

## Old School: Glenn Roberts restores Carolina grains



**Common-place:** Glenn Roberts, you are known as the defender of the landraces, the preserver of the most ancient and most storied grains cultivated by civil cultures since the development of agriculture. Would you care to define what a landrace is, and suggest what is its importance as food and as cultivars?

**Glenn Roberts:** Landraces are pre-industrial domesticated plants or animals that are distinct and maintained agriculturally in contrast to modern cultivars/breeds that are distinct and maintained by scientific breeding with modern farming methods. Landrace cereals, legumes and oil seeds have been maintained by farmers over hundreds and mostly thousands of years. This landrace trilogy, if you will, when combined with landrace brassicas, is the basis of all sustainable domesticated food systems worldwide from antiquity. Popular media, since the 1980s, presents landrace cereals, vegetables, etc., under the banner of “heirloom” foods here in the USA. This term is increasingly imprecise because the generally accepted definition of “heirloom” is any domesticated food plant or animal in production over 50 years ago. This definition now includes foods that were developed scientifically between 1950 and 1960 ... the delineating decade of emergent scientifically bred and maintained green revolution production crops in America.

**Common-place:** Most people when they think of a vegetable “variety” think of a plant that will have a uniform configuration, growing history, fruit size. Landraces existed before the modern markets for food and industrial agriculture

came into being. How do they diverge from the common picture of uniform type?

**Glenn Roberts:** The compelling realities of landrace agriculture include genetic diversity where variation is celebrated and encouraged to maintain crop vigor, success in low-resource, high-stress environments ... low fertility, drought resistance, disease and pest tolerance being a few of the chief advantages ... and the innate ability to adapt to climate and other change. Landrace crop diversity and variation contributes to appealing and dramatic flavor profile and high-quality nutrition. It is best limited to human scale small family or community farming due to variability in ripening and crop fragility that can thwart early and/or uniform harvest and wide distribution. In other words, landrace systems are the quintessential “local” food systems meant for “local” consumption. Most important, success of landrace food systems is dependent upon the relationship of many individual landrace plants and animals which creates more diverse foods with inherent variability, which is attractive in human scale “local” distribution, but the antithesis of uniform traits required for industrial farming and manufacturing food systems.



Fig. 1. Glenn Roberts holding cob of Red Flint Corn at Anson Mills, Columbia, South Carolina. Photograph by David S. Shields. Courtesy of Carolina Gold Rice Foundation, Charleston, South Carolina.

**Common-place:** What grains do you currently cultivate? And what are their distinctive qualities?

**Glenn Roberts:** Anson Mills is attempting to revive the husbandry of the Carolina Rice Kitchen ... the cuisine of the Carolina and Georgia lowcountry that flourished before the Civil War. Cereals, legumes and oil seeds are fundamental crops and intercrops (grown together on the same ground) within the Rice Kitchen. This cuisine is the result of the latest pervasive landrace market farming in our region. Our cereals begin with Carolina Gold rice and reach into

every historic Creole crop influence beginning in the late seventeenth century in and around Charleston. All of the subsequent crops are connected in some fashion to successful rice horticulture. All of them share distinct attributes in stark contrast to modern crops. Most are very tall ... up to 7 feet in some instances for rice, wheat, barley, farro, buckwheat, benne, Sea Island Peas, and rye, and up to fourteen feet for maize and sorghum. ... This is reflective of their multiple uses beyond food: thatch, bedding, fodder and silage. All of these landraces have deep roots as well to better uptake water and nutrients including important micronutrients for human and animal nutrition. It is the characteristics of tall straw, deep roots and field ripening not present in modern crops that contribute to extraordinary flavor. Additionally, some of these crops, especially rye, benne and barley are allelopathic ... they suppress weeds without tillage, making them energy efficient. Others are negative pest suppressive ... certainly benne had that role, shared with brassicas, in antebellum rice, maize and cotton horticulture. There is also a wealth of medicinal properties within the set of grains, legumes and oil seeds of the Carolina Rice Kitchen. For example, barley tea, crème de riz, benne leaves, and many others contribute to the pharmacopeia of the Carolina Rice Kitchen.

**Common-place:** How did you first become interested in the fate of the landraces and begin putting them into cultivation in the United States?

