

## Sanders Ridge Farm Creates Profit from Surplus Fruits and Vegetables

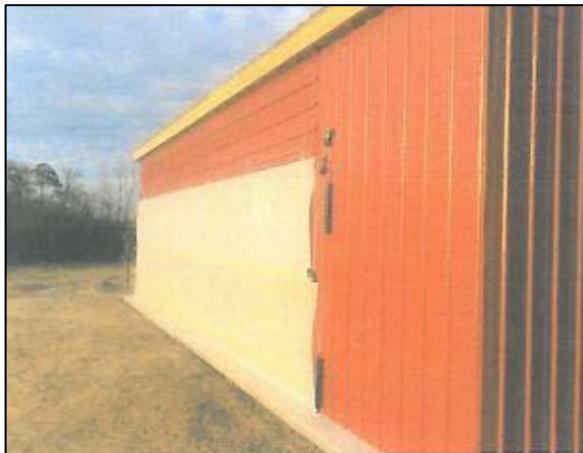
Cindy Shore purchased a commercial Dehydrator and Vacuum-Sealer to produce a line of dried and frozen packaged ready to prepare soup mixes, vegetable side dishes, vegetable chips, teas, and herb/spice seasonings from the vegetables and herbs produced on her organic farm.

Cindy partnered with a local restaurant Chef to create recipes that would provide a tasty product with consistent quality. Her project will create profit from surplus fruits and vegetables; provide extended employment opportunities to seasonal labor and offer drying and packaging services to local growers.

2015 was the least productive growing season in over 10 years. Because of the heat and drought there were several weeks when they had very little fresh produce to sell. Cindy brought the dried packaged products. The sales on those days actually exceeded by 30% what she had been averaging in prior weeks.

They participated in a winter pop-up market on December 5<sup>th</sup>, and sold everything in stock. Sales in dried products alone was the highest brought in all year – and was three times what was earned in fresh produce sales that day...

Luckily, because it remained so warm this fall, they were able to produce more dried products to sell at the winter market. Cindy's project led to an increase in revenue during a depressed growing season.



## Scott Show Pigs

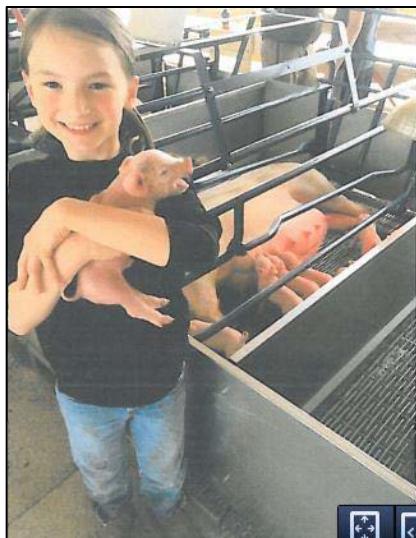
Ben and Sarah Scott are the ninth generation to grow up on the family farm. Their grandfather was in the second graduating class of the Ag Institute at NC State University; and their parents met at NC State University where both were 4-H volunteers.

In the past, the family traveled to numerous states to purchase show pigs. They were successful, but the parents felt it would be a greater experience for the children to raise their own pigs from breeding to finish.

They purchased a few sows and with good management practices they have been successful. People began calling asking if they could purchase show pigs. They used the grant funds to build a facility for housing sows and farrowing these highly prized piglets.

Ben and his sister Sarah work together caring for the pigs and preparing them for show. Eight litters of pigs have been delivered since the building was completed. At the *Got to be NC Show Pig Sale*, June 20<sup>th</sup>, Ben sold the high selling pig at \$1000.

The project was successful. They were able to increase the herd to 13 females for 2016 farrowing. They had over \$10,000 in pig sales for 2015.



### 54 | Scott Show Pigs

Click to go to watch the video Sale Order No. 54 Ear Notch 10-3 Sire: As Goo



Estimates : 200.00 - 2,000.00

Sold to floor for  $(1,000.00 + 60.00) \times 1 = 1,060.00$



## FarmGirl Arts Builds a Cottage Industry

Laura Frazier has built a cottage industry around discarded fleece. She collects the waste wool from her farm and from two commercial sheep operations and re-purposes the wool into art supplies for fiber artists and for clothing. She markets the wool at local markets and through the internet. With her grant Laura purchased ElectroNet fencing for rotation grazing, and wool processing equipment.

