

## **M2011-03**

### **Research and Development of an On-Line Local Foods Buying Club Cooperative**

\$48,490 over 2 years, Christina Elwood-Gehrke and Jason Grimm, Iowa Valley Resource Conservation and Development (RC&D) and Jesse Singerman, Prairie Ventures L.L.C. Corresponding Investigator: Jason Grimm, [jason@ivrkd.org](mailto:jason@ivrkd.org), 319.622.3264

The project seeks to develop the Iowa Valley Food Cooperative (IVFC), a web-based, direct to consumer, marketplace for food, fiber and other producers in Eastern Iowa. The IVFC will be based on the pioneering work of the Oklahoma Food Cooperative and the Iowa Food Cooperative in Des Moines, IA. We seek to write a case study and develop a model that can be replicated statewide and linked with other similar entities. When open, the cooperative will use open-source producer members to its consumer members. In addition, the cooperative will be leveraged to develop and provide needed producer training and to research the potential for additional producer cooperatives. Principal investigators on the project, Jesse Singerman and Jason Grimm, will oversee the following project milestones:

- Create, support and facilitate a steering committee and start-up Board of Directors to supervise the development of the cooperative.
- Research and make decisions needed to complete the cooperative's legal incorporation, including Articles of Incorporation and By-laws.
- Develop a start up business plan, including a marketing plan and financial projections, to guide organization of the cooperative.
- Install and modify open source software to demonstrate how member transactions will be handled by the cooperative.
- Create a web-site to provide visibility for the organizational effort and to aid in communicating with potential members.
- Recruit a critical mass of consumer and producer members to open the cooperative in 2011.
- Determine IVFC product standards, product mix, and preferred product attributes for use in recruiting potential producers.
- Research accounting systems and other recordkeeping systems needed to open the cooperative.
- Research standard operating procedures, food safety procedures, inventory and ordering systems needed to open the cooperative.

- Identify appropriate potential distribution locations based on established criteria.
- Research and evaluate strategic alliances, business relationships and federation opportunities with other participants in the regional sustainable agricultural system
- Research and provide education and training needed by producer members in areas such as on-line marketing and web page development.
- Research additional producer-identified topics such as GAP, post-harvest handling, shipping and storage requirements related to aggregation and building supply. Recommend or create additional training opportunities for the cooperative's producer members.
- Research, measure and report on project outcomes.
- Leverage the experiences of the group by producing a case study outlining the steps and decisions needed to form the cooperative.

**M2011-05 Developing permaculture techniques for increased production and profit in sustainable year-round agriculture for beginning farmers and ranchers in southwest Iowa, \$39,245 over 2 years, Barry Deuel and Bahia Barry, Golden Hills Resource Conservation and Development (RC&D)**

Corresponding Investigator: Bahia Barry, [Bahia.Barry@rcdnet.net](mailto:Bahia.Barry@rcdnet.net), 71.-482.3029

## **SCOPE OF WORK**

**Aspect One:** Designing and implementing a pilot project to apply the permaculture technologies that regional farmers have been trained on at Growing Power™ in Milwaukee, Wisconsin. This includes year-round growing techniques, aquaculture, and composting & vermicomposting in high-tunnels for fruit & vegetable production, soil development, and increased economic returns for farmers.

This project will research, develop, test and implement technologies for year round growing production methods designed for southwest Iowa growing conditions. We will develop a low-carbon footprint, four-season growing environment using low-cost materials and training already received at Growing Power™ Inc. The project will provide education, training, and skills development to new and beginning farmers and ranchers, as well as existing local food producers in all aspects of the project. The project is designed to be a demonstration facility and also a test for the applicable nature of the permaculture techniques being developed outside the region and their ability to be implemented in southwest Iowa.

**Aspect Two:** Establishing a formal Growers Association to assist local food producers as part of the Regional Food System Working Group: Southwest Iowa Food & Farm Initiative (SWIFFI). The growers association will be given start-up support and guidance through SWIFFI and Golden Hills RC&D. The RC&D will assist the association with legal formation, grant applications and fiscal management.

**Aspect Three:** We will recruit four diverse, qualified, new and beginning growers from rural Pottawattamie County to form a cCSA; provide them with training, technical assistance, marketing cost-share, and general program support. This aspect of the project serves to help educate and inspire local food producers in the region to work collaboratively to meet the growing demand for local food.

All aspects of the project will serve to improve access to local, healthy, fresh, affordable food in Pottawattamie County and the surrounding area. We feel this is an important step towards scaled up production that will meet the needs of schools, institutions, and retail food outlets in southwest Iowa. In order to ensure continued growth in the community food system development projects in the Golden Hills region, we need to develop resources that support the continued growth of our local food producers and stakeholders. Importing appropriate technologies, creating demonstration projects for community outreach and training for new, beginning, and existing farmers and ranchers is crucial for our continued success. This project builds on the work of SWIFFI, and helps fulfill the mission and intent of that group, as well as the two established local food policy councils working to create a more resilient food system in southwest Iowa. This will be an experiment to highlight the value of forming associations / cooperatives / cCSA's. This project will help us show the possibility of increased market opportunities, risk reduction, and the benefits of small-scale aggregation and distribution to producers wishing to scale-up their operations.

The local food coordinator and Golden Hills RC&D are responsible for all segments of the project; working with: Chris Combs and Phil Hackett for technical support, Mike Von Weihe, Mark Nightengale, Chuck and Berni Bichel to form the cCSA, and Jeff Adams, Madison Ave. Hy-Vee and Cass County Municipal Hospital on the composting and aquaculture demonstration projects. SWIFFI and the RC&D will facilitate the growers association in start-up, operation, and maintenance. All aspects of the project will start under the umbrella of the RC&D, with the goal being to fledge them into successful, for-profit enterprises at the end of the demonstration project.



