

West Virginia Department of Agriculture



Specialty Crop Block Grant Program

FINAL REPORT

12-25-B-1103

Submitted by
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Subrecipient: Marion County Beekeepers Association
Project: "Beekeeping Education"
Amount: \$600.00

PROJECT SUMMARY

- The honeybee population has been severely declining over the past few years due to many new diseases and pests. Beekeepers are becoming discouraged and many are cutting back on the number of hives or giving up completely. It is very important to encourage new beekeepers and help the current beekeepers learn how to combat the problems we are encountering. Our local association – Marion County Beekeepers Association (MCBA)– has been working hard to make our community aware of our plight. We feel the best way to accomplish this is by education.
- We have been holding a beginner’s beekeeping class every year for over 20 years and many of our materials were outdated. Technology, as well as beekeeping has changed dramatically in the last 20 years. We had been using a VCR and TV for showing tapes. A new DVD player and DVDs were needed to make our teaching task much easier and more portable when traveling to classrooms and meetings.
- The purpose of this grant was to provide tools to assist our members to take this information to the public. We felt we needed books, a DVD player, DVDs and other educational materials that could be used to prepare presentations.

PROJECT APPROACH

- Many of our members give public presentations to local schools and civic groups. The project administrator consulted with them and asked for their input for what materials were needed. Many felt that their biggest obstacle was keeping the attention of school-aged children with the materials we had. Modern materials and videos were recommended for this purpose.
- There are several beekeeping supply companies that provide an array of materials to choose from. We shopped through these catalogs to find the materials that would best suit our needs.
- We have acquired a DVD player, 10 DVDs, 10 books and other visual charts. These have been very valuable in making presentations. MCBA members now have better tools and are more willing to accept an invitation to present a program about honeybees and their role in nature.
- These materials have been very important in our beekeeping classes as well as our monthly meetings. We can now better demonstrate some of the methods necessary for hive package installation, medical treatments, hive inspections and other general information concerning beekeeping and the honeybee.

GOALS AND OUTCOMES ACHIEVED

- Our beekeeping short course is offered every year in February and the acquired materials proved to be valuable tools for these classes.
- DVD player and videos have been used in our regular monthly meetings to demonstrate techniques for hive treatments and inspections.
- We have not had many requests for public presentations since the completion of this project but we feel that we have the materials necessary to educate and reinforce the importance and value of the honeybee to our agricultural endeavors.

BENEFICIARIES

- MCBA members benefited by use of the DVD player and the videos at monthly meetings
- The annual beekeeping classes offered by MCBA usually have 20 – 25 students who benefited by use of the materials and visual aids.
- Members giving public presentations benefited by having access to reference materials and visual charts.
- Schools and civic groups benefited by having better informed presenters and use of visual materials.

LESSONS LEARNED

- Not as many of the materials are being used as expected but feel the acquisition was and will be very valuable to anyone asked to give presentations or teaching the beekeeping classes
- Since we now have these materials and they are not being used as often as we hoped, we will be setting up a library to allow any of the MCBA members to check out these materials to use as reference guides in many of the aspects of beekeeping. Often the experienced beekeepers are asked to recommend a book that best covers what a beginner needs to know. Many are reluctant to make a recommendation since this is just a personal opinion and what may be easy for one to understand may be difficult for someone else. Having these materials will serve to help them make a decision about buying materials for their own libraries.

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Subrecipient: Friends of Milam Creek
Project: "Friends of Milam Creek"
Amount: \$3,000.00

PROJECT SUMMARY

Milam Creek in Wyoming County and its adjacent communities are nestled so deeply in the Appalachian coalfields that the region is often forgotten and underserved. The Milam Creek neighborhoods are home to hardy mountainfolk who have learned to adapt and survive despite inadequate infrastructure systems, limited health, education, and social services, few economic opportunities, and powerful industries degrading the natural environment. This resilient community continues to find ways to build hope and change, and have channeled these ambitions in an organization that has accomplished much in the last three years- Friends of Milam Creek (FOMC). There continues to be a great need for local, healthy food access in our community. The closest full-scale grocery store is a 35-minute drive from the Milam Creek communities. Thus, FOMC has committed to fostering safe, sustainable agriculture practices through the initiation of community and home gardens growing specialty crops native to WV. Our goal is to promote sustainable and safe agricultural practices and community development via a community garden, FOMC Gardening Association with home gardens, and, eventually, a farmers' market. Growing fresh, nutritious produce in our community and neighbors' gardens has increased access to specialty crop foods for the public and garnered increased community activism and interest for a local farmers' market. Providing a means for home gardeners to supply fresh food in their meals, improves the health status and lives of community members.

The introduction of a local food economy has benefitted the welfare of the Milam Creek community in many ways. A venue for families to purchase fresh produce and for small farmers to sell and incur a little profit, is building a local economy, as opposed to traveling 35 minutes to build another community's economy. Community interaction and activism through gardening has seen several successes over the last three years, in spite of the garden being destroyed by vandals the first year. The community was angry, and as a result of increased vigilance, nothing like this has happened since.

We have focused on specialty crops native to Wyoming County, reawakening a local ecological pride in home grown efforts. We promote through the use of our marquee and other fiberglass embedded signage around the park, distributed native seedlings, and provide produce to the local food pantry.

We have measured success in two ways. One: the number of families that benefit from the crops grown in the community garden. Through the neighboring House of Hope Food Pantry, much of the produce grown in the garden has been donated for food baskets to needy families. The need has grown, and the pantry is now supplying baskets of food every month to over 100 families. We are reaching not just those people in our service area, but now families from Glen Rogers are also being served. Including children, the pantry feeds approximately 400 people monthly. Two: the number of families who are now building their own gardens and raising their own produce. We have decided that a good way to increase this number is to put packets of seeds in those monthly food baskets (March to July), and will be implementing this next spring.

PROJECT APPROACH

The project approach was constantly evolving as roadblocks were encountered and program activities stayed within scope of the grant. Native seedlings and other specialty crops were not available through the designated provided (Enchanter's Garden) but qualified seeds and seedlings, including several mentioned in the original proposal, were purchased. Success of these crops was seriously jeopardized when vandals destroyed the first garden plantings. Alternative sources replaced many of the lost crops and successive plantings are ongoing.

Brochures, promotion and education about the project was accomplished through volunteers and promoted at community events and activities stressing the program, its health benefits and the value of specialty crops in the community. The signage took the form of kiosks promoting both the community garden and information about growing and caring techniques.

The goal of establishing a FOMC Garden Association took an alternate form as it morphed into the Friends of Milam Creek Organization due to time constraints and interest. The garden and orchard appear on monthly agendas and the activities of continuing the developed area continue to lie with this group.

We built raised beds, and while there was not enough space for everyone who wanted to reserve space and for FOMC to provide produce to the food pantry at the same time, instructions were provided on how to do raised gardening, and several families implemented this process. This is an older community, and several retirees wanted to grow potatoes but did not have the ability to plow the ground. We experimented with something we had read in GRIT magazine = planting potatoes in straw and hay bales. Success was mixed with this growing technique.

The residents interested in gardening created a way to pump water from the creek instead of carrying water from the old school for irrigation in the garden and orchard area. A fence was built around the garden as we discovered the deer love the produce as well as people do.

We cleared 10 years of trash and debris from the exercise green and growing/orchard region (left over from the flood of 2001), creating a space where children and adults can exercise or put a blanket on the ground while family members participated in growing and gardening activities.

We have put bird houses around the wetland and distributed seeds to bring in pollinators essential for garden success in an area ecologically scarred from resource extraction.

A donation from Southern Conservation District allowed FOMC to build a farmers market shelter that has seen quite a bit of use, including use by the food pantry and local growers for specialty crop distribution.

The Wyoming County Board of Education donated the old ball field (adjacent to the community garden) to FOMC, and that space had to be cleared and readied for planting. That was done, and fruit trees were planted in the center of the field. Several pairs of loppers had to be purchased.

Cliffs Natural Resources donated money to build an elevated walkway, which now borders the orchard on three sides, and the community garden on its fourth. This walkway will be used as

an outdoor environmental classroom once educational displays are put in place (kiosks focused on specialty crop production, pollination and orchard production

The Wyoming County Day Report Center helps to keep the park mowed and weed eaten during the growing season. Mowing equipment is owned by FOMC volunteers. At some point we need to request funding to buy a riding mower of our own.

Eligible expenditures utilized SCBGP funds (i.e. seeds, fencing, pump for irrigation, growing/informational kiosks) as well as multiple donations for a combination of both eligible and non-eligible expenditures demonstrate interest in the project from contributors. Excess produce was distributed via food pantry boxes. Continuing to build interest, maximizing resources (avoiding untended raised beds) as well as grower interest will help this project continue beyond the grant cycle.

The community stage, marquee, playground and bird houses were all built using community volunteers and general funds and not SCBGP funding.

GOALS AND OUTCOMES ACHIEVED

Expected Measurable Outcome #1: If 100 WV specialty native crop species are dispersed to 20 home gardeners/community members (5 different plants each), the WV native plant portion of the project will be considered successful.

The live plant outcome was not as successful. Where we were successful was in distributing purchased and donated seed packets to interested families. We recognized that the best time to distribute these seeds was in March and April. There were at least 100 seed packets dispersed.

Expected Measurable Outcome #2: If 20 home gardeners/community members join the FOMC Gardening Association, the community development and media campaign portions of the project (including signage, brochures, community garden promotion) will be considered successful.

The FOMC organization continues to grow. Families from the community come to our meetings and planned events. They participate in discussions regarding how to increase the yield of the raised bed gardens, and which native species to grow. FOMC continues to interject those species which have fallen out of knowledge like the artichoke. Throughout the grant, at least 20 families have participated at one time or another but lack of interest, time, attrition (older population) and disappointment at many of the setbacks (i.e. vandals) mean a consistent participation by 20 families has not been sustained.

Expected Measurable Outcome #3: If 20 community members participate in the FOMC Community Garden, the community development and media campaign portions of the project (including signage, brochures, community garden promotion) will be considered successful.

The community garden club has integrated itself into the FOMC organization itself. It was too difficult to schedule separate meetings and separate organizations, so we simply made the club part of our regular meeting agenda, and probably spent more time discussing garden needs than other things on the agenda. We purchased three fiberglass embedded kiosks for marketing sustainability with SCBGP funds (provides information about upcoming garden events and production information). We created a brochure that we distribute at every opportunity, and when the PSD was in the old school, kept brochures on a display table that we regularly had to resupply.

Reenergizing a community takes time. More and more families are participating. We started a community watch that has resulted in a real reduction in crime in the area. People are beginning to take pride in the area, and are finding new hope in the improvements.

BENEFICIARIES

Every family who lives along the Milam Creek watershed, and those in the surrounding communities. A goal for this spring is to get kids in the area out into the raised beds to get them ready for planting and putting seeds in the ground.

There are over 2000 people living in this census quadrant. Add to that the numbers of people that the food pantry feeds every month and the number is exponential.

LESSONS LEARNED

What we thought was going to be short term was not. Getting a community reenergized is not an easy thing – especially in an area that has the kind of crime that we do (drug based). It took a couple of years for the community to see that this was a project with permanence, and another year to begin volunteering.

We were most surprised by the numbers of organizations wanting to participate: Mountain RC&D, Southern Conservation District, The Wyoming County Board of Education, County Commission, Ken & Coy, Mount Olive Correctional Facility, and the Boy Scout Community Service Initiative. We appreciate those partners more than we can say, and are currently in the process of developing a sign that displays partnership.

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Photo below is of community garden and orchard site.



Subrecipient: West Virginia State University R&D Corporation
Project: "Specialty Lettuce and Greens Production by Youth"
Amount: \$8,000.00

PROJECT SUMMARY

Teaching our youth how to become more self-sufficient has become more and more difficult. Most children in the urban areas of the state have not been given the opportunity to grow their own food in a garden or taught the process in even its simplest form. In the urban, low income housing areas in Huntington, the community has come together in order to better their lives through planting gardens and educating themselves, as well as the kids, on the importance of knowing how to produce their own food.

The original purpose of this program was to work with youth to introduce them to aeroponic and hydroponic production of specialty lettuce and greens, as well as to test the marketability of these crops in the local area therefore justifying the expense of establishing a small scale specialty lettuce and greens range to a local farmer as a business venture. With consumption of healthy, locally grown foods on the rise in our society, it was logical to think that producing specialty lettuce and greens and distributing it locally could potentially meet the supply needs of various niche markets in the area. The other benefit to this program would be the ability to conduct workshops to teach others how to grow both aeroponically and hydroponically, in order to increase their production and provide a sustained supply of the commodity to meet the needs of the various local vendors.

In general, though this project did not go exactly as planned and the data collection portion of the project is in its initiation stage, the overall results and responses has been astounding. The program outreach efforts met its initial proposed marks of outreach with exposure to 93 youth and 19 college aged students, while also involving 4 restaurants/establishments, but the future of the project from here on out may be more of the story. Through the exposure of the hydroponic and aeroponic production systems to both the general public and various agencies around the state, it is very possible that this technology will become part of the solution to increase agricultural production within WV as well as play a role in increasing awareness of healthy eating practices. Due to this funding opportunity the future may be a little brighter for residents of West Virginia.

PROJECT APPROACH

This project was implemented in two phases- implementation of hydroponic and aeroponic technology and the workshop phase. These may be explained in more detail in the outcomes section of this report.

Based on the production issues that occurred within given timeframes of the grant, the little data collected was not sufficient to illustrate the capacity of the systems consistently. Due to weather as well as electrical issues, crops were compromised before production could be fully measured- in some cases entire crops were lost as they were approaching harvest. Rather than submit lack luster information that is no way indicative of the ability of the system, it was better to wait for a productive trial to be conducted with the youth to share.

With the high tunnel construction and trials with running the towers via solar providing less than consistent power, additional solar is being added to increase the capacity and will result in

the first truly functional trial under these conditions this season. Reports can be submitted at the end of this growing season back to illustrate the capacity of the systems and truly indicate the production capabilities in this scenario.

Phase 1- Implementation of Technology

This project was developed to increase awareness of hydroponic production capabilities and was initiated at the Barnett Center in Huntington. At the start of the project concentration was placed on developing relationships with entities in the area that would benefit from this type of technology. Meetings were conducted individually with representation from Mount West Culinary Program, Big Sandy Superstore Arena, The Wild Ramp, Heritage Farm and Museum and Black Sheep Burritos and Brews. A buzz around the idea of hydroponic production was created.

As the project evolved, systems were incorporated at the Barnett Center and production initiated on a small scale. A hobby greenhouse was constructed to assist with seed and propagation needs while additional systems were added to trial other production methods. Produce grown was utilized directly in with the Barnett Center and offered to community organizations that meet regularly out of the building. The SCRATCH Project youth helped with harvest and general crop maintenance with the systems at the Barnett Center as well as enjoyed the fruits of their labor. During this same timeframe relationships were forged further with the Wild Ramp to incorporate a system into their marketplace.

As the additional funding was received the project moved toward the idea of fostering relationships and exposing others to the technologies available. The construction of the high tunnel on the tennis court became a community effort as others became engaged with the idea of the project working directly with the youth. As the towers were constructed and powered by solar panels, the awareness throughout the town expanded. During this same timeframe the towers in behind the Barnett Center continued to produce on a more regular basis and the produce from these were distributed at the Wild Ramp and the East End Bazaar in Charleston. Presentations were given around the state illustrating the incorporation of this technology in conjunction with the SCRATCH Project as well as discussions in regards to the potential for use of these systems for adaptive gardening, in particular with disabled veterans through the Huntington VA Hospital.