She now has 4 large paddocks entirely fenced in and is able to move her sheep and shelters between them. This is saving time, money and energy. Rather than taking an hour per sheep rotation, the time has been cut in half. She also has fence lengths in use for a separate ram pen.

She decided to switch from an automatic sock-knitting machine to the far more lucrative Feltcraft loom; it's lucrative, because more products can be made on the loom. The new loom arrived in Mid-November instead of June; as a result, she has not yet been fully able to capitalize on the income-generating possibilities. She plans to hire a new wool-processing apprentice, and anticipates full-scale production this spring. In addition to raising sheep, Laura is a member of the art community.

Each year, Laura spends a few days at the local elementary school sharing her knowledge about raising sheep and fiber art. With her new equipment, she believes that FarmGirl Arts will become a center of creativity and entrepreneurship for sheep farmers and fiber artists in central North Carolina.



## Growing Moringa Leaf

Livingstone Flowmeh-Mawutor has been growing Moringa, a dietary supplement on a small demonstration site in a Winston-Salem neighborhood. Moringa is a plant that is native to the sub-Himalayan areas of India, Pakistan, Bangladesh, and Afghanistan. In the North Carolina Piedmont, Moringa must be grown as an annual.

Moringa is an important food source in some parts of the world, because it can be grown cheaply and easily, and the leaves retain lots of vitamins and minerals. After three years of testing, Livingstone began production of dried Moringa leaf capsules.

This year, *Konsikracted Moringa Farms (KMF)* manufactured 1215 bottles of 60 count capsules of dried Moringa leaf; and produced about 7,000 kilograms of fresh Moringa leaves. The leaves were processed by dehydrating in a solar dryer. This resulted in 700 kilograms of dry Moringa leaves that will be used to manufacture capsules.

KMF has secured an order on the international market for 60,000 bottles of daily dietary supplements to be distributed from 2016 to 2020. Livingstone is working on a new marketing plan to sell and distribute KMF supplements.



## Marketing with Education

Mark Nicholson and his family operate NOMAD Farm, an educational farm that incorporates rotational grazing techniques they learned while living in the Tibetan Plateau of Western China. With the grant funds they expanded their educational farm tours, added a youth summer camp and offered a semester long farm internship for students and young adults. They sell pasture-raised poultry and grass-fed beef, hogs, lamb, veggies and flowers. Webpage: <http://www.nomadfarms.org/>.

They offered a monthly family education volunteer day. Each all-day opportunity featured a different stewardship focus including a multi-tools day (gardening, chicken processing, wood-chopping), fitness & health, forestry, and turkey processing (grand finale). The day would begin with an hour lecture on whatever the topic, and was followed by several hours of hands-on work led by different team leaders.

They followed through on all components of their application and learned a tremendous amount from hiring their first employees and hosting their first summer farm camp. This all was inspired by and provided for by funds from the grant.

They almost tripled their poultry production, and grossed \$4950 for farm camp tuition. They collected an average of \$180/week for customers paying \$3 per person for farm tours, and trained 225 volunteers.



### Sand Filter Conserves Water

The Sullivan Family Farm is multi-generation farm that grows tobacco, cotton, corn, wheat and soybeans. Scott Sullivan wanted to expand and diversify the produce garden and purchased a sand filter to save water. (*Low rainfall made this an ideal year to test the system.*)

The filtration system cost more than originally thought but has conserved a tremendous amount of water. They believe it will pay for itself in one year. The irrigation filter was used on sweet potato transplants, sweet corn, butter beans and peas.

They are pleased with the project outcome. They made approximately 26,000 dollars on sweet potato plants that would not have survived without the drip irrigation system. They said they conserved a lot of water and saved on energy costs due to the drip system instead of the old overhead irrigation system used in the past.

Next year, they will continue to grow sweet potato transplants and are currently investigating growing squash and possibly peppers with the system this upcoming year.





## Corn Maze Located on Land Where Tobacco was Once Grown

After the tobacco buy-out, the Hemric family of Hamptonville was searching for ways to diversify their farm operation. In 2013, they added an agri-tourism component and opened the Alpha and Omega Corn Maze.

