

**Cultural Factors Impacting
Food Sustainability Initiatives in
Montgomery, Floyd, and Grayson Counties, Virginia**

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Final Report Narrative

Name of Project **Cultural Factors Impacting Food Sustainability Initiatives in Floyd, Giles, Grayson, and Montgomery Counties, Virginia**

Grant Period: February 1, 2011 – June 30, 2012

Grantee Name: Virginia Tech Project Director: Dr. Anita Puckett

Description of Project:

A. Background and Purpose of Study

The need for developing an alternative, viable agricultural base for southwest Virginia is critical. The Appalachian Regional Commission (ARC) recognizes this need by stipulating sustainable agriculture as one of its strategic goals (ARC 2010:9). This Appalachian subregion has relied on agriculture as its major or a major source of income for generations. Nevertheless, traditional farming that relied on tobacco and even the selling of livestock are no longer viable economic assets for long term environmental or economic sustainability. The soil quality and lack of large fields have excluded industrial agribusiness from being economically successful in the region, much less environmentally sustainable (Grace 2011). Other fruit and vegetable crops have not been successful, either. Soil ecologies have deteriorated in most areas to the point of diminishing return unless extensive, expensive, and environmentally destructive synthetic fertilizers are used. Few farmers rely on only one crop, and most must have sources of additional income outside of farming. Even with these “livelihood” strategies, adequate annual income is very difficult for many (c.f., Economic Development Research Group 2007). Yet, when presented with sustainable agricultural alternatives that are or have economic potential, most farmers chose not to change to them (Terry 2011). This project postulated that the reluctance to change was influenced significantly by cultural factors that constructed barriers to change.

Therefore this project investigated the cultural factors impacting those engaged in sustainable agricultural methods in Floyd, Giles, Grayson, and Montgomery Counties, Virginia, in order to illuminate why farmers choose to engage in these practices and how their reasons pattern culturally. These counties were selected because they have a substantial sustainable agricultural base and are supported by either viable farmers markets, such as the Blacksburg Farmers Market in Montgomery County (<http://www.blacksburgfarmersmarket.com/>), or by well-organized sustainable agriculture organizations such as Appalachian Sustainable Development (<http://www.asdevelop.org/>) in Washington County, Virginia.

The objectives of the project were to:

- 1) provide new information about cultural justifications to development of sustainable agriculture;

- 2) promote student understanding of Appalachian community sustainability issues from a “learning-by-doing” orientation;
- 3) develop student leadership and self-motivation skills through independent research within a community context;
- 4) educate students about the strengths and pitfalls of community-based social science research; and
- 5) to assist local community organizations and groups in developing asset that will promote long-term sustainability.

B. Findings

Findings are detailed in the Attachments, which contain the PowerPoint presentation and student reports. Major findings, however, were

1. Reported paradigms regarding conventional and sustainable agriculture do not fully apply in this subregion of Appalachia. Small plots of land, a tendency toward family-owned and family-run farms, and accommodation to the terrain more generally results in a mix-method approach in which farmers may, indeed, for example, use organic fertilizer and free ranging grass-fed strategies for vegetables and livestock, but rely on synthetic fertilizers as they determine is needed. A new paradigm that takes regional cultural variation into account is needed;
2. Cultural factors impacting why farmers farm the way they do is as important if not more important than economic factors in determining which methods farmers use. Family, senses of “place,” oral traditions, and holding on to what has been working, are all major factors;
3. Economic factors are, however, very important, and farmers expect to make a profit from their farming, even if a minimal one;
4. Critical to the farmers in the target research area was having the thriving Blacksburg Farmers Market accessible. Others farmers markets in the area did not provide the clientele in sufficient numbers to make their participation profitable. Results indicated that having a strong clientele interested in buying local organic produce was the most significant variable. Those interested in environmental issues or creating a more idyllic world were fewer in numbers and therefore economically less significant;
5. Farmers who embrace organic and sustainable agricultural methods were, for the most part, highly diverse in cultural orientations and backgrounds. Most, however, were not indigenes, but had moved to the area or had moved back after having lived elsewhere.

C. Recommendations

Results of the research yielded the following recommendations:

1. Farmers in the targeted research area need to have access to more than the farmers markets to distribute their produce. Currently, distributing to grocery stores or restaurants is problematic and the distribution system devised by Appalachian Sustainable Development is still problematic and are not in place in this area;
2. Farmers need a cost share program to assist them in organic (and other labels) certification fees. Currently, the costs are very high for these farmers, forcing many to reject full organic certification. Without certification, they cannot distribute to major chain grocery stores. Consequently, they are not receiving the full economic benefits of their economically-friendly farming methods;

3. Farmers need monetary support to subsidize farming apprenticeships and internships in order to train those interested in sustainable methods. The traditional family-based model of farming is still in place, but dying out. Engaging those non-family individuals who want to learn to farm in eco-friendly ways is critical to expanding community-based and culturally supported agricultural systems;
4. As a corollary to 3., the establishment of farm transition programs for engaging new farmers is also needed. These programs should link older, retiring farmers to younger, new farmers who would be subsidized financially to purchase farmland at a competitive price for the owner and an affordable price for the buyer. These programs would insure that much of the current farmland remains agricultural;
5. As proposed by the Blacksburg Farmers Market administration, non-stigmatizing ways of providing low-income residents on food stamps with a means for purchasing organically-grown produce are needed to expand distribution of organic produce and meat to broader constituencies. Currently, the price of farmers market items is prohibitive for lower income individuals and families. Such expansion will also stimulate higher production by sustainable, organic farmers.

Implementation of these recommendations have the potential to strengthen the current farming sector in the research area, with implications for much of South Central Appalachia more generally by expanding the economic and customer base and providing a way of sustaining it through lessening barriers to success in the industry for new farmers.

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Activities:

The plan of research required students to engage in participant-observational research with farmers so as to obtain ethnographic data on how and why farmers engage in the farming practices they do. This type of research was chosen for two major reasons:

- It frequently leads to cultural insights and understandings through the actual "doing" of activities central to the research project. In so doing, it permits an interpretation of events, activities, and

performances that is maximally sensitive to the meanings given them by cultural members rather than by the researchers' own cultural systems of meaning;

- It provides students with opportunities to engage more fully in cross-cultural encounters than can be achieved in a traditional classroom setting. They learn differently and develop more sensitivity to worldviews different than their own in the process, or they develop intellectual tools for articulating how their own cultural orientations are different from others through the experience.

To meet this methodological goal, the project director, Dr. Anita Puckett, contacted five sustainable farmers in the target research area during the summer 2011 to obtain interest in working with students during the Virginia Tech fall semester and, once interest was obtained, visited their farms to determine suitability in terms of access, types of crops grown, methods used, and usefulness of student labor. A written agreement template was constructed to detail both student and farmer obligations to the project. At the beginning of the fall semester, both students and farmers filled in and signed the form according to farmers' expectations of students' labor and students' expectations of farmers' contributions to the project. This written agreement ameliorated many of the concerns farmers had from being disappointed or feeling misused in previous collaborations with various Virginia Tech professors. By signing the agreement, students also knew that the project director was very serious about their commitment to the assigned farmer and that their grade would be seriously impacted by irresponsibility on their part. Students were required to spend at least 40 contact hours with the farmer to whom they were assigned over the course of the semester.

Students were trained in participant/observation and ethnographic research methods during the regular class sessions during the Fall 2011 semester. They kept fieldnotes, a log, and a journal on their sessions with farmers. These materials were evaluated as part of the course grade.

In addition, students also engaged in the following methods:

- direct observation of consumers and vendors at the Blacksburg Farmers Market, the Shawsville Farmers Market, and the Floyd Farmers Market, all of which are located in the targeted research area;
- formal open-ended interviews of their assigned farmers to learn more about farmers' backgrounds, motivations for engaging in sustainable agriculture, and views concerning the economic viability of organic or sustainable agriculture;
- focus group discussion with two of the participating farmers;
- literature search on publications relevant to sustainable agriculture, local farming methods and agricultural studies of the targeted research region, and relevant material on South Central Appalachia more generally; and
- traditional classroom learning that included guest lectures from the following scholars:
 - a) Dr. Susan Clark, Professor, College of Agriculture and Life Sciences and Director, Civic Agriculture Program;
 - b) Dr. Patricia Grace, recent Ph.D. graduate in VT Agricultural Extension. Her research is on developing teaching tools to transform farmers from traditional to sustainable agricultural methods;
 - c) Ms. Tamara Kennelly, University Archivist and oral historian
 - d) Ms. Kathlyn Terry, Executive Director, Appalachian Sustainable Development, Abingdon, VA

Community and University partners for the project included:

- Appalachian Sustainable Development
- Blacksburg Farmers Market
- Shawsville Farmers Market
- Floyd Farmers Market
- Local farmers: Greenstar Farms, Ron Holdron, Merry Peas Farm, Showcase Farm (withdrew), and Stonecrop Farm

Research was given Virginia Tech IRB approval (IRB 11-548).

Project Outcomes:

Outcomes of the project were

1. Oral presentation of students' research at the Appalachian Teaching Project Conference, Washington, DC, December 2-3, 2012;
2. Presentation of students' research via a poster display at the Appalachian Teaching Project Conference, Washington, DC, December 2-3, 2012;
3. Presentation of students' research to the Blacksburg Farmers Market personnel (including participating farmers), and the general public. Blacksburg Public Library, April 18, 2012;
4. Presentation of students' research to the Virginia Tech academic community via participation in the Department of Religion and Culture's "Undergraduate Research Day" presentations. April 20, 2012;
5. Recognition of students' participation in the Appalachian Teaching Project via the College of Liberal Arts and Human Sciences monthly electronic newsletter;
6. Recognition of the project director's role in the Project by the College of Liberal Arts and Human Sciences monthly newsletter and public relations director in response to her appointment as an ARC Teaching Fellow;
7. Based on students own comments, personal development of research skills in working with communities on community projects, enhancement of their self-motivation and leadership skills, and the sense that the course provided them with outcomes they can list on their professional resumes;
8. Stronger ties with the sustainable agricultural farmers in the area; recognition of the VT Appalachian Studies Program as having provided something useful to the farmers markets in the area; recognition by the Program's department and college that the project is worthwhile; and much stronger ties between the Program and the both the College of Agriculture and Life Sciences.

Problems Encountered:

The project encountered the following problems, all of which were addressed:

1. Scheduling problems led to one farmer/student work/research conflict. With the permission of the farmer, the student was re-assigned to a farm with which he had personal ties and had interned previously;

2. Preference of one farmer to not be identified or personally recognized in any written or oral presentation of the project. She was never identified;
3. Assembling students to make public presentations once the semester is over is quite difficult. At the same time, presentations cannot be made during the semester that the research is current. This problem was addressed by having five students who were willing to present not only their narratives, but also the presentation narratives of those missing, during the Spring 2012 semester. Nevertheless, this outcome was not the best. No ready solutions to this problem are available;
4. Funding for local travel would be most welcome. Departmental support for local travel to conduct research was not available. Future projects that will require students to travel even further from the Virginia Tech campus will be more successful if reimbursement for their expenses can be provided; and
5. Routine course issues as they relate to student scheduling, absenteeism, and data collection conflicts. These were addressed on a case-by-case basis.