**Glenn Roberts:** I thought growing corn and rice and milling both grains properly would be a great way to highlight the extraordinary flavors inherent in Charleston, South Carolina, foodways. As I moved into rice production, I noticed better flavors in rice when planted after field peas than after soy beans. ... When I looked into the anecdotal histories of field peas on the Sea Islands, I discovered planting methods no one was using anymore ... sequencing particular crops without repeating any crop back to back over seventeen years. ... This is known as a sun cycle rotation and it is the most elegant farming system on our planet. When I began to discover the myriad different farmer cultivars (landraces) used in the sun cycle rotations for rice in old plantation journals, I was literally floored ... none of those cultivars ... landrace legumes, oil seeds, cereals, brassicas, were being grown together by any farmer I knew in the ACE Basin. So I began collecting oral histories inland in what is known as the "wheat belt" of South Carolina ... an area beginning in Orangeburg (settled in 1703 by German wheat farmers) and running North and East to the coast. I found individual family farms growing kitchen plots of some of the old sun cycle crops. ... Many were multi-generation free men families and most were somehow involved with small scale milling and had saved old sweet collards, benne, rice, maize, sorghum, mustards, turnips, sweet potatoes, yams, pumpkin squash. But I did not find any farmer still following the full rotation with all the crops. So I decided to pursue all the landrace crops associated with antebellum rice production to explore how flavor development is supported in crop sequencing. I have discovered, obviously, along the way ... we're in year 13 now ... that sun cycle rotations promote extraordinary tilth as well.



Fig. 2. Glenn Roberts examining landrace benne grown by Merle Shepard at Clemson Coastal Research & Education Center. Photograph by David S. Shields. Courtesy of Carolina Gold Rice Foundation, Charleston, South Carolina.

**Common-place:** Because these grains came into cultivation in antiquity before the chemical soil supplementation and pesticide spraying that characterize “conventional” growing in the twentieth century, how do you grow them? Do you attempt to replicate old growing methods? Because ancient agriculture was labor intensive, do you make use of modern combines and technology for weeding, watering, and harvest?

**Glenn Roberts:** Our growing practices, like our milling practices, encompass manual artisan scale for delicate or very endangered crops and modern methods and equipment for many repatriated crops. For seed production, which is radically different from market farming, we use extensive hand labor. These practices are essentially unchanged from antiquity. For our best and most difficult market crops, we integrate hand work with machine farming techniques. We mechanically till a few of our crops in the very early stage of growth, but, unlike modern cropping, we plant cover crops between these crops to suppress weeds. For example, modern corn farming involves roll down no-till (which, if not managed properly can lead to nitrogen toxicity in future crops) or extensive mechanical tilling or spraying to suppress weeds. ... We till once only, then immediately plant an aggressive cover crop like ground runner peas to suppress weeds and eliminate additional tilling. This is a slightly altered version of colonial-era 4-by-4 check hill-up maize farming. For other crops, we rogue our fields ... pick out foreign varieties by hand and we under- or over-sow with allelopathic (weed suppressing) landrace crops like landrace clover, rye, barley, benne, etc. We plant our crops together ... intercropping two or more crops in any field. ... This develops harvest challenges that are not present in modern monocrop farming systems. We plant with crops farther apart than modern crops to accommodate larger root systems and taller crops. We harvest only field ripened crops, sometimes even sweeping the field multiple times with a

team of hand harvesters to pick only ripe crop, versus monocrop harvest of the entire crop by machine all at once ... monocrop harvest requires artificial drying ... early harvest and forced drying suppresses flavor. We never irrigate landrace crops, with the exception of rice, of course, which is why we have about fifty percent success in any given year. Irrigation suppresses flavor in landrace crops. Climate stress improves flavor in landrace crops. All of the above practices we follow in landrace crop farming are exactly the same as, or simulate to a significant degree, horticultural methods from antiquity.

**Common-place:** How do you research traditional growing and cooking methods?

**Glenn Roberts:** My research odyssey with one particular cereal, Carolina Gold rice, illustrates the diverse sources and pathways that lead to repatriating best practices farming and cooking methods for a fundamental element of a cuisine system (the Carolina Rice Kitchen) that is extinct. My research followed three tracks. First, I mined antebellum rice farming and cooking documentation following the classic pathways of research in academic and plantation journals, planter biographies, travel diaries of visiting Europeans during our Colonial era and the same from Northerners after our Revolution, formal historic archives in our region, local newspaper archives and the standard classic cooking, farming and processing rice literature from our region from first contact to 1900.

My second and concurrent pursuit of rice farming and cooking facts and applications in antebellum South Carolina and Georgia was slightly counterintuitive: I set out to survey "on the ground" and document first hand the cooking methods and classic local recipes of Carolina rice throughout the ACE Basin, even though most locals cooked store-bought rice at the time. I surveyed social club and church archives and spent considerable time collecting oral histories from local cooks, farmers who were also cooks, and the community of commercial Sea Island fisherman, particularly families engaged over multiple generations in commercial shrimping. I discovered that families with shrimp boats also farmed truck and cereal crops. The oldest living members of these families had farmed rice before the Great Depression. These elders had hands-on experience with Sea Island farming practices based upon sustainable rice horticulture methods of the early nineteenth century. Their families also knew the arcane rice recipes emanating from nineteenth-century hearth cookery of Sea Island rice.