The entire family is involved with the agri-tourism operation. They enjoy welcoming visitors to their farm and educating the public about the farming lifestyle.

The farm produces tobacco, soybeans and small grains. In addition, they own and operate eight poultry breeder houses and 59 beef cows. They employ 6 fulltime employees and 11 part time staff. Ten of the eleven part time employees work during corn maze season and they expect that number will grow.

In addition to the maze, visitors can go for a hayride, hop aboard the barrel train or watch a pumpkin canon shoot off. The grant funds were used to build permanent restroom facilities and a concession stand.

The project was very successful. Visitor attendance was much higher than the previous two years and after talking with some of the customers, they explained that the kitchen and restroom facilities were a major part of this growth. The total number of attendees almost doubled from 2014 to 2015. In 2014 the attendance was approximately 2,200; in 2015 the attendance was close to 5,000.





## Cover Crop Roller Crimper for Organic No-Till: Forsyth County

Al and Linda Hutchison are transforming a 25 acre, former tobacco farm in Tobaccoville, NC into an organic farm to raise heirloom vegetables, herbs and wildflowers. They used their funding to purchase a crop roller crimper, so they can roll and kill the cover crop without using herbicide. This method builds the soil and helps maintain moisture and provides non-chemical weed management.

To improve tractor stability, they put the roller-crimper onto the back three-point hitch of the tractor and pulling. The initial plan of making one pass to both push the roller-crimper and pull the drill seeder was adjusted to make two passes. The first pass would conduct the mechanical kill and the second pass would drill the seed.

Because they used only organic and naturally sustainable methods, their customers recognized the quality and paid a price higher than the average conventional vegetable prices at market. In the first year they anticipated sales of \$2,000 in vegetables with the premium being \$500. In 2015 they realized \$5,200 in vegetable sales including a projected premium of 25%, or \$1,300. They also received \$2,700 in savings, and increased revenue of \$1,300, for a total of \$4,000 in 2015.

In 2016, they will focus on repeating what has worked, and make timing adjustments in the spring to coordinate with projected rainfall. They also want to try the concept of seeding a mix of cover crops to create a much wider diversity of plants growing throughout the year.





## Adapted Mechanical Pea Harvester:

Spencer Davis, a third generation tobacco farmer is diversifying his income by expanding his pea crop. He used his grant funds to purchase a used Pixall picker and adapted the picker to fit his needs. To make the process more efficient, he removed the conveyor and had a local welding shop fabricate a funnel for the beans to fall down into plastic crates for handling. Using scrap metal from an old tobacco baler he made a platform for a rider and the crates.

The efficiency of the picker is very high and saved money on labor. He estimates that the picker could pick a bushel in 2 minutes. Hand picking peas would be 2 bushels per hour per person, and butterbeans 1 bushel per hour per person, in high yielding crops. At these rates the picker greatly reduced harvesting cost as well as increase profits.

Due to the weather, Spencer was unable to plant any garden peas; but he did plant edamame and says that looks promising. He was able to purchase additional equipment, such as a sheller and trailer earlier than expected.

Spencer was recently elected to the farmers market board; he has plans to expand the customer base as well as the vendors. Motivated by his success in adapting the picker, Spencer plans to re-plumb the hydraulic system to make the machine more versatile and develop a mechanized post-harvest cleaning system to increase productivity.

**Deans Farm Market**

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## Deans Farm Market

James Sharp, who grew up on his family's tobacco farm turned a backyard garden into a major wholesale produce company. He grows 80 acres of fruits and vegetables.

In 2001, James became the operator of Dean's Farm Market, a community market with a strong customer base. He has purchased equipment to flash freeze and vacuum pack surplus crops from his farm, as well as surplus purchased from other farms. This will eliminate waste from over production and expand the out-of-season selections for Dean's Market customers.

Webpage: <http://deansfarmmarket.com/>

The new commercial kitchen should be complete by mid to late March 2016. With the Grant funds they purchased a Kettle Pot, Oven, and Vacuum Sealer.

There have been multiple roadblocks from the time consuming task of establishing permits for wastewater to visiting multiple kitchens and meeting with designers to develop a kitchen layout that works for the type of production they require. And, last but not least the weather. The heavy rainfall has limited access to get the site work done to get the project off the ground. Currently they are interviewing for the Chef's position.