Program Continuation and Sustainability:

From a Virginia Tech perspective, the program will continue for some time to come. A specific course, ATP 4094/SOC 4094 Appalachian Community Research went through the University approval process Spring 2012 and will appear in the Undergraduate Catalogue in 2013. Cross-listing the course with Sociology assists in insuring full enrollment and buy-in from another department. Over time, this buy-in should result in the donation of additional financial and material resources. Furthermore, the course is becoming known across colleges, assisting the VT Appalachian Studies Program in building its cross-campus networks. These networks are and will result in greater and more diverse enrollment for the course over time.

Conclusions and Recommendations:

This year's participation by Virginia Tech's Appalachian Studies Program was especially successful from the Program's perspective. The research project clearly met one of the Commission's major goals, the students were strongly engaged in the research, and the willingness of the farmers to participate was also strong. Problems were few and were, for the most part, easily addressed. Furthermore, departmental, college, and cross-college recognition of the research is becoming more widespread and positive. Development of a cross-listed course with Sociology for the project is also a positive step towards interdisciplinary collaboration.

More comprehensively, the conference venue, the organization of the conference, and the quality and level of engagement by all participating colleges and universities was exceptionally high. At this point in its development, it is clear that the Appalachian Teaching Project has emerged as a quality program for the Commission, the participating institutions, and the region. From the Virginia Tech perspective, recognition of this excellence by appointing the project director as an ARC Teaching Fellow is a visible recognition of the Commission's own valuation of the directors' contributions. Clearly, collaboration among the various constituents is high and growing.

The Commission's willingness to come to campuses and reach out to students is and will further enhance this collaboration, and Virginia Tech plans on taking advantage of it this coming funding period, should it be accepted as a partner. The openness of the Commission to work with campuses in other ways (providing access to personnel for advice, consulting with campus researchers on research projects, and inviting

campus members to regional planning events, for example) is a noteworthy example of how the federal government serves its citizens and uses its funding for the common good.

The only substantive recommendation Virginia Tech offers is that the discussion of how to include more educational institutions in the Program should continue. Other campuses than those currently included also have much to bring to the collaborations and the conference. Surely we can come up with a viable plan (and funding) to include them in the future.

Attachments:

- A. PowerPoint File for Students' Oral Presentation, Appalachian Teaching Conference, December 2-3, 2012**
- B. Abbreviated Student Final Reports Describing Their Research**

A. PowerPoint File for Students' Oral Presentation Appalachian Teaching Conference, December 2-3, 2012

Undergraduate Community Research in Sustainable Agriculture

Instructor
Anita Puckett

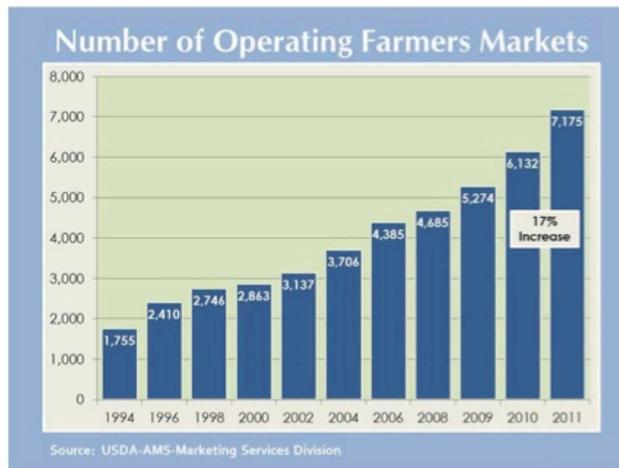
Students
Luke Cox
Drew Proffitt
Dana Williams
Ellen Koertge
Paul Vest
Shasta Sowers
Lida Aljabar
Dan Crowder
Emily Ratliff
Daniel Freeman



Sustainable civic agriculture is a growing interest through the nation



**7175 Farmers Markets Nationwide
17 % Growth from 2010**



www.ams.usda.gov



Understanding local farmer's cultural orientations and how they relate to their farming methods



Influences for Sustainable and/or conventional Practices

Cultural Orientations	Family Practices
Region	Economy



Conventional Farming Paradigm



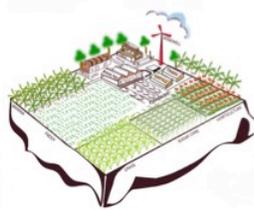
Categories	Description
Soil and Plant Maintenance	Synthetic Additives Chemicals
Animal Care	Antibiotics Hormones Processed Feed
Plant and Animal Diversity	Monoculture
Competition	High National / Global
Support	Government Subsidies
Culture	Global Standardization
Business	Corporate Industry Standards



Sustainable Farming Paradigm



Categories	Description
Soil and Plant Maintenance	Organic Materials
Animal Care	No Antibiotics No Hormones Minimally Processed Feed
Plant and Animal Diversity	Polycultures
Competition	Minimal Local
Support	Local Community
Culture	Local Influence
Business	Family Owned and Operated



Several methods were used to obtain data from the farmers, distributors, and consumers



Participant Observation

Interviews

- Farmers
- Customers



Round the Table Discussion



Guest speakers

Dr. Susan Clark
Dr. Patricia Grace

Ms. Kathlyn Terry
Ms. Tamara Kennelly



Throughout the semester our group discovered some interesting qualitative findings about farmers



Ron:
Distributor
Master Networker



Andrew & Lauren:
Teacher and
Entrepreneur



Gwynn & Robert:
Self-Sufficient
and Profitable

Recent Back to
Lander

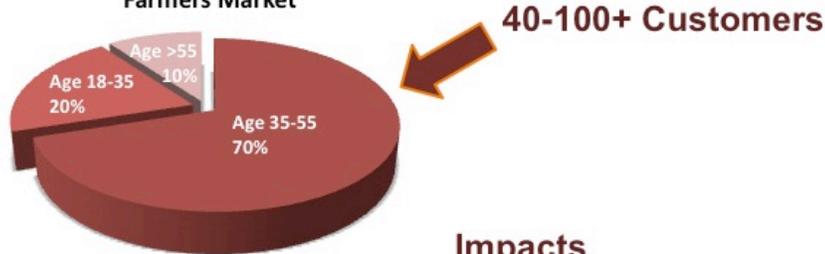


Sustainable Visionary



Our group also discovered some interesting qualitative and quantitative findings from the Blacksburg Farmers Market

Customer Age Percentages Blacksburg
Farmers Market



Impacts



Local Interference



University School
Season



Football Games



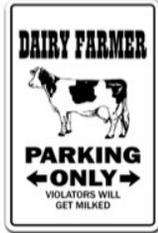
There are numerous types of customers found at the Blacksburg Farmer's Market



Local Supporters



Environmentalist



Novelty Buyers



Utopians



Local farmers in the New River Valley area of Virginia do not follow these standard models

sustainable



conventional



Local Farmers exercise practices of both methods



Our team determined that the local sustainable farmers of the NRV area require their own regional paradigm



Categories	Description
Soil and Plant Maintenance	Generally Sustainable Not Organic Certified
Animal Care	Minimal Antibiotics Grass Fed
Plant and Animal Diversity	Polycultures
Competition	Moderate Regional High Cooperation
Support	Vibrant Local Market
Culture	Highly Individualistic
Business	Family Owned or Small Business



Distribution of Products is very Important to local farmers

Farmers Markets



**Profit Driven
Buying/Reselling
Price**

Regional / Multi Regional Markets



Stores



Restaurants



Conclusions

Specific cultural aspects of the studied agricultural establishments in the New River Valley area

Small scale farms which produce a diverse array of crops and products

Farming methods are sensitive to the climate and topography of the Appalachian locale

Economic aspirations balanced with stewardship of the land

Market and distribution network unique to this community (university and non-local populations, specialty grocery stores, etc.)

High level of individualism

Strong sense of place

Potential to enhance the established conventional farming market



Conclusions (contd.)

Barriers for entrance into and success within the sustainable agricultural market



Access to Land, Infrastructure, and other Upfront Costs



Education and Acquisition of Local Knowledge



Costs of Certification for Various Labels



Recommendations



ARC should help with Cost Share Program



Support of Farming Apprenticeships



Develop stronger consumer markets, direct markets, and distribution systems

Farmer transition from older farmers to new farmers



Support efforts to promote civic agriculture



We would like to give a special thank you to



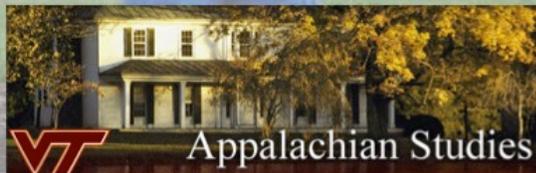
Farmers +1

Ron Holdren
Lauren Cooper
Andrew Schenker
Robert Webster
Gwynn Hamilton
Brantley Ivey

Guest Speakers

Dr. Susan Clark
Dr. Patricia Grace
Ms. Kathlyn Terry
Ms. Tamara Kenelly

Dr. Anita Puckett



Questions?



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B. Abbreviated Student Final Reports Describing Their Research

1. Luke Cox

Statement of the Problem

Examining the cultural limitations and motivations of the growth of civic agriculture in Appalachia, the Virginia Tech Undergraduate Community Research in Sustainable Agriculture class conducted research on several farms throughout Southwest Virginia. Conducting research for the class, I spent first half of this semester working at Shadowchase Farms in Craig County, Virginia. For the remainder of the semester I worked for Grayson Natural Beef in Grayson County, VA collecting more data to contribute to the project. Working primarily at River Ridge Cattle Co with Brantley Ivey, I was exposed to other local farmers affiliated with sustainable agriculture throughout Grayson, Carroll and Allegheny Counties. I also utilized my past experiences growing up around traditional and civic agriculture. This research is extremely pertinent to Appalachia, as sustainable agriculture could very well be a large economic contributor to the region in the near future. We used two separate paradigms of farmer for the purposes of our research, the sustainable farmer and the conventional farmer. The terms "sustainable agriculture" and "civic agriculture" frequently are unclear and confused. Our research used the definitions set by Dr. Patricia Grace and author Thomas Lyson. Dr. Grace states, "Sustainable agriculture addresses the economic, environmental, social and ethical concerns of production". Thomas Lyson defines civic agriculture as community-based agriculture that brings together production and consumption within the same community. In other words, sustainable agriculture defines the product produced and the means of production and civic agriculture defines who produces, distributes, and consumes as well as the location of each. Farmers who participate in sustainable and civic practices refrain from the uses of synthetic fertilizers, grain based feeds, antibiotics and growth hormones. They practice a holistic, communal type of agriculture often without the incentive for profit or wealth. Sustainable and civic farmers according to our paradigm tend to focus heavily on the environmental and ethical impacts of farming instead of the economical. Contrarily, by our paradigm of conventional farming, the farmers tend to view agriculture in a more capitalistic, economical light. Utilizing means that appear more economical such as synthetic fertilizers, antibiotics, growth hormones, and grain based feeds, conventional agriculture follows a path that many opponents see as cutting corners. Conventional agriculture is the most widely practice form of farming in Appalachia.

