, 2011.


Jimmy Hagood tells how you can secure his rice in his article. Glenn Roberts offers a Laurel-scented version of Charleston Gold in the retail product section of his Anson Mills site: http://www.ansonmills.com/rice.htm#goldrice

Ode to a Secret Kitchen

By Glenn Roberts

Long gone, those serendipitous early evening “plates” from a non-descript home kitchen on James Island just across the Ashley river from Charleston’s famed peninsula. Secret meals, screeching hot, consumed ravenously and privately in a car. You couldn’t resist the clandestine and primal pursuit of well-being. And you brought beer for company, or, if you were lucky, some ultra-smooth, clear beaded homemade “good” would silently appear in a jelly jar along with your plate, silver and cotton napkin. Those plates were loaded with miraculously delicious rice casseroles concealing wild herbs, seafood netted that day by hand, or wild fowl, just shot. Your portion of rice casserole possessed the crisp caramel grains that sizzled next to the bottom and sides of the iron pot creating an impossible and delirious collision of shatter and velvet textures with each bite. There were fresh picked and stewed greens on the side, grown in the kitchen garden you walked by to get to the back door… and plenty of homemade pepper vinegar drizzled over them. Hot peppers from family saved seed came from...
that same garden to season vinegar made from wildly aromatic black muscadines. Hot cracking cornbread or stale biscuits with huge swipes of melting butter, churned that day, screamed to be eaten NOW. That biscuit wheat was grown just across the Stono River on Johns Island and the corn was in patches all over James Island and both were milled fresh weekly. Even rice was local… pounded by hand then winnowed by fanner basket the ancient way then right into the iron casserole pot and into the oven. That oven heat roiling off your plate could hurt you if you tried to touch your food while walking back to your car.

Majestic women gathered and processed these ingredients, cooked these foods and were glad to share a portion of their family supper out the back door for a dollar or two if they knew you and were confident you wouldn’t talk too much about their talent or location. This was the ultimate local food experience decades ago that spoke of rural mystery and island life. This food, a furtive swirl of Huguenot Cocotte and African culinary genius, made you swoon. This food was the pinnacle of Pilau, Purloo, Purlow, or any other spelling you wish…. the distinctive center of Charleston rice cuisine.

These hidden homes and kitchens have vanished along with notions of hidden gardens… all shadows of culinary wonder along the Carolina Sea Islands. Ironically, if somehow just one could appear by magic today, the dining experience would certainly become a sought after pop up event announced to a chosen few in code on twitter. The unmarked appeal of this style of food experience would be limitless.

We remind ourselves that centuries of touch and intuition in addition to chef dedication and cutting edge culinary concept, moved Charleston into the global spotlight as a world class culinary destination over the last decade. Charleston’s culinary fame is based upon the integrity of its kitchen gardens and small farms growing the foods that created our cuisine… this, alone… our local cuisine identity and its heritage, resonated with the talent of our world class chefs. But we perceive an equally exciting future for Charleston food in local home kitchens, not just in our famous restaurants. A future that affirms the heritage of our lowcountry family gardens and farms on a personal scale.

Charleston chefs help in the genesis of our idea to increase awareness and support for the growing community of local food and gardening enthusiasts. We are excited that a few passionate Charlestonians have quietly initiated the restoration of back yard family rice gardening for all residing in the Charleston Lowcountry… this is, after all, the Carolina Gold Rice Foundation’s culinary ideal… in our view, local gardeners will inevitably grow their own rice in a region that consumes more rice per capita today than anywhere else in the South.

The Carolina Gold Rice Foundation is making tons, literally… more than fifteen tons to be exact… of Carolina Gold and Charleston Gold rice seed available, pro bono, to qualified growers this season. Many are small plot back yard growers with aspirations to cook and serve the rice they grow in their own homes. The rest are scattered all across the South and even into Appalachia. Our intention is to make the Carolina Rice Kitchen, our local cuisine, accessible to home cooks, not just professional chefs, through support of personal kitchen gardens. In pursuing this goal beyond seed and growing advice, we are sharing the home kitchen traditions of the Carolina Rice Kitchen in our future newsletters. The dishes include a stunning list of easily prepared rice casseroles and rice breads and extend to more esoteric but uncomplicated ideas including rice beignets, rice custards, rice biscuits, and myriad rice scones and pastries. Until the 1980’s, Charleston enjoyed the Holiday tradition of exchanging rice breads from home to home. The Carolina Gold Rice Foundation is committed to repatriating this tradition. Modern and antique recipes for Rice Pain de Mie and Rice Challah, both finished with Benne Seed, are but two of many traditional Charleston Holiday breads we will cover in future newsletters.

Beyond our interest in rice, The Carolina Gold Rice Foundation plans to promote kitchen gardening of benne whose leaves are more delicate and flavorful than many garden greens and okra. We already love benne wafers and candy here, so restoring the historic culinary applications of this plant, a plant critical to successful rice farming over the long term even in kitchen gardening scale, is inevitable. Of particular interest: we wonder why no home cooks have latched onto Benne Ice Cream… it is beyond superb and unique… we prepared and served “ices” aplenty here in Charleston before the Great Depression. We will present a lovely and simple recipe for Benne Ice, among others.

The Carolina Gold Rice Foundation is focused upon the day coming when the ghost of our secret kitchen is no more. We know the community of local rice cooks will return to their home tables and prepare spectacular foods that accompany rice in the field and on the stove. We will advocate for authentic rice food craft taking center stage in our homes while Charleston basks upon the world stage.