By the end of the project, though everything did not go as planned, the end result has been positive in nature. The exposure of the technologies has opened the eyes and minds of many to the possibilities for future production capabilities. This project has actually served as a starting point, and rather than concluding here as of September 30th, I feel it is actually just beginning. As we look toward the spring of 2014, the production range will be ready for early production starting in March and we look forward to documenting and trialing numerous crops to illustrate the potential for production under the season extending high tunnel.

Phase 2- Workshop Delivery

The program culminated with the workshop delivered out of the Barnett Center and educated the 14 participants of the benefits of hydroponic production in comparison to traditional agricultural practices, while also illustrating numerous hydroponic production methodologies. After a two hour long presentation and discussion, the workshop moved into the hands-on mode which exposed the participants to the functional systems at the Barnett Center as well as well as demonstrations on how to build a few different production systems. The workshop ended with a tour of the tennis court high tunnel aeroponic range running on solar power. The workshop was

well received and resulted in numerous partnerships that are continuing to evolve today. These partnerships are denoted in the latter part of this final report.

Goals and Outcomes Achieved

Goal 1

It was anticipated that throughout the life of the project that approximately **100** youth would work in some capacity within this program. Through their involvement, the youth would increase their knowledge of specialty lettuce and greens production, as well as gain a better understanding of marketing and distribution of the commodity through interaction with local businesses. Extension staff and volunteers from other organization provided oversight of the youth activities as well as technical assistance during the production of the specialty crops. The expectation was that there would be **four restaurants and establishments** involved with the program by the end of the funding in September 2013.

Outcome 1

Throughout the program youth involved in the WVSU SCRATCH project have been intertwined with the project. From seeding rockwool cubes to assisting with maintenance and harvest, the kids have become familiar with the various systems- but mainly the aeroponic technology. As the SCRATCH program has evolved, we are now up to 67 youth who have been engaged in the project, those most recently come from the SCRATCH afterschool program out of Spring Hill Elementary. Along with the SCRATCH project comes a delegation of 18 Marshall Undergraduate Volunteers who offer up their time to engage the youth in the after school setting and assist with all the projects undertaken by SCRATCH.

Working in conjunction with the Farm to School in Cabell County, Rhonda McCoy and her Americorp Vista Brianna Hairston have joined forces with the WVSU SCRATCH Project to incorporate 4 aeroponic production towers in with kids at Spring Hill Elementary. Made possible through a Farm to School grant from the Department of Education with additional funds through the CYFAR/NIFA funded SCRATCH Project, the systems have been constructed and are being planted with lettuce, peas, strawberries and tomatoes (in the spring). Additionally, 26 preschool aged youth from Spring Hill Elementary preschool program have interacted with the program through assisting to transplant roughly 80 strawberry plant runners from the small fruit demonstration site in Milton, into rockwool cubes to be planted into the towers from this project as well as other applied research trials around the state. This brings the youth involvement in the project up to a total of **93** kids and **19** Marshall Undergrad and Grad Students.

Finally, a Marshall Environmental Science Graduate Student worked with the WVSU on some applied research on water conservation through the aeroponic production system during this timeframe. Over the course of the 3 month trial, data illustrated the following results in direct comparison to containerized plantings of tomatoes:

- ❖ July 2013- Tower Garden- used 45 gallons= 180 qts/20 plants= 9qts/plant
 - Potted Plants- used 100 qts/5 plants= 20qts/plant
- ❖ Aug 2013- Tower Garden- used 35 gallons= 140 qts/20 plants= 7qts/plant
 - Potted Plants- used 115 qts/5 plants= 23qts/plant
- ❖ Sept 2013- Tower Garden- used 40 gallons= 160 qts/20 plants= 8qts/plant
 - Potted Plants- used 105 qts/5 plants= 21qts/plant

From the comparison it was summarized that the aeroponic production systems utilized 37.5% less water during the course of the trial.

Outcome 2

As we began our search for potential markets for the specialty lettuce and greens it became evident early on that there would definitely be an emerging market. Due to the amazing response to the SCRATCH Project in Huntington, it became a logical decision to approach those entities to determine their interest in this project as well. During November of 2012, the Wild Ramp Local Foods Market at Heritage Station became home to one of the Tower Garden systems with the youth responsible for accompanying WVSU staff to the market for regular crop maintenance as well as crop rotation. We worked with the staff of the Wild Ramp to establish a pricing system for cuttings off of the system- starting out with the Tower Garden is full of parsley, chives, thyme, rosemary and lemon balm. All the proceeds from the sale of these cuttings went back to the Wild Ramp in support of their efforts and willingness to collaborate. The idea was to allow the customer the flexibility to come and obtain cuttings in as low as a ¼ of an ounce portion. They would be able to pick and choose what they need to make up that amount and are not restricted by only one herb. The pricing has been established at \$1.00 per ¼ ounce; \$2.00 per ½ ounce; \$3.00 per ¾ ounce; and \$4.00 per ounce. This price schedule was created based on the going rate of \$3.00 per ¾ ounce of prepackaged, hydroponically produced herbs under the Melissa's label found at local retailers. The overall idea was lucrative, but the demand for the product was underestimated. Plants in the tower were overharvested to the point of death and at this point in the project; there was little that could be done to keep replacement plant material in rotation. Ultimately, the tower was removed from establishment after two rounds of plant material was replaced and maintained with youth in tow but I feel once the production range is functioning full force that this type of distribution would be highly fruitful.

The second establishment that came on board with the project was Black Sheep Burritos and Brews located on Hal Greer across the street from the Marshall University campus. As a huge supporter of the local foods movement in Huntington and a restaurant who takes pride in their use of fresh ingredients, was a natural fit. Talks began in the fall of 2012 through connections made with the SCRATCH project and ideas were tossed around to determine exactly what they would desire in the way of specialty lettuces and other products. Many discussions occurred with the restaurant, requests spanned from specialty lettuces/micro greens to edible flowers. By December 2012, it became evident that the demand for the products was going to outweigh the current production capabilities illustrated through the interactions with the Wild Ramp, and at that time we were asked to submit for an additional \$10,000 to develop a production range. With the additional funding arriving to campus in late January and added to the budget line for draw down by early February, additional production towers were ordered and the timeline put in place for high tunnel construction and solar panel implementation. With a restricted timeline in place to complete construction and begin production, this relationship was tabled and will be rekindled when production is abundant in spring of 2014. The overall plan of the project with Black Sheep is to work to determine the capacity of the towers to keep up with the demand of a restaurant as well as the promotion of the idea that restaurants can become their own suppliers through the incorporation of a small growing range of these systems.

With trials of swiss chard flourishing in towers at the Barnett Center in the spring of 2013 while the greenhouse and high tunnel were amidst construction, a third seasonal market was established with the East End Bazaar in Charleston. Structured as a nontraditional marketplace, the East End Bazaar is an open-air artisan market featuring a variety of functional and collectible arts

and crafts. Each week, the Bazaar hosts a wide variety of high-quality, juried artisans, live music and entertainment, locally-sourced food, and plenty more surprises. Working in collaboration with the SAGE Project in Charleston, WVSU and the SCRATCH Project were welcomed to distribute the swiss chard at the local market to rave reviews. A lot of the produce was used in conjunction with a local chef but a direct market to that chef was not initiated, but this will be a follow up discussion as production under the high tunnel increases.

Finally, with buzz locally vamping up since the November 2012 introduction of the aeroponic system into the Wild Ramp, by the time the hydroponic/aeroponic production workshop out of the Barnett Center in Huntington rolled out, a relationship had already been cultivated with the evolving Farm to School Program in the state. An unexpected target of this grant program, the interest in specialty production in the towers to meet the needs of the local school cafeterias has been staggering. Solidified through the program workshop, the relationship with the Farm to School Program has grown exponentially with three school incorporating towers for the youth to work toward production for the salad bar and four more working to obtain grant funding toward implementation. The schools are not only interested in specialty lettuce and greens, but they are also intrigued by the production of celery, strawberries and cherry/grape tomatoes. This will be covered in more detail under the unexpected results area of this report.

Goal 2

A second measurement tool for the success of the project was the registration of participants for the workshop provided by the Extension staff and volunteers from other organizations on the technology utilized in the project. State and Federal Agency personnel were invited to participate in the workshops in order to gain a greater understanding of this production methodology and how it may benefit small local growers in the future. It was anticipated that **30** people would attend the workshop conducted on aeroponic/hydroponic production, with the participants of this workshop surveyed regarding the knowledge gained from the experience.

Outcome 1

The 2 hour long Hydroponic/Aeroponic Production Workshop was conducted in September in Huntington, WV at the Barnett Center, along Hal Greer Blvd. There were 14 participants at this workshop and they were instructed on general hydroponic production, methodologies behind the production and given hands-on interaction with setting up several systems with a focus on the aeroponic production technology under the high tunnel with solar panels. Of the 14 participants, there were 7 respondents to the evaluation with all illustrating an increase in knowledge and 5 of the 7 interested in incorporating this type of production in the following year. With representation from local farmers, WVU Health Sciences, PEIA, and the Cabell County School Nutrition Office- the audience well exceeded our expectations.

Following on the heels of this successful workshop, the President of Future Growing- the company who developed the aeroponic technology for the Tower Garden, was invited to participate on the WVSU Extension and Research Advisory Council on October 4th. Since he was flying in the morning of October 3rd, he offered to conduct a presentation about the aeroponic production technology and we structured an additional workshop. Hosted at the WVSU EDC Center in Charleston, WV an additional 27 participants were on hand to learn more about this amazing technology. The presentation was videoed and can be watched by following the link below:

❖ <http://www.youtube.com/watch?v=YE6Xk5F51og&feature=youtu.be>

Outcome 2- Unexpected Results

To say the least, this project has taken on a life of its own, expanding well beyond the intent of the project. Below are meetings that have been a direct result of connections made through the funding of this initial project.

PEIA

Meeting with PEIA Workplace Wellness- Sept. 27

After attending a workshop in Huntington, WV on hydroponic and aeroponic production presented by Melissa Stewart, we were contacted by PEIA staff members in charge of workplace wellness across the state. Ms. Nidia Henderson and Ms. Virginia Manchin are very interested in working with WVSU Extension Service to develop an MOU for us to bring in different workshops not only focused on food production, but also for overall health classes as well. This would be a partnership that all of the Extension staff could benefit from.

Our initial discussions have us looking at 3 pilot sites with which to trial a system of aeroponic growing towers in workplaces that would allow the employees to harvest directly from the towers either for their lunch, or to take home to their families as part of the family meal. This partnership is one that can help to benefit everyone involved as it opens up potentially 1,000 workplace locations with which to present our workshops while also helping to get the public employees in the state healthier one workplace at a time.

PEIA Workplace Wellness Workshops from WVSU Extension Service

During the week ending Oct. 18th, a comprehensive list of workshops that could be offered by WVSU Extension Service was sent to representatives from PEIA Workplace Wellness. This list of workshops included classes from CARD and FCS staff and will be added into an MOU over the coming months which will allow WVSU Extension Service to offer these approved workshops in nearly 1,000 worksites around the state of WV. Currently an MOU is in the works between the two agencies.

Farm to School

Tyler County

Conference call with Nutrition Director from Tyler County in regards to upcoming Farm to School Grant opportunities in conjunction with the aeroponic production systems

Wetzel County

Conference call with Nutrition Director from Tyler County in regards to upcoming Farm to School Grant opportunities in conjunction with the aeroponic production systems

Tyler/Wetzel County Farm to School- Oct. 9, Tyler Consolidated High School

We presented a talk on JMG and aeroponic production to the Tyler County Nutrition Director, Health and Nutrition Teachers- Elementary-High School, FFA Teachers and WVU NOI on aeroponic production and JMG Program in conjunction with local Farm to School movement. We are working with both counties on Farm to School proposals for future funding to incorporate aeroponic production technology into the local schools.

Aeroponic System Incorporation

Cabell County

Facilitated the purchase and set up of 4 tower garden systems in collaboration with Nutrition Director Rhonda McCoy at Spring Hill Elementary School in Cabell County. The systems will be managed in conjunction with the SCRATCH Project that is conducted out of the afterschool program efforts

Raleigh County

Facilitated the purchase and set up of 3 tower garden systems in collaboration with the FFA teacher Kevin Okes and the Nutrition Director at Liberty High School in Raleigh County. This will be replacing the aquaponic systems to illustrate a different method of food production and looks to expand efforts to high tunnel on site in the future

Aeroponic Production Trial with WVU Ag Agent John David Johnson, Jackson County

Meeting with Jackson County WVU Ag Agent- Oct. 7, County Farm- Cottageville

We met with John David Johnson to discuss potential for collaboration in high tunnel production with aeroponics, community/adaptive gardens and crossover with local foods/Farm to School program efforts in the county with both Ripley and Ravenswood High Schools.

Meeting with Jackson County WVU Ag Agent- Oct. 15, County Farm- Cottageville

We met again with John David Johnson to set up two aeroponic tower systems in high tunnel at county farm in Jackson County to structure a trial in comparison to lettuce planting in raised beds under the same high tunnel. Planted towers with strawberry runners and with lettuce seedlings at the time lettuce is planted into raised beds. The plugs will be provided from Lewis Jett at WVU for Ag Agents to trial for high tunnel production.

WV Department of Ag

Meeting with WV Department of Ag- Oct. 24, Guthrie

We met with Walt Helmick along with Dr. Toledo, to discuss aeroponic production technology and the outreach efforts at WVSU in conjunction with Farm to School and local growers with hydroponic production. This is an Alternative Ag opportunity to diversify agricultural production in the state in areas that lack traditional acreage for high production crops. The next scheduled trip is in November to Berryville, VA to introduce the Commissioner to aeroponic production technology with a local grower with 50 tower production range that sells to Charles Town Raceway in WV.

Trip with WV Department of Ag to Berryville, VA- Nov. 19-20

We coordinated a trip to Berryville, VA to see a 50 tower range run by Kevin Anderson at Anderson's Nursery. Along on the trip was Brad Cochran- WVSU, John David Johnson- WVU, James Coffman- Future Growing, Mike Teets- WV Department of Ag, Jerry Ours- WV Department of Ag and Brad Gritt- Gritt's Farm. Additional talks are on the schedule to discuss how these systems will be incorporated throughout the state in the form of teaching and demonstration locations as collaboration between WVSU and WVU Extension Services, the Department of Ag and Future Growing.

Goal 3

The third measurement of the program's success was the creation of an **aeroponic growing range** under a high tunnel within Huntington with the additional funding that was awarded end of January 2013. The proposed site for this high tunnel was an unused fenced in tennis court owned by the city and located at the AD Lewis Center- the community center to which most of the youth involved with the program attend in an after school and summer setting. The range was established to run off of the grid through the use of solar technology and it has be managed and maintained by the youth, as well as WVSU staff, and various program volunteers. At least **30** youth were to be involved in the growing process to provide the produce required to meet the needs of the local restaurants and farmers markets interested in the local foods movement. The plan is that this site will serve as a destination for educational field trips for local schools as well as the backbone for the ever growing Farm 2 School program efforts in Cabell County. The intent was that at least one school will visit the growing range in the timeframe of this grant allocation- with many more to follow exterior to the grant time constraints.

Outcome 1

The creation of the new aeroponic growing range under a high tunnel on the tennis court in Huntington was indeed an undertaking. With unexpected staffing changes occurring at the beginning year at the University, the WVSU Extension was faced with a smaller staff as well as experiencing the loss of a great bit of knowledge that was to be utilized on this project in particular. The aeroponic production technology was purchased early in 2013 and placed in storage until the high tunnel could be constructed. The high tunnel kit was purchased as well but the weather for construction became an issue as well as the demands for other projects. Plans were made with Terry Hudson, the resident high tunnel construction expert, to enlist his help with the project. As the weather began to break after a horribly rainy season, construction was initiated the first of May under his lead. Between May- July the high tunnel supports were erected, the structure framed in and the plastic pulled. Volunteers from WVSU Extension Service, WV Build It Up, Marshall University, WV PROMISE Vistas and the SCRATCH Project were involved in the construction process.