Fig. 3. Glenn Roberts and Patricia Moore-Pastides, author of *Greek Revival: Cooking for Life*, examining an intercropped field at Old Field, South Carolina. Photograph by David S. Shields. Courtesy of Carolina Gold Rice Foundation, Charleston, South Carolina.

My third track of antebellum Carolina rice research should have been straightforward: I decided to perform hands-on Carolina rice growing and cooking research trials of the methods I discovered. The hitch I encountered was scientific ... international seed banks and the available antebellum rice literature did not clearly define what "Carolina Gold" rice was. Nearly two decades later, I can easily deal with this confusion because we now know there were at least three distinct types of Carolina Gold rice exported from the Carolina lowcountry before the Civil War. But without benefit of clear documentation by modern day professionals engaged in cross-discipline research of antebellum cereals of the South, I decided to accept what the international rice seed banks offered as Carolina Gold rice and put it in the ground. I was blissfully ignorant of the fact that my study was flawed for over two years. The discovery of this deficiency led to my involvement with geneticists and the Carolina Gold Rice Foundation.

After an intense decade consulting with the world's best geneticists, food historians and sustainable farming practitioners, I still follow all of the above three research tracks for every new element of the Carolina Rice Kitchen we repatriate. I have somewhat ironically coined the name "Book Farming" to identify the above first research track. I never assume these first track essential histories and practices will translate into modern reality. Instead, I focus nearly all of Anson Mills resources on food identification, horticulture, and cookery integrity which become clear only after we explore all resources from the second and third research tracks above. This process reverses the classic paradigm "farm to table" and follows a more reliable land based track from "table to farm."

**Common-place:** What are you exploring next?

**Glenn Roberts:** I am fortunate to have open access through the Carolina Gold Rice Foundation, Slow Food USA and the Southern Foodways Alliance to an international group of noted scholars (geneticists, entomologists, food historians, chefs, food scientists, crop scientists, seed archeologists, etc.) whose research intersects everything I do in our fields with landrace crops. The interaction of cuisine, history and genetics is a relatively recent focus here in America, but, in order to redevelop landrace farming systems here in the South, our target continues to be, for want of a better title, Landrace Cuisine ... the complete seasonally driven compliment of local landrace foods at table. The Landrace Cuisine of the Charleston region is the Carolina Rice Kitchen. By surveying New World culinary histories, plantation farm journals, scientific papers of the Agricultural Societies, historic cookbooks, family receipts in private papers, the extensive information from just before 1900 in the USDA Yearbooks, shipping manifests here and abroad, the scientific records surviving within the Madeira culture, seed archeology records, the papers involved with continuing interpretive farming at Plymouth, the National Colonial Farm at Accokeek, Mount Vernon, Monticello and Colonial Williamsburg and others. I also look toward Old World scholarship involving pre-Columbian farming exchange and foodways and their diaspora here after first contact. I am just beginning to explore the early maritime exchange between the East, particularly Indonesia, and Africa through histories associated with the Indies trade. There are literally oceans of resource materials available that reveal the complexities of crop and food characteristics and impact interpretation and repatriation of the Carolina Rice Kitchen and Charleston landrace farming. This challenge remains: how to connect the disparate information in this vast literature to develop a working landrace husbandry manual.

**Common-place:** You have been a critic at times of the “organic” label. What is inadequate in it? How do you prefer to characterize what you are doing?



Fig. 4. Glenn Roberts at Lavington Plantation, Green Pond, South Carolina. Photograph by David S. Shields. Courtesy of Carolina Gold Rice Foundation,

Charleston, South Carolina

**Glenn Roberts:** There may be a less direct term for my thoughts on this ... because even though all Anson Mills crops are certified organic, I am not qualified to be a critic in this arena since I do not farm modern crops. But I do think the term "organic" must be viewed and used in context with its legal designation and regulation under the USDA National Organic Program. I see increasing divergence from what is organic today when contrasted with the spirit and on-the-ground intent of sustainable farming. The list of approved farming substances regulated by the Organic Materials Review Institute includes some questionable farming inputs and "amendments," etc. Some modern organic farming looks much like conventional monocropping ... something farmers who truly care about land quality may not consider sustainable now or in the future. Also, the timeless obligation of sustainable farming should be to present seasonality at its apogee and limit food preservation to those foods that, when preserved, retain or improve on that quality. I think frozen organic TV dinners may fly in the face of this obligation.