---

**Rice Ice Cream, Paradise**

**By David S. Shields**

In debates about who was the greatest chef working in the United States during the 19th century, when haute cuisine came into being, the name of Charles Ranhofer often receives mention. This French-educated culinary genius presided as chef de cuisine at Delmonico’s in New York City from the Civil War to the Gilded Age. Early in Ranhofer’s career he spent four years, 1856-60, under F. Lefevre in New Orleans learning how to treat southern ingredients. There he came to know and cherish Carolina Rice. In Ranhofer’s published treasury of recipes, *The Epicurean*, he invariably specifies Carolina Rice when Rice is featured in a dish. Of the several rice recipes in this book, one speaks to the refined taste that came to typify the offerings at Delmonico’s. It is a masterwork of simple luxury: Rice Ice Cream, Paradise.

Wash and blanch twelve ounces of Carolina rice; drain. Take four ounces of it and cook it thoroughly in four quarts of milk; strain through a sieve. Put thirty-two egg-yolks in a tinned basin, add two pounds and a quarter of sugar, and beat both together, then put in the rice pulp; set it on the fire and beat steadily until the preparation covers the spatula; leave stand till cold; run it through a sieve, and replace it in the basin after it has been well cleaned; lay it on ice; whip to have the mixture light, and stir in as much whipped cream. Cook the remainder of the rice in a vanilla syrup at twenty degrees; cool off, drain, add it to the composition, and freeze. *The Epicurean*, p. 988.

If one craves more complexity of taste, Ranhofer offers a variation with citron and truffles.
Bringing Gold to Charleston

By Jimmy Hagood

Here are some of my thoughts from the experiences the Hagood Family had with the Carolina Gold Rice Foundation, Charleston Gold Rice and working with you, Glenn Roberts and Merle Shepard. We began speaking with Glenn in March 2008. I have known Glenn for the past 10 years, through the Southern Foodways Alliance and Carolina Gold Rice Foundation. He has always been so encouraging and helpful by assisting our family with the various aspects of planting, harvesting, milling and reaching the market with a finished product. In our discussion in the early years, we were hesitant to begin the process. My father, Ben Hagood, was very concerned about committing our inland ricefields for rice harvest. Over the past 15 years we have reclaimed these historic fields for growing corn and millet and then flooding to support the wood duck and teal population. Our upper field is used as a reservoir especially in drought years. This would have been the field designated for growing CGR.

Beginning in 2011 our discussions resumed and what became apparent was the new strain, Charleston Gold Rice, would be well suited to plant in our lower field, the field that we drain each year after duck season and then plant with corn in the spring and flood in the fall. Because the ChasGR is planted in dry conditions this seemed to be a perfect fit. After Glenn, Merle and David visited our farm in January 2011, we began taking the steps for planting in late spring. We received shipment of the seed in late April and by mid-May we planted 4 acres of ChasGR. The field is predominately peat and we are able to keep most of these 80 acres moist by maintaining water in the perimeter and center canal throughout the summer. By late September the crop was in very good condition. We began harvest in the second week of October. We learned that the AC 72 pull combine was difficult to use in the peat and moist soil. We even spent a day harvesting by hand with 6 men. Once the larger combine was secured the remaining plots were harvested in one day. In the 4 acres we sent 8000 lbs to Anson Mills and Campbell Cox for milling. The yield was approx 4500 lbs. We are now marketing this crop as the 2011 Lavington Farms Charleston Gold Aromatic Rice. We have distributed this product in 1# bags to most grocery stores in the Lowcountry. We have also sold in bulk to several local restaurants. See the attached product label that we developed and contracted Clay Rice, the grandson of Carew rice. This family have been silhouette artists in Charleston for 3 generations.

We are excited about continuing our relationship with the Carolina Gold Rice Foundation, Anson Mills and others to produce the 2012 ChasGR crop. We have learned a tremendous amount in the past 12 months and look forward to farming this year’s crop. Thank you to all that has made this possible for the Hagood Family and Lavington Farms.

A Visit to Rodger Winn’s Tomato Paradise

By David S. Shields

Mention the words ‘heirloom’ and ‘vegetable’ in the same sentence, and the average listener will conjure the image of a tomato. The general interest in the heirloom tomato can be attributed to the general distaste for the common grocery store tomato. Thick-walled, mealy, taut-skinned, and reliably roundish, the tomato of commerce appeals to the eye, because of its pronounced red hue, particularly in winter months, not to the tongue. Those available in season in the east, come from Florida, or Beaufort, SC, or the eastern shore of Virginia, picked by migrant labor, from leased fields doused with insecticide and fertilizer, sheeted in black plastic and harvested on a date determined by labor contract, not the ripeness of the produce. The commercial tomato is a product of convenience, not an object of gastronomic regard. It is the null backdrop upon which the memory of tomatoes from old family gardens, or vacation roadside stands shines. The heirloom tomato, whether a juicy gigantic beefsteak, a sugary black sandwich tomato, a mellow heirloom orange, or an acid, fresh Arkansas Traveler, commands attention for taste, configuration, and color.

All of the heirlooms date from after 1840, that moment when the tomato sized the palate of American diners, and the old landraces attracted the attention of horticulturists and seed brokers. Breeding for new tastes, shapes, and colors became a nationwide agricultural practice. From mid-century on, not a year passed when a new introduction captured the public fancy, making heirloom tomatoes one of the most ample and rich troves of vegetable/fruit creations of the past two centuries. Many of the star tomatoes of past decades have disappeared entirely, supplanted by ‘improved’ versions, or abandoned because of vulnerabilities to disease or insect depredation. Many varieties that went out of commercial seed production lived on, however, because of the preference of some local grower for its taste, look, or productivity. In the past decade a concerted effort by seed savers and botanical antiquarians have collected many of the surviving cultivars. One of the greatest conservators of the heirloom tomato is Rodger Winn of Little Mountain, SC.