Solar units were ordered based on information from Future Growing on the needs to run the 25 watt pumps on a per tower basis. This technology was trialed in conjunction with earlier purchased solar panels and inverters, running the two towers that have been consistently running in the back of the Barnett Center since early 2012. The twelve aeroponic towers were assembled in late August under the high tunnel. The solar cubes in the months of August and September, each with a 1500 watt solar capacity, proved to be able to effectively support 5 towers each with the sun levels during that timeframe. During these trial periods the towers were running with clear water without plant material, due to the unstable nature of the power supply. The range, even minus plant material, received a wonderful reaction during the workshop. The towers were able to be disassembled to look at the technology after the participants witnessed the towers in production with plant material at the Barnett Center. As the day length decreased, so has the capacity of the solar panels to meet the demands of the towers. Plans are in the works to add additional panels and back up batteries to the solar cubes and meetings have been structured with local solar suppliers for assistance. During the winter months this year the plan will be to run a few towers with cold hardy crops and possibly in tank heaters, if the panels can support the additional power pull. This would mimic the trial going on in conjunction with the WVU Ag Agent in Jackson County, minus the use of solar.

Transplants were purchased in late September to trial in the system from a company out of

Florida, but due to their tender nature, when they arrived they were close to death. Few were able to be salvaged, but transplants were seeded and strawberry runners were taken and wrapped in rockwool by SCRATCH youth and the preschoolers at Spring Hill Elementary. Sadly, during the latest round of 60 mph winds, the hobby greenhouse that was purchased and erected at the Barnett Center earlier within this project became the latest structure to succumb to our strange winds. The transplants were up and growing in the greenhouse structure and when it was demolished in November, so were the latest round of seedlings. Currently, transplants are being grown out in conjunction with the WVU Ag Agent in Jackson County, John David Johnson, with hopes of planting into a few of the systems in the near future with cold hardy varieties of mustard greens and kale. By March of 2014, the range should be back in line for production and will be managed by the SCRATCH Project. Youth involved in this program will work with the program leads to keep production records on a per tower basis. This will be combined with similar records being kept in conjunction with these units around WV that WVSU Extension will work to compile.

Outcome 2

Since the aeroponic range has been under construction and a testing phase, the youth have not been actively growing or assisting with the maintenance of this structure as of yet. They have been involved in the propagation of the seedlings and the wrapping of the strawberry runners for implementation into these systems- and this totals well over 30 youth. As the project unfolds this upcoming season, these youth will be actively participating in the production aspects of this innovative range.

With the growing interest of youth becoming actively engaged in growing what they are eating at school, this growing range in the middle of the city will be seen as an easy school day trip to educate youth on the possibilities. Due to the success of the SCRATCH Project in Huntington, which has youth gardening on three abandoned housing lots right off of Hal Greer Blvd, schools have taken walks with area youth to the lots and been given tours by kids who participate in the program as well as the SCRATCH Project staff. I envision that similar trips will be scheduled to the aeroponic production range during peak production.

BENEFICIARIES

As stated in the initial grant proposal, the intended beneficiaries for this project were youth, small restaurant owners, displaced tobacco growers, minority farmers, women, homeowners, and limited resource landowners. While all of these entities were represented throughout the interaction with this project, other groups and operations were also involved that we did not anticipate.

During this project there were several groups that benefited from this interaction that we had overlooked. Through the demonstration sites, groups that benefited were:

- Local School Systems- Cabell, Jackson, Wetzel, Raleigh and Tyler County directly, but through talks it appears that school systems throughout WV may benefit in the near future.
- PEIA- Public Employees Insurance Agency, which has 1,000 sites around WV providing health insurance coverage to countless public employees, will be looking to pilot the idea of incorporating aeroponic production ranges at local facilities to encourage healthy eating practices of its insured.

- WV Department of Agriculture- Through direct overlap with this project and innovative technologies available, the WV Department of Agriculture may be able to identify this type of production as an alternative to traditional agricultural practices. With this said expansion of agricultural production in the state to meet the needs for fresh fruits and vegetables grown locally and in an environmentally conscious manner.

LESSONS LEARNED

As we worked toward completion of this project we learned many lessons- some expected, others not as well anticipated. The first lesson learned was that even the best laid out plan can have its flaws. Within the first year of the grant, we had numerous set backs on the side of funding as well as the ability to begin construction at the site. As we struggled with both sides, we determined that no matter what we wanted to see happen, we had to be flexible and let the program take its course. After the first year, the program began to level out and we were able to get our footing and seek a different perspective on how this program would be implemented as well as sustained year after year. With this new outlook, we were successful in the development of relationships with entities that valued what we had to offer and had the same vision of what this project could offer in the end. It was difficult to not become frustrated by the process- but in the end, we are proud of the partnerships that have been forged and the opportunities that the implementation of this program will bring for many years to come.

Our second surprise came from the outpouring of interest in the realm of aeroponic production and the niche it can fill in many arenas. Though we have always been supportive of hydroponic production at WVSU Extension Service, it is a world that very few have experienced in the manner that we have. As the buzz about what we were doing increased, it was astonishing to see interest coming from state agencies such as PEIA, Department of Education as well as the Department of Agriculture itself. With the changing of the tides in our state and the search for new opportunities, the timing for this project seemed to be just right. Though we entered in to this project with one intention, it was wonderful to see the project take on an entirely different perspective- especially since it is one that could be entirely more impactful to those entities that we had intended to benefit- the citizens of WV.

Finally, we never anticipated having so many issues on the side of production, and not on the side of the capabilities of the technology, but the ability to do what we thought would be simple on the side of running the systems. The best made plans always look great on paper, but usually translate differently on the side of implementation. Construction of a high tunnel became a greater undertaking than we could ever have imagined, but now that it is up- it was a fabulous addition to the project. The same holds true with the idea of running the aeroponic range off the grid through solar panels. Though a wonderful thought, it will take a while to get this streamlined to ensure that year round production through this power source is possible. With the decreased day length during the fall and winter, the amount of solar capacity is greatly reduced requiring additional panels and back up batteries that were not figured in to the budget. Definitely a learning curve, but this will be figured out with a few consultations with professionals in the field and some WV engineering.

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Subrecipient: Morgan Orchard
Project: "Apple Cider Project"
Amount: \$4,000.00

PROJECT SUMMARY

The purpose of Morgan Orchard's Apple Cider Project was to provide a practical example of how a small to medium sized specialty crop producer can research a potential market niche to upgrade a commodity priced product; implement effective, low cost food safety practices; produce a quality product; and market the product in the local rural area. The project was also intended to educate and assist other specialty crop producers on how to analyze potential value-added products for internal production.

The original motivation for the project was to produce a raw tasting apple cider product that was safer than raw cider. Pasteurization heats the cider and changes the taste to something similar to apple juice. Customers had requested raw cider. The CiderSure process using ultraviolet light does not heat the cider but kills all known e-coli strains. By utilizing the CiderSure equipment Morgan Orchard met the customer need. At the same time the orchard was trying to increase the margin on low grade cider-type apples. Producing cider at the orchard was more profitable except in a poor apple year when cider apple prices skyrocketed. Producing cider on site also uses some available labor time. This benefits employees due to increased hours worked.

In addition, the project provided an opportunity to assist other rural, specialty crop producers to learn from Morgan Orchard's experience. A power point presentation " Value-Added Product Analysis for Specialty Crop Producers" was prepared and presented to producers. Two presentations to middle school and high school students about the project were also accomplished. Ten short presentations were presented to Road Scholar (Elderhostl) tours over two years.

The conduct of this project was timely for Morgan Orchard in trying to maximize revenue and improve the orchards ability to be a viable family business. The same is true for the presentations associated with the project, as others seek to learn and improve their operations and increase their knowledge.

PROJECT APPROACH

Summarized below are the activities of Morgan Orchard's Apple Cider Project:

11/30/10 The grant was officially awarded, signed and returned to the WV Department of Agriculture.

2/12/11 Visited the Ivy Hill Farm in Smithburg, MD to look at their CiderSure machine and discuss operations with the owners.

2/23/11 Ordered the CiderSure 2500 from Oesco, Inc. - \$2000 deposit.

5/12-9/11 Presentation to 5 Road Scholar (Elderhostl) tours on production and marketing of apples and cider.

7/15/11	Made final payment of \$8760 to Oesco, Inc.
7/27/11	Received CiderSure 2500.
10/1/11	Test ran the CiderSure 2500 and training on proper operation.
10/2/11	Presentation to 130 Western Greenbrier Junior High School 6 th grade students.
10/2/11 – 12/7/11	Produced and sold 266 gallons of apple cider.
10/25/11	Presentation given to 11 Liberty High School students.
12/7/11	Submitted Annual Performance Report.
2/12	Identified motorized apple grinder (Oesco) and water operated press (Lancman).
5/12-9/12	Presentation to 5 Road Scholar (Elderhostl) tours on production and marketing of apples and cider.
9/12-10/12	Produced 70 gallons of apple cider.
9/12-10/12	Sold apple cider at Morgan Orchard, to local restraints, and 3 local farmers markets.
10/12	Prepared project template for use by other small farmers and gave presentation to small farm groups.
11/12	Scheduled presentations
11/12	Prepared Annual Performance Report
1/9/13	Presented “Value-Added Product Analysis for Specialty Crop Producers to 19 people at Greenbrier Valley Economic Development Corp. – Greenbrier Valley Local Food Initiative Meeting
3/12/13	Presented “Value-Added Product Analysis for Specialty Crop Producers to 8 people at West Virginia Small Farms Conference, Morgantown, WV

The West Virginia University Extension Service was helpful in setting up presentations and reviewing materials to be presented. The West Virginia Department of Agriculture assisted in scheduling presentations also.

GOALS AND OUTCOMES ACHIEVED

Goal: Increase the dollar return per bushel of cider apples by producing, marketing, selling and distributing a safe, high quality, raw tasting (UV treated) cider with a reasonable shelf life (2 weeks).

Outcome: The production of UV treated cider did increase the dollar return to Morgan Orchard from cider quality apples. During the 2011 apple season cider production was hampered by the late arrival of the CiderSure machine and prices increased for cider quality apples. Morgan Orchard's response was to increase our price per gallon to \$7.00. The result was selling cider apples on the open market returned \$3.06 per bushel verses \$3.46 returned by producing Morgan Orchard Cider. The price \$.25 increase kept Morgan Orchard Cider the most profitable choice. But the margin was half of what was originally anticipated. Unfortunately, due to the late arrival of the CiderSure machine only 266 gallons were produced verses a goal of 1000 gallons of cider.

During the 2012 season prices for cider apples skyrocketed to almost triple the price when the project started. This was due to a shortage of apples in the region due to frost/freeze problems in the spring. Morgan Orchard had only 23% of a normal crop. The margin was now distinctly in favor of selling apples to a cider mill. Morgan Orchard's response was to produce apple cider in pint containers and sell them for \$1.50 per pint yielding \$12.00 per gallon verses \$7.00 per gallon when selling by the gallon. The return to a bushel was \$8.26 when selling to the cider mill and \$10.26 per bushel when selling Morgan Orchard Cider by the pint. Unfortunately, only 70 gallons of apple cider were produced verses a target of 2000 due to the shortage of apples.

In the grant proposal Morgan Orchard proposed motorizing the hand crank cider press. It became clear after the purchase of the CiderSure machine that this upgrade would be insufficient. A motorized grinder and water jacket press were targeted for purchase in 2012. Given the limited crops in 2012 this purchase was delayed until 2013 at such time a reasonable crop is assured.

Morgan Orchard is confident that long term market levels and an anticipated change in marketing and production techniques in the orchard cider operation will yield a better return over time for the orchard produced cider whether sold as gallons or pints..

Goal: Help other specialty crop producers identify and analyze produce they are selling at commodity prices as candidates for value added products to produce and sell in their current marketing area and beyond.

Outcome: Two power point lectures with handouts of "Value Added Product Analysis for Specialty Crop Producers" were presented in 2013. The first was at the Greenbrier Economic Development Corporations offices through the Greenbrier Valley Local Food Initiative on January 9th to 19 participants. The second presentation was at the West Virginia Small Farm Conference in Morgantown on March 2nd to 8 individuals. A copy of the presentation (template) is attached.

If the presentations inspired or helped an individual or group in launching a new value added project is unknown. Conversations during and after the presentations indicated half a dozen people who were seriously working on or planning a value added product launch.

BENEFICIARIES

Obviously, Morgan Orchard benefited from this project as shown by the descriptions above. A high quality, safe, new value added product is being produced to fill a viable market niche. In addition, participating in the grant process has sharpened the skills of the owners and provided a framework for future marketing analysis.

Producers and customers who were exposed to presentations are now more knowledgeable. Producers have a template to use in evaluating possible projects. Customers have a better knowledge of how agricultural value added products are produced and what to look for as they purchase apple cider. Student presentations helped them learn that agriculture is a business and not just farming.

LESSONS LEARNED

Positive lessons learned include being flexible with marketing strategies and to anticipate delays as projects start and progress. Marketing pints verses gallons of apple cider to increase revenue is a good example of being flexible.

Delays almost always cost money and should be anticipated. The delay in receiving the CiderSure machine reduced our output in 2011. Delays in project/grant award had negative effects on the financial results and production. The price for the CiderSure machine increased 55% from the time of project proposal to funding award. Given these kind of delays and price increases, applicants should be allowed to include inflation or price increases in their proposals.

CONTACT PERSON

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(35 slide PowerPoint presentation also submitted)



Pictured below: "Hand Crank Cider Press"



Pictured below: "CiderSure Machine"



Subrecipient: Gilmer County Economic Development Authority
Project: "Farmers' Market Collaborative"
Amount: \$7,762.07

PROJECT SUMMARY

The Gilmer County Economic Development Association (GCEDA) partnered with the Future Farmers of America (FFA) at Gilmer County High School (GCHS), the Calhoun-Gilmer Career Center (CGCC) Environmental Studies Class, the Culinary Arts Class, and Beekeepers from Gilmer County. This project targeted additional youth in the area to enhance the need for agriculture, proper nutrition and the importance of Beekeeping. The project addressed the need of providing youth training, monitoring and technical assistance in the areas of honey production and specialty crop production (vegetables) from "start to finish" to promote entrepreneurship and encourage continuing generations of specialty crop production in the rural county.

PROJECT APPROACH

The use of fresh herbs, proper drying techniques, storage, and sales promoting sustainable agriculture.

- 35 students from GCHS were involved with FY2009 project.
- 10 students from GCCC will be involved with FY2009 project
- Students received 2 – 3 times on their return.
- Cooking demo's by the Culinary Arts students, promoting use of WV grown products.
- Sales of added value products from Culinary Arts students.
- Built hives, purchased colonies with queens.
- Entrepreneurial education was conducted with the ultimate goal of year round gardens, greenhouse or tunnel, creating monetary rewards as well as employment."
- 7 consecutive classes were dedicated to classes providing a knowledge framework for honey (bee) production and produce growing. Topics included a "seed to harvest" approach for several crops (specialty carrots, colored beets, etc.)
- With the addition of a service provider to the original grant proposal (Gilmer County Beekeepers), student were provided the materials to build a hive for honey production (7 students; 6 additional students were added to the project in 2012 with additional SCBGP from another cycle)
- Entrepreneurship with an emphasis on record keeping (inputs, outputs, profitability) was established. These records are reviewed bi-monthly by a project committee including the grant administrators, farmers market personnel and the Beekeepers Association. Students not utilizing provided equipment or actively participating in the program are required to return materials for another student to join the program. To date, all 7 students are still participating.
- As mentioned in the project proposal, the beehives completed their first full year of colony establishment in 2012 and will undergo a first harvest in 2013 allowing components of the project (value added cream, lip balm and other consumer products) to occur. At this point, these formulations/recipes are being developed along with labeling in anticipation of a successful harvest as all hives have been split (standard procedure; given to the 6 students in the successive grant allocation) and will yield a harvest in 2013.