This project will be successful by giving their farm the ability to diversify and also to limit over production waste from the crops they grow. It will also help their neighboring farmers once it is running as they can limit and put value to any of their overproduction in the peak of harvest.





Conveyor equipment for the corn bagging operation.

### Niche Market for Bagged Corn

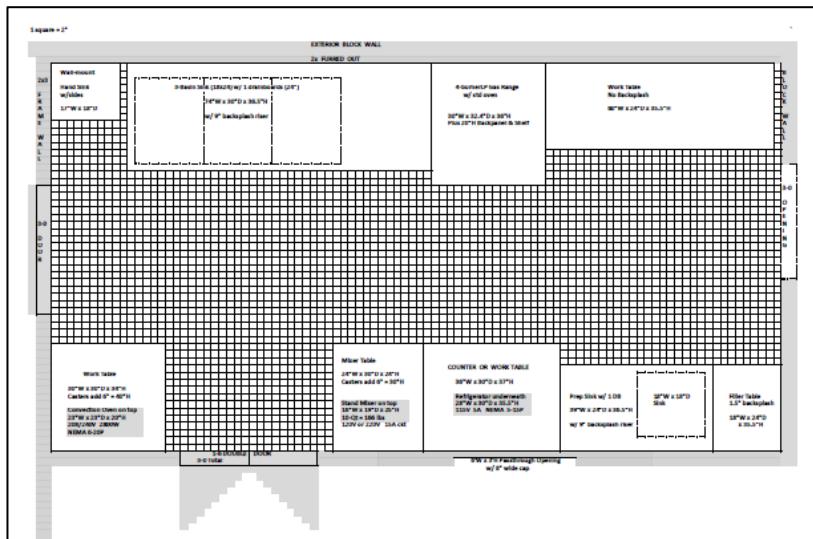
Chad Bullington farms the same land his parents, grandparents and great-grandparents farmed. He believes that change is a necessary part of farming. He has implemented a two-year tobacco/corn rotation for soil and water compliance, and developed a niche market of buyers who want small bags of corn for personal use. This market pays almost double what the corn mill pays. With the grant funds he purchased equipment to establish a bagging operation to sell bags of corn and poultry litter.

Chad came up against several obstacles during this project. First, the poultry litter portion of the project was canceled. After several discussions with county Extension personnel, it quickly became evident that the risk of bagging poultry litter as a fertilizer was not going to be an option at this time. The risk of Avian influenza and other poultry related diseases presents a great risk to the poultry industry.

Second, the summer drought devastated the tobacco and corn crop. There was little time to concentrate on anything but the tobacco until after harvest. With little rainfall, the low corn yields have not made bagging corn feasible.

Chad purchased the scales, sewing machine, and conveyor. He plans to build a hopper to fit the scales. He will also provide storage and an auger to move the corn into the building. He has planned a meeting with AR McKay to evaluate the building site and determine the best and most efficient way to do this.

His goal is to have all of this operation set up and operating for the 2016 corn harvest. Savings on bagging with the automated line will increase profits from the corn crop. Especially if corn prices remain the same at \$4.00 per bushel or fall even lower.



# Community Kitchen

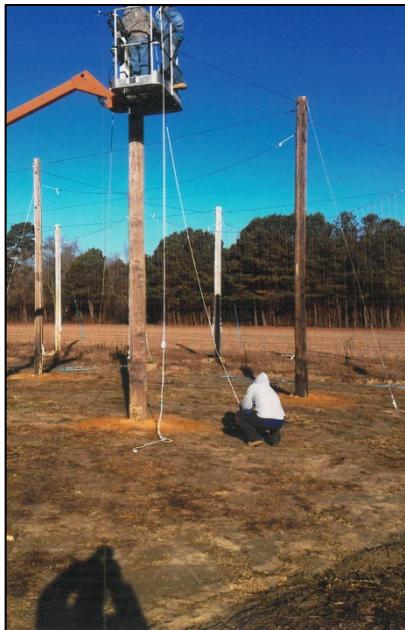
Plum Granny farm is a certified organic small farm on 54 acres just outside Hanging Rock State Park in the Capella community. The farm has been in Cheryl's family for over 140 years. They grow berries, garlic, ginger, herbs, and specialty veggies. They are using their grant funds to build a certified kitchen for the production and development of value-added products from their farm. The new community kitchen will be used to expand their current farm operation and provide a space for other local farmers and entrepreneurs to can, cook and bake in a state certified kitchen.