By setting these paradigms, we had hoped to examine the impact of culture on sustainable agriculture in Appalachia through a study of several farmers throughout Southwest Virginia. The specific areas of focus are the reasons Appalachian farmers do or do not decide to utilize sustainable farming practices, what factors inhibit the cultural and economic success of the farmers, and what are the distribution limitations faced by sustainable farmers. I personally hoped to broaden my knowledge base of civic agriculture and the overall sustainable movement enough to work towards a transition of my family farm from conventional to sustainable. My specific focus of study is grassfed beef industry in the region. I focused on the effects and limitations of climate, geography, location, supply, demand, transportation, labor and culture on the grassfed beef operations in Grayson and surrounding counties.

Methods and Methodology

To collect data for our project, I spent the first half of this semester working at Shadowchase Farms with Phil Mosser. I also drew on my past experiences growing up around traditional and sustainable agriculture and my time spent working at River Cattle Co in Grayson County, Virginia prior to taking this class. River Ridge Cattle Company is a grassfed beef farm that utilizes sustainable practices to produce all natural beef. They are a part of a larger All-

Natural Beef conglomerate, Grayson Natural Beef. Due to a scheduling conflict with Shadowchase Farms, I moved my field research to River Ridge Cattle Co to further my work with Brantley Ivey and Gary Mitchell.

During the course of the past five weeks, drawing on my time spent at Shadowchase Farms and River Ridge, I compiled my data primarily through observation and experience. Phil does not talk much so I did not learn much from conversation. I paid attention to him and the things he did around the farm and the things that changed from visit to visit. We did not complete many tasks around the farm related to sustainable agriculture other than fencing which limited my data collection at Shadowchase. However, my prior experiences helped to compensate for my lack of data from the Mosser farm. By asking questions, observing, working and living in an agricultural area, I have been able to unknowingly collect data all my life. My time working at River Ridge Cattle Co last summer exposed me firsthand to sustainable beef farming in the hills of Southwest Virginia. At River Ridge I asked questions constantly to try and learn as much as I could about grassfed beef. I worked on the farm doing a wide variety of things adding to my knowledge base. Furthering this study, my work for this class went hand in hand with what I had been doing. Switching farms and working at River Ridge during the semester was very informative and beneficial. I took a far more academic approach to my work than I had previously, keeping a log of my work and asking questions throughout the day.

Our class was also fortunate enough to have several guest speakers attend and present different ideas and perspectives of sustainable, civic, and conventional agriculture. Interviews with the farmers were conducted and recorded as well as a roundtable discussion between our class and two of our farmers. Two of our students worked closely at the farmers market in Blacksburg, observing and interviewing vendors and customers.

Findings

Our preconceived paradigms proved inefficient and too black and white to describe our farmers. Therefore we were forced to develop a new paradigm of farmer split somewhere in between the two. In Appalachia, there is little difference between a conventional farm and a sustainable one. Without the large-scale factory farms and feedlots found elsewhere, Appalachian farms are mostly family run, small-scale operations, conventional or sustainable. For the most part the individual farmers could be interchanged with one another. Most of the cattle are grassfed with throughout their life. The differences lie in the specifics. In Appalachia, at the end of a cow's life they are either finished on grass or grain. If finished on grain they fall into conventional, if grass then sustainable. Other factors play an important role like the previously mentioned use of synthetics, antibiotics and hormones. Despite the specific differences in certain practices, the farms and farmers themselves are very similar. This leads to a blending of the paradigms. To draw on the higher price for sustainable products, there are clear-cut rules that cannot be broken, such as use of synthetics and hormones etc. However, the motivations for practicing sustainable agriculture are not so clearly defined.

The ability to provide for themselves and their families is the driving force in the minds of most Americans. If farmers cannot earn a living solely on farming, they subsidize with outside work. This part time commitment rarely allows for the time and labor-intensive sustainable practices. To fully commit to the farming life without any other source of income, these farmers are risking a great deal. This hesitancy has led to fewer farmers producing sustainable products, which inhibits the cost effectiveness of distribution. Kathlyn Terry of the Appalachian Sustainable Development told our class one of the largest inhibitors to turning a profit is the lack of supply. They have yet to fully meet the overall demand for sustainable products. They are working hard to reduce the number of empty trucks rolling up and down the interstate. When a truck is traveling empty, there are hidden transportation costs expended with no return. If every time a drop is made, a pickup is also made, those costs are then negated. Grayson Natural Beef (GNB) is another sustainable agriculture organization that cannot currently meet the market demand for supply or distribution for their product. GNB has found the distribution middlemen to be limiting GNB's profit margin. In response to this, the owners and operators of GNB and a local businessman have placed into the works a separate entity dubbed Grayson Farms to operate retail sales of GNB products. GNB is still handling wholesale sales to restaurants, universities, whole food stores and other wholesale outlets, while Grayson Farms markets directly to the consumers earning retail prices. Ideally, by cutting out the middlemen, GNB is now selling

their beef to Grayson Farms for a considerably higher profit. Grayson Farms then can turn around and sell GNB beef the directly to the consumers for a profit. This now keeps the production, distribution and consumption all on a local level, an ultimate goal of the sustainable movement. Grayson Farms is currently nonoperational but has great potential to benefit the not only GNB but grassfed beef farmers throughout Southwest Virginia and Appalachia.

We have also found certain farmer's markets are far more successful than others. The Blacksburg Farmer's Market, located 250 yards from the Virginia Tech campus is one of the largest and most successful famer's markets in the region. Despite more convenient and closer markets will drive a greater distance and pay a higher fee to sell their products in the Blacksburg Farmer's market. Certain farmers even sell goods they've purchased from other farmers. The farmers sell what the market demands where the market demands it. They are not confined to their own communities when it becomes more profitable to distribute further away. The incentive to be profitable is the overall driving force for the new paradigm of farmer. Without the incentive of profitability, no matter how idealistic and devoted to the organic cause, farmers cannot and will not practice sustainable agriculture.

Significance

The significance of my research transcends far beyond this course at Virginia Tech. Appalachia is a region that supports sustainable agriculture geographically and through its climate. Appalachia has no cash crop, tobacco is gone. Christmas trees are extremely detrimental to the soil and the watershed. Civic agriculture, if adapted regionally could potentially be a huge economic resource for rural Appalachia. Small family farms cannot compete with the industrial model offering the same traditional product. But by offering a natural, healthier alternative that is not harmful to the environment, rural Appalachian farms penetrate into a rapidly growing market. This transition from traditional to civic could be the saving grace for many farms that have been family run for generations.

Beyond Appalachia, civic agriculture could have a similar effect, resurrecting small rural communities with jobs and revenue. Communities, households, and individuals who are able to practice their own sustainable agriculture will be able to purchase a healthier, better product from neighbors. The beauty of civic agriculture is keeping the revenue local. This will improve local economies immensely if it can be brought to fruition. As America becomes more and more conscience to the nutritional value of the foods they consume, they are going to demand a better quality product. Sustainable farmers will be there ready to fill that market.

Recommendations

Our class believes the ARC could greatly aid in the development and expansion of sustainable civic agriculture in Appalachia through several different means. A cost share program for certifications and projects would greatly aid new farmers in the pursuit of success. Limiting and reducing the hoops farmers have to jump through to become certified in with different labels would aid in the expansion of sustainable agriculture. Many farmers do not pursue the government labels as the regulations and applications are far too time consuming and expensive. ARC support of the education of the next generation of farmer is key to the success of expanding sustainable ag. Apprenticeships and school fieldtrips are suggested. Helping older more experienced farmers link up with younger less experienced farmers will help to build a strong foundation for the development of sustainable agriculture in the region.

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2. Dan Crowder

Statement of Problem

The focus of our research was on small farmers in the Appalachian region of the New River Valley and Grayson County, Virginia (Hereafter referred to as NRV Farmers). Originally it focused on what the farmers needed to effectively operate. It was quickly found that these farmers were different. Farmers are often separated into paradigms within academia. Some of the guest lecturers for the class caused a realization that the farmers of the New River Valley and Grayson County do not fit within the given paradigms. The current idea is that farmers are either conventional or sustainable. Dr. Patricia Grace shows in her doctoral dissertation, *The Effects of Story Telling on Worldview and Attitudes Toward Sustainable Agriculture*, the paradigms showed so far. Grace states this about conventional farming practices, "farming is a business only, emphasis on efficiency and profit". She also states, "farming a way of life, emphasis on permanence, quality, beauty" about sustainable agriculture (Grace, 15). Research found that this was inconsistent with what the NRV Farmers were doing. The model Grace gives for conventional farmers is that they are purely profit driven. Through research it was found that the NRV Farmers were very much profit driven but not to the point of destroying their social network through competition. All the NRV Farmers (with the exception of Grayson Natural Beef) were vendors at the Blacksburg Farmers Market. This is a competitive market so that side of the paradigm is upheld. It is also true that the market creates a social atmosphere in which the farmers share information and talk to one another. This suggests that The NRV Farmers motives are not purely competitive but also for the greater good. This crosses over into the sustainable paradigm. These farmers are working on their way of life and permanence. Clearly the NRV Farmers could not be bunched together into either group but had to be included in both. This way of life also falls under Thomas Lyson's idea of Civic Agriculture. In his book *Civic Agriculture: Reconnecting Farm, Food, and Community* Lyson defines civic agriculture as "the rebirth of locally based agriculture and food production... these activities are tightly linked to a communities social and economic development". (Lyson, I) Lyson seems to suggest that social development is just as important as economic development for the health of a community. The NRV Farmers seem to prove this idea through their activities of building their economy while also building their society through the farmers market. All this goes into the idea of having a food system. Dr. Susan Clark presented this idea to the class through a PowerPoint. Clark suggests that a food system is, "All the people processes and places involved with moving the food from the seed the farmer plants to your dinner table, your local restaurant or the cafeteria lunch line." Clark also says that Food Systems exist on many different scales. (Clark) The NRV Farmers are a prime example of a food system that is based on a community scale.

The research found that clearly there was need for a new paradigm to account for the NRV Farmers and others that may be like them.