- Though 2 short of the 4 goal, two students were able to secure sales of grown lettuce, green onions, onions, tomatoes, cucumbers and carrots to two local restaurants

GOALS AND OUTCOMES ACHIEVED

The market consisted of approximately 25 producers for this year and 30 last year. Making our total vendors and sales remain flat. Weather played a huge impact on our decrease, due to many of our local farmers not being able to get their gardens plowed and planted.

Our beekeeping classes consisted of 7 students who will not see any honey sales this first year but are very hopeful to reap the rewards in calendar year 2013; per the original grant proposal. Bi-monthly project reviews are being conducted and will continue through 2013.

The market reached our entrepreneurial goals by establishing the beekeeping curriculum and sustainable agriculture with our youth program.

Other progress on measurable outcomes include recipes/formulation research on value added products with label development and 2013 anticipated market sales once honey becomes available. The existing hives (there are now 10 from the original 7) will be utilized for pollination beginning in the spring of 2013. The original 7 hives were split to provide an additional 6 hives for subsequent classes.

Two restaurants were provided specialty crops as a result of the education and production practices implemented by the youth. Four youth participated in the farmers market (sporadically) during the 2012 season and they had a total economic impact of \$1,200. Plans for 2013 are for a 100% increase based on expanded production. Anecdotally, one student grew 5 bushels of specialty peppers for the market which were "beautiful." WIC and SNAP vouchers have been problematic for the market and plans for 2013 are to provide this purchasing options for all market patrons including the 7 students that are part of this project. In 2011, the redemption rate for the Senior Farmers Market voucher program was 87% and the 2012 market provided the same opportunity that was open to the 7 students. The Fall Harvest Dinner was not held in 2011 and 2012 due to time and specialty crop availability (the project participants were able to sell all of their grown produce at the market); plans are to hold this event in 2013 with assistance from the Culinary Arts program (ProStart) at the high school.

BENEFICIARIES

The project beneficiaries in this small, rural community were wide reaching. The 7 participating students are still very active in the program and have gained knowledge, entrepreneurial skills and a real-life enterprise experience that is continuing. They have been motivated to continue their enterprise and consider agriculture as a future career/enterprise.

The patrons at the market have benefitted by both the additional supply at the farmers market and the diversity/innovation brought to the market through this project. New varieties of specialty crops including specialty lettuces and greens, colored beets and specialty carrots were combined with cooking information that leads to increased specialty crop consumption and usage.

The addition of the county beekeeper club to this project helps to perpetuate production skills and assist with filling organizational leadership voids in the future.

The culinary arts program has become active in the process and becomes a key beneficiary in 2013 as honey and specialty crops become part of the state's growing farm to school initiative that also includes nutrition education. Future plans are to fulfill the original goal of 4 restaurants featuring locally grown honey and produce on their menus benefitting both restaurant owner and patrons.

A kids Day at the Market was held October 12th with great success. Approximately 26 children throughout the county came to participate in activities such as pumpkin carving, pinch pot making, applesauce making, leaf pressing, and hand printing on canvas bags.

The annual Christmas Market was held December 3rd. The selling of WV produced Christmas trees, wreathes, and garlands as well as preserves, jams, and baked goods provided the community with a local option for purchases.

The general population of Gilmer County has benefited from the Gilmer County Farmers Market which has become a social networking spot where friends come to meet.

LESSONS LEARNED

The project staff as a result of completing this project learned that many of our youth have great enthusiasm toward the agricultural community. They also have shown great interest in continuing these projects.

The youth have reaped monetary rewards in addition to personal growth, knowledge, and experience.

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ADDITIONAL INFORMATION

www.gceda.org
www.gilmerwvnews.info

Subrecipient: Mineral County Farmers' Market Association
Project: "MCFM-Marketing Campaign"
Amount: \$10,000.00

PROJECT SUMMARY:

The initial purpose of the project was to enhance the marketing strategies of the Mineral County Farmers' Market. Our market has expanded in vendor diversity and product diversity over the last five years, but our goal with the WVDA grant money was to expand marketing strategies and increase customer awareness of specialty crops.

The Mineral County Farmers' Market project was implemented to address several problems. First, citizens of Mineral County were not taking advantage of local produce, specifically specialty crops. Secondly, our local farmers struggled with an outlet to sell their specialty crops. Using the specialty crop money to promote our existing farmers' markets (that were struggling with community awareness), we were able to provide farmers with a sustainable venue to sell specialty crops, as well as educate the community about specialty crops and their benefits.

PROJECT APPROACH:

During the grant period, activities performed included: designing and distributing marketing materials such as brochures, fabric bags, and informational pamphlets, all with the Mineral County Farmers' Market logo. The informational pamphlets had information about specialty crops and the nutrition they provide.

The Farmers' Market Association utilized radio advertising as well, broadcasting live from the farmers' market twice a year for two years in a row. During the past three seasons, the association used grant money to host several special events during market days, including tomato tasting, kids day, and other events.

The vendors reported an increase in sales from the start of the project to the end of the 2013 season. Not all the vendors submitted data (it was voluntary), but from those that submitted sales data, they reported a 11% increase in sales from 2010 to 2013. This included sales data from Keyser, Fort Ashby, and Piedmont vendors (a majority from Keyser).

Although the project was aimed at increasing awareness of specialty crops and increasing sales, it also greatly helped the association recruit new vendors. We have always struggled with maintaining enough vendors to supply the amount of produce needed to meet the demand. Because of our radio and newspaper advertising, we were able to recruit four new vendors for our Keyser location, and 1 new vendor for our Ft. Ashby location.

All Specialty Block Grant money was used to promote specialty crops at the Mineral County Farmers' Markets. All advertising (flyers and radio advertisements), solely highlighted crops that are listed on the WV Department of Agriculture specialty crop list. It cannot be guaranteed, however, that once customers arrived at the market that they did not purchase

“non-specialty crops” in addition, as a result of advertising from the Specialty Crop Block grant money.

Several cooking demonstrations and educational workshops were implemented during the farmers’ markets using Specialty Crop Block money. These cooking demonstrations focused only on foods listed as specialty crops. Classes were taught by Shannon Ritchie, WVU Extension Nutrition Outreach Instructor and Stacey Huffman, WVU Extension Agent.

GOALS AND OUTCOMES ACHIEVED:

Activities completed: (these are the original goals set out in the initial stage of the project)

Project Activity	Leader/Facilitator	Date Completed
Billboards	Stacey Huffman, WVU Extension	Not Completed—prices of billboards and locations were unattainable
Radio remotes	Stacey Huffman, Robert Knotts, Farmers’ Market Association President	July/August 2012 August/September 2013
Eco-friendly reusable market bags	Stacey Huffman	June 2012 (distributed throughout 2012 and 2013 seasons)
Specialty Crop door prizes	Stacey Huffman, Dayla Harvey, Family Resource Network and Mineral Co. Healthy Coalition	Door Prizes were collected and awarded during the 2011 and 2012 seasons
Tables & Displays	Stacey Huffman, Robert Knotts	June 2011
Brochures	Jennie Shaffer	Developed and printed 2012
Specialty Crops School	Stacey Huffman	Classes were offered in August 2012 and August 2013 to participants of the WIC and SPOLKS programs, as well as cooking demonstrations offered during the 2012 and 2013 seasons (12 cooking demos all together)
Evaluation and Survey Development	Stacey Huffman, Dixie Riggleman, Farmers’ Market Association Secretary/Treasurer	Sales data was collected from vendors in 2011 and again in 2013 to determine increase in sales data.
Data Analysis for Evaluations and Surveys	Stacey Huffman, Dixie Riggleman	Evaluations were gathered from customers to determine how they became aware of the farmers market

Significant Results:

- 11% increase in vendor sales from 2011 to 2013 (**not all vendors submitted data, and the data does not include any new vendors that came on board after the initial sales data collection)
- The average vendor sales per day in 2011 for August was \$754 (includes all vendors, no matter what size operation), and in 2013 that average in August was \$836.
- Four new vendors for the Keyser location were recruited as a direct result of the marketing strategies utilized as part of the WVDA grant and project
- Results of the customer evaluation completed during August 2013—of the evaluations completed, 40% of customers reported hearing our radio advertisements, and 15% of the customers reported that they were first-time visitors to the market as a direct result of hearing our radio ads. We had an 8% response rate for first time customers as a result of our Facebook page.
- 12 cooking demonstrations were presented during market days to increase awareness of how to utilize specialty crops. During all cooking demonstrations, 175 people were in attendance.
- A Mineral County Farmers' Market Facebook was developed by our consultant/intern, (paid for by the grant). This Facebook page contained pictures and advertising about different vegetables, cooking demonstrations, special events, etc. It was very successful in bringing in first-time customers. <https://www.facebook.com/pages/Mineral-County-Farmers-Market>

BENEFICIARIES

- Keyser Assembly of God, Wee Tots (daycare program)—two educational farmers' market tours were given to the daycare program during 2013. During these tours, children learned about where their food comes from, benefits of specialty crops, and were given produce as snacks.
- SPOLKS and WIC participants—attended cooking demonstrations on how to cook and store specialty crops, and the nutritional value of those crops. The participants learned how to buy in-season produce to save money.
- Farmers' Market Vendors—vendors benefited directly from the project by means of 11% increase in sales from 2011 to 2013.

LESSONS LEARNED:

This campaign was very successful. With the increase of vendor sales and awareness of specialty crops, this was a very time worthy project. One unexpected outcome was the increase in number of vendors as a result of advertising specialty crops.

During our project, the farmers market in Keyser was forced to move locations. This was a blessing in disguise, as our marketing efforts were fueled by the “newly located farmers market.”

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Subrecipient: Davis & Elkins College
Project: "Randolph County Community Gardens"
Amount: \$10,000.00

PROJECT SUMMARY

Numerous studies make it abundantly clear that we have a need for healthy lifestyles education in West Virginia. It has also been shown that low income households often will choose foods that have lower nutritional value and which are more heavily processed on the basis of affordability and accessibility. It is also established that we must pursue more sustainable agricultural practices. That would include locally growing and locally consuming highly nutritious produce. Further, research has established the desirability of growers directly selling their produce to local markets. In addition, there is demonstrated need to provide education in methods for the preservation of locally produced foods, including specialty crops.

It was therefore intended to develop and apply a viable model for community gardens and truck gardens in small West Virginia towns via the establishment of community gardens at the Kump House Education Center and a second site within an economically challenged neighborhood on Henry Avenue, also in the city of Elkins. The project was a collaboration amongst The Center for Sustainability Studies of Davis & Elkins College, the City of Elkins–Kump House Education Center, Randolph County 4-H, WV University Extension Service, and the local chapter of Master Gardeners.

Additionally, it provided an opportunity for nutrition education for young people and adults, supported local farmers market, and introduced 4-H members to vegetable and fruit production under the tutelage of Master Gardeners. The project has also begun to provide an inexpensive nutritional supplement for low income residents who would not otherwise have access to garden plots. Nutrition education and technical assistance have been a part of the ongoing project. Further, the project incorporated two student internships into the program. In keeping with the determination to establish and teach sustainable practices, heritage species and varieties providing greatest yields with the fewest inputs were identified and featured.

PROJECT APPROACH - GOALS AND OUTCOMES ACHIEVED- BENEFICIARIES

The Randolph County Community Gardens project sought to provide space and other necessary supports (including material and education for the novice) for residents to grow low cost and nutritious foods. Further, it was the intent of RCCG to promote a community garden model accessible across the region, in a variety of economic and social settings.

Goals during the grant period, from the original proposal, included the establishment of an 8,000 square foot community garden at the local Kump House historic site, as well as a second community garden at Henry Avenue in downtown Elkins (fencing and raised beds), through community and partner involvement. The use of heritage vegetable plants and fruit trees, lessons of nutrition and food preservation, and involvement of student interns and

economically challenged families were key aspects of the project.

A 10,000 square foot garden (2,000 more than expected and proposed) was established at the Kump House site in the spring of 2011 and was fully subscribed (20 families), with a waiting list for 2012. There also is a wait list for 2013. There were a variety of families subscribed, of varying economic backgrounds and ages.

Thirty-one heritage apple trees (11 more than planned and proposed) were planted adjacent to the Kump House garden with the aid of partners and community members. This will restore the original orchard (from 1770s) on the site. Four additional commercial trees were also planted for future grafting rootstock.

Due to unexpected immediate interest, the second garden site at the Henry Avenue location (unused lot provided by a partner) was also established for use in the spring of 2011, one year early. This garden was also fully subscribed for the season (12 families), with significant participation from local accessible housing and elderly residents. There is currently a wait list for the 2013 season, with several pre-paid subscriptions.

The Kump House and Henry Avenue gardens were created and tended in large effort by two student interns, with the help of the volunteers and community members. The local Youthbuild organization provided complementary labor for construction of fencing, raised beds, and a garden shed at the Henry Avenue garden. The site was utilized by the group to train young people in the construction trades. One of the D&E student interns has interviewed for employment with a nonprofit community garden organization in New Orleans as a result of his experiences at the gardens. The Woodlands Development Group provided the unused city lot free of charge by contract to Davis & Elkins College.

Other active partners for the Randolph Gardens group include The City of Elkins (waived sewer fees and compost material), The Kump House Education Center (property), WesMonTy Resource Development Project (funding for heritage plants), WVU Extension Service (consultation, meeting space, and soil testing), Woodford Methodist Church (function space and garden subscriptions for elderly members), and the Randolph-Tucker Master Gardeners (garden establishment and teaching). Representatives from each group to the RCCG committee now meet monthly. [see partner list addendum]

Workshops held for and at the gardens included an open house event with heritage plant lessons and giveaways (~50 persons in attendance), a “paint-a-picket” fundraiser and children’s event (~60 persons in attendance – funds were provided by Davis & Elkins College for this fundraiser, not Specialty Crop Block Grant funds), and a canning and preservation workshop at the Elkins Catholic Church (12 participants). Students from Davis & Elkins College participated and learned about seed and plant propagation in the campus greenhouse, for heritage seedling production for the gardens (4 students). An end-of season pot luck featuring vegetables and recipes from the gardens was held at Woodford Methodist Church in Elkins. [see addendum]

A few gardeners have pre-paid their 2013 subscription fees for each garden, such that they

might plant winter garlic and amend their plots. Particularly pleasing is the continued participation of residents from accessible housing in the neighborhood, fulfilling one of the main goals of the RCCG project - to provide access to low cost and nutritious food to everyone. The pride evident in the neighborhood's adoption of the Henry Avenue garden, and use of the garden as a landmark ("go down Henry, turn left at our community garden..."), have been an added bonus, as are scenes of multiple generations tending plants throughout the season.

Feedback from the community has been quite positive, with several pieces in local and regional media, as well as letters of appreciation. [see addendum].

LESSONS LEARNED

Although some neighbors initially responded unfavorably to the location of the Henry Avenue garden in the previously vacant lot (used for parking (unauthorized) and disposal of yard materials and recreational equipment (unauthorized)), current disposition is very positive, with two immediate neighbors subscribed to the garden for 2013; as well as the use of the garden for supervised play by young children while parents garden.