The kitchen is under construction, but they expect it to be completed and available to rent in May.

The kitchen will offer a gas stove, a convection oven, a food processor, some refrigeration space and possibly a steamer as well as all the pots, pans and utensils needed to create almost anything. The kitchen also offers storage lockers for regular users.

They plan to partner with the Stokes County Cooperative Extension to offer some classes on canning and cooking demonstrations.

"We want your food to be safe and you want to make sure you are doing it in a proper way," says Cheryl.



## Cardinal Pine Farm Hops Growing on 20-foot Vertical Structure

The Leggett's are working on a pilot project to grow beer hops on a 20-foot vertical structure made of poles and cables on less than an acre of land. The Leggett's market their hops to micro-brewers in nearby counties. They purchased materials and a hammer mill and pelletizer to freeze hops when they are harvested. Webpage:

<http://www.cardinalpinefarm.com/>

Even with the best laid plans, one cannot discount the impact of personal injury. Guilford Leggett, injured his knee and had to have knee surgery in July. He was not mobile for two months followed by two months on crutches.

Even so, Guilford and Pam pushed forward. They completed the hops dryer in July, and purchased the materials needed to expand the hop field by another  $\frac{1}{4}$  acre. They planted 511 Rhysomes and harvested 340 pounds of hops in August.

In spite of the set-backs they have proven that hops could grow in an area of North Carolina that was not considered suitable.





## First On-Farm Peanut Drying System

Richard grows 450 acres of peanuts and is the first farmer in his region, to own on-farm peanut dryers. This system enables the operation to be more productive, efficient and reduce expenses.

He initially thought the existing power at the farm would suffice for the dryers, but learned that it would need a 3-phase power instead of single. In addition to the surprise with the power requirements, he also learned that he would need a moisture meter/tester and a Peanut Sheller. Both were unexpected expenses that were not factored in to the initial budget. The moisture meter cost an additional \$4600 and the gas line, rocks and cement added an additional \$7,155. He also purchased two dryers

Richard was able to utilize the dryers for the full peanut harvest season. The gas and electrical bills during the peanut season, while the dryers were in use were approximately \$3800. He estimates that drying fees would have cost \$30,000 in the past for this year's peanut crop. So, in year one he saw a savings of approximately \$26,200.

Richard's experience with this investment provides useful information to Extension and other peanut farmers in the region.





## Riverside Family Farm Corn Maze Adventure

The Slate family of Mount Airy has owned and operated Riverside Farm for five generations. The family transitioned from growing tobacco to producing grains in 2010; and last year they added a corn maze. With the grant funds they added a corn crib and small concession building.

The project was very successful. The grant funding made a significant impact on the farm operation. They were able to serve concessions from the new concession stand, and they were able to book birthday parties, meetings, etc. in the newly renovated Party Barn.

The Party Barn also served as a great place for students to eat lunches during one of the many field trips they were able to book this year. They also were able to do more substantial advertising for the 2015 season due in large part to the grant funding received.

The profit for the season increased this year as a direct result of being able to serve food from our concession area, and being able to book parties and meetings in our Party Barn.





## Rebuilding After a Catastrophic Loss

Jonathan White farms with his father on land that has passed down through several generations. They transitioned from tobacco to soybeans, cotton, wheat, corn and livestock in 2011. The tornado that came through last year destroyed their hay storage facilities, farm equipment, and equipment barns. They employ 6 fulltime workers and 2-4 seasonal workers. One of their employees has lived on the farm for thirty years. Jonathan says you cannot take out enough insurance to cover catastrophic losses.

They used the funds to rebuild the hay storage barn. Hay is used for their livestock, but they also provide hay to neighboring farms. Hay is part of their annual income. The following pictures show the completed facility constructed. They did not encounter any roadblocks in the process of construction and if they had to do it over again, they would construct the same facility as pictured below, as this type of construction is sturdy and blends well with other storage facilities on their farm. The structure is 100 feet long, 55 feet wide and 16 feet tall. They believe this facility will be sufficient to store their annual hay production.