Methods and Methodology

The methods used in this research are:

- Qualitative data gathered on site by working with the NRV Farmers directly. The tasks of the researchers include looking for data by working on a farm alongside a farmer. The NRV Farmer on whose property data is being collected is named Ron Holdron. There are two researchers assigned to Ron Holdron's Farm including myself. Field notes are being taken while at work with the farmer to better understand about his motives and issues. He lives just off US 460 in Giles County, Virginia. The current data states that Ron used to run a store in Giles called Ron's Stop and Shop, but it closed in 2000. Since then he has been doing some farming on his small property at his house. He also works with other local farmers as a distributor. Ron helps the Amish farmers in the area by distributing their crops for them. He delivers for an apple farm in Carroll County by distributing their apples at the Blacksburg Farmers Market. He also grows vegetables and herbs for sale locally. Research has involved pulling weeds and emptying old trays

used for starting young plants.

- Research also includes an interview with Ron. There was an audio recording done with a digital recorder. This was done in a two on one setting. Through the interview we gained a better understanding of Ron's place in his society as well as found out more about his extensive network. Ron's dealings with the Amish and the Carroll County Apple people give him a distinct and important place in his society.

- There was a group round table for the farmers participating in the study. This was a chance for them to get together and discuss issues they all face. Two farmers came to the round table discussion. They voiced their opinions about what should be done to further help the NRV Farmers with regards to the national Organic Certification. They suggested a cost share program with the ARC to help with the expensive program. This was recorded with digital voice recorders as well.

- The audio files will be compiled by Dr. Puckett and given to the Virginia Tech Library where they can be kept for future reference. It should be noted that sometimes farmers do not like to talk while others may talk about things that do not pertain in any way to the research. The researcher should be ready for both of these eventualities with a specific set of questions going in to an interview.

All of this research had to be approved by an Information Review Board prior to it's being collected. The IRB at Virginia Tech provided this.

Findings

The data found suggests that the alternative paradigm created for the NRV Farmers needs to be one that encompasses both conventional and sustainable methods. This is due to the business like nature of the farmers along with their social networks. In particular I studied a farmer named Ron Holdron. Of the group he was the distributor. Ron had a small farm of his own but mainly distributed for other farmers such as the Amish and an apple orchard based out of Carroll County. He advised them on what to grow then took their products to market to sell. On his farm he grows potted plants and specialty products largely for restaurants. Through all of this activity it is easily seen that Ron is profit based. Hearing him talk shows his base in Civic Agriculture. Ron not only goes to pick up the produce from the Amish but will often sit down and eat a meal with them. This shows his devotion to not only the profits made but also the social ties built between himself and the people with whom he works.

Clearly Ron Holdron does not fit within any of the current paradigms. He is neither all business nor is he all ethically driven. This shows the need for a new paradigm supporting Ron's type of farmer. Further research should be done on this paradigm with different farmers in different areas. The paradigm could possibly extend the NRV Farmers to other farmers market systems. It is possible that there are many other farmers out there that are governed by these same principals. A hybrid of sustainable and conventional paradigms may be useful elsewhere in Appalachia and beyond. This research was presented at the Appalachian Teaching Project conference in Washington DC on December 3, 2011. The Appalachian Regional Commission (ARC) and East Tennessee State University hosted the conference. While there we talked with members of the ARC about what could be done to further this research and what they could do to help.

Significance

The research done has advanced us by showing that farmers do not always fit into the neat paradigms we provide for them. The truth is that there are many different types of farmers, each figuring out the way to be the most profitable coupled with their beliefs and morals. This new paradigm may help to understand small farmers and market based farmers. Some of the conclusions we have drawn about these NRV Farmers are:

- The NRV Farmers produce a diverse array of crops. Ron is developing a ghost pepper plant to sell as a novelty item at the farmers market. He also experiments with many different heirloom varieties of tomatoes. The apple orchard he works with produces many heirloom varieties of apples. These all provide to a market that demands these kinds of things.

- Farming methods are sensitive to the Appalachian locale. Ron's farm is small and the land on which he grows is not flat. He had a collapse after an earthquake in the last ten years that caused a cave to open on his land. This swallowed up some of his potted plants, which he said he wrote off as an incidental. He then had to call in two dump truck loads of dirt to fill in his land.

- Ron has a high level of individualism. He takes on all aspects of the market. He grows, delivers and sells products. He conducts his own business through all the steps of the process of farming.

- NRV Farmers have a strong sense of place. Many of the farmers we studied have lived in the area their entire lives and farm land that was already owned by their families. Ron farms his families land along with a small plot near his house. He is very in tune with his land. He once mentioned a group of hunters that tried to squat on some of his land but he knew just where the boundaries were. This shows that Ron is very in tune with the land he works and knows it well.

Recommendations

The data collected also suggests there are recommendations to be offered. There are ways the NRV Farmers could be helped in their farming. Many of these recommendations are perfectly attainable for the ARC and other organizations that would be willing to help. They are as follows:

- The ARC could help with a cost share program for acquiring the Organic Certification. The State of Virginia currently does this but they are threatening to take it away and in lieu of many recent budget cuts it appears as if they may do just that. If this was done the ARC could take up the cost share program. They could also schedule days for the inspector to go to the farms and help provide transportation for the government inspectors. This would help alleviate the cost on the NRV Farmers and give them more legitimacy as a group.

- The ARC could also support farming apprenticeships. Ron already employs many college students but he does not have a set way for them to learn farming. Most of them just help him unload his truck and sell apples. He says his business is built on the backs of college students. It would be helpful to have a program where college students could intern at farms and learn the essential skills of where their food comes from.

- Support the transition from old farmers to new farmers. The ARC could provide a farm heritage system where someone who has interned as a farmer may take over for an old farmer in running the farm. This would provide some sort of retirement system for old farmers rather than just handing their farms down to their kids. While this is a good system, children of farmers often do not want to be farmers themselves and so there is no way to keep the farms operating. A transition system would help keep farms running effectively.

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3 Daniel Freeman and Paul Vest

Report Abstract

This research explains how information and results that were discovered were obtained to benefit the Appalachian Teaching Project of 2011, sponsored by the Appalachian Regional Commission, in regards to local Farmer's Markets and sustainable agriculture within the counties of Montgomery, Floyd, Giles, and Grayson Virginia (Puckett). The report explains the purpose and motivation behind the research. The methodologies used to gather information in this report will include participant observation and interviews. The report will discuss the findings and results determined with these methodologies in my research at the local Farmer's Markets. Finally, this report will conclude with a discussion of the significance of the research that has been performed in regards to the combined research of the entire class this semester.

This particular research in regards to the local farmer's markets in the area was a combined effort between Paul Vest and Daniel Freeman. Throughout this research, Paul Vest and Daniel Freeman focused on applied anthropology. Therefore, Mr. Vest and Mr. Freeman have analyzed the decisions customers are making at the local Farmer's Markets in regards to their social and cultural backgrounds (Ervin 4). Together, Paul Vest and Daniel Freeman analyzed and obtained data in regards to different aspects of the markets. For instance, Mr. Vest focused more on the number of people attending the markets on various days, while Mr. Freeman focused on the amount of products being purchased and gathered information in regards to the economic classes of the farmers. Therefore, our results were combined to form a broader understanding of the activities taking place at the local farmer's markets.

Statement of Purpose

The purpose of this research project will be to explore the relationship between agriculture practices and cultural backgrounds of the community members as they relate within the following counties of Virginia: Montgomery, Craig, Giles, and Floyd (Puckett). The practice of shopping for local products is heavily influenced by personal backgrounds (Ervin 4). For instance, if a person is raised in a community where local farmers are the primary source of food, then they will continue this practice in their current location. However, if another person is raised in an area where local farms do not exist, they probably do not go out of their way to participate in sustainable agriculture. Also, people who are concerned with sustainability and the present energy crisis are more likely to participate in this program as well.

The motivation behind this research is best summed up by the following quote: "While the American Food and agriculture system follows a decades-old path of industrialization and globalization, a counter trend toward localizing some agriculture and food production has appeared" (Lyson 1). With this research project, the goal is to discover a trend within the listed communities where a desire to practice sustainable agriculture exists. If a desire for this sustainability practice is determined, a connection will then be made between the people who participate in this sustainability and their backgrounds. This information will then allow the researchers to determine effective methods that can be used in order to promote this use of sustainable agriculture to other members within the communities. The final goal of this research was to present our findings and results to the Appalachian Regional Commission so that an influence towards sustainable agriculture may be achieved within the area. This goal was

accomplished by the researchers involved in this project.

This specific research project will analyze statistical information found through participant observation at the local farmer's markets of the counties listed before. Due to our research receiving IRB approval 11-548 from Virginia Tech, an interview with two farmers at the Blacksburg Farmer's Market was conducted. Through these techniques, a significant amount of data was discovered about the amount of business occurring at the Blacksburg and Floyd Farmer's Markets as well as an understanding of the thoughts of two local farmers. Through this research, areas where improvement and promotions can be made to the Blacksburg Farmer's Market to influence sustainable agriculture in the area have been determined. The next section of this report will discuss, in detail, the procedures and methodologies that have been involved with gathering this data.

Methodologies

In order to gather informative and qualitative data, it will be necessary to construct a predetermined approach to retrieve this information. Since this particular part of the project involves visiting the local farmers markets in the region, this research will focus mainly on the consumption aspect of the agricultural production. Throughout the semester, the data has been obtained between the Blacksburg and Floyd farmer's markets to analyze the number of people who shop at these markets, as well as the quantity of products that are being purchased. By analyzing these two different farmers markets comparisons have been made to the similarities and differences within these two different communities in regards to this idea of sustainable agriculture. Also, an interview with Jason Pall and Sally Walker at Glade Road Growing LLC was conducted to gain an understanding of the motivation and background behind two local farmers who participate at the Blacksburg Farmer's Market. This interview gathered qualitative answers to specific questions in regards to the Blacksburg Farmer's Market. Table 1 lists the questions that were asked to Jason Pall and Sally Walker during the interview.

Table 1. Examples of questions that can be asked to the vendors/farmers found at the local farmer's markets.

Are you a full-time farmer?
 How long have you been involved with this particular market?
 Are you involved with any of the other markets in the area? If so, which ones?
 What products are you consistently selling?
 How many of these products do you typically sell each week?
 Would you like to see more or fewer vendors at the market?
 What aspects of the Farmers Market do you think should be improved?
 Does the coordination of activities within the town need improvement (Football Games, Parades, etc)?
 Overall, do you feel as though this Farmers Market is a successful operation?
 Is Blacksburg a good place to participate in a farmer's market?
 Have you seen any significant changes in the number of people that attend the farmers markets since you have been involved here?
 Are you familiar with the Appalachian Regional Commission.
 Is there anything else you would like to tell us about the Blacksburg Farmer's market?

Throughout the act of participant observation at the Blacksburg and Floyd Farmer's Markets and the interview conducted with Jason Pall and Sally Walker, a significant amount of qualitative data in regards to the farmer's markets was obtained. Examples of data and results

that were determined in regards to the Blacksburg Farmer's Market consists of: percentage of age groups at the market, number of people who shop at the market, impacts to the market, and amount of products being purchased at the market. The results and findings determined this semester can be used to improve the success of the market, which will be discussed later in this report. The next section of this report will discuss and analyze the findings that were discovered this semester with this particular portion of the project.