**Common-place:** Your training was not in botany, agronomy, or in any of the disciplines conventionally associated with the current practice of agriculture. Would you comment on your background, and how you came to develop such a passion for ethical growing and the preservation of heritage grains?

**Glenn Roberts:** My mother is Geechee ... rice at every meal. And she is a terrific black skillet cook in the best Southern tradition. Her culinary sensibilities emanate from her childhood in Aiken, S.C., and Edisto Island, S.C., during the Great Depression. I was raised on deep Southern foods with rice in the center of my mother's cuisine. I do care about my mother's foods ... they are my foods now but during my childhood they were mostly kitchen garden shadows of the greatness of the Carolina Rice Kitchen ... it was fading even on Edisto Island during the Depression. I had no idea how far reaching this cuisine could be. The simplest foods had the greatest impact on me: mother's grits and cornmeal ground weekly and rice pounded daily on Edisto Island. Today, one of our oldest rice fields is just four miles from my mother's Depression-era church. I suppose the craving I experience for good rice is genetic and the research and scholarship of the professionals in this orbit provide confirmation of what everyone in my mother's generation took for granted: good food is good for you. If I had formal training in genetics, botany, agronomy or any other facet of horticulture, I would not have attempted to revive landrace farming in the ACE Basin. My ignorance made what we have accomplished to date possible. The guiding principle continues to be: authenticity equals flavor, flavor equals genetic diversity, genetic diversity combined with great soil equals the best flavor, the best flavor improves the soil. I am driven to learn every nuance of this principle.

**Common-place:** Though your efforts were not driven by a market imperative to make a profit, you have enjoyed commercial success. Who buys your products? Why? And why do you think success has come your way when so many idealist



planters never manage to become more than hobby farmers operating at a loss?

**Glenn Roberts:** After building hotels and restaurants for three decades, I turned to agriculture and formed Anson Mills for reasons not driven by profit—no feasibility study, no forecasts, no budget. In fact, I purposely set out to turn all my previous hotel business models upside-down. We are grant giving; we return profit to farmers and seed research; we provide support for foodways research on many levels, and we invest deeply in culinary research, both historic and modern. In this model, there is no bottom line. I found out after the fact that this philosophy is called a triple net business model. I set out to make something totally arcane relevant because that mission made sense to me. I knew chefs would get it if we focused upon flavor and made everything else peripheral. And I knew the top chefs personally, so in a way, I cheated because they would answer my phone calls. But the hospitality axiom remains: the only way to keep any great chef on board is with consistent and remarkable flavor. So far, so good.

**Common-place:** Government agricultural policy shapes much of the practice of farming in the United States. Would you comment on the proper role of the USDA in the current situation?

**Glenn Roberts:** I have been lucky enough in the last year to have the opportunity to offer ideas indirectly to the USDA. I believe the role of the USDA involves movement in the direction of sustainable practices while continuing support of market farming and community farming concurrently. The USDA should invest in landrace farming systems research to bridge genetics into modern cropping systems for drought resistance (low water requirements), low fertility production, high disease and pest resistance in a dramatically diversified cropping system as a complement to their ongoing careful shift away from green-revolution systems. The USDA should narrow their ultimate long term goal over the next three decades to net zero distribution (no export, no import) food systems with regional market food security networks (this replaces commodities export/import here and abroad and acts as a decentralized food reserve system) to address catastrophic loss due to any cause ... war, pests, weather, etc. Our food exports and imports should be those foods we can grow that do not do well elsewhere and our imports should be those foods that do not do well here. Our global food security support programs should be in the form of seed that can be saved by third world farmers instead of terminator-style seed or inexpensive commodity grain that suppresses third world agriculture. This is a sustainable path to help feed the world.

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Glenn Roberts, CEO of Anson Mills and president of the Carolina Gold Rice

Foundation, has been in the forefront of efforts to preserve the agricultural and culinary legacies of North America since 1998. He is recipient of the Southern Seed Savers Legacy Award, the Food Arts Silver Spoon Award, and is a member of Southern Foodways Alliance's hall of fame, the Fellowship of Southern Farmers, Artisans, and Chefs. He is currently on Slow Foods U.S.A. Ark of Taste Committee. Equally expert in the field and kitchen, he, with the aid of his wife, food-writer and photographer Kay Rentschler, labors to keep alive the historic grains upon which the world's traditional baked goods and alcoholic beverages depend.