For a little over a decade, Rodger Winn, a retired nuclear engineer, has devoted his farm to the organic cultivation of landrace and heirloom legumes, grains, and vegetables. He became a seedsman performing grow outs and trials of dozens of varieties for the likes of Baker Seeds, Southern Exposure Seeds, Fedco Seeds, and
Heavenly Seeds. Like one of the great experimental planters of the 19th century, Winn grows an extraordinary range of items: honey drip sorghum, the stone mountain watermelon, the old long purple eggplant, brown cotton. But the rows of tomato plants and the poles of bean vines are the pride of his plantings.

Every year, in late July/early August, during the week when the majority of his tomatoes achieve ripeness, Winn invites “those in the know” to his “Tomato Splat,” a tasting of his heirlooms on the lawns of his house. Long tables festooned with china plates, each filled with a variety of tomato identified by hand-lettered sign, provide the 100 or so guests with an instant education on the range of heirloom types. Visitors bring their own bread and condiments. Rodger Winn supplies the entertainment (a blue grass band) and the tomatoes. At the invitation of Jim Kibler, scion of an old Carolina planting family whose land is near Whitmire, we attended the 2011 Splat. Protecting sandwiches from free-range chickens, we sampled an extraordinary range of tomatoes—at least 30 of the multitude of offerings. Winn’s tomatoes varieties serve a range of functions—some were bred originally as paste tomatoes (The Amish Paste deserves particular notice), some for drying, some for pickling. Of the salad and sandwich tomatoes we consumed, most concurred that the Black Tom and Cherokee Purple had special merit. Steve Kresovich thought the Heirloom Orange particularly piquant.

Dr. Stephen Kresovich

In order to offer such a panoply of varieties, on must have inspired a great deal of trust and done a fair amount of trading in the community of people that cherish old garden cultivars.

While tomatoes were the reason for coming to Little Mountain, I was particularly interested in seeing Winn’s legendary plantings of field peas and beans. The beds did not disappoint. Besides the southern standbys—Greasy Beans (from the Bradshaw Collection) and the Red Cranberry—there were rare family varieties—The Epting Bean, and the Grandma Roberts Purple Pole Bean. The Limas and Sieva Beans thrived in the hot muggy clime of the Carolina Piedmont. I can’t say that I’ve ever seen more variety in a single landscape. Because beans and field peas operated in the rotation plantings with the traditional southern landrace grains, ascertaining their qualities and agricultural effects is an important component of the restoration of fields and food in our region.

To view the seeds Rodger Winn makes available annually to the public, consult his website: http://www.rodgersheirlooms.com/index.html

Forthcoming: Dr. Richard Porcher’s The Market Preparation of Carolina Rice

The University of South Carolina Press is preparing for publication later this year a landmark study of the mechanisms and processes needed to make Carolina Gold ready for the market. Composed by CGR Foundation board member, Dr. Richard Porcher, The Market Preparation of Carolina Rice chronicles the development of the technology and milling know how needed to establish the rice as a world brand during the 19th century. A paragraph from the Preface suggests the distinctive contribution that Porcher has made to the understanding of southern food culture.

“The Old South was generally reckoned to have been a technological backwater, with only four areas of mechanical production worth mentioning: sugar production, iron working, ship building, and rice milling. Even in these circumscribed areas, commentators have reckoned that the south with the noteworthy exception of devising submersibles was never an innovator in the creation of the means of production or products. Richard Porcher’s The Market Preparation of Carolina Rice dismantles this perception forcefully and definitively, showing that in the invention of devices to harvest, thresh, mill, and polish Carolina rice, persons in South Carolina and Georgia restlessly worked at creating and refining mechanisms that could insure that the Lowcountry could supply the world with superlative rice. In rice milling technology South Carolina was during the antebellum era the world leader in innovation. No treatment of southern technological production in any area has chronicled developments with the care, attention to mechanical detail, and illustrative clarity of this book. Because Carolina rice was a staple grain of the American larder, and because Carolina Gold Rice was reputed to be one of the great rices in world trade, Porcher’s study has importance in the area of food studies as well as the histories of technology and trade.”

Lavishly illustrated with schematic drawings by William Judd and a trove of historic images, Porcher’s book materializes the lost world of plantation factories that stretched from the Cape Fear River in the north to Cumberland Island, Georgia, in the south.

Notes from the Land Where Pigweed is King

By David S. Shields

An edible plant is stalking the south, muscling in on soybean and cotton fields, invading corn plantings and sweet potato beds. Designated Amaranthus palmeri by botanists, farmers with increasing dread use an uglier name—pigweed. It has become many a southern planter’s worst nightmare.

The fact that the leaves, stems, and abundant seeds are edible, indeed, extremely nutritious, matters little. Aside from health food devotees, Palmer amaranth seeds have no market in North America. The leaves concentrate too much nitrogen as nitrate to be safe as animal fodder. So the southern farmer reckons it a weed. More than a weed—a super plant, indigenous to southern soil and climate, that has evolved into an extremely prolific reproducer, generating massive seed heads. A single plant in a cultivated field produces over 150,000 seeds; with no competition, 1.5 million seeds. Its vitality and profusion enable it to take over a field in two seasons.

Sometime in the last six years it developed resistance to the commonest chemical herbicide in use, Monsanto’s “Roundup.” It would appear that the warnings of the critics of ‘conventional agriculture’ have come true. Exclusive reliance

The Rice Paper – Spring 2012
on a single herbicide year after year has produced mutations in *Amaranthus palmeri* so that since 2005 Glyphosate, the active agent in “Roundup” no longer inhibits the growth of pigweed. Calls for rotation of herbicides in a field each year to prevent the development of resistant species went unheeded, in part because salesmen touted “Roundup” as a never-fail herbicide. The season of regret has arrived. Farmers are forced to resort to a stop-gap: manual removal of young pigweed stalks by hired labor gangs. Unfortunately labor is not always available in season. Unfortunately the overlooking of a single stalk when clearing is enough to put a field in peril.