## **Involving New Immigrants and Minorities in Local Food Systems- RE: M2011-8**

**Extension Sociology, Iowa State University**

**Jan L. Flora, Professor, and**

**Cornelia Flora, Distinguished Professor, Co-Principal Investigators**

**Feb 1, 2011-Jan 31, 2012**

**Corresponding Investigator: Jan Flora, [floraj@iastate.edu](mailto:floraj@iastate.edu), 515-294-4295**

### **Collaborating Institutions:**

Southwest Iowa Food and Farm Initiative (SWIFFI)

Hometown Harvest of Southeast Iowa/Pathfinders RC&D

Healthy Urban Food and Farming (HUFF) Working Group, Polk County

### **• Scope of work**

The project will collaborate with regional food groups (RFGs) affiliated with the Leopold Center for Sustainable Agriculture to incorporate immigrants and other minority members into the food chain as participating members of the Value Chain Partnerships.

The program will use Participatory Action Research (PAR), Appreciative Inquiry (AI), and the Community Capitals Framework (CCF) to identify mechanisms for integrating immigrant and minority producers, processors and distributors, retailers, and consumers into local and regional food systems. Capacity building at the local and regional levels will be a central feature of the project, with a particular focus on immigrant and minority youth and women. Guided by an Advisory Committee drawn from the RFGs, from immigrant and minority leaders in those communities and across Iowa, and from members of institutions that work with immigrants and minorities in the state, we will devise a Training of Trainers (ToT) curriculum, with two-three trainees selected from each of the RFG localities to work with the RFGs in integrating underserved groups into local food systems. Using PAR and CCF, we will train immigrant and minority youth to gather baseline data on community capital assets in relation to local food systems that will serve as a benchmark from which, in a later phase of the project, we can assess the effect of integrating immigrants and minorities, with a special emphasis on youth and women, into RFGs in Iowa. At the end of the first year, we will have developed culturally relevant curricula and selected and trained trainers from the three regions. These trainers will be ready to work on integrating immigrant and minority groups from their localities into emerging local food systems and the RFGs themselves.

Three RFGs affiliated with the RFSWG have committed to work with us during the first year: Southwest Iowa Food and Farm Initiative (SWIFFI), Hometown Harvest of Southeast Iowa, and Healthy Urban Food and Farming (HUFF) Working Group in Polk Co.

The objectives to be addressed in this first year of the project include the following:

1) Assess the potential and develop the means for incorporating immigrant and minority residents throughout the food value chain into local and regional food groups.

- 2) Develop capacity in RFGs and in their regions for integrating immigrant/minority groups into local food systems: gather, assess, develop, and test materials for a training of trainers (ToT) curricula, select trainers and organize and execute the first training.
- 3) Disseminate materials, methods, and insights to other RFGs in the LCSA RFSWG and beyond, and develop a plan for electronic dissemination.

• **Progress so far**

- We are in discussion with the ISU Science Bound program to provide Latino high school students with summer internships in which they will conduct research about Latino neighborhoods in the Des Moines metro area and the assets they can bring to bear in developing community and school gardens, and ultimately local food systems. Such a relationship also holds out the possibility of building multigenerational cooperation in strengthening local food systems in Polk County. It is possible that there could be involvement of youth in Science Bound from Denison in our efforts in Southwest Iowa.
- Our team is integrated into the planning grant received by HUFF from LCSA to strengthen community gardening and develop an incubator farm to serve Polk County. We will coordinate the training component that will include developing curricula that prepare immigrants and minority individuals to engage in gardening and small-scale high value commercial farming in Iowa. Our team will also take responsibility for developing a plan for involving Latino immigrants in the efforts of HUFF.
- We have met with the Diversity Committee in Ottumwa and have a warm welcome to work with them in developing community gardens and an Ottumwa local food efforts that would be undertaken with Hometown Harvest.
- SWIFFI is involved in the early phases of a planning effort that would develop local/regional food groups in the Omaha-Council Bluffs Metroplex, possibly including some rural counties adjacent to the Metroplex in both Nebraska and Iowa. We are attending one of the early meetings of that effort on March 25, and hope to determine from that meeting what role we could play (through our affiliation with SWIFFI) in that effort.

In summary, we have had satisfactory meetings with all three RFSWG-affiliated Regional Food Groups that we agreed to work with through this project. All three have clear plans and novel ideas for involving immigrant and minority gardeners and farmers in their regional food efforts. We have agreement with HUFF on our role in supporting its planning effort for the farm incubator in or near Polk County, and will assist in including Latinos among the immigrant and minority populations they will serve. We have a clear vision of how to involve high school students in participatory research that will be important in establishing ways in which immigrant communities can engage in strengthening local food systems in Polk County. ISU Science Bound is not involved in either Ottumwa or the Council Bluffs area, so we will be seeking other linkages to high school students or other youth in those communities. We have a lot of work to do, but are very optimistic that all three of our collaborations with RFSWG Regional Food Groups will bear fruit.

## **M2011-13**

**Iowa immigrant and refugee incubator farm program**, \$6,985 for 1 year, Linda Gobberdiel, 1000 Friends of Iowa.

Corresponding Investigator: Linda Gobberdeil, [director@1000friendsofiowa.org](mailto:director@1000friendsofiowa.org), 515-288-5364

### **Scope of Work**

The immigrant and refugee incubator farm program develops a livelihood in small acreage farming and increases access to healthy and affordable local food in families residing in Iowa and coping with economic hardship. The program is specifically designed to include refugees from the beginning in planning and implementing the incubator farm.

The project focus is one incubator farm at one identified location to keep the project financially feasible. As the program curriculum and incubator site are being developed, small community garden sites are identified and immigrants/refugees begin working their plot. Once the incubator training is completed, “graduates” are connected to larger plots of land where they will continue their farming careers. The team recognizes that many beginning farmers will only farm on a part time basis due to time commitment to other employment. In addition, on-going needs of small market farmers and related employment in the agricultural sector are identified as well as a sustainable means to meet these labor needs through such farm training programs. Such agriculturally related work may provide other part time work options for the beginning farmers as well. The incubator farm program will be planned over a one-year period. There will be co-coordinators and refugee leaders who will oversee the planning process and collaborate with community organizations and other similar farm programs for expertise needed. Other members of the planning committee and supporters will represent organizations in the metro Des Moines community with expertise for various components of the program. These components include land availability, connections to refugee and immigrant populations, curriculum development, educators and trainers, farm equipment, farming skills, and marketing.

The one-year planning includes at least two on-site visits to similar programs in Iowa, one visit in a neighboring state, and consultation with at least two programs with over 10 years experience. Planning will also include close collaboration with Jan Flora, Department of Sociology, and his staff at Iowa State University particularly in the areas of curriculum development, a train the trainer program, and integration of refugee farmers into local food systems.

## **M2011-15**

**In good company**, \$3,750 over 1 year, Marvin Phillips and Elisabet Humble, Pathfinders Resource Conservation and Development (RC&D)

Corresponding Investigator: Elisabet Humble, [elisabet@pathfindersrcd.org](mailto:elisabet@pathfindersrcd.org), 641.472.6177.

### **Scope of work**

“In Good Company” is an initiative that began through the networking and cooperation of southeast Iowa farms in order to create more market opportunities for southeast Iowa farm enterprises. The scope of this project begins as a group query into the different structures and forms that a business entity may use to incorporate, winds through the byways of choosing and forming a legal structure that will best suit the group, forays into the formation of bylaws and Articles of Incorporation, and finishes with the submission of papers and Articles to the State of Iowa for legal incorporation of the group.

This objective will be accomplished by arranging a field visit between participating farms and an already incorporated multi-farm enterprise. This visit will lead to facilitated discussions between the participating farms create a Strengths-Weaknesses-Opportunities-Threats (SWOTs) analysis of both market opportunities and legal structures. Once SWOTs analyses are finished, the group will be able to make the decision as to which legal structure best fits their needs and begin writing bylaws, finally submitting the bylaws and Articles of Incorporation to the State of Iowa.

Once this is accomplished, the incorporated network of farms will be able to enjoy greater marketing opportunities for their farm-based enterprises. Currently the farms are marketing together to attract businesses and institutions, and incorporation into one legally-recognized entity will lend the farms even greater credibility among some institutions. Farms participating through the incorporated structure will enjoy a greater measure of asset protection that is not available to non-incorporated businesses. Additionally, farm ownership in the larger incorporated group of farms will assure that the member farms selling their produce through the incorporated group will retain more value for the food they produce. The incorporated group of farms may also initiate outreach and education efforts to the larger community abroad to facilitate greater investment and support for local and regional food enterprises from economic development councils, city planners, and citizen groups with greater success than if such outreach were done on the behalf of individual farms alone.

**M2011-16 Local food in every pot: Growing farmers in northeastern Iowa through public and private partnerships,** \$25,307 over 2 years, Andrea Geary, Center for Energy and Environmental Education, University of Northern Iowa  
Corresponding Investigator: Andrea Geary, [andrea.geary@uni.edu](mailto:andrea.geary@uni.edu), 319.273.7883

### **Scope of Work**

The scope of work for this project involves providing access to land, horticultural and agricultural technical support, business planning, skills development, and direct-marketing support and solutions to people who are interested in growing food for local consumption. Women, immigrants, and new and transitioning growers will be targeted.

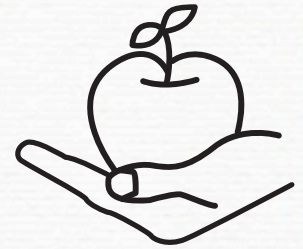
In our region there are significant members of these targeted populations with agricultural backgrounds and a desire to grow food, however, are faced with major obstacles to gaining entrance to the industry. In order to help facilitate more growers entering the marketplace in a sustainable manner, the project planning team has identified key resources in making this project a success. The resources required for this project include 1) land, 2) growers, 3) project coordination, 4) agricultural technical assistance, and 5) business skills development.

Collaborative arrangements and resource commitments have been secured through in-kind contributions (excepting project coordination), and are as follows:

- Land: Vacant and publicly owned lots will be made available by Black Hawk County. Suitable land has already been surveyed and mapped by NIFFP staff.
- Growers: Very minimal recruitment efforts have resulted in nine families interested in participating in the project.
- Project coordination: NIFFP will commit experienced staff and resources to implement project coordination.
- Agriculture technical assistance: Big Wave Agricultural Services and NIFFP farming board members will provide consultation services and mentorship opportunities to new growers.
- Business skills development: The University of Northern Iowa's Regional Business Center has committed to providing training opportunities and support to the growers in regard to business plan development and skills acquisition.

# IOWA FOOD ACCESS & HEALTH WORKING GROUP

**Background.** Launched in March 2010, the Iowa Food Access & Health Working Group (FAHWG) is a statewide network of food and nutrition assistance program providers and health professionals focused on advancing regionally-based food systems that ameliorates hunger and improves the health of Iowans by increasing access to fresh and nutritious food. The goals of FAHWG are to develop and recommend program, research and policy options which support systems that produce safe and nutritious food for healthier Iowans and to strengthen food access and self-reliance among all eaters and communities in Iowa.



FAHWG is an emerging group within the Iowa-Based Network for Food and Agriculture Working Groups ([www.valuechains.org](http://www.valuechains.org)) of the Leopold Center for Sustainable Agriculture and also serves as a subunit within the newly-formed Iowa Food Systems Council ([www.IowaFoodSystemsCouncil.org](http://www.IowaFoodSystemsCouncil.org)). This dual purpose maximizes opportunities for Iowa to better address research, programs and policies related to food security and public health.

**Objectives.** The objectives of the FAHWG are to:

1. Increase communication, coordination and collaboration among a statewide network of food access, nutrition and health experts.
2. Assess and monitor food access, health and food system indicators as a basis to develop and recommend research, program and policy strategies for advancing food and nutrition assistance programs and public health initiatives that support community-based food system efforts. This includes promoting innovative strategies for connecting low-resource households with healthy, affordable and locally-grown food.
3. Function as an information clearinghouse including statewide food security and health knowledge and expertise, programs and research opportunities.
4. Leverage funding and resources from private and public sectors for research, programs and policies that increase Iowans' access to healthy, affordable and locally-grown food.

**Partners.** FAHWG partners include the Iowa Food Bank Association; Des Moines Area Religious Council; Iowa Department of Public Health; Iowa Department of Education; Iowa Department on Aging; Iowa Department of Human Services; Iowa Workforce Development; Iowa Department of Inspections and Appeals; Iowa Department of Agriculture and Land Stewardship; Iowa State University and Iowa State University Extension; Iowa Center on Health Disparities at the University of Northern Iowa; Local Foods Connection; The Soyfoods Council; and 1000 Friends of Iowa.

**Impacts.** Several accomplishments were made to establish research, program and policy strategies that increase access to fresh, nutritious and affordable local food to Iowans using a community-based food system framework. These accomplishments include:

- Increased communication and cooperation among FAHWG partners, specifically federally funded food and nutrition assistance program providers, emergency food system administrators and public health practitioners. Rapport building strategies included interviews, four conference calls, two face-to-face meetings, and electronic communications.
- Increased FAHWG networking and visibility via several presentations at conferences and meetings. An outcome of the increased visibility included a proposal to replicate the FAHWG in another state.
- Increased FAHWG marketing and branding through the development of a logo, brochure, web presence and a monthly e-newsletter.
- Leveraged research, program and funding for FAHWG partners including the integration of food insecurity core questions in to the Iowa Behavioral Risk Factor Surveillance System, coordinated outreach activities between Feeding America Food Banks and IDHS on SNAP applications, and demonstrating involvement within the FAHWG as an asset in foundation and federal grant applications.
- Strengthened Iowa's food system infrastructure by increasing knowledge of the connection between the food system and access to healthful foods in large food system venues and advancing leadership of FAHWG partners on the Iowa Food Systems Council Board of Directors.
- Integration of food access and health indicators and recommendations into the report "*Cultivating Resilience: A Food System Blueprint that Advances the Health of Iowans, Farms and Communities.*" They include:

#### **Indicator 4. Percent acres of agriculture land in Iowa producing fruits and vegetables**

- 4a. Implement solutions to assure maximum safety of foods produced in Iowa. For example: Provide comprehensive Good Agricultural Practices (GAP) training and technical assistance programs; and Provide insurance coverage such as crop, liability, and health, specifically to small and mid-sized producers and processors; and Opportunities for cost-share program for food safety audits.

# IOWA FOOD ACCESS & HEALTH WORKING GROUP

- 4b. Assess and develop tools for adoption by Iowa municipalities and counties to perform land inventories of public properties with the goal of determining suitability for food production such as urban farms, community gardens/orchards and municipal edible landscapes. The inventory may include: vacant lots/land; under-utilized school land, Brownfield sites, rooftops, utility right-of-ways, alleys, boulevards, medians, and easements.
- 4c. Assess and develop sample ordinances for adoption by Iowa municipalities and counties that support urban farms and backyard, school, and community gardens/orchards.
- 4d. Assess and develop ordinances for adoption by Iowa municipalities and counties that offer incentives to developers of residential and mixed-use projects to incorporate food system features into plans. For example: Edible landscaping; School, community, or rooftop food gardens/orchards; Year-round farmers' markets; and Healthy food retail.

## **Indicator 9. Number of farmers' markets per 100,000 Iowans**

- 9a. Assess, develop and adopt policies and programs that increase Iowan's access to farmers' markets and healthy Iowa-produced food and create economic opportunities for Iowa food producers and retailers. For example: Mobile farmers' markets; Healthy food street carts; Year-round permanent markets; Online food ordering systems; EBT machines at authorized farmers' market; and Co-locating farmers' markets at federal nutrition feeding sites.

## **Indicator 10. Number of Healthy Food Retailers per 100,000 Iowans**

- 10a. Establish an Iowa healthy food retail initiative to increase availability of fruits and vegetables (indicated by percent shelf space for fruits and vegetables) in grocery and convenience stores. For example: Tax incentives to increase shelf space for fruits and vegetables in municipalities that do not have a grocery store; Land use and zoning allowances for healthy food retail in mixed-residential and commercial buildings; Reduction in required parking for healthy food retail; and Tax incentives for developers who incorporate healthy food retail in new or revitalized mixed-use developments.

## **Indicator 13. Percent Iowa adults who are overweight and obese**

- 13a. Assess, develop and adopt comprehensive education curricula on health and food systems (from production to waste management) to decrease rates of chronic disease in Iowans for K-12, community colleges, colleges and universities, and continuing education for health professionals.
- 13b. Establish policy in which the Iowa Department of Public Health and county public health departments include food system indicators in their Community Health Needs Assessment and Health Improvement Plans (CHNA & HIP).

*Note: The report [Cultivating Resilience: A Food System Blueprint that Advances the Health of Iowans, Farms and Communities](http://www.IowaFoodSystemsCouncil.org/cultivating-resilience) can be accessed at [www.IowaFoodSystemsCouncil.org/cultivating-resilience](http://www.IowaFoodSystemsCouncil.org/cultivating-resilience).*

**Plans for Upcoming Grant Year.** The primary strategies for accomplishing the project goal in the second year are to:

- Continue to build relationships with existing FAHWG partners and cultivate new partners through conference calls, face-to-face meetings, interviews and educational events.
- Continue monthly e-newsletters (*The Forum*) that highlight what's new in food access, hunger, health and food system issues;
- Collaborate with FAHWG partners in completing a comprehensive analysis of food insecurity, hunger, and public health data within a food systems framework. This will be accompanied by case studies, research, program and policy strategies that increase access to fresh, nutritious and affordable local food to all Iowans.
- Publish and disseminate a report titled "Building a Food System Framework that Advances Food Access and the Health of Iowans - A Blueprint for Action."
- Seek continuation funding to support ongoing FAHWG projects.

**Support.** Funding for the launch of the FAHWG and the statewide food access and health assessment has been provided by the Leopold Center for Sustainable Agriculture (2 years at \$57,900) and partial support provided by the W. K. Kellogg Foundation (1 year at \$137,600 for the establishment of the Iowa Food Systems Council and to conduct a statewide food system assessment). Both projects are administered by the Iowa Center on Health Disparities at the University of Northern Iowa.

**Contact.** For more information go to [www.IowaFoodSystemsCouncil.org/food-access-health/](http://www.IowaFoodSystemsCouncil.org/food-access-health/), <http://www.valuechains.org/foodaccess?src=sidebar> or contact Angie Tagtow, FAHWG Coordinator; (515) 367-5200, [angie.tagtow@mac.com](mailto:angie.tagtow@mac.com).

**M2010-04**

**Mapping Potential Foodsheds in Iowa: A System Optimization Modeling Approach, \$74,826, 2 years, Guiping Hu, ISU Industrial and Manufacturing Systems**

**Engineering. Corresponding Investigator: [gphu@iastate.edu](mailto:gphu@iastate.edu), 515-294-1682.**

***We have achieved in the first year:***

***Objective 1: Developed innovative protocols, metrics and optimization methods to analyze the foodshed localization potential of geographic areas in Iowa:***

Task 1) Engaged community partners and foodservice representatives to inform the design and data collection process (Led by Hu and Wohlsdorf-Arendt).

- Engaged the Leopold Center to designate a purposeful list of key partners and representatives in Iowa.
- Conducted in-depth interviews with eleven informants.
- Informally discussed and adapted project concepts with Leopold designated stakeholders.
- Incorporated findings into the design and data collection stages of the project.

Task 2) Developed a methodology to define the dietary requirements of a specific population center in the context of human health (Led by Wohlsdorf-Arendt).

- Based on USDA MyPyramid daily recommendations, established per capita rates were translated to MyPyramid daily recommendations.
- Population centers were segmented into pre-school, elementary school, high school, adult, and retirement age consumer groups. Per capita rates represent distribution among various age groups.

Task 3) Defined, identified and collected the data needed to meet the objectives of the project (Led by Boeckenstedt).

- Discussed, identified, and applied appropriate dietary, agricultural, and transportation measures that serve both as input and output variables to the model.
- A consumer equivalent consisted of all of the MyPyramid food groups (represented in servings per day) with each food group distributed among the key food products that make up that group.
- Consolidated available data for modeling and optimization within Iowa.
- All data were consolidated into a common spreadsheet that can be linked to geographies either through longitude / latitude coordinates, or Federal Information Processing Standards (FIPs) codes.

Task 4) Developed a mathematical model to characterize the cost of transporting food from multiple producers to multiple client locations (Led by Hu, this preliminary model will be refined in the second year).

- Operations research and mathematical modeling techniques were used to formulate the system model.
- Producer potential was based on cropland availability; client locations will be based on population densities. Constraints are demand oriented.

- For modeling purposes, products such as citrus fruits that were not immediately adaptable to Iowa's climate were not considered available in Iowa, and they instead were substituted with options that can be sourced locally to meet similar dietary compositions.
- Developed application software needed to incorporate solution/optimization techniques with emphasis on minimizing transportation costs among competing population centers.
- Optimization software will include "what if" scenarios, which let investigators change variables and develop goals and impacts accordingly.

Task 5) Develop application software needed to incorporate solution/optimization techniques with emphasis on minimizing transportation costs among competing population centers (Led by Wang, a preliminary application software has been developed; improvement and refinement will be carried out in the second year).

***We plan to implement in the second year:***

***Objective 2: Apply the methods developed to define foodshed geographies for all cities and rural populations in Iowa.***

Task 6) Develop a descriptive summary that illustrates how the model can be used and applied using base case results for Iowa (Led jointly, we have started summarizing the data source in year 1).

- Results will be graphically displayed and discuss the optimal foodshed boundaries in Iowa, along with a discussion of the model and how it can be applied.
- An appendix will include tabular results for each of the 1,000+ incorporated towns and rural populations (by county). Feedback elements are expected to include the following representative values for each foodshed: population and dietary demands, conversion assumptions, optimal use/distribution of cropland, and weighted average shipping measures. Resulting variables may be modified and added as well.

***Objective 3: Present, communicate, and initiate peer review and discussion of results with the intention of prompting derivative economic and environmental studies in Iowa.***

Task 7) The PIs will jointly prepare and submit, for peer review, three distinct journal and/or conference papers to leading organizations representing their respective fields of study (Led jointly).

Overall, this project will clearly link food and health to agriculture and transportation. The priority will be to develop methods that communities can use independently to identify the minimum foodshed distances that they need to access a healthy diet, given potentially competing demands from other nearby communities. Supplemental to this will be to apply the methods developed to communities in Iowa.

## TRANSPLANT PRODUCTION DECISION TOOL FOR VEGETABLE PRODUCERS

Grant Number M2010-10

### PROJECT UPDATE 25 MARCH 2011

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Chris Blanchard conducted farm visits at six farms in the Upper Midwest: Gardens of Eagan, Harmony Valley Farm, River Root Farm, Stillwater Greenhouse, Tipi Produce, and Vermont Valley. Visited farms included conventional and organic farms, as well as small, medium, and large-scale operations.

Narrative summaries were written for each of the farm visits, breaking each operation's tools, equipment, and procedures into their various components: Growing Trays, Media, Seeders, Germination, Benches, Irrigation, Fertilization, Hardening Off, and Setting Out. Operations were described and evaluated in these summaries.

Information was also organized into an Options and Costs document that described tools, equipment, and procedures from the perspective of the components of transplant production, providing an opportunity to make a side-by-side comparison and evaluation the various options.

This information and structure was used as the basis of a presentation on Transplant Production Systems at the 2011 Iowa Fruit and Vegetable Growers Conference. This workshop received excellent evaluations, with the majority of responses strongly agreeing that the training provided the information needed to have a successful farm and the information needed to scale up the respondent's market farm.

Plans for the coming year include follow-up visits to at least two farms, an additional visit to at least one new farm, and a summary of transplant operations at Chris Blanchard's Rock Spring Farm. Additional information will be collected and collated into the farm narratives and options and costs documents, and published online.

Two tools will be developed for financial analysis of transplant production options: a budget template for transplant production to be used in comparing production options, and in comparing farm-based production to the cost of purchased transplants; and a discussion of cost-benefit analyses for various operational improvements. The latter will include a narrative discussion of risk mitigation and quality-of-life considerations.

## M2010-14

### **“Impacts of GAPs and Post-harvest Handling Practices Certificate Training on Producers’ On-Farm Food Safety Behaviors and Perceptions of Customer Assurance,”** \$62,946 over 2 years,

Catherine Strohbehn, ISU Apparel, Educational Studies and Hospitality Management and Margaret Smith, ISU Value Added Agriculture Extension

Corresponding Investigator Catherine Strohbehn, [cstrohbe@iastate.edu](mailto:cstrohbe@iastate.edu), 515-294-3527.

Year one: February 1, 2010 - January 31, 2011

**General summary:** During Year 1, we networked with producers – individually and through organizations; researched GAPs and other on-farm certification programs and content of these; enrolled and participated in GAPs training; and planned for the one day workshop.

#### **Specific Action Items:**

##### 1. Conducted Environmental Scan:

- a. Met with relevant stakeholders (representatives from IDALs, NE Iowa Food and Fitness Initiative, Strohbehn, Iowa Fruit and Vegetable Association, Iowa Seed group ) to discuss strategies and possible leadership for state wide GAPs certification.
- b. Email surveys and telephone interviews were conducted with: retail buyers, producers, and interested stakeholders. Surveys were completed by 4 retail buyers, 37 producers and 4 interested stakeholders.
  - i. Retail buyers: Retail buyers indicated that food safety training about on-farm practices and handling will eventually be needed. None of the retail buyers currently required documentation of a food safety plan from growers, and if a grower showed a certificate showing completion of training on food safety, GAPs and post-harvest handling, it would be sufficient for now.
  - ii. Producers: Ninety-five percent of the growers surveyed indicated that a need for food safety training about on-farm practices and handling; 70% indicated they personally needed training about on-farm practices and handling to improve food safety. Growers thought safety, followed by access to markets, would be the top benefits of such training. Only 14% had been questioned by buyers about their on-farm practices, with the most common questions about organically/used pesticides, and what type of water was used to wash the produce. Sixty-five percent of the thought food safety training would make a difference to buyers; 30% thought a third party audit would be more creditable. Thirty-five percent of the growers indicated buyers were imposing requirements upon them; only 14% indicated buyers were requiring documentation of a food safety plan.
  - iii. Interested stakeholders: Institutions are interested in growers receiving on-farm food safety training; half the participants indicated that they would put more creditability into a third party audit of on-farm practices.
- c. Interviews/conversations others GAPs initiatives - GAPs Harmony Group; National GAPs Project; and USDA Whole Farm GAPs initiative

2. Planned for workshop: recruitment and coordination with producer and other agency contacts (such as ISUE) through the state for site determinations; set the agenda and prepared the presentations; developed video – based case studies; identified educational packet materials and updated these. Assessment documents and data collection protocol submitted to Iowa State University Institutional Review Board; approval was received (IRB 10-530). Challenges have been planning in the midst of uncertainty regarding the Food Safety Modernization Act (which passed in December) and reluctance of some growers to recognize need for such training.
  
3. Conducted six workshops conducted between January 27 and February 10<sup>th</sup> reaching approximately 120 participants. A preliminary review of evaluations shows workshops were well received. Preliminary pre-workshop assessment data tabulated

## **M2010-18**

***“Increasing Access to Healthy, Fresh, and Local Food to Students in Three Rural Public Schools in Northeast Iowa”***, \$39,280, 2 years, Andrea Geary, University of Northern Iowa

Corresponding Investigator: Andrea Geary, [andrea.geary@uni.edu](mailto:andrea.geary@uni.edu), 319-273-2573.

Project Period: April 1, 2010 – January 31, 2012

Year One Updates:

- As a follow up to last year’s “A is for Asparagus” farm to school conference, we organized a workshop this February called “Growing Local Lunches,” aimed at local farmers interested in selling to schools or otherwise being more involved in farm to school programming. Featuring presentations on farm to school’s role in classrooms, procuring local food to serve in cafeterias, and a panel discussion of local growers with experience selling to schools, this workshop was a major success for us. The evaluations came back overwhelmingly positive, and we have heard from many of the 40+ attendees who made new connections and are excited to increase their involvement.
- In consultation with Waverly-Shell Rock schools and Genuine Faux Farm, we revised ISU Extension’s “Checklist for Retail Purchasing of Local Produce” to target schools’ specific needs, and are currently in the process of becoming a clearinghouse for these forms so farms only have to fill out the checklist once (as opposed to once for every school interested in buying from them), and schools can have one contact to access multiple farms’ forms. Preliminary feedback for this project has been very positive, with both school food services and local farmers agreeing that it will streamline the process.
- Sumner-Fredericksburg and Dike-New Hartford school districts reported their total local purchases number for our 2010 year end tally. This represented the first year of buying locally for both districts.
- Waverly-Shell Rock community schools are currently soliciting bids from local growers on produce for the spring 2011 and the 2011-2012 school year. The food service director is excited to be in touch with farmers early in the season and work with them to plan certain crops.
- Dike-New Hartford schools have discussed using their first year mini-grant to purchase a new salad bar for their dining area to help highlight and promote fresh fruits and vegetables as an integral part of students’ healthy diets.
- Sumner-Fredericksburg schools have narrowed down their intended uses for the mini-grant to include garden tools, a vegetable slicer and food processor, and two picnic tables to be placed outside near their school garden to facilitate their “outdoor classroom.”

- We organized a “meet and greet” event in late February to bring together local growers who are interested in selling to institutions, and area businesses who are interested in buying more locally grown food. This event was attended by 25+ people and was covered by the Waterloo-Cedar Falls Courier.
- We continued to draw public attention to local, fresh food in our region, connecting with the ongoing national dialogue on nutrition and healthy eating. The Leopold Center grant has supported our efforts to involve local media in our farm to school successes, resulting in a significant number of stories on the local news and in local papers. These include radio interviews, newspaper stories on classroom visits by local farmers, coverage of our farm to school workshops, and more.
- We have leveraged Leopold Center funding to attract more resources to this work, including renewed funding from the W.K. Kellogg Foundation as well as partnering with National Center for Appropriate Technology and Luther College to bring the Food Corps Program to Iowa in its inaugural year.



## PROJECT SUMMARY

Flavors of Northwest Iowa is a regional network for local food producers and consumers. We provide:

- \* Producer support through access to resources, education, and promotional opportunities
- \* Information to consumers about local foods and flavors, farmers, markets, and local businesses
- \* Support for the local food movement in Northwest Iowa and surrounding regions by helping build healthy food partnerships

Flavors is a project focused on developing a regional “brand” under which we map food and other locally grown assets to establish a network of local/regional food system components. From our network we are creating more delivery mechanisms, materials, maps, and information to promote local food and locally grown flavors to consumers while supporting education and growth for local food growers/businesses.

## ACCOMPLISHMENTS

- \* We have increased producer education opportunities by hosting 5 workshops since November.
- \* We have solicited feedback to identify the needs of the producers and perceptions of consumers through 5 local food planning meetings scattered throughout the region.
- \* Our advisory board has members from Siouxland Buy Fresh Buy Local & the Sioux City Farmers Market, Siouxland District Health, USDA-NRCS and RC&D representative, Woodbury County Economic Development, and ISU Extension specialists. We meet bi-monthly. We have also made contact with over 16 other related organizations as potential partners.
- \* We blog, distribute an E-newsletter, Facebook, Tweet, and Google to connect with consumers and keep producers up-to-date on upcoming events and opportunities.
- \* We have a great start to our map having identified many new assets in 6 counties. We have started to make an interactive Google Map that will appear on our upcoming website to serve as the regional local foods directory (“Local Food & Flavor Guide”). A print version will be made available for download.
- \* Our website is in development and will launch in May 2011. It will feature the interactive local food map, downloadable maps and guides for self-guided tours of food trails, news, the continuation of our blog with stories about our local producers and businesses, tasty tidbits for eaters, tools for growers, a page dedicated to the farmers markets in our region, a gallery of local food photos including market and vendor profiles.
- \* To assess our progress we distributed an online survey to gather feedback on our current direction. We also have a strong partnership with the Sioux City Farmers Market, helping them collect market surveys and sales data. 2010 sales were up 20% from 2009. The emergence of 2 new farmers markets also indicates growth. Some restaurants and many consumers are eager for the directory to be published.
- \* We continue to orchestrate the Regional Food System Working Group strategies in our region to meet the groups’ objectives to support all components of a regional food system.



## ACCOMPLISHMENTS CONT...

- \* We have started to create a buzz and build up the network by giving public presentations. We are starting to receive invitations to speak at various events including the Siouxland Garden Show, Calhoun County Backyard Gardening Event, Ida County Economic Development meeting, and a Monona County Marketing meeting. We also work to have a presence at community meetings such as Mapleton farmers market planning, LeMars seed exchange, Ida County seed exchange, and other related events.

## 2011 PLANS

- \* Finalize the website, the “home” for our network, and throw a BIG launch party.
- \* Get the word out and get members! We need a formal marketing plan and membership drive. Many innovative promotional ideas are steeping.
- \* Continue with food system mapping—now that we have a more organized process to collect information, proper forms and materials for people to join the network, and sign-ups to be included in our “Local Food & Flavor Guide”
- \* Goal: hold one educational workshop or local food system planning (RFSWG-style) meeting every month
- \* Plan some flavorful events.
- \* Better data collection.

## FOR FUN

- \* Flavors is DIY! Check out our **HOMEMADE** banner (also environmentally friendly). The Flavors brand has integrity.
- \* We’re hip and cool. Even though local food isn’t a trendy new fad (rural folks have grown their own food for centuries) we’re making it *look* like it is while still paying homage to Northwest Iowa’s more traditional roots (like picnics?).
- \* Below is a peek at our developing map. With only about 1/3 of our identified assets flagged (we ran out of pins), you can see that we’re well on our way!



- \* Plus, Cy likes us!



## **M2010-30**

**Connecting family, community and health from a food system perspective, \$31,200** 2 years, Kimberly Greder, ISU Extension. Team Members: Kimberly Greder, Neal Flora, Emily Krengel, LaVon Eblen, Ardyth Gillespie Corresponding Investigator: Kimberly Greder, [kgreder@iastate.edu](mailto:kgreder@iastate.edu), 515-294-5906.

### **Project Objectives:**

1. Explore the perceptions of families regarding locally grown food as a regular viable healthy food source for Cass County families who have school-age children.
2. Identify values, priorities, experiences, and knowledge of Cass County families with school-age children that shape how they make decisions about food and whether or not to include locally grown foods in their daily eating.
3. Identify assets in Cass County that can be invested to improve the appreciation, availability, and accessibility of locally grown food to families with school-age children.

### **Year 1 Project Highlights:**

**Literature review.** We began a literature review to better understand the topic at hand and to inform the development of interview questions.

**Garden boxes.** Collaborated with Cass County Wellness to host a day for parents and their school-age children learn how to grow vegetables in a garden box. Project leaders demonstrated how to make the garden boxes, and provided families lumber, screws, weed control fabric, soil, seeds/seedlings and planting directions to create a garden box at home. 12 families took materials home to develop their own garden boxes. Student intern met with six of the families to assess progress of their gardens. Two families assembled, planted and maintained a garden box located at the hospital. They kept notes re: the garden's progress and what they were learning. The hospital garden box yielded over 100 Fairy Tale and Orient Express eggplant, Mini Chocolate Bell and Purple Beauty peppers, and many Cherokee Purple and Big Rainbow tomatoes.

**Field trips.** Three to five families participated in three local field trips to further expose them to locally grown foods and visit with growers (i.e., Farmer's Market, Rolling Hills Acres Farm, a back yard garden), and an educational program, "Plotting Against Pests". Three families participated in an event at the YMCA where they brought produce they grew to "show and tell", and learned how to make salsa. Informal interviews conducted with parents and youth revealed 1) the children liked fruits and vegetables, had them in their homes and tried to eat them daily; 2) many parents were not happy with the way they feed their children and would like to include more fruits and vegetables. Taste, price, and convenience were the most important factors in determining what parents feed their families. Some parents don't have their own gardens, but would like to, and try to buy locally grown food when possible.

## **Year 2 Proposed Plans:**

**Listen to and learn from families.** During Year 2, ISU Extension will conduct 2-3 focus group interviews with parents who have elementary age children to gather insight into their experiences with and perceptions of locally grown food being a viable food choice in their family's daily eating.

A written survey to assess a larger number of Cass County parents' awareness of locally grown foods and perception of the viability of locally grown foods as a regular food choice, as well as perceived avenues and barriers to consuming locally grown foods will be conducted. Results of the survey will further inform project activities (including the development of an interactive display focused on locally grown foods), and be shared with Cass County Cultivators, Cass County Public Health and Cass County Food Policy Council to inform future community decisions and activities.

**Use family input to design project activities.** Input from parents will also be sought regarding the development and implementation of proposed parent/child project activities (e.g., garden boxes, parent/child local foods cooking sessions, community garden). Data from the focus group interviews and Year 1 project experiences will inform the development and implementation of Year 2 activities. Local project leaders (associated with Harrisdale and Cass County Memorial Hospital) will invite parents who participated in the focus group interviews to a meeting to further shape the project activities, as well as participate in the activities.

**Well-planned marketing.** During March-April, local project leaders will share information about the proposed project activities with community members via radio, newspaper, and school newsletters/flyers. Additionally, ISUE will modify the Growing and Cooking Up Family Fun brochures developed for Year 1, for local project leaders to distribute to parents/caregivers through family and youth serving organizations (e.g., ISU Extension county office, 4H, YMCA, afterschool programs, Head Start, Dept of Human Services offices/staff). Through these recruitment efforts, project leaders will identify parents/caregivers to participate in a parent/child cooking series focused on preparing, tasting and planning a meal using locally grown foods (4-6 sessions) over a two month period.

**Identify community volunteers.** Local project leaders will solicit the active involvement of other community leaders/parents to assist in the implementation of at least two cooking series during Year 2. During Year 2, local project leaders and community volunteers will assist families in learning how to grow food (in garden boxes, in their yard, potentially in a community garden). Ideally some of the food families grow will be used during the cooking sessions.

**Learn from growers.** A focus group or individual interviews will be conducted (ISU Sociology) with local growers and community leaders interested in food systems to further understand the community and local policy context for support of locally grown foods.

## **M2008-02**

### **Producer Machinery and Labor Sharing Arrangements**

\$30,954, 2 years, (Roger Ginders) Daren Jarboe, William Edwards, Iowa Alliance for Cooperative Business Development. Corresponding Investigator: Daren Jarboe, jarboe@iastate.edu, 515-294-2342.

*Objective 1: Complete two new case studies on intergenerational transfer to supplement the ten cases on cooperative strategies that are currently available.*

#### Case Studies

Two Iowa farm operations that successfully used machinery and labor sharing arrangements for intergenerational transfer of farm assets were identified. The families agreed to participate in the case study analyses. The case studies have been drafted and are being polished. One case study is about a diversified farming operation which includes cattle feeding, farrow-to-finish hogs, and corn and soybean production. There are three families involved in the farming operation. The other case study is about a corn and soybean farm that also has a custom farming enterprise. Two families are involved.

#### Future activities

Two additional case studies are in progress. One is a three-generation family corporation in Southwest Iowa that is evaluating strategies for treating farming and non-farming children equitably. The second involves two non-related parties in north central Iowa who have used formal agreements (leases, contracts) to transfer machinery ownership and management of a grain operation to the younger party. These four cases, in addition to relevant pieces of our existing farm machinery and labor sharing cases, will be incorporated into an Extension/outreach programming publication focused on farm asset transfer strategies.

*Objective 2: Provide three workshops for producers and agribusinesses on machinery and labor sharing arrangements.*

#### Workshop Presentations

The materials developed were presented to the following audiences:

1) **Iowa Fruit and Vegetable Growers Association**, Des Moines, January 28, 2011 (45 attendees; fruit and vegetable growers)

Content: Machinery adoption decision analysis; benefits of machinery sharing, types of machinery to share, business structures/arrangements for sharing, operational considerations (scheduling use, handling repairs and maintenance, transportation, joining and exiting the arrangement), and choosing partners.

2) **Beginning Farmer Network Beginning Farmers Conference**, Ames, February 12, 2011 (175 attendees; beginning farmers, students, and parents)

Content: Getting started in a machinery sharing agreement, exchanging labor for machinery, joint ownership with equal and unequal use, a formal joint machinery ownership entity, accounting for costs, and scheduling work.

**