IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

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Specialty Crop Block Grant Program – Farm Bill
12-25-B-1461

Final Performance Report
Dec 9, 2015

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PRACTICAL farmers of Iowa

working together, always learning

Project Profile

Title

Improving Employee Management on Fruit and Vegetable Farms

Project Summary

Fruit and vegetable farmers report it is hard to find labor for their farms. Many only offer seasonal positions that are harder to fill; seasonal workers often find permanent jobs before the commencement of the next season, requiring farms to recruit and train new employees. Farms with year-round employment opportunities provide more stable work and potential for long-term employee retention.

Fruit and vegetable farmers also don't fully understand labor laws and their responsibilities as employers. Fruit and vegetable farms, from those looking to hire one part-time seasonal employee to those trying to fill ten full-time positions, frequently lack adequate knowledge and procedures such as interview and hiring processes, labor budgets, employee contracts or manuals, training systems or daily task assignment methods. They do not understand Department of Labor regulations that depict whether a person is a farm intern or employee, and how that designation impacts their pay and duties. They also lack awareness of agriculture-specific labor laws pertaining to temporary labor and overtime. Insufficient understanding of these issues not only puts fruit and vegetable employers at risk of not adhering with Department of Labor laws, it also limits their business success.

The objective of this project was to provide education to fruit and vegetable farmers about how to be compliant and efficient employers. This is timely as existing farm businesses mature and need more labor; these producers have identified these issues as priorities. In addition, there is a surge of farmers interested in raising fruits and vegetables; they report they need employee education as well. A good understanding of employee management from compliance to hiring to daily duties will help current fruit and vegetable farms remain in business, increase in scale, and allow new fruit and vegetable farms to start up. This will in turn increase the amount of fruit and vegetables grown in Iowa as well as the number of job opportunities in rural Iowa.

Practical Farmers of Iowa carried out all activities outlined in the work plan. We partnered with multiple fruit and vegetable farmers who have expertise in each area to provide education at each event. Experts from Department of Labor and Iowa Workforce Development presented at two events. Experts from Department of Labor, Iowa Workforce Development, Drake Agricultural Law Center reviewed the FAQ sheet on labor laws. Farm Commons helped prepare the information for the labor law FAQ sheet in conjunction with PFI staff. Work built on and helped provide outreach for existing literature, such as Department of Labor's Agricultural Employers Under the Fair Labor Standards Act and Iowa State University Extension's Checklist for Iowa Agricultural Employers.

Outside supporters of this project were the Iowa Fruit and Vegetable Growers Association, Leopold Center for Sustainable Agriculture, the Iowa Department of Labor, Iowa State University Value-Added Agriculture and

Women, Food and Agriculture Network. These organizations all realize the need for fruit and vegetable farm employer training, and helped publicize project to their constituents.

Project Approach

This project targeted Iowa fruit and vegetable farmers, people considering adding fruit and vegetable production to an existing farm and those considering starting a fruit and vegetable farm.

Outcome 1: Iowa fruit and vegetable farmers will learn how to recruit, hire and retain employees.

In Practical Farmers' spring newsletter *the Practical Farmer,* we published a report on how one farm equates a profitable farm to having efficient employees. The report detailed how they conduct timings to ensure each employee is generating a minimum of $40 per hour in gross revenue on harvest days. This newsletter was printed and circulated to 2100 as well as posted on Practical Farmers' website.

Practical Farmers held a farminar (Practical Farmers' term for webinar) on February 5, 2013 where two farmers presented their employment structures. One farmer had successfully established year-round employment for their farm, and the other farm was working toward the goal of providing year-round employment. The farmer who had established year-round employment opportunities provided guidance to how the farmer aspiring to have year-round employment could achieve this. Forty-five participants attended live, and 95 have watched the archived view.

Practical Farmers held a workshop January 12, 2013 where one farmer detailed how he recruited labor, found labor, navigated hiring and interviewing, employee screening, communicated clear expectations and determined compensation. Some of his employees attended and provided feedback. The workshop also consisted of a roundtable discussion where attendees asked question about labor as well as shared their labor experiences. Thirty-nine farmers attended this workshop.

Outcome 2: Fruit and vegetable farmers will learn their legal responsibilities as an employer.

Practical Farmer held part one of a two-part farminar series on employee labor laws November 6, 2012. In this farminar, two farmers shared their farm labor employment scenarios and asked questions of a Labor Department director, who also summarized Iowa farm labor laws. Twenty-five people attended the live farminar and 169 have watched the archived view.

April 2, 2013, Practical Farmers held part two of a two-part farminar series on employee labor laws. In this farminar, two farmers talked about their experiences hiring farm laborers across the spectrum, from H-2A visa holders and migrant seasonal contractor crews, to regular part-time workers and full-time employees. Experts from multiple regulatory agencies answered questions these farmers had about labor compliance, and provided education on how to be legally compliant farm employers. Twenty-eight people attended the live farminar and 108 have watched the archived event.

March 1, 2013, Practical Farmers published a labor laws frequently asked questions fact sheet. This fact sheet was dispersed at labor-related workshops, shared on Practical Farmers' website, through a news release and during farminars.

Outcome 3: Fruit and vegetable farmers will improve their employee management skills.

Practical Farmers organized a workshop March 14, 2013 led by a farmer with extensive employee management experience. This farmer talked about how to write an employee manual, how to efficiently set up daily work tasks and how to hold employees accountable. During this workshop, attendees received employee manual templates and also were able to view 'real life' employee manuals from multiple farms. Twenty-two farmers attended this workshop.

September 26, 2013, Practical Farmers posted multiple employee manual templates and other employee resources online.

Practical Farmers held a field day on August 22, 2013 on a vegetable farm. This field day showcased structure implemented on-farm to create an efficient, compliant workplace. Multiple farm employees were on hand and helped answer questions along with the host farmers. Seventy people attended this field day.

March 26, 2013, Practical Farmers held a farminar where a farm employer and a farm employee talked about how to increase the success of employer-employee relationships. Twenty-four people attended the live event and 124 have watched the archived view.

September 10, 2013, Practical Farmers organized a field day during which the farmer host discussed how he measures labor efficiency and profitability. Twenty people attended this field day.

Press releases were written for each event organized for this grant. These were sent to Practical Farmers' 300+ media contact list, posted on Practical Farmers' website, featured in Practical Farmers' weekly newsletter and shared on partner websites. These releases resulted in widespread print and radio coverage. Practical Farmers wrote summaries of most of the events on the Practical Farmers' blog. In addition, Practical Farmers used social media extensively to publicize these events.

Given that farming is not generally limited to specialty crops, please describe how you ensured that grant funds were used to solely enhance the competitiveness of specialty crops.

The project focused on specialty crop production. All speakers were fruit and vegetable farmers, and the targeted audience, thus topics, were fruit- and vegetable-centric. Practical Farmers advertised the events as events for fruit and vegetable farmers. Practical Farmers' events are free and open to the public, so we do not screen attendees. However, if someone attended events listed in this grant, they learned about improving labor management on fruit and vegetable farms.

Goals and Outcomes Achieved

<u>Outcome 1:</u> Iowa fruit and vegetable farmers will learn how to recruit, hire and retain employees.

Participants of this project will complete a survey at the end of each event. Ninety percent of attendees will report an increased knowledge in how to recruit and hire employees as a result of attending the events. The average effectiveness and usefulness of information presented at these events will each average a score of at least 4 on a ranking scale to 5.

February 5, 2013 farminar: 89% of live attendees reported considering making a change as a result of attending, and 77.8% reported a change in knowledge as a result of attending. One attendee reported: "These are great presentations that I would be unable to get anywhere else. I don't have a university with agricultural subjects

covering any of these things. I am retired military and formerly owned a Real Estate business that was no longer profitable in this economy. I have ten acres and a desire to make it profitable. Your farminars are great with good usable info."

January 12, 2013 workshop: Average usefulness of this session was rated 4.07 on a 1 to 5 scale, 1 being poor and 5 being excellent.

100 farmers attending the events will report better success recruiting employees and will hire 200 new employees during the growing season that follows training outlined in this grant.

Anecdotal conversations with farmers reveal they are trying more avenues to find labor. Not enough time has gone by for us to be able to accurately measure this goal.

Ten farmers attending the events will implement steps to provide year-round employment.

At least three farms have preliminary reported they are implementing steps to provide year-round employment. Not enough time has gone by for us to be able to accurately measure this goal.

<u>Outcome 2:</u> Fruit and vegetable farmers will learn their legal responsibilities as an employer.

Participants of this project will complete a survey at the end of corresponding events. Ninety percent of attendees will report an increased knowledge of their legal responsibilities as employers as a result of attending the event. The average effectiveness and usefulness of information presented at these events will each average a score of at least 4 on a ranking scale to 5.

November 6, 2012 farminar: All live attendees of this event report planning to make a change to their farm as a result of participating, and all attendees reported a change in knowledge. One attendee reported: "Excellent topic and speakers." Twenty-five people attended the live farminar and 169 have watched the archived view.

April 2, 2013 farminar: 75% of live attendees reported considering making a change as a result of attending, and 85.8% reported a change in knowledge as a result of attending.

75 fruit and vegetable farmers will report better compliance with labor laws.

Farmers who attended events have reported better understanding of labor laws, but not enough time has passed for us to be able to measure if they've improved compliance.

<u>Outcome 3:</u> Fruit and vegetable farmers will improve their employee management skills.

Participants of this project will complete a survey at the end of corresponding events. Ninety percent of attendees will report an increased knowledge of employee management skills as a result of attending the events. The average effectiveness and usefulness of information presented at these events will each average a score of at least 4 on a ranking scale to 5.

March 14, 2013 workshop: Average effectiveness of this workshop was rated as 4.5/5, and usefulness as 4.17/5. All attendees reported an increase in knowledge.

August 22, 2013 field day: Average effectiveness of information presented was rated 4.24/5, and average usefulness of information presented was 4.33/5. All attendees reported a change in knowledge as a result of attending.

March 26, 2013 farminar: 100% of live attendees reported considering making a change as a result of attending, and 100% reported a change in knowledge as a result of attending.

September 10, 2013 field day: Average effectiveness of information presented was rated 4.1/5, and average usefulness of information presented was 4.5/5. All attendees reported a change in knowledge as a result of attending.

Fifty fruit and vegetable farmers will create an employee handbook after completing PFI's programming under this grant. 150 fruit and vegetable farmers will make improvements to their employee training and daily management.

Practical Farmers staff members have heard fruit and vegetable farmers talking about both their intentions to create an employee handbook as well as make improvements to training and management. However, not enough time has passed to be able to gauge this outcome measure.

Beneficiaries

Beneficiaries of this work were primarily fruit and vegetable farmers. In addition, fruit farm employees benefited as well as aspiring farmers looking for experience on fruit and vegetable farms. Practical Farmers has communicated with other agencies working to support fruit and vegetable farmers, and they report gaining knowledge from this project they plan to use in helping fruit and vegetable farmers succeed.

767 people attended project events. In addition, approximately 75,000 individuals were reached through media, and information on employee rights and responsibilities reached approximately 20,000 individuals throughout this grant period.

75,000 individuals will be reached with information on employee rights and responsibilities will be secured to 20,000 individuals throughout this grant period.

Lessons Learned

The issues addressed by this grant are complex, and while farmers learned through this grant, there is still a need for more education for fruit and vegetable farmers to recruit, hire and retain employees, improve management skills, and understand and comply with labor laws. This information needs to be ongoing both for existing farmers and people entering fruit and vegetable farming. These topics are imperative for the fruit and vegetable industry to be able to thrive and grow in Iowa.

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Iowa Department of Agriculture and Land Stewardship

2013 IDALS Specialty Crop Block Grant Program

Project Title

Increasing Iowa Specialty Crop Production and Consumption through Empowerment of Refugee Producers

Project Summary

Many of the most recent arriving refugee groups in Des Moines come from agricultural backgrounds. Farming, both for home consumption and for profit, has been for many, a way of life. Several refugee groups have expressed a deep desire to return to the land in order to provide food for themselves, maintain their culture, and create new forms of income, however, they are faced with the inability to access land and training resources due to language and cultural barriers, as well as a lack of resources. Lutheran Services in Iowa's (LSI) current gardening program partners with The City of Des Moines' Parks and Recreation Department, private land owners, churches, volunteers and the refugee ethnic communities to assist growers in gaining plots in pre-existing community gardens, as well as starting new gardens in areas where many refugee families are living. At the time, LSI held nearly 60 people on our waiting list for those that wanted some kind of access to land. Larger garden plots were also limited for families that wanted to produce extra produce for themselves and their ethnic communities. The issues that needed to be addressed were helping individuals access existing community garden plots, creating new and larger plots where they were needed and providing education to growers on the specifics of growing produce in Iowa.

Refugees have been uprooted from their homes, land, and culture. Growing food is a means to help families adapt and integrate into the community, use the skills and knowledge they have, and retain their culture. In surveys LSI completed in 2010 and 2012, community members cited the main reasons for wanting to grow food in Iowa were: better access to fresh, less expensive produce; physical health benefits; mental health benefits; emotional healing; earning a supplemental income; enjoyment; and a way to pass their traditions on to the next generation. Many growers have experience as successful farmers in their home countries. Through this project, LSI had the opportunity to provide more access to land which provided expanded outlets for income, increase in produce production, including grower's native foods, and a rise in refugee ethnic groups' involvement in local food systems.

Project Approach

LSI's project timeline started November 1st in consulting with community garden leaders, The City of Des Moines and evaluating existing land opportunities for new garden plots. Throughout the winter season LSI worked with landowners of new gardens to create management structure and agreements for use by growers, recruited trainers and interpreters needed for grower education, translated City of Des Moines garden contracts, and scheduled future trainings and field trips to existing farms for the growing season.

During February though April LSI focused on conducting meetings with existing gardeners to sign contracts and place bulk seed orders, creating garden maps for each grower at the training farm, securing material needs for establishing new gardens , and promoting and advertising grower workshops. Throughout the spring and summer, LSI established new gardens, facilitated workshops and tours, and provided ongoing support in the form of meetings, work days, and individual consultations with growers.

Significant activities that took place this year was to help refugees get signed up with already existing plots. Over 120 people were able to get 10'x15' plots at 11 other different community gardens sites around Des Moines with the help of LSI's staff member, interpreters, and ethnic community members. LSI worked with the National Center for Appropriate Technology (NCAT) to provide workshops on 7 different topics, including business, finances, marketing, record keeping, garden mapping, pest and disease management, and growing food in Iowa soil. Besides the trainings, growers were able to visit 2 different farm sites in Iowa through Practical Farmers of Iowa (PFI) Field Days so that they could learn best practices, and see how other farmers maintain their businesses. NCAT made significant contributions in assisting with transportation to and from farms and facilitating trainings by scheduling and connecting with experts in each subject area.

The creation of 2 different garden locations allowed LSI to get over 60 new growers onto plots. Global Greens Farm was created at the Valley Community Center which created 21, 50'x50' plots for growers interested in starting a business, and a community garden on the Southside at a mobile home site created 51, slightly larger, 20'x20' plots that helped at least 51 gardeners and their families grow food for themselves and their neighbors.

Significant contributions were made by Valley Community Center and Valley Church and its members to get Global Greens Farm up and running including members that donated woodchips for the pathways, assistance in mapping and creating the garden, and a church-member Eagles Scout who constructed a wash station. Contributions for the Southside garden included volunteers that helped plow and till the land, and ethnic community members to assist in assigning plots and supporting the garden throughout the season.

The scope of the project did not benefit commodities other than specialty crops, it did not build upon any previously funded SCBG projects, and was not funded by any other Federal or State grant program.

Goals and Outcomes Achieved

The activities and tasks performed this year have really transformed our Urban Agriculture program. LSI was able to get over 60 people off our waiting list by creating the two new larger-plot garden locations, as well as link 112 existing gardeners into old plots from last season. A large community garden was started on the Southside of Des Moines on the property of a mobile home site. The program coordinator was able to work with the property manager and owner to create 51 new plots that were larger than normal community garden plots. These plots ran 20 feet by 20 feet and the site allowed 51 gardeners and their families to grow vegetables and have access to land. A community garden on the Southside of Des Moines was much needed, as there is a large community of Bhutanese refugees that live on this side

of town. At the time there was no community gardens started on the Southside. Creating a garden in collaboration with the mobile home property also allowed LSI to work with people that lived on the property and share information about our Urban Agriculture program. This relationship will continue to develop next planting season. Mobile home neighbors and the property manager are interested in creating a compost site close to the community garden. This composting site will benefit the neighbors, who currently do not have a place to dispose of leaves, and it would benefit the gardeners in learning how to manage compost and use it to enrich the soil in the future.

Although LSI was able to get 60 people off the community garden waiting list, the demand for gardens has quickly been on the rise again. By October 2013, LSI had identified 57 additional families that would like a plot to grow vegetables and fruits. Significant progress was made to create additional land resources this last year but more land is always needed. LSI will hopefully continue to create more community gardens in Des Moines that will benefit families on the waiting list as well as future families that are resettled in the Des Moines area. A new location has been identified on the North side of the city in an area owned by the Tai Dam organization. More plots and manpower are needed to bring this community garden into fruition in the spring of 2014, which could potentially serve 20-40 more families.

At the second location, LSI was also able to create 21, 50'x50' plots in partnership with West Des Moines' Valley Community Center, an outreach ministry of Valley Church. These plots were focused on a long term project of creating a training farmer program. The site was named Global Greens Farm, and 21 gardeners that were previously in LSI's community garden program were able to get access to larger pieces of land. The program coordinator worked with these 21 refugees from Burundi, Bhutan, and Burma to map out their garden plots, provide trainings, market their produce, and sell at market. At this location we installed an irrigation system with the help of Joe Hannon at the ISU extension, and worked with and Eagle Scout member to build a washing station that included 4 large sinks and two drying racks. LSI was also able to work with skilled volunteers to build a cool bot system in the barn to store washed produce prior to markets.

The Global Greens Farm is a long term project and significant progress was made this year as mentioned above. LSI recently received the Specialty Crop Block Grant again this fiscal year. With these additional funds progress can be made on our long term plans of continuing our farmer training program at Global Greens. LSI has interviewed the 21 gardeners that were previously gardening at Global Greens and was able to identity 8 candidates that will be moved to new ¼ acre plots that will be created next Spring at Global Greens Farm. In addition to moving 8 of the famers onto ¼ acre plots, 8 new growers will be given the opportunity to move into the vacated 50'x50' plots also located on the site. These growers will have access to more training throughout next season and will be able to market their produce at various market stands.

In addition to placing over 70 growers in larger plots, LSI was able to translate the City of Des Moines' community gardener contract into 4 different languages including Burmese, Karen, Nepali, and Kirundi.

These contracts helped existing and new gardeners understand the rules and commitments they were making in signing up for a Parks and Recreation plot with the city of Des Moines.

LSI worked with NCAT to provide workshops on 7 different topics, including business, finances, marketing, record-keeping, garden mapping, pest and disease management, and growing food in Iowa soil. Besides the trainings, growers were able to visit 2 different farm sites in Iowa through PFI's Field Days so that they could learn best practices, and see how other farmers maintain their businesses. We did not have 40 participants involved in each of the trainings. Instead LSI focused on providing these trainings to the 21 growers at the Global Greens Training Farm. On average 16 growers participated in each event and interpretation was provided for all trainings and tours. All growers were evaluated at the end of the season and asked if the workshops helped to increase their knowledge about growing fruits and vegetables in Iowa's soils and climate. All 21 growers, 100 % stated that, yes, they had learned and increased knowledge about growing food in Iowa. In addition the growers stated that they want even more extensive trainings next year around the following topics: pest management, disease management, record keeping, understand the English names of vegetables, understanding how to price produce, when to harvest, which fertilizers to use, how to order seed, food preservation, and more information on crop growing in United States.

Beneficiaries

The beneficiaries of this project were the growers and their families, including their larger ethnic communities in Des Moines, Iowa. Over 160 gardeners were connected or reconnected to garden plots through out the city at 11 different sites, including the new site established on the Southside of Des Moines. LSI was on target with approximately 640 family members having access to land. This was calculated based upon an average of 4 people per family. Secondly with the addition of larger plots at Global Greens training farm, an additional 21 people were assisted in accessing larger pieces of land with the ability to sell produce at markets, restaurants, and to their ethnic community members. A collective total of $6,226.55 was made by the 21 gardeners at the training farm, with $2,604.55 made directly through a market at Valley Church in West Des Moines, right across the street from the farm.

Translation of the community garden contracts benefitted over 100 gardeners and the City of Des Moines. The translated contracts allowed Parks and Recreation to describe the gardener's responsibilities in caring for a plot, and reiterate the importance of rules which the gardeners were able to read through to better understand.

For the third objective, trainings for gardeners, LSI decided to take a different approach, as mentioned above. The beneficiaries of the trainings were gardeners from the Global Greens Farm. All 21 gardeners were invited to attend each of the seven sessions and interpretation was provided at all sessions. An average of 16 gardeners attended each training throughout the season.

Other beneficiaries include the gardener families and ethnic communities, which allowed them to have more access to fresh fruits and vegetables, especially produce that they are custom to eating from their cultures.

Lessons Learned

LSI experienced a variety of results this year both positive and negative. By translating the City of Des Moines gardening contracts LSI was able to better communicate with ethnic community members. LSI held gardening meetings intentionally designed to go over the contracts with interpreters and the contract served its purpose very well. In addition, there were number of future gardeners that walked into the office looking for a plot or wanting to sign a contract for an existing plot they had last year. The translated contracts allowed LSI to effectively communicate with walk-in gardeners and get them set with a plot quickly. Interpreters are not available in the office at all times, so with the contract translated LSI was able to serve gardeners more efficiently.

LSI achieved the outcome of creating more land opportunities for gardeners this year through the creation of the Southside garden and Global Greens Farm. Both gardens were extremely successful in their first season but a challenge is getting enough manpower to keep the gardens going and running smoothly. This seems to be a recurring problem with community gardens. There needs to be a leader or leaders at each garden to monitor, maintain, and keep the garden alive. Southside garden struggled in finding leadership throughout the season, and numerous problems surfaced that needed to be dealt with quickly. For instance, some gardeners left the water hose running after they left the garden, making the cost of water for the garden increase for the mobile home site. Other problems such as trash or tools being left out were also recurring problems. The LSI coordinator had to spend a lot of time throughout the season communicating with gardeners, holding gardening meetings, and keeping up a good relationship with the site manager. The coordinator's goal for the end of the season was to find leadership to take over the garden so that their time could be freed up next growing season to start new projects. Leaders from the Bhutanese community decided to take on leadership and run the garden for future seasons. The Southside garden is largely populated with refugees from Bhutan. The leadership that their community will provide for the site will be very beneficial in terms of communication in their native language, Nepali, and for providing ownership for the garden. The Global Greens Farm was also quite an endeavor this season. An LSI Farmer Associate with hired through funding by United Way of Central Iowa to provide leadership in the creation and management of the farm as well as mentoring and technical assistance for the 21 growers. This was a huge undertaking for just one LSI associate and initially, LSI's Refugee Director was involved in the process as well. To combat the need for manpower, LSI reached out the Valley Church for volunteers and people within the Urban Agriculture community for support. Many volunteers helped in creating the farm, including setting up the wash station, irrigation system, mulch pathways, deer fencing, and installing the coolbot system in the barn.

LSI is very thankful to have had the support of IDALS SBCBG Program to be able to continue helping recently-arrived refugee families reconnect with their agricultural roots and contribute there expertise to our local food system. If you have any questions regarding the details of this project or LSI in general, please contact:

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Additional Information

Leopold Center Success Story - http://www.leopold.iastate.edu/sites/default/files/success-incubator.pdf
May 2013 Story on Iowa Public Radio - http://iowapublicradio.org/post/refugees-find-home-farm
Farmer background information - http://lsiowa.org/index.php/services/refugee/programs/community-gardening/
PhotoVoice Video – link will be shared with IDALS once it is posted to LSI's Website

Global Greens Farm (June 2013)

Global Greens Farm (May 2013)

Global Greens Farm (July 2013)

Global Greens Farm (wash station under construction)

Southside Garden (laying out plots - April 2013)

Southside Garden (laying out plots - April 2013)

PROJECT TITLE

Delivering Specialty Crops to Corporations through CSA's

PARTNER ORGANIZATIONS

Iowa Heartland Resource Conservation & Development (RC&D), Shirley Stout Frederiksen
Drake University Agricultural Law Center, Matt Russell

PROJECT SUMMARY

This project attempted to integrate specialty crops into major employers in the Des Moines metro area through central Iowa Community Supported Agriculture producers. We initiated discussions with health conscious employers and ask for their cooperation and assistance to introduce Community Supported Agriculture (CSA) businesses to their employees. For this project we worked with four CSA operations to increase their clientele to include corporate or institution employee subscriptions. We targeted major health conscious employers in the Des Moines region to connect with the CSA's. We focused on businesses with corporate wellness programs in order to promote eating fresh fruits and vegetables as a wellness strategy.

PROJECT PURPOSE

This project attempted to integrate specialty crops into major employers in the Des Moines metro area through central Iowa Community Supported Agriculture producers. We initiated discussions with health conscious employers and ask for their cooperation and assistance to introduce Community Supported Agriculture (CSA) businesses to their employees. Local CSAs had shares available and were interested in filling those shares. For this project we worked with four CSA operations to increase their clientele to include corporate or institution employee subscriptions. The four CSAs had approximately 150 shares available collectively. We targeted major health conscious employers in the Des Moines region to connect with the CSA's. We focused on buisnesses with corporate wellness programs in order to promote eating fresh fruits and vegetables as a wellness strategy.

CSAs were to deliver to the employer at a specified time and place to provide convenient access to specialty crops. This project attempted to help producers provide healthy specialty crops to a greater variety of people. CSA operations and other local food producers are expressing an interest to scale up their production in order to move more income generating labor on the farm rather than depending on off farm income. This project explored one strategy to link specialty crops fresh from the farm to employees by facilitating the relationships, providing the planning, oversight and organization necessary to connect the health conscious employer with the potential of CSAs. This project reinforced the dependency of very deep relationships between the CSA and its members. In exploring this model, other methods of delivery may be more effective than CSA where health conscious employers are interested in promoting fresh produce as a wellness strategy. This project is instructive for employers and CSAs who want to work together. It is also helpful for employers with a wellness focus to figure out how to make healthy, locally grown produce the norm in employer dining rooms and in their employee's homes.

This effort built on the previously funded Specialty Crop Block Grant project which funded the work of IHRC&D and Drake ALC in 2010 and 2011: Kicking up Fruits and Vegetables in Greater Des Moines Buy Fresh Buy Local. We used the capacity of the Greater Des Moines Buy Fresh Buy Local network to identify and recruit CSA farms. We also worked with two sponsoring members of BFBL to implement the current SCBG project: Drake University and Campbell's Nutrition.

PROJECT ACTIVITIES

The project closely followed the work plan set out in the grant proposal. We dealt exclusively with specialty crop growers and specialty crops. We followed very closely the project timeline and tracked our progress. We invited six CSAs to participate and four participated in the project. We solicited participation from 53 employers in year one and 46 employers in year 2 who had wellness programs and contacted all of them by mail, email and with a follow-up telephone call. We met in person with 7 wellness directors in year one and 6 employers in year two. Ultimately only two employers participated in the program in 2013 and one additional employer in year two. Both employers from year one are repeating their participation in 2014.

In the beginning we gatheried contact information for the 6 CSAs working in the six county region they were all invited to an introductory meeting in fall 2012. Four of the six CSAs attended the meeting. We explained the project, gathered information and all four CSAs decided to participate. During 2013, we attempted to place all four CSAs with Central Iowa employers.

From the meetings with the CSAs, we created materials about CSA in general and the participating CSAs in particular to help recruit employers for the project. Materials included text documents, business synopsis, surveys, commitment outline and an electronic slide show, (see the appendix for documents). We also used these materials in face to face meetings as well as made them available to employers to use within their organization to recruit participants into the CSA program.

After researching what businesses had wellness programs and collecting their contact information we sent letters to 53 of the businesses. We worked with employers from January to the first of May 2013 to help them gauge interest among their employees. This help included employee survey drafts, descriptions of a CSA, pictures of typical CSA boxes, CSA business synopsis and an electronic slide show (see the appendix for documents). We focused our resources on promoting the benefits of increasing the consumption of fruits and vegetables by employees. We identified a team structure that could be used to help successfully implement the onsite, employer based CSA program. We encouraged the wellness director to select a 3 to 5 member team to assist in selecting the CSA, troubleshoot problems and promote the program to other employees. During the same timeframe the project partners communicated regularly with the CSAs to let them know how the project was moving forward. Our fourth CSA disbanded during the 2013 growing season due to family related issues.

In 2013, one CSA farm participated with a university for a total of 15 full shares. The other CSA participated with a retailer who hosted a delivery site, 11 shares were delivered at this business. The retail business decided to participate because they felt the CSA shareholders would stop into

their business to add to their shopping needs when they picked up their share at the drop site. The two relationships between growers and employers from 2013 continued into the 2014 growing season.

Both farms and both employers participated in a year end interview gauging the success of the program. See LESSONS LEARNED for a full report. In summary of year one, the logistics of coordinating CSA with the culture of the workplace proved to be more challenging than anticipated. The education of the wellness directors about CSAs was unexpected. Many employers were totally unfamiliar with the concept of CSAs so the initial education required was much more extensive than previously thought. It took the partners much longer to navigate the corporate structure to find the correct person in each business. Many of the employers hire an outside contractor for the employee wellness program and the contractor was not interested in developing a new outside program. Logistics were another big barrier for recruiting employers into the project, figuring out where boxes of produce would be delivered, dealing with unclaimed boxes, recruiting employees to sign up for membership, getting boxes from the worksite to the participant's car and home. The upfront cost of a CSA membership was also identified, but surprisingly this seemed to be less of an issue than figuring out the logistics.

To try to counteract the time for approvals in the business hierarchy, we began earlier in year two, which meant starting in late October, 2013 for the 2014 season to allow for increased time to navigate the corporate structure. We contacted 46 employers by mail and email to participate in the project. We continued to work with our original three CSAs since they still had shares available. As we worked through the fall we discovered this timeframe was not conducive for the businesses to be thinking about local food and healthy eating with Thanksgiving around the corner. However in year two, we focused most of our energy on businesses that had expressed some interest in year one. The project partners also began working with two other organizations to "get the word out". Eat Greater Des Moines and the Des Moines Area Religious Council were both aware of the project and we used some of their contacts to get appointments with businesses and used their website for communication purposes.

We recruited one additional employer for the 2014 growing season. This new employer took a very hands-off approach to the project and allowed two CSAs time and space in their lunch room and then informed employees that the CSAs were available at that location if they wanted to sign up for a share. Their reasoning was that they have multiple business locations around the country and must provide wellness programs company wide, so by taking a more hands off approach and by allowing individual employees the opportunity to sign up for a share on their own the company would not have to replicate the service at their other locations. Our belief that farmers and employers need to develop a deeper relationship than for the employer to simply offer space was confirmed when we interviewed the CSAs that were allowed space in the lunch room. The farmers were disappointed in the number of shares coming from this location for their time spent and the connections with those shareholders. It was encouraging that this business offered the farms a location for a delivery and kept the logistics rather simple. Since there was no on-site team to assist with the program, they had not allowed for share boxes that were forgotten and not picked up. Between the two CSAs, 31 shares were purchased, however some of those were half shares (no exact number of ½ shares were available from the CSAs).

In February 2014, we hosted a CSA Fair at the one employer participant's retail locations. Seven CSAs participated from inside and outside of the six county project area. We created press releases and did radio spots about the CSA fair and produced a video of the event to promote CSA membership. Again it was hard to quantify if this event caused more people to buy shares and only a few shares were sold the day of the CSA Fair. But the CSA Fair was a good education event. The CSA Fair was not included in the original work plan.

A project update was given at two statewide local food coordinator meetings, one in 2013 and one in 2014. A project overview was also provided to the Iowa Food System Council. The Drake University Agricultural Law Center is committed to creating a Project Summary and distributing it throughout Iowa to share the lessons learned and some ideas for encouraging specialty crop growers and employers to work together to increase fruit and vegetable consumption as a wellness strategy.

GOALS AND OUTCOMES ACHIEVED

Objective 1) Identify Employers with wellness programs interested in acting as a model to increase healthy local food to their employees. We identified over 50 employers with wellness programs in Central Iowa. Wellness programs were not particularly focused on fruit and vegetable consumption as a strategy for better health.

Objective 2) Identify current CSA's and/or develop Collaborative CSA's willing to work with an employer to provide local specialty crop products. Four of six CSAs responded to our invitation to participate. CSA interest was much greater than employer interest.

Objective 3) Initiate a type of CSA to employer model that can be replicated by other employers in central Iowa as well as in other parts of the state. This proved to be a difficult objective to achieve and provided many lessons learned. A greater level of commitment to developing a workable model is needed from both parties but especially from employers.

Objective 4) Discover other methods to incorporate local food into the corporate/ institution structure. We will use our findings to suggest other models for connecting produce from specialty crop farms with employers and their wellness program. One health care provider business was interested in working with the Iowa Food Cooperative to place orders for specialty crops. We provided information to this employer and encouraged them to proceed with their plans for the Food Cooperative

Objective 5) Provide an opportunity to increase understanding and awareness of specialty crop production through farm visits for the subscribers. Farm visits did take place however not as many as had initially been hoped for with this project. All of the participants in the CSA/university partnership made a trip to the farm in order to pick up the produce for the delivery to the employer worksite. In year two, the farm is delivering directly and members are not taking turns picking up the produce. We did do some significant education about local specialty crop growers but not with farm visits.

BENEFICIARIES

Describe the specialty crop groups and other stakeholders that benefited from the completion of this project's accomplishments.

In general many of the regions specialty crop producers benefited but especially the CSAs and specifically the 4 CSAs who participated in the program. The 4 CSAs contact information and a short descriptive paragraph was distributed to employers in year one and year 2 with wellness programs. It is hard to quantify if the CSAs received more shares due to our educational information unless they were through the CSA to Employer project. The CSA owners were very appreciative of the work and marketing done on their behalf. The CSAs and our project partners felt that at a minimum our education efforts were successful but that more marketing assistance was needed on a continuing basis for 2-3 more years. An enormous amount of time was spent educating about what CSA's are and how they worked, about local foods and the benefit of fresh local food to employees. The education needed to the wellness directors was surprising considering their job. Many had a vague idea of what a CSA was but not how the actual mechanics of a share worked, instead the wellness directors were more focused on exercise programs for employees. As another way to reach employees, we held a CSA Fair and notified most of the employers' wellness directors. We found that many of the employers hire outside wellness companies which were not interested in the internal work necessary on the logistics of set-up for a CSA delivery.

How many benefited from the project?

In 2013, two employers participated in the project, the first with 15 shares and the second with 11 shares, totaling 26 shares with two CSA businesses. In 2014, only one additional business participated with 31 additional shares, and the two employers from 2013 continued to participate. These results were less than hoped for but overall 57 additional shares for the CSAs was still a positive outcome.

The fourth CSA who initially agreed to work with the project disbanded during the 2013 growing season for family related issues.

How did they benefit from the project?

The CSAs reported 26 shares purchased in year one of the project at approximately $500 per share equals $13,000 of additional revenue. In year two 31 additional shares were purchased by a new business participant due to the CSA to Employer project (31 X $500 = $15,500). Combining year one and year two total *new* shares due to the project equals 57 *new* shares at $500 = $28,500. The year one sites (university and retail business) did continue the relationship with CSAs into year two. Year one 26 shares X $500 = $13,000; year two 26 shares continued = $13,000; plus 31 new shares in year two = $15,500. Totaling $26,000 plus $15,500 = $41,500 which is similar to our original project goal of $37,500 in share sales by year two.

LESSONS LEARNED

CSA is a highly relational marketing model. CSAs continually reminded us of this. This project succeeded in educating hundreds of people about CSA directly and many more than that indirectly with media outreach within the project. However, we only had minor success in recruiting employers into investing in this model as a means of promoting wellness for their employees.

There are examples of CSAs partnering with employers, particularly in Madison, Wisconsin: http://www.csacoalition.org/. We solicited advice and tools from the Madison, Wisconsin CSA Coalition leaders. However, in Greater Des Moines, the CSAs are not organized into any kind of coalition or group. CSAs do belong to Buy Fresh Buy Local and Practical Farmers of Iowa. They are willing to work together and participate in activities. However, it appears CSAs will need to be far more engaged in order to overcome the reluctance of employers to embrace a commitment to a program involving 20 weeks and up to $600 per employee.

Here are some additional strategies that may prove more successful than a traditional CSA model for encouraging employers to use increased fruit and vegetable consumption as a strategy for improving employee wellness.

SEASONAL TIMING

Develop a plan to recruit employers and start implementing the plan a full year before implementation. Businesses are thinking fresh produce in May with the beginning of the farmers' market season. May is a particularly busy time for farms and too late for CSAs to be adding shares. There is a significant challenge in the difference in timing between when farmers want to recruit and when the general public, including wellness staff, is thinking about produce. The first year we started in January, which was not enough time for spring sign ups and approvals through the corporate structures. In year two we began recruiting in the fall. This was not the right time for wellness staff to be thinking about fresh produce. CSA farms themselves may be more successful in recruiting partners in the early summer for the following season. However, this timing is going to be problematic except for the very motivated CSAs willing to invest resources at the time of year when resources are most scarce.

THE STRUCTURE OF CSA

The upfront cost and 20 plus week commitment to a CSA appeared to be one barrier to employer wellness programs. Wellness professionals were reluctant to commit to a program that suggested a minimum number of participants. We suggested a minimum of 15 shares per worksite. At a cost of $500 to $600 a share, the cost was also seen as a barrier but to much less of a degree than the partners expected. The logistics of weekly deliveries, forgotten boxes, and returning boxes also seemed daunting to the wellness staff we spoke with. CSAs interested in modifying their structure may have more success with employers by shortening their share season, partnering with businesses/organizations to identify a more strategic time of year, and providing an additional level of service to help with logistics. Most CSAs may find these options unappealing or inconsistent with the idea of Community Supported Agriculture as it has been developed in Central Iowa. Here are some examples:

- Introduce a shortened CSA share of six to eight weeks. This lowers the cost, lowers the commitment, and allows an employer to "try it out" without being all in for the entire growing season. If possible use the shoulder seasons for shorter CSA shares with employers if the CSAs have high tunnel or greenhouse capabilities.
- Targeting a particular time such as when kids go back to school. Several employers talked about the summer being a period of irregular schedules for their employees. Having a shorter season timed with a more regular schedule might help with some of the logistics.
- Starting during the peak season rather than starting at the beginning of the season might help recruit reluctant vegetable eaters. Corn, tomatoes, and melons might be more appealing than crops at the beginning of the season like arugula, turnips, and garlic.

ADDITIONAL STRATEGIES

CSA might not be the most effective model for partnering with employers to increase fruit and vegetable consumption. We did not test other models like on site farmers markets or weekly ordering. Farms interested in these marketing strategies may find employers in Central Iowa more willing to embrace programs with more flexibility for the wellness staff and employees.

Lessons Learned -Administration

- Finding the right contact person within the corporate structure was very challenging and more time consuming than originally expected. Many companies use a wellness provider and do not have an employee on site to contact, so often our letters and emails went unopened. In many instances we solved this issue by using board members networking abilities to guide us to the right person to assist. "Who you know", worked in many cases, however this was also more time consuming than originally expected.
- One of the main items was the amount of education required about CSAs. Working as both partners do in the local food arena, we had an elevated view of the corporate awareness of CSAs. This project could have easily focused two years on education about CSAs to the Wellness Council of Iowa and other wellness staff in the Greater Des Moines area.

CONTACT PERSON

Shirley Stout Frederiksen, Iowa Heartland RC&D, Cell 712-249-5023
Email - stoutfarm1864@gmail.com

ADDITIONAL INFORMATION

APPENDIX

Item A -Developed a one page project overview to assist in explaining the project purpose to CSAs and employers.

Delivering Fruits and Vegetables to Employers through CSA's

Summary

This project will integrate fruits and vegetables into the workplace of major employers in greater Des Moines through central Iowa CSA's.

We are targeting a minimum of three major health-conscious employers in greater Des Moines to connect with CSA's. We will develop introductory promotional materials to complement their employee wellness programs. The goal of this project is to utilize the CSA model to encourage employees to increase their fruit and vegetable consumption. We will develop a replicable model that may require some minor modification to typical central Iowa CSA member shares.

Action Steps

1. *Identify Employers with wellness programs interested in developing a model to increase healthy local food to their employees.*
2. *Identify current CSA's willing to work with an employer to provide locally-grown fresh fruits and vegetables.*
3. *Initiate a type of CSA to employer model that can be replicated by other employers in central Iowa and across the state.*
4. *Discover other methods to incorporate local food into the worksites and wellness programs.*
5. *Provide an opportunity for the employees to increase their understanding and awareness of fruit and vegetable production through farm visits.*

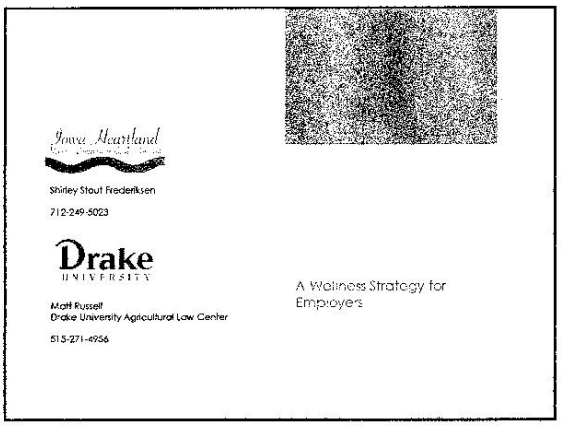
To accomplish these steps, we will facilitate a partnership between health-conscious employers and local CSAs interested in expanding the number of shares they offer.

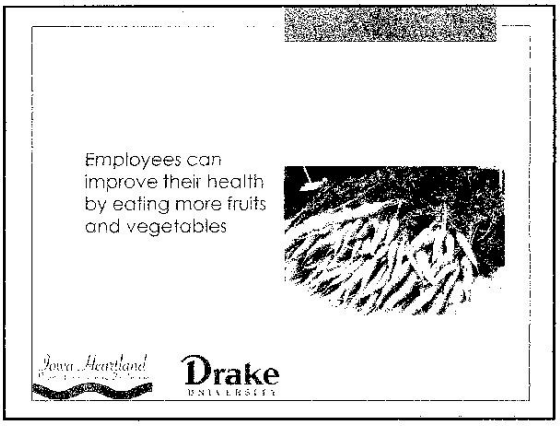
Project Leaders

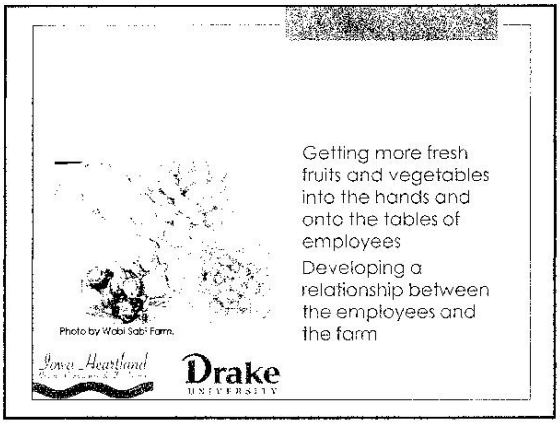
Shirley Stout Frederiksen, Iowa Heartland Resource Conservation & Development (RC&D), Matt Russell, Drake University Agricultural Law Center.

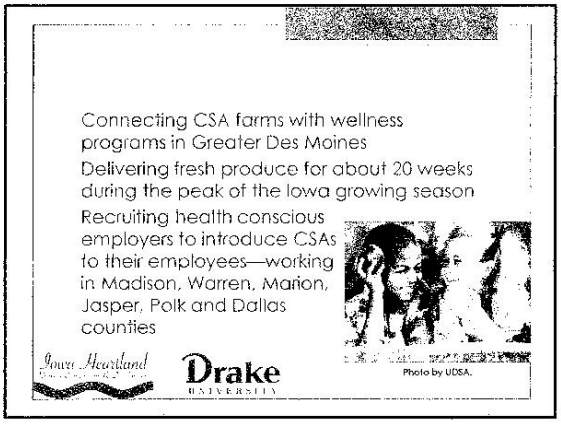
Funds for this project were provided by the USDA Specialty Crops Block Grant Program through the Iowa Department of Agriculture and Land Stewardship.

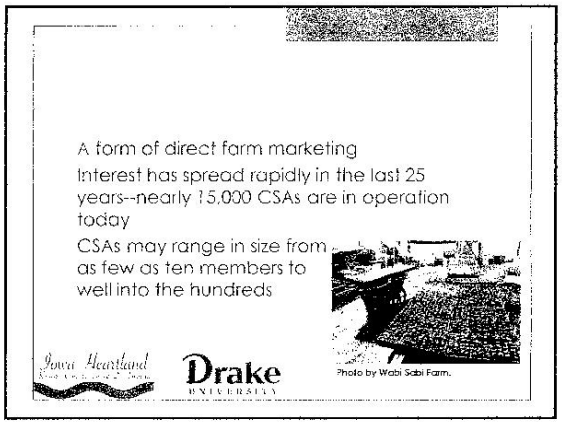
Item B. This power point was created to use on face-to-face appointments with businesses and is intended to assist in setting the stage for the meeting. The power point was revised after year one for use in year two.

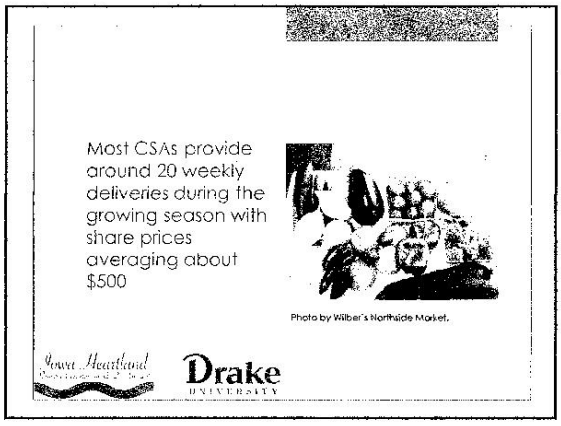












Based on the idea of "community" those participating are often considered members of the farm

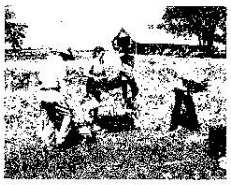
Often include weekly newsletters and recipes with deliveries.

May hold regularly scheduled open houses on the farm

Iowa Heartland

Drake UNIVERSITY

Some CSAs even allow members to work a certain number of hours during the year as part of their share price



Iowa Heartland

Drake UNIVERSITY

Market the food early in the year, before the peak of the growing season and time in the field

Receive payment early in the season, which helps with the farm's cash flow

Have an opportunity to know the people who eat the food they grow

Photo by Garden Destination.

Iowa Heartland

Drake UNIVERSITY

Ultra-fresh food, with all the flavor and nutritional benefits

Diverse varieties of fruits and vegetables

New cooking skills

Relationship with and chance to visit the farm

Iowa Heartland

Drake UNIVERSITY

Photo by Wiber's Northside Market.

Kids typically favor food from "their" farm – even veggies they've never been known to eat

Learn more about how food is grown

Empowered to eat with the seasons

Iowa Heartland

Drake UNIVERSITY

According to a 2010 study by Iowans Fit for Life:

"Iowans consumed an average of 3½ servings of fruit and/or vegetables each day"

"The percentage of Iowans who ate five or more servings of fruits and/or vegetables each day was 19.5 %, minimally lower than the 19.9 % reported in 2007"

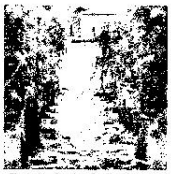


Photo by Garden Destination.

Iowa Heartland

Drake UNIVERSITY

Iowans need to eat more fruits and vegetables
Eating more fruits and vegetables is a powerful strategy that will improve the health outcomes for everyone
Especially for the more than 80% of Iowans who eat less than five servings a day

Iowa Heartland Drake University

Recruit employers and CSA's
Provide information on the program to employers and CSA's
Develop a participation agreement
Develop an employee survey
Facilitate regular meetings with employers and maintain communication with CSA's
Help resolve any issues that may arise

Photo by Raccoon Forks.

Iowa Heartland Drake University

Photo by Wabi Sabi Farms.

Collect and share data information
Evaluate the project by tracking participant satisfaction
Develop a replicable model

Iowa Heartland Drake University

Meet with project leaders to develop a plan of participation
Appoint an employer project leader and team (select CSA, review survey)
Distribute survey to employees
Select a CSA (or CSAs) to promote and market to employees
Provide a drop site for CSA shares and collect share boxes

Photo by Raccoon Forks.

Iowa Heartland Drake University

CSA Boxes. Photo by One Step at a Time Gardens.

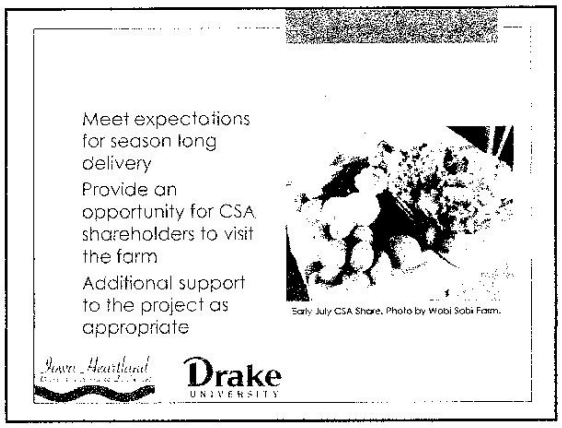
Integrate the CSA project into the employer wellness program
Work with project leaders to work out issues that develop during the project
Additional support to the project as appropriate

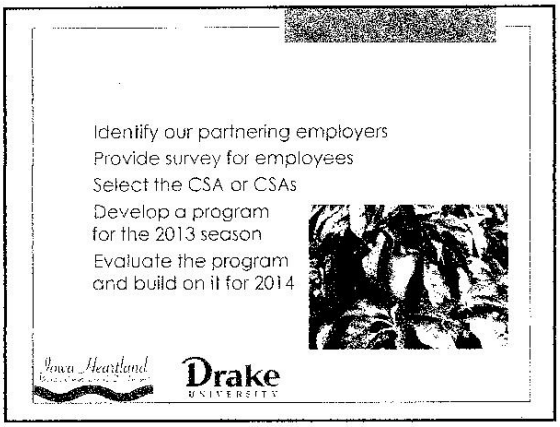
Iowa Heartland Drake University

Marketing presentation to employers about their CSA
Programming on site for employer
- Intro to CSA
- One additional program determined by the employer project team

Logistics for delivery – commitment to delivery schedule

Iowa Heartland Drake University





Item C – The Commitment Outline was used for both CSAs and businesses to explain their roles and steps in the process, so it was a very transparent process.

Delivering Fruits and Vegetables to Employers through CSA's: Commitment Outline

<u>Employer Commitment</u>

- Meet with project leaders to develop a plan of participation
- Appoint an employer project leader and team (to select CSA, review survey)
- Distribute survey to employees
- Select a CSA (or CSAs) to promote and market to your employees
- Provide a drop site for once a week delivery at specific time to collect share boxes
- Integrate the CSA project into the employer wellness program
- Work with project leaders to solve issues that develop during the project

Community Supported Agriculture (CSA's) Commitment

- Marketing presentation to employers about their CSA
- Programming on site for employer – intro to CSA & one additional program determined by the employer project team
- Logistics for delivery – commitment to delivery schedule
- Meet expectations at all times
- Provide an opportunity for CSA shareholders to visit the farm

Project Leaders Commitment

- Recruit employers and CSA's to participate
- Provide packet of introductory information on program to employers and CSA's
- Develop an application for employers to participate
- Develop survey for employers to distribute to employees
- Facilitate regular meetings with employers and maintain communication with CSA's to troubleshoot any issues that may arise
- Collect data and translate information into shares/CSA opportunities
- Evaluate the project by tracking employee/employer satisfaction, number of shares, and other data
- Develop a replicable model

"Funds for this project were provided by the USDA Specialty Crops Block Grant Program through the Iowa Department of Agriculture and Land Stewardship."

Item D – These pictures and others were used to give an idea of the items in a summer share. These are photos from the participating CSAs.

Item E - A letter similar to the following letter was used in year one then revised for year two and sent to 46 employers in the greater Des Moines, Iowa area.

Iowa Heartland RC&D
Warren County Admin Building
301 N Buxton Street #202
Indianola, IA 50125
Phone: 515-961-1001
IHRCD@IHRCD.org
"Building partnerships for healthy land, water, and communities"

November 5, 2013

Company Address

Dear Company Name:

We are recruiting employers to participate in the "Delivering Specialty Crops to Corporations through CSA's" project with Iowa Heartland Resource Conservation and Development (RC&D) and the Drake University Agricultural Law Center. The goal of the project is to connect CSA (Community Supported Agriculture) farms with employer wellness programs. CSAs offer a weekly share of locally grown, fresh produce for about 20 weeks during the peak of the Iowa growing season. Last year we worked with two CSAs and two worksites to deliver produce to Central Iowa families. In the second year of this project, we will work with up to three additional employers. We believe your workplace would be an excellent candidate to pilot this wellness project.

To accomplish this Matt Russell with the Drake University Agricultural Law Center and I would like to help you connect your employees to super fresh fruits and vegetables through CSA's.

Please contact me if you are interested in discussing this opportunity for bringing fresh produce to your worksite as part of your wellness program.

Sincerely,
Shirley Stout Frederiksen
For Iowa Heartland RC&D
301 N Buxton, Suite 202
Indianola, Iowa 50125

Stoutfarm1864@gmail.com
Cell – 712-249-5023
Land line -641-862-3344

"Funds for this project were provided by the USDA Specialty Crops Block Grant Program through the Iowa Department of Agriculture and Land Stewardship."

Item F – CSA Fair Press Release

PRESS RELEASE CSA FAIR

Groups host CSA fair promoting fresh produce for healthier hearts this Valentine's Day weekend

DES MOINES — Feb. 11, 2014 – Six CSAs* will connect with potential members this coming Saturday at the Campbell's Nutrition CSA fair presented by Greater Des Moines Buy Fresh Buy Local, Eat Greater Des Moines, and Iowa Heartland Resource Conservation and Development. The event aims to provide people the opportunity to meet with farmers directly, to learn more about CSAs, and to ask questions to help them choose a CSA that best fits their specific needs and lifestyle.

"CSAs are really a fantastic way for individuals and families to dramatically increase their consumption of fresh fruits and vegetables. The produce is often harvested on the day the produce is delivered and throughout the 20 or so weeks of deliveries a CSA member will be offered dozens of different fruits and vegetables," says Matt Russell, Greater Des Moines Buy Fresh Buy Local coordinator at the Drake Agricultural Law Center.

There has been a perception in the past that CSAs are full and people are too late to join. While that might have been true a decade ago, today there are plenty of shares as new farms have started and existing farms have expanded their operations.

The Drake Agricultural Law Center is working with Iowa Heartland RC&D on a project connecting CSAs with Des Moines area employers. The project involves CSAs and employers working together to deliver shares directly to worksites making it easier for employees to access and eat more fresh produce.

"This is a wellness project for employers. The evidence is clear that people who eat more fruits and vegetables have significantly better health outcomes than people who only eat fruits and vegetables occasionally," says Shirley Stout Frederiksen the executive director of Iowa Heartland RC&D. "This project is a win, win, win. Employers provide a proven strategy for better health, employees receive a growing season's worth of the freshest produce possible, and farmers are able to expand their farms."

Campbell's was one of the participants last year in the CSA project. They partnered with The Homestead CSA at their Urbandale location.

"Partnering with CSAs is a natural fit for us because our mission is health. Helping our customers eat more fruits and vegetables is an important part of what we do. We sell produce all year and offer locally grown in season. But whether our customers are buying from us or joining a CSA, the goal is the same: more fruits and vegetables for better health," says Diane Lahodny, owner of Campbell's Nutrition. Campbell's Nutrition in addition to hosting the CSA fair will be sampling heart healthy foods throughout the store.

For more information, contact Matt Russell at 515-689-8219 or matt.russell@drake.edu.

"Funds for this project were provided by the USDA Specialty Crops Block Grant Program through the Iowa Department of Agriculture and Land Stewardship."

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ITEM G – Description of a CSA

What is a CSA?

From the 2nd Edition The Legal Guide for Direct Farm Marketing by Neil Hamilton, 2013.
Community supported agriculture (CSA) - is a form of direct marketing in the U.S., with the first CSA beginning operation in Massachusetts in 1986. Interest in this form of marketing has spread rapidly and it is estimated nearly 15,000 CSAs are in operation today. There is a great deal of variation and flexibility in how CSAs are organized and run but the most common features are **an established share price for the members and a set number of weekly deliveries for the growing year**. CSAs may range in size from as few as ten members to well into the hundreds. While most CSAs involve just one farm family producing the food, in recent years a number of mutual CSAs have been formed in which several growers collaborate to provide the products being sold. The share price for a CSA will vary depending on the quantity of food provided each week and the number of weekly deliveries promised. Most CSAs provide for around 20 weekly deliveries during the growing season with share prices averaging around $500. Most CSAs are premised on the idea of "community" with the subscribers being considered members of the farm. CSA's often include weekly newsletters and recipes with the deliveries and may hold regularly scheduled open houses on the farm. Some CSAs even allow members to work a certain number of hours during the year as part of their share price.

From the website Local Harvest: http://www.localharvest.org/csa
Advantages for farmers:

- Get to spend time marketing the food early in the year, before their 16 hour days in the field begin
- Receive payment early in the season, which helps with the farm's cash flow
- Have an opportunity to get to know the people who eat the food they grow

Advantages for consumers:

- Eat ultra-fresh food, with all the flavor and vitamin benefits
- Get exposed to new vegetables and new ways of cooking
- Usually get to visit the farm at least once a season
- Find that kids typically favor food from "their" farm – even veggies they've never been known to eat
- Develop a relationship with the farmer who grows their food and learn more about how food is grown

Why are CSAs important for health and wellness?

According to a 2010 study by Iowans Fit for Life "Iowans consumed an average of three and one-half servings of fruit and/or vegetables each day. The percentage of Iowans who ate five or more servings of fruits and/or vegetables each day was 19.5 percent, minimally

lower than the 19.9 percent reported in 2007." Clearly, Iowans need to eat more fruits and vegetables. The power of eating more fruits and vegetables as a wellness strategy is well documented. Our project is built on the assumption that eating more fruits and vegetables is a powerful strategy that will improve the health outcomes for everyone, but especially for the more than 80 percent of Iowan who eat less than five servings a day. CSAs can be a powerful tool to put more fruits and vegetables on the plates of your employees.

"Funds for this project were provided by the USDA Specialty Crops Block Grant Program through the Iowa Department of Agriculture and Land Stewardship."

Consumer Education Campaign: Know Your Food Producer

Final Report

Partner organization: Local Food Producers Market Association

Project Summary

This project involved launching a region wide marketing campaign to promote awareness of the specialty crop growers in Northern Iowa and Southern Minnesota. Working with 32 independent growers, we profiled their individual stories, on-line and at regional farmers markets. A mixture of advertising on radio, public television and on-line was used to draw people to a regional website featuring information on famers markets as well as grower profiles. At farmers markets, growers used business cards and posters profiling their farm to engage customers.

Project Purpose

This project sought to connect customers with the people who are actually providing their food. The aim was to establish a regional "Know your food producer" marketing campaign that features area growers with local identities. These are unique and interesting stories that need to be told right here in our region. Fruit and vegetable growers showcased their farms and farming methods to area customers.

This project was important to specialty crop growers, but even more important to area residents seeking access to fresh fruits and vegetables. The change from traditional "farm fresh quality" to commercial "artificially ripened" produce happened so gradually, many customers lost the ability to discern the difference. With this project, local growers could tell their own stories of how they farm to produce the type of quality that sustains their business. Farm profiles engaged customers and encouraged them to reconnect to locally grown produce.

New farmers just starting out in this industry lack both public exposure and a customer base. This project is intended to help them organize their story and approach to communicating their values to customers. This project provided them with needed exposure.

This project profiled area growers, but did so in a way that the growers themselves were able to make valuable points about local food. They were able to talk to customers about the "values" of local food. They communicated that their local food was vine-ripened and fresher than commercial food; their produce had higher taste and quality characteristics; their produce was

unique for the varietal differences and growing methods used; their food was trustworthy because they grew and picked it; their food was better for the environment and much more.

Project Activities

This project started with a steering committee to develop the program outline, approach and media outlets to be used to communicate the "Know your food producer" story. It was determined that building these profiles into our existing websites was the most logical approach since traditional media outlets are not designed to tell full stories from large numbers of growers. While we continue to work with Garden Connections on local public television, we could not use television to accomplish a full exposé of all grower farms. Instead, by centralizing the profiles, we could then use media outlets and advertising to direct consumers to the websites to get the information they needed. We could then use these same profiles as templates for point of sale aids for growers to use.

This project originally projected that 20 growers would be profiled out of the 62 growers of specialty crops in our region. However, we actually profiled 29 specialty crop growers and provided point of sales aids (such as business cards and business name signage) to 52 specialty crop growers in the region. Three non-specialty crop growers were profiled using direct monetary contributions from individual farmers markets. In total, participation was quite good, although the amount of time and effort required to organize this participation was significantly underestimated.

The survey and feedback process was accomplished, yet the process was far more laborious than originally envisioned. It was determined that due to the varied and busy schedules of growers it was necessary to conduct numerous one-on-one personal interviews with growers in the same way we gathered most of our profiles. Typical paper surveys yielded too low of a response and we responded by engaging growers directly to get a fuller picture of their individual experiences. These conversations, while very time consuming, nonetheless did paint a good picture of the programs impact sales and the growers customer base.

Goals and Outcomes

This project sought to make direct connections between growers and customers through a marketing campaign in northern Iowa and southern Minnesota. Participating growers kept notes throughout the season referencing customer feedback and comments. Growers were asked repeatedly to engage customers and ask questions like "How did you hear about us?" and "Have you seen our website?"

Feedback from growers was a mixture of specific questionnaire responses and verbal dialogue on their unique experiences in engaging customers. This direct dialogue with growers was perhaps the most useful in gaging the programs impact. Yet, many growers gave broad estimations rather than hard numerical specifics. The survey results were:

1) How many customers responded they encountered our media advertising (other than on-line promotion)? {Observations varied from 0 to 22 per grower. In total, growers responded that 132 customers responded by encountering our advertising and almost all of that (110) was radio, with (22) responding to our print advertising.
2) How many customers responded they encountered our Facebook advertising? {Observations varied from 0 to 2. In total only 8 customers responded they saw our Facebook advertising. However, many more customers responded that they had visited our Facebook pages, but had not seen any Facebook advertising.}
3) How many customers responded to point of sale signage and profiles? {Observations varied from 5 to over 100. Some growers were more engaging of customers than others and those that were had favorable comments about signage success. In total it is estimated that over 1,800 customers responded in some way to grower signage.}
4) How many <u>new</u> customer contacts do you think resulted from our marketing and program efforts? {By far, this was the most difficult observation for growers to gauge. Observations varied from 5 to about 60, with the average being 27 (our target was 50). Again, the ability of the grower to engage customers seemed to impact their estimation of new contacts made. In total growers responded that about 500 to 700 new customers were reached with this program (our target was 1,000). However, since not all customers respond to growers questions, we believe this actual number could be much higher. In fact it seems likely that well over 1,000 new customer contacts would have been made if growers had been more diligent in engaging all customers.}
5) What was the <u>average</u> purchase from new or <u>first time</u> customers who responded they had seen our marketing campaign? {Observations varied from $4 to $15 averages. In total 24 growers responded with a grand average of $9 per purchase. Most growers responded this was a very soft estimate. Most also responded that repeat sales were more important than first time sales. Yet, growers seemed to universally respond that judging total repeat sales was next to impossible. Loyalty cards were discussed as a possibility, but tracking such purchases is way beyond what growers can or are prepared to do.

By far, overall general verbal responses seemed to paint a better picture of what the growers thought of the program itself. The prevailing comment was positive in that all marketing and promotion efforts are good regardless of the specific program. Growers responded that it was largely impossible to tell how many first time and repeat customers from this single program could have actually come to the markets. Customer engagement by growers is too sparse to gain specific verifiable numbers of how many customers are responding due to our marketing efforts. Further, growers were mostly very negative about conducting customer surveys, believing that the majority of customers were annoyed by being approached to take surveys. Most growers felt the customer "experience" at the market had to be protected and even enhanced to build greater loyalty. Most growers believed market signage, business cards and direct dialogue had the biggest impact. Most growers also responded that once a customer became a loyal repeat customer they had much greater importance than just about anything. It was also mentioned that most of the customers who mentioned encountering the profiles on-line were doing so as a result of deliberate searching rather than casually encountering them. Growers believed when customers are particularly health conscious they will research what is available, but these active seekers are a very small number.

In conclusion, while this program seemed to produce tangible benefits, it was not a magic bullet that can focus all of our future efforts. Rather the program seemed to validate that a broader mixture of marketing, particularly market based activities, seemed to be needed in the future. It was clear that many first time customers to the market never knew of the markets existence prior to their first visit. Thus, general market promotion coupled with organized grower/vendor customer engagement seemed be the primary need as we look ahead. Customer engagement through signage seemed to be the best way to begin the grower/customer relationship.

Beneficiaries

The beneficiaries of this project include most of the major specialty crop growers in our region who sell product at local farmers markets. The number of growers in our area changes from year to year but approximately 60 growers of all sizes are involved in our region. There were 29 growers who were profiled and another 23 who benefited from this program in some way. There were on-line profiles, at-market posters featuring those profiles, business name signage, business cards and advertising geared to reach customers. Our growers benefited from customer exposure (particularly the new growers) and from organizing "their story" for the customer base. Increased sales and solidified relationships were the result.

Lessons Learned

While productive over all, it appears on-line promotion of regional fruit and vegetable growers tend largely to reach those already most committed to healthy eating and seeking local fresh

fruits and vegetables. Most of the public's comments came from those actively seeking information on farmers markets, which seemed to represent a relatively small subset of the farmers' market customer base. While some of these on-line searchers found quality on-line information on local farmers, it's questionable how we could expand the base of those seeking such information. We feel like we shook the branches of the local populous through radio and on-line advertising and directed those "actively intent" on seeking more information, but need to make more headway with others with healthy eating concerns. It was valuable to develop the base of grower profiles that we did because it will be used continually into the future.

Direct point of sale signage with farm profiles seemed to generate more customer feedback and create a link between customers and growers. However, while this seemed to make more customers committed to specific growers, it had a marginal impact on expanding the overall number of customers. Those who became more committed to growers did sometimes involve friends, relatives and neighbors by making word of mouth referrals.

Generally the POS signage sparked some conversation from customers and those customers tended to respond favorably to what they heard from the grower. Customers responded favorably to the profiles they saw. Thus, this program was a successful element in what needs to be a larger and more consistent marketing approach of linking customers to their locally produced food. The program itself is not the magic bullet we need to inform customers, but it seems to be one worthwhile part.

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PROJECT REPORT(S)

PROJECT TITLE

- ☐ *Statewide On-farm Food Safety Program*

PROJECT SUMMARY

Fruit and vegetable producers often have to undergo a steep learning curve to understand market requirements and frequently rely on their own investigations or information from peers regarding crop production and management practices (Chase, 2012). With an estimated 48 million foodborne illnesses annually in the U.S. (Scannell et al, 2011) of which ~38% are associated with fresh produce, reliance on growers' own knowledge is not adequate to ensure food safety on the farm. Education and outreach is critical to ensure that growers are knowledgeable about how to operate a farm using good agricultural and management practices. The goal with this project was to develop a sequential, three-level, on-farm food safety pilot program designed to provide food safety best practice guidance based on the marketing venue of choice. Level One provided growers with the knowledge of good agriculture best practices through a GAP short course. Level two informed growers about marketing options and provided an opportunity to develop a written food safety plan for their farms with the aid of food safety experts. Level three training prepared growers for the GAP audit process through a farm crawl and interactions with a GAP auditor. In addition to these short courses, we also aimed to provide continuing education opportunities through annual webinars for all growers for specific food safety based topics.

Through this sequential food safety educational programming, the initial goal was to educate at least 375 growers on how to grow their crops safely while exposing them to basic food microbiology, food regulations, and marketing tools that could aid in expanding their clientele beyond direct to consumer markets (i.e. farmers market, roadside stands). As a result of the program, growers would have increased knowledge on potential hazards (biological, chemical, physical, and allergen) on the farm, current state and federal regulations, traceability and record keeping methods and requirements, and have the opportunity to create an on-farm food safety plan with technical assistance provided by food safety experts.

The assumption was that by equipping these growers with Good Agricultural Practice and Good Manufacturing Practice guidance, the likelihood of foodborne outbreaks would be reduced. Additionally, this sequential program would standardize the food safety knowledge amongst growers and increase the pool of educated consumers. In addition to increasing growers' knowledge about food safety, growers were exposed to programming related to marketing and business planning with guidance on how to scale up production and/or expand their businesses to service new markets. The expansion of business opportunities could result in positive economic impacts such as an increase in employment and revenue re-invested in Iowa companies. Also by increases in potential markets would make locally grown produce more

readily available to Iowans through retail foodservice outlets such as restaurants, grocers, schools, institutions, hospitals, and community pantries. Sales of e locally grown produce to local foodservices would improve local economies by retaining food dollars within communities.

PROJECT APPROACH

Between November of 2012 and May of 2015, the On Farm Food Safety Team (Shaw, Strohbehn, Naeve, Wilson, Smith, Wiemerslage and Domoto) completed Food Safety workshops throughout the state of Iowa. The project was organized by teams to ensure the completion of the project and standardization of information. Team assignments were as follows: overall coordination by Dr. Angela Shaw (Food Science/On-Farm Food Safety); Level One Workshops by Drs. Shaw, Catherine Strohbehn (Hospitality Management/Retail Food Safety/GAP Trainer) and Paul Domoto (Horticulture/ GAP Trainer); Level Two Workshop by Dr. Angela Shaw and Linda Naeve (Value Added Agriculture); Level Three Workshop by Margaret Smith (Value Added Agriculture/GAP Trainer) and Teresa Wiemerslage (County Extension Specialist/ GAP Trainer); and Annual Webinar Update by Drs. Lester Wilson (Food Science/Food Quality Assurance/ GAP Trainer) and Angela Shaw. Paul Domoto retired in 2014 so all of his duties were transferred amongst the team.

These workshops were coordinated by local Iowa State University Extension personnel and county extension personnel and held throughout the state of Iowa each year.

GOALS AND OUTCOMES ACHIEVED

The goal for this grant was to educate 325 growers on safe food handling on the farm through the three level program. At the conclusion of the grant in 2015, 530 growers were reached directly through 14 Good Agricultural Practices level courses in Mason City, Fairfield, Altoona, Waterloo, Council Bluff, Dubuque, Iowa City, Kalona, Indianapolis, Spencer, Cedar Rapids, and West Pottawattamie, 2 webinars (Wholesale for Success and Produce Sanitizers) and 1 in-person additional education seminar (Iowa Fruit and Vegetable Growers Association).

Proposed Goals (325 participants) were:

- Level One Completion: 75 in Year 1 and 50 in Year 2 (total of 125)
- Level Two Completions: 75 in Year 1 and 50 in Year 2 (total of 125)
- Level Three Completions: 25 in Year 1 and 50 in Year 2 (total of 75)
- Annual Webinar: 25 participants in Year 1 and 25 participants in Year 2 (50)

Actual Outcomes (530 participants)

- Level One Completion: 170 completed
- Level Two Completions: 102 completed
- Level Three Completions: 12 completed (45 viewed online)
- Two Continuing Education Webinar: 221 completed
- In-Person Continuing Education Seminar: 25 completed

As seen above, the level two and level three goals were not met within this grant. The Level two training assisted growers in the development of a food safety plan, while the level three training assisted growers in audit readiness. The level two training did not have high participation due to growers not seeing the need for having a food safety plan and the market they were selling to not requiring it. The level three training was cancelled in year 1 due to low participation numbers and in year two was provided even with low numbers. Selection of an ideal location and timing during the year posted many challenges. It was ideal to have the workshop provided when crop was harvested but this was also the hardest time of the year for growers to leave the farm. With the new Food Safety Modernization Act being enforced in fall of 2015, we deem this need for these two workshops increasing significantly.

As a result of this work, three peer reviewed journal articles have been accepted for publication

1. Shaw, A., C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Systematic Approach to Food Safety Education on the Farm. Journal of Extension. Manuscript Accepted
2. Shaw, A., C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Knowledge gained from good agricultural practices courses for Iowa growers. Journal of Extension. Manuscript Accepted.
3. Shaw, A., C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Current trends in food safety practices for small growers in the Midwest. Food Protection Trends. Manuscript Accepted.

The ISU On-Farm Food Safety Team three-level sequential on-farm food safety program ("Know", "Show", & "Go") provides growers with a holistic approach to food safety education. Our program has shown that growers positively changed their knowledge and opinions on key food safety principles and regulations and change on-farm food safety practices (e.g. policies, training, and documentation). These findings provide evidence that our program is an effective method to reach growers. Specifically, our pre- and post-surveys show evidence that participants gained knowledge about Iowa regulations related to produce sales (such as need for licenses, certifications, and allowable procedures); food safety concerns with produce (outbreaks, recalls); and key elements of food safety practices (water, packaging, documentation). An increase in the percent of participants responding correctly to food safety statements after the workshop also provides evidence that growers became more confident in their answers (i.e. there were zero "Don't know" responses post-workshop). The most cited self-reported changes in behavior that occurred post workshops included: documentation of on-farm procedures, water quality testing and training of workers; also written protocols for sanitation of equipment, bins, and products; and product traceability. Policy and documentation development of food safety practices were noted as areas needing the most improvement and should be emphasized by instructors of GAP.

Through this grant, we were able to structure a sequential on-farm food safety program, educate other Food Safety Extension Educators, and identify areas and resources for emphasis during their state programs.

BENEFICIARIES

The farmers who produce specialty crops were the direct beneficiaries of this proposal (530 total). They increased their knowledge and were able to capitalize on the education to expand their markets with provisions of food safety assurances. Specific impacts were noted in data published in the three peer-reviewed accepted articles.

Other beneficiaries were consumers of specialty crops marketed through Iowa's Farmers Markets, grocery stores, and retail foodservices. Through the evaluation survey, it was estimated each grower marketed to at least two different vendors; therefore a potential of 1,060 vendors benefited from educated growers on safe food handling.

LESSONS LEARNED

Inclusion of local extension coordinators that work directly within the communities was essential for successful promotion of the food safety programming. It can be difficult to recruit participants for trainings on topics not required by regulation or topics not deemed as important. Winter months were the best times to provide workshops to growers but travel distance by participants and trainers impacted event schedules. We found scheduling events at locations within an hour's drive of a critical mass of growers positively affected participation. Further planning a snow day in the event of inclement weather avoided last minute confusion. Establishment of pre- and post- knowledge, attitude, and behavior surveys provided useful assessments of the impact of the workshops and provided data for journal publications. Because personnel within the team and at county offices changed during the grant period, project leaders needed to be flexible with the timeline.

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ADDITIONAL INFORMATION

GAP Workshops – www.fshn.hs.iastate.edu/angela-shaw-food-safety/good-agricultural-practices-workshop/

Food safety producer information – www.extension.iastate.edu/foodsafety/producer

USDA Final Performance Report : SCBG 2012-2013

Submitted by: Ann Marie VanDerZanden, on behalf of the Board of Directors, Iowa Nursery and Landscape Association: February 2014

PROJECT TITLE

Making Iowa's Green Industry Professionals more Competitive through Professional Development: A Webinar Series and Revision to the Iowa Certified Nursery Professional Training Program

PROJECT SUMMARY

Surveys of the Iowa Nursery and Landscape Association (INLA) membership in 2008 and 2010 showed that members were interested in educational programming beyond the online training provided to prepare for the Iowa Certified Nursery Professional exam. Responses to the survey also showed that members were interested in program delivery methods that were flexible and that could accommodate their schedules. The purpose of this project is to develop a series of four webinars for the INLA membership on topics not covered in the nursery professional training program. In addition to the live and archived versions of the webinars, online training modules will be created to supplement content covered in the webinars. The creation and capturing of these new webinars leads to the opportunity to revise the current nursery professional training program, including reconfiguring the existing training program website, to incorporate these four new webinars and the other nine webinars that have already been completed.

The data collected from webinar participants on achievement of Expected Measureable Outcomes was analyzed and is reported in the Goals and Outcomes Achieved section of this report, as is data on the number of site visits to the reconfigured training program website.

PROJECT APPROACH

All of the project elements outlined in the Work Plan from January 2013-November 2013 have been completed. The four emerging issues webinars were completed in spring 2013 and each webinar averaged approximately 5 participants during the live broadcast. The archived version of each webinar was posted to the webinar section of the INLA website, which was originally created in 2012 as a place to post webinars from our 2010-11 and 2011-12 IDALS SCBG projects. As in previous years, a mix of Iowa State University professors and green industry experts again presented the 2013 webinars.

GOALS AND OUTCOMES ACHIEVED

The first goal of this project centered on providing educational programming for INLA members beyond preparation for the Iowa Certified Nursery Professional exam. The data collected from the eight unique webinar participants in spring 2013 (some participants attended multiple webinars) was analyzed in June 2013. The data showed that overall participants did achieve two of the **Expected Measureable Outcomes** (Table 2). Due to an error in the survey software we were unable to calculate a percent increase in knowledge gained post webinar as was originally planned for in the proposal. Further, only one participant rated the third expected measureable outcome 'applying what they have learned to increase their company's profitability' as 'agree' or 'strongly agree'. As a result of this small sample size, follow up face-to-face interviews will not be completed at the 2014 Shade Tree Short Course as was originally planned for in the proposal.

Table 2 As a result of this webinar …	**Mean Rating** **(n=8 unique identifiers)**
I have gained new knowledge about the topic covered.	3.20[z]
I am likely to implement one or more new practices/concepts I learned.	3.02
I believe I can increase profitability for my employer/company.	2.05

[z] Scale where: 1=strongly disagree; 2=disagree; 3=agree; and 4=strongly agree.

A second goal of this project was to revise the existing nursery professional training program including 20 online modules posted on Iowa State University's learning management system (Blackboard Learn), study materials, self-tests, and the certification exam. The modules were reviewed and updated April-June 2013. Data showing the number of times the modules were accessed between June 2013-November 15, 2013 shows a slight increase (6%) compared to the same timeframe in 2012. Data showing the number of times the modules were accessed from November 15, 2013-February 25, 2014 (the typical preparation/study time for the Iowa Certified Nursery Professional exam) shows an increase of 37% compared to the same timeframe in 2012-13. We originally anticipated 15-20% increase in user traffic on the website after the new webinars and supplemental training modules are added.

The final element of this project is to create supporting educational modules that correspond to the four emerging issues webinars. Each module includes the webinar link, additional resource materials and a series of multiple-choice questions to check participant learning. As of December 6, 2013 the four supporting modules were completed and posted on ISU's Blackboard Learn site in the same location as the modules for the 2012 webinars and 20 ICNP exam preparation training modules. Access information to the online modules continues to be distributed to the INLA membership regularly.

In February 26, 2014 no webinar participants took the ICNP exam. At the December 4, 2013 INLA Executive Board meeting the Board decided not to integrate questions from the webinar content into the February 2014 certification exam. But, they will explore how best to do that for the February 2015 exam.

BENEFICIARIES

The largest beneficiaries of this project include the members of the Iowa Nursery and Landscape Association, which is currently 188 professionals. Access to the archived version of the webinars is significant and continues well beyond the live offering. The 37% increase in user traffic on the online training website after the new webinars and supplemental training modules were added suggests additional a significant increase in INLA members who are benefiting from these online training materials compared to previous years.

LESSONS LEARNED

Although we consulted with the INLA membership on a preferred day of the week, and time of day to offer the webinars, attendance to the live broadcasts was significantly less than anticipated. However, based on the number of times the webinars have been accessed (87 downloads of archived versions) the 12 months after they were posted on the website it is clear the membership was interested in the topics and willing to access them asynchronously. This suggests that capturing presentations and posting them online would be an equally effective was as coordinating a live broadcast. The supporting educational modules that were created for each webinar continue to be accessed by INLA members. INLA will monitor what components of the modules receive the most hits and may chose to expand those sections.

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ADDITIONAL INFORMATION

Below is a screen capture of the module that supports the Green Roofs and Sustainable Sites Initiative webinar from February 13, 2013. These modules are password protected and housed on the Iowa State University Blackboard Learn server. This screen capture is representative of how the webinar supporting modules are designed with an embedded link to the archived webinar, a current list of additional resources to support further learning, and an online quiz for participants to check their learning.

A full listing of webinars from both 2012 and 2013 are available at: http://iowanla.org/webinars/
Select the individual webinar, and on the next screen a password is required to launch the archived version. The password for all webinars is: webinar2012.

Project Title

Gathering Economic and Social Impact Data in Rural Southwest Iowa for Support of Specialty Crop Production.

Partner Organization

Southern Iowa Resource Conservation and Development Area, Inc (SIRCDA).

Project Summary

Both economic and social impact data was gathered using various online data bases for compilation and distribution to regional stakeholders in support of building the regional infrastructure necessary for increasing specialty crop production. Southern Iowa Local Foods Initiative Community Food Profile was developed to illustrate the social impact of local food production in the Southern Iowa Resource Conservation and Development Area (SIRCDA) region. The food profile, which includes the economic and social impact data, highlights an assortment of sustainably-driven food sectors throughout the region and provides information and resources necessary to achieve progressive, sustained market growth for specialty crop production in southern Iowa.

Project Purpose

The objectives of this project were to compile economic and production data covering the prevailing conditions in the local farm and food economy in the SIRCDA region and to create a community food profile.

Economic development groups in our rural communities have been exposed to the potential of local food production as both a community and economic development venture. Other entities such as public health, community action agencies and hospitals are looking for ways to make communities healthier and self-sustaining.

As producers, consumers and community entities explore the opportunity for specialty crop production, a consistent question surfaces related to the economic potential for product. While informal surveys have been administered there has never been an analysis addressing the issues and conditions of local food and farm economy. Local food and farm economies in rural southwest Iowa are dependent on the sociological factors related to food production. It is important that these high poverty, low population counties in Iowa develop a positive “can do” picture of their community, particularly as it relates to the specialty crop production portion of local food systems. Communities need to work on both the supply and the demand for locally grown foods.

The Southern Iowa Local Foods Initiative Community Food Profile spotlights diverse food sectors throughout the SIRCDA region pulling together economic data and statistics that reflect not only the region, but the state of Iowa. The food profile brings to life passionate stories from Iowans working to create a sustainable food system. Rather than reinventing the wheel or searching blindly, stakeholders are able to gain perspective and insight from the food profile. Included in the food profile are individual

stories that relay "home pride," as well as economic and production data, along with a host of much-needed resources from which to navigate.

Project Activities

Rather than contracting with a consultant, foods coordinator researched and collected economic data from USDA sites, online news articles, Iowa State Extension articles, Leopold Center for Sustainable Agriculture as well as other online data bases on six food sector areas which include Farmers' Markets, Community-Based Food Security Programs, Land Use and Farming, Institutions Serving Locally Grown Foods and Community Supported Agriculture.

A summary and PowerPoint presentation entitled *Gathering Economic and Social Impact Data in Rural Southwest Iowa for Support of Specialty Crop Production* was shared with county and regional stakeholders including Ackworth Garden Club, Kiwanis, The Wallace Centers of Iowa (which provides a variety of programs and services to build awareness of local food, sustainable agriculture, and civility), Southern Iowa Local Foods Council and Southwestern Community College's environmental science class. This presentation will continue to be shared with stakeholders throughout the SIRCDA region.

Food system sectors featured in the community food profile include Farmers' Markets', Community-Based Foods Security Programs, Land Use and Farming, Locally Grown Foods in Institutions, Community Supported Agriculture and Agritourism. Food coordinator traveled and interviewed subjects related to the sectors of the local food systems to include their stories in the community food profile.

Once completed, a PDF of the community food profile was shared with nearly 100 stakeholders and 100 booklets thus far have been sent to regional stakeholders, economic development leaders, Chamber of Commerce throughout the SIRCDA region, government agencies such as MATURA ACTION CORPORATION, community leaders, Iowa Secretary of Agriculture Bill Northey, Iowa State Extension local food contacts, the Regional Food System Working Group, the Leopold Center for Sustainable Agriculture as well as other community entities and businesses.

The grant funds were solely used to enhance the competitiveness of specialty crops

Goals and Outcomes Achieved

Goal One: Compile solid and quantitative baseline data to understand the current farm and food economy.

Performance Measure

Rather than contracting with a consultant, food coordinator researched and collected economic data from USDA sites, online news articles, Iowa State Extension articles, Leopold Center for Sustainable Agriculture as well as other online data bases to understand the current farm and food economy.

Benchmark

A PowerPoint presentation entitled *Gathering Economic and Social Impact Data in Rural Southwest Iowa for Support of Specialty Crop Production* was completed by December 2013 and has been shared with and continues to be shared with regional stakeholders, college students and civic groups via community outreach projects which include Ackworth Garden Club, Creston Kiwanis, The Wallace Centers of Iowa (which provides a variety of programs and services to build awareness of local food, sustainable agriculture, and civility), Southern Iowa Local Foods Council and Southwestern Community College's environmental science class.

Goal Two: Assist local stakeholders in identifying sociological and economic impacts of local food systems.

Performance Measure

The *Southern Iowa Local Foods Initiative Community Food Profile* features a compilation of six food sectors which include seven stories that relay "home pride". A PDF of the community food profile and food profile booklets (200 were printed) were sent to regional stakeholders in the SIRCDA region which included economic development leaders, chambers of commerce, county extensions, public health, city mayors, public libraries, Matura Action Corporation, community leaders, Iowa Secretary of Agriculture Bill Northey, the Regional Food System Working Group, the Leopold Center for Sustainable Agriculture, Growing Food Connections, the Des Moines Register as well as other community entities and businesses. The food profile is also available at the Southern Iowa Resource Conservation and Developments web page in the local food section.

Benchmark

Community Food Profile was completed by August 2014.

Goal Three: Unify work of diverse stakeholders involved in strengthening specialty crop production.

Performance Measure

A compiled report of both economic and sociological data was printed and shared with stakeholders when giving the PowerPoint presentation entitled *Gathering Economic and Social Impact Data in Rural Southwest Iowa for Support of Specialty Crop Production*. This report has been shared with and continues to be shared with regional stakeholders and civic groups via community outreach projects. The report was also included in the community food profile which was sent out to multiple stakeholders and is available on Southern Iowa Resource Conservation and Development's webpage.

Benchmark

Compiled printed reports were distributed to stakeholders.

Conclusions

Farmers' Markets

Iowa ranks in the top ten for Farmers' Markets in the United States. All but one of the SIRCDA counties have at least one farmers' market. Some of these markets are flourishing while others are struggling. **Market location, atmosphere, leadership, promotion, advertising and vendor commitment contribute to the success of farmers' markets.**

Community-Based Food Security Programs

Iowa has 24 food deserts including Union County. Persons below the poverty levels in the SIRCDA region range from 11.1% to 23.7%. In 2013 there were 420,914 Iowans using assistance from the Supplemental Nutrition Assistance Program illustrating a need for more affordable fresh food. **Food insecurity can be curbed by helping families in need become more self-sufficient by teaching them gardening skills. Community Gardens could be the platform from which they learn these gardening skills. Community members who participate in community gardens can also commit to donating a percentage of their crops to families in need. Additionally, excess produce from specialty-crop farmers can be shared with food banks giving low income families access to healthier food options.**

Land Use and Farming

The number of farms across the United States has been dwindling since the 1900's, while the farms that do remain are growing in size. Iowa farms dropped from 206,000 in the past 55 years to 89,000. Most Iowa farms specialize in growing corn and soybeans. Most animals raised in Iowa are bound for the global commodity market. Iowa spends 7.2 billion dollars on food imported from out of state. **By supporting specialty crop farmers our food dollars can circulate back into the pockets of Iowans and we can take pride in eating fresh local food while reducing our carbon footprint.**

Locally Grown Foods in Institutions

The Leopold Center for Sustainable Agriculture partnered with the Regional Food System Working Group (RFSWG) and coordinated an evaluation for one of the first statewide attempts to measure actual impacts of the local food industry on Iowa's economy. The food coordinator who worked on this Crop Block Grant and who is also a member of the RFSWG helped collect the data. The results were published in the *2012 Economic Impact of Iowa's Regional Food System Working Group* report. Sales of food produced in the SIRCDA region (data collected from three specialty crop farmers) added $72,230 to the local economy. In addition, $143,430 of local foods was purchased by institutions in the SIRCDA region (data collected from three institutions). If institutions committed to purchasing 30% of their food from local farmers, $8,895,824 would stay in the hands of Iowa farmers. **Consumer awareness campaigns regarding local foods would be beneficial to the state of Iowa. If people are aware of the positive impact local foods has on communities they will be more likely to purchase locally grown specialty crops and support local businesses who are serving or selling locally grown specialty crops.**

Community Supported Agriculture

It is estimated that only 10% of the produce eaten in Iowa was grown here. **Although the CSA farmer featured in the Southern Iowa Local Foods Initiative Community Profile has seen a significant increase in his CSA sales, the overall number of Iowa farms marketing products through CSA's dropped from 487 in 2007 to 260 in 2012. This finding was surprising considering more and more people are buying locally grown foods. Perhaps they are purchasing most locally grown foods from farmers' markets which continue to grow in popularity.**

Agritourism

Although most Iowans aren't familiar with the term agritourism, ironically it happens to be an Iowa pastime. The underlying goal of agritourism is to build support for agriculture and educate the public while providing supplemental incomes to farms and other operations. The number of farms that sold agricultural products directly to individuals for human consumption increased by 17% nationally; while the number of farms in Iowa showed an increase of 22% rising from 2,455 farms in 2002 to 2,987 in 2007. **Agritiourism appears to be growing industry, but little economic data is available. More measures/studies need to be put in place to collect quantitative data.**

Long term potential

SIRC&D has entered into a partnership with the University of Iowa and through this collaboration Food Coordinator hopes to use this project to build relations with Public Health and Economic Development sectors.

Final Conclusions

As the movement and interest towards local foods grows, specialty crop farmers need resources, educational tools, marketing support, financial support, continuing farm education, adult computer education and overall support to better compete in the marketplace. Resources which aim to help consumers find and access locally grown specialty crops would be beneficial as well as wellness education and education on the importance of supporting specialty crop farmers as it relates to physical health and the economy.

The overall scope of the project didn't benefit commodities other than specialty crops.

Beneficiaries

A PDF of the community food profile, which included both the economic and sociological data, was shared with 100 stakeholders via email and nearly 100 community profile booklets were sent out via U.S. Mail to additional stakeholders throughout the SIRCDA region and beyond which included regional stakeholders, public health offices, economic development leaders, Southern Iowa Local Foods Council, farmers' market managers, local restaurants, Chambers of Commerce, MATURA ACTION

CORPORATION, city mayors, Iowa Secretary of Agriculture-Bill Northey, Iowa State Extensions, public libraries, specialty-crop farmers, the Regional Food System Working Group, the Leopold Center for Sustainable Agriculture, The Des Moines Register, Creston News Advertiser, Growing Food Connections in Buffalo, New York, whose focus is food policy planning, as well as other community entities and businesses. Food coordinator was also a guest on Creston's radio station KSIB talking about the project and referred listeners to the Southern Iowa Resource Conservation and Development website to find the Community Food Profile.

As a result of this project, Marketing and Food Systems Initiative Program Manager from Iowa State University referred a graduate research assistant from the Leopold Center for Sustainable Agriculture and Iowa State University Extension and Outreach to food coordinator, so food coordinator could lend feedback on toolkit for local food leaders. This toolkit included a document on farmers market organizational structure, development and budget that graduate research assistant developed for West Virginia, but is thinking about making a version of the toolkit for Iowa via ISUEO / the Leopold Center.

The Community Food Profile, which can be used as a guide, will hopefully fuel conversations and action, so communities can begin the important work of building a regional infrastructure necessary for increasing specialty crop production. Individuals who were featured in the community food profile have been able to share their stories with their communities and customers, bringing attention to specialty crop production in the SIRCDA region. Other organizations like chambers of commerce can use this profile to paint a "hometown pride" snapshot of their unique communities. Regional Food System Working Group has shared the community food profile with its members which can be used as a guide or template for writing their own community food profile. The food profile is also available on the Southern Iowa Resource Conservation and Development's web page in the local food section.

The impact locally-grown specialty crops have on communities is far reaching, influencing diverse sectors from economic development, to health, to community spirit. The community food profile illustrates the importance of these intertwining sectors that greatly influence and impact our communities.

Many people in the SIRCDA region are doing great work as it relates to the local and sustainable food system, but oftentimes their work goes unnoticed unless it's being advertised or written about. This project, which connects the dots of our local food system, has been shared with a diverse and influential population throughout the SIRCDA region who now can now share this information and be inspired to take action in their own communities to work towards a more sustainable food system.

Lessons Learned

Food Coordinator who worked on and completed this project was not the same food coordinator who wrote the grant proposal and who intended to complete this project (former food coordinator retired early). That said, current food coordinator did her best to interpret the goals and objectives of this project.

Consumers and farmers benefit greatly from resources, so when writing a community food profile, it's important to include as many resources as possible. Iowa State Extension proved to be a great link for state resources. Because so many resources are available on their websites, time was saved. Beyond state resources, it's worth noting to include regional and national resources as well. Extending a lens beyond Iowa to see what others are doing nationally is vital for growth.

Although the Community Food Profile represents the SIRCDA region, not all 7 counties were represented in the "story" sector of the food profile. Food coordinator, however, did her best to collect economic and statistical data from each county whenever possible.

Contact Person

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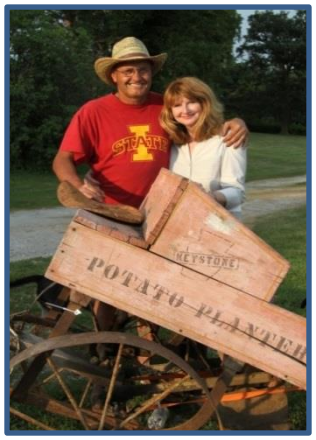
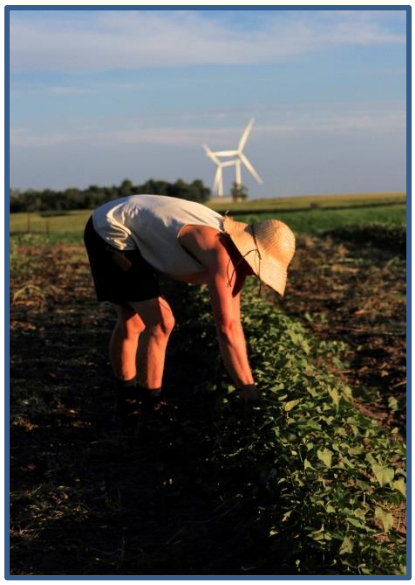
Additional Information

FOOD CONNECTIONS

Southern Iowa Local Foods Initiative Community Food Profile

Prepared by Alexi Groumoutis, Local Foods Coordinator for Southern Iowa Resource Conservation & Development, 2014





Preface

This community Food Profile is intended to give readers a better sense of how producing, processing, distributing, retailing, preparing and eating food influence and interconnect a community's economic, ecological and social wellbeing.

We hope this sketch of the local food system will stimulate you to consider your relationship with food and how your food purchases affect your community. Use the Profile to better understand how agriculture and food fit into your work and your daily life. When we base our food choices and food-related activities in our community, multiple benefits are possible. Allow the stories in this Profile to suggest new – and perhaps unexpected – partners as you continue to make your community a better place to live and work.

This Profile focuses on the Southern Iowa Resource Conservation and Development seven county area which includes Adair, Adams, Union, Clarke, Taylor, Ringgold and Decatur.

"A human community, too, must collect leaves and stories, and turn them to account. It must build soil, and build that memory of itself – in lore and story and song – that will be its culture. These two kinds of accumulation, of local soil and local culture, are intimately related." Wendell Berry

Prepared by Alexi Groumoutis, Local Foods Coordinator for Southern Iowa RC&D. Food profiles written by Alexi Groumoutis. Southern Iowa Local Foods Initiative Community Food Profile framework was adapted from and select general information was taken directly from C.S. Mott Group for Sustainable Food Systems at Michigan State University's 'Food Connections' profile. Southern Iowa Local Foods Initiative is working to build healthier, more prosperous communities by working to create a vibrant, regional, local foods system. By supporting local farmers and growers, we can support sustainable food practices that improve food security, health, the environment, community ties and local commerce. Find this document online at: http://www.southerniowarcd.org/index.html

Southern Iowa Local Foods

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Sponsored by Iowa Department of Agriculture and Land Stewardship

Information in the Food Connections Profile may have changed in the time this document was published.

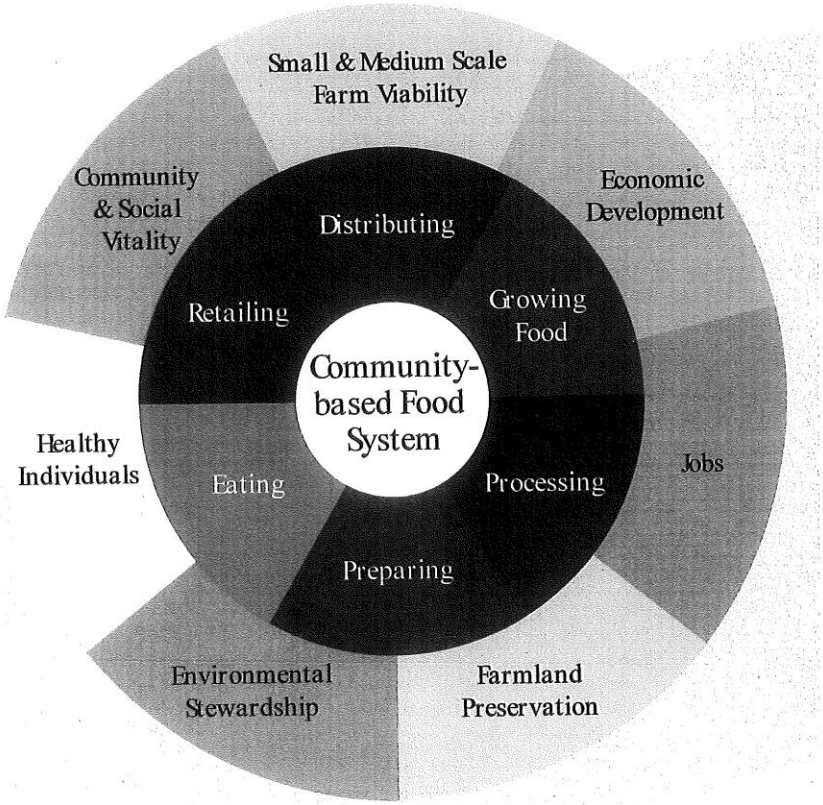
Circle of Connections

This Community Food Profile uses the □circle of connections□diagram to focus attention on the connections between food and farming in the Capital Area. Let the diagram be your lens to see new opportunities and partners □new connections □that will make your community a better place to work and live.

Legend

Inner ring □food system components

Outer ring □community-based food system outcomes



Where does your food come from?

Everyone in our community has connections to food. Food is essential to our health and well-being. It plays a central role in the social networks and cultural traditions that help define a community. Agriculture is an important industry in Iowa and it's southern counties.

However, communities rarely see opportunities for development in the food and farming connections that make up their local food system. We see a globalized and industrialized food system, often leaving farmers and consumers separated by distance and understanding. Produce eaten in the Midwest travels an average of more than 1,500 miles, and the typical consumer doesn't imagine his steak as "livestock," let alone appreciate the resources used in its production.

Yet we can address current pressing issues as diverse as obesity, urban sprawl and economic development in part by paying closer attention to our food – what we eat; where it comes from; how it is produced, processed and distributed. Evaluating our collective food habits can open a host of new opportunities.

This guide maps some of the food and farming connections in the southern Iowa counties through stories, photos, facts and figures.

Why community-based food systems?

Community-based food systems emphasize relationships between growers and eaters, retailers and distributors, processors and preparers of food. They give priority to local resources and focus on local markets. Social equity and environmental sustainability are emphasized along with efficiency and profitability, and food security is a right and responsibility of all community members. Most importantly, they rely on the participation of well-informed consumers who have a stake and a voice in how and where their food is produced, processed and sold.

When local agriculture and food production are integrated in community, food becomes part of a community's problem-solving capacity rather than just a commodity that's bought and sold. By eating local and developing connections among local consumers, farmers, processors and retailers, we can have profound effects on the health and wellbeing of our community.

Using this guide

Usually, we think of food as following a linear path from farm to table – produced on farms, processed in factories, distributed by trucks and purchased by consumers at grocery stores and restaurants. Thinking, instead, of the food system as a circle reminds us that we are all linked in multiple ways (see diagram, page 4). By paying attention to these connections and, when possible, strengthening them within our community, we begin to see that a host of outcomes are possible. The outer ring in the Circle of Connections diagram suggests some outcomes of a community-based food system (you can probably think of others). The following page details their importance.

Everyone – regardless of economic status, ethnicity or political bent; whether economic development professional, farmer, grocery retailer, public health advocate or eater – has a stake in the food system. It is indeed reasonable to ask, **"what type of food system do I want for my community?"** This Community Food Profile will help you answer that question.

A Food System

Includes the who, what, where, when, why and how of our food- from farm to plate.

Outcomes Here are some of the issues a community-based food system can influence. Which ones affect you?

Small and medium scale farm viability

The numbers of farms across the United States has been dwindling since the 1900's, while the farms that do remain are growing in size. Iowa farms dropped from 206,000 in the past 55 years to 89,000. This loss is not just farms but also farmland, farmers, skills and infrastructure necessary for long-term food production capability. Many studies have demonstrated the importance of small-and medium-scale farms in maintaining the social, economic and environmental health of rural communities.

Environmental Stewardship

Food production is inextricably linked to the environment. However, the intensification and industrialization of agriculture over the past 50 years have resulted in some practices that are detrimental to environmental health. A community-based food system highlights the connection between food and environment, creating opportunities for consumers to recognize and value the environmental services provided by local farms, such as water filtration and wildlife habitat.

Jobs

In a time when job outsourcing is a painful reality for many communities, local food production and processing can create significant numbers of stable jobs. Like "Buy American" campaigns, "Buy Local Food" campaigns can foster an understanding that purchasing choices affect the economic well-being of people in our community.

Healthy Individuals

There is a direct correlation between food and health. In 2011 twenty-nine percent of Iowans were obese according to the U.S. Centers for Disease Control and Prevention. Community-based food systems encourage healthy lifestyles by making fresh, delicious fruits, vegetables and other foods more accessible. Healthier citizens mean reduced healthcare premiums, making Iowa communities more business friendly.

Economic Development

Iowa spends 7.2 billion dollars on food imported from out of state. Community-based food systems capitalize on opportunities for entrepreneurial farmers and small businesses to add value to local agriculture products and keep a larger portion of each food dollar within the local economy.

Farmland Preservation

Preserving farmland must go hand –in-hand with assuring farm viability. Re-localizing the food system-relying more on local and regional sources for our food needs-creates valuable markets that help keep farmers farming on farmland and increases awareness of the importance of preserving local farmland.

Community and Social Vitality

At the heart of a community-based food system are relationships that build social capital, strengthen social networks and form the basis of community identity. Food is a deep-rooted aspect of our social interactions. In fact, the Latin root of the words companion and

company means “with bread.” Food is an inclusive focal point for rebuilding community, in urban as well as rural settings, and especially between the two.

Farmers' Markets

Where can you go to find smiling faces, jamming guitars or jams in vases? Ice-cold drinks, fruit-filled treats, hot meals for purchase and a place to sit and eat. Where can you go to find locally raised meat, farm-fresh eggs and fresh vegetables to eat? Here is a hint, but if I share, you must go and support this local affair. Their names may be Dennis, Dale or Tyler; they grow fresh food ; they are your local farmers. Food that hasn't traveled thousands of miles, just ask how they grow it; they will tell you with smiles.

Farmers' markets are spreading like wildfire across the country and understandably so. Not willing to get left behind, Iowa ranks in the top ten for farmers market in the United States.

In 1994 there were approximately 1,775 farmers' markets in the United State and by 2012 that number jumped to 7,864 according to the USDA Farmers Market Directory. There is at least one farmers' market in Adair, Adams, Union, Clarke, Ringgold and Decatur counties.

What's behind the upward trend? Consumers like knowing WHO is raising their food and HOW it's being raised. Just as important, they enjoy eating fresh, flavorful food grown within miles of where they lay their heads to sleep at night. It is not only this connection that has people flocking to farmers' markets, but also the overall 'experience' that farmers' markets offer. Many farmers' markets are social events, such as the Creston Farmers' Market, that bring neighbors together to shop, eat and listen to live entertainment under the open sky, all while supporting small agriculture.

By selling directly to customers, farmers are able to get more than 14 cents on the retail dollar, this according to Agriculture Deputy Secretary Kathleen Merrigan.

According to the 2012 Grinell Area Local Food Guide, "If every Iowan spent only $10 a week on locally grown food, it would amount to $1.5 billion every year invested in local people, local farms, and independent local businesses."

What You Can Do

Individuals:

Shop regularly at your local farmers' market and encourage others to do the same.

Community:

Make your farmers' market 'an experience' for people by providing entertainment, activities and cooking demonstrations.

Municipality:

Sponsor a farmers' market in your town.

Resources

Iowa Farmers' Market Directory:

http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.formFarmersMarketDirectory

Local Harvest:

www.localharvest.org

Area Farmers' Markets

- **Creston Farmers' Market**
  *Mondays,June-Sept, 4 pm-6:30pm
  *Dinner and Entertainment
  *McKinley Park
  *Contact: Brian Zachary at 641.247.1663
- **Afton Farmers' Market**
  *Tuesdays,June-?, 3pm
  *Dinner and Entertainment
  *Afton Park
  *Contact: City Hall at 641.347.5224
- **Greenfield Farmers' Market**
  *Thursdays
  *Courthouse Square
  *Contact Chamber at 641.743.8444
  info@greenfieldiowa.com
- **Corning Farmers' Market**
  *Thursdays,June-Sept, 4-6:30 pm
  *Central Park
  *Contact: Eleanor Ogburn at 641.322.3382
- **Lamoni Farmers' Market**
  *Saturdays,June-Sept, 9am-12pm
  *Contact: Sophie Ryan at 641.203.2990
  Sophieryan2011@yahoo.com
- **Mt. Ayr Farmers' Market**
  *Fridays, 3pm-5pm
  Contact: Judith Hensley at 641.464.3333
  judyh@iastate.edu
- **Leon Farmers' Market**
  *Thursdays June-October 3-5:30
  *Contact: Darlene Richardson 641.442.5417
  highprairiejd@gmail.com

To locate Farmers' Markets in the state of Iowa go online to: http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.formFarmersMarketDirectory

Creston Farmers' Market Manager Grows Successful Market

California native Brian Zachary rescued Creston, Iowa's, ailing farmers market back in 2008. Zachary, who teaches at Southwestern Community College, moved to Creston from Los Angeles, California, in 2007 with his wife Jean Weisshaar (a Creston native) and their two kids, so Jean could join her dad and brother in the family farming business.

While still living in L.A., Zachary would shop weekly with his kids in tow for groceries at L.A.'s organic farmers' market. It was a ritual he and his family looked forward to. After moving to Creston, he longed for the familiarity of L.A.'s thriving outdoor market complete with fresh fruits and vegetables, live music and hot food for purchase. So, with his wife's encouragement he accepted an unpaid position as manager for Creston's Farmers' Market (CFM), hoping to breathe new life into the dying market. He wanted to give Crestonians a farmers' market that would leave them coming back for more.

Prior to him taking over as market manager, CFM was stationed in a less than ideal location in uptown Creston with only three vendors. Once Zachary came on board he moved the farmers' market to McKinley Park, a vast and picturesque park located on the west side of town overlooking McKinley Lake. The market has since grown from three vendors to an average of 18 vendors and according Zachary in 2013 the CFM market had an average of 250 people in attendance every Monday.

CFM has become a Monday afternoon destination to not only buy locally grown food, but to enjoy live music while grabbing a bite to eat. The market offers a variety of locally grown fruits, herbs, vegetables, meats, eggs and honey. Baked goods and homemade jams are also available, as well as arts and crafts.

While some small-town farmers' markets are struggling, others like the CFM are thriving. Zachary credits this success to not only its location, but to signage and free advertising which has been crucial since he operates the market with little to no money. Every Monday morning (the day of the farmers' market) he gets up at the crack of dawn and places signs throughout town reminding people before they go to work to attend the farmers' market. He also advertises the farmers' market via electric sign boards belonging to local businesses, such as banks, that are free of charge. Zachary writes letters to the editor that get published at Creston News Advertiser encouraging citizens to attend the market.

In addition to a sizable influx of vendors and customers, Zachary has seen other notable changes at the farmers' market over the last couple of years. Although hobby farmers sell at CFM, he's says there is an increase in professional farmers who depend on specialty-crop farming as their primary source of income.

CFM clientele seems to be broadening as well. Zachary notes that the average farmers' market attendee is 65 years old, but increasingly he is seeing more college-aged students and families attending.

Zachary says farmers' markets are vital for locally grown foods, especially in small towns, because they act as a distribution center.

"The sources of local food are really only farm stands and farmers' markets and just a tiny bit now (of) co-ops and grocery stores," said Zachary. "Farmers' market is the crucial, really the most important place/location for people to get the local food. It's the backbone."

Most people attending farmers' markets assume the products being offered are locally grown by the vendors. However, some vendors buy their local produce from out-of-state auctions unbeknownst to consumers which can be interpreted as misleading. As of 2014, Creston Farmers' Market requires that all produce, meats and other products sold, must be grown in Iowa by the vendor in keeping true to the original spirit and integrity of a farmers' market.

Paradise Farmers' Market

Community is sewn into the fabric of Darlene Richardson's moral compass. Along with being the director of the Leon Public Library in Leon, Iowa, she and her husband Jim manage Leon's farmers' market also known as Paradise Farmers' Market.

"Some of the first European settlers in the county described the county as paradise," said Darlene. "They said, 'I would want no fairer land.' "

Proud to call Decatur County home, Darlene says her county has been unfairly tarred and feathered; labeled by some as 'the pits.' She says Decatur County is touted as one of the poorest counties in the state, along with a slew of other unflattering accolades.

Rather than succumbing to this pessimism, Darlene finds inspiration within her family's roots and vows to leave Decatur County better than she found it. She says her parents and grandparents were raised in this region as well as her husband's parents and grandparents and they were not ashamed of their lives.

"I think communities are important," said Darlene. "One of the ways to keep things going is you have to nurture and nourish your community."

She adds no matter how old you are, you will sicken and die if you don't have fresh air, clean water and good food.

According to Darlene, Paradise Farmers' Market started as a collaboration between (father and son)Bud and Everett Parmer and Darlene and her husband Jim.

"Bud had been in the produce business for a long time," said Darlene. "Bud used to say it was important for elderly people to have access to Farmers Market Nutrition Program vouchers."

Around the same time, Darlene's husband Jim was welding horseshoes as a hobby. They had been married only a few years and were looking for ways to make extra money.

"I thought wouldn't it be swell if we could sell this stuff?" said Darlene. "Maybe we could make a buck or two."

The Parmers and the Richardsons put their heads together to form Paradise Farmers' Market around 2002. Within the first three years of its opening, the market was certified for the Seniors Farmers Market Nutrition program (SFMNP).

SFMNP is a federally funded program in which low income seniors receive voucher booklets to purchase fresh fruits, vegetables, herbs and honey.

The SFMNP check booklets contain 10 vouchers redeemable for $3 each at a certified vendor. When redeeming SFMNP vouchers, Darlene

says Paradise Farmers' Market vendors tend to be generous, giving more than $3 worth of produce to their customers.

Darlene says her biggest challenge regarding the farmers' market is the number of vendors; she would like to see more. She says she has a core group of three vendors who show up weekly with an average of four to five vendors a week. She says the market receives approximately 50 visitors a week.

Despite its size, Darlene is grateful her community has a farmers' market to enjoy. She is proud the market has reached a place where people now ask, "When will *our* market open?"

When she created the market Darlene had two goals.

"First goal- it should outlast my husband and I," said Darlene. "And second goal- I would like it to produce a regional company."

Although Paradise Farmers Market is small, Darlene believes its potential is mighty.

Darlene says Hy-Vee, which has 235 stores throughout eight Midwestern states, got its start in Beaconsfield, Iowa, and Starbucks, a global company, got its start at Pike's Place Market in Seattle. Darlene says every successful company started somewhere, so she doesn't see why a local vendor from Paradise Farmers Market can't make a name for themselves regionally, if not nationally.

"Surely someone from our market could be in at least a couple of states," said Darlene.

More than anything, Darlene says she wants to build a community that if her kids someday leave, they will have something to come back to. She believes Paradise Farmers' Market helps to fulfill that obligation.

"I feel like I've done something worthwhile. I feel like I've done something to support my community."

For more information about Paradise Farmers' Market contact Darlene Richardson at 641-442-5417. Like Paradise Farmers Market on Facebook.

To learn more about SFMNP visit https://www.iowaaging.gov/senior-farmers-market-nutrition-program

Community – Based Food Security Programs

In Iowa, food security is a concerning issue with food deserts scattered throughout the state. According to the United States Department of Agriculture, 13.5 million Americans live in food deserts. Although Iowa reigns supreme in agriculture, 80 percent of the food grown here is exported out of state, according to Iowa Public Radio.

A 2011 report conducted by the Iowa Policy Research Organization entitled *Starvation Nation: Rural Food Deserts* found that Iowa has 24 food deserts, Union County being one of them.

Food deserts can be found in both rural and urban areas where it's difficult to access to fresh, healthy foods due to affordability and distance.

The effects from food insecurity can have damaging consequences. A 2014 study conducted by Iowa State University links food insecurity with maternal depression.

According to Iowa Fiscal Partnership, May of 2013 statistics, nearly 200,000 households (420,914 individuals) used assistance from the Supplemental Nutrition Assistance Program (SNAP), illustrating a need for more affordable food. Twelve point one to sixteen percent of people in Adair, Union and Taylor counties use SNAP. Eight to twelve percent in Adams and Ringgold counties use SNAP and 16.1 to 20 percent in Clarke and Decatur counties use SNAP.

Fortunately, some Farmers Markets vendors accept SNAP which can be used for fresh fruits, vegetables, meat, honey, eggs, herbs, cheese, baked goods and jams, etc.

Sadly, many of those suffering from hunger are children. According to The Food Bank of Iowa, one in five children don't get enough to eat.

For five weeks during the summer of 2013, underprivileged children were able to eat free lunches at First Presbyterian Church in Creston thanks to One in Christ, a collaboration of six area churches.

How to Curb Food Insecurity

Is there a way to help people become more self-sufficient? There is a saying, "Growing a garden is like growing money." One way to battle food insecurity is to plant gardens. According to The Wall Street Journal, the average household invests $70 when planting a garden which reaps $600 worth of produce.

Ampleharvest.org

Another means of battling food insecurity is donating fresh produce to local food pantries. AmpleHarvest.org connects backyard gardeners with local food banks. Gardeners drop off their freshly picked produce to food banks at a designated time. People in need pick up the fresh produce at a different designated time forgoing any shame they may feel by having to come in contact with the grower. Everyone benefits. The backyard gardener is able to donate their excess produce rather than letting it go to waste while people in need are able to access freshly harvested produce to no cost to

them. Because the food is picked and immediately given away, food banks don't have to worry about refrigeration and storage issues which detours many food banks from collecting fresh produce in the first place.

Fresh Foods Ward Off Disease

The need for fresh, affordable fruits and vegetables is greater than ever as many Americans are facing an epidemic of preventable man-made diseases such as heart disease, obesity and diabetes.

According to The Centers for Disease Control and Prevention "in 2009, an estimated 32.5% of adults consumed fruit two or more times per day and 26.3% consumed vegetables three or more times per day, far short of the national targets. Overall, the proportion of adults who met the fruit target declined slightly, but significantly, from 34.4% in 2000 to 32.5% in 2009…"

Even more disturbing, a 2007 report stated "Iowa ranks 8 in overall prevalence with 26.5% of children considered either overweight or obese," according to childhealthdata.org.

Fortunately, it was reported in 2013 that obesity rates in Iowa have dropped slightly due to grants that promote healthy eating, this according to the Centers for Disease Control and Prevention.

What Can You Do?

Individuals:

Volunteer at an organization dedicated to improving food security.

Community:

Organize fresh-food drives.

AmpleHarvest.Org

Municipality

Work with local foods council.

United States Census Persons Below Poverty Level 2007-2011	
Adair County	11.5%
Adams County	10.7%
Clarke County	12%
Decatur County	19%
Ringgold County	12.7%
Taylor County	13.5%
Union County	17.4%

United States Department of Agriculture-Economic Research Service People in Poverty 2012	
Adair County	11.1%
Adams County	12.9%
Clarke County	12.8%
Decatur County	23.7%
Ringgold County	16.4%
Taylor County	14.1%
Union County	14.1%

Osceola Community Diversity Garden

As she bends down to fill her weaved basket with freshly harvested produce, Marilyn Dorland's white hair glistens in the sun. At 80-years-old she tries carefully not to agitate her fragile knees. Rummaging through the garden, Dorland begins plucking fresh green beans off their vines. Her tanned skin tells the story of a close relationship with the outdoors while her aching knees are testimony to the many years she's devoted to gardening. Although age has proven unforgiving in many ways, Dorland still remains physically strong putting one foot on top of her shovel while using the weight of her body to sink the shovel deep into the ground unearthing purple potatoes. The wind blows a brief bit of respite against the battering sun on this hot Iowa day where temperatures are expected to reach 102 degrees. Neither blazing temperatures nor a previous battle with cancer will come between Dorland and the vegetables she grows.

"I was born during the depression," said Dorland. " My mother always gardened. I can always remember gardening at her knee."

Osceola Community Diversity Garden (OCDG) is the brain-child of master gardener Dorland who years ago sold produce at Osceola's Farmers' market. She would hear people say they wished they had a place to grow their own fresh food, so with the help of Iowa State Extension and other community sponsors she was able to make that wish a reality back in 2003.

Cabbages the size of basketballs, red peppers almost too pretty to eat, giant green watermelons and golden quinoa are just a few of the jewels that have replaced the Canadian thistles and weeds that once blanketed the backyard of the Farm Bureau where community gardens is located.

OCDG started with eight plots back in 2003 and has since grown to 32 plots. Garden plots, size 10x20, are available to anyone from the public and are also rented out to educational groups such as Future Farmers of America, horticulture classes, the learning disabled and 4-H Groups. People interested in reserving a plot must sign up at the Iowa State Extension office. Plots cost only $20 for the entire season. In exchange for five hours of seasonal volunteer work at OCDG, stakeholders have an opportunity to get $10 of their investment back.

Dorland recounts a young boy around 10 years of age who belonged to a 4-H group and when asked how he felt about what he was doing he said,"Oh, it's just like a miracle. You put this dead old seed in the ground and give it some water. Up from the ground comes this thing I can eat!"

Dorland and her gardening side-kick, Master Gardener Sue Wilder, farm two plots of land dedicated to Cultivate Iowa. The produce from these plots are donated to individual in need. Dorland and Wilder also farm several educational demonstration plots that are sponsored by Iowa State University. These plots are used as studies. For example, one year a variety of beans were planted and then they were able to compare which varieties grew best. The results were then passed on to stakeholders.

When asked why she continues to volunteer her time year after year (Dorland and Wilder both work 300-400 hours each per year at OCDG) she says, “I just want to see people develop an enthusiasm for gardening. It’s been a special thing in my life and I’d like to see other people develop their enthusiasm as well.”

Land Use and Farming

You may need the luck of the Irish if you hope to get your hands on a piece of Iowa's pot of gold, AKA,Iowa farmland. For young aspiring farmers especially, biting off a chunk of this highly sought after land is no easy feat. For one: available land for sale is limited and two: it's expensive.

Most aging farmers aren't looking to sell their land, limiting the number of farms on the market and the farmers who change ownership of their land usually do so within the confines of family or they sell to an existing farmer, minimizing the opportunity for newcomers to purchase land.

The price of Iowa farmland reached a historic peak in 2013 costing an average of $8,716 per acre, this up 5.1 % from 2012, according to Iowa Land Value Survey. Decatur County saw the lowest prices in the state averaging $3,628 per acre.

Farm incomes, commodity prices, shifts in interest rates and limited farms on the market are just a few variables that determine the fluctuating prices of farmland

Dwindling Farms

The numbers of farms across the United States has been dwindling since the 1900's, while the farms that do remain are growing in size. Iowa farms dropped from 206,000 in the past 55 years to 89,000.

During 1900's most farms raised a mix of chickens, grains, at least one milking cow and pigs, but because of research and technology, farms got bigger and more specialized while the number of traditional farms began shrinking. In 1900, the average farm size was 147 acres compared to 441 acres today, this according to *National Ag Day.*

Today most Iowa farms specialize in growing one or two crops like corn and soybeans which cover two-thirds of Iowa's land. These crops are raised in high volumes to be used in livestock feed. Along the same lines, most Iowa livestock farmers specialize in raising one kind of animal; for example, either hogs or chickens, which are raised in massive quantities in indoor factory-farm settings.

Most Food Grown in Iowa Doesn't Stay Here

Iowa leads the nation in the production of chickens, eggs, pork and beef, but most of these goods don't stay in Iowa; they are bound for the global commodity market.

Though their percentages are significantly smaller compared to their industrial counterparts, some farmers are raising a handful of chickens, eggs, pork and beef to be sold to their neighbors through direct marketing. Included in this list are specialty animals like, bison, deer, rabbit and elk.

According to the *Iowa Policy Project,* Iowa spends approximately 7.2 billion dollars on food imported from out of state. By supporting local farmers, who grow food for human consumption, our food dollars can circulate back into the pockets of Iowans.

Support for Farmers

With traditional farms vanishing, it is important to preserve and support the few that remain.

Practical Farmers of Iowa is a supportive organization that hosts educational events such as field days, workshops and farminars to ensure the success of Iowa farmers.

According to their website, "Practical Farmers of Iowa is an open, supportive and diverse organization of farmers and friends of farmers, advancing profitable, ecologically sound and community-enhancing approaches to agriculture through farmer-to-farmer networking, farmer-led investigation and information sharing."

Resources

Practical Farmers of Iowa

http://practicalfarmers.org/

Cedar Valley Business Monthly Online : 'Map: Farmland Prices Across Iowa'

Iowa Counties	2011Farmland Values Per Acre	2010-2011 Percentage Increase Per Acre
Adair	$5,313	35.42%
Adams	$4,286	34.51%
Clarke	$3,182	30.99%
Decatur	$2,721	30.47%
Ringgold	$3,466	32.86%
Taylor	$3,946	34.72%
Union	$4,179	32.77%

Iowa State University Extension and Outreach		
Counties	2013 Land Value Per Acre	% Increase from 2012
Adair	$6,884	7.15%
Adams	$5,564	9.23%
Clarke	$4,228	11.54%
Decatur	$3,628	11.90%
Ringgold	$4,549	10.31%
Taylor	$5,116	9.10%
Union	$5,487	10.36%

What Can You Do?

Individuals:

Keep small farms viable:

Become a CSA member

Support local farmers' markets

Encourage local grocery stores and restaurants to offer produce, meat and eggs from local farmers

Community:

Develop a local foods directory to help identify places to buy locally produced food in your community

Municipality

Keep your community's food system in mind when making decisions about land use, planning and development

Iowa Grown and in the Freezer Section

Product Types: Frozen sweet corn, sliced apples, whole asparagus

About Iowa Choice Harvest
Iowa Choice Harvest LLC formed in 2013 with 24 member owners. 60% of our member owners are Iowa producers and 40% are Iowa non-producers. Our mission is to connect our customers with earth-conscious Iowa farmers who grow high-quality fruits and vegetable. Our plant is located in Marshalltown, Iowa and we began processing sweet corn in August. Our company purchases crops from Iowa farmers at their peak of ripeness and then flash freezes it

to maintain the highest quality taste possible. Our sweet corn this year was harvested and frozen on the same day.

Ingredients

The sweet corn seed was non-GMO seed and was raised by one producer. Our apple product comes from six orchards in Iowa.

Practices (our standards for raising or making our products)

Our producers may use integrated pest management practices on their farms. We do not add any additives or ingredients to our products at the time of freezing.

Available At

Iowa Choice Harvest products are available at all Fareway, Dahl's and Hometown Foods stores in Iowa and select HyVee stores. Iowa Choice Harvest products are also available at independents grocery stores and restaurants.

For more information visit
http://www.iowachoiceharvest.com/

Stone Post Bison LTD

Judy and Larry Gile never imagined in their wildest dreams they would be farmers and when addressed as such they tend to shy away from the title. As they see it, raising bison is more like hands-off farming.

When the Giles moved from their Creston home to their acreage on the outskirts of town in 1989, Bison was the last thing on their minds.

Both Judy and Larry worked full-time jobs in Creston; Judy as a psychiatric social worker at Cross Roads and Larry as a supervisor of school psychological services and a special education consultant for the Area Education Agency.

After a little more than a decade of living on their acreage, there was an opportunity to buy the land around them. They decided to purchase 70 acres, adding to the 10 they already owned. With so much land, they thought it should be utilized and that's when they decided to partner with family friends Rick and Annette Rice to farm bison as a hobby. And so began Stone Post Bison LTD.

Bison seemed a good fit for the Giles because they are low maintenance animals that require very little time and attention.

"They are not domesticated animals which makes them easier to raise," said Larry. "The more familiar we got with it (bison), the more we learned. They aren't trouble. You don't have to spend a lot of time with them. We've known farmers that would be out pulling calves from February on. We didn't want to do that."

With bison, the cycle of breeding and calving is left to nature. Bison not only have a natural breeding season, but they breed naturally in the field. During calving season, the 1,500-pound cows usually have no problems giving birth to their calves which weigh an average of 35 pounds.

Only once in their 14 years of raising bison did the Giles need vet assistance due to an animal getting tangled in wire. Aside from this incident, they've never had any vet bills. Their bison don't receive shots, growth hormones or antibiotics. They roam openly in a field and eat a natural diet consisting of grass and straw.

Bison, which are native to North America, are often mistaken for Buffalo. At their peak, there were an estimated 50-75 million bison, but during the 19th century they were brought to the brink of extinction by settlers. It is now estimated their numbers have rebounded to over 200,000.

Because bison are wild, the Giles believe they should be left alone and therefore don't make contact with the animals which are raised for their meat.

"They are very self-sufficient and they really don't need us at all," said Judy. "They are not pets; we don't pet them. We watch them with

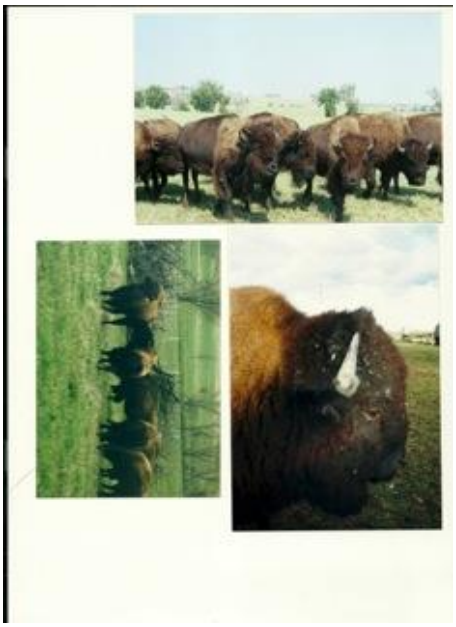
field glasses and occasionally go out and see them. We've just come to really respect the animal."

According to Judy, Iowa has over 100 bison producers. They range from having as few as two animals to as many as 300.

The Giles process an average of five bison per year which are processed at Corning Meat Processing in Corning, Iowa. They freeze and sell the state inspected meat out of their home.

Judy admits Bison meat is a niche market. She hopes bison meat will cross traditional grocery store barriers and be sold alongside pork, beef and chicken as an added protein option. Bison meat, which is red meat, tends to be sweeter compared to beef. It's also leaner than beef, higher in protein and lower in calories and cholesterol. Bison meat is available in the same cuts as beef. An added perk, bison meat is hypoallergenic, so people who can't eat beef can typically eat bison.

The Giles, whose customers travel from as far as Des Moines and Council Bluffs, don't advertise or market their meat. They've remained successful throughout the years strictly by word of mouth.



Judy says raising bison has been a delightful adventure, one that she couldn't have predicted and that she and Larry have learned so much from the animals. However, they may soon close this chapter and retire Stone Post Bison LTD.

"We were never dependent on making a living at this," said Judy.

Because farming bison has been such a rewarding experience for the Giles, they hope future farmers will explore the idea of farming Bison.

Locally Grown Foods in Institutions

Locally grown foods have recently gained popularity via farmers' markets and increasingly locally grown foods are making their way into local institutions such as restaurants and grocery stores. Although there is plenty of room for growth in the institution sector, notable progress is being made in the Southern Iowa RC&D region.

In a perfect world restaurants and institutions would source ingredients from local farmers and veer away from the industrialized food system. But, a perfect world it is not. Instead, the focus must be to gradually implement local foods into institutions without taking an *all or nothing* approach.

Impact of Local Foods

"To support the local economy, institutions commonly aim to increase local food purchases to 30 percent of their total food budget," this according to the *2012 Economic Impacts of Iowa's Regional Food System Working Group Report.*

Southern Iowa Local Foods Coordinator, Alexi Groumoutis, is a member of the Regional Food System Working Group (RFSWG) which supports local food efforts in 90 of Iowa's 99 counties. Within this working group, Groumoutis represents Southern Iowa Regional Food Systems which covers Adair, Adams, Union, Clarke, Taylor, Ringgold and Decatur counties.

The Leopold Center for Sustainable Agriculture partnered with the RFSWG and coordinated an evaluation for one of the first statewide attempts to measure actual impacts of the local food industry on Iowa's economy.

The results of the *2012 Economic Impact of Iowa's Regional Food Systems Working Group Report* should not go unnoticed. Local foods are making an economic impact in Iowa. In fact, sales of food produced in Southern Iowa RC&D region (data collected from three specialty crop farmers/growers) added $72,230 to the local economy in 2012. In addition, $143,430 of local foods were purchased by institutions in this region (data collected from three institutions). Institutional purchases of local food added nearly 9 million dollars to Iowa's economy.

Although Iowa is a farm state, 90 percent of the food eaten here is imported. By reaching that 30 percent target, $8,895,824 would be spent on purchasing local food in the Southern Iowa Regional Food System area alone. Now, imagine if all institutions in the entire state of Iowa reached this 30 percent target.

Challenges with Local Foods

It's important to look at the challenges restaurants and other institutions face when purchasing from local growers. For restaurants the biggest roadblock is cost. Often times, locally grown produce and meats are more expensive than their commercial counterparts, therefore, consumers living in rural communities must be willing to pay higher menu prices.

Other barriers standing in the way include access, distribution and product consistency. Typically, restaurants order most of their food items from one or two commercial food distributors. A salesperson comes to the business with a computer and takes down the restaurant's food order or the order is given over phone. A truck then delivers the food a day or two later. It's an efficient, cost-effective and convenient process. Unfortunately, there is no uniform ordering system or 'one-stop shopping' when it comes to purchasing from local farmers.

Usually implementing local foods into institutions is a grassroots effort on the farmers' behalf which requires persistence and dedication. Growers must also be able to provide a consistent product in terms of quantity and quality.

When purchasing from local growers, institutions will normally pay whole sale prices, however they may be willing to pay premium prices for unique items.

Although it is not required by law (yet), some institutions require farmers to possess the Good Agricultural Practices Certification (GAPS) before they will purchase from them. GAPS is a voluntary set of food-safety guidelines designed to help farmers handle food safety from the farm to the market. These practices include developing a food safety plan for the farm; training farm employees about this plan and farm food safety practices and documenting farm practices to reduce the risk of dangerous bacteria or toxins on farm products.

Most grocery stores also require local farmers to carry a minimum one million dollar liability insurance policy.

Licensing is not required by farmers when selling fresh, raw unprocessed fruits and vegetables to institutions. However, it is required when selling meat, poultry, eggs and dairy products or anything processed such as cut and washed vegetables.

Community Involvement

In an effort to get the community of Creston excited about implementing more local foods into institutions, Groumoutis, with the support of her food council, Southern Iowa Local Foods Council, spearheaded the inaugural 'Uptown Creston Food Crawl' in 2013. Patrons walked from business to business (coffee shops, bakeries and restaurants) sampling culinary delights made with ingredients sourced from local farmers while enjoying live music and interacting with the farmers who grew the food. This celebratory event was not only fun for the community, but it brought needed attention to the impact local foods can have on communities.

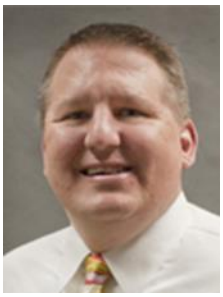
What Can You Do?
Individuals: **Encourage institutions to carry locally grown foods and support the ones that do.** Community: **Host events like food crawls to encourage the use of locally grown foods in institutions.** Municipality **Chamber of Commerce should commend institutions who are supporting local farmers by recognizing them in Chamber newsletters and on their websites.**

2012 Economic Impacts of Iowa's Regional Food Systems Working Group:

Southern Iowa RC&D Regional report:
http://www.leopold.iastate.edu/content/southern-iowa-regional-food-systems

Statewide report:
http://www.leopold.iastate.edu/local-food

Where to find more info about RFSWG:
https://sites.google.com/site/iowarfswg/



Hy-Vee Supports Local Farmers

Midwest grocery store chain Hy-Vee is trailblazing the local foods arena with a history of supporting local farmers and growers. Creston Hy-Vee store director, Chuck Irelan, says his store has been selling locally grown foods for as long as he can remember. Locally grown pumpkins and sweet corn were the first types of produce to be sold at Hy-Vee, but in recent years they've expanded their selection to include apples, zucchini, a variety of lettuces, kale, green peppers, potatoes, tomatoes, Swiss chard and Napa cabbage.

According to Irelan, there is a demand for locally grown foods. He says customers are always looking for locally grown or produced products.

"These items connect the customer to the growers and makes people feel good by reducing their carbon footprint and helping the local economy," said Irelan.

However, supporting local growers does not come without challenges.

"The biggest roadblock is a steady supply," said Irelan. "Dealing with the weather in Iowa can be a challenge for our growers. We try to assist by letting them know in advance what we are looking for and how much. Dennis Wimmer (from Wimmer Farms in Arispe, Iowa) has been exceptional for us to work with, as have all of our growers."

Over the years Creston Hy-Vee s has gradually expanded their selection to not only include produce, but to also include wine, honey and now USDA state inspected eggs from Bridgewater Farm. The response to local, organic eggs has been positive. He says people are looking for healthy and local alternatives.

Irelan says buying locally grown foods have added benefits.

"These products have a much better taste and shelf life," said Irelan. Also, despite some preconceived notions (locally grown foods) can be more affordable than other products."

Ireland says there is extended value in supporting local growers.

"Hy-Vee is conscious of our environment and local economy," said Irelan. "We try to buy as much locally as we can and stay competitive in our markets. Also, by purchasing locally, the effects to the environment are lessened due to shipping."

Irelan says there are many benefits to supporting local farmers.

"It allows people to have more of a connection to how their food is obtained. If more people focused on buying local products, think of the growers who would jump at the opportunity to be involved," he said.

Currently, Creston Hy-Vee sells less than eight percent of locally grown foods. Although they are open to growth, there are limitations.

"There really is no limit if we could sell all locally grown, we would gladly do that. But, obviously due to growing constraints and customer needs that is not truly attainable," said Irelan.

Community Supported Agriculture

Community Supported Agriculture (CSA) programs connect consumers directly with farmers and growers. For an up-front seasonal fee, shareholders receive weekly or bimonthly baskets of fresh produce from growers.

This exchange benefits both growers and shareholders. The upfront payment lessons the burden of beginning-of-the-season operating costs for growers.

As a member of a CSA, shareholders are able to build relationships with the people responsible for nourishing their bodies. They not only know the names of the farmers growing their food, but they also know where and how their food is being grown. Not only are they able to enjoy the delicious flavors and high nutritional content of freshly harvested produce, but they can feel good knowing their food hasn't traveled hundreds if not thousands of miles leaving behind a big-fat global footprint.

In addition to field-grown crops, many CSA growers use high tunnels to extend their growing season, allowing shareholders to purchase fresh produce earlier and later in the growing season.

Signing up for a CSA can help improve Iowa's economy. According to the 2007 report *Iowa's Local Food Systems: A Place to Grow*, it was estimated that only 10 percent of the produce eaten in Iowa was grown here.

There is risk, however, when signing up for a CSA. Drought, floods and storm damage can affect the success of crops which can leave shareholders with less produce than expected or even worse, empty-handed in extremely rare instances.

Many farmers get involved with CSA's because it's a labor of love derived from a need to provide their neighbors with fresh, wholesome fruits and vegetables that are often grown without the use of chemicals and pesticides.

Although not all CSA's are organic, Iowa ranked in the top ten for the number of organic farms and organic sales in the United States according to the2008 Organic Production Survey released February 3, 2010 by the U.S. Department of Agriculture's National Agricultural Statistics Service.

Just because a farm isn't Certified Organic doesn't mean they haven't adopted organic practices. Many small farmers grow their food organically, but because of fees and paperwork they choose not to get ''organically" or "naturally" certified. However, the beauty of supporting local agriculture is knowing you can ask farmers face to face how they grow or raise their food.

According to the USDA's 2012 Census of Agriculture, 260 Iowa farms marketed products through CSA's, compared to 487 in 2007.

Thanks to the Leopold Center for Sustainable Agriculture and Iowa State University Extension and Outreach, an updated Iowa CSA Directory was created to better connect farmers with consumers. Over the years, the directory has grown from 49 CSA producers in 2006, to 75 producers in 2014.

Resources

Iowa CSA Directory

www.leopold.iastate.edu/csa

Iowa State University Market Maker

http://ia.foodmarketmaker.com/

Local Harvest

www.localharvest.org

What You Can Do
Individuals: **Join a CSA Farm!** **Community:** **Organize centralized locations for CSA food pick-ups.** **Muncipality** **Subsidize CSA shares for low-income residents.**

CSA's in the Southern Iowa RC&D Region:

CSA	Website	Contact
Bridgewater Farm/Adair County	Look up 'Bridewater Farm' on Facebook	641.745.5368
Wimmer Farms/Union County	www.wimmerfarms.com	641.278.0735
The Wallace Centers of Iowa/Adair County	wallace.org	515.243.7063

Bridgewater Farm CSA

Dale Raasch, owner of Bridgewater Farm, and his son Tyler, are proud to work alongside one another on their two-man farming operation. This father/son team grows fruits, vegetables and raise cage-free broiler chickens, laying hen chickens, cattle that are pastured part of the year, hogs, and ducks that are raised for their eggs. Bridgewater Farm is located on 40 acres outside of Bridgewater, Iowa, in Adair County.

Dale, who describes himself as an unconventional farmer swimming upstream, has been farming for 35 years and hails from a family of farmers. In 2009 he began making the shift towards organic farming and by 2014 Bridgewater Farm became Certified Organic. He flipped the switch because he believes organically grown foods are better for people, animals and the environment. By growing food sustainably, Dale hopes to make a difference globally.

Dale, who sells his products at farmers' markets and specialty grocery stores, expanded his business in 2011 to include a CSA program. During its first year, 11 members were recruited and by 2014 the CSA program was so successful Dale capped membership off at 60, with others on a waiting list to join the following year.

Dale says his CSA program is successful because members like the variety of produce they receive weekly.

Depending on the season, a CSA box can include between eight to 15 different fruits and vegetables. The week of July 20th, 2014 members opened their boxes to find colorful treasures of onions, beets, red and white new potatoes, green beans, zucchini, yellow summer squash, cucumbers, Swiss chard, kale, cilantro, radishes and strawberries.

A full CSA share for an 18-week season costs $450 and can weigh up to 45 pounds depending on the season. A half share for an 18-week season costs $260. Shares are dropped off weekly at select locations throughout the region.

Opening a weekly CSA box is comparable to unwrapping a birthday present; you aren't exactly sure what you are going to get, but you are anxious to see what awaits you. Occasionally, members open their CSA box to find curious vegetables that leave them scratching their heads…..like turnips.

Dale understands his customers may be unfamiliar with certain vegetables and so he tries to make his veggies more approachable with a little bit of help.

"We try to put recipes in (the CSA box) every week," said Raasch.

Dale grows wholesome food with a purpose. He recognizes Americans are facing a health crisis due to poor eating habits and reiterates his son's advice on the importance of making mindful food choices.

"By buying better food now it's just like an insurance policy, pay a little bit more now and eat better and you're are going to be healthier," said Raasch. "Otherwise if you don't, down the road you are going to pay for it later. It may even cost you your life."

In addition to growing twelve acres of produce outdoors, Dale also grows produce in his 30 by 96 foot high tunnel.

His bounties includes herbs, radishes, kale, squash, spinach, cauliflower, broccoli, kohlrabi, tomatoes, peppers, potatoes, sweet potatoes, berries and watermelon; just to name a few.

Dale says he has built a loyal customer base because people like knowing exactly where their food comes from and they enjoy the superior taste of his locally grown foods which are harvested within 24 hours of being delivered to his shareholders.

"That's one of the biggest selling points," said Dale. "If you can get them to try it and they like it, they're going to be back."

Organic farming is labor intensive, and uncertainty due to weather can add to the challenges often faced by farmers.

"The challenge is to have enough stuff (produce) and keep it at their peak condition when the weather reaches high temperatures," said Dale.

Dale, who is always on the go, sells his products at farmers' markets in Creston, Johnston, Atlantic and Winterset. He also sells to surrounding specialty and mainstream grocery stores including Natural Health Center and Harvest Moon, both in Atlantic, and Campbell's Nutrition and Gateway Market in Des Moines. He sells to hospitals (including Greater Regional Medical Center in Creston), nursing homes and restaurants (including the Gathering Table at the Henry A. Wallace Center). You can purchase Bridgewater Farm's USDA inspected eggs at Creston Hy-Vee.

Dale travels throughout the week dropping his CSA's off at select locations throughout the region.

Bridgewater Farm is located at 2409 Brown Avenue in Bridgewater, Iowa, 50837. Raasch can be reached at 641-745-5368. Like 'Bridgewater Farm' on Facebook. For more information contact Southern Iowa RC&D food coordinator, Alexi Groumoutis at 641-782-4033.

To stay connected to local foods in the Southern RC&D region visit Southern Iowa Resource Conservation and Development's webpage or like 'Southern Iowa Local Food Initiative' on Facebook.

Agritourism

Although most Iowans aren't familiar with the term agrotourism, ironically it happens to be an Iowa pastime. Agritourism, is defined by the Agricultural Marketing Resource Center at Iowa State University as "...the act of visiting a working farm or any agricultural, horticultural or agribusiness operation to enjoy, be educated or be involved in activities."

Agritourism is a destination activity comprised of varying layers that serve different purposes for different operations. An operation can be anything from a farm to a winery. Some operations focus on entertainment or 'agritainment' while other operations focus on education or 'agrieducation.'

Agritainment, which seems to be the more popular of the two in Iowa, especially during fall time, serves to entertain by way of pumpkin patches, corn mazes, hay rides, petting farms and haunted houses; while agrieducation's purpose is to teach visitors via tours or hands-on activities about agricultural production. Agrieducation may involve helping out with tasks on a farm or touring a winery.

Another great example of agritourism in Iowa is the county fairs which showcase agricultural displays unique to a county's specific region. Iowa fairs are rich with cooking, produce and livestock competitions often submitted by 4-H'ers, intertwined with talent and art competitions. The Iowa State Fair, known for its over-the-top fried foods on a stick and turkey legs, is nationally recognized as one of the best state fairs in the nation.

The underlying goal of agritourism is to build support for agriculture and educate the public while providing a supplemental income to farms and other operations. Most farms involved in agritourism are small to medium sized farms that are growing food for people.

The Journal of Extension writes, "According to the 2007 U.S. Census of Agriculture, the number of farms that sold agricultural products directly to individuals for human consumption increased by 17% nationally, while the number of farms in Iowa showed an increase of 22%, rising from 2,455 farms in 2002 to 2,987 farms in 2007."

2012 Census of Agriculture

Counties	Number of Farms in the Southern Iowa RC&D region
Union	648
Adair	726
Adams	467
Clarke	627
Taylor	639
Ringgold	651
Decatur	711

Examples of Agritourism from NC State University:

U-Pick operations or pick your own (PYO)
Visitors are allowed to harvest (pick) their own fruits, vegetables, and other products. U-Pick operations can include pumpkins, apples, strawberries, peaches, grapes, blackberries, Christmas trees, and more.

On-farm produce stand
Rather than have visitors pick their own fruits and vegetables, on-farm produce stands provide harvested fruits, vegetables, or value-added products (such as jams, salsa, canned fruits and vegetables) for retail.

On-farm restaurant, dinners, bakery
Some farms may choose to offer food and beverages to guests visiting the farm. Another option is to offer on-farm meals several times a year where visitors are served food straight from the farm.

Educational farm tours and demonstrations
These types of tours and demonstrations are often interactive and provide hands-on education. Tours and demonstrations can be given on an individual basis to the visiting public and to school groups or other organizations. Examples include cheese production, milking dem-onstrations, picking cotton, how-to class-es (such as canning), and discussions on the history of farming.

On-farm activities
Many farms offer a variety of on-farm activities for kids and adults. For example, corn mazes, U-Pick, wagon/hay/sleigh rides, petting zoos, pig races, horseback riding, hunting, and fishing

What You Can Do
Individuals: **Explore Iowa Agritourism destinations on your next weekend get-away or vacation.** Community: **Sponsor a farm crawl in your community in which people visit a variety of farms in one day to learn about farm life and how foods are grown/raised.** Muncipality **Partner with other governmental agencies to promote agritourism.**

Iowa organizations supporting agritourism:

Association of Iowa Fairs

http://www.iowafairs.com/site/aif-member-fairs.php

Iowa Cooperative Extension:
http://www.extension.iastate.edu/

Leopold Center for Sustainable Agriculture-Iowa State University:
http://www.leopold.iastate.edu/

Beginning Farming Center:

http://www.extension.iastate.edu/bfc/

Visit Iowa Farms-Iowa State University Extension-List your Agritourism operation for free at:

http://www.visitiowafarms.org/

Iowa tourism

www.traveliowa.com

Market Maker

http://webapps.foodmarketmaker.com/marketmaker/#IA/food/productsearch/22390/19

Other Resources:

Farm stays around the country

http://www.farmstayus.com/

The Maize

http://www.themaize.com/

Trade labor for lodging: Worldwide opportunities on organic farms: Linking volunteers with organic farmers and growers:

http://www.wwoof.net/

Webinar: Hosting Safe, legally-secure on-farm events:

http://farmcommons.org/webinars

Corning Winery and Vineyards

Corning, Iowa, is forever stamped on the map for being the birthplace of the late television personality Johnny Carson. This quaint Midwestern town has added attractions which include The Corning Opera House Cultural Center, Lake Icaria, Icarian Village, Adams County Speedway and now Corning Winery and Vineyards that make it a town worth visiting.

Corning Winery and Vineyards sits on five acres of land directly off of U.S. Highway 34.

In the early 2000's,Barbara Corey and her late husband Ron flirted with the idea of planting a vineyard on their property to sell grapes and possibly craft and sell wine. With very little wine knowledge, the couple started doing their homework. Ron attended seminars learning as much as he could about the business of winemaking. Soon after, their idea became a reality and wine was being crafted, bottled and sold from their garage.

Eventually, they built a pond in their front yard and constructed a building. Once completed, Ron pushed the building into the pond with his John Deer tractor, thus erecting the first floating winery in Iowa.

Corning Winery and Vineyards opened Labor Day weekend of 2013. Sadly, Barbara lost Ron to cancer in 2014.

The floating winery is a cozy get-away accented with a charming wrap-around deck overlooking the pond and vineyard. Inside, a rectangular tempered glass floor, lights up, daring curious visitors to stand over it for a first-hand glimpse into the pond below.

The vineyards contain 2,700 grape plants which include six different varieties of grapes. After they were initially planted, the grapes took three years to mature before they could be harvested. The wines, which are made from the previous year's crop, range from sweet to dry.

As the sole proprietor of the winery, Barbara wears many hats. She does everything from booking the parties to serving the drinks to preparing the food.

She hires Amish workers to prune and pick the grapes and has retired medical doctor Steven Gruba make the wine.

Barbara credits Iowa State University Extension's Horticulture Department as being a great resource for her business.

In addition to the winery, Barbara continues to work full time as surgical technician at the hospital in Corning where she has been employed for 22 years.

Although she's got a lot on her plate, Barbra says she enjoys her job at the winery so much, she doesn't feel like she's working.

Barbara says the winery benefits Corning because it's a tourist attraction that brings people to the community.

"This is a destination people come to," said Barbara. "I get a lot of people off the highway traveling by. I get people from Omaha, Des Moines, Council Bluffs."

During the summer months, many of her customers spill over from Lake Icaria.

The winding road that has led to the winery's opening has been a journey says Barbara, from the loss of her husband, to other challenges that have come her way. After all that Barbra's been through, she finally experienced a moment of Zen that allowed her to slowly exhale.

Barbara recalls Fourth of July, 2014 when she hired her first band to perform. While walking from her house to the winery, the band was warming up. Hearing their music nearly brought tears to her eyes.

"I thought to myself," 'yes, that's why we built this building,' said Barbara. "It almost made me cry."

It was at that moment she felt everything she had worked towards had come to fruition, from the planting of the grapes eight years prior to the winery finally opening.

"My greatest reward is seeing people enjoying the wines and the music coming out of the building," said Barbra.

Corning Winery is open to the public and is available for parties and weddings (there is an outdoor gazebo). Patrons can stop by to enjoy a glass of wine or beer while watching the big game on television. Hot food can be ordered when booking a party in advance, otherwise light snacks and appetizers are available for purchase. Caterers can be brought in for special events. The winery hosts special classes like yoga and 'Paint and Wine,' where customers attend a painting class while enjoying a glass of wine. 'Like' Corning Winery and Vineyards on Facebook.

What Does a Community-based Food System Look Like?

What Does a Community-based Food System Look Like? The preceding pages present examples of parts of a community-based food system. These examples are by no means all-inclusive, nor do they represent a required or magical combination. They are a starting point. Much like the interconnections that hold together any ecosystem, the webs of connections within a community-based food system are central to its strength. These connections create long-term stability, encourage community self-reliance and present numerous synergies and opportunities.

What is a community-based food system like in practice?

Eating in such a system may involve purchasing some portion of your food directly from local farmers. This simple act helps to support small-scale family farms in the area by passing the greatest amount of your food dollar back to the farmer. Local farmers in turn purchase goods and services from local business people, keeping your food dollars within the community. Buying local provides Iowa agriculture with a viable market and thus helps keep farmland in farming. When more eaters choose a diversity of local food, the demand translates into farms that grow a wide variety of crops rather than large monocultures of corn or soybeans. These diverse farms offer local jobs because such mixed operations do not lend themselves well to complete mechanization.

With appropriate incentives and start-up assistance, entrepreneurial on-farm and specialty food processing businesses develop and offer greater choice at the local market and bring additional jobs and stable economic development to the area. Restaurants, cafeterias, hospitals, retirement homes and schools can all commit to buying a portion of their food purchases from local sources, presenting even greater markets for local farmers and food processors.

The interdependence that arises through this local food system creates a strong sense of community and encourages people to help one another and assure that everyone has equal access to healthy food. As awareness of the food system increases, attention turns to diet quality as an important aspect of preventative health care. Increased access to local foods through farmers' markets, CSAs and farm stands presents many options for healthy eating – fresh fruits and vegetables, antibiotic- and hormone-free meat and eggs, locally processed jams and sauces, and more. Healthy people means a dependable work force and lower healthcare costs for employers. The strong sense of community encourages young professionals to stay in the area.

In the end, a community-based food system is a wonderful opportunity to improve public health, strengthen the local economy, and develop sound land use stewardship.

But it can be done only with a large number of community members working together. Strong connections and meaningful partnerships are needed.

Strengthening Connections

Now that you have a clearer picture of what makes up a community-based food system, it's time to begin building on the connections in your community. Much of this can be done simply by paying attention to your food choices and buying local and direct when possible. But some efforts need broader support.
Below is a list of some community leaders and decision-makers and suggestions of roles they can play.
Share your ideas – and this booklet – with them. A community-based food system frame can be useful in finding common interests and building strong partnerships. Together we can build the type of food system that we want, and strengthen our community along the way.

●**County planning commissions** make decisions that affect where food can be grown and processed.

●**Local elected officials** such as mayors and township supervisors may be able to offer support in starting and building a farmers' market.

●You may consider joining the citizen planners in your area to advocate for including food system issues in local planning efforts.

●**Health professionals** may be interested in improving their patients' awareness of and access to healthy food.

●Local Departments of Public Health provide WIC participants with Farmers' Market Nutrition Program coupons for local, fresh fruits and vegetables. They also design and implement a host of public health programs that are increasingly focused on disease prevention.

●Chambers of Commerce can assist in building alliances around business and infrastructure development. They may also be interested in supporting a farmers' market.

●Local and regional economic development teams can assist in creating opportunities for food processing and other businesses. They may be able to identify potential funding sources to develop food system infrastructure.

●Communities of faith can help to organize CSA groups, offer space for a neighborhood farmers' market, and teach "eating as a moral act."

●Farmers grow the food and are essential in any partnership.

●Schools can incorporate food and agriculture in both curriculum and cafeteria.

●Environmental groups can support farming systems that preserve biodiversity, provide wildlife habitat and minimize pollutions to air and water.
●Iowa State Extension and Outreach can assist with information and facilitation expertise. They can also help you identify researchers interested in community-based food systems.

●Neighborhood groups and community organizations can help mobilize communities and implement programs

This list is just the beginning. You may think of others to involve in your work.

Community Food Systems Resources

Southern Iowa Regional Food System Area

Southern Iowa Local Foods Initiative Facebook page

https://www.facebook.com/SouthernIowaLocalFoodsInitiative?ref=hl

Southern Iowa Local Foods Initiative web page

http://www.southerniowarcd.org/index.html

The Wallace Centers of Iowa

http://www.wallace.org/

MATURA

http://www.maturacommunityaction.com/index.php

Iowa

Iowa tourism

www.traveliowa.com

Association of Iowa Fairs

http://www.iowafairs.com/site/aif-member-fairs.php

Beginning Farming Center

http://www.extension.iastate.edu/bfc/

Visit Iowa Farms-Iowa State University Extension-List your Agritourism operation for free at:

http://www.visitiowafarms.org/

Farmers Market Directory

http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.formFarmersMarketDirectory

Farm Stands Directory

http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.dspFarmStandDirectory

Fruit and Vegetable Farms Directory

http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.dspFruitVegFarmDirectory

Iowa CSA Directory

www.leopold.iastate.edu/csa

Iowa State University Market Maker

http://ia.foodmarketmaker.com/

Local Harvest

www.localharvest.org

Iowa Food Cooperative

http://iowafood.coop/

Iowa State University Market Maker

http://ia.foodmarketmaker.com/

Practical Farmers of Iowa
http://practicalfarmers.org/

Know Your Farmer, Know Your Food Compass
http://www.usda.gov/wps/portal/usda/usdahome?navid=KYF_COMPASS

Leopold Center for Sustainable Agriculture
http://www.leopold.iastate.edu/

Iowa State University Extension and Outreach
http://www.extension.iastate.edu/

Regional Food System Working Group
https://sites.google.com/site/iowarfswg/

Iowa Food Systems Council
http://iowafoodsystemscouncil.org/

Cultivate Iowa
http://www.cultivateiowa.org/

Iowa's EBT Farmers Market Project (Bringing Farmers Markets and Food Assistance Together)

Iowa Department of Human Services

Visit: www.dhs.state.ia.us and click on 'Food Assistance' or call 877-937-3663

Iowa Choice Harvest Products

http://www.iowachoiceharvest.com/

2012 Economic Impacts of Iowa's Regional Food Systems Working Group:

Southern Iowa RC&D Regional report:
http://www.leopold.iastate.edu/content/southern-iowa-regional-food-systems

Statewide report:
http://www.leopold.iastate.edu/local-food

Where to find more info about RFSWG:
https://sites.google.com/site/iowarfswg/

Regional and National

Farm Commons-Legal Resources and Guides for Sustainably-Minded Farmers

http://farmcommons.org/

AmpleHarvest.org

http://ampleharvest.org/

Farm stays around the country

http://www.farmstayus.com/

The Maize

http://www.themaize.com/

Trade labor for lodging: Worldwide opportunities on organic farms: Linking volunteers with organic farmers and growers:

http://www.wwoof.net/

USDA Agricultural Marketing Service

USDA's Local Food Directories update and registration site for local food retail and wholesale outlets is a free service to help you advertise your business and connect with buyers. It includes Farmers Market, CSA, Food Hub and On-Farm Market directories.

http://www.usdalocalfooddirectories.com/updates.html

Webinar: Hosting Safe, legally-secure on-farm events:

http://farmcommons.org/webinars

Below, Regional Food System Working Group Members

Southern Iowa RC&D Local Foods Coordinator and Regional Food System Working Group member, Alexi Groumoutis.

Web page:

http://www.southerniowarcd.org/index.html

Facebook Page:

https://www.facebook.com/SouthernIowaLocalFoodsInitiative?ref=hl

Gathering Economic and Social Impact Data in Rural Southwest Iowa for Support of Specialty Crop Production

Alexi Groumoutis, Local Foods Coordinator
Southern Iowa Resource Conservation and Development
agroumoutis@hotmail.com

Current Farm and Food Economy Data

- Food Security
- Local Food Impact on the Economy
- Land Use and Farming

Most Pictures in this power point are from local specialty-crop growers.

Picture : Marilyn Dorland from Osceola's Community Diversity Garden

Food Security

In Iowa, food security is a concerning issue with food deserts scattered throughout the state.

Food Desert Definition: Food deserts can be found in both rural and urban areas where it's difficult to access fresh, healthy foods due to affordability and distance.

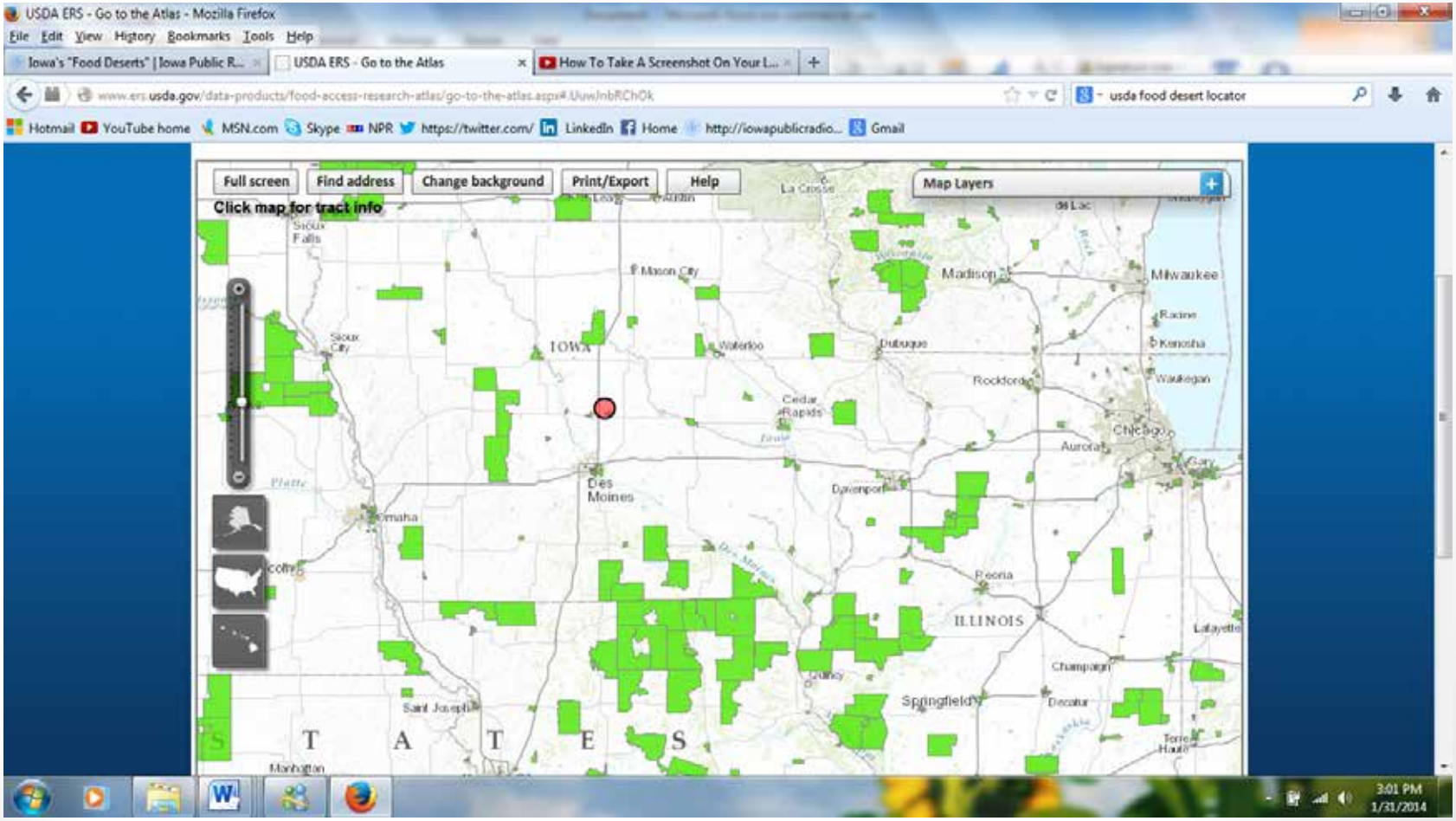
- 13.5 million Americans live in food deserts
- A 2011 report conducted by the Iowa Policy Research Organization entitled *Starvation Nation: Rural Food Deserts* found that Iowa has 24 food deserts.

Food Security

- The effects of from food insecurity can have damaging consequences.
- A 2014 study conducted by Iowa State University links food insecurity with maternal depression.

Iowa Food Deserts-USDA Food Desert Locator

http://apps.ams.usda.gov/fooddeserts/foodDeserts.aspx.



Food Security-Iowa is the Mecca of Agriculture, but……..

- 80% of what we grow in Iowa is exported out of state-*Iowa Public Radio.*
  - *Much of that 80% is food grown for livestock*

- Nearly 200,000 households (420,914 individuals) used assistance from the Supplemental Nutrition Assistance Program (SNAP)-*Iowa Fiscal Partnership, May of 2013 statistics.*

Iowa Counties	% using SNAP
Adair	12.1-16%
Union	12.1-16%
Taylor	12.1-16%
Adams	8-12%
Ringgold	8-12%
Clarke	16.1-20%
Decatur	16.1-20%

Food Security-

United States Census
Persons below poverty level 2007-2011

Adair County	11.5%
Adams County	10.7%
Clarke County	12%
Decatur County	19%
Ringgold County	12.7%
Taylor County	13.5%
Union County	17.4%

Food Security

- 1 out of 5 children don’t get enough to eat-*Food Bank of Iowa.*

Obesity

More Fruits and Vegetables Please! Our kids are overweight, yet their bodies are starving.

- Iowa ranked 8 in overall prevalence with 26.5% of children considered either overweight or obese. -*2007 childhealthdata.org*
- Obesity rates in Iowa have dropped slightly due to grants that promote healthy eating.- *2013 Centers for Disease Control and Prevention*

Poverty = Processed Foods

Limited access to fresh food=more processed foods.

More processed foods=obese and undernourished children

Access to fresh, affordable produce=Healthier people and less chronic diseases. Children can learn and focus better.

Picture: Tomatoes from Wimmer Farms

And let's not forget the Adults……who are feeding the kids

- 2009, an estimated 32.5% of adults consumed fruit two or more times per day
- 26.3% consumed vegetables three or more times per day, far short of the national targets.
- Overall, the proportion of adults who met the fruit target declined slightly, but significantly, from 34.4% in 2000 to 32.5% in 2009…
- *Picture: Vegetables from 3TJ Farm in Ellston, IA.*

Food Security

What can families do to be more self-sufficient?

- Plant a Garden!! Invest $70 and reap $600 worth of produce- *Wall Street Journal*
- *Picture: Osceola's Community Garden*

What can gardeners do to fight poverty?

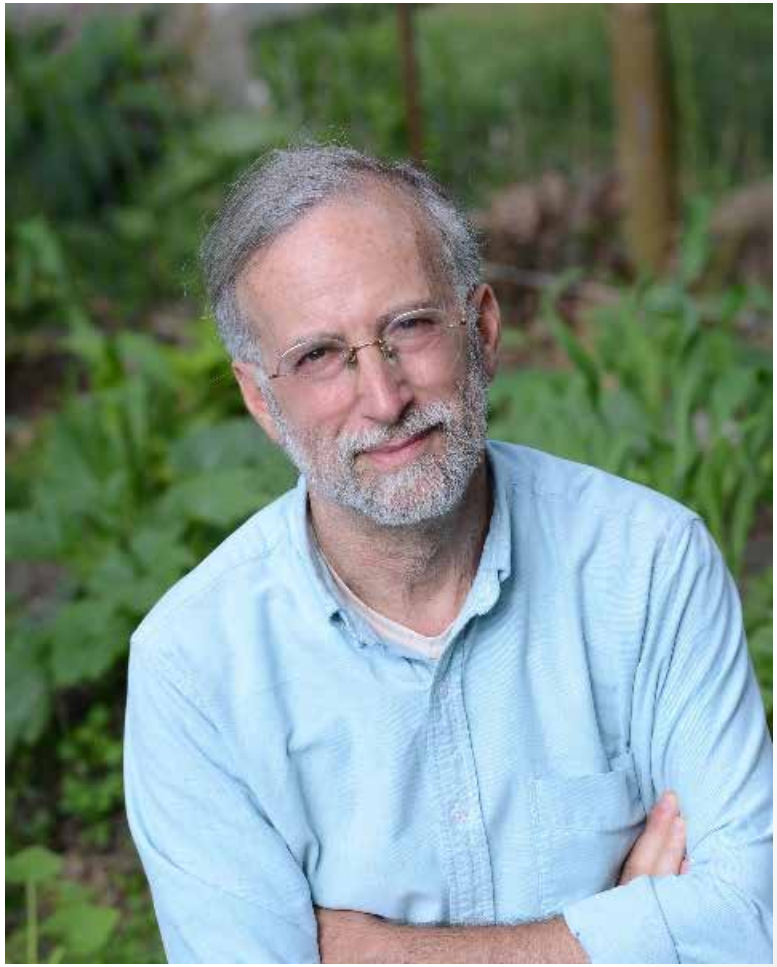
- Donate to food banks

AmpleHarvest.org

- *AmpleHarvest.org* helps America's gardeners diminish hunger in their community by enabling them to donate their excess garden produce to a neighborhood food banks.

Executive Director and Founder of Ample Harvest

- Garry Openheimer
  - CNN Hero
  - Ampleharvest.org has partnered with:
    - The White House
    - And mentioned in Michelle Obama's book for her 'Let's Move' initiative
    - National Gardening Association



He saw a problem

- Food banks accept boxed and canned foods
- Due to storage restrictions, no fresh produce.

Simple concept

- Connect back yard gardeners with food banks.

How does it work?

- Gardeners drop off produce at food bank at certain time, say 2pm.
- People in need pick up produce at a certain time, say 3 pm.

Why is this great?

People in need

- Don’t have to come face to face with gardener avoiding any shame they may feel.
- Able to eat fresh, nutritious produce at no cost to them.

Food Bank

- No storage is needed
- No refrigeration is needed.
- No cost to food bank

Gardener has just become a superhero!

- Excess produce is not left to rot in the garden
- Feeding the Hungry fresh, vibrant life-giving food

Advocate!

- Encourage your local food bank to register with AmpleHarvest.org

Summary

- Benefits of fresh produce:
  - Children learn better when they eat a healthy diet
  - Chronic disease is thwarted
- Ways to combat food insecurity:
  - Plant gardens
  - Donate fresh produce to local food banks

Local Economy

Supporting specialty crop producers keeps money in our communities.

Local Foods can be marketed to :

- Households
- Restaurants
- Hospitals
- Grocery Stores
- Farmers' Markets
- SCHOOLS!!!

Picture: Oceola's Community Gardens

Local Economy

Farmers' Markets

- 1994 there were approximately 1,775 farmers' markets in the United States
- 2012 that number jumped to 7,864 according to the USDA Farmers Market Directory

Picture: Creston Farmers' Market

Did you know……..

- Iowa ranks in the top 10 for farmers' markets in the United States!

- Picture : Kevin and Karen Watston of Watson Farm in rural Ringgold County.

Why Are Farmers' Markets So Critical?

Access to local foods:

- Farmers' Markets are the gateway way for people to access locally grown foods
  - CSA's
  - Roadside Stands
  - Grocery Store-limited

Challenges

- No organized aggregation or distribution outlet for local foods

It's easier to access food from China

Did You Know…….

- Only 10% of the produce eaten in Iowa was grown here-2007 report '*Iowa's Local Food Systems: A Place to Grow'*
- *Less than 1 percent of the state's farms produced vegetables and melons-Dave Swenson, Department of Economics, Iowa State University*
- *It's highly possible you've never eaten an Iowa-grown meal!*

Picture: Dale and Tyler Raacsh from Bridgewater Farm in Bridgewater, IA

But how can that be? We are the leader in Agriculture!!!

- Iowa leads the nation in the production of :
- Chicken
- Eggs
- Pork
- Beef
- But guess what?

It’s not staying here, it’s bound for the global commodity market.

So what does this mean??

- We spend approximately 7.2 billion dollars on food we import from out of state according to *Iowa Policy Project*.

- Can you imagine if we purchased our food from local farmers and kept those dollars in Iowa?

Picture: Weisshaar Family Farm in Creston, IA

Local Economy

- By selling directly to customers, farmers are able to get more than 14 cents on the retail dollar-*Agriculture Deputy Secretary Kathleen Merrigan*

- If every Iowan spent only $10 a week on locally grown food, it would amount to $1.5 billion every year invested in local people, local farms, and independent local businesses.- According to the '2012 Grinell Area Local Food Guide

- *Picture: Chad and Katie Hensley of Big Creek Farms in Lamoni, IA*

Institutions

- To support the local economy, institutions commonly aim to increase local food purchases to 30 percent of their total food budget.

2012 Economic Impacts of Iowa's Regional Food System Working Group Report.

So where are we at now?

- The first statewide attempts to measure actual impacts of the local food industry on Iowa's economy produced positive results.
- Why is this important?
  - Job creation
  - Money kept in Iowa
  - People want to know how and where their food is being grown.
  - Furthers local food policy.

Good News! -2012

- 3 Institutions Surveyed $143,430 in local food purchases
- 3 Farmers reported $72,230
- Institutional purchases of local food added nearly $9 million to Iowa's economy.

Summary

- Growing popularity of farmers' markets proves there is demand for specialty crops
- Aggregation system or Food Hub would be beneficial to specialty crop farmers
- Buy supporting specialty crop farmers, billions of dollars could stay in Iowa

Land Use and Farming-*Picture: Stone Post Bison LTD in Creston, IA*

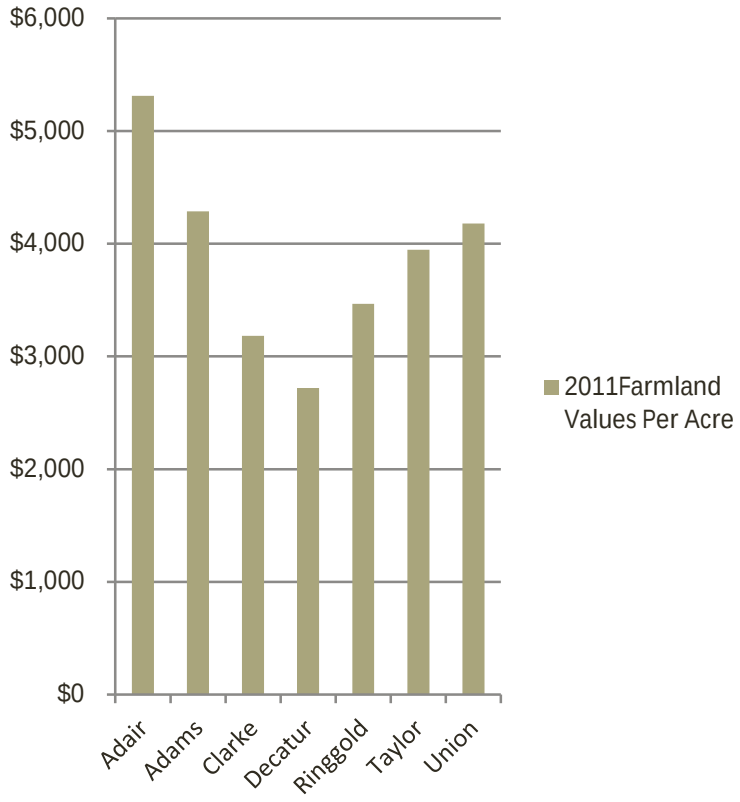
Land Use and Farming-Data

	Number of Farms 2010	Total Farmland Acres 2010	Avg. Acre Per Farm 2010
Union	670	220,000	328
Clarke	690	200,000	290
Decatur	730	240,000	329
Ringgold	720	270,000	375
Adair	760	320,000	421
Adams	610	230,000	377
Taylor	770	290,000	377
National Agriculture Statistics Service			

Land Use and Farming-*Cedar Valley Business Monthly*

Online : 'Map: Farmland Prices Across Iowa'

2011Farmland Values Per Acre



2010-2011 Percentage Increase Per Acre

Adair	35.42%
Adams	34.51%
Clarke	30.99%
Decatur	30.47%
Ringgold	32.86%
Taylor	34.72%
Union	32.77%

Wowzas!

- The price of Iowa farmland reached a historic peak in 2013 costing an average of $8,716 per acre, according to Iowa Land Value Survey. Decatur County saw the lowest prices in the state averaging $3,628 per acre.

How is the price of farmland determined?

- Farm incomes, commodity prices, shifts in interest rates and limited farms on the market are just a few variables that determine the price of farmland.

Land Use and Farming

- Eighty-eight percent of the land in Iowa is used for Agriculture

- Large operations grow just two primary crops in Iowa, corn and soybeans, and the price of land reflects the overall profitability of large-scale, heavily mechanized production with low average costs. This incremental production evolution has eliminated much of the state's agricultural diversity.

- Corn and soybeans cover two-thirds of Iowa's land

2013 Values Per Acre

Iowa State University Extension and Outreach		
Counties	2013 Land Value Per Acre	% Increase from 2012
Adair	$6,884	7.15%
Adams	$5,564	9.23%
Clarke	$4,228	11.54%
Decatur	$3,628	11.90%
Ringgold	$4,549	10.31%
Taylor	$5,116	9.10%
Union	$5,487	10.36%

Land Use and Farming-Trends

- Farms across the United States are dwindling while the farms that remain are growing bigger in size and more specialized. Iowa is no exception.

Land Use and Farming-Trends

Then

- During 1900 most farms raised a mix of chickens, grains, at least one milking cow and pigs,

Now

- But because of research and technology, farms got bigger and more specialized while the number of traditional farms began shrinking

Land Use and Farming-Trends

- Iowa farms dropped from 206,000 in the past 55 years to 88,637.
- In the past 10 years, 70 of Iowa's 99 counties and about 70 percent of its communities posted population declines.

How can this be fixed??

- Reintroduce profitable smaller-scale agricultural production.

Land Use and Farming-Consumers want to know who is growing their food and how it's being grown.

Potential Opportunities

- Grass Fed Livestock
- Niche Markets: Bison
- Vegetable and Fruit Production

Summary

- Land in the Southern Iowa RC&D region has skyrocketed
- Small to medium size farms are disappearing
- Large operations which grow mostly corn and soybeans remain
- By reintroducing profitable smaller-scale agricultural production county populations will see an increase.

The End

Economic and Sociological Data Report

Farmers' Markets

Where can you go to find smiling faces, jamming guitars or jams in vases? Ice-cold drinks, fruit-filled treats, hot meals for purchase and a place to sit and eat. Where can you go to find locally raised meat, farm-fresh eggs and fresh vegetables to eat? Here is a hint, but if I share, you must go and support this local affair. Their names may be Dennis, Dale or Tyler; they grow fresh food ; they are your local farmers. Food that hasn't traveled thousands of miles, just ask how they grow it; they will tell you with smiles.

Farmers' markets are spreading like wildfire across the country and understandably so. Not willing to get left behind, Iowa ranks in the top ten for farmers market in the United States.

In 1994 there were approximately 1,775 farmers' markets in the United State and by 2012 that number jumped to 7,864 according to the USDA Farmers Market Directory. There is at least one farmers' market in Adair, Adams, Union, Clarke, Ringgold and Decatur counties.

What's behind the upward trend? Consumers like knowing WHO is raising their food and HOW it's being raised. Just as important, they enjoy eating fresh, flavorful food grown within miles of where they lay their heads to sleep at night. It is not only this connection that has people flocking to farmers markets, but also the overall 'experience' that farmers' markets offer. Many farmers' markets are social events, such as the Creston Farmers' Market, that bring neighbors together to shop, eat and listen to live entertainment under the open sky, all while supporting small agriculture.

By selling directly to customers, farmers are able to get more than 14 cents on the retail dollar, this

What You Can Do

Individuals:

Shop regularly at your local farmers' market and encourage others to do the same.

Community:

Make your farmers' market 'an experience' for people by providing entertainment, activities and cooking demonstrations.

Municipality:

Sponsor a farmers' market in your town.

according to Agriculture Deputy Secretary Kathleen Merrigan.

According to the 2012 Grinell Area Local Food Guide, "If every Iowan spent only $10 a week on locally grown food, it would amount to $1.5 billion every year invested in local people, local farms, and independent local businesses."

Resources

Iowa Farmers' Market Directory:

http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.formFarmersMarketDirectory

Local Harvest:

www.localharvest.org

Area Farmers' Markets

- **Creston Farmers' Market**
  *Mondays,June-Sept, 4 pm-6:30pm
  *Dinner and Entertainment
  *McKinley Park
  *Contact: Brian Zachary at 641.247.1663
- **Afton Farmers' Market**
  *Tuesdays,June-?, 3pm
  *Dinner and Entertainment
  *Afton Park
  *Contact: City Hall at 641.347.5224
- **Greenfield Farmers' Market**
  *Thursdays
  *Courthouse Square
  *Contact Chamber at 641.743.8444
  info@greenfieldiowa.com
- **Corning Farmers' Market**
  *Thursdays,June-Sept, 4-6:30 pm
  *Central Park
  *Contact: Eleanor Ogburn at 641.322.3382
- **Lamoni Farmers' Market**
  *Saturdays,June-Sept, 9am-12pm
  *Contact: Sophie Ryan at 641.203.2990
  Sophieryan2011@yahoo.com
- **Mt. Ayr Farmers' Market**
  *Fridays, 3pm-5pm
  Contact: Judith Hensley at 641.464.3333
  judyh@iastate.edu
- **Leon Farmers' Market**
  *Thursdays June-October 3-5:30
  *Contact: Darlene Richardson 641.442.5417
  highprairiejd@gmail.com

To locate Farmers' Markets in the state of Iowa go online to: http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.formFarmersMarketDirectory

Food Security

In Iowa, food security is a concerning issue with food deserts scattered throughout the state. According to the United States Department of Agriculture, 13.5 million Americans live in food deserts. Although Iowa reigns supreme in agriculture, 80 percent of the food grown here is exported out of state, according to Iowa Public Radio.

A 2011 report conducted by the Iowa Policy Research Organization entitled *Starvation Nation: Rural Food Deserts* found that Iowa has 24 food deserts, Union County being one of them.

Food deserts can be found in both rural and urban areas where it's difficult to access to fresh, healthy foods due to affordability and distance.

The effects from food insecurity can have damaging consequences. A 2014 study conducted by Iowa State University links food insecurity with maternal depression.

According to Iowa Fiscal Partnership, May of 2013 statistics, nearly 200,000 households (420,914 individuals) used assistance from the Supplemental Nutrition Assistance Program (SNAP), illustrating a need for more affordable food. Twelve point one to sixteen percent of people in Adair, Union and Taylor counties use SNAP. Eight to twelve percent in Adams and Ringgold counties use SNAP and 16.1 to 20 percent in Clarke and Decatur counties use SNAP.

Fortunately, some Farmers Markets vendors accept SNAP which can be used for fresh fruits, vegetables, meat, honey, eggs, herbs, cheese, baked goods and jams, etc.

Sadly, many of those suffering from hunger are children. According to The Food Bank of Iowa, one in five children don't get enough to eat.

For five weeks during the summer of 2013, underprivileged children were able to eat free lunches at First Presbyterian Church in Creston thanks to One in Christ, a collaboration of six area churches.

How to Curb Food Insecurity

Is there a way to help people become more self-sufficient? There is a saying, "growing a garden is like growing money." One way to battle food insecurity is to plant gardens. According to The Wall Street Journal, the average household invests $70 when planting a garden which reaps $600 worth of produce.

Ampleharvest.org

Another means of battling food insecurity is donating fresh produce to local food pantries. AmpleHarvest.org connects backyard gardeners with local food banks. Gardeners drop off their freshly picked produce to food banks at a designated time. People in need pick up the fresh produce at a different designated time forgoing any shame they may feel by having to come in contact with the

grower. Everyone benefits. The backyard gardener is able to donate their excess produce rather than letting it go to waste while people in need are able to access freshly harvested produce to no cost to them. Because the food is picked and immediately given away, food banks don't have to worry about refrigeration and storage issues which detours many food banks from collecting fresh produce in the first place.

What Can You Do?

Individuals:

Volunteer at an organization dedicated to improving food security.

Community:

Organize fresh-food drives.

AmpleHarvest.Org

Municipality

Work with local foods council.

Fresh Foods Ward Off Disease

The need for fresh, affordable fruits and vegetables is greater than ever as many Americans are facing an epidemic of preventable man-made diseases such as heart disease, obesity and diabetes.

According to The Centers for Disease Control and Prevention "in 2009, an estimated 32.5% of adults consumed fruit two or more times per day and 26.3% consumed vegetables three or more times per day, far short of the national targets. Overall, the proportion of adults who met the fruit target declined slightly, but significantly, from 34.4% in 2000 to 32.5% in 2009…"

Even more disturbing, a 2007 report stated "Iowa ranks 8 in overall prevalence with 26.5% of children considered either overweight or obese," according to childhealthdata.org.

Fortunately, it was reported in 2013 that obesity rates in Iowa have dropped slightly due to grants that promote healthy eating, this according to the Centers for Disease Control and Prevention.

United States Census *Persons Below Poverty Level 2007-2011*	
Adair County	11.5%
Adams County	10.7%
Clarke County	12%
Decatur County	19%
Ringgold County	12.7%
Taylor County	13.5%
Union County	17.4%

United States Department of Agriculture-Economic Research Service *People in Poverty 2012*	
Adair County	11.1%
Adams County	12.9%
Clarke County	12.8%
Decatur County	23.7%
Ringgold County	16.4%
Taylor County	14.1%
Union County	14.1%

Resource

Iowa's EBT Farmers Market Project-Bringing Farmers Markets and Food Assistance Together.

For more information on Food Assistance visit: www.dhs.state.ia.us and click on 'Food Assistance' to view information about the Farmers Market Project or call the Customer Call Center at 877-937-3663

Land Use and Farming

You may need the luck of the Irish if you hope to get your hands on a piece of Iowa's pot of gold, AKA,Iowa farmland. For young aspiring farmers especially, biting off a chunk of this highly sought after land is no easy feat. For one: available land for sale is limited and two: it's expensive.

Most aging farmers aren't looking to sell their land, limiting the number of farms on the market and the farmers who change ownership of their land usually do so within the confines of family or they sell to an existing farmer, minimizing the opportunity for newcomers to purchase land.

The price of Iowa farmland reached a historic peak in 2013 costing an average of $8,716 per acre, this up 5.1 % from 2012, according to Iowa Land Value Survey. Decatur County saw the lowest prices in the state averaging $3,628 per acre.

Farm incomes, commodity prices, shifts in interest rates and limited farms on the market are just a few variables that determine the fluctuating prices of farmland

Dwindling Farms

The numbers of farms across the United States has been dwindling since the 1900's, while the farms that do remain are growing in size. Iowa farms dropped from 206,000 in the past 55 years to 89,000.

During 1900's most farms raised a mix of chickens, grains, at least one milking cow and pigs, but because of research and technology, farms got bigger and more specialized while the number of traditional farms began shrinking. In 1900, the average farm size was 147 acres compared to 441 acres today, this according to *National Ag Day.*

Today most Iowa farms specialize in growing one or two crops like corn and soybeans which cover two-thirds of Iowa's land. These crops are raised in high volumes to be used in livestock feed. Along the same lines, most Iowa livestock farmers specialize in raising one kind of animal; for example, either hogs or chickens, which are raised in massive quantities in indoor factory-farm settings.

Most Food Grown in Iowa Doesn't Stay Here

Iowa leads the nation in the production of chickens, eggs, pork and beef, but most of these goods don't stay in Iowa; they are bound for the global commodity market.

Though their percentages are significantly smaller compared to their industrial counterparts, some farmers are raising a handful of chickens, eggs, pork and beef to be sold to their neighbors through direct marketing. Included in this list are specialty animals like, bison, deer, rabbit and elk.

According to the *Iowa Policy Project,* Iowa spends approximately 7.2 billion dollars on food imported from out of state. By supporting local farmers, who grow food for human consumption, our food dollars can circulate back into the pockets of Iowans.

Support for Farmers

With traditional farms vanishing, it is important to preserve and support the few that remain. Practical Farmers of Iowa is a supportive organization that hosts educational events such as field days, workshops and farminars to ensure the success of Iowa farmers.

According to their website, "Practical Farmers of Iowa is an open, supportive and diverse organization of farmers and friends of farmers, advancing profitable, ecologically sound and community-enhancing approaches to agriculture through farmer-to-farmer networking, farmer-led investigation and information sharing."

Cedar Valley Business Monthly Online : 'Map: Farmland Prices Across Iowa'

Iowa Counties	2011Farmland Values Per Acre	2010-2011 Percentage Increase Per Acre
Adair	$5,313	35.42%
Adams	$4,286	34.51%
Clarke	$3,182	30.99%
Decatur	$2,721	30.47%
Ringgold	$3,466	32.86%
Taylor	$3,946	34.72%
Union	$4,179	32.77%

Iowa State University Extension and Outreach		
Counties	2013 Land Value Per Acre	% Increase from 2012
Adair	$6,884	7.15%
Adams	$5,564	9.23%
Clarke	$4,228	11.54%
Decatur	$3,628	11.90%
Ringgold	$4,549	10.31%
Taylor	$5,116	9.10%
Union	$5,487	10.36%

What Can You Do?

Individuals:

Keep small farms viable:

Become a CSA member

Support local farmers' markets

Encourage local grocery stores and restaurants to offer produce, meat and eggs from local farmers

Community:

Develop a local foods directory to help identify places to buy locally produced food in your community

Municipality

Keep your community's food system in mind when making decisions about land use, planning and development

Locally Grown Foods in Institutions

Locally grown foods have recently gained popularity via farmers' markets and increasingly locally grown foods are making their way into local institutions such as restaurants and grocery stores. Although there is plenty of room for growth in the institution sector, notable progress is being made in the Southern Iowa RC&D region.

In a perfect world restaurants and institutions would source ingredients from local farmers and veer away from the industrialized food system. But, a perfect world it is not. Instead, the focus must be to gradually implement local foods into institutions without taking an *all or nothing* approach.

Impact of Local Foods

"To support the local economy, institutions commonly aim to increase local food purchases to 30 percent of their total food budget," this according to the *2012 Economic Impacts of Iowa's Regional Food System Working Group Report.*

Southern Iowa Local Foods Coordinator, Alexi Groumoutis, is a member of the Regional Food System Working Group (RFSWG) which supports local food efforts in 90 of Iowa's 99 counties. Within this working group, Groumoutis represents Southern Iowa Regional Food Systems which covers Adair, Adams, Union, Clarke, Taylor, Ringgold and Decatur counties.

The Leopold Center for Sustainable Agriculture partnered with the RFSWG and coordinated an evaluation for one of the first statewide attempts to measure actual impacts of the local food industry on Iowa's economy.

The results of the *2012 Economic Impact of Iowa's Regional Food Systems Working Group Report* should not go unnoticed. Local foods are making an economic impact in Iowa. In fact, sales of food produced in Southern Iowa RC&D region (data collected from three specialty crop farmers/growers) added $72,230 to the local economy in 2012. In addition, $143,430 of local foods were purchased by institutions in this region (data collected from three institutions). Institutional purchases of local food added nearly 9 million dollars to Iowa's economy.

Although Iowa is a farm state, 90 percent of the food eaten here is imported. By reaching that 30 percent target, $8,895,824 would be spent on purchasing local food in the Southern Iowa Regional Food

System area alone. Now, imagine if all institutions in the entire state of Iowa reached this 30 percent target.

Challenges with Local Foods

It's important to look at the challenges restaurants and other institutions face when purchasing from local growers. For restaurants the biggest roadblock is cost. Often times, locally grown produce and meats are more expensive than their commercial counterparts, therefore, consumers living in rural communities must be willing to pay higher menu prices.

Other barriers standing in the way include access, distribution and product consistency. Typically, restaurants order most of their food items from one or two commercial food distributors. A salesperson comes to the business with a computer and takes down the restaurant's food order or the order is given over phone. A truck then delivers the food a day or two later. It's an efficient, cost-effective and convenient process. Unfortunately, there is no uniform ordering system or 'one-stop shopping' when it comes to purchasing from local farmers.

Usually implementing local foods into institutions is a grassroots effort on the farmers' behalf which requires persistence and dedication. Growers must also be able to provide a consistent product in terms of quantity and quality.

When purchasing from local growers, institutions will normally pay whole sale prices, however they may be willing to pay premium prices for unique items.

Although it is not required by law (yet), some institutions require farmers to possess the Good Agricultural Practices Certification (GAPS) before they will purchase from them. GAPS is a voluntary set of food-safety guidelines designed to help farmers handle food safety from the farm to the market. These practices include developing a food safety plan for the farm; training farm employees about this plan and farm food safety practices and documenting farm practices to reduce the risk of dangerous bacteria or toxins on farm products.

Most grocery stores will also require local farmers to carry liability insurance policies of one million dollars minimum in the rare event their food were to make people sick.

Licensing is not required by farmers when selling fresh, raw unprocessed fruits and vegetables to institutions; however it is required when selling meat, poultry, eggs and dairy products or anything processed such as cut and washed vegetables.

Community Involvement

In an effort to get the community of Creston excited about implementing more local foods into institutions, Groumoutis, with the support of her food council, Southern Iowa Local Foods Council, spearheaded the inaugural 'Uptown Creston Food Crawl' in 2013. Patrons walked from business to business, (coffee shops, bakeries and restaurants) sampling culinary delights made with ingredients sourced from local farmers while enjoying live music and interacting with the farmers who grew the

food. This celebratory event was not only fun for the community, but it brought needed attention to the impact local foods can have on communities.

2012 Economic Impacts of Iowa's Regional Food Systems Working Group:

Southern Iowa RC&D Regional report: http://www.leopold.iastate.edu/content/southern-iowa-regional-food-systems

Statewide report: http://www.leopold.iastate.edu/local-food

Where to find more info about RFSWG: https://sites.google.com/site/iowarfswg/

What Can You Do?
Individuals: **Encourage institutions to carry locally grown foods and support the ones that do.** Community: **Host events like food crawls to encourage the use of locally grown foods in institutions.** Municipality **Chamber of Commerce should commend institutions who are supporting local farmers by recognizing them in Chamber newsletters and on their websites.**

Community Supported Agriculture

Community Supported Agriculture (CSA) programs connect consumers directly with farmers and growers. For an up-front seasonal fee, shareholders receive weekly or bimonthly baskets of fresh produce from growers.

This exchange benefits both growers and shareholders. The upfront payment lessons the burden of beginning-of-the-season operating costs for growers.

As a member of a CSA, shareholders are able to build relationships with the people responsible for nourishing their bodies. They not only know the names of the farmers growing their food, but they also know where and how their food is being grown. Not only are they able to enjoy the delicious flavors and high nutritional content of freshly harvested produce, but they can feel good knowing their food hasn't traveled hundreds if not thousands of miles leaving behind a big-fat global footprint.

In addition to field-grown crops, many CSA growers use high tunnels to extend their growing season, allowing shareholders to purchase fresh produce earlier and later in the growing season.

Signing up for a CSA can help improve Iowa's economy. According to the 2007 report *Iowa's Local Food Systems: A Place to Grow*, it was estimated that only 10 percent of the produce eaten in Iowa was grown here.

There is risk, however, when signing up for a CSA. Drought, floods and storm damage can affect the success of crops which can leave shareholders with less produce than expected or even worse, empty-handed in extremely rare instances.

Many farmers get involved with CSA's because it's a labor of love derived from a need to provide their neighbors with fresh, wholesome fruits and vegetables that are often grown without the use of chemicals and pesticides.

Although not all CSA's are organic, Iowa ranked in the top ten for the number of organic farms and organic sales in the United States according to the2008 Organic Production Survey released February 3, 2010 by the U.S. Department of Agriculture's National Agricultural Statistics Service.

Just because a farm isn't Certified Organic doesn't mean they haven't adopted organic practices. Many small farmers grow their food organically, but because of fees and paperwork they choose not to get ''organically" or "naturally" certified. However, the beauty of supporting local agriculture is knowing you can ask farmers face to face how they grow or raise their food.

According to the USDA's 2012 Census of Agriculture, 260 Iowa farms marketed products through CSA's, compared to 487 in 2007.

Thanks to the Leopold Center for Sustainable Agriculture and Iowa State University Extension and Outreach, an updated Iowa CSA Directory was created to better connect farmers with consumers. Over the years, the directory has grown from 49 CSA producers in 2006, to 75 producers in 2014.

CSA's in the Southern Iowa RC&D Region:

CSA	Website	Contact
Bridgewater Farm/Adair County	Look up 'Bridewater Farm' on Facebook	641.745.5368
Wimmer Farms/Union County	www.wimmerfarms.com	641.278.0735
The Wallace Centers of Iowa/Adair County	wallace.org	515.243.7063

Resources

Iowa CSA Directory

www.leopold.iastate.edu/csa

Iowa State University Market Maker

http://ia.foodmarketmaker.com/

Local Harvest

www.localharvest.org

What You Can Do
Individuals: **Join a CSA Farm!** **Community:** **Organize centralized locations for CSA food pick-ups.** **Muncipality** **Subsidize CSA shares for low-income residents.**

Agritourism

Although most Iowans aren't familiar with the term agrotourism, ironically it happens to be an Iowa pastime. Agritourism, is defined by the Agricultural Marketing Resource Center at Iowa State University as "…the act of visiting a working farm or any agricultural, horticultural or agribusiness operation to enjoy, be educated or be involved in activities."

Agritourism is a destination activity comprised of varying layers that serve different purposes for different operations. An operation can be anything from a farm to a winery. Some operations focus on entertainment or 'agritainment' while other operations focus on education or 'agrieducation.'

Agritainment, which seems to be the more popular of the two in Iowa, especially during fall time, serves to entertain by way of pumpkin patches, corn mazes, hay rides, petting farms and haunted houses, while agrieducation's purpose is to teach visitors via tours or hands-on activities about agricultural production. Agrieducation may involve helping out with tasks on a farm or touring a winery.

Another great example of agritourism in Iowa is the county fairs which showcase agricultural displays unique to a county's specific region. Iowa fairs are rich with cooking, produce and livestock competitions often submitted by 4-H'ers, intertwined with talent and art competitions. The Iowa State Fair, known for its over-the-top fried foods on a stick and turkey legs, is nationally recognized as one of the best state fairs in the nation.

The underlying goal of agritourism is to build support for agriculture and educate the public while providing a supplemental income to farms and other operations. Most farms involved in agritourism are small to medium sized farms that are growing food for people.

The Journal of Extension writes, "According to the 2007 U.S. Census of Agriculture, the number of farms that sold agricultural products directly to individuals for human consumption increased by 17% nationally, while the number of farms in Iowa showed an increase of 22%, rising from 2,455 farms in 2002 to 2,987 farms in 2007."

2012 Census of Agriculture

Counties	Number of Farms in the Southern Iowa RC&D region
Union	648
Adair	726
Adams	467
Clarke	627
Taylor	639
Ringgold	651
Decatur	711

Examples of Agritourism from NC State University:

U-Pick operations or pick your own (PYO)

Visitors are allowed to harvest (pick) their own fruits, vegetables, and other products. U-Pick operations can include pumpkins, apples, strawberries, peaches, grapes, blackberries, Christmas trees, and more.

On-farm produce stand

Rather than have visitors pick their own fruits and vegetables, on-farm produce stands provide harvested fruits, vegetables, or value-added products (such as jams, salsa, canned fruits and vegetables) for retail.

On-farm restaurant, dinners, bakery

Some farms may choose to offer food and beverages to guests visiting the farm. Another option is to offer on-farm meals several times a year where visitors are served food straight from the farm.

Educational farm tours and demonstrations

These types of tours and demonstrations are often interactive and provide hands-on education. Tours and demonstrations can be given on an individual basis to the visiting public and to school groups or other organizations. Examples include cheese production, milking dem-onstrations, picking cotton, how-to class-es (such as canning), and discussions on

the history of farming.

On-farm activities

Many farms offer a variety of on-farm activities for kids and adults. For example, corn mazes, U-Pick, wagon/hay/sleigh rides, petting zoos, pig races, horseback riding, hunting, and fishing

What You Can Do
Individuals: **Explore Iowa Agritourism destinations on your next weekend get-away or vacation.** Community: **Sponsor a farm crawl in your community in which people visit a variety of farms in one day to learn about farm life and how foods are grown/raised.** Muncipality **Partner with other governmental agencies to promote agritourism.**

Iowa organizations supporting agritourism:

Association of Iowa Fairs

http://www.iowafairs.com/site/aif-member-fairs.php

Iowa Cooperative Extension: http://www.extension.iastate.edu/

Leopold Center for Sustainable Agriculture-Iowa State University: http://www.leopold.iastate.edu/

Beginning Farming Center:

http://www.extension.iastate.edu/bfc/

Visit Iowa Farms-Iowa State University Extension-List your Agritourism operation for free at:

http://www.visitiowafarms.org/

Iowa tourism

www.traveliowa.com

Other Resources:

Farm stays around the country

http://www.farmstayus.com/

The Maize

http://www.themaize.com/

Trade labor for lodging: Worldwide opportunities on organic farms: Linking volunteers with organic farmers and growers:

http://www.wwoof.net/

Webinar: Hosting Safe, legally-secure on-farm events:

http://farmcommons.org/webinars

Shared Community Food Profile with the following contacts

Lamoni-Decatur County

- Lamoni City Hall (economic development and chamber of commerce)

  190 South Chestnut
  Lamoni, IA 50140

- Lamoni Mayor

  Douglas Foster

  190 S Chestnut St, Lamoni, IA 50140

- Lamoni Public Library

  301 W Main St, Lamoni, IA 50140

Leon-Decatur County

- Leon Iowa chamber of Commerce

  104 West. First Street

  Leon Iowa, 50144

- Decatur County (Economic Development, Public Health)

  207 N. Main Street

- Leon Iowa Public Library

  200 W 1st St, Leon, IA 50144

- Leon Mayor

  Mayor - Robert Kilgore

  401 SE Q Street Apt 8

  Leon, Iowa 50144

  E-mail: AZinIowa50@yahoo.com

- Decatur County Extension Services

  309 N Main St, Leon

Creston-Union County

- Creston Mayor

  Warren Woods

  116 West Adams PO Box 449

- Union County Development Association

  Wayne Pantini

  208 W Taylor Street
  P.O. Box 471
  Creston, IA

- Gibson Memorial Library

  200 W Howard St, Creston, IA 50801

- Union County Public Health

  1700 W Townline St, Creston, IA 50801

- Union County Extension Office
  811 N. Sumner

Osceola-Clarke County

- Osceola Chamber of Commerce
  115 E Washington St, Osceola, IA 50213
- Clarke County Public Health
  134 W Jefferson St, Osceola, IA 50213
- CLARKE COUNTY DEVELOPMENT CORPORATION
  Bill Trickey
  115 E Washington Street
  P.O. Box 426
  Osceola, IA 50213
- Mayor
  Fred P. Diehl
  629 S. Jackson Street

- Osceola Public Library
  300 S Fillmore St, Osceola, IA 50213

- Clarke County Extension
  154 W Jefferson St, Osceola, *IA* 50213

Greenfield-Adair County

- Adair County Public Health
  117 NW Hayes | Greenfield Iowa | 50849

- Chamber of Commerce and Community Development (one entity)
  Attn: Stacie Hull
  Greenfield Chamber/Main Street and Development Office
  Historic Carnegie Library - Lower Level
  215 South First Street
  Greenfield, Iowa 50849

- Greenfield Mayor
  Ron Smith
  202 S. 1st Street
- Greenfield Public Library

202 S 1st St, Greenfield, IA 50849

- Adair County Extension
  154 Public Square, Suite C
  Greenfield, IA 50849

Bedford-Taylor County

- Taylor County Public Health
  405 Jefferson St #7, Bedford, IA 50833

- Bedford Mayor
  Matt Dukes
  City Hall
  625 Court Avenue
  Bedford, IA 50833

- Bedford Economic Development and Chamber of Commerce
  601 Madison Street
  Bedford, IA 50833

- Bedford Public Library
  507 Jefferson St, Bedford, IA 50833

- Taylor County Extension
  609 Pollock Blvd.
  Bedford, IA 50833

Mt. Ayr –Ringgold County

- Public Health
  119 S Fillmore St, Mt Ayr, IA 50854

- Chamber of Commerce and Ringgold County Development Corporation
  117 S. Fillmore Mount Ayr IA 50854

- Mayor
  MT Ayr City Hall
  200 South Taylor St
  Mount Ayr, IA 50854

- Mt. Ayr Public Library
  121 West Monroe
  Mt Ayr, IA 50854

- Ringgold County Extension
  101 N Polk St, Mt Ayr, IA 50854

Corning-Adams County

- Adams County Chamber of Commerce and Economic Dev.
  710 Davis Avenue
  Corning, IA 50841

- Adams County Public Health
  703 Rosary Drive
  Corning, IA 50841

- Adams County Extension
  603 7th Street
  Corning, IA 50841

- French Icarian Village
  2349 220th Street Corning, IA 50841

- Mayor Dwight Sunderman
  601 6th St, Corning, IA 50841

- Corning City Public Library
  603 9th St, Corning, IA 50841

Other

- Afton Mayor Michelle Burger
  115 E. Kansas Street
  Afton, Iowa 50830

- Secretary of Ag. Bill Northey
  502 E. 9th Street
  Des Moines, IA 50319

- Corning Winery
  2271 State HWY 148
  Corning, IA 50841

Determining the Optimum Harvest Time for Aronia Berries to Maximize their Antioxidant and Sensory Properties

Project Summary

Aronia berries are a trending super fruit catching the eyes of many consumers, farmers and researchers. Aronia berries are known for their high levels of antioxidants, which may be beneficial in preventing disease and maintaining health. They also have the potential of being a strong coloring agent due to their deep purple-red color. During 2012-2014, Iowa State University Food Science and Human Nutrition Department was involved in studies of antioxidant and sensory properties of Aronia berries. Led by Dr. Lester Wilson, an optimal harvest time was determined in order to help the local farmers. During this study, the first year (2012) was completed at no cost to the USDA as a generous Aronia farmer dedicated to educational research provided the crop. The subsequent years of study (2013, 2014) were funded by the USDA.

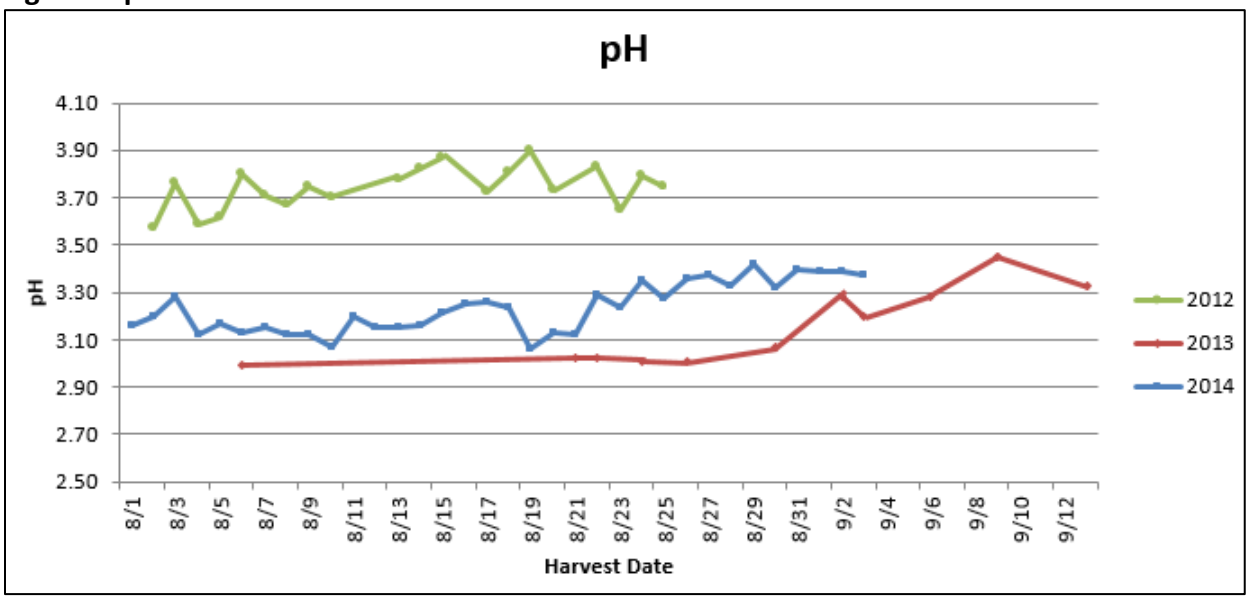
Project Approach

Over the course of the experiment, Aronia berries (cultivar Viking) from the farm, Winding Creek, in Belmont, Iowa were analyzed. Frozen samples were received weekly (harvested by the farmer and the Horticulture graduate student. Each gallon Ziploc bag was labeled by harvest date and row number. The berries were then juiced, wrapped in plastic wrap and aluminum foil, and refrigerated or frozen. Samples were pulled until the crop was harvested by the farmer (prior to drying on the plant like raisins) each year. The following were tested and analyzed: pH to measure acidity, °Brix to measure sugar concentration, Sugar Acid ratio to measure sensory acceptability, total acidity, Trolox equivalence (TE) to measure the antioxidant concentrations, and High Performance Liquid Chromatography (HPLC) to determine amounts of phenolics and anthocyanins in the juice. Overall color and aroma testing were initially analyzed, but it was determined that they are not good indicators of optimum time of harvest. Once the berries turn their signature purple color, the variation of the color was indistinguishable visually or instrumentally. Weather at Winding Creek, including growth degree-days, rainfall and temperature, was also monitored.

pH

Figure 1 describes the evolution of the pH of the Aronia juice samples with changing harvest dates. Overall, the pH increased slightly over time. In 2012, the average pH was significantly higher than the two subsequent years. The pH range for the 2012 harvest year was from around 3.6 to 3.9. During 2013, pH dramatically increased during late August through early September. 2013 was also the year containing the lowest recorded pH values. The pH range for that year was between 3.0 and 3.45. For 2014, a large decrease in pH occurred on August 19th. The pH had an increasing trend from August 1st to September 3rd. During 2014, there was an increase in precipitation during the end of August that could have caused this increase. The pH range was from 3.06 to 3.42. These differences between years were due to varying environmental and weather conditions from year to year.

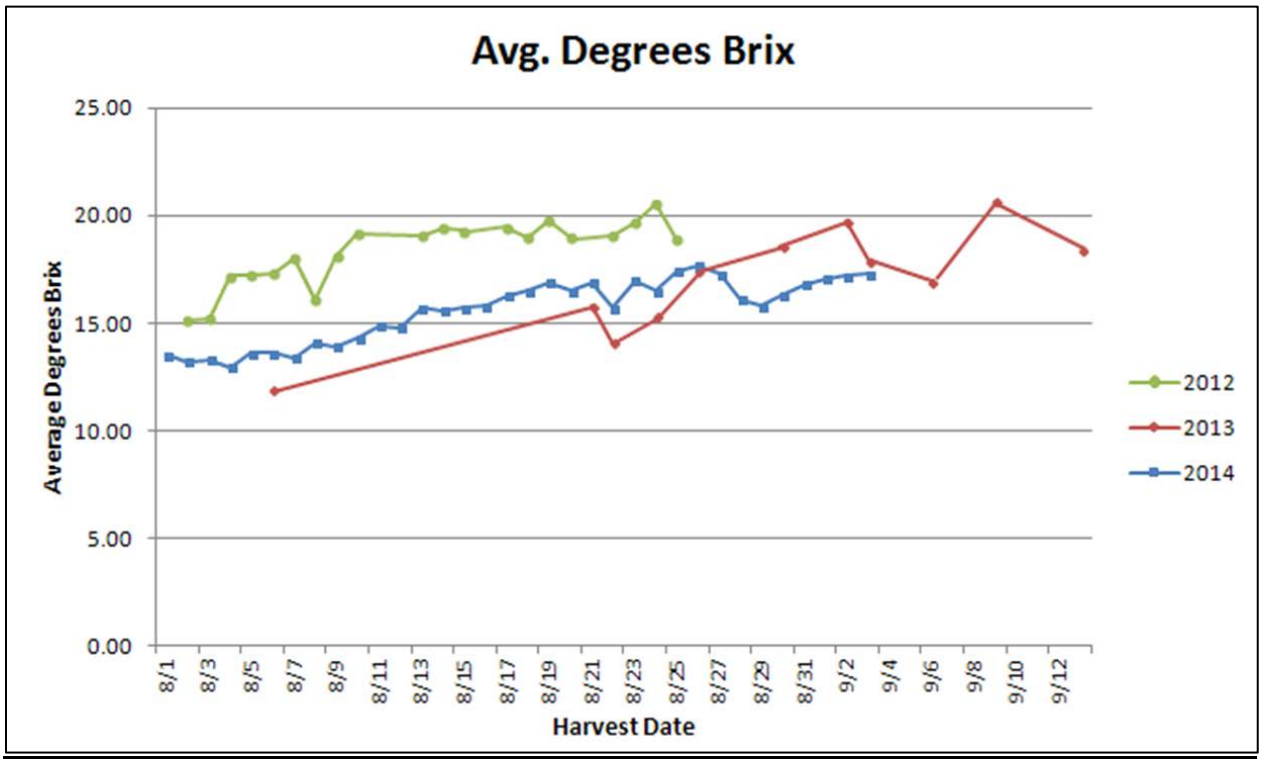
Figure 1. pH



Degrees Brix

Figure 2 describes the evolution of °Brix (percentage sugar measured as sucrose at 20 C)for the 2012-2014 Aronia harvesting period. Overall, °Brix had an increasing trend with every successive harvest date, typical of most fruits. The 2012 harvest period had the highest average °Brix compared to the other two years. As 2012 was a drought year, a higher brix was expected. During 2014, there were significant drops on August 23rd and August 31st, periods of more rainfall. The highest peak occurred on August 26th with a value of 17.7. Temperatures were moderate and it rained fairly well throughout the growing season. Looking back at the 2012 and 2013 data the °Brix ranged from 15.1 to 20.5 in 2012 and between 11.9 and 20.6 in 2013. These differences had to do with varying environmental and weather conditions from year to year.

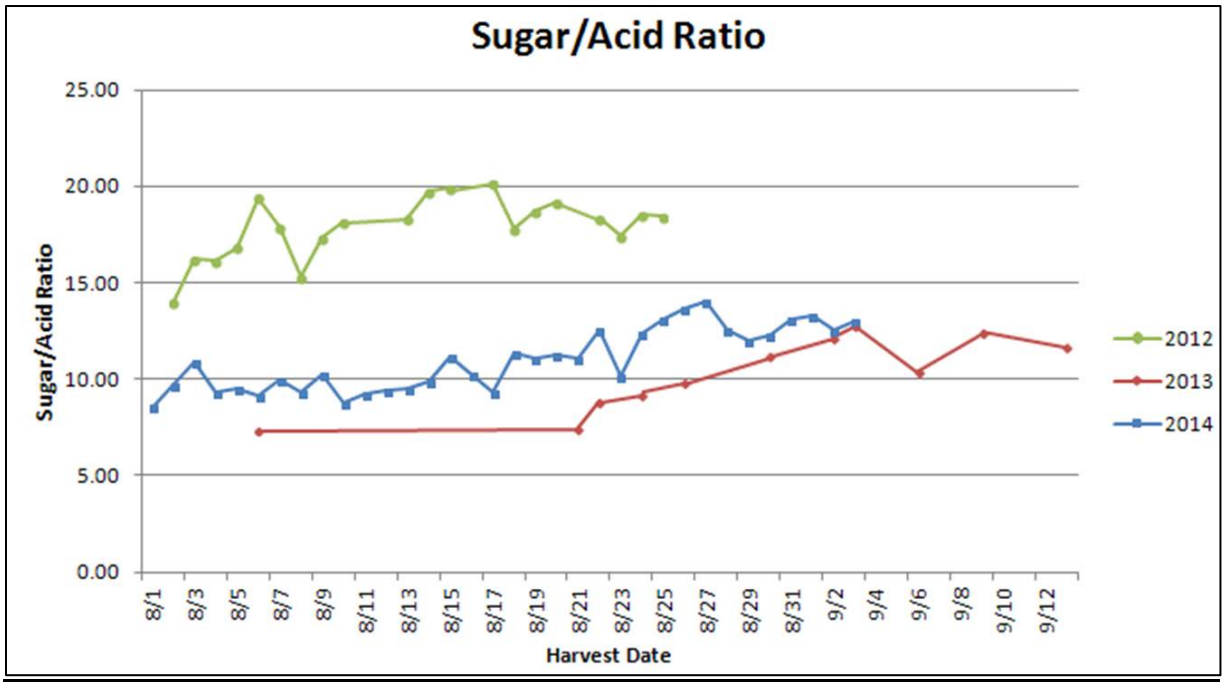
Figure 2. °Brix



Sugar/Acid Ratio

Figure 3 shows sugar/acid ratio of the Aronia juice in the 2012-2014 harvesting seasons from August 1st to September 13th. There was a consistently increasing trend over time. This means that the longer the berries are on the plant, the more sugar being produced and the less acid there is, causing the ratio to increase as shown. 2012 (drought year), again, had the highest average values compared to the other two years. In 2014, the peak sweetness was on August 27th. There were significant drops on August 17th and August 23rd. Looking back to 2012 and 2013, in 2012 the sugar/acid ratio ranged from 13.97 to 20.15 and in 2013 from 7.46 to 12.73. In 2014 the sugar/ acid ratio ranged from 8.63 to 14.03. The drought year of 2012 produced the best sensory perceived sweetness based upon sugar acid ratio (August 17th). The differences between years clearly had to do with varying environmental and weather conditions.

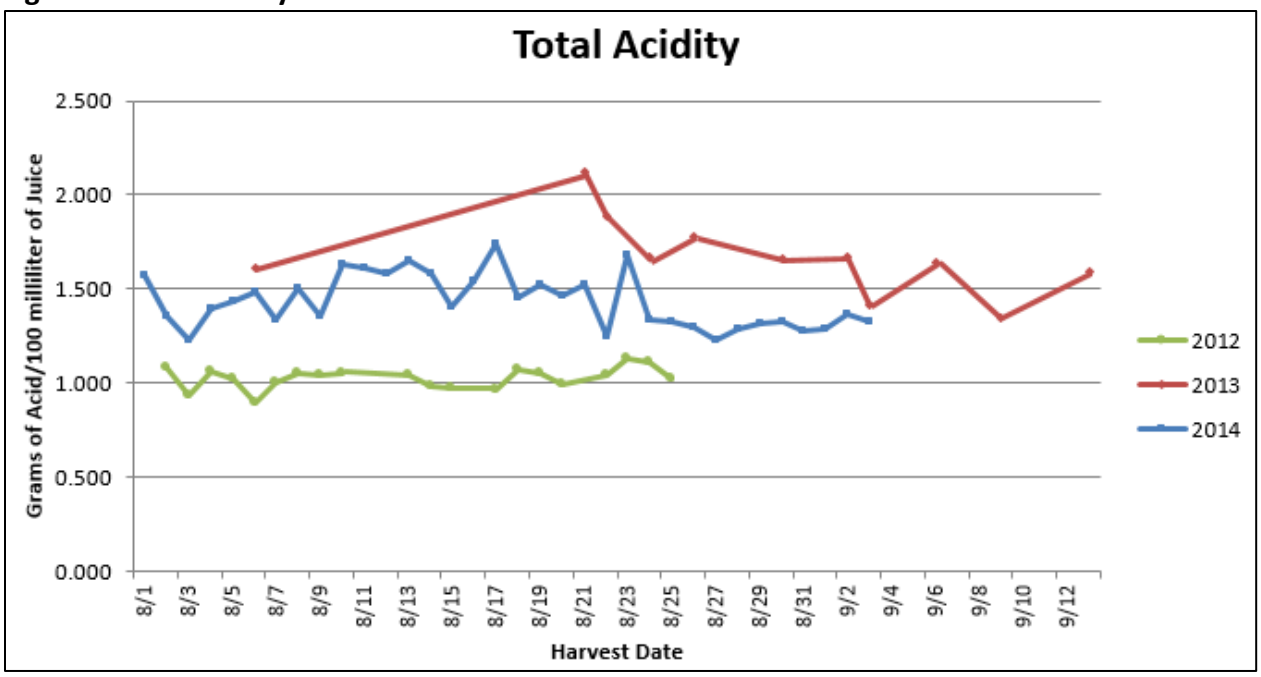
Figure 3. Sugar/Acid Ratio



Total Acidity

Figure 4 shows the evolution of Total Acidity in Aronia juice in the 2012-2014 harvesting seasons from August 1st to September 13th. Over time, the Total Acidity did not have a specific trend. 2012 had the lowest averages in Total Acidity, which may be correlated with having the highest average °Brix during the drought of 2012. During 2014, peaks occurred at August 17th and August 24th. Looking back to 2012 and 2013, the 2012 data ranges from 0.893 to 1.130 and the data ranges from 1.350 to 2.120. The 2014 data ranges from 1.224 to 1.740. The wetter years had more acidity. Note that all of these acid levels are high compared to citrus juices. These differences had to do with varying environmental and weather conditions from year to year.

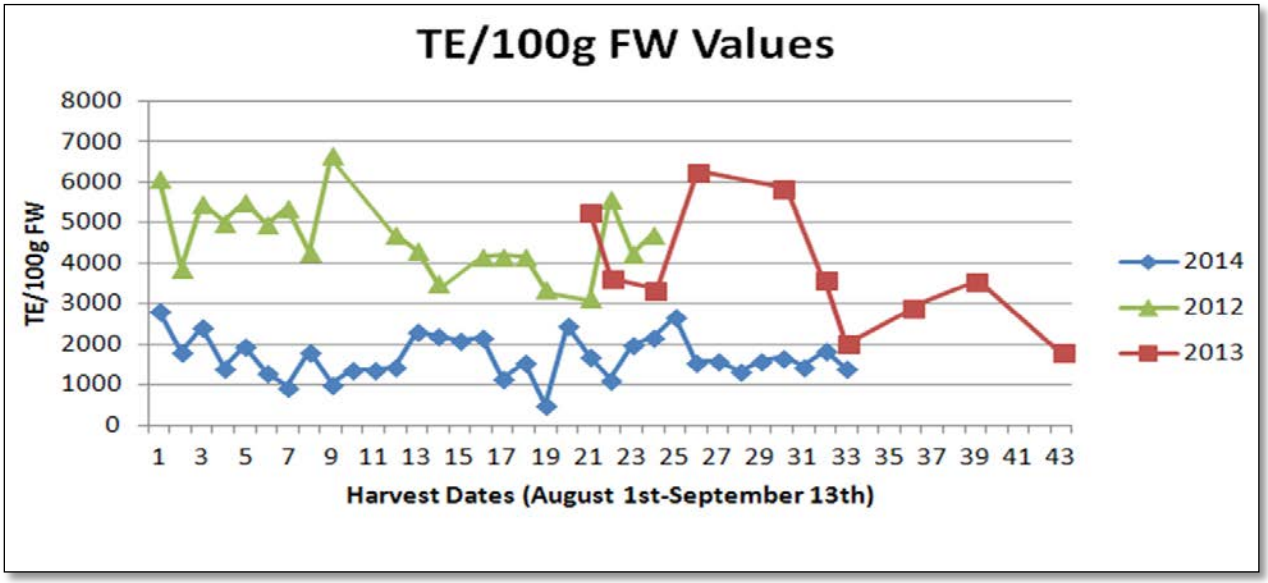
Figure 4. Total Acidity



Trolox Equivalency (TE)

Figure 5 analyzes Trolox Equivalency (antioxidant content) over the 2012- 2014 Aronia harvesting periods. Overall initial readings show a higher amount of antioxidants earlier in the drought year (2012) for their respective harvest periods (2012: 6120 TE/100g FW; 2013: 3271 TE/100g FW; 2014: around 5100 TE/100g FW). The observed trend is generally decreasing, with a spike seen around the end of August. This could be due to extra rainfall seen at the end of the month.

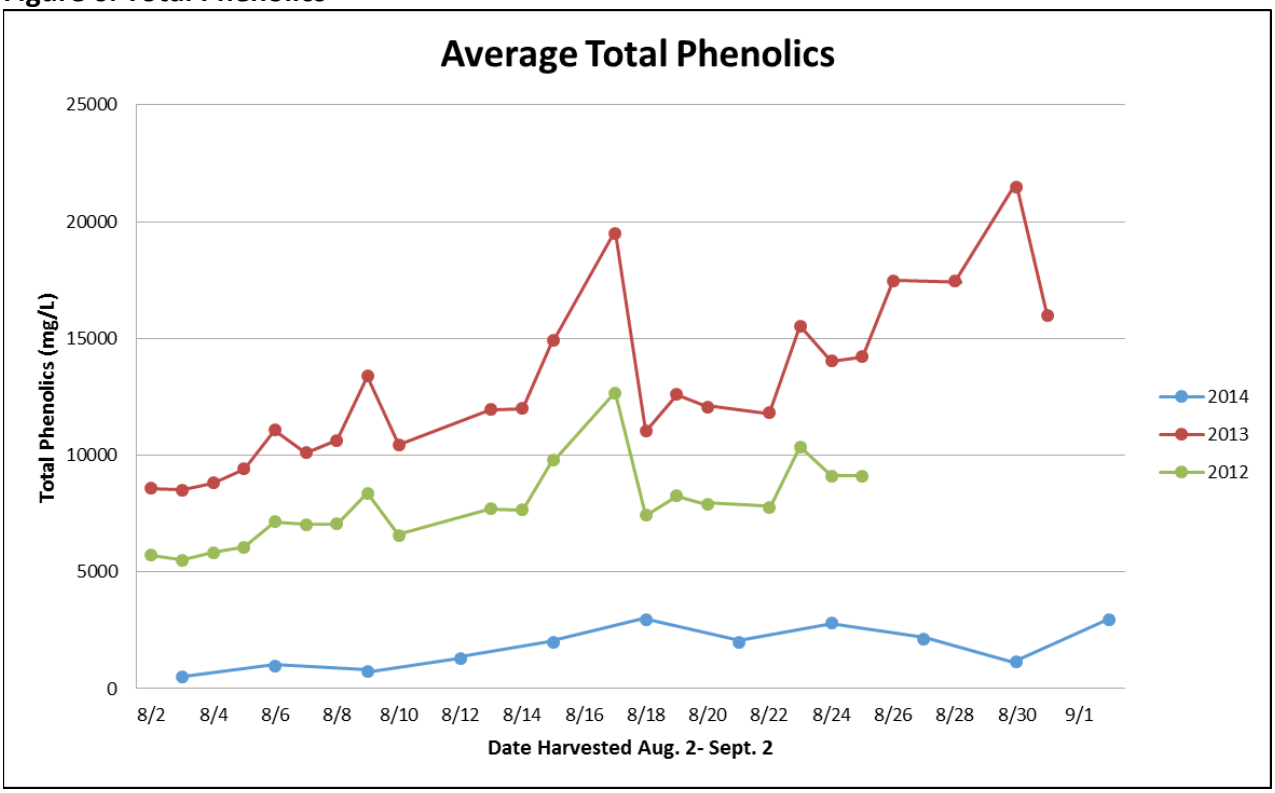
Figure 5. Trolox Equivalency



Total Phenolics (simple and anthocyanin's)

Figure 6 shows the evolution of total phenolics in the Aronia berries for 2012, 2013, and 2014. They were calculated as an average of 3 runs. Phenolics are organic chemicals that can contribute to the colors of foods and are the primary sources of antioxidants in fruits and vegetables. All three years show a general increase of phenolic content in the late harvest dates. There were peaks around August 17th for all three years, and in 2013 there was a peak on August 30th as well (a wet then dry year).

Figure 6. Total Phenolics



Antioxidant Capacity with Total Phenolics and Rainfall

Figures 7-9 show the yearly rainfall compared against the antioxidant levels and phenolics. This allows for comparison between the three variables. Note that the wetter 2014 year had the lowest values. Phenolics were higher the drought (2012) and the wet/drought 2013.

Figure 7. Antioxidant Capacity with Total Phenolics and Rainfall 2012

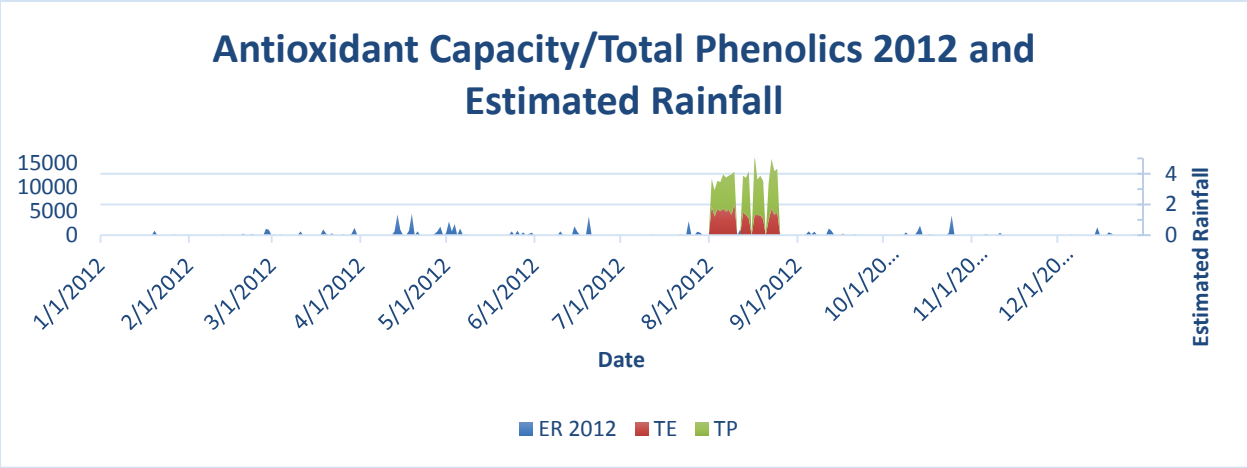
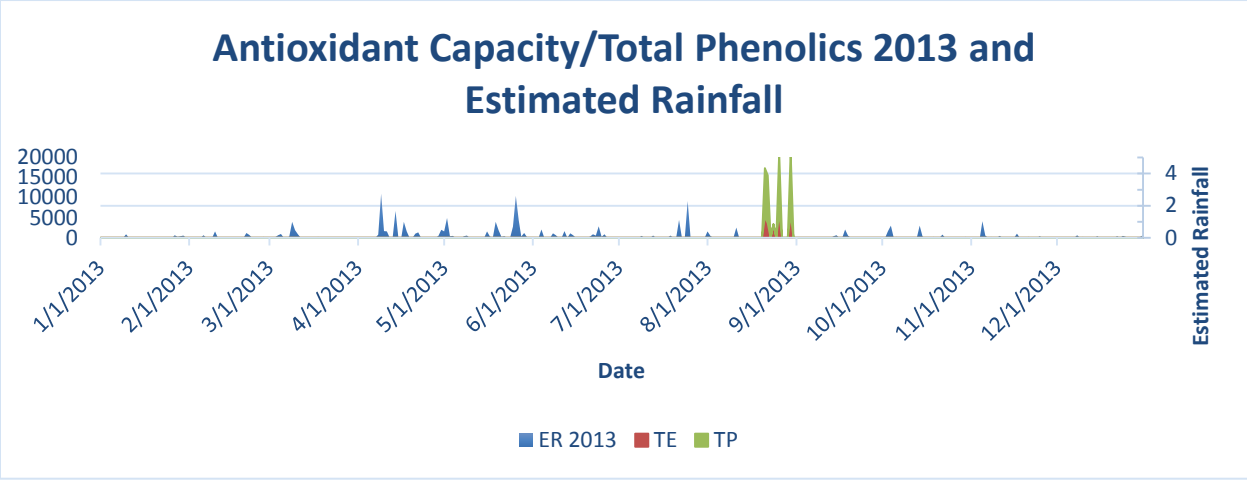


Figure 8. Antioxidant Capacity with Total Phenolics and Rainfall 2013



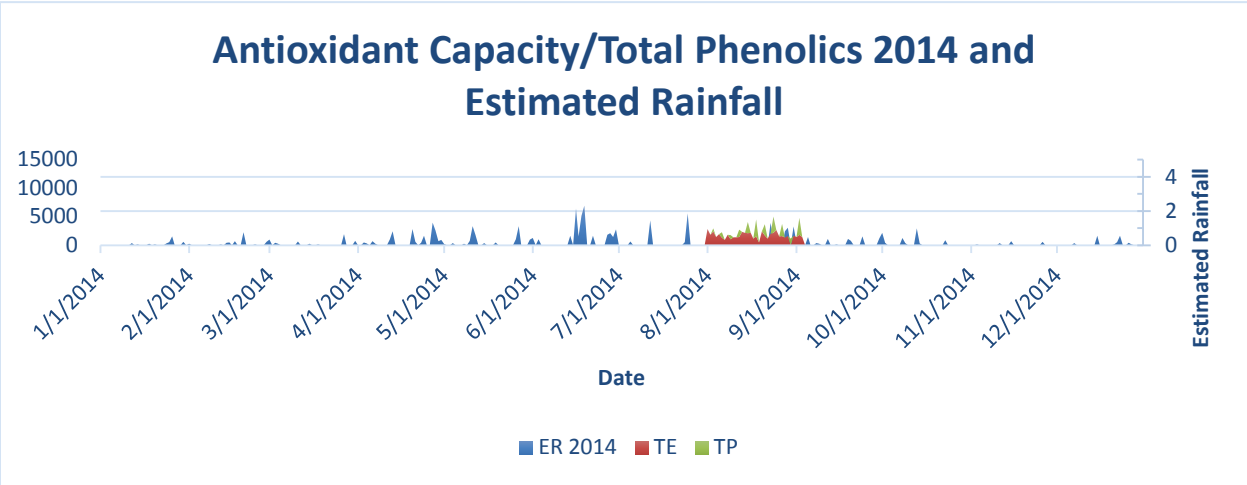
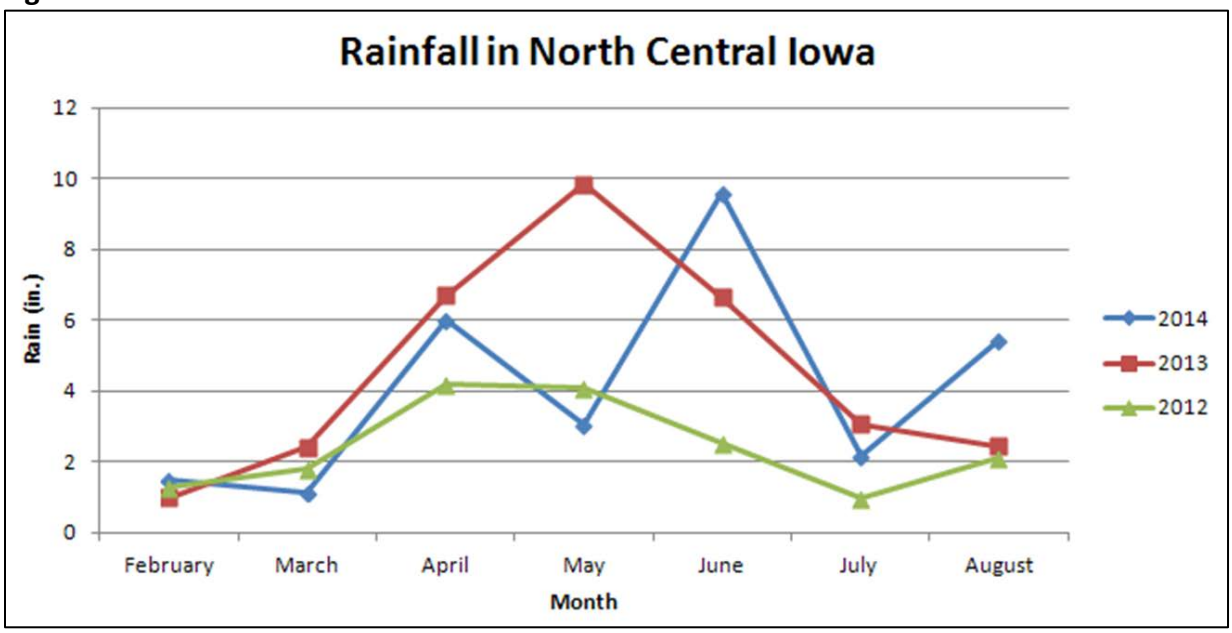


Figure 9. Antioxidant Capacity with Total Phenolics and Rainfall 2014

Weather Analysis

There was a drought in 2012, which caused the farmers to implement drip irrigation, which was not used in 2013 or 2014. While this could cause variance in the results, the drought in 2012 was not overcome. 2013 saw a lot of rain in the late spring, which turned into drought conditions later in the summer. 2014 was a very wet year and falls in line with 2013 right through mid-April before dropping through May (figure 12). Following this logic, it can be hypothesized that higher precipitation in the spring could be the cause of higher acid levels in Aronia berries. The weather descriptors GDD (Growing Degree Days) and VSM (Volumetric Soil Moisture) were related to aronia berry composition over the three years of study. In Table 1, the relationship of these factors were correlated to antioxidant activity, degree Brix, pH, and total acidity. While GDD and VSM were correlated to the berry composition in 2012, only VSM correlated with composition over all three years where GDD was not correlated over all three years. Twenty-five different regression models were used to evaluate these relationships. A simple linear regression only accounted 74.29% whereas logY vs X^2 accounted for 80.03% of the variation for antioxidant level. The equation therefore is $Antioxidant\ activity = \exp(b - a * VSM^2)\ where\ a = 8.942\ and\ b = 0.002221$. Table 2 shows the percent variation across all of the composition factors of interest, with the specific models for each composition factor. The variabilities (R^2 %) lie between 95.77% (pH) and 68.32% (degree Brix). A more complex model may give a better representation of the combined factors controlling composition of the berries. While GDD and VSM were used in this model, the amount of sunlight would also play a factor but was not measured in this study.

Figure 12. Rainfall in North Central Iowa

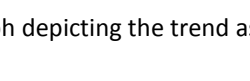
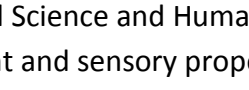
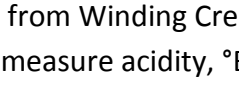


United States Geological Survey (11 Feb. 2015). Iowa Water Science Center-Precipitation Averages. Retrieved from http://ia.water.usgs.gov/climate/precipitation.html

Table 1: Correlation table between weather parameter and parameters characteristic of aronia juice

	Antioxidant activity	°Brix	pH	Total acidity
VSM	-0.8619	-0.8075	-0.9759	0.7623
Probability	<0.05	<0.05	<0.05	<0.05
Significantly different from 0	Yes	Yes	Yes	Yes
GDD	0.1905	-0.27	-0.0561	0.0218
Probability	>0.05	>0.05	>0.05	>0.05
Significantly different from 0	No	No	No	No

Table 15: Statistic models and correlations of parameters characteristic of aronia juice and VSM

	Equation	a	b	R-square(adjusted) %
Antioxidant acrivity	Exp(b – a *VSM²) 	8,94	0,002	80,03
Brix	Exp(b +a/VSM)	9,12	2,12	68,32
pH	1/(a + b/VSM) 	0,005	0,2	95,77
Total acidity	1/(a-b*VSM) 	1,21	0,001	77

Below each equation is a graph depicting the trend as VSM increases. 2:

Goals and Outcomes Achieved

Iowa State University Food Science and Human Nutrition Department was involved in Aronia berry studies of antioxidant and sensory properties during 2012-2014. Frozen samples were received and tested weekly from Winding Creek in Belmont, Iowa. The following were then tested and analyzed: pH to measure acidity, °Brix to measure sugar concentration, Sugar/Acid ratio to measure sensory acceptability, total acidity, Trolox equivalence (TE) to measure the antioxidant concentrations, and High Performance Liquid Chromatography (HPLC) to determine amounts of phenolics and anthocyanins in the juice.

pH generally saw a slight increase of about 0.25-0.5 throughout the harvesting season. Total acidity remained consistent through the harvesting season. However, total acidity was higher in years when there was a higher amount of rainfall at the beginning of the growing season. Degree Brix generally increased by about 4-7 °Brix throughout the harvesting season. Sugar concentrations from year to year were also higher when rainfall was lower. Antioxidant activity remained consistent throughout the harvesting period. Phenolic compounds (simple and anthocyanin color) results show an increase of about 2000 mg/L throughout the harvesting period, with August 17th having high values all three years.

From the analysis of these tests, the optimal harvest time for Aronia berries is late August. This allows for the appropriate amount of antioxidants, phenolics, as well as a larger proportion of sugar to acid to accumulate in the berries for sensory and fermentation purposes. A controlled amount of water (via drip irrigation in 2012) yielded better results over the entirety of the study for amount of sugar and acid, with an increase in amount of sugar and decrease in acid. VSM (Volumetric Soil Moisture) across all three years (with very different weather patterns) showed

the strongest correlation to aronia berry composition and should be considered when determining when to harvest the berries. The goals of this project were met.

Beneficiaries

Groups that benefit from the completion of this project include The Midwest Aronia Berry Association, Winding Creek farm in Belmond, Iowa, any aronia berry growers, food companies using aronia berries, plant breeders, consumers, and Iowa State University. These groups are benefitted from the discovery of new knowledge, learning about antioxidant concentrations in aronia berries, how to better grow and harvest aronia berries, and having a better quality in the products made from them. The potential economic impact of the project would be due to having better quality products in the market, by choosing the correct harvest date for color and/or antioxidant concentration and/or sensory properties.

Lessons Learned

Over the course of completing this project, the project staff was able to gain a better perspective on the growing and harvesting processes of aronia berries, as well as the tests used to determine antioxidant concentrations. It was also found that the color of the berries and/or juice was not a viable measurement standard for optimum harvest time for aronia berries, due to the deep purple color. When juice color was assessed by a Hunter Colorimeter, all samples, regardless of time of harvest, could not be significantly distinguished by color. Weather is a variable that cannot be controlled and has an effect on determining optimal harvest time. We had many positive experiences working together, with the undergraduate students from Iowa State University, the internship students from France, and the farmers. Great collaboration between the groups was made and helped with problem solving, data collection and data evaluation.

Contact Person

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Additional Information

The results of this project have been presented at the Midwest Aronia Association Conference held in Moline, Illinois on March 19th, 2015 by Dr. Lester Wilson. The presentations were "Harvesting Aronia: Optimal Timing, Proper Handling, Post-Harvest Options" and "Labeling: Current and New Labeling Proposals".

An abstract was accepted by the Institute of Food Technologists for the National Meeting in Chicago in summer 2015, and it was presented by the research team on July 12, 2015. See poster attached. A manuscript and an Extension Bulletin are in preparation.

IOWA STATE UNIVERSITY
Department of Food Science and Nutrition

Institute of Food Technologists
Summer 2015

Dr. Lester Wilson, Camille Liebaut, Baptiste Randriamampita, Hélène Moquet, Nicole Eagin, Christine Eckert, Robert Lysne, Lauren Millen, Kendall Ryan, Jessica Schaumburg, Dr. Gail Nonnecke

IOWA STATE UNIVERSITY
Center for Crops Utilization Research

Determining the Optimum Harvest Time for Aronia Berries to Maximize Their Antioxidant and Sensory Properties

BACKGROUND

Aronia berries are a trending super fruit catching the eyes of many consumers, farmers, and researchers. Aronia berries are known for their high levels of antioxidants, which may be beneficial in preventing disease and maintaining health. They also have the potential of being a strong coloring agent due to their deep red color. The Iowa State University Department of Food Science and Human Nutrition has been involved in aronia berry studies of antioxidant and sensory properties from 2012 to 2014. The purpose of this project was to look at various properties of aronia berries including pH, total acidity, sugar content, phenolics and antioxidant activity to determine the optimum time of harvest. Local weather patterns were also analyzed for their effect on optimum harvest time.

MATERIALS AND METHODS

Over the course of the experiment, aronia berries from Winding Creek farm in Belmont, Iowa were analyzed. Frozen samples were received weekly. They were labeled by harvest date and row number. The berries were then juiced, placed in a glass breaker, wrapped in plastic wrap and aluminum foil, and refrigerated or frozen. The following were tested and analyzed: pH to measure acidity, degrees Brix to measure sugar concentration, Sugar/Acid ratio to measure sensory acceptability, total acidity, Trolox equivalence (TE) to measure the antioxidant concentrations, and High Performance Liquid Chromatography (HPLC) to determine amounts of phenolics and anthocyanins in the juice. Weather at Winding Creek was also monitored, which included rainfall and temperature.

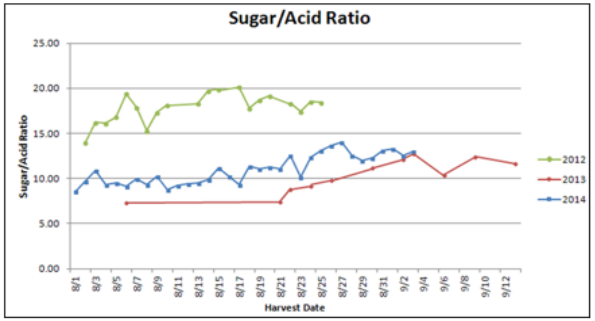


Figure 1: Sugar to acid ratio of harvested berries over three years.

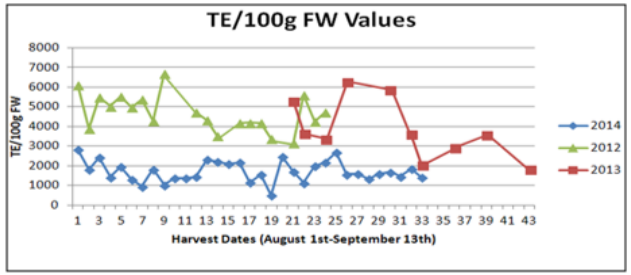


Figure 2: Antioxidant activity analysis of three years of harvest.

RESULTS AND DISCUSSION

Generally, pH had a slight increase of about 0.25-0.5 throughout the harvesting season. Total acidity remained consistent through the harvesting season. However, total acidity was higher in years when there was a higher amount of rainfall at the beginning of the growing season. Degrees Brix generally increased by about 4-7 degrees Brix throughout the harvesting season. Sugar concentrations from year to year also appear higher when rainfall was lower. Antioxidant activity remained consistent throughout the harvesting period. Phenolic compound results show an increase of about 2000 mg/L throughout the harvesting period. However, this is ultimately dependent on the weather during the growing season. A controlled amount of water (via drip irrigation in 2012) yielded better results over the entirety of the study for amount of sugar and acid. Acid increased at a slower rate than sugar which lead to an overall increase in the Sugar/Acid ratio. There was a desired increase in amount of sugar and decrease in acid.

CONCLUSIONS

Based on the results, it was concluded that the optimum time of harvest for aronia berries is the end of August. This allows for the antioxidant levels to stabilize as well as a larger proportion of sugar to acid to accumulate in the berries. This research is significant to the food industry because there is minimal knowledge on the harvesting and use of aronia berries. This fruit could be used to improve nutritional value of various foods when optimally harvested.

Acknowledgements: Funds for this project were provided by the USDA Specialty Crops Block Grant Program through the Iowa Department of Agriculture and Land Stewardship. Special thanks to Aronia farmer Larry Turner, the Midwest Aronia Association, and Dr. Wilson's Aronia Team.

PROJECT REPORT(S)

PROJECT TITLE

Creating, Marketing and Promoting the Iowa Loess Hills AVA Wine Trail

PROJECT SUMMARY

In 2010, Western Iowa Grape Growers and the Golden Hills RC&D partnered to develop and submit a petition to the US Tax and Trade Bureau (TTB) to designate the Loess Hills of Western Iowa as a federally recognized American Viticultural Area (AVA), an area encompassing 11 counties in Western Iowa. It is known for its unique, well-drained soils of sandy loam and wind formed hills rising over 200 feet, providing the air and drainage necessary for producing high-quality wine grapes.

The designation of an AVA provides grape growers and wineries with a regional identity that has proven successful across the country to form a foundation and clear focus for the region's industry. The key to a successful AVA is a strong marketing and promotion campaign. This project created the required foundation for the Western Iowa Grape Growers and Wineries to establish the "Loess Hills District AVA Wine Trail", which will serve as the primary vehicle for promoting the unique value added products produced from the grapes grown in this wine region. This is the first and only wine trail in Iowa that is founded and solely based on the use of Iowa grown grapes.

Recently surpassing 100 operating wineries, Iowa wines are becoming increasingly sophisticated, and the results are showing in their award-winning products. The state's wine industry has received numerous awards locally, nationally and internationally. Iowa's wine industry adds an important diversification to Iowa's agricultural sector offering agri-tourism opportunities while providing a value added product. Iowa's winery and vineyard industry had an estimated $234.3 million estimated economic impact in 2011.

Iowa wine production continues to rise each and every year. Unfortunately, grape growers in the state have not equally benefitted from this industry expansion given Iowa's liberal definition of native wine. Grape production in Iowa continues to expand but it is not keeping pace with the state's increasing wine production. This means the industry is becoming less dependent on Iowa grapes and more dependent on foreign grapes, and risks losing its legitimate claim as an agricultural concern in the state. According to a study conducted by MFK Research of St Helena, California, in 2011 Iowa wineries produced 360,000 gallons of wine and Iowa had a total of 600 acres of planted grapes. With each acre producing 2 to 3 tons and each ton producing 125 gallons of wine (600 acres X 2.5 tons X 125 gallons = 187,500 gallons) Iowa produced only 187,500 gallons of "Iowa grown" wine. Best case, only 62.5% of the wine produced in Iowa was made with Iowa grown grapes. The percentage is actually much lower because not all of those 600 acres are of bearing age and this calculation does not account for grapes lost to hail, disease, and animal predation. While many Iowa wineries began their operations based on use of locally grown grapes, the lure of inexpensive juice from Europe, South America and other wine regions is often very tempting to the bottom line. With no state requirement for Iowa native wineries to use Iowa grown grapes, it is difficult for Iowa growers and the wineries that use Iowa grapes to develop a marketing and

promotion effort like growers and wineries do in the more famous wine regions like Napa Valley and Sonoma County.

From Iowa agriculture's perspective, the concern is that the term "Iowa Wine" has become meaningless. In state regulation and to wineries that use foreign grapes, it means wine "produced" in Iowa regardless of where the grapes came from. From a consumer standpoint, most people assume that when they buy a bottle of wine from an Iowa winery it was made from Iowa grapes and their purchase is supporting local grape growers. Often, this is not the reality. Wineries that use foreign grapes have no incentive to change because they are purchasing grapes at a reduced price while enjoying the increased value obtained because consumers assume it was made with Iowa grapes. This also puts wineries that do use Iowa grapes at a competitive disadvantage. Left unchecked, more and more wineries will choose to start using foreign grapes and the recent reintroduction of vineyards and grapes as a specialty crop in Iowa could be reversed. WIGGA sponsors several award programs and promotional campaigns to bring this fact "front of mind" with the consumers of "Iowa" wine.

Iowa vineyards have not yet matured to the point where they can compete with foreign grapes. The vineyards in these countries have had decades (and in some cases centuries) to develop their industry. Their vineyards are much larger and mechanization is used to hold down labor costs. Most vineyards in Iowa are less than 5 years old. In time our industry will mature and vineyard owners will transition their operations from hand labor to mechanical systems, which will level the playing field with foreign competition. Iowa grape growers are not seeking regulatory protection but they do desire the ability to promote their product in an honest and fair manner to the consumer while preventing foreign grapes from being passed off as Iowa wine. While consumers increasingly want to "buy local"; when it comes to Iowa wine they may unwittingly be purchasing a foreign product. Based on market research from some of our "Iowa grape only" wineries, we believe that given the choice, most Iowa consumers will choose to purchase a bottle of wine produced by locally grown grapes.

This issue prevents growers and grower associations like WIGGA from being able to promote their product. Today, when growers help promote the Iowa wine industry or any of the current Iowa wine trails; they are also supporting foreign grapes. This puts Iowa grape growers in a position of having to support the foreign growers with whom they are competing. Ask an Italian grape grower what they think about promoting Iowa grown grapes!

A properly marketed AVA will solve this problem. It not only increases the value of both the grapes and the wine produced from those grapes but provides growers and wineries a regional identity that they can promote. Consumers will be confident that they are purchasing a truly local product whose content is governed by federal law. According to a study conducted by the Leopold Center for Sustainable Agriculture, an AVA increases the value of a bottle of wine by $1 to $2 if the bottle is labeled with the AVA name as the appellation of origin. Wineries can place the AVA name on their label if 85% of the grapes used to make that wine were grown within the AVA. This provides the mechanism whereby grape growers and wineries using Iowa grapes can both work together to market and promote their products without having to promote other producers who are not using locally produced grapes.

- ☐ **If the project built on a previously funded project with the SCBGP or SCBGP-FB describe how this project complemented and enhanced previously completed work.**

The SCBG funds were used solely be used to create, promote and market the Loess Hills District AVA Wine Trail and will not duplicate previous efforts. This project does not build on a previously funded SCBG project.

PROJECT APPROACH

Throughout the project, Golden Hills RC&D worked in collaboration with the Western Iowa Grape Growers Association (WeIGGA). WeIGGA was established in October 2000 to promote the wine industry and other value added products of grapes in western Iowa. They have a current membership of 50 growers and affiliates. WeIGGA and Golden Hills jointly established the Loess Hills District AVA Wine Trail Steering Committee and hosted regular meetings for the duration of the project. The committee issued a request for qualifications for consultants to develop the brand, logo and marketing materials. The committee opted to partner with two consultants: Shive-Hattery to develop the logo and brand concept, wine trail map, bottle labels and marketing brochure. Mediatrik was engaged to provide the web version of the wine trail based on the graphics package developed by Shive-Hattery. Final approval of marketing material and other items was a joint approval between Golden Hills RC&D and WeIGGA.

This project solely benefitted wineries and vineyards within the proposed Loess Hills District AVA region. Marketing materials will support Loess Hills grape production and locally crafted wines using these grapes. By marketing the wineries and vineyards participating on the trail, we anticipate increased patronage at the associated wineries as well as increased purchase and consumption of AVA specific wines.

Western Iowa Grape Growers Association (WeIGGA) led and executed this project. WeIGGA was established in October 2000 to promote the wine industry and other value added products of grapes in western Iowa. They have a current membership of 50 growers and affiliates. Golden Hills RC&D provided project oversight. The *Creating, Marketing and Promoting the Iowa Loess Hills AVA Wine Trail* Project was overseen by Golden Hills RC&D, a community non-profit with a thirty-four year history of successful project management in rural southwest Iowa. Organizational meetings were convened by WeIGGA, with Golden Hills providing fiscal management, budgeting and meeting facilitation. Steering committee members were authorized by the WeIGGA membership to determine final product design and approach. Updates on the project were provided at WeIGGA membership meetings. Golden Hills facilitated the request for qualifications and consultant contracting process and coordinated interviews of potential consultants with the steering committee. Golden Hills provided the point of contact with Shive-Hattery and WeIGGA provided the point of contact for Mediatrik to ensure consistent and timely communication among the partners.

GOALS AND OUTCOMES ACHIEVED

This project was a collaborative effort between the Western Iowa Grape Growers Association and Golden Hills RC&D to develop a marketing strategy and materials to support the Loess Hills District AVA Wine Trail. Project activities within the scope of work were developed through this collaboration. Ongoing goals of materials and strategies developed within this partnership include:

- Establish a regional identity that growers and wineries can work together to support
- Create a fair marketing environment for Iowa grape growers and wineries using Iowa grapes
- Educate consumers so they can make an informed choice when they purchase Iowa wine
- Level the playing field with foreign grape growers
- Reverse trend of state dependence on foreign grapes
- Provide significant sustainability to Iowa vineyards and the specialty crop of grapes

Work plan activities were conducted as follows:

Project Activity	Narrative	Timeline
Assemble the Loess Hills AVA Wine Trail Steering Committee	Western Iowa Grape Growers Association and Golden Hills RC&D formed the steering committee for this project in November 2012. This group has been integral to leading, selecting consultants and implementing the marketing strategy for the anticipated AVA designation.	Task Completed November 2012
Attend monthly Loess Hills AVA Wine Trail Planning Meetings	The Loess Hills AVA Wine Trail Steering Committee met 8 times in 2014 and 4 times in 2015. The steering committee consisted of four producers/members of WeIGGA and one representative of Golden Hills RC&D. Regular contact was maintained throughout the process with email updates and correspondence.	Task Completed
Develop a Request for Proposal for a Marketing Consultant	Loess Hills AVA Wine Trail Steering Committee released a Request for Qualifications for a marketing consultant to lead the planning process as well as develop the branding and web presence for the project. RFQ's were issued March 2014 with interviews conducted in April 2014.	Task completed April 2014
Interview and Select Marketing Firm/Team	After interviewing several qualified consultants, the steering committee chose to use two contractors to meet the objectives of the project. Mike Lanning, with Shive Hattery was selected to develop the brand/logo and printed materials such as shelf talkers, wine trail map, signage and brochure. Mediatrik was selected to develop the mobile-friendly web site based on graphic elements and specifications designed by Shive Hattery. Both contractors have successfully partnered toward the project. Golden Hills RC&D administered contracting with both firms and assisted in coordinating their combined efforts toward the larger marketing plan.	Task Completed April 2014

Establish the Loess Hills AVA Wine Trail route and participating wineries/vineyards	Loess Hills AVA Wine Trail Steering Committee confirmed the participating wineries and vineyards for inclusion in the printed and mobile map. In the time since the project was funded, several wineries have closed, changed ownership and new ones have been developed. Nine wineries agreed to produce and sell AVA compliant wines to be included on the wine trail.	Task Completed February 2015
Develop Marketing Material to include AVA Logo, AVA Shelf Talker, Wine Trail Map and Wine Trail Pamphlet	Shive Hattery developed several options for logo and companion marketing materials. The steering committee selected its preferred logo and color scheme and the materials. (Samples included with report)	Task Completed February 2015
Develop a Loess Hills AVA Wine Trail Website	The steering committee selected Mediatrik to design the interactive wine trail and AVA web site based on graphic design provided by Mike Lanning with Shive Hattery. The two contractors successfully worked together to develop complementary marketing products to support the overall plan. The site is still under development and has not gone "live" yet, pending official AVA designation. http://weigga.businesscatalyst.com/	Task Completed April 2015
Establish Date and Theme for Loess Hills AVA Wine Trail Kick-Off Event	The committee chose the newly opened Bodega Victoriana Winery as the site for the kick-off, scheduled for April 30, 2015. Invitation list was developed of elected officials, consumers, media, economic development partners, tourism and businesses.	Task Completed March 2015
Advertise (Print, Radio, TV) Loess Hills AVA Wine Trail and Event	Press releases were submitted to regional news outlets, including radio, television and print. A social media campaign through Facebook was used to invite attendees and generate interest.	Task Completed March – April 2015
Host Loess Hills AVA Wine Trail Kick-Off Event	The event was held on April 30, 2015 at Bodega Victoriana. 24 people attended. A presentation was provided by Doug Grave and Andrew Hrasky about the grant, wine trail project and WeIGGA, as well as anticipated timeline for AVA designation.	Task Completed April 30, 2015

Outcome #1 – Goal: Establish the Iowa Loess Hills AVA Wine Trail and market it on a local and regional level (GOAL). The Iowa Loess Hills AVA application is currently under review by the Federal Tax and Trade Bureau and no active marketing of the Wine Trail has been undertaken. Members of the Western Iowa Grape Growers Association have indicated a strong interest in establishing a Wine Trail (BENCHMARK). Form the Iowa Loess Hills AVA Wine Trail Steering Committee, identify the Wine Trail route and produce marketing material (TARGET. A sign-in sheet was kept at regular meetings (PERFORMANCE MEASURE).

The Iowa Loess Hills AVA Wine Trail Committee was represented by Doug Grave, Bodega Victoriana; Clifton Burkhart, Burkhart Vineyards; Andrew Hruska, Prairie Crossing Winery; and Michelle Wodtke Franks, Golden Hills RC&D. Consultants are Mike Lanning with Shive Hattery and Katie Zulanas with Mediatrik. Committee hours contributed toward the project - 112 hours, In-kind value – (@ $22.55 rate) $2,525.60

The committee developed and determined final marketing product content and layout for printed materials and website, with consultants. Distributed complete maps and brochures to customers and tourism venues. Planned and hosted the kickoff event/press conference introducing the wine trail map and promotional products to the region on April 30th.

Outcome #2 – Increase resident consumption of Iowa wines to match the national average (GOAL). Iowa residents currently lag behind the national average by more than five bottles per person per year (BENCHMARK). Increase purchase and consumption of Iowa wine by two bottles per person per year by 2013 (TARGET), and match the national average of consumption wine by 2015 (TARGET) to be measured by Iowa State University's Annual Survey "Iowa Native Wine Production & Sales Report" (PERFORMANCE MEASURE).

At the end of June 2014, the number of gallons of wine used by family for the State of Iowa was 3,218, and increase of 234 gallons per year since 2012. Wine sales for the year ending 2014 is 288,226 gallons up from 265,686 gallons the year ending June 2013 and 267,209 gallons for the year ending June 2012. Iowa's estimated June 2013 population consumes about 1.464 gallons of wine per person while the US average is 2.73 gallons of wine per person.[1] (Iowa State University Extension & Outreach, Value Added Ag Program, C. Tordsen, August 2014) (1) based upon Bureau of the Census estimated resident population. Per capita consumption will be higher is based on legal drinking age population.

Western Iowa Grape Growers and Golden Hills RC&D will continue to track state data as the marketing efforts are launched into full force. Because of the delay in TTB designation of the AVA, the full impact of the marketing efforts were not realized within the term of the grant award. Through increased awareness and consumer engagement, we would expect the state wine consumption levels would increase to a level closer to the national average.

BENEFICIARIES

The Loess Hills District AVA Wine Trail Committee was represented by Doug Grave, Bodega Victoriana; Clifton Burkhart, Burkhart Vineyards; Andrew Hruska, Prairie Crossing Winery; and Michelle Wodtke Franks, Golden Hills RC&D. Consultants were Mike Lanning with Shive Hattery and Katie Zulanas with Mediatrik.

WeIGGA has a current membership of 50 growers and affiliates. By raising awareness, marketing to the Omaha/Council Bluffs metro region and providing incentive to develop local wines made with Loess Hills grown grapes, the larger membership will benefit. Consumers from the region will benefit by becoming educated consumers and enticed to support this growing specialty crop industry.

This project will have a direct impact on nine wineries in western Iowa, who have agreed to produce and sell AVA compliant wines from grapes grown in the Loess Hills. These wineries include:

1. Bodega Victoriana Winery, Glenwood, Iowa;
2. Prairie Crossing Vineyard and Winery, Treynor, Iowa;
3. Wabash Wine Company, Shenandoah, Iowa;

4. Old Town Vineyard and Winery, Ida Grove, Iowa;
5. Prairie Hawk Vineyards, Council Bluffs, Iowa;
6. Vine Street Cellars/Blackwing Vineyard, Glenwood, Iowa;
7. Sugar Clay Winery and Vineyards, Thurman, Iowa
8. Danish Countryside Vines and Wines, Exira, Iowa; and
9. Breezy Hills Winery, Minden, Iowa

This project will impact the State's approximately 415 vineyards and 103 wineries involved in growing and producing a value added product from the specialty crop of grapes. The economic impact of Iowa's wine and vineyard industry is estimated at $234.3 million. According to a Leopold Center for Sustainable Agriculture study, an AVA increases the value of both grapes and wine. Typically, wines that include a specific AVA appellation of origin on the label bring $1 to $2 more per bottle at the winery. Wineries produce about 125 gallons of wine per ton of grapes. At five bottles of wine per gallon, the AVA designation will add $625 to $1250 of value per ton of grapes produced within the designated region (125 gallons X 5 bottles = 750 bottles @ $1 -$2 increase each). An additional $625 to $1250 of value per ton of grapes will provide a strong incentive for wineries currently using foreign grapes to begin transitioning to Iowa grapes. Assuming we can equal Iowa's current level of wine production with Iowa grape wine only in time, this represents $2.7 million in direct economic value add ($1.50 per bottle X 5 bottles per gallon X 360,000 gallons).

An ancillary benefit of this project is that it represents the first time the Iowa vineyard and wine industry will be professionally marketed to the 1.3 million people living in the greater Omaha/Council Bluffs metro area. Most people in Omaha are still not aware of Iowa's wine renaissance and that just across the river there are 13 wineries within a one hour drive. This project and its marketing of the Loess Hills District AVA Wine Trail will educate this untapped market. The $2.7 million in direct economic value added will have an exponential impact.

Currently, Iowa's per capita wine consumption trails the national average by more than five bottles per person per year. Ongoing marketing of the Loess Hills District AVA Wine Trail and the resurgence of the native wine industry in Iowa will bring our resident wine consumption closer to the national average. This represents a potential of $120 million in wine sales.

LESSONS LEARNED

In 2010, Western Iowa Grape Growers and the Golden Hills RC&D partnered to develop and submit a petition to the Tax and Trade Bureau (TTB) to designate the Loess Hills of Western Iowa as a federally recognized American Viticultural Area (AVA), an area encompassing 11 counties in Western Iowa. The application was accepted as "perfected" by the TTB on November 26, 2013. Since then, the petition lingered in the petition "pipeline" awaiting the next phase of rulemaking and inclusion into the Federal Register. In the interim, the project proceeded with developing marketing materials in support of the Loess Hills District, but was not allowed any references to the AVA designation or the petition in progress. This posed a challenge to the project, since we proceeded with material and logo development under the assumption that we will be designated, but materials were designed with a dual purpose – to promote the anticipated district and its producers in the short term while we waited, and also at the ready to launch the full campaign once the TTB approves the designation.

For the remainder of the grant project, the steering committee and contractors completed marketing plans and products by April 2015. The group finalized the marketing materials and wine trail map, printed and launched within the Council Bluffs/Omaha market in conjunction with a kickoff event. AVA designation had still not been approved by that date, so the group launched the Loess Hills District promotion without reference to the AVA petition. This final effort was launched prior to the summer 2015 travel season, where we will continue to partner with marketing and promotion opportunities through Western Iowa Tourism Region and Travel Iowa.

As of July 18, 2015, the AVA petition for proposed rule finally entered into public comment period, which will close August 17. The Loess Hills District docket number is (TTB-2015-0009). Once the comment period is over, if we don't receive any substantive opposing comments, TTB will start the final rule phase. It is anticipated that the final rule phase will be complete by fall of 2015. Once the AVA designation is confirmed, the promotion with the products developed under this grant will begin in earnest, first to the Council Bluffs/Omaha market and secondarily to the regional metropolitan areas such as Des Moines and Kansas City. Labeling with the AVA designation sticker will be monitored and approved by the steering committee of this project, to ensure authentic and appropriate attribution of wines made with Loess Hills District grapes. Matching funds contributed by WeIGGA for this project and into the future will ensure the marketing products will be placed in multiple media outlets, such as billboards, retail and with travel industry partners.

The biggest unexpected outcome was the long process to achieve AVA designation for the region. When this proposal was submitted, it was the expectation that designation would occur within the timeframe of the project, allowing for a seamless marketing and promotion effort. Unfortunately, the petition for AVA designation has just now been moved to the public comment period prior to official designation. Because the region has not been officially designated, the project committee was unable to embark on large scale promotion in the event that it would jeopardize the AVA petition process and, perhaps, shut down the designation all together. Because of this, the wine trail brochure was developed to be used prior, as well as after the anticipated designation, in order to begin promoting the wine trail.

Goals for the project were met, although the timeframe for the project required an extension due to the long AVA designation process. We fully anticipate receiving the AVA designation, however that will occur after the completion of this project. Lessons learned include allowing ample time to navigate the AVA process.

This project successfully launched an ongoing partnership between WeIGGA and Golden Hills RC&D to reinvigorate the grape growing renaissance within the Loess Hills region. The marketing products and strategies developed through this funding will go far to maintain the momentum of that renaissance. It is our hope that remaining members of WeIGGA who still use foreign sourced grapes in their "Iowa wines" will see the benefit of truly supporting locally and develop deeper alliances with vineyards. The group is eager to receive the official AVA designation, and by having products to promote it at the ready, we will be able to quickly launch into increased outreach and marketing.

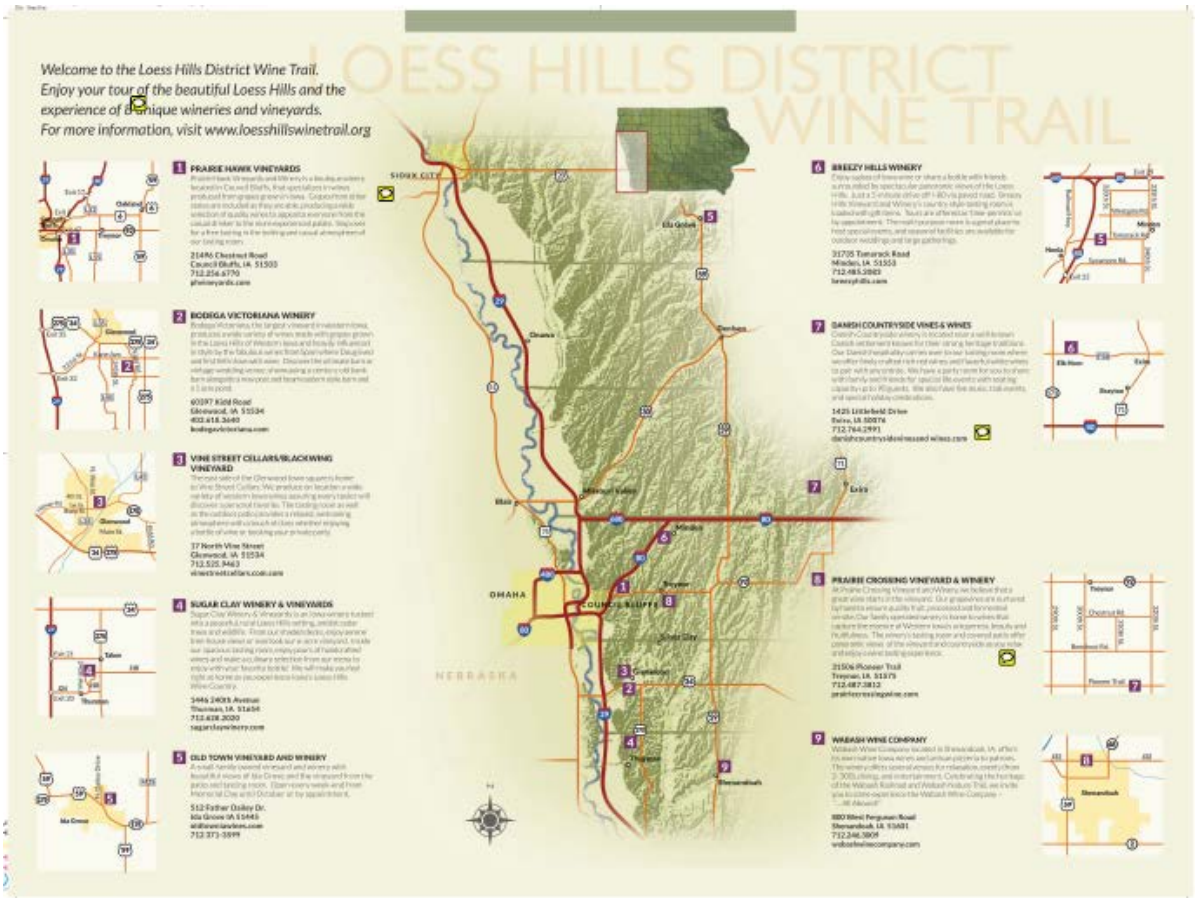
CONTACT PERSON

- ☐ Michelle Wodtke Franks

- (712) 482-3029
- michelle@goldenhillsrcd.org

ADDITIONAL INFORMATION

Attached



LOESS HILLS DISTRICT WINE TRAIL

© Ken West www.sweetlightpillars.com

PRAIRIE HAWK VINEYARDS

Prairie Hawk Vineyards and Winery is a boutique winery located in Council Bluffs, that specializes in wines produced from grapes grown in Iowa. Grapes from other states are included as they are able, producing a wide selection of quality wines to appeal to everyone from the casual drinker to the more experienced palate. Stop over for a free tasting in the inviting and casual atmosphere of our tasting room.

21496 Chestnut Road
Council Bluffs, IA 51503
712.256.6770
phvineyards.com

BODEGA VICTORIANA WINERY

Bodega Victoriana, the largest vineyard in western Iowa, produces a wide variety of wines made with grapes grown in the Loess Hills of Western Iowa and heavily influenced in style by the fabulous wines from Spain where Doug lived and first fell in love with wine. Discover the ultimate barn or vintage wedding venue, showcasing a century old bank barn alongside a new post and beam eastern style barn and a 1 acre pond.

60397 Kidd Road
Glenwood, IA 51534
402.618.3640
bodegavictoriana.com

VINE STREET CELLARS/BLACKWING VINEYARD

The east side of the Glenwood town square is home to Vine Street Cellars. We produce on location a wide variety of western Iowa wines assuring every taster will discover a personal favorite. The tasting room as well as the outdoor patio provides a relaxed, welcoming atmosphere with a touch of class whether enjoying a bottle of wine or booking your private party.

17 North Vine Street
Glenwood, IA 51534
712.525.9463
vinestreetcellars.com.com

DANISH COUNTRYSIDE VINES & WINES

Danish Countryside winery is located near a well-known Danish settlement known for their strong heritage traditions. Our Danish hospitality carries over to our tasting room where we offer finely crafted rich red wines and flavorful white wines to pair with any entrée. We have a party room for you to share with family and friends for special life events with seating capacity up to 90 guests. We also have live music, trail events, and special holiday celebrations.

1425 Littlefield Drive
Exira, IA 50076
712.764.2991
danishcountrysidevinesand wines.com

SUGAR CLAY WINERY & VINEYARDS

Sugar Clay Winery & Vineyards is an Iowa winery tucked into a peaceful, rural Loess Hills setting, amidst cedar trees and wildlife. From our shaded decks, enjoy serene tree-house views or overlook our 6-acre vineyard. Inside our spacious tasting room, enjoy pours of handcrafted wines and make a culinary selection from our menu to enjoy with your favorite bottle! We will make you feel right at home as you experience Iowa's Loess Hills Wine Country.

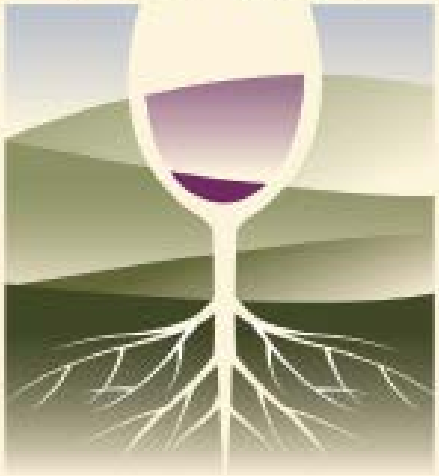
1446 240th Avenue
Thurman, IA 51654
712.628.2020
sugarclaywinery.com

BREEZY HILLS WINERY

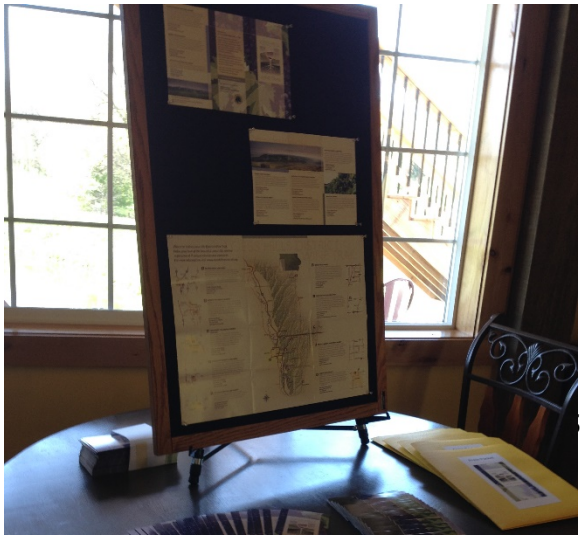
Enjoy a glass of Iowa wine or share a bottle with friends surrounded by spectacular panoramic views of the Loess Hills. Just a 5-minute drive off I-80 via paved road. Breezy Hills Vineyard and Winery's country style tasting room is loaded with gift items. Tours are offered as 'time-permits' or by appointment. The multi-purpose room is a great place to host special events, and seasonal facilities are available for outdoor weddings and large gatherings.

31735 Tamarack Road
Minden, IA 51553
712.485.2083
breezyhills.com

LOESS HILLS
DISTRICT



WINE TRAIL



IDALS Specialty Crop Block Grant Program
Iowa Department of Agriculture and Land Stewardship

PROJECT TITLE:

GAP/GHP Cost-Share Program for NE Iowa Fruit & Vegetable Growers

Grant Period: Dec 2012 – Dec 2014

Partner Organization:
Winneshiek County Ag Extension District (the local Iowa State University Extension partner) on behalf of the NE Iowa Food and Farm Coalition, 325 Washington Street, Decorah, IA 52101

Project Summary:
Fruit and vegetable growers are facing pressure to comply with food safety standards, known as Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs). Wholesale buyers are increasingly requiring third-party GAPs certification. Although certification is still voluntary, nearly everyone in the produce industry agrees that mandatory certification is on the horizon for those who sell wholesale.

Third party certification is expensive for small-scale farmers. This project will offer a cost-share program to Iowa specialty crop growers to assist with the expense of food safety certification. Currently, Iowa does not have any USDA GAP auditors in the state. It is estimated that GAP audits of Iowa farms range from $800-1200 each year due to travel costs. By the end of the project, eight farms and one distribution facility received assistance with certification costs. Four farms received certification for the first time.

Project Purpose:
Previous SCBG research in northeast Iowa as shown that GAP certification for Iowa farms regularly exceeds $1000 due to high travel costs to bring in auditors from out-of-state. The research has also shown that a GAP cost-share program is an effective way to lower those costs.

In this project, existing and new specialty crop growers had access to funds to defray some of the costs related to a successful food safety audit.

As a result of certification, farmers will have increased access to markets for their products because they will be able to satisfy the food safety requirements of different buyers. Farmers will be able to access larger markets and larger distribution companies.

Food buyers at distributors, grocery stores, food service, schools and other institutions will have increased confidence in buying produce from local farmers.

Project Activities:
The cost-share program was developed through previous SCBG funding. The application and promotional materials were updated and advertised widely on partner websites including the Iowa GAP Center blog hosted by ISU Extension.

State education partners were aware of the program so they can refer farmers. Personal emails and phone calls were sent to farms certified in the past.

Goats and Outcomes Achieved:
The goal of this project was to maintain a GAP/GHP cost-share program to encourage more specialty crop farmers to become GAP/GHP certified or maintain their certification.

When this grant proposal was written, we were specifically working with a local farmer cooperative (GROWN Locally, GL) as they were scaling-up production for institutional and wholesale markets. GL was the primary beneficiary, although any Iowa specialty crop farmer was encouraged to participate.

Goal 1: 60% increase in number of farms that are GAP certified.
Performance Measure: Number of farms requesting cost-share for passing an audit.
Benchmark: 12 NE Iowa farms were GAP certified in 2010.
Target: 20 GAP certified farms in 2 years.
Outcome: 11 farms were GAP certified as of 12/9/14. One distribution facility was Primus GAP certified. 100% of the GAP certification cost was covered by grant funds.

We did not meet our goal due to various circumstances. Most notably, the specialty crop landscape and demand for food safety changed since the time of the application.

1. At the time of application, the primary driver for the GROWN Locally growers to be certified in NE Iowa was the potential to work with a large distribution company. In 2010, thirteen farms were USDA GAP certified only to find that the demand had disappeared due to company reorganization and change in management. Extremely frustrated, some farmers simply refusing to even consider certification after that point.

2. Mother Nature delivered a one-two punch in 2011 and 2012. The drought in 2011 left many farms with no crops to certify. The wet spring of 2012 prevented many crops from even getting into the ground. Even with the promise of funds to cover certification costs, some farmers are not willing to consider maintaining their certification. At least one farmer has gone out of business, and others have scaled back production. Because of this significant decrease in sales, the farmer cooperative has lost both of its coordinators and several growers. That specific group of farmers is currently facing the task of recruiting more growers and reestablishing relationships with buyers.

3. The looming changes with the Food Safety Modernization Act (FSMA) has some growers seriously considering their future. As an educator, I can assure them that being proactive with food safety can be a great way to meet the future challenges head-on. Yet, the fear of the unknown leaves several farmers paralyzed with indecision.

Goal 2: Growers will sell $50,000 more in produce in one year
Performance Measure: Growers will each verify their annual sales in December 2013, and December 2014.
Benchmark: 2010 annual sales of a grower cooperative was $130,000
Target: $100,000 increase in sales over two years.

Outcome:
As mentioned previously, weather extremes, changing market demand and cooperative membership dramatically affected the progress toward this goal. The cooperative's sales are down almost 40% from the benchmark.

However, a new food hub is emerging as the next leader for GAP certification for northeast Iowa farmers and shows promising potential for increasing access to markets where GAP certification is required.

Iowa Food Hub (IFH) is an innovative local food distribution business that provides the infrastructure and systems to allow farmers to work together to sell and distribute their products, and access larger markets.

IFH was launched in October 2013. They source products from over 50 farms and grew from $96,000 in sales in 2013 to over $300,000 in sales of goods and services in 2014. Sales include produce, meat, dairy, eggs and baked goods.

Because of the late season audits, we were unable to determine any direct increase in sales related to certification by the time of this report.

Next steps
Because of their rapid growth, and success in securing funding to develop Farm to School markets in NE Iowa, the Iowa Food Hub was selected as one of eight food hubs in the country to be early adopters of the Group GAP model.

In Group GAP, a food hub or support organization collaborates with producers to establish site-specific best practices for complying with a food safety standard. These best practices are formalized into a food safety quality management system (QMS) built to an international standard that can be measured, analyzed, reviewed, and continually improved.

After establishing the QMS, the central entity coordinates training and on-farm implementation of the QMS procedures, monitors their ongoing usage, and manages their recording and reporting. The central entity internally audits each farm's compliance with the group QMS, while USDA externally audits the management system and its implementation.

Group GAP spreads the cost of GAP certification across the group. The more members in the group, the larger the cost savings. The biggest challenge with establishing a group is the up-front development and implementation costs. It is estimated that the Group GAP model can reduce the cost of certification to $200-300 per year.

Six of the eleven farms certified in this project participated because of the new direction of being part of the Iowa Food Hub Group GAP.

Beneficiaries:
Eleven farms were GAP certified in 2014. (Up from 3 farms certified in 2013).

- 10 farms were USDA GAP certified; 1 farm was Primus certified.
- 8 farms received GAP cost-share assistance through this grant. The other farms did not want to participate in the program or were ineligible.
- Seven farms were previously certified. Four farms were certified for the first time; these were all new farms--less than two years in production.

The farms benefitted from the project because GAP certification opened up new markets to them including distributors, food service, large grocery chains, and food manufacturers.

Lessons Learned:
GAP cost-share remains the best option to reduce costs of certification for Iowa specialty crop growers. During this project, certification costs ranged from $510 to $1288. The lower costs were realized because those growers coordinated their audits to share travel costs of an out-of-state auditor (i.e. six audits performed in three days). The cost-share program also allows farmers to choose the certification agency that best fits their buyer's needs (i.e. USDA vs. Primus).

Group GAP appears to be the next evolution in food safety certification for growers in Iowa. The shared-risk and internal inspection model will allow more growers to become GAP certified while maintaining the certification costs at a reasonable level. GAP cost-share will continue to be an important tool for both group and non-group farmers to manage the certification costs with the greater cost savings occurring for those farms that are not part of a group.

The administration of a cost-share program is relatively low cost provided the hosting agency is willing to contribute a staff person's time to coordinate.

Contact Information:
Teresa Wiemerslage, Regional Program Coordinator
(563) 794-0599, wiemer@iastate.edu

Additional Information:

USDA GAP certified farms, 12/9/14

United States						
Iowa						
Gilt's Fresh	2375 325th Ave	Cresco, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities, House Packing Facility	August 29, 2014	Broccoli, Brussels Sprouts, Cucumbers, Lettuce, Onions, Peppers, Potatoes, Pumpkins, Summer Squash, Tomatoes, Watermelons, Winter Squash
Gordon's Garden	14009 120th Street	Maynard, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities, House Packing Facility, Storage and Transportation	August 29, 2014	Beans, Beets, Broccoli, Cauliflower, Cucumbers, Eggplant, Kale, Leafy Greens, Leeks, Peppers, Potatoes, Tomatoes, Various Herbs
Kymar Acres	2168 Winnmakee Rd	Waukon, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities, House Packing Facility, Storage and Transportation	August 28, 2014	Beets, Broccoli, Brussels Sprouts, Cauliflower, Corn, Cucumbers, Eggplant, Kale, Kohlrabi, Leeks, Peas, Peppers, Potatoes, Tomatillos, Tomatoes, Turnips, Various Herbs
LORATA GARDENS	300 SCOTT BLVD	WINTHROP, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities, House Packing Facility, Storage and Transportation	August 15, 2014	Cabbage, Corn, Cucumbers, Eggplant, Kale, Kohlrabi, Peppers, Squash
Marcks Bros.	4248 Indigo Ave	St. Ansgar, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities	October 16, 2014	Cabbage
Ocean Acres	1687 510th street	Northwood, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities, House Packing Facility, Storage and Transportation	August 18, 2014	Cucumbers, Peppers, Tomatoes
River Root Farm	1007 Locust Rd	Decorah, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities, House Packing Facility, Storage and Transportation	August 28, 2014	Beets, Broccoli, Cabbage, Carrots, Kale, Leeks, Onions, Peppers, Potatoes, Salad Mix, Squash, Tomatoes, Turnips, Various Herbs
Riverview Berry Farms	1206 170th St.	Lu Verne, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities	July 23, 2014	Blackberries
Rolling Hills Greenhouse	24803 Ironwood Road	West Union, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities	August 29, 2014	Leafy Greens, Various Herbs
Tir na n 'Og (Land of The Young)	18535 Eagle Avenue	Farmersburg, IA	USDA Good Agricultural Practices & Good Handling Practices Audit	Farm Review, Field Harvesting and Field Packing Activities, House Packing Facility	August 28, 2014	Beets, Broccoli, Cabbage, Carrots, Cauliflower, Kale, Leeks, Onions, Peppers, Potatoes, Squash, Tomatoes

Report Name: G05 - By Location - Auditees that Meet Acceptance Criteria
Print date: 12/9/2014 9:33:08 AM

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Additional certifications:

Perfect Circle Tomato, Primus certification, January 2014

GROWN Locally Distribution facility, Primus certification, September 2014

Project Title: Spotlight on Iowa's Specialty Crops

Project Summary: To help mold future generations into a more health conscientious consumer, we need to expose them to healthy, nutritious foods. For many students, the only opportunity they may have to taste specialty crops or have a hand at growing them is at school. Iowa's Farm to School Program, focusses solely on specialty crops. Through Farm to School legislation, initiatives offered within the program are designed to: link elementary schools with Iowa farmers; provide schools with fresh and minimally processed Iowa-grown produce and encourage children to develop healthy eating habits through hands on learning activities. With state and federal initiative such as "Know Your Farmer, Know Your Food," the timeliness of these projects has never been better.

Project Approach: To enhance the competitiveness of specialty crops in Iowa, we need to raise awareness of what specialty crops we grow and when they are harvested. We offer the opportunity for schools to get involved in many different initiatives targeting a variety of specialty crops. Such as:

"You Say Tomato, I Say Tomahto, You Say Potato, I Say Potahto" Initiative

In previous years we have offered a very popular initiative entitled "A is for Apple" because of an anticipated poor apple crop, and the need to involve different specialty crop growers, we offered "You Say Tomato, I Say Tomahto, You Say Potato, I say Potahto." This initiative offered classroom teachers the opportunity to purchase tomatoes or potatoes from local growers and incorporate them into classroom lessons. Highlights include:

- 19 classrooms participated impacting 822 students
- Emails were sent to the potato/tomato growers listed in the Farm to School directory
- Participating classrooms also received age-appropriate items to incorporate into their tomato/potato lessons (From the Farm to You DVD and/or books)
- Potatoes/Tomatoes were used in a variety of ways including: sampling, soups, to create electricity and in art lessons

A is for Apple

Forty Classroom teachers were offered the chance to receive $40 to spend on locally grown apples in conjunction with an apple lesson. Teachers were also encouraged to sign up to be a part of the Midwest Great Apple Crunch. Thirty four teachers/classrooms took part in the Midwest Great Apple Crunch with one school being selected to receive an Apple Taste Test for their entire school and a visit by Iowa's Secretary of Agriculture.

- Many schools utilized additional funding to offer 1800 students the chance to have a locally grown apple on at least one occasion
- The apple sampling at Brubaker Elementary (the largest elementary school in Des Moines) included teachers, growers, school administrators and news coverage by 4 different groups further raising awareness of the importance of supporting local growers

A Garden is the Way to Grow

What better way to educate and engage students than by letting them do it! The A Garden is the Way to Grow initiative offered 45 schools supplies and funds ($150) to start their own school garden. Through a partnership with The Gardener's Supply Company and a 25% discount, schools received seed starter kits, a trellis, colander and tubtrug to carry vegetables, Plant and Go Pots, pruners and the opportunity to have 2 soil samples analyzed by Iowa State University.

- Dozens of specialty crops were planted
- Initiative impacted more than 10,000 students

Farm to School Chapters

The Farm to School Chapters create their own plan to increase knowledge and consumption of specialty crops has long term impacts. Approved chapters must have 7 members or more. Approved activities included establishing a school garden, and offering a mock farmers market at school in which students

- Projects impacted more than 1300 students, and directly impacted 18 growers

October – Farm to School Month – Local Food Day & I Tried It Challenge

To celebrate National Farm to School Month, a variety of opportunities were offered to celebrate our local produce and those growing it. Schools were offered $100 to procure produce to be sampled once along with table tents and "I Tried it—Iowa Grown" fruit or "I Tried It—Iowa Grown" vegetable stickers to students taking a sample. Schools were offered another $50 to offer samples at a later date after promoting it. The goal was to see if marketing the opportunity after offering it once would result in increased student participation and excitement.

- 9 schools participated in Local Food Day with 8 schools also participating in the I Tried It Challenge
- School purchases with local growers exceeded the amount awarded by an average of 75%, impacting over 13,000 students
- Sampling included more than 10 specialty crops with squash being the most popular
- Share your Food Photo Contest encouraged schools to send in pictures of their celebrations featuring locally grown fruits and vegetables and have their photos posted on our Facebook
- A grow light was offered to schools that utilized the Farm to School Directory to procure their local produce. The results of this included: addition of 2 growers to the directory, phone calls from growers asking about the Farm to School Program, and grower Thank You's

Farm to School—Open Something Great

When growers are surveyed as to how we can help them in their efforts to get more local produce into schools, packaging continues to be a factor. In order to help growers with this additional expense, while at the same time addressing a large school concern—food safety—food grade boxes was the perfect answer. To qualify for the boxes, schools had to list their local produce purchases and commit to making additional purchases. In turn, they were provided 4 different sizes of food grade boxes to give to their local growers.

- 8 schools participated, identifying more than 20 local growers
- 90% of the schools intend to increase their local purchases with 10% remaining the same.
- Data obtained from applicants will be instrumental in increasing local specialty crops sales through things such as: listing produce purchases and future requests, use of geographic preference, refrigeration space and additional needs.

Iowa Planting and Harvest Calendar

Asking Iowans to eat seasonally requires educating them on the crops grown and the harvest time. A Planting and Harvest calendar is an excellent educational tool. The calendar shows ideal planting and harvest times for many of Iowa's specialty crop while educating them about agriculture in Iowa and offering recipes utilizing specialty crops.

- Calendars were available in many public places including Extension offices, WIC Agencies, schools, farmers markets, as well as state and county fairs.
- 5,000 calendars were printed

Goals and Outcomes Achieved:
One of the goals of the grant was to show an increase in new customers to specialty crop producers featured in the calendar. While the Iowa Planting and Harvest Calendar has been printed 3 consecutive years, each calendar featured different categories all related to specialty crops. Growers are a difficult group to access and did not sign-up to be featured. Furthermore, promotions and marketing efforts that are done prior to a harvest season (press releases and interviews) are also hard to correlate to increased business as a great crop or a nice day may have been the contributing factor and grower's responses are vague and not measureable. A much more concise and accurate tool has been measuring purchases of specialty crops through schools. These surveys have been done for each Farm to School initiative.

These simple initiatives have opened the door to grower visits to schools, sampling of specialty crops, field trips to farms. Below are the results:

- 87% of reporting teachers incorporated lessons with the specialty crop samples including: nutrition/health benefits, dental health, cooking w/specialty crops, growth cycles
- 26% of specialty crop purchases were from growers that schools have not previously purchased from
- 87% respondents indicated these local specialty crop purchases would not have occurred without these initiatives
- 100% of respondents said they would like to purchase more specialty crops in the future
- The creation of three Farm to School Chapters, impacted more than 1300 students and 18 growers
- Local food purchases by the Northeast Iowa Food and Fitness Coalition* which is comprised of many Farm to School Chapters reported "50% of the schools doubled or more than doubled their local food purchases compared to last year."

An issue listed in the annual report around timeliness of fall Farm to School activities was addressed through a timeline. Schools were sent an email in May informing them of summer Farm to School opportunities as well as upcoming events planned for the remainder of the year. In addition, a timeline of 2015 activities was put on the Iowa Department of Agriculture and Land Stewardship's webpage http://www.iowaagriculture.gov/AgDiversification/pdf/2015/2015FarmtoSchooltimeline.pdf and on our Farm to School Facebook page. Applications for the fall Farm to School initiative doubled that of the previous year. A timeline will be updated yearly.

The NE Iowa Food & Farm Coalition (NIFF) is a network of stake-holders across the value chain working to create opportunities for existing and new farmers to engage in the local and regional food system.

Beneficiaries:
Farm to School impact is felt statewide. Farm to School has a lasting impact. The fruit and vegetable samplings and garden initiatives expose student's to new specialty crops and the knowledge of how to grow them and the nutritional benefits of including them in their diets. Today's students are tomorrow's consumers and this increased awareness exceeds the school activity to which it is associated.

A sampling of direct beneficiaries for some of the Farm to School Initiatives is listed below:

Below are estimates of the impact of just a few Farm to School initiatives:

Initiative	Students impacted	Grower impact $	Benefits
Farm to School Month	13,023	$1300*	Sales/consumption/awareness
A is for Apple	1,800	1600*	Sales/consumption/awareness
A Garden is the way to Grow	10,424	Indirect	Awareness/consumption
Tomato/Potato	822	$570*	Awareness/consumption
Farm to School—Open Something Great	27,183		20 growers receive free boxes + future school purchases

*Many schools spent additional funds (up to 85% more) to implement the project school or to a larger scale

Lessons Learned:
It continues to be a challenge to capture the direct impact Farm to School has throughout the state as some growers do not use email and are difficult to reach. In the future, more information will be garnered more directly through school purchases. Partnerships are being formed through the local food coordinators, extension offices, FoodCorps and Food Service Directors. We will continue to look for better methods by streamlining the process and the information being requested.

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Final Report

Lutheran Services in Iowa

Increasing Specialty Crops by Refugee Farmers through Farm Equipment and Soil Enhancement Training

Project Summary:

Many of the most recent arriving refugee groups in Des Moines come from agricultural backgrounds. Farming, both for home consumption and for profit, has been for many, a way of life. Several refugee groups have expressed a deep desire to return to the land in order to provide food for themselves, maintain their culture, and create new forms of income, however, they are faced with an inability to access land and training resources due to the language and cultural barriers as well as a lack of resources.

Over the last 5 years LSI has worked with a wide array of community partners, volunteers, and individuals from the refugee community to help that desire become a reality. LSI's goal is to provide a spectrum of opportunities for refugee families to be able to grow food in the U.S. as well as a progression of growth for those families interested in farming for profit. Phase 1 connects refugee gardeners to small community garden plots near their homes and neighborhoods; Phase 2 creates a training farm that provides larger plots of land and the intensive support and training needed to assist growers in developing viable small-market businesses over a three to five year period. Phase 3 transitions growers off of the training farm and onto their own land in order to operate their own independent farming businesses.

However, the new project ***"Increasing Specialty Crops by Refugee Farmers through Farm Equipment and Soil Enhancement Training"*** has been important and timely project in that farmers are quickly growing their skills and desiring to increase their levels of production and efficiency. After completing the first season cultivating a ¼ acre plot using only hand tools, LSI staff received feed back from many farmers the need to learn about operating farm equipment in order to create more efficiency in their production of fruits and vegetables. Many farmers have indicated that training on this type of equipment would be an important step in moving toward their longer term goals of farming independently at a larger scale. LSI has identified that growers will need to receive training in basic farm equipment operation along with training on how to use the equipment for soil enhancement. LSI has identified two types of tillers for which farmers will need training: 1) BCS walk behind tiller as well as, 2) a utility riding tractor with a tiller attachment. However, up until receiving the grant, LSI's equipment was inadequate to complete these trainings. Having the right equipment will continue to allow the program to expand training offerings and allow staff to spend more one-on-one time providing technical assistance.

LSI is currently funded through the Iowa Specialty Crop Block Grant Program and has been since 2012. LSI's current project, "Investing in Refugee Specialty Crop Producers" has built upon the 2012 and 2013 year projects by developing and implementing the second level of training and technical assistance for the eight

refugee farmers engaged in Phase 2 at Global Greens Farm. LSI has continued to provide these farmers with the foundational tools needed to build small farming businesses and establish benchmarks. The objective of the 2014 project is to help these farmers develop further in their production and marketing practices and show growth and improvement in their yields, market sales, and business skills.

Project Approach:

During the project period LSI staff completed the purchase of BCS tiller and flail mower attachments, upgrade for tractor, and tractor tiller attachment. Staff also worked with Bilingual Community Associates (BCA) to adapt a BCS guide sheet from an incubator project in Maine into a translated guide for general safety for BCS usage. These guides are laminated and staff use these to review safety steps before each training session (sample attached). This translated guide was shared with the National Incubator Farm Training Initiative (NIFTI) to be used for similar trainings. BCA and staff are in the process of completing a similar guide for tractor safety as well. This guide sheet was translated into Kirundi, Nepali, Karen and Burmese. Staff developed vocabulary cards (sample attached) and information for trainings on general equipment safety. These resources will continue to be used for future trainings as well as Farmer English classes in the off season. Staff also developed training for farmers to learn about increasing soil quality and soil enhancement with the use of BCS and tractor equipment. Group trainings were completed within the reporting period and individual trainings on both the BCS and the tractor began and will continue beyond the project period now that the training structure has been built. Staff and farmers are excited about the continued benefits that this project will provide. The farmers will continue to work one-on-one with staff throughout the season and will especially target the end of the season to enhance soil quality through the use certain crops like clover, brassicas or vetch that can be tilled back into the soil in order to increase the quality of the soil for the growth of specialty crops. This type of work is especially important since LSI's current training farm site has limited space for crop rotation and therefore, soil enhancement must be done through adding nutrients to the soil. The reporting period for this project was April – June of 2015 and was a very limited window of time for equipment to be purchased and training to be developed and completed. By the time the equipment arrived, farm staff had already contracted primary tilling for the spring and farmers were well into planting and harvesting, a time when not as much tilling needed to be done within plots. Staff and farmers will continue to work one-on-one and will especially benefit from independent tilling in the fall and the spring season of 2016 and seasons to come when farmers can till at the time that works for them and not be dependent on staff availability.

Goals and Outcomes Achieved:

Goal #1 of the project was **"**Increased knowledge by refugee farmers of farm equipment safety and operation." Since this is an on-going goal of the program that has been established through the specialty crop project LSI will continue to track individual training hours completed by farmers. While no farmers have yet to achieve independent BCS and tractor operation, seven out of the eight farmers have begun training. Four of the eight Advanced Market Farmers are at 75% competency in tiller and tractor usage with the other three farmers at 50% or less. One farmer has not yet had time to begin training. Staff still feel that farmers need a review of safety procedures and oversight for starting the equipment but farmers are doing well in independent use once the equipment has been started. Staff are developing a complete checklist and test for farmers to pass a test for independent operation. These numbers are less than the target measure #1 in the original project application but staff are confident in meeting those targets by next season with more time and practice. In regards to measure #2, staff completed the BCS equipment safety guide sheet and translated guide into four languages: Kirundi, Nepali, Burmese and Karen. The guide sheet was submitted to the National Incubator Farm Training Initiative resource library and is available for use by similar farmer training programs. Staff will continue to work on completing a similar guide sheet for the tractor tiller as needed. During the reporting period more work time was spent on individual trainings as well as training BCAs in the proper vocabulary for equipment trainings.

LSI staff completed Goal #2, "Increased knowledge by refugee farmers of soil maintenance using cover crop methods" through group training, on-farm participation and individual trainings. A total of 14 farmers have completed at least one hour of soil enhancement training. Soil enhancement training and participation will continue into the fall as farmers are prepping beds for the coming season.

Total training hours: 72.25 hours

	General Safety/Equipment Training	*Soil Enhancement Training*	*BCS Mower*	*BCS Tiller*	*Tractor driving/ tiller*
Number of farmers	15	14	4	6	5
Number of hours	30 hrs	17 hrs	5.25 hrs	11.25 hrs	8.75 hrs

Beneficiaries:

The specialty crop beneficiaries of this project were the 15 farmers and family members who received education and training during the project period. LSI's Global Greens training farm currently has 26 families farming on the training site, all of which will eventually have access to training and usage of equipment purchased through this project. This project also set the foundation of training that will benefit future cohorts of farmers. As farmers graduate from the program after 3-5 years in the Advanced Market Farmer level, new farmers will move onto the training farm. Finally, farmers are able to more efficiently prep beds for second and third plantings and with the use of these tools and training. Farmers have begun to increase efficiency and autonomy within their plots. Through this increase in efficiency and soil enhancement, farmers are bringing more specialty crops to market and to their communities. LSI estimates in 2015 at least 4,600 customers will visit the Global Greens market alone. Farmers are also selling through home sales, the Des Moines Downtown Farmers' Market and other market outlets supported by LSI's program.

Lessons Learned:

Overall, farmers are vey excited to learn about how to operate both the BCS and the tractor and see the value of utilizing machinery if they want to expand their businesses. The usage of the tillers has already saved farmers a significant amount of time. One farmer reported that a job of weeding and tilling up his plot that usually took 10 hours was cut to 3 hours of work. This independence has also helped staff re-direct time that was previously spent on plot maintenance towards more individual work with farmers.

The full scope of training has proved to be more time intensive than originally anticipated. Global Greens farmers have a wide variety of skill levels in regards to equipment usage. While one farmer has experience in diesel mechanics others have never touched a piece of equipment in their lifetime. Much of the vocabulary was difficult for interpreters to understand in order to pass on information since many times there was no base of vocabulary in the native language from which to draw. Staff found it to be helpful to take time to work with interpreters before trainings to understand vocabulary and concepts. Staff found that those with driving experience took to operating the tractor much more quickly than those without driving experience. However, generally, farmers found the BCS walk-behind tiller/flail mower more difficult to operate due to it's self-propelled motor and more need for control.

Cultural differences in clothing and footwear was found to be an important training point. Many women wear skirts and loose fitting wraps out to the farm that can easily get caught in the equipment. Many

farmers also wear flip flops and sandals and sometimes had to be turned away from training if they did not have the proper shoes to change into.

Overall, the safety concerns for this type of training are much higher for personal safety along with the risks of damaging equipment. Staff found that during the reporting period four of the eight Advanced Market farmers are at about 75% competency in operating both machines. The main point of oversight and training that is still needed is the safety review and start up of the machine. Once the machine is operational farmers have been well on their way to working independently in their plots.

Staff also found that the timing of the project was not ideal, seasonally, for project goals to be met. Group trainings are much more difficult to coordinate during the season when farmers are busy planting and harvesting and Saturdays are spent at market. Also, with the season underway tillers can be used within beds to cultivate for second and third plantings but much of the tiller usage will be earlier in the spring. Earlier in the spring would have offered many more relevant opportunities for training. However, with on-going nature of the Global Greens program this specialty crop project has set important foundation work and findings that will continue to be implemented and expanded upon in the off season, leading into next spring and for many years to come with new farmers.

Contact Person:

- Name the Contact Person for the Project – Hilary Burbank, Program Supervisor
    - Telephone Number - 515.271.7315
    - Email Address – hilary.burbank@lsiowa.org

Additional Information:

Training photos thanks so IDALS staff

- General Safety Guide Samples (English & Burmese)

Review EVERY TIME you use the BCS

REMEMBER! There are three big mistakes that damage the BCS:

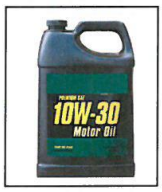
-Lack of oil or dirty oil
-Old gas or dirty gas
-Running the BCS with the choke on

SAFETY CHECK:

- Closed toed shoes, no loose fabric

BEFORE YOU START THE BCS:

- Check the oil level. **ADD OIL** if it is not full. **DO NOT** use the BCS if the oil is low.
- Check the gas.
- Make sure everything is in neutral.
- Adjust the height of the rototiller and handle bars if you want.



WHEN STARTING THE BCS:

- Put the throttle on full.
- If this is the first time to start BCS for the day, put the choke on. You do not have to do this if it was started recently.
- If it is cold outside, the engine may need to run for 20 seconds before you turn the choke off.
- After starting, **TURN THE CHOKE OFF.**

WHEN USING THE ROTOTILLER:

- **ONLY USE THE ROTOTILLER** in 1st gear, with the throttle at full power.

AFTER USING THE ROTOTILLER:

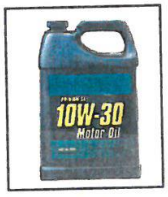
- Put everything in neutral again, including the clutch.
- **Clean** the dirt and other grasses out of the tiller. Rolling the tines backwards can help unwind anything that is caught.

သင်အသုံးပြုသောထွန်စက်ကိုအချိန်တိုင်းပြန်လှည့်စစ်ဆေးပါ

သတိရစေပါ । ထွန်စက်ကိုပြက်စီးနိုင်သောအရေးကြီး ၃ ချက်
ဆီနဲ့လွန်းခြင်း သို့မဟုတ် ဆီညစ်ပေနေခြင်း
ဒါတ်ဇွေဟောင်း သို့မဟုတ် ညစ်ပေနေသောဒါတ်ဇွေ
ထွန်စက်ကို choke ဖွင့်ထားခြင်းဖြင့်ခုတ်မှောင်းခြင်း

လုံခြုံရေးစီစစ်ခြင်း । ခြေချောင်းများဖုန်အုတ်ထားသော shoe ဖိနပ်ကိုစီးရမည် ।ချောင်ကျဲသောဖိနပ်မဖြစ်စေရ ।

ထွန်စက်ကိုစတင်အသုံးမပြုခင် । ဆီအနေအထားကိုစစ် ဆီမပြည့်လျှင်ထပ်ဖြည့် ဆီနဲ့နေလျှင်ထွန်စက်ကိုအသုံးမပြု ပါနှင့်၊
ဒါတ်ဇွေကိုစစ်ဆေးခြင်း၊
အဖက်ဖက်မှသေချာအောင်စီစစ်ခြင်း in neutral
ထွန်စက်ကိုအမြင့်ဆုံးအားပြုလုပ်ထားပါ လက်ကိုင် Bars ကိုကိုင်ထားပါ ကိုင်ထားခြင်ရင်၊



ထွန်စက်ကိုစတင်သောအချိန် । စက်အားအပြည့်ပေးပါ ।
အကယ်၍ထွန်စက်ကိုပထမနေ့မှာစတင်သုံးခဲ့လျှင် choke ကိုဖွင့်ထားရမည် ।
အကယ်မကြာခင်အချိန်လေးမှာသုံးခဲ့လျှင် choke ဖွင့်ထားစရာမလို၊
အကယ်၍အပြင်မှာအေးနေလျှင် ၊ Choke ကိုမပိတ်ခင် စက်အားစက်ကန် ၂၀ မောင်းလယ်ထားရန်လိုအပ်သည်၊
စက်အားစတင်ပြီးနောက် choke ကိုပိတ်ထားပါ ।

ထွန်စက်ကိုအသုံးပြုသောအချိန်မှာ । ထွန်စက်ကို gear နံပါတ် ၁ ကိုဘဲသုံးပြီးအားအပြည့်တင်ထားပေးပါ ।

ထွန်စက်ကိုသုံးပြီးနောက်၊
ကိုင်သုံးထားသောအရာများအပါဝင် စက်ပစ္စည်းများအားလုံးနေရာတကျပြန်ထားပါ ।
ထွန်စက်ကိုညစ်ပေနေသောအရာ မျက်မျှားအားလုံးသန့်ရှင်းအောင်လုပ်ပါ စက်ကိုရှေ့နောက်တွန်းပေးခြင်းဖြင့် အရာဝတ္ထု ညှိကျန်ခြင်းမရှိစေရန်ကူညီစေသည်။

Burmese

- **BCS vocabulary card samples**