It is on one level odd that the world does not welcome a food source that has become so vital that it has decided to plant itself in all the fields we have prepared for the convenient culture of produce. Yet the United States seems to lack a 21st George Washington Carver who can teach the present generation to find favor in amaranth. So we seem fated to relive recent history with agricultural chemists concocting new cocktails of plant toxins (Dual, Valor, Authority MTZ, Envive) to spread on soil before planting.

One hopes that exploration of rotations is undertaken. Pigweed’s efficiency nitrogen out of the soil bodes ill for its prolonged colonization of an area, since its own vitality is taxed by the nutrient exhaustion with each successive year. Pigweed thrives when fields are cultivated with the same crop in succession. Weed scientists Bob Scott and Ken Smith of the University of Arkansas have noted that regular crop rotation inhibits pigweed’s consolidation: “Although Palmer amaranth plants produce a tremendous number of seed, the seed do not live long in the soil. One to two years of an alternate crop that can be kept Palmer amaranth-free will significantly reduce the population level of pigweeds.”

What will happen next? When *Science* magazine in 1977 proclaimed Amaranth the “plant of the future” it thought that its contribution to world nutrition would make it needful in areas where population stress and degraded soil prevailed. It hardly imagined it would become the scourge of American farmers. Yet all its promise remains as well as all its peril. One thing is sure, the plant will receive a scrutiny it has never heretofore endured, and from this careful examination, knowledge will surely arise of its potential for improvement, its natural limitations, and the vulnerabilities that will enable its spread to be controlled. For many southern farmers this knowledge can’t come too quickly.

The Summers Brothers: Imagining the Sustainable Plantation

By David S. Shields

Because any attempt to resuscitate a cuisine requires reviving the agricultural system that gave rise to it, a task before us is to research the best practices of the planters of the Carolinas, Georgia, and Florida. Because of the CGR Foundation’s interest in the Lowcountry’s rice-based cuisine, we have tended to look to the writings of a half dozen experimental rice planters of the antebellum period—James Hamilton Couper and Thomas Spalding of the Georgia Sea Islands—Joshua John Ward, R. F. W. Allston, William Washington, and J. Bryan from South Carolina. Their writings, for all their information about the management of Carolina Gold Rice and other field crops, did not speak to important dimensions of plantation food production. They provided little about livestock needed for meat production or the role of orchards and kitchen gardens in the market production of fruits and vegetables. To understand how the production of pork, beef, poultry, fruit, and vegetables connected with the cultivation of grains and field crops on a plantation we have to turn to the writings of planters from the sandhills skating the Lowcountry. We have to turn to the greatest theoreticians of sustainable planting in the antebellum south, the Summer Brothers, chemist Thomas Summer, Col. Adam G. Summer of Ravenscroft Plantation and William Summer of Pomaria Plantation in South Carolina.

Farming in the Newberry district of the Carolina sand hills, the Summer Brothers during the 1840s and ‘50s put into place diversified farming systems. A visitor “would see, even in the winter, fields green with grass, winter oats, barley, wheat and turnips (rata baga).” One field of Egyptian winter oats pastured thirty Southdowns sheep who manured the three acres. In March this and other fields were deep plowed with a Remington Steel Plow and fertilized for cotton or corn. Cattle, pigs, horses, mules, and sheep supplied the plantation’s fertilizer. In the south the Summer Brothers pioneered the stabling of livestock. In 1859 S. B. Buckley observed, “This is the first and only instance I have seen of cows and cattle being stabled at the South.” Imitating the dairy-farming regimens of northern experimentalists such as Jesse Buel, the Summer Brothers maintained extensive pasturage, growing red clover and alfalfa for grazing, corn and oats for fodder, and root vegetables (rutabaga, sweet potato, and Jerusalem artichoke) for winter stall feeding. Book farmers of the best sort, plugged into the major horticultural, agricultural, and pomological networks, the brothers jumped on every promising novelty. The experimental introduction of sorghum from France in 1853 had Adam Summer growing 20 acres of ‘sugar millet’ for fodder. He fed cattle both millet and leaves.

Col. Adam Summer

Thomas Summer, who studied chemistry in Germany under Justus Liebig, had begun the renovation of the midlands’ soil with Red Clover. Having read of the experiments in Pennsylvania of Judge Peters during the Revolutionary period with the red clover and gyspum, Summer showed that countering the acidity of the soil with an alkaline manure could enable this nutritious and

1 http://www.uaex.edu/Other_Areas/publications/PDF/FSA-2152.pdf.


soil-building cover to grow in the deep south.\(^4\) His findings on clover culture and his writings on the soil chemistry of cotton growing won him fame in southern agricultural circles despite his death while still in his twenties. His brothers William and Adam took up his research and extended the experiments to include the fall planting of Bremen Oats, rye, barley, and buckwheat for winter grazing. William Summer thought a September planting of rye requisite for the pasturing of lambs and calves born in February.\(^5\) Because of rye’s tenacious root system, it holds up well to grazing, withstanding being trodden down or pulled. Rye first captured the attention of agriculturists in the 1830s. Jesse Buel may have been the first American to grow it in his experimental farm near Albany. “A Charlestonian” noted in 1840 that it was not grown in the south, but that seeds for both “Italian Rye Grass” and “Baily’s Rye” were readily available from European sources.\(^6\) The Summers were apparently the first to make systematic experiments with it in the early 1840s, growing the Italian Rye Grass and supplying well publicized progress reports to the Newberry Agricultural Society. In contrast to rye, barley did not lend itself to grazing. But because it was a “certain” crop, reliable in cold weather, and because it was nutritious, the Summer brothers grew it, scythed it, and employed it in stall feeding (known then as “soiling”) horses and cattle. Barley only became important in winter feeding with the establishment of livestock stables.