We found that ultimately the community embraced the improvement of the garden site, and reservations and concerns were largely related to hesitance at change in the landscape of the neighborhood. Once neighbors and community members learned of the intent of the garden space through public committee meetings and open house days at the site during building and establishment, many visited again to help move earth and construct the beds. Of particular help was the presence of student interns most days, as well as events such as "paint-a-picket", heritage plant seedling giveaways, and a canning workshop at a nearby church. The heritage orchard planting was quite popular, with the permanence of the orchard as a learning space and the "unusual trees" as the most significant comments received. The addition of bright, colorful signage and advertising for plot availability was also key in creating a welcoming space.

Particularly pleasing is the continued participation of residents from accessible housing in the neighborhood, fulfilling one of the main goals of the RCCG project - to provide access to low cost and nutritious food to everyone. The pride evident in the neighborhood's adoption of the Henry Avenue garden, and use of the garden as a landmark ("go down Henry, turn left at our community garden..."), have been an added bonus, as are scenes of multiple generations tending plants throughout the season.

Challenges include what one gardener has called a "good problem to have" - a lack of space for all gardeners who have contacted the Randolph Community Gardens group. Indeed, the fall of 2012 has brought continued interest, phone calls, and applications for both community gardens, with a wait list for each garden. Clearly demand for community garden space is unfulfilled and will exceed capacity and funding for the foreseeable future. The Center for Sustainability Studies of Davis & Elkins College and the Randolph Community Garden group will continue to oversee and promote the current sites and activities, as well as seek

opportunities for expansion to a third site.

Although the SCBG project is complete, future plans include a third community garden before the 2014 season, dependent upon funding (asks pending). The immediate goal of the garden group is a single community garden in the other three city wards of Elkins by 2017. Although the current gardens will be largely self-sufficient in future seasons, establishment of a new city community garden will require another similar grant and commitment.

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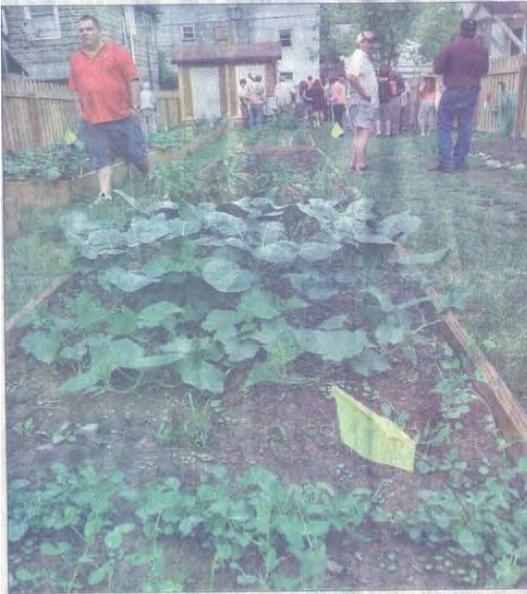
ADDITIONAL INFORMATION

Please see attached press, photos, community participant list, and advertising related to the project, as well as the following links.

http://issuu.com/davisandelkinscollege/docs/d_e_forward_4_12

<http://www.dewv.edu/headline/5th-ward-garden-celebration>

Fifth Ward Community Garden



The Davis & Elkins College Center for Sustainability Studies held the grand opening for the Fifth Ward Community Garden on Tuesday. Program Director Russ McClain said Youth Build constructed the garden beds, fence, storage shed, ran plumbing and brought in three tons of soil. McClain said the center held a community garden at the Kump House last year and the response was positive. He said there is a waiting list for beds at the Fifth Ward Garden. The Woodlands Development Group donated the land for the garden.



The Inter-Mountain photo by Anthony Gaynor
Kevin Chesser, Bob Smakula, Joey Hochgesang and Karl Smakula perform during the grand opening of the Fifth Ward Community Garden.



The Inter-Mountain photo by Anthony Gaynor
Fifth Ward Elkins City Councilman Danny Satterfield cuts the ribbon for the grand opening of the Fifth Ward Community Garden. Holding the ribbon are from left, Connie Townsend with the Davis & Elkins College Center for Sustainability Studies, college interns Becky Hill and Kevin Chesser, Ronnie Hemondollar with the WVU Extension Service, Center for Sustainability Studies Director Russ McClain and Dave Clark with the Woodland Development Group.



Randolph County Community Gardens Potluck



You are invited to the end of the season
Randolph County Community Gardens Potluck.
 When: Thursday, August 25th 2011 from 6:30 – 8pm
 Where: Woodford Memorial Methodist Church
 113 1st Street, Elkins WV

Please bring a dish to pass.
 We encourage you to share something from your gardens!
 RSVP to townsendc@dewv.edu.
 If you have any questions please call
 the Center of Sustainability Studies office at 304. 637. 1309.
 We look forward to seeing you there!

Paint a Picket

At the
5th Ward Community Gardens



CONTACT:
604-637-1309

IF YOU HAVE
QUESTIONS,



**You are invited to come
paint a picket at the 5th
Ward Community Gardens.**

When: Saturday July 16th

From: 10 am — 1pm

All Ages Welcome.

\$1 dollar a picket.



Canning Workshop



Demonstration of pressure cooker & cold pack canning

Taught by Emily Ede & Connie Townsend

Sunday, August 21st, 2:30 – 5pm

St. Brendan's Catholic Church

5\$ Donation Appreciated.

RSVP to townsendc@dewv.edu.

Sponsored by St. Brendan's Catholic Church, WV Extension Office,
Randolph-Tucker Master Gardeners and Randolph County Community Gardens.



Subrecipient: Little Patch on the Lane
Project: "From Farm to Family"
Amount: \$4,291.19

PROJECT SUMMARY

This projects purpose was to introduce local families to the benefits of not only gardening but other sustainable practices through hands on agricultural education. Thus, taking advantage of the "grow your own food movement" that is currently sweeping through our local region. This project in the past three years has reached children and adults in the Kanawha, Putnam and Cabell County Regions.

- The motivation for this project derived from identifying a need for volunteers to reach out to the community and assist with agricultural education.
- The issue we found in our research was that West Virginia's (WVU and WVSU) county extension agents did not have the time nor the staff to reach everyone who expressed a need, specifically the time needed for project based learning activities with youth.
- The need we addressed: Our team tried to make the activities interesting enough that community members with the necessary skills would be interested in investing volunteer hours in the Farm to Family project thus assisting the targeted audience in learning more about agriculture.

PROJECT APPROACH

- We hosted several small Jr. Master Gardener Workshops at the farm throughout the summer months. 132 children from Kanawha and Putnam Counties were able to attend the farm in person for these events.
- We continued our Jr. Master Gardener Leader Training workshops. 23 more Kanawha County Teachers were trained on Jr. Master Gardener Curriculum.
- Children and teenagers planted pumpkins for a very successful "pick your own" pumpkins patch. Each age class had their own patch which to grow pumpkins. The pumpkin patch income was \$1898.00 in the 2013 harvest season. Which is carried over for next year's gardening activities with the group.
- A pumpkin seed vs. pumpkin plants transplanting workshop. We found that you have much more success with seed.
- Erected deer fencing. We found this worked well for deer but not raccoons ☹ who also like pumpkins.

The two significant contributors to 2013 projects was Barney Sigman from Twin Maples Farm for donating his time to assist erection of a deer fence around the pumpkin patch and Melissa Stewart from WVSU for her continued support with the Jr. Master Gardener Program.

GOALS AND OUTCOMES ACHIEVED

The number one performance goal of this project was to enact a “pick your own” pumpkin patch for Jr. Master Gardener groups in the local area. This goal was fully reached in 2013 after the past two years of disappointing yields and crop damage from deer.

We had hoped for long term outcome measures but when at the mercy of mother nature you can never really have a guaranteed outcome. A successful fall of 2013 brought sales of nearly each undamaged pumpkin that was grown.

High year we consider this a very successful start to a long term project while growing our outreach programs. Expected 2014 expenses include: seed, basic supplies, transportation of Jr. Master Gardeners, Farmers Market fees and transportation fees all of which will use minimal amounts of the money earned and saved. We will purchase new curriculum publications for the workshops and school classrooms.

In comparison, our goals may have seemed unreachable after a fruitless first two years. It seems as though once we were able to smooth the “bumps out of the road” we are not off to a great start for a continued project.

- Every elementary school in Putnam County (14; 12,850 students) will have access to the educational materials and supplies specific to specialty crops and growing techniques via the WV Junior Master Gardner program. At least 40% of the students will utilize the materials (as documented by teacher reports) and 10% of the students will visit the working farm model.

Not all expected measurable outcomes were met. We modified our expectations as we ran into roadblocks or difficulties. All Putnam County Elementary schools were sent a letter offering the services of the program. Only 3 replied and implanted programs. All three chose to implement programs that they could do at the location of their school. Buffalo Elementary worked with Shelley Whittington on Jr. Master Gardener. Tootie Black implemented and continues Jr. Master Gardener programs. Karen Fragale at Connor Street Elementary implemented a rain garden.

- At least 50 people with participate in at least one workshop and 5 will grow new products or adopt a growing technique taught in a workshop session as documented by a post workshop evaluation form.

We did have well over 50 (adults) people at our various workshops; however, we had forgotten the post evaluation workshop form. We do still have contact with these folks and can request that they do a post evaluation form.

- Elements that will be monitored include but are not limited to; project development, education, children that are involved in the program and the skill levels they work at from the beginning to end of each season. The actual community participation and interest generated in a “pick your own” processes and the progress, health and quality of the actual crops and soil each year.

The skill levels grew steadily with each chapter covered and project performed for the children participating in the program. We chose pumpkins to grow with the thoughts that they can be planted during the school year, left for the most part alone to grow through the

summer and then harvested during the beginning of the school year. We utilized Jr. Master Gardener curriculum for the majority of the children we contacted as getting them to the farm itself proved to be quite the challenge. Getting teachers to agree to participate was easy – getting them TO participate was difficult.

The need for more pick your own produce farms is still great in our area. Our troubles with crop loss and deer damage were great and therefore our actual participation was low as we had low production. We listed our patch on pickyourown.org and received a minimum of 6-25 calls daily as we grew closer to picking season. These calls came from all over the surrounding counties.

As our season progressed (or did not progress well) we referred those folks who called but could not accommodate to Jim Withrow's pick your own farm in Scott Depot and Gritts Pumpkin Patch farm in Buffalo where they were able to find activities and an abundance of pumpkins.

a) Healthy and organic soils and their maintenance in this project will be monitored by our local WVU Putnam Extension Agent, Dr. Chuck Talbott yearly.

Chuck provided technical assistance and advice to myself. He also visited the farm two years in a row and took photographs of the progress. I created a power point presentation that was used during a Master Gardener Class about building the soils in the excavated areas.

b) 5 students from Marshall University will conduct independent studies at the beginning, middle and the end of each growing season by researching community involvement and interest through surveys with local residents and participants of the project. The students will contribute at least 16 hours (3 credit hours) per month in the project.

Much like the teachers, these students agreed to participate then did not participate as the project was implemented.

c) The farmer will track the programs plant growth and health, the crop yield and financial aspects of the project. Progress bi-weekly. Data collected will be utilized for presentations and workshops

The black 3 ring binder that the records were being kept in was lost by the people we hired to help us move during our move from one home to another.

d) WVSU Extension Agent Melissa Stewart will track the progress of the Junior Master Gardener participation.

Melissa arranged for specialist training for myself to be able to teach the training workshops myself as she took on large projects in the Huntington area. We had a much smaller amount of children participating at the farm than we had hoped/expected so we focused on outreach we could do off the farm including, School Day at Camp Virgil Tate, working with the three participating Elementary schools and smaller half day workshops. *i.e.: Healthy Kids WV, Putnam Farmers Market, WVSU Therapeutic Gardening Workshop, City of Hurricane Harvest Festival, Hurricane Middle School outdoor classroom days, Huntington area Dogwood Festival, just to name a few.*

We began to work closely with Melissa Stewart at this time through attempting to implement this program as a volunteer in many of her programs. We still work very closely together in several projects. This project was unfortunately not our best one. Due to the “brick walls” we hit with our farm visits we had so hoped for. Once we found we could not get the kids to the farm, with her help we arranged to take the farm to the kids as best we could. We have since learned not to depend on school districts to bring children to field day visits but to implement school gardens and outdoor classrooms instead. We now work with WVU Extension Agents John Porter and Chuck Talbott putting in school gardens and high tunnels, Jessica Pollitt with wvschoolgardens.org, Jenny Totten with WVSU, Shelley Whittington with WVSU.

BENEFICIARIES

Beneficiaries to our project include the children who were able to attend the workshops and farm days.

Adults who attended the “adult only” workshop days.

Children whom attend the schools which our new Jr. Master Gardener Teacher-Leaders are enacting JMG groups and clubs.

There’s no clear way as of yet to quantify the economic impact this education will have on the future adults of our area. There’s no price to be had on an education – except that it is indeed priceless!

Even though we were unable to get as many community members to our farm and pick your own operation as we had hoped. We were able to take our ideas and youth programs “on the road”. We made an impact with over 250 families through our workshops at the farm and that were hosted at other locations such as the Habitat Restore workshops that we mentioned in the previous report. Training teachers and home school parents along with volunteers to utilize the programs we were hoping to initiate in our area. Three workshops focused solely on Jr. Master Gardener programs and training new leaders while three other workshops at Habitat Restore were focused on children and youth gardening workshops. Two very large field days “The Locavore Dinner” (2011 and 2012) on the farm hosted well over 200 people from our community that attended and enjoyed the two field days. We hosted a variety of workshops during both events with three specifically geared towards the production of specialty crops.

Although the “on farm” production was poor and the students we had so hoped for were unable to leave schools to attend our patch and educational workshops we made every effort possible to get the word out and impact our community as a whole. We got out and attended every single event in our tri-county area that we heard about. We took our curriculum, our specialty crop seeds, our Christmas Tree Seedlings and our supplies on the go. We set up tables and hosted an educational workshop wherever we were allowed. The great news is that all of the event planners welcomed us with open arms. The children and adults we worked with enjoyed their time and were able to take home at least one hour’s worth of instruction. In the end, we sometimes feel as though the project itself for an “all-educational pumpkin patch” was a failure due to so many uncontrollable circumstances. In our final year we did get the results we wanted in crop yield but did not get the on farm participation we hoped for. We did not allow this to deter us from our goal of agriculture outreach to children and families. We did whatever steps necessary to take the farm to the family. We took the farm on the road, we reached out and we found the families that were in need.

We learned that you cannot always get folks out of their normal routines or depend on what they say they would “like” to do. Rather understand that if you make the experience more

convenient and easier for them to access they will come. Especially you are working with a traditionally underserved population as we were. In closing, we were not always able to get the families we were hoping for to the farm but we were able to keep the promise of the project name and "take the farm to the family".

LESSONS LEARNED

- The number one lesson learned, as the coordinator, is that expected results and goals were not going to take place on the first year.
- Secondly, that Mother Nature is in charge of agriculture.
- Also, a lesson learned is that one can procure many supporters who promise to support a project, but will often find oneself working alone.
- Deer fencing in our region is a must for a pumpkin patch.
- High tunnels are much too hot in the summer for children to use in the daytime.
- Children love to learn while "playing" outside.
- Teachers are restricted by common core education policies.
- Some children, no matter how interesting is seems to the masses will simply take no interest in getting dirty and planting.
- Large orders and once a year shipments of product and supplies would be easier for grant reporting and reimbursement activities.