Findings

The research this semester focused mainly on the Blacksburg Farmer's Market. One trip was made to the Floyd Farmer's Market but the business and community interest in that particular market is very low. Therefore, the majority of this research was spent analyzing as many aspects as possible of the Blacksburg Farmer's Market to determine ways that its success can be promoted even more.

The research of the Blacksburg Farmer's Market showed the farmer's market to be busy every week. The market usually starts around 8:00am on Saturday mornings and 2:00pm on Wednesday afternoons. On average, the market has about twenty to thirty people every week right at 8:00am. Also, with this early morning crowd, it seems to be mostly people within the age group of forty to sixty years old. Also, this age group usually leaves with at least one or two large, full bags of products. Therefore, it seems as though these people are buying several days' worth of groceries for themselves from the market, and possibly even other people in their families. In regards to an idea of promoting a sustainable agricultural community, this is a strong result in that regard. Also, most of the people who are purchasing large amounts of groceries seem to be health conscience. This result was determined from the basis that the majority of these people are usually in shape, a lot of them wear athletic clothing which means they have just finished or are about to start exercising, and they seem to be very fast-paced walkers. This result also leads to another result, which is there are not many overweight or obese people shopping at the farmers markets. Therefore, the conclusion has been made that most of the customers who shop at these markets are probably concerned with their health.

The number of people shopping at the Blacksburg farmer's market drastically increases as the time passes. As mentioned before, the day usually starts out with approximately twenty to thirty people. However, by 10:00 am the crowd shopping at the farmer's market has usually increased to forty or fifty people on average. This increase in people leads to a very busy market. During this research it was easy to see one person after another leave the market with at least a handful of products when this many people are there. It seems as though around this time there are less people leaving with large amounts of products, which is experienced earlier in the morning. Also, by this time frame, there is a more diversified age group experienced at the market. There are usually several people there who resemble college-aged students, there is still a large amount of people in the forty to sixty year old range, and there is also a large group of people that have been classified around thirty years of age. It is important to note that these ages are simply estimated.

Local activities can have a significant impact on the Blacksburg Farmer's Market. One such activity that impacts the market is Virginia Tech football games. If the games occur at lunch time or before, the market experiences a significant decrease in business. However, if the game occurs in the evening, business usually increases at the market due to alumni and family walking around the town of Blacksburg before the game starts. In the interview with Jason Pall and Sally Walker, they believe that evening games not only increases business at the market but also everywhere else in the town of Blacksburg (Pall and Walker). Therefore, Virginia Tech

may want to communicate with the local businesses in the area to find out if scheduling all evening games would bring about more local economy. The problem with this idea is that football games are scheduled so that the game can be televised. Therefore, this may not be a possibility but it is something that should be considered. Also, parades seem to have a negative impact on the market as well. The Virginia Tech homecoming parade this year drastically decreased the amount of business experienced at the market. Therefore, there needs to be more coordination with Virginia Tech and the town of Blacksburg to ensure a successful operation at the market.

The last item that will be discussed in regards to the Blacksburg farmer's market is the vendors and farmers who are there every week. The vehicles the vendors drive to the market are low-end to medium-end vehicles in regards to reliability and price. There are several vans at the market that appear to have been very heavily used. Also, there are a few pickup trucks there that are 1980's model with a lot of wear showing on them. These types of vehicles were expected to be seen at the farmer's markets. However, since there were not any newer trucks or vans during the visits to the market, it was concluded that this means that the vendors at the market are probably not making a significant profit from the product. It seems more similar to the fact that the farmers and vendors are just using what they can to get the job done.

The Floyd Farmer's Market has been determined to be very different from the Blacksburg Farmer's Market. This particular research has only traveled the Floyd farmers market once this semester; however, I have been around it several times in the past when I used to play bluegrass music in Floyd on the weekends. An interesting aspect that has been noticed with the market is a very complex dynamic among the vendors and farmers present at the market. One side of the market is controlled by the farmers near the Floyd area, while the other side of the market is dominated by the "hippies" within the region. This conclusion was made by the way the two different groups of people dressed, talked, and presented themselves. Also, from my previous experiences in the area, I know that this not an uncommon aspect of the community. It was determined that the two different groups socialized within their respective groups, but the two did not socialize with each other. Therefore, tension was sensed between the two different types of products being sold. Also, over two hours of research were performed at the market, and during this time no products were sold from the market to the customers walking around. From what was seen this semester and previous semesters the market experiences very low attendance, around twenty to thirty people, in the market with little actual business being experienced. Therefore, significant improvements need to be made to this particular market for their operation to be as successful as the Blacksburg Farmer's Market.

In regards to both markets, a lot of traits that were expected to be seen were in fact discovered. It seems as though on pretty, warm, sunny days there are more people who come to the markets to look at the products being sold. While on cold, gloomy days it seems as though the only people who come to the market are the regular shoppers who use the market as a major grocery shopping activity. As stated before, the majority of the people who consume the products from the market seem to be health conscience, middle aged adults who purchase food for themselves as well as their families.

During this research an additional opportunity to spend time with Rial Tombes on September 29, 2011 at the on-campus farmer's market at Virginia Tech was achieved. Rial has been involved with this market since it started in the spring of 2009. She discussed that the market started out with a maximum of three vendors at the market, and it only occurred about once a semester. Since then, the market has increased its operation to five or more vendors each time. Also, the market now occurs at least four times a semester. Therefore, it easy to say that

the on-campus market is growing each year and it is a perfect liaison for the students at Virginia Tech to learn about the weekly farmer's market that occurs twice a week only a short distance away from campus.

Significance

The results that have been presented from this research are important in regards to understanding the amount of business and significance the farmer's markets are experiencing. Our ultimate goal of this project is to improve the local farmer's markets and promote more business to the local farmer. This will create a more sustainable agricultural system within the region of the New River Valley.

Throughout the semester it was noticed that the Blacksburg Farmer's Market continually stays busy. The vendors at the market seemed to be constantly selling their products or talking to potential buyers at any given time during the operating hours of the market. Also, during this research notes were taken on the people leaving the markets and it was easy to determine that a lot of products were being sold at the market. This information shows that there is a desire within the town of Blacksburg for local products.

A lot of very important information during my interview with Jason Pall and Sally Walker was determined. This is the first year that Jason has been selling his own products at the Blacksburg Farmer's Market; however, he has been involved with the market through different farms for two previous years. Jason said during his interview that there has been a growing trend of people who attend and shop at the market since he has been involved with it (Pall and Walker).

My research this semester has proved that there is a growing demand for local produce and meat in the town of Blacksburg. According to the United States Department of Agriculture, this trend is being seen throughout the nation. The information found is there has been an exponential rise in farmers markets in the nation over the past ten years. This year 7,175 farmer's markets were recorded across the United States with a seventeen percent growth from last year (United States Department of Agriculture). Therefore, the movement for civic agriculture does exist not only in the town of Blacksburg, Virginia but also across the nation.

Recommendations

Analyzing the local Farmer's Markets and conducting an interview with one of the vendors at the Blacksburg market has enabled this research to determine recommendations that can be made to improve the success of the Blacksburg Farmer's Market. One issue that has been noticed with the Blacksburg Farmer's Market is parking availability. It seems as though the people driving to the market are constantly looking for parallel parking spots along Draper Road. However, I have noticed during my time spent there this semester that there is always parking available in the architectural annex parking lot except on football game days. Also Jason Pall mentioned that on football game days, the Kent Square parking garage usually has plenty of available spots open. Therefore, if the Blacksburg Farmer's Market would simply advertise available parking areas around the market then game day parking would not be as much of an issue (Pall and Walker).

Throughout my research it was also determined that the majority of people actively shopping at the market were people in the age range of thirty five to fifty five years of age.

Considering that Virginia Tech, with approximately thirty thousand students, is located within a half mile of the market, more shoppers in the eighteen to thirty five year old range should be encouraged to participate. One of the major issues with this recommendation is the current meal plan systems on campus and the lack of food storage room within a dormitory. As a former dormitory resident of two years in Virginia Tech's Lee Hall, I never felt as though I had time to cook or shop for groceries especially when it was so easy to just walk a few hundred yards and purchase food at one of the university's restaurants. Therefore, there are some challenges to overcome by the market to promote business to this age group consisting of primarily college students. The recommendation from this research would be to have a cooked dinner on Wednesdays and a lunch on Saturdays using products from the market and could be purchased using Virginia Tech's dining dollars which almost every on-campus student has. While this would take considerable effort by the Blacksburg Farmer's Market, it would bring about additional business and offer students a pleasant break from eating on-campus food all of the time.

The final recommendation made by the research this semester in regards to the Blacksburg Farmer's Market is there needs to be better communication and coordination between the market and Virginia Tech. Football season seems to have both positive and negative impacts on the market depending upon the time of the football game. Evening games seem to promote additional business to the market while morning games decrease the amount of business. Therefore, if the university could try to have more evening games than morning games, this could greatly improve the success of the market.

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4. Ellen Koertge

Statement of problem

The questions being asked by this research deal with the effects of the culture of Appalachia on farmer's choices in farming and their success. What influence does culture orientation have on the choice to farm sustainably,

what are the cultural and economic roadblocks to success, and issues with the distribution of their products from their point of view?

Farms, markets, and the customers used to be closely connected, but in today's world the farm and the customer are so distant people forget, or don't even think about where their food comes from. The food we get from grocery stores can come from farms thousands of miles away. (Lyson, 3) Around 1950 the food system began to change from a local system of production and consumption to a global system where the production and consumption were separated. (Lyson, 5) Today people have become dependent on foods that may not grow in their area or even the country. People forget about how important farms are to our living, without them we would have no food. What can be done to help the farmers in the Appalachian area?

From one of our guest speakers, Kathlyn Terry, the Interim Executive Director of Appalachian Sustainable Development, I have learned about their programs to help the farming communities in other parts of Appalachia. Farming is where our food comes from and today a much smaller proportion of farms are responsible for feeding a large country. The farming culture and knowledge cannot be lost, and that is one of the projects of the ASD. They have created programs that teach children the importance of plants, and the effect that growing in certain ways has on the environment.