William Summer favored mixing root vegetables with grain and silage when stall feeding animals. Visitors remarked his use of the rutabaga, the Swedish turnip that vied with artichoke for stall feeding, but found that pigs preferred uprooting them in the field. Because the Jerusalem artichoke was perennial, prolific, and grew abundantly in stressed conditions, it was a forage crop singularly suited to waste areas on a property.

Several acres were planted in a peach orchard a Pomaria, last year, and under all the disadvantages of dense shade, drouth, and exhausted soil, they produced quite a fine crop; and its adaptation as food for swine has been fully tested. A number of sows and pigs are now running on this last-mentioned lot, and keep fat on what they glean from the field, which has been partially dug over, without a particle of other food. It is a great promoter of milk in all animals, and fully sustains the opinion . . . concerning its being good food for cows and sheep.\(^7\)

Summer Brothers became famous early in the 1840s for their livestock by importing the best breeding stock available. Adam Summer purchased the award-winning Hereford bull calf “Pomaria” and the heifer “Marie” from the north’s premier breeders, Corning & Lotman, of Albany. His Southdowns Sheep came from John Ellman of Glynde, U.K. His flock of Cotswold Sheep (another long woolled breed) came from Sotham, a New York breeder.\(^8\) Col. Wade Hampton of Columbia, SC, bred his Blakewell Sheep, for which he won a premium in the 1846 State Agricultural Convention. For milk, he also secured a herd of Devon Cows from Lewis G. Morris of Maryland.\(^9\) From the same breeder he obtained a number of extraordinary Black Essex Pigs. For a decade he may have been the only breeder of Berkshire Hogs in the South Carolina.\(^10\) And he loved the Suffolk breed so much, he wrote a prose poem in their praise in the pages of the Southern Agriculturist.\(^11\) Only he and Richard Peters of Atlanta bred them pure in the south during 1850s. He loved the taste of their flesh, particularly after they had fed on fallen fruit in the plantation orchards.

Both William and Adam were avid pomologists. At William Summer’s plantation, Pomaria, an extensive orchard grew. Indeed, the plantings of fruit trees were so extensive that William operated the orchard as a nursery (the only one in the state) supplying the region with apple cuttings (Carolina Red June, Aromatic Carolina, Augustine, Epting’s Premium, Epting’s Red Winter, Lever, Maverick’s Sweet, Cook’s Red Winter, Hoover, Hammond, Ferdinand, and three of his own creations, the Greening Pomaria, the Fixlin, and Susannah),\(^12\) crab apples (Gore, Champagne Crab, and White Crab), Peaches (the Aremie, the white-fleshed Christiana, the Poinsett, Mrs. Poinsett, and Amelia varieties)\(^13\), Pears (Julienne, Sekel, Bartlett, Doynne Blanc, Duchesse d’Angoulem, B. Capiaumont, Fulton, Croft Castle, Dearborn, Upper Crust, Hebe)\(^14\) Adam’s plantation, Ravenscroft, possessed orchards of plums, apricots, and nectarines. By keeping a flock of chickens in the orchards, Col. Isaac Croom, “The Clovers and Grasses of the South,” The Cultivator 13, 8 (August 1855).


“I doubt whether the Italian rye grass has ever been seen in the southern states and scarcely in America, although I have a faint recollection of seeing a few plants, some years ago, on the farm of Judge Buel, near Albany in New York.” “Notes on European Agriculture: The Grasses,” The Farmer’s Register 8 (1840), pp. 361-63.


Summer completely countered the depredations of the insect, curculio. “It takes more than a dozen hens and a gouty old cock to keep a few acres of these delicate trees clear of their enemies. A flock of a hundred is not too many: I find them a valuable auxiliary in manuring, as I consider domestic hen guano, properly tempered down, a good manure for trees the second year of their growth in the orchard.”

We know from premiums awarded at various fairs that Col. Summer excelled at breeding Dorking Fowl and Hong Kong Geese. The white five-toed Dorking fowl hailed from Surrey in England and won a reputation in England as the finest of yard birds for laying and for meat. While Summer ran his chickens through the orchard in Spring and Summer, in autumn he brought in his swine.

Orton Plantation Rice Production – Past, Present & Future

By Glenn Roberts, David S. Shields, & B. Merle Shepard

Between 1700 and 1775 no colony in British America experienced more impressive growth than North Carolina, and no region within the colony developed as rapidly as the Lower Cape Fear. Totally uninhabited by Europeans in 1700, this isolated corner of North Carolina’s southern coast is particularly noteworthy for its relatively late colonization and its rapid rise to economic prominence, first settled in 1725, the region grew to be the most prosperous in North Carolina by 1775. The study of the eighteenth-century settlement of the Lower Cape Fear is a prime example for understanding North Carolina and the entirety of colonial America as a patchwork of regional cultures (Bradford, J Wood, 2004).

One family, the Moore’s, proved to be pivotal in the development of the Lower Cape Fear. During early 1700’s they shaped the regions political and economic importance within North Carolina. The Moore’s provide an instructive if exceptional example. As the most powerful family in the region, they articulated an elite model of behavior together with the damming and construction of Orton pond, which was essential as a reserve to supply the rice fields with water. The pond and rice field layout is recorded on many early historic navigation plans of the Cape Fear River. Research is ongoing and current thinking suggests that the “back” rice fields contiguous to Orton pond, protected by higher ground and most easily fortified against the brackish Cape Fear River, were developed first as a beta test site to experiment with rice cultivation. Due to their success, a large dike impoundment was built out into a shallow portion of the Cape Fear River. This was equipped with extensive irrigation and water control structures to modulate water levels. At the same time sluices drained the fresh water of Orton pond through a series of paddies and canals within the original “back” rice fields to the 200+ acres of rice fields that provide the magnificent foreground view from the front of the plantation house. Although cultivation of rice and other crops has been intermittent in the last few decades, the original system of water controls, sluices, canals and embankments are largely in place and functional.