An unexpected outcome is that when children planted the pumpkin patch and then sold the pumpkins there is more than a financial satisfaction. The children began to "take ownership" of their plots, the plants and the pumpkins. They cared for them and were careful not to do any damage to the plots of the other children. Even offering to share the plots they had if there was natural damage to another groups plot. They learned teamwork, job sharing, pride and respect.

We did not expect the outcome to reach so far beyond agricultural education.

Contact Person

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A cold winter day working with a Kanawha County Girl Scout Group 2013



Tilling up ground before newly built raised beds go down



Cabell county beginning farmer , Sammy Torres, works between beds mulching on beginning farmer training day.



Beginning Farmer Training Day – we had 16 new farmers in attendance. Proceeds from specialty crop produce grown was sold at the Capitol Market and invested back into the production of the high tunnel.

Charleston **Daily Mail**

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PHOTOS: PUMPKIN CARVING CONTEST IN HURRICANE (4 OF 4)

Volunteer and Teays Valley resident Aimee Figgatt waves as she takes another group of visitors on the hay ride that was offered during the contest.

Brad Davis

Pumpkin Carving Contest Day at Hurricane City Park. Some pumpkins used were purchased from our patch, as well as hay rides to the contest.

PHOTOS: PUMPKIN CARVING CONTEST IN HURRICANE (1 OF 4)



Brad Davis

Twin sisters Erin, right, and Jordan Signorelli, 7, of Hurricane, work on their pumpkins for the carving contest at Hurricane City Park on Sunday afternoon. Erin is still scooping out the seeds while Jordan is drawing her design.



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Subrecipient: Wood County Development Authority
Project: "Parkersburg Downtown Farmers' Marketplace"
Amount: \$5,000.00

PROJECT SUMMARY

The Downtown Farmers' Marketplace was established in 2007 to advance revitalization efforts in downtown Parkersburg. And while it is true that a significant amount of private investments were being made at the time by large downtown employers, no improvements were being made to the area's social infrastructure. When the Marketplace opened, it quickly became more than a place to purchase produce and other local goods; it became a gathering place for City residents and downtown workers. Funds from the WVDA's 2011 Specialty Crop Block Grant were used to sustain promotion for existing programs (i.e. cooking demonstrations, Credit/EBT card transactions) and purchase additional promotional materials for the Marketplace. These materials were used to promote the Market to the general public, as well as socially and economically distressed households.

Since the Market is able to process SNAP cards, organizers had large posters printed and displayed in targeted facilities (i.e. Mid-Ohio Valley Health Department, WV Work Force Investment and the WV Department of Natural Resources). To supplement this effort, summer interns went door to door leaving door knockers on resident's homes in low-income neighborhoods. Although this particular campaign did not result in a significant increase in SNAP purchases, it did expand the Market's outreach efforts. These efforts, as well as Market's promotional campaigns would not be possible without the WVDA's Specialty Crop Block Grant.

In recent years, the number of specialty crop vendors decreased. While there was no one cause, it impacted the variety of produce items available; hence attendance and sales were down at the Marketplace. Since the Market was over 5 years old, organizers used Specialty Crop Block Funds to expand the Markets outreach efforts and refresh old merchandise available at the information booth. Specifically, the Market updated promotional materials and developed a new rack card that could be hung on doors. Despite organizer's best efforts, there are a lot of people who still did not know about the Marketplace, including low-income households who could purchase fresh produce through the Market's SNAP machine. That is why organizers came up with the door-to-door promotional campaign.

PROJECT APPROACH

With the 2011 WVDA Specialty Crop Block Grant, the Downtown Farmers' Marketplace was able to do the following:

- Replace a large, outdated banner on the Market tent
 - Purchase and install four new decorative banners emphasizing the Market's social attributes (i.e. eating, shopping, laughing, etc.)
 - Purchase and display 16 street banners on major thoroughfares in downtown Parkersburg
 - Design and update existing rack cards
 - Design new door hangers advertising the Marketplace
- This campaign targeted households in socially/economically distressed neighborhoods, including the Parkersburg Housing Authority. Several hundred door hangers were distributed.*

- Update the Market's website
- Designed wooden spoons and plastic cutting boards
These items were sold at the Market's Information Booth. Proceeds from the sale of these items is used to promote the Market and put on programming (i.e. live music and special events)

Although overall sales were down compared to previous years, this had more to do with the lack of produce vendors than the Market's advertising efforts. After hearing from Market patrons through a community survey in 2012, organizers decided to not allow known wholesalers to vend at the Marketplace in 2013. The result was less produce vendors, which unfortunately translated into less people shopping at the Marketplace.

A total of fourteen units were sold, generating \$60.00 in revenue. These funds were used to offset costs associated with live cooking demonstrations at the Marketplace and were occasionally given away during a special promotion. Funds were not used to pay for live entertainment, as entertainers were compensated in access of the funds generated from the sale of spoons and cutting boards. Spoons and cutting boards featured the Market's logo, which is comprised of four different colored blocks, each with a different produce item. The objective was is to make these goods a household item, thereby reminding people to stop by the Market or encourage others to do the same. That is why Market bags were purchase with Specialty Crop Block Grant funds when Market first opened in 2007.

Like any commodity or service, the novelty of a local farmers' market can run out if it not refreshed with new activities, signage, and promotions. A lack of produce vendors and outdated promotional materials made it difficult to attract patrons. The purchases and updates described above were meant to inject new energy into the Marketplace.

Additional funding sources for the Marketplace included the City's Development Department, Let's Move Healthy Lifestyle Grant – Highmark Foundation and a private donation from a local family.

These aforementioned items that were purchased above promoted the consumption of specialty crops several ways. First, the promotional materials were designed with specialty crops in mind. For example, the door hangers had large crops on them with facial features. This was intended to get people's attention, as well as promote the produce items available at the Marketplace. The same held true for the wooden spoons and cutting boards. These items complimented specialty crops as they could be used to prepare food items. In this way, the Marketplace ensured that all promotional items, first and foremost, promoted specialty crops.

GOALS AND OUTCOMES ACHIEVED

Organizers had expected sales to increase by 10 percent with the additional marketing and promotional items purchased through the WVDA's Specialty Crop Block Grant. Unfortunately, this was not the case as sales were down by 44 percent from 2012. In 2013, vendors grossed \$43,000 in sales compared to \$77,000 the previous year. This decline was due in large part to the limited amount of produce available at the Marketplace and the fact that the Market closed for the season a month early. Typically the Marketplace is open May-October. This year the

Marketplace closed at the end of September. But, despite the decrease in sales, interest in the Marketplace still remains high. This can be attributed to the Market's advertising, website and social media efforts.

At last count, more than 470 people were signed up for the Market's monthly e-newsletter. That is about a 34 percent increase from 2012. Equally exciting is that the number of people that have 'liked' the Market's Facebook page. As of November 30, 787 people had become fans of the page. That is about a 34 percent increase from the previous year. This strong following, in spite of sales, demonstrates the Market's value and brand in Parkersburg. However, this will not be sustainable if more produce and agricultural goods are not made available in the future. The new, year-round facility under construction at Point Park will go a long way in addressing this issue. The challenge will be letting the community know about the new location, hours of operation and programming available at the new Point Park Marketplace.

BENEFICIARIES

Funds from the 2011 WV Specialty Crop Block Grant were used to update and purchase additional promotional materials. The primary beneficiaries of these materials were the general public and households in socially and economically distressed neighborhoods. By canvassing the Parkersburg Housing Authority and other low to moderate income neighborhoods, organizers had hoped for an increase in sales from households receiving SNAP benefits. Unfortunately, that goal was not met. Next year, organizers intend to re-canvass neighborhoods to let them know about the new Point Park Marketplace. Assuming there is a larger selection of produce, meats and other agricultural-based products, organizers are confident EBT Card transactions will increase, so long as these households are aware of the new facility.

LESSONS LEARNED

The materials that were printed to promote the Marketplace were professional and of high quality. This includes the new rack cards and door hangers. With respect to the door hangers, however, organizers were not able to get them to as many households as anticipated. Going forward, organizers will get a larger group of volunteers together and strategically place them in specific neighborhoods so that everyone in these areas gets the information. Successful outreach efforts like this require a significant amount of time and organization; the Marketplace will devote a considerable amount of time and resources to do a better job in 2014.

The other lesson learned is that getting new materials printed and ready for distribution requires a significant amount of time upfront. In 2012, the Marketplace did not spend any funds, because the Market's marketing consultant could not get new materials printed in time for the grand opening in May. 2013 was much better in that organizers met with the marketing consultant in January of 2013. This gave the consultant and their respective vendors enough time to get the new banners, door knockers, rack cards and promotional items (wooden spoons and cutting boards) completed. Organizers will start the process again this year as the new Point Park Marketplace will require additional advertising to promote the new location and hours of operation.

Word of mouth, at least in Parkersburg, appears to be the best way to let people know what's going on in the community. In hindsight, organizers waited too long to distribute promotional

materials to area neighborhoods. While the Marketplace opened the Friday before Mother's Day, door hangers were not distributed until organizers got two interns (coming back home from College) to work on the project in June/July. These efforts need to be done well in advance of a Market's opening and then followed up on throughout the season. Also, it did not help that when people came to the Market there was a limited amount of produce. Before a promotional campaign is put together, it is imperative that Markets have the products people want. Looking back, organizers should have spent more time recruiting vendors for the season.

CONTACT PERSON

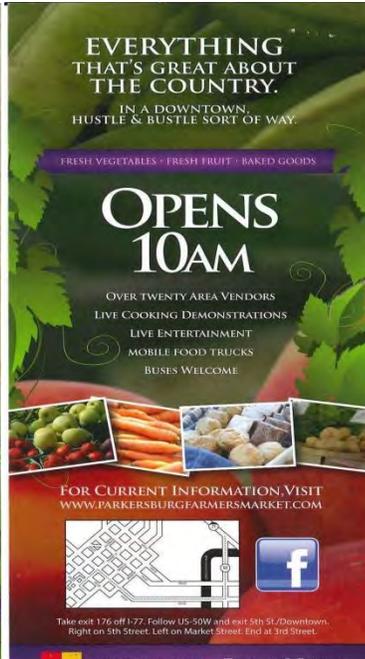
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www.parkersburgcity.com

ADDITIONAL INFORMATION

Since opening in 2007, the Downtown Farmers Marketplace has received several Specialty Crop Block Grants from the WVDA. These grants have helped organizers create an identifiable brand for the Market; a brand organizers believe will transfer to the new Point Park Marketplace next season. It is reasonable to say that if it were not for these grants, the Marketplace would not be as prevalent in the community as it is today. The Marketplace is more than just a place to buy locally grown/produced goods; it has become a gathering place for the downtown and source of information for activities going on in the community.

The Specialty Crop Block Grants have allowed the Market to develop professional materials, including an award winning rack card and website. The Marketplace greatly appreciates all the work the WVDA does to assist local markets and organizers look forward to applying for additional grant opportunities in the future. Thank you.

Below is a scanned copy of the rack cards made



Subrecipient: West Virginia Department of Agriculture
Project: "2011 National Farmers' Market Week: Promoting Specialty Crops"
Amount: \$4,000.00

Project Summary:

This project was designed to take advantage of the national celebration of farmer's market during the 2011 growing season. The goal was the development of a multi-faceted marketing campaign aimed at brand awareness of specialty crops within a West Virginia context, the growing wine industry in the state and the culinary opportunities surrounding specialty crops properly prepared through public demonstrations and samplings. Though diverse in terms of products covered, the project aimed to build a bridge between growers and retail availability/consumer utilization in private households. The project was designed to meet the capitalize on the opportunity of National Farmers' Market Week promotion in addition to providing capitol area markets the opportunity to promote both their markets and the availability of specialty crops. This was also the first event where the Marketing & Development staff compiled event information (survey) to provide to area markets for them to assess the impact of the event and future interest in specialty crops.

Project Approach:

Three activities highlighted the implementation of this project. The first was a corn roast activity at the State Capitol with the utilization of a media satellite uplink. The satellite format allowed for live one-on-one interaction between noon news personnel statewide with the Agriculture Commissioner and subsequent taped feed interviews used in later broadcasts on that day. One local station sent a reporter for a live on-air shot that was uplinked to several affiliates while others chose airwave transmittal. The one-on-one interaction was proceeded by a media advisory highlighting the days' corn roast and wine display activity and the questions related back to patronage at area farmer's markets with each region's market provided to the Commissioner for recommendations. The public interacted with the feeds through corn sampling and the wine display.

The wine display at the Capitol indicated a strong need for proper display and informational materials necessary to create a meaningful and informative presentation. Purchase of two retail display units as part of this project allowed a tracking at the State Fair of West Virginia two weeks after the Capitol event. The last activity within the project was the purchase of a demonstration convection oven to be used at events for cooking (microwave roasting of corn highlighted on the Sweet Corn Fact Sheet developed and distributed as a part of both the Capitol and State Fair event) and other specialty crops. Sampled/demonstrated products included apple butter, hot pepper butter and fruit jams.

Goals and Outcomes Achieved

To measure the effectiveness of this project, WVDA staff utilized number of television household impacted by the satellite feed, earned media income, ratio of dollars spent to earned media received and the sales increase at the State Fair Country Store as a result of the improved retail presentation. The results are listed below.

Satellite Uplink

Television Households in DMA*	8,035,620
Earned Media	\$75,000.00
Effectiveness Ratio	For every \$1.00 spent on the uplink; \$30.00 in earned media was received

*Source: tvnewscheck.com

State Fair Wine Sales

2010	\$2,500.26 total wine sales	Baseline year
2011	\$3,184.30 total wine sales	21.5% increase; new racks, pairing suggestions, QR codes & company descriptions in addition to more varieties
2012*	\$2,772.05	13% decrease over previous year, reduction in space availability resulting in less wines displays and less information provided to consumer

Additional results included an on-site survey of 50 event participants specifying purchasing patterns and farmers market attendance, distribution of 50 dozen ears of roasted corn grown in West Virginia and referral to 10 area farmers markets.

Survey results indicated that more than 75% of respondents were planning on increasing the number of visits to their local farmers market and purchase more specialty crops than previous years (10 locations were provided as frequently visited) and 85% of the respondents felt they would increase their consumption of sweet corn in the next 2 months. Respondents indicated that the top two ways to prepare sweet corn were grilling and boiling with 45% expressing interest in trying the microwave technique listed on the preparation fact sheet provided. The 10 local markets were told of the anticipated increase in visitors and demand for specialty crops (specifically sweet corn) and were provided copies and the template for the developed fact sheet.

Beneficiaries

The beneficiaries of this project included corn roast participants, farmers market vendors who were provided with information concerning anticipated increase in sweet corn and other specialty crop demands as a result of the activity (Capitol Market vendors, Putnam, Cabell and Jackson County markets), consumers who received the Fact Sheet and learned the multiple ways of preparing sweet corn, samplers and patrons at the State Fair who learned about how specialty crops can be prepared in a home kitchen, wine producers in the state who increased their sales at the State Fair as a result of improved merchandising and the households in the DMA's of the satellite uplinks who were made aware of the national farmer's market recognition and availability of local specialty crops. Reports cite over 1 million homes reached and \$75,000.00 of earned media. Six hundred participants were exposed to the wine display and sweet corn samples/fact sheet while exponential numbers are difficult to determine with the outreach to the 10 markets throughout the growing season. State Fair exposure to wine as a state specialty crop as well as the developed signage totaled more than 700,00 visitors to the event during its 10-day run. The media exposure combined with survey results, outreach and education provided a favorable return on investment.