A problem that my farmers and others face is that selling their produce locally is not an easy task. If they are part of the farmers market they can sell there, but what about the produce that does not sell there, or the farmers who have not made it into the farmers market. One of the projects they run is one that allows farmers to be able to sell their products to wholesale markets. Appalachian Sustainable Development has come up with a solution to farmer's issues with trying to sell their produce to local food businesses. One farm wouldn't typically grow enough produce consistently to be able to sell to a market on their own, so the ASD has multiple farmers drop off their produce to a warehouse where all the produce that is collected is packaged and sold to whole food markets. This system or something like it could be very helpful to farmers that do not have a spot in the farmer's market. (ASD)

The support of a local food system helps not only the farmer but also the community the farmers sell to. The practice of sustainable farming keeps healthy land and produces healthy food. And while these products may be a little more expensive upfront, they support healthier bodies than the food filled with preservatives so that it can be shipped all over the country and world. The farmer's success in their distribution of their product locally is beneficial to the whole community. (Clark)

One of the roadblocks farmers face is the idea that farming can be categorized into either conventional or sustainable. In these models conventional focuses on profits and business with the goals of global production and distribution, and sustainable agriculture defined by Dr. Patricia Grace addresses the economic, environmental, social and ethical concerns of production. (Lyson 70, 80)

The problem with the idea that only these two categories exists is that many farms use practices that fall in the middle, or draw from the other category which can hurt the farmer because the loose the support of the customers who have a black and white view about where their food comes from. The use of antibiotics is considered to be a conventional farming practice where they use them to prevent sickness, but sustainable farmers might have to use them occasionally when they have a sick animal. Customers who want to buy strictly sustainable or organic products could refuse to buy the product just because the animal received antibiotics once in its life when they were really needed. Farmers who want to farm sustainably want to follow practices that are best for the earth and consumers, but they also want to be able to make a living, which can mean using some practices that are deemed conventional by the models but are not harmful in small quantities such as antibiotics.

Methods and Methodology

To gain an understanding of the difficulties faced by farmers in the New River Valley and Grayson County area we worked on the farm with 4 different farmers doing any projects that they needed help with for 40 hours over the semester, and observed vendors and customers at the Blacksburg Farmers market. We used participatory research is because the people affected, the farmers, know the effects that the cultural orientation of Appalachia has on their farming practices and success. (Ervin, 221) It also allowed us to experience the challenges of farming in the Appalachian landscape, see what it took to gain the certifications that sustainable supporters like to see, and hear from vendors and customers about why they buy and sell where they do. We also interviewed the farmers we worked with individually and recorded a round table discussion with two of them to ask them what they believe could be beneficial for the farmers and consumers in the area. These interviews required us to gain IRB approval. We recorded the interviews using digital recorders and put the files on our computers. These files will be sent to our instructor Dr. Puckett and will be given to the Appalachian Studies Program.

We will also present our findings to the farmers and see what else they think could be done, and see if they would be interested in participating in a distribution program like the Appalachian Sustainable Development.

Findings

Through my work with Gwynn and Robert I have found out about some of their views towards farming. Their views affect their farming, how they eat at home, and even how they eat when they go into town.

Gwynn is not comfortable with the use of chemicals. I have never given second thought to the use of flea treatments on my dog, but Gwynn will not use the commercial chemicals on her dog for fleas. She tried many non-chemical treatments to get rid of them. If they don't want to use chemicals for their dog's fleas then why would they use chemical on their farm? They don't use a commercial fertilizer full of all sorts of chemicals but use a mix of fish gut juice and water for their fertilizer and compost from Virginia tech for their raised beds and to help out their soil. They grow their crops organically, but sometimes wonder if it is worth it to go through the paper work to be certified organic. Practices and the certification can cost more than the farmers can pay. One of the requirements for certification is the use of untreated wood for plants beds and other things, but after a few years the wood needs to be replaced which can be costly.

Before this project I never realized the effect of the football games on the farmers market. The game day traffic and all the tailgaters slowed the market for years. It has picked up some because there are people that don't let game day get in the way. But the farmers love the later game times because the game doesn't affect the market quite as negatively as it would on a noon game day.

They also like to know where their meat comes from so when they go into town they eat vegetarian because they don't know where that meat comes from. They also believe that just because it is grown locally doesn't mean that it is good. Grain fattened cows are not fattened up in a good way whether they are raised here at Tech or all the way in California. This came up when Gwynn shared that she had read an article in the paper about that question and the cows grown at Tech.

I have also found out about some of the problems that they have run into when selling their crops. The farmers market has been doing better each year for them, but selling to local restaurants is tough. Their menus don't follow the growing seasons, so they get tired when all Robert has to sell them is a lot of cucumber for 3 weeks straight. They have a few restaurants that they sell two, but they would like to sell to one or two more, but finding restaurants to buy from them is not easy, especially in a small town like Blacksburg where the number of local non-chain restaurants is limited. One of the restaurants they use to sell to stopped buying from them when the restaurant

owners divorced. In a small community like Blacksburg losing a restaurant like that isn't easy to replace just because the number of non-restaurant chains is fairly limited.

They also have trouble finding something to serve as a cover crop for in between the beds to help stop the spread of the weeds that end up growing there. They haven't been able to find helpful resources, and so far nothing that they have tried has worked. Help trouble shooting problems that arise from farming on a hill, and ways that they could sell more of their crop, because they have plenty more that they would be able to sell could be beneficial to them.

These findings help support the project idea that farmers in the New River Valley and Grayson County area don't fit into one of the two models presented by Dr. Patricia Grace and Lyson. The farmers we worked with use methods from both models, but in a way so that they are still sustainable. Their main concern is taking care of the land and their families. They use compost and animal manure, farm as organically they can even if they can't afford getting the certification, and use polycultures to deal with the difficult terrain. But they also use minimal additives so that they can provide quality products while getting the most out of the animals they raise, and may try to compete with a more global market by selling to grocery stores and restaurants, with the majority of their competition being regional.

These findings have been presented to Appalachian Regional Commission, but continued research with more farmers in the area would allow the new paradigm for the New River Valley and Grayson County area to be even better fitted for them. This semester the majority of the research was done with farmers that only work with produce, working with animal farms will help make sure that those farmers are not left out. Continued work and relationships with farmers will insure that the paradigm reflects what the farmers believe, and shows ways that they could use help to ensure they are able to continue their sustainable practices.

Significance

Through our research we began to see the cultural influences of the area on the farming practices. These farmers have to balance their desire to keep the land healthy and working for future generations with the need to make enough money to support families. They also have a strong connection to the community but like to keep their individualism, which allows them to sell a product that people can know and trust. This community of farmers also has the unique opportunity to have a farmers market in a college town, and have college students work on their farms. The topography of the New River Valley area lends itself to many small-scale farms, which allows for a wide array of products, but unless they are passed down they will soon be lost. Along with the passing down of farmland, people need to be educated in the importance and methods for farming sustainably so that the practices and understanding for the need of sustainable farming are not lost.

Recommendations

From the work with the farmers they have shared many things that they believe would make it easier to continue their sustainable practices. Gwynn shared in the round table discussion that it would be helpful to have a cost share program that would help cover the cost to obtain an organic certification. Virginia now has a cost share program but farmers fear it may not stay, and if they could no longer get that help with the certification than farmer are going to reconsider getting that certification. (Hamilton) This program would help farmers that are not able to obtain the certification because of the cost, to gain the benefits of selling the organic products that they already grow.

Gwynn is really interested in creating a school garden at her daughter's school, but she would have to organize it all by herself, and her work would be unpaid. A farm is already a lot of work and they don't have a lot of free time, so as much as she would love to set up the garden, taking that time away from her farm without a little extra money makes it difficult to make it worth the work. In our interview Robert mentioned that teaching is not their

main goal because they are “just trying to survive mostly”. (Hamilton) If there were community support for the programs to teach kids about sustainable farming where farmers can give some help, but don't have to do all the work their self could make this a more realistic project that could be very successful.

Grant's to build things such as hoop houses have been used and are helpful for Gwynn and Robert. The hoop house will allow them to extend their growing season for a little longer. This is beneficial for the farmers and the customers who can buy produce for a little longer outside of the typical growing season. Farmers in this area of Appalachia want to be able to extend their growing season so that they can sell their produce just a little longer, but many don't have the money on their own to cover the costs of what they would need to build to be able to do so. Grant subsidy programs would be extremely beneficial to farmers in this region.

From talking to farmer that sell at the market and trough the interview with Gwynn and Robert we have found that they would like to have some kind or organization that would make it possible for them to get health insurance. On their own it is too difficult and expensive to get health insurance, and they would like to have access to an affordable health insurance policy.

A program that brings people that are trying to acquire land to farm with people have the land and are looking for someone to farm it, would insure that farming land is not lost. Many people that would like to be able to farm can't because of the cost of acquiring the land, or they don't know where to find it.

Sustainable farming practices are not only important for farmers so that they can keep their land and crops healthy for year after year, but for the consumers as well. These practices produce healthy foods for us, and when the land stop being farmable there goes our food. Small local farmers are going to need a hand if they are going to keep sustainable farming going.

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5. Shasta Sowers

Statement of Purpose:

In the HUM-4104 class, Fall 2011, the purpose was to specifically research and find how culture of the New River Valley (+ Grayson County) portion of the Appalachian Region affected practices of sustainable agriculture. Agriculture has always had a part in this portion of the Appalachian Region. The New River Valley is home to one of Virginia's land grant universities, which original purpose was to teach agriculture sciences (Virginia Tech). Farming practices in Appalachia differ than those of other regions due to topography, economics, and culture. Our goal was

to use hands-on learning to better understand the culture of farmers and consumers in the New River Valley and how their orientations either promote or hinder sustainable agricultural practices.

Class lectures included discussion of readings and guest lecturers on the subject of sustainable and civic agriculture. Through these methods we found two established “paradigms” of agriculture development. These two paradigms can be described as: conventional farming verses sustainable farming. Both Lyson, author of class textbook *Civic Agriculture: Reconnecting Farm, Food, and Community* and Grace, guest lecturer presented their own form of the two paradigms. Lyson describes the two models with through subcategories of: Social Theory, Biological Theory, Operational Model, Organizational Model, Class Positions, Political Processes, Power, and Motors of Change (70-1). Lyson also focuses on civic sustainable agriculture, as expressed in the title of his book. Grace also uses subcategories, as follows: Centralization verses Decentralization, Dependence verses Independence, Competition verses Cooperation, Dominance of Nature verses Harmony with Nature, Specialization verses Diversity, and Exploitation verses Restraint (15) Grace’s interpretations of agriculture also have a civic aspect like Lyson, but appear to be more centralized on environmental sustainability instead of cultural sustainability (14).

Although Lyson and Grace go into greater detail of these two paradigms, I will focus on the social theory behind the two. Social theory is an umbrella in which the other subcategories are organized. This is because the other factors depend upon the school of thought for individuals that make up societies. Conventional agriculture is described as neoclassical whereas sustainable is considered pragmatic (Lyson 70). These descriptions basically state that conventional is based upon theories and older, established themes and sustainable is practical and considers intellect. An overall theme dividing the two paradigms is economics and efficiency verses culture and community. For more in-depth description of the differences of the “Conventional Agriculture Paradigm” and the “Sustainable Agriculture Paradigm” please see Attachment A.

Both sources display the paradigms in a very “black verses white” format. It is clear that both individuals see conventional agriculture as the “bad guy” and sustainable agriculture as the “good guy.” This bias is extremely visible in Grace’s interpretations. As well intended as these sources may be, it is hard to realistically place these paradigms into practice. A huge reason is because of human nature and cultural influences. There are all different levels of ethics that humans possess. These ethics are “a mix of theoretical and practical science,” according to H. B. Miller of the Department of Philosophy at Virginia Tech. Even though you can categorize them, there are still variations within them. You can never fully segregate people with varying opinions and practices; therefore it is very unlikely you can do so for those who work in opposing forms of agricultural development. These varying human ethics will alter the extreme aspects of the two paradigms.

Although these two paradigms are established through public works, I question their credibility. Both Lyson and Grace have direct interaction within the agriculture industry, through extension work and research, I find their education on the matter questionable. All of Lyson’s degrees are in Sociology and Grace’s undergraduate degree is not in agriculture (Ramanujan). Granted, Grace does hold a master’s and doctorate in philosophy in Agriculture and Extension Education from Virginia Tech. But, from my own enrollment within the Agriculture and Extension Education Department at Virginia Tech, I know that the structures of those programs do not necessarily require those enrolled to have a deep knowledge in agriculture. The undergraduate Agricultural Sciences program, which feeds into the graduate level programs, is to establish sound agricultural knowledge. The graduate programs are focused on how to educate agricultural knowledge, which is assumed to already be established in the future educator (current graduate student). Therefore, I question the practicality of these two scholars’ agricultural methods due to a lack in their fundamental agricultural knowledge.

Methods and Methodology:

Participative observation was the heart of our research approach. All individuals in our research group worked alongside a Blacksburg Farmers’ Market vendor/farmer or observed the weekly Blacksburg Farmer’s Market sale days, up to forty hours. In our group some of us worked in together for our participative observation. Dana Williams and I worked on Merry Peas Farm in Floyd, Virginia. The owner/operator of this farm was among a group of

five vendors that our professor, Dr. Anita Puckett, met at the market and asked if they would volunteer to be a part of our study. Due to a grant from the Appalachian Regional Commission, we were able to have the HUM-4104 course, collect data, and present our findings.

Simply put, our participative observation was farm work and household chores. One may think that household chores are not related to farm work, but the farmers live on their farm and therefore it is a part of their home. There were many tasks to accomplish at Merry Peas Farm, but the biggest challenge was building a deer fence. The owner for Merry Peas lives alone and has no employees. Building a deer around her large garden took many weeks. It consisted of driving ten-foot posts all the way around, attaching sturdy plastic mesh, and installing a barbed wire line around the top. Deer are very prevalent in the New River Valley, and this farmer had an increased problem due to location (on a ridge surrounded by tree lines) and her garden, which deer like to consume. Other farm tasks that Williams and I did were clearing rocks from the garden to use to fill her driveway. Another larger task was collecting horse manure for fertilizer. It took several weeks for us to travel to the Indian Valley community of Floyd County to get all the loads of manure. Near the end of our time on the farm we helped This farmer till in the manure to a corner of her recently fenced in garden by picking up rock and roots which were thrown up by the tiller. Finally other tasks included weeding, planting, pulling up old fence lines, and working in the kitchen some.

Besides working alongside this farmer, we were able to grasp even more of her cultural connection to the land through a recorded interview. For all the interviews that our class conducted we had the Virginia Tech Internal Review Board (IRB) approve our interviews. The approval code for them was as follows: 11-548. I also conducted an interview with another Floyd County farmer, Curtis Sowers. He is co-owner and operator of Huckleberry Dairy and Beef. Unlike the Merry Peas farmer, he does not grow organic crops or animals.

The method of data collection was difficult at times, but ended up with great results. Although we had textbooks and lectures on the subject of anthropology and oral history collection, I personally struggled for a long time on how to collect qualitative data from such methods. This was only my second time participating in such data collection methods, but I realized that it simply took practice and detailed notes from observation. The interviews were the most obviously helpful, because they were a method of receiving direct information. The participative research was more difficult to collect data, but what data was collected had some of the greatest significance.

As a class, we are planning to archive the information we gained from our interviews. Our hope is to have a collective report of our finding and Appendices of our interviews archived at Virginia Tech in the Special Collections. Another hope is to possible publishing our findings to an academic journal. Finally, guaranteed distribution of our findings in the form of a poster display and presentation at The Appalachian Teaching Project Conference in 2011 and smaller presentations to local organizations and community groups in 2012. Furthermore, we will also be sharing our findings with the farmers that we worked with and interviewed.

Findings:

Discussed above are two established paradigms: conventional verses sustainable. Our findings found that there is not such a clear division between the two. As a class we established a new paradigm. From our participative research, class materials, and personal agricultural background we felt that the previous two paradigms were too extreme for farmers of the New River Valley. The new paradigm is not strictly defined by economic nor culture. Aspects of both the previous paradigms are included, in a fashion that realistically balances efficient, sustainable practices for the farmer, consumer, and land.

As gathered from our research, the following are examples of what types of practices farmers of the New River Valley participate in which fall under the new paradigm Listed here are some examples of practices that New River Valley farmers include in their paradigm: Farmers do whatever possible to alter the land as little as possible. An example is using buffer crops to naturally add back nutrients into the soil that certain crops take out. Also, a more common example with the farmers we worked with was using compost and animal manure as fertilizer. A common theme within the paradigm is having non-organic certified products. Organic certification is a very difficult roadblock

for producers, but they wish to provide products which come as close as possible to organic. Livestock producers in our area use minimal antibiotics and other additives in order to cut costs and market a more natural product. Because of our mountainous terrain, utilizing hillsides for pasture is very common. Because the topography of the NRV does not allow for vast fields for crops or livestock, many farmers raise polycultures that includes several varieties of each crop they grow and animals they raise. These diversified products are attractive to consumers at the Blacksburg Farmer's Market. Instead of competing with global markets, area farmers usually own their market, be it the Blacksburg Farmer's Market or a Cooperative. This means that competition is regional and producers provide support systems for one another. Other support for these farmers comes from their communities. Farmers fitting into this paradigm are individualistic and innovative in order to make their farms successful. Also, the farms here are owned and operated by families or are commonly ran as a family business with several un-related employees.

Furthermore, all of these practices appear to be affected by cultural aspects of the region. They have emotional ties to the land; therefore they work with it, not against it. Many farmer's produce because they want to provide for their market and their families. Therefore they strive to provide the most wholesome product possible. The small-scale sense of community that our area has makes it easy and almost necessary to work with the public and other farmers.

This paradigm is inclusive of organic and non-organic farmers within the New River Valley. A common assumption of sustainable and/or civic agriculture is that it must be organic. Although almost all of the farmers we worked with produce and sell mostly organic products to the Blacksburg Farmer's Market, we know that that organic can be, but is not always organic. Also, non-organic practices can be sustainable as well. These descriptions of organic, for our purposes include certified and non-certified organic. Both of these facts were brought up by Kathryn Terry, Appalachian Sustainable Development Executive Director, and a local non-organic farmer, Curtis Sowers.

The establishment of this paradigm is critical for farmers of the New River Valley and beyond. Because the paradigm is inclusive of the "grey area" which the conventional and sustainable paradigms cast out previously, there is an established category for actual farmers of the area. This paradigm rejects the "bad guy" verses the "good guy" mindset for agriculture and provides piece of mind for farmers and consumers. Having a positive, yet realistic paradigm for farmers of the area will help them gain more interest and support for their efforts. Educating the public about how farming really works will result in more aware consumers. Also, because it is evident that culture plays a part in agriculture, producers can rally even more support for their sustainable practices from groups that would not feel connected otherwise.

In order to create a defined model, further research must be conducted. It is obvious that the conventional and sustainable paradigms will not work for the region, but the new established paradigm is not complete yet. Another grant from the Appalachian Regional Commission could make this possible. Further research should be expanded extensively to incorporate all aspects of farming within the New River Valley. Research methods such as participative observation, interviews, and credible written sources would be adequate. Since we focused mostly on organic/non-certified organic farmers who distribute to the Blacksburg Farmer's Market, we need to expand to different types of farmers including: non-organic, non-direct distributors, and livestock producers. Also, incorporating data from those individuals and organizations that assist local farmers would be beneficial. These groups include: Virginia Cooperative Extension; Virginia and County Farm Bureaus; local, statewide, and regional Co-operatives for specific products; and local and statewide agricultural youth programs such as 4-H and FFA. By incorporating more members of the New River Valley agriculture community, we can further define how the culture of the area defines the sustainability of our agricultural practices.

Significance:

The FFA motto is: Learning to Do, Doing to Learn, Earning to Live, Living to Serve. Participating in this project allowed us to do just that to better understand the culture in agriculture. We were able to see first-hand how farming is not simply a job, but a lifestyle. People often feel that if you lose a job, you can get another one. By

educating the public that farming is a lifestyle, that shapes their culture then they will likely be more supportive of area farmers.

Overall, most people want to be sustainable and support sustainable causes. Oftentimes, citizens are not well educated on sources of sustainability. By establishing the new paradigm, which is sustainable for the farmer, consumers, and land through economics and the environment, the public will be more aware of sustainable practices around them. It is important to show that reasons behind sustainability are multi-dimensional. Not all reasons are for the environment, even though they benefit it just the same. Some are to cut input costs. For the most part, farmers want to continue to replenish the land they work, because if they use it for all it's worth without payback, then it will render useless in the future. Farmers are, and will continue to practice in ways that will establish more sustainable futures.

It is very significant for Virginia Tech that we were able to conduct this research. While at the Appalachian Teaching Project Conference I spoke with an Emory and Henry student. She expressed to me that she was really surprised and interested in the data we found. This was because she associated land-grant universities, like Virginia Tech, with agriculture practices that would fall under the conventional agriculture paradigm. Because we proved that Virginia Tech supports and teaches sustainable farming practices, our university will appeal to even more people.

Recommendations:

From our findings, there are several recommendations that we feel that local, statewide, and federal groups (including the Appalachian Regional Commission) should consider. In order to further promote sustainable practices within our new paradigm, incentives need to be provided for consumers. One reason that the original sustainable paradigm was not realistic was because many of the "sustainable" practices were not efficient or economical. By having cost share programs or grants available for New River Valley producers, they can continue to grow their operations in an economic and environmental way. There are already opportunities for these types of incentives, but it appears that there is loss of funding recently or simply farmers are unaware of them. There needs to be increased availability of programs already established through increased advertisement/awareness.

Another recommendation includes farmer apprenticeship programs. The Merry Peas farmer, who Williams and I worked with, completed an internship on Greenstar Farm in Blacksburg before beginning her own farm. Greenstar provides a great place for Virginia Tech college students to get their agricultural start, but there needs to be more opportunities. Virginia Tech's Department of Agriculture and Extension Education recently received funding from the United States Department of Agriculture' (USDA) National Institute of Food and Agriculture (NIFA) for a project that focuses on just that. The Virginia Beginning Farmer and Rancher Coalition Project is utilizing governmental and non-governmental local, regional, and statewide organizations to help interested individuals become established farmers. This is a new approach to reach individuals outside of the agriculture community who would like to become farmers. This specific project is very new and is need of support (Greiner).

Further support of local 4-H and FFA chapters can provide agricultural apprenticeships. Youth in 4-H can participate in learning projects ranging from seed germination to raising a lamb for show. Middle and high school students who enroll in agriculture courses are required to complete a Supervised Agricultural Experience (SAE). This is non-laboratory instruction in the form of work, volunteering, and research in the agriculture field. Students who excel in their SAEs can be rewarded locally, statewide, and nationally through awards and scholarships. Support of these aspects of youth leadership organizations can benefit the future of farm establishment.

Although there needs to be more support for those wanting to enter the farming industry, there definitely needs to be more support for farm transition. Children of the farming community are not necessarily continuing the farming tradition, oftentimes due to lack of planning of transitions. The Virginia Department of Agriculture and Consumer Services has previously conducted farm transition workshops for dairy producers in Southwest Virginia. These workshops included things such as budgeting for the future, wills, and conservation easement paperwork. Another aspect to conserve more farms for future use is to create an easier process to put into place, conservation

easements. Conservation easements make it legal binding that plots of land can never be developed (into buildings, urban areas, etc.). Greater availability through funding and advertisement would greatly benefit these initiatives.

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6. Dana Williams

Problem: For generations, the Appalachian region depended on agriculture as a major source of income. Traditional farming that relied on cash crops, such as tobacco, is not profitable in this area anymore. The poor soil quality and mountainous topography have prevented industrial farming from entering the region. Conventional methods of fruit and vegetable production are not as profitable as tobacco farming used to be. Because of these reasons, organic or sustainable farming has become a popular alternative, but these methods are not without problems either. Farmers are turning to organic products because of the higher prices these items can be sold for. Certifications are expensive and small farms have trouble accessing wholesale markets such as grocery stores (Puckett). The purpose of this project was to compare the cultural factors that influenced farmers to choose one method of farming or the other.

The two different paradigms of agriculture were described for us by Thomas Lyson in his textbook *Civic Agriculture: Reconnecting Farm, Food, and Community*. Conventional agriculture methods developed out of concepts

from the Industrial Revolution and the driving motivations behind these practices are science and economic incentives. Expensive chemical fertilizers for crops and antibiotics and hormones for animals are used to produce the greatest amount of product possible. Vast acreage of a monoculture give conventional farmers advantages in global markets, but deplete the land and soil of important nutrients, which are then replaced by expensive fertilizers. The U.S. government also provides subsidies for certain crops to protect farmers from fluctuations in the market value of their products. In comparison, sustainable agriculture paradigm is motivated by a respect for nature and the environment (Lyson). Only natural fertilizers and feeds are used to care for crops and animals. Polycultures are also used to maintain the quality of the soil and biodiversity. Markets for sustainable farms are local to the farm and competition remains local as well. This paradigm focuses more on the welfare of and cooperation in communities than the profitability of the farms.

Throughout our class, we had several guest speakers lecture on different aspects of these types of agriculture and specifics of agriculture in southwest Virginia. First, Dr. Susan Clark from the Department of Human Nutrition, Foods and Exercise spoke about civic agriculture. She described how much of the U.S. population is very unfamiliar with where their food comes from and how it is produced. This has led people to prefer cheap food that has been produced by industrial and conventional methods. These people unknowingly contribute to the environmental degradation of farmland across the world. Second, Dr. Patricia Grace spoke about her dissertation on the impact of storytelling on people's opinions of industrial agriculture. She provided us with another definition of sustainable agriculture that says that this type of farming adequately addresses the economic, environmental, social and ethical concerns of production (Grace). Finally, Ms. Kathlyn Terry, the Executive Director of Appalachian Sustainable Development, came to talk about her organization and how they help small farmers in southwest Virginia. One of their programs, Appalachian Harvest, involves a packinghouse for small farmers to sell their products to grocery stores in the region.

Methods: The majority of our data was collected by participant observation with local farmers. Members of the class were divided into groups of two and assigned to farmers from the Blacksburg Farmers Market that they worked with for approximately 40 hours throughout the fall semester. A few people were assigned individually to farms or the farmer's markets in Blacksburg. The students at the farmer's markets took observational notes. Students assigned to farmers took field notes on their activities, observations, and conversations with the farmers.

Our research also included interviews with each farmer. My interview with the Merry Peas farmer was conducted at her home after my partner and I had worked on her farm one afternoon. Interviews were focused on values related to agriculture, problems they faced, and cultural reasons for their farming methods. Interviews were also conducted with Blacksburg Farmers Market customers by the students assigned to the market.

A roundtable discussion was held on November 9, 2011 during our regular class time. All farmers involved in the project were invited, but only two attended. The Merry Peas farmer was not one of them.

Our research methods received Internal Review Board approval, IRB 11-548. Consent forms were developed for the observations, interviews, and roundtable. Interviews will be archived by the Appalachian Studies Program at Virginia Tech online.

Findings: My data shows that in many areas our farmer does not fit into either of the defined categories of conventional or sustainable farming (Lyson). The chart below illustrates the main differences I have identified in my participatory observations.

Industrial Farming (Lyson)	Merry Peas Farmer	Sustainable Farming (Lyson)
Globalization of market	Farmer would like to sell at farmer's markets other than hometown's market; her market includes multiple counties and towns.	Self-reliant communities – reintroduces the idea that small communities are isolated because of location in Appalachia.

	<p>Other students' farmers contract with restaurants to provide certain crops.</p> <p>Farmers who work with Appalachian Harvest sell wholesale crops to supermarkets in addition to selling directly to customers at farmer's markets.</p>	
Use of genetically modified organisms (GMOs)	<p>Farmer's seeds are purchased, but she does use heirloom tomato seeds; information on other crops is needed.</p> <p>Appalachian Harvest farmers grow varieties of crops specifically requested by the org. and supermarkets. These may include GMOs or other varieties.</p>	Use of traditional, heirloom, antique varieties of plants; seeds are saved for future planting; plant varieties are native to the region.
Small list of available products. Companies specialize to be maximally profitable.	Farmer produces what products the market and community sees fit to buy from small farmers. Some products people would rather buy at a supermarket.	Total diversity – can grow everything a community needs.
Conventional pesticide use and dependence	<p>The Merry Peas farmer tries to use organic practices as much as possible. Many times it is not affordable to meet the organic requirements. She is not organic certified.</p> <p>Farmers may be organic or use pesticides. Organizations like Appalachian Harvest work with both types of farmers and find the best mix of practices for each farmer.</p> <p>Methods can depend on specific detail of each farm. Because of topography, past use of the land, etc., different farms may need certain practices to produce significant amounts of food.</p>	Organic practices only.
Technologically sophisticated – the purchase of large and expensive equipment is necessary to manage such large areas of farmland	Some equipment is necessary to make farm tasks practical. The Merry Peas farmer has only 4 machines: a truck, a mower, a weed-eater, and a tiller. She also uses an electric fence; this is solar powered. She works by herself, so all of her equipment can be managed alone. Building her fence was only possible	Minimal equipment, especially if it is gas powered. Farming methods should utilize natural processes as much as possible.

	because she had my classmate and I to help.	
Global markets are incredibly competitive	Farmers must compete for places at farmer's markets and for contracts with local businesses. Farmer's markets as a whole must compete with local supermarkets. Competition is therefore localized within a region.	Communities work together to produce what the citizens need. There seems to be little, if any, competition.

Data from the other students in the class confirm my findings. The agricultural paradigms established by individuals like Lyson and Grace are too extreme of either perspective for farmers of the New River Valley. Especially pertaining to our research, the paradigms place a cultural centered model against a completely monetary focused model. Farmers in the New River Valley, Virginia blend the characteristics of each of these existing paradigms in order to adhere to their personal values but still make a profit at the farmers market. Because of our findings, we developed a new paradigm that fits the characteristics of the farmers in the New River Valley, Virginia. Characteristics of our new paradigm include:

- Farmers try to alter the land as little as possible. This is to reduce both labor and costs.
- Farmers cater to the customer based who frequent the Blacksburg Farmers Market and provide produce that is as natural as possible, but not necessarily organic. Since organic certification is expensive, many farmers do not become certified even if they do meet all requirements.
- Similarly, livestock is treated with minimal antibiotics to provide a healthier and more natural product. Farmers will not, however, refuse antibiotics if they are at risk for losing a large portion of their livestock. Minimal food additives and hormones are used in the same way.
- Farmers take advantage of hillsides and mountainous terrains. Livestock can easily be grass fed in a pasture on a steep hillside where little else is possible. Other farmers use the contours of the hills to their advantage when planting crops.
- Farmers in this region network with each other for several reasons. Some network in order to distribute their products to specific markets, like the Blacksburg Farmers Market, without having to travel there. Others find winter jobs with different types of farmers, such as Christmas tree farmers. This creates regional competition, but also a support system among the farmers.
- Farms are family owned and managed, but often have several unrelated workers or interns. Some use these intern positions to teach people about farming but also to have labor done at a lower cost.

Significance: Large agribusinesses support industrial and conventional farming through agricultural extension and lobbying while many grassroots organizations are simultaneously supporting sustainable agriculture in one form or another. Because neither of these models accurately categorizes the farmers in the New River Valley, these communities and farmers are often left without a support system that encourages farming methods that are practical in this region. The results of this project will be of significant value to the farmers in the region if we are able to report to the Appalachian Regional Commission and Appalachian Sustainable Development. By characterizing farms in the region, these groups will be able to provide supportive programs and better markets for the farmers. A better economic system for the movement of food products will develop in the region if more organizations are aware of the abilities and problems of these regional farms.

Recommendations: From all of the data gathered by the entire class, we have developed several recommendations to improve the state of agriculture in the New River Valley. These recommendations are intended to help resolve some of the issues the farmers were concerned about. Start-up costs for new farmers, especially on land that has not previously been farmland, can be significant burdens. Also, it may take new farmer a long time to acquire local knowledge of farming practices that work best in the region. Farmers may also have varying levels of education and use different sources for information because of that. Finally, the costs of certifications may hinder some farmers' business at markets, including the Blacksburg Farmers Market, since a large portion of the customers prefer organic food. Our recommendations include the following:

- The Appalachian Regional Commission should create a cost-sharing program to help relieve the burden of certifications on the farmers.
- The ARC should support apprenticeship programs that help train new farmers, such as the intern program that is already operating on one of our farms.
- More distribution centers like the Appalachian Harvest packinghouse should be developed to allow more small farmers to get their products into grocery stores.
- Grants or subsidy programs should be expanded for infrastructure projects.
- Agricultural education programs and tourism should be supported and encouraged.
- Transition programs should be developed in order to make sure that existing farmland remains farmland.
- Regional resource centers and information systems should be developed.
- Efforts to promote civic agriculture should be supported.

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7. Lida Aljabar

This student's report was submitted in a format that does not permit import into this document and is not available for resubmission. It was attached as an email attachment to the email submitting this report. It was an excellent report, perhaps the best one, so the project director decided to submit it in this fashion rather than omit it.