## Experimenting with Plasticulture

Patrick Owens has been farming with a sweet potato farmer in Wilson County for 10 years. In 2014 he made an arrangement to rent land from the same farmer. On part of the land he grew tobacco and on the other half he experimented with the newer technique of growing produce in plastic mulch framing. Patrick learned a lot and wanted to continue his research. With the award funds he purchased a water wheel transplanter and plastic layer.

The project was successful. He doubled the operation size while still maintaining a quality product. He provided temporary employment for 25 workers and sustained 5 jobs. He used the profits to purchase other items such as a row shaper and fertility management equipment. Patrick estimated the value of his production at \$56,000.

His plans for 2016 are to maintain acreage and improve productivity and efficiency. He said there was a lot of room for improvement in the previous season and he plans on implementing strategies to achieve those goals.

**The pictures were captured from video sent by Patrick.**



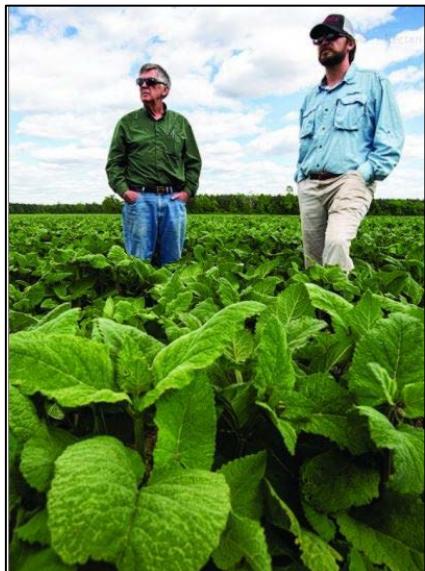
## Repurpose Bushels of Grain into Pounds of Beef

With grain prices on the down swing, Robert James decided to convert bushels of grain into pounds of beef. He has set aside acreage to be planted in a variety of small grains suitable for cattle, pigs and poultry feed. Next year, they plan to offer livestock feed to local farmers and meat producers. The grant funds were used to purchase equipment and to renovate a shelter for feed storage

They were not able to complete their project. The primary road block was not unlike many years, weather and nature. They encountered harvest challenges beginning in September that persisted through December. They also did not anticipate a new pest to the area, sugar cane aphids. Wet weather did not allow for any silage harvest and damaged the soybean crop to the point of toxicity concerns for feed supplementation.

Robert and his son plan to pursue the same plan this year. They have the equipment necessary to complete their goals.

They were featured in a Daily Reflector article that publicized NC AgVentures grant program. This created word of mouth opportunities throughout the late spring and summer. Most interest was overshadowed by inclement weather from October to December.



Photos Courtesy of the Daily Reflector



## Extend Production Season

Jess Scott of Danbury bought his farm with flue-cured tobacco quota many years ago and has grown tobacco most of his life. Scott installed a high-tunnel structure that will allow him to extend the vegetable production season, and diversify the farm operation.

Jesse Scott has worked on a farm for most of his life. In 2014 he grew 5.4 acres of burley tobacco. His wife had a greenhouse and grew tomatoes, cucumbers, squash, and lettuce. People in the community expressed a strong interest in what she grew.

Jesse had helped build the greenhouse and installed the electrical service, water and heat. In November 2014, he attended the High Tunnel Specialty Crops class offered by Surry Community College and NC Cooperative Extension. Jess finished the high tunnel and planted tomatoes last fall.

*I think it was successful, wrote Jess. I learned a lot, good experience and I could see what I could do, or could not do with extended season. I could do tomatoes but learned I had a drainage problem where I planted radishes. I like having the extended season for the fall. Savings was created on my grocery bill for our house and I shared a lot of produce with neighbors and friends. I enjoyed growing spinach, kale, mustard greens and new varieties of tomatoes'. His plans for this year are to put another crop of tomatoes and greens for spring and fall.*



## Sweet Potato Inventory Management

Todd Glover created a high tech inventory management system using Radio Frequency Identification Technology (RFID) to manage his sweet potato inventory. RFID works via a tag that is placed on each product bin for subsequent tracking with scanners as the boxes of sweet potatoes are transported and distributed to their market destination. This system will reduce the cost of lost bins and reduce the manpower it takes to manually log and track the shipments. The extra manpower was used to increase sweet potato production.