Lessons Learned

This was the first attempt that the WVDA Marketing staff attempted to sample participants to determine consumer preferences and feedback. It was a learning experience in that there are more effective ways to get this information other than notebook and handwritten data collection. The decrease in wine sales revenue was indicative of the need for dedicated retail space and consumer information as it directly correlated with increased sales. The pairing suggestions were effective while the QR code opportunity needed additional information (app download and what they were) before they could be used as an effective tracking tool. The interaction with local media is invaluable as they enjoy the live satellite program offering for their viewers and as the photos demonstrate below, a chance to enjoy an ear of corn!

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Additional information



Subrecipient: West Virginia Department of Agriculture

Project: "Regional Marketplace"

Amount: \$51,340.00

Project Summary

Promotion of West Virginia specialty crops on a regional basis to increase interest, availability and consumption is essential especially for higher end niche markets (i.e. value added and niche production) as outreach efforts provide awareness and opportunity to expand and grow the associated commodities due to increased demand and targeted revenue points.

The development of this project attempted to capture these marketplaces while providing state growers and processors learning opportunities associated with promotion to higher end markets in the Washington, DC and Charlotte, NC regions.

The three events that comprised this activity were the Southern Christmas Show, the Christmas Market at Inwood Market and the 2011 Fancy Food Show in Washington, DC.

An additional event, Good Taste! Pittsburgh was not carried out due to lack of interest. One producer did attend the event and technical assistance associated with the project (but no funds) were provided. Feedback was captured from the individual who attended the event and their feedback indicated that the event would not meet the needs of the specialty crop growers/processors.

Project Approach

The Southern Christmas Show is an annual event in Charlotte, North Carolina that draws over 100,000 visitors in its 10 day run from throughout the southeast. The average consumer spends \$175.00 during their visit. The opportunity for sales of value added and fresh specialty crops as a holiday/gift giving item is tremendous and correlates with consumer interest in local foods. The West Virginia Department of Agriculture spearheaded a promotional program around this event that included a 1,500 square foot retail store, cooperation with the WV Division of Tourism to promote agritourism activities that were specific to specialty crops, public presentations on holiday cooking with specialty crops and producer education on sampling and sales techniques in a rapid retail environment.

The Inwood Market in Inwood, WV features WV products including a wide variety of locally grown fruits (the region is the heart of the state's apple and peach industry), a full selection of WV value added specialty crop products (i.e. jams, jellies, salsas) and the regions largest selection of WV wines. Development of a focused Christmas event with sampling, promotion and implementation had never been undertaken and provided a lucrative Washington, DC based market pool eager to incorporate WV specialty crops into their holiday plans.

The Fancy Food Show is the nation's largest marketplace for high end gourmet gifts. This grant activity provided support, promotion and training for value added specialty crop exhibitors.

To accomplish the program goals, coordination between growers, manufacturers, and technical assistance providers was essential. Qualified products were identified, integration into a retail purchasing system and personnel/staffing meant a coordinating partner (Mountain RC&D) provided the organizational structure for this activity. In addition to the retail procurement procedures, staff was hired and trained to assist during the event, public presentation planning and implemented, pre-show targeted postcards mailed with coupons to incentivize visits to the West Virginia booth, signage highlighting specialty crops (i.e. window display of Washington DC Christmas tree created) and booth decorations. One-on-one focused technical assistance prior to the show (i.e. preparation of press releases, sales sheets, etc.), during (assistance in display and sampling) and follow up (number of additional sales) were carried out and measured towards positive outcomes. Coupon redemption demonstrated pre-show marketing effectiveness as well as provided companies additional leads for pre and post show follow up, and a list of retailers was supplied for companies to do additional calls during event sampling. Stage time gave the Marketing & Development staff an opportunity to showcase West Virginia products for the holidays (honey, beets, squash, carrots, potatoes) and audience members were given the opportunity to have recipes through email follow up. Information gathered (i.e. email addresses) were shared by tourism and WVDA for future events.

Goals & Outcomes Achieved

Sales of specialty crops as well as outreach for training and trade leads accumulated served as a measurement for the project's success.

Sales Data-Southern Christmas Show (comparative)

Year	Total Sales	SCBGP eligible sales	Percentage of Total	Number of samplers	Value of post show/additional sales
2009	\$51,770.51	\$24,012.03	46%	17	\$1,100.00
2010	\$44,486.55	\$17,994.38	40%	14	\$2,300.00
2011	\$48,720.63	\$24,153.43	50%	11	\$1,500.00

Overall Results

	Total Sales SC (during & post)	# of specialty crop participants	Trade Leads Actual
2010 Southern Christmas Show	\$20,294.38	23	38/7
2010 Christmas Expo at Inwood Market	\$6,584.29	19	3/1
2011 Fancy Food Show (Washington, DC)	\$4,680.83	4	145/9
TOTAL	\$31,559.50	46	186/17

The data reflects totals that fall short of the defined outcomes. Total anticipated and actual sales predicted totaled \$88,000.00 with only \$31,559.50 documented (36% of goal) and a little more than 50% of actual leads and 17 of 25 qualified (defined as repeat order, new account openings, additions to retail lines) did not meet established goals. Participation reached 61% of goal with resistance to travel, lack of preparation for retail markets, lack of production capacity and cost (i.e. travel and lodging) cited as reasons for non-participation. Although the project fell short in the outcomes, subjective feedback from participants demonstrated an interest in exploring regional markets and positive feedback on specialty crops offered and quality.

The economic downturn of late 2009 impacted the gift industry geographically. In the Charlotte region, the November, 2009 Southern Christmas Show did not seem to reflect any downturn and yielded one of the most successful events for West Virginia specialty crop growers and manufacturers. This grant funded the 2010 event which, unfortunately, caught up with the economic downturn. Visitorship was level to the show but people were simply not buying at the show which is reflected in overall, specialty crop eligible and total sales. The upturn in additional sales self-reported by only 10 of the 23 specialty crop exhibitors reflected more last minute sales via shipping rather than immediate purchases at the November event.

A total of 93 coupons (NC, SC & WV) were a result of the pre-show mailing gleaned from the trade leads provided by tourism during the 2009 event. The booth received a 1st place best of show award.

Public presentations of holiday ideas for specialty crops yielded attendance of 125 people and requests for recipes by 60 attendees but did not translate into a noticeable increase in

sales of featured products. Dishes presented included chocolate beet cake, squash pie, honey roasted carrots, pickled beets, pumpkin pie jelly, applebutter, maple syrup on buckwheat cakes and pure honey.

The one-on-one interaction assisting with preparation and demonstrating skills provided 2 new companies a positive first time (yet overwhelming) experience. Antedoctally, the company principals received feedback on characteristics such as taste, packaging, alternative product uses and the need for reorder mechanisms especially when exploring out of state markets. One of the two new companies, redesigned their label (computer generated to professional print) as a result of this interaction and feedback.

Beneficiaries

Directly, the activity benefitted the 23 specialty crop growers and manufacturers in West Virginia through actual and follow up sales. Show visitors, ex patriot West Virginians and retailers visited during the event (Harris Teeter, Southern Seasons, Lowe's Grocery and Wal Mart) all provided additional beneficiary contact in an attempt to assist companies in expanding their regional reach of their specialty crop offerings. One company secured an additional 2 products into their previous portfolio with Southern Seasons.

Lessons Learned Contact

In anticipation of increased competition and the economic scenario, a considerable amount of pre-planning and resources went into this event for 2010. Although the results did not meet many of the anticipated outcomes, the interest in mail order and a comparison to others facing more severe impacts from the economic downturn (overall sales were down and several competitors experienced much more significant decreases in sales), the activity did assist 23 specialty crop exhibitors with sales that they would not ordinarily have during the lucrative holiday season.

The follow up reporting was disappointing with a low response and the need for phone follow up to assemble the data. Though many of the specialty crop companies reported positive results and interest in future events, they failed to formally submit their results. The low participation fee and unwillingness to cover the overhead costs associated with this event (i.e. WVDA staff time and lodging) mean this project needs to be carefully monitored for results in the future.

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Subrecipient: West Virginia Department of Agriculture
Project: "Producer Education"
Amount: \$21,600.00

Project Summary

Providing education programs for specialty crop growers and value added specialty crop producers is essential for both compliance and marketing reasons. FDA, USDA and state/local health departments require strict production protocols and the debate surrounding the pending Food Safety and Mechanization Act law mean that growers, manufacturers, regulators and consumers have place a large emphasis on compliance that begins with education. This project addresses these educational priorities through Better Process Control School (BPCS), Recall Procedures and Good Handling Practices/Good Agricultural Practices (GHP/GAP) training.

Project Approach

To meet the needs of the stakeholders listed above a BPCS course (February, 2011), GHP/GAP course (January, 2013) and Food Products Recall class (August, 2013) were planned, promoted and presented.

The Better Process Control School (BPCS) was held as a pre-conference offering as part of the larger West Virginia Small Farms Conference. The course is held in limited locations throughout the US and instructors must be approved by the Food Processors Association (FPA). Dr. Joe Marcy with Virginia Tech, collaborating with Dean Hackney from West Virginia University conduct the course at a discounted amount to enable WV specialty food processors the opportunity to fulfill the production requirement. In addition to providing the course certification (participants must successfully test out at the conclusion of each chapter), West Virginia University provides product testing and process authority expertise to successful students as they work to develop their specialty crop product for the marketplace.

After an initial GHP/GAP course offered with funding from a SCBGP previous funding cycle, WVDA has contracted the services of Dr. Robert Williams of Virginia Tech to instruct the training. His staff is also accessible for produce safety related issues and has been utilized for questions specific to vegetables in flood scenarios. He has worked with the WVDA staff and specialty crop industry to develop the GHP/GAP curriculum specific to the needs of West Virginia growers. For this grant project, he conducted one educational session.

The collaboration forged with the GHP/GAP program has carried over into the Recall class addressing both fresh and processed food products. With colleagues from Virginia Tech, He conducted one GHP/GAP training to address needs with a large grower collaborative that was formed in response to an approved SCBGP project in a later funding cycle. This course also met the educational needs of extension personnel in the region who participated in order to learn new GHP/GAP SOP's and provide consistent technical assistance to the growing community.

Goals & Outcomes Achieved

The Better Process Control School (BPCS) conducted in February, 2011 with 23 producers/manufacturers attending. Of those attending, 19 participants were focused on the manufacturing of a value added specialty crop (i.e. tomatoes, cucumbers, etc.) and needed this course in order to process per FDA. Five new value added specialty crops have been added to the marketplace as a result of the training (salsas, condiments, pickles and dried herbs) and an additional 20 products have been introduced in the marketplace and have explained the offering of shelf stable specialty crops throughout the state. Specialty crops featured included cucumbers, tomatoes, onions, and herbs. All students successfully completed the course with passing testing scores.

The January, 2013 GHP/GAP class was held in Jackson County, the site of a future funded SCBGP activity that focuses on watermelons, aggregation and cooperative growing as well as supporting growers for the Mid-Ohio Valley initiative (also SCBGP recipients). 50 people from 33 farms and three agencies participated. Of particular note were the farms who sent two or more representatives to the training helping to insure best practices implementation on the farm as a whole. Dr. Robert Williams from Virginia Tech was the instructor. At this time, no audit attempts have been reported from the training so it difficult to document educational effectiveness. A follow up discussion with the Extension agents who spearheaded this training will be done at the 2014 WV Small Farm Conference. Program effectiveness can be documented through retail purchases by several stores in the region who mandated farm participation in the training program as a condition of purchase resulting in at least \$8,000.00 of local sales of specialty crops.

The August, 2013 Food Recall class was held in Bridgeport, WV and conducted by Dr. Robert Williams of Virginia Tech. The audience solicited was both fresh produce growers (to comply with GHP/GAP procedures) and processed specialty crop manufacturers (to comply with FDA requirements). Participation was sparse (9 people; 7 firms) but did yield some positive results. An acquisition and product restart (potato chips) was identified in the group and extension personnel interaction were critical and worthwhile during the course. At the completion of the program, six recall plans were developed and one new specialty crop value added processor (tomatoes, peppers) were identified.

Beneficiaries

The first tier beneficiaries for this project are obviously the growers and processors who participated. Secondary beneficiaries include professionals who participate that led to consistent technical assistance provision and inspection criteria. Additional beneficiaries include the wholesalers and retailers who now require the skills, record keeping and procedures as a part of their product decision making. Consistent throughout each of the courses was how the training provides collaboration and interaction opportunities. Buyers and sellers discover the goods and services each offers while

gaining confidence in the safety of the products that will eventually be consumed. The final, and most critical, beneficiaries in this project are the consumers who gain confidence in West Virginia specialty crops whether purchased fresh or preserved.

Though difficult to quantify, conservative estimates are that this training resulted in increased sales of specialty crops (fresh and value added) of at least \$60,000.00 (20 new products BPCS+33 farms GHP/GAP+7 firms GHP/GAP=60 trained units x \$1,000 revenue from new product and/or new market = \$60,000)

Lessons Learned

The GHP/GAP training programs have been problematic. The need for the training and recognition of its value in the production process and distribution system (demands from retail, food service, schools) is understood. Getting small farmers, used to subsistence production, to expand and get on board with the program is the issue. The approval of SCBGP in the region seemed to be the impetus to increase participation.

The BPCS is a perennial training need that also introduces specialty crop manufacturers to the resources available in terms of process authority review, product marketing and development as well as interaction with industry professionals (FDA, state department of public health, WVDA, etc.). Administration changes, personnel turnover (death of former WVU Dean of Agriculture Cameron Hackney who instructed and oversaw process authority review), retirements and other industry factors mean that this school is imperative to maintain continuity and help insure food safety. Dr. Joe Marcy has been instrumental in keeping this program in West Virginia while the SCBGP has made the training affordable.

The developing regulation surrounding the Food Safety and Mechanization Act make the Recall Class timely and significant. Although covered in the GHP/GAP training for fresh produce, the value added processors as well as produce wholesalers have a role in the eventual regulation implementation. Proven Recall Procedures are imperative for safety, traceability, and marketing/third party audit processes. The lack of interest in this course was startling although those who did participate have all reviewed and update their procedures based on the course. Once the final FSMA rules have been established, it is anticipated a future need for another education program will be warranted.

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Subrecipient: West Virginia Department of Agriculture
Project: "Promotions and Consumer Education"
Amount: \$47,435.85

Project Summary

A targeted effort to promote specialty crops was identified early in the Specialty Crop Grant process but presented obstacles in terms of creating a campaign that addressed the varied niches that make up the West Virginia industry, the predominantly rural nature and undetermined media effectiveness. To meet these needs, this project provided a multi-media, multi-niche approach to evaluate the types of activities that provide economic efficiency, information reach and information dissemination. Though the results were mixed, the need for future programs was established as well as a determination of where future funding, activity efforts and outcome monitoring as these determinants relate to the promotion of West Virginia specialty crops.

Project Approach

As stated in the project summary, the diversity of the industry as well as a need to determine project effectiveness came to the forefront of how these activities were approached. Throughout the project, lessons were learned and consumers/viewers provided feedback that were invaluable in terms of what was needed. The approaches were varied to maximize reach and included a series of satellite uplink interviews statewide, billboards in the highly populated Eastern Panhandle, youth education materials, rackcard production and distribution, development of a table tent highlighting specialty crop utilization on restaurant menus, mass media advertising in a national publication highlighting agritourism in West Virginia, signage in the Charlotte Show region promoting West Virginia specialty crop utilization during the holidays and social media advertising in the West Virginia "Wild and Wonderful" eblast. Seasonality, specialty crop availability and development of industry collaborators and organizations were some of the criteria employed in selecting media methods/activities.

Goals and Outcomes Achieved

The measurable outcomes for the project seemed daunting at first; 5 million impressions/views and 10 activities. Actualization of these measurable outcomes was obtainable and demonstrated the media as a powerful tool for information dissemination.

Satellite Outreach activities

Event	Specialty Crops Featured	Total Households Reached	Total Household Reach-Frequency	Earned Media

May 3, 2011 at Charleston Capitol Market	Statewide Opening of WV Farmers Markets	6,995,960	9,686,800	\$72,000.00
August 16, 2011 at State Fair of West Virginia	State Fair specialty crop competitive events, awarding of SCBGP projects & media opportunity to speak with grant recipients	4,686,040	8,035,620	\$85,000.00
October 22, 2012 at Charleston Capitol Market	Collaborative effort with WV Nurserymen's Association highlighting horticulture industry and visiting China buying delegation	4,686,040	32,337,227	\$46,000.00
March 1, 2013 in Morgantown at WV Small Farm Conference	Conference participants; new and beginning farmers, specialty crop enterprise expansion	4,686,040	8,108,290	\$62,800.00
TOTALS		21,054,080	58,167,937	\$265,800.00

Total Earned Media Ratio: For every dollar spent on satellite uplinks promoting specialty crops, \$24.98 of earned media was reported.

A review of the data showed that the two largest markets were Hagerstown, MD (reaching the Eastern Panhandle, northern Virginia and Washington, DC where West Virginia specialty crop participation in farmers markets is strong) and Charleston, WV. The interpretation of the data makes sense in terms of population base as well as crop availability. Participation by the Hagerstown, MD (WHAG) and Charleston stations (WOWK, WCHS, WVAH) significantly increased both the frequency and effectiveness

of this media activity.

Billboard activity

Board number	Cost	Total potential daily views*	Cost per view
301250	\$2,492.50	7,221,600	\$0.000345
2041224	\$2,492.50	1,948,770	\$0.00128
2671224	\$2,492.50	780,930	\$0.00319
3951224	\$2,492.50	772,380	\$0.00323
TOTALS	\$9,970.00	10,723,680	\$0.0020 ave

*90 day period

Eblast Advertisers Report*

Total Sent	Total Delivered	Delivery Rate	Total Open	Open Rate
370,354	368,808	99.58%	20,355	8.23%

*Includes article development and production of "State Farms & Markets" article (6/2012)

The response rate (open) was disappointing for this activity. The call to action (visits to markets mentioning article for discount proved ineffective with only 4 documented retail mentions)

One hundred and thirty restaurants that feature locally crop specialty crops distributed and displayed the 1,000 table tents generated for customers. These cards were designed to highlight the specialty crop menu items as well as motivate restaurant guests to purchase additional specialty crops. This project was done in collaboration with the West Virginia Collaborative for 21st Century Appalachia.

An educational packet with target specialty crop activities targeting K-2 and 3-4 featured apples and pumpkins for distribution during the fall season. Students were provided a grow sequencing activity and language arts sheet for each crop. In addition to availability at the Pumpkin Festival (50,000 visitors) and Capitol Market (2 youth targeted events; 1,000 total participants), the activities were utilized during media events centered on specialty crop agritourism for a pending SCBGP grant cycle. As a result of these activities, 10 teachers asked for materials and sources so that they could integrate the activities into their classrooms.

For agritourism literature outlets and to benefit two underserved specialty crop sectors, rackcards featuring Christmas trees and maple syrup were introduced and disseminated at fairs and events, welcome centers and farmers markets. As a result of these and other outreach efforts, the Christmas tree association has applied for and received SCBGP funding in future cycles and an organizational meeting of the maple syrup producers throughout the state was held with future marketing and collaborative activities scheduled. Additional print media included an agritourism add

“riding the WV wine trail” that appeared in the USA Today published “Go Escape” publication.

The Park Point Marketplace in Parkersburg serves as another example of markets seeking year round availability for their consumers. Working with the successful Parkersburg Market group, the year round marketplace features a retail outlet for weekly seasonal specialty crop producers as well as an incubator for at least two value added producers. Their signage reflects their commitment to specialty crops and serving the community (see below).

Additional resources utilizing grant funds include market tents for events promoting specialty crops and new/beginning farmers, and ongoing development of the web domain wv-grown.com that will integrate with the new WVDA website featuring more functionality, interactivity and analytics for future grant effectiveness and tracking.

Beneficiaries

The beneficiaries in this project are numerous and include consumers, collaboration between the state department of agriculture and a large, relatively untapped specialty crop trade group (horticulture), students, farmers and WVDA personnel. Specialty crop farmers, by far, are the greatest beneficiaries as the project demonstrated the importance of getting the specialty crop messages of health, availability and potential to consumers to increase revenue. Capturing a monetary value of this benefit to this producer group with future programming will allow farmers to quantify the benefits of specialty crop production and spur enterprise expansion.

Lessons Learned

The media is a powerful and wide reaching tool to spread the specialty crop message and the need for this is critical in expanding the scope and consumption of these products in our state. What is proving to be more problematic is the quantification of more long range changes in consumer preference and utilization. Coordination of the mechanism to measure these results is necessary to monitor analytics so that data can be collected on a level beyond media exposure (billboards). Additional challenges were encountered with an administration change 2/3 of the way through the project meaning completion and measurement (website counts, etc.) were compromised. The project did, however, provide actual examples of data that needed to be considered for collection in the future and the assurance that measurement matrixes are built into new media development. The project provided training for marketing and development staff in terms of defining outputs and outcomes as well as the importance of evaluation (i.e. surveying activity participants). Overall, the utilization of satellite uplink technology throughout the state has proven to be cost effective and methods to combine it with social/electronic media resources that ultimately measure longer impactful outcomes will be a priority in future funding of this sort.

The inability to track long term measureable outcomes impacted the project's ability to expend total allocated funds. Combined with an administration change that has refocused promotional efforts, \$4,971.73 of allocated funds within this project were returned to USDA.

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Additional Information

(See below)







USA Today magazine ad; circulation 1,829,099



Point Park Marketplace Sign
 Parkersburg, WV
 Accessible to 30,000 visitors to Blennerhassett Ferry and 32,000 Parkersburg residents



Banner for semi trailer; Independence Blvd, Charlotte for 10 days; 97,000 average daily vehicle count



Commissioner Douglass holds a press conference welcoming Chinese delegation on an inbound buying mission of horticultural products. Later the buyers would join Commissioner Douglass on a statewide evening news satellite uplink talking about their West Virginia tour and the horticultural products available throughout the state.

Fall Mad Libs for Kids Fall Mad Libs - Pumpkins - Classroom Jr. Page 1 of 2

Pumpkin Picking!

Fall has arrived with a chill in the _____
(noun)

The leaves are turning _____ and _____
(color) (color)

Night time comes quicker, which usually means _____! But today was a _____ day.
(noun) (adjective)

My _____ went to the _____ patch.
(noun) (vegetable)

The _____ took us on a hay _____ to a big _____ field. We all got to pick a _____ that was _____. Yes night comes quicker now that it's fall. But tonight my _____ sits by my _____ what a _____ day!
(person) (noun) (verb) (adjective) (noun) (exclamation) (adjective)

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<http://www.classroomjr.com/fall-mad-libs-for-kids/fall-mad-libs-pumpkins/> 9/9/2013

Fall Mad Libs for Kids Fall Mad Libs - Apples - Classroom Jr. Page 1 of 1

Apples!

Red, _____ apples! Today we are going to _____ apples. I am going to _____ the most.
(adjective) (verb) (verb)

My _____ and I are having an _____ picking contest this year. Every _____ we go to _____ farm to pick a _____ of apples. This year _____ wants to make _____, so we need alot.
(person) (fruit) (season) (person's) (noun) (person)

When we arrive _____, _____ counts out our apples. We anxiously await the final count.
(place) (person)

My _____ and I _____! Well actually I had one more then him, but it had a _____ slimy worm _____ in it. That night we had _____ applesauce!
(person) (verb) (adjective) (noun) (adjective)

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<http://www.classroomjr.com/fall-mad-libs-for-kids/fall-mad-libs-apples/> 9/9/2013

Examples of worksheets provided as part of an apple and pumpkin focused packet given out to Pumpkin Festival visitors (50,000 visitors; 1,000 distribution); other items included youth flower and vegetable seed packets and a language arts sequencing activity of the growing cycle of apples and pumpkins.



WEST VIRGINIA... the Christmas Tree state!

Reconnect with a family tradition this holiday season. Nationally recognized and on display in our nation's capitol, West Virginia Christmas tree producers take pride in growing the finest fresh cut trees for festive display.

Available at your local farmer's market, roadside stand or for cutting at the farm, make sure your tree bears the WV Crown designation. Plan on an "adventure" to the farm spending time discovering the perfect tree for you and your family...you may even find a treat or jolly visitor!

CHRISTMAS TREE FARM
West Virginia Crown



WEST VIRGINIA... the Christmas Tree state!

For a list of West Virginia Christmas tree markets, pick your own tree farms or other retail outlets, contact the West Virginia Department of Agriculture Marketing & Development Division at (304) 558-2210.

Provided by the USDA Specialty Crop Block Grant Program and the West Virginia Department of Agriculture, Walt Helmick, Commissioner.



WEST VIRGINIA... The Sweet State

For a list of syrup producers, wholesalers for West Virginia maple products or to learn how you can become involved in this growing industry by joining the newly formed state association, contact the West Virginia Department of Agriculture Marketing & Development Division at (304) 558-2210.

Provided by the USDA Specialty Crop Block Grant Program and the West Virginia Department of Agriculture, Walt Helmick, Commissioner.



WEST VIRGINIA... the Sweet State

With woodland availability giving the state the potential to harvest the 6th largest syrup crop in the nation, the potential for maple syrup farming is endless.

In your favorite recipe, processed as sugar or candy, or a stack of pancakes you can experience a taste of the West Virginia mountains in each drop. Sweet, pure and versatile, maple syrup is one of nature's most perfect food products and a thriving potential agriculture enterprise.

Christmas Tree and Maple Syrup rackcards; 20,000 each distributed.

Subrecipient: West Virginia Department of Agriculture
Project: "Sterilizer Project: Beekeeping" **Amount:**
\$5,500.00

PROJECT SUMMARY:

Most recently colonies of honey bees began dying in large numbers and this cause has not yet been clearly identified. Small numbers of colonies have died in the past, in isolated cases and were called disappearing bee disease due to colonies suddenly becoming absent of adult bees. The more recent disappearing bee disease has been called Colony Collapse Disorder and is very wide spread.

Research suggests that *Nosema ceranae* may be a significant factor in colony collapse disorder. *Nosema ceranae* peaks in the hottest part of the summer, its effects are most noticed in dramatically reduced winter survival of honeybee colonies. It also causes a reduction in honey crops and pollination.

The original plan for the *Nosema* sterilizer was to construct a portable heated chamber that allowed brood combs from honey bee colonies to be sterilized by heat. *Nosema apis* spores die within 24 hours at low temperatures. The heat needed to sterilize *Nosema apis* was lower than the melting point of the honey brood combs. The combs could then be reused once the sterilizing process was complete. This would have been a tremendous cost savings to the beekeeper. The project construction was ready to begin when a new strain of *Nosema* was discovered. The United States Department of Agriculture reported that this new strain called *Nosema Ceranae* could withstand a higher degree of heat, exceeding the temperature that the combs would be able to withstand.

The project was amended due to this new strain to incorporate the West Virginia Department of Agriculture's portable autoclave. This machine was out of service due to mechanical repairs needed. The autoclave uses live steam to sterilize American foulbrood, a contagious and infectious disease of honey bee larvae and pupa. Although we were not able to save the combs from melting, we would still be able to sterilize them and the wax could be recovered and returned to the beekeeper. A request was made for the changes and approved. The repairs were made as directed by two boiler inspectors and an operator's manual was produced. The autoclave was then put into service.

One final change was made in the project scope to cover the need to sterilize honey bee equipment and identify potential users. Samples of live honey bees were collected to identify colonies infected with *Nosema* in order for the beekeeper to administer Fumagilin-B, to try and prevent colony death. The sampled colonies will be monitored for the results to determine effectiveness of the Fumagilin-B product and help determine future decisions.

PROJECT APPROACH:

It was announced to the West Virginia Beekeepers Association in 2011 that the sterilization chamber that we call the auto clave was available for use in sterilizing both Nosema and American Foulbrood diseases. This information was provided to local associations throughout the state. As confirmation of the disease was diagnosed the auto clave was towed to the locations and honey bee equipment was then sterilized.

Over 50 beekeepers have cooperated in the sampling process. Samples of live bees were collected from the colony entrances according to the United States Department of Agriculture protocol. The West Virginia Department of Agriculture sampled over 600 colonies.

1. In place of the letter that was to be mailed out separately to our registered beekeepers, the WVDA has placed on its apiary registration form for beekeepers to contact us for any disease detected so that we may confirm if it would be subject to sterilization. "This will help insure that our targeted diseases are not missed by beekeeper error." Beekeepers mail a copy of the registration form to us and keep a copy for their files. Apiary staff have been receiving request and responding to them for sampling to determine the course of action necessary.
2. After inspection by a certified dealer it was determined that there was an axil out of line on the auto clave trailer. The axil was re-positioned to correct the problem. It was then tested and the swaying problem didn't occur as it had in the past.
3. New fenders were purchased and installed on the auto clave trailer as planned. The trailer is now in compliance by the West Virginia Department of Transportation for hauling the auto clave.
4. The portable auto clave was built in the year 1989. It passed inspection every year and no major changes were necessary until 2009. Most of these were updates, determined by the boiler inspector. Minor repairs were made to the trailer during this time period. Based on the previous years of service we expect that the auto clave will be able to provide another 20 years of service. In our previous 25 years the auto clave was stored outside. We now have placed the auto clave in an indoor shelter to protect from weather.
5. Four operators were given operating manuals plus training which cover the auto clave sterilization and towing procedures. These four operators were assigned areas by county and all of West Virginia's 55 counties are covered. In July of 2013 one operator resigned and the counties were redistributed to the three remaining operators. We have begun the process of replacing the operator that resigned. An onsite operator is being considered for the storage location of the auto clave as well to help reduce travel when equipment is received directly from the beekeeper. Although counties are assigned, all operators are capable of traveling to all 55 counties as needed. Attached is a sample of our operating records, produced by one operator, which we are using to track any reoccurrence of disease. The names of the beekeepers were removed. To date we have had no reoccurrence from the sterilized equipment.

GOALS AND OUTCOMES ACHIEVED:

By producing a means of sterilization of honey bee equipment, beekeepers may now use equipment that was once infected with both Nosema and American Foulbrood disease without reoccurrence of these diseases thus saving additional investment cost that has put beekeepers out of business.

To date the West Virginia Department of Agriculture has sterilized \$3,370.15 worth of beekeeping equipment with American Foulbrood disease. We have also sterilized \$1,935.30 in beekeeping equipment infected with Nosema disease.

The lab results from the samples collected identified that 27% of the 600 colonies have Nosema disease.

BENEFICIARIES:

Beekeepers in West Virginia will benefit for the next decade from the use of the portable autoclave. It is estimated that they may save about \$2,652.72. In 2012 & 2013 West Virginia beekeepers have saved \$5305.45 in replacement cost for beekeeping equipment. Other states have shown interest in constructing their own portable autoclave for use in controlling bee diseases. Construction plans for the autoclave has been shared with them.

LESSONS LEARNED:

New strains of disease may appear that can interfere with projected outcome. Plans to respond to these changes should be planned for in advance. To reduce costly disease outbreaks on new equipment, colonies should be tested and treated during the startup to eliminate defecation on combs, creating the need for sterilization.

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