Orton was the first rice plantation in the Lower Cape Fear Region and one of the largest in North Carolina and because of his vast land holdings, Roger Moore was referred to as ‘King’ Roger. The amount of slave labor that was needed to build the original pond and back rice fields was significant but with commercial success even more slaves were imported to build out and cultivate the massive front rice fields. This horrendous and cruel labor system gave way after the civil war to large agrarian employment and eventually more mechanized cultivation.

Upon his death in 1750, Moore left his Orton and Kendal estates and 250 slaves to his sons, half-brothers George and William. William died seven years later and passed Orton to wife Mary and son Roger (the younger). Orton was thereafter passed through various ownerships:

Richard Quince: 1770-1796.

Benjamin Smith: 1796-1826, grandson of Roger Moore and Governor of North Carolina (1810-11). 1800, Brunswick census lists 199 slaves

Dr Fredrick Jones Hill: 1826-1854, 1830 Brunswick census lists 55 slaves. 1850 census shows profitable Sawmill, Corn mill and Rice Threshing Machine producing 15000 bushels of rough rice (annual production of 325,000 pounds of Rice) with 77 slaves

The Rice Paper – Spring 2012


Extensive slave labor made the economic development of the Lower Cape Fear possible and the circumstances surrounding slavery did as much to differentiate the Lower Cape Fear form other regions as anything else. Contemporaries acknowledged that there were many more slaves in the region than could be found on inland territories. Although fiercely independent of South Carolina, Governance and Tax structure, Lower Cape Fear rice plantations, represented the most northerly position of the Carolina Low Country and is known as the upper most limit of the “Deep South”.

Orton’s rice fields are the last of the many rice plantations of North Carolina. They stand as tangible record of the skill and labor exerted by enslaved laborers. Although the noted Civil War battlefields of Fort Fisher and Fort Anderson flank the southern boundary of Orton, the reason for the war itself was the demands of the slave labor practice that built and cultivated the plantation’s rice fields that will hopefully be restored as its own ‘battleground’ testimony.

Golden Seed Rice History

Although rice was planted as a market crop in the Carolina Lowcountry near Charleston by 1685 and proliferated North and South rapidly along the Carolina and Georgia coasts over the next century to become a major pre-revolutionary commodity export, rice did not become a distinctive American export crop with respect to its morphology, taxonomy and unique identity until after our revolution. Dr. David Shields writes extensively about the genesis of Carolina rice in his introduction to *The Golden Seed...*

“Some time before the Revolutionary War, the ‘Gold Seed’ rice was introduced (from what precise quarter, and how, has not been accurately ascertained) which, owing to its superiority, soon entirely superseded the white.” Dr. Shield notes that “more precise commentators pinpoint its (Carolina Gold rice) introduction to the period after the cessation of hostilities between the United States and Great Britain form 1783-1785.

Even though we cannot state with certainty the origins of Carolina Gold Rice, we can sit planter-naturalists of the era who presented the first informal characteristic description of Carolina Gold rice: “The ordinary crop rice most highly esteemed and therefore universally cultivated, an oblong grain 3/8ths of an inch in length, slightly flattened on two sides, of a deep yellow or golden color, awn short; when the husk and inner coat are removed, the grain presents a beautiful pearly-white appearance—an ellipsoid in figure, and somewhat translucent.”

The meteoric rise in acreage devoted to Carolina Gold rice after our revolution followed the trajectory of improved practices characterized today as the scientific agricultural movement. Over 100,000 acres of ricelands were in production and those acres demanded pure seed. Scientific farmer/breeders moved aggressively to develop vigorous pure Carolina Gold seed to combat the increasing incidence of weedy red rice in Carolina Gold production fields. Their routines against foreign variety and weedy contamination were extensively researched and trialed after 1800. R. F. W. Allston, E. T. Heriot, and Joshua John Ward rose as South Carolina scientific breeders whose seed rices were legendary for purity and vigor in their regions. It is no small coincidence that Dr. Frederick Jones Hill, Orton’s owner from 1826 to 1854, worked closely with his South Carolina colleagues and was equally respected with regard to his research, weedy rice suppression protocols, seed selection, and market production. In short, Orton was one of only five great rice research stations strung along the Carolinas and Georgia devoted to breeding and horticultural science during that era. Orton’s many rice fields were used to develop and trial Carolina Gold rice in any scale from small isolated 100 sq. ft. rice plots to massive field trials on hundreds of acres for production.

Golden Seed Rice History at Orton Plantation

Orton Plantation, under Dr. F. J. Hill, became the vital Northern supplier of pure Carolina Gold Rice seed to support the vast market rice production across all ricelands extending deep into Louisiana beginning in 1830. Orton’s reputation for pure seed was legendary and critical to national rice horticultural advances between 1830 and the Civil War.

Dr. Shields writes of Orton’s rice seed history:

“During the 1830s, 40s, and 50s, Orton Plantation was the northermmost producer of Carolina Gold rice seed, replenishing the production stock of planters nationally. The plantation’s owner during this period, Dr. Fred J. Hill, belonged to the rigorous network of planters extending from the Santee River to the Cape Fear who exchanged seed stock and policed seed purity. The entire southern rice planting system depended upon seed produced by these breeders. Careful planters as far away as Louisiana improved their rice plantings with an infusion of ‘northern seed’...”
Hill embodied the experimentalist spirit that enlivened the most successful southern planters during the second quarter of the 19th century. Because of a fire that destroyed Orton’s mill and grain processing infrastructure in 1824 during the Governor Benjamin Smith’s final years of residence, Dr. Hill, when he took possession in 1826, rebuilt with state of the art engineering the finest rice hulling and milling factory in the region. He installed gates on the water system, and created a fully functional tidal irrigation scheme on the S.C. model. He sought seed partnerships with important rice breeders in South Carolina—R. F. W. Allston, E. T. Heriot, and Joshua John Ward—to secure the best available seed stock. As the most learned of the Cape Fear Planters, he became the resource for the growers at Belvidere, Buchoi, Clarendon, Lilliput, Kendal, Hilton, and Sans Souci Plantations in Brunswick County, providing advice on insect infestation, red rice pollution of fields, and declining field production.

The heyday of rice production ceased with the Civil War. Orton was declared abandoned by the Federal Authorities and briefly turned over to occupancy by freedmen. The lands lay abandoned for fifteen years. When K. M. Murchison secured ownership of Orton in the final quarter of the 19th century, the expense of rice planting in Carolina made in non-competitive with high-yielding Honduran white rice planted in the Southwest. Even John F. Garrell, the greatest agricultural savant of the region after the War, could not make Sans Souci plantation’s rice (despite its superior taste, mouth-feel, and appearance on the plate) compete in the commodity market against rice from Arkansas, Texas, and Louisiana.

In 1911, the U. S. D. A. in 1911 funded the draining of wetland ricefields at Orton Plantation to determine whether they could be converted to dry field agriculture. This attempt at secondary usage failed. A hurricane later in the year effectually brought an end to commercial rice production in the Carolinas until its revival in the 21st century. "Annual Report of the U. S. Department of Agriculture 1911, p. 762"

Heirloom Rice Foodways, Farming and Cultural Notes

Carolina Gold rice market farming created a unique set of foods that eventually evolved into a complete cuisine. Sweet potatoes, brassicas, oats, barley, buckwheat, benne, emmer, bread rye, wheats, maize, cowpeas, broad beans, etc. were involved at the height of 19th century science supported market farming in an elegant sequence of mixed crop rotation prior to industrialization. We have completely lost these combinations and rotations in modern times. These rice crop rotation crops formed the cuisine associated with our market farming and eventually attained stature in Europe and on our tables. There is renewed interest in our rice cuisine, known today as the Carolina Rice Kitchen, and all of the plants and systems that once vaulted it onto the global stage. Dr. Shields is about to publish a definitive work on the plants and foods of our 19th century market farming. There has been explosive media interest in Carolina (including North and South) rice cuisine in the last 18 months since Dr. Shepard, Dr. Khush and Dr. McClung released their new rice “Charleston Gold.”

We are witnessing our youth becoming aware of their own food legacies and we see them returning by the tens of thousands to their local tables nationally. This phenomenon is moving ahead with alacrity and is constant in homes, farmers markets, food kiosks and restaurants. Everyone in the “older” generation in our major urban centers where these food systems are beginning to take hold economically, is adapting or being left behind. In the South, particularly the Virginia to Southern Georgia region, there is renewed global interest in our local food heritage beyond urban gardening and hobby cropping for the first time since the mid-nineteenth century. There are growing clusters of nascent heritage food farmers encircling our larger cities. The latest Southern entry onto the world stage sourcing quality ingredients from this movement is Husk Restaurant in Charleston and Husk’s Chef Sean Brock. Brock is equally a farmer and a chef and has been featured in major media here, in Europe and in Asia more than any other American chef over the last year. Brock’s food philosophy, garnered from his time with Dr. Shields, marries local food history and Brock’s modern locale. Brock is reviving lost foods at a rapid clip. Husk restaurant is living the Carolina Rice Kitchen and they are booked solid 30 days in advance right now. Brock is unabashedly drawing Carolina Rice and its companion foods back into the Southern pantry while the world watches.

Orton should be a major presence in this grand movement toward sense of place and local identity. Simply, there is deep cultural meaning in repatriating North Carolina rice for the people of North Carolina. Our rices were always Carolina rices… they were the legacy of the Lowcountry without cultural borders.

Comment on Landrace Genetics and Farming

Most modern breeders are focusing upon nano and gmo seed improvement and many of our young geneticists are no longer working in the public realm. It would be folly to deny that we must address carrying capacity and the rising challenge to feed a growing global population. This is a given within our pursuits.

But we are aware of adaptive weaknesses in these modern systems. The CGRF set out at our inception to explore our mission scientifically and apply the results to modern rice agriculture systems. We know that landrace cereals regress in small populations and can exhibit more vigor and new traits in large populations. We are also aware that large cereal populations increase frequency of beneficial mutation and sporting in unintuitive ways. We know that there is little chance for this genetic expression in a seed bank replication plot, especially when the stated purpose of the plot is true type replication.

Our position on landrace farming is that we should all keep focused upon the mission to feed the world while leaving scientific and practical breathing room to support and study landrace plant systems that have been adapting to pest pressure and climate change in larger populations for centuries and many times millennia. The Carolina Gold Rice Foundation is following this mission to the letter. Dr. Shepard, Dr. Khush and Dr. McClung cooperated, pro bono, to develop Charleston Gold Rice, an effort stretching nearly a decade and a half. Last year, 100 acres of commercial Charleston Gold Rice came to harvest. This year, over 300 acres of Charleston Gold rice will go in and interest is growing. We expect over 500 acres for 2013.

Landrace plant systems are based upon survival through vigor and flavor… Dr. Shepard, et al, have certainly imbued Charleston Gold Rice with the best flavor traits of Carolina Gold Rice while improving its vigor and field performance four fold.

One last comment. Drayton recorded over 100 varieties of landrace rices grown in the Carolinas.
by 1800. All of our efforts should be focused upon obtaining local landrace rice food security by diversifying beyond the two rices we have in production now.

Interpretation – Heirloom Rice Agriculture and Culture

The cultural interpretation of rice husbandry at Drayton Hall, Magnolia Plantation, Middleton Place and Brookgreen Gardens is impressive and enjoys international presence and respect. But none have working fields. Middleton Place stands alone in interpretation of Antebellum rice husbandry with a small plot of Carolina Gold rice below the butterfly ponds. The Middleton Place staff employs only authentic manual tillage with period implements, heel and toe manual planting, and manual harvest, threshing, pounding and winnowing… all with authentic implements. Middleton also engages authentic rice art and crafts, elite and common rice music and architecture within its interpretive programs. All of these historic plantation interpretive programs present and reflect upon the historic social justice issues and interpretive aspects of slavery as well.

But there are no scaled up interpretation fields of heirloom Carolina Gold Rice in America and no interpretation program focuses upon the importance of separate seed protocols in landrace rice husbandry. There is a growing awareness that the massive contributions and tribulations of slavery will not be embraced with respect to Antebellum rice production until a true vista of a working Antebellum rice field in scale can be part of our national experience. Orton Plantation, of all the Antebellum rice plantations, possesses this vista if her rice fields return to their original purpose… Carolina Gold rice seed research and production. Orton’s facility and potential presence of scale are unmatched with respect to our surviving collection of Antebellum rice field landmarks.

Landrace Rice Seed – Demonstration of Need

The rapid increase of local food gardening and farming continues unabated across America. This movement is driving the establishment of mid-scale local and regional food hubs and is accelerating demand for local niche rices here in the South and elsewhere in America. In South Carolina, a similar deficit has impeded local cereal production. The Carolina Gold Rice Foundation helped develop a mid-scale heirloom rice seed cleaning, processing and storage facility located in central SC beginning in 2010. This facility is now operational.

We’re not aware that there is a local fully equipped facility for heirloom rice seed or production processing in NC or Georgia at this time. There is a color sorter in the 2013 budget of the central SC seed facility which will bring it fully online for quality seed (a dedicated color sorter is essential for rice seed quality and weedy rice prevention management, especially in landrace rice seed systems).

Regarding landrace rice seed production… there is no certified foundation rice seed production facility in NC, SC or Georgia at this time, even though we have access to sufficient breeder seed stock to support at least one now. We envision the need for mid-scale certified foundation rice seed and rice production, processing and storage facilities in NC, SC and GA by 2015 based upon current growth rates and the unpredictability of rice seed supply in the United States.

Orton Plantation is strategically and geographically situated to maximize rice seed and production security (if it is in production) against catastrophic loss due to storms in SC, GA and TX. This was Orton Plantation’s strategic role during the first half of the 19th century as well. Without Orton, we cannot achieve rice seed and production continuity in our region in the future.

Landrace Rice Seed Market – Demonstration of Need

The growth of acreage planted to Carolina Gold and Charleston Gold production rice is about 10% per year over the last four years as the market for heirloom niche rices accelerates nationally. Landrace (heirloom) Carolina Gold rice seed and Charleston Gold rice seed, produced in head row, breeder and certified foundation protocols has been produced only in one facility in the USA… Texas Rice Improvement Association in Beaumont, TX.

As of January this year, head row and breeder Carolina Gold and Charleston Gold rice seed stock will be grown out at Dale Bumpers Institute in Stuttgart, AR, only. TRIA will continue to produce certified foundation seed from DPI breeder. The CGRF asked TRIA to produce 300 cwt each of 2011 Certified Foundation Carolina Gold Rice seed and Charleston Gold Rice seed to serve niche landrace rice growers in South Carolina, Georgia, Alabama and Texas. The CGRF produces an additional 300 cwt VNS rice seed per year to assist in seed availability and act as reserve against catastrophic loss.

The niche rice market is growing rapidly and this season, record acreage of Carolina Gold Rice and Charleston Gold Rice will be planted in the aforementioned Southern states. These acreages are split evenly between conventional and organic rice production management. TRIA will reach their maximum security allocation for CGR and CHASGR certified foundation seed production in 2014. We estimate this at 500/cwt for each rice. The CGRF has capability of producing another 500 cwt VNS as a backup. Although we may have additional VNS capability for these rices, we will need additional sources for certified foundation heirloom rice seed thereafter.

This overview does not account for our new variety research programs for Carolina Long Rice, an black Tribute rice and the Italian cultivar associated with first rices at Caw Caw wilderness South of Charleston by Italian growers in the late 1600’s… tall straw Italian heirloom rices including Vialone Nano.

Having only one certified foundation seed production facility for the growing number of Carolina Gold and Charleston Gold rice farmers in the South is an increasing security risk. A hurricane in Beaumont could easily wipe out a year’s seed production. Weather completely wiped out our seed crops at TRIA once in the last decade and took down half of our seed crop 2 years ago.

The Carolina Gold Rice Foundation is funding the establishment of 50 acres of seed protocol fields off the Savannah River fed by well system and protected from coastal storm systems to a fair degree.

We need Orton rice seed production for strategic security against catastrophic loss as a landrace seed facility at the very least. We also project demand for local rice in NC will grow vertically, once available. We advocate for the restoration of Orton Plantation’s full array of fields for rice seed production and, especially, Orton’s larger fields because they can be deployed for scale-up field trials to be able to assess genetic stability in landrace rice seed.