They feel the project was successful however profits will not be realized until 2016 as the potatoes are currently in storage waiting to be packed. However, they did dig more acres with less people and reduced daily paperwork by 60%. They reduced the paperwork by capturing the data on the scanner and downloading it into Excel and using Pivot tables to generate the reports.

Per their original estimates, they planted and harvested 270 acres of sweet potatoes, totaling 150000 bushels. Yields were down due to weather. They dug all 270 acres in 10 days and processed an average of 15000 bushels per day. In previous years they dug for 4 to 6 weeks and averaged 4000 bushels per day. They have added 600 additional boxes in 2015 and all are tagged and part of the system.



## Boost Productivity for Small Independent Swine Producers in North Carolina

This was a Community Grant, a collaborative project that included farmers from Wilson, Nash, Edgecombe, Pitt and Martin counties. The goal was to boost profitability for the small, independent swine producers through the sale of show pigs with the *Got to Be NC Show Pig Sale*. Pigs consigned to this sale were produced exclusively in North Carolina according to the "Got to Be NC" guidelines.

A select group of pigs qualify for show pigs and they more than double in value compared to normal sales channels. The Got to Be NC Show Pig Sale allowed show quality females pigs to be sold in neighboring states reaching out to a large audience of buyers. Gilts and barrows competed equally.

All of the piglets were captured on video and could be seen prior to the sale at an online website. One auctioneer took bids from the stage, while another person took online bids. They offered 80 *show quality* piglets for sale, and sold 46; the average price was \$295 per pig. One piglet sold for \$1000. Sales like this are popular in the mid-west, but new to North Carolina. The auction not only provides a marketing opportunity; it gives these farms statewide recognition that has led to additional sales.

# **Rebuilding the Cut Greenery Industry**

## *A Community Grant for Surry County*



**Boxwood Blight**

Presently over \$7 million dollars of farm income lost annually in Surry County alone because of this disease.

*No cure in sight...*



**The Project**

Evaluating plant materials that can potentially substitute as cut greenery to replace lost boxwood tips used by the industry.



**FUNDED AND SUPPORTED BY**



### **Surry County Community Project: a Partnership between Extension, Local Growers and the Master Gardeners:**

Surry County has a strong heritage of tobacco farming but over time many farms, especially those in the higher elevations transitioned to nursery stock, boxwoods, and Christmas trees. Boxwood blight came into the region about 3 years ago. Present estimates suggest over a 7 million dollar loss to growers and processors with no remedy in sight. The grant funds are being used to locate and research plant materials that would serve as substitutes for the loss of the boxwood industry. A local farm offered a portion of their land to be used for research and the project will be managed by NCSU College of Agriculture.

To this point, the project shows indications of successful outcomes. They had a 99% survival rate going into winter. As the project moves into the new growing season, several plant characteristics will be important in our evaluation and dissemination of information in the coming year. Planted material will be treated on a production type of growing environment close to what nurseries and growers will be doing in their fields. They will share production information and recommendations based on how the trial was maintained related to fertilization, insect and disease management. Key data will include hardiness and rate/volume of growth to supply tips for the industry along with plant/nursery management.

All planting information has been shared with local growers. They anticipate holding their first field day in late May/June 2016.



## Raised Bed Mulch Layer Helps Growers Diversify:

Yadkin County is a predominantly rural county with agriculture leading as the top employer and number one industry in the county. Fruit and vegetable production are viable alternatives to tobacco production, and bring a higher return than traditional row crops. The goal of this community project is to purchase a raised bed mulch layer and water wheel transplanter that will be available for producers to rent; making it easier to expand a small garden and or to transition away from tobacco.

Commercial strawberry production relies on plasticulture and requires special equipment to install. This can be difficult when there is a narrow window for planting and very few businesses offer the service.

The use of this equipment can improve efficiency and production on fruit and vegetable farms bringing down their costs and allowing them to work with larger retailers.

The mulch laying equipment rents for \$50 a day for each piece of equipment. Two trailers were purchased so they could accommodate individual equipment rentals. The equipment is being marketed through Extension, FSA, Soil and Water, and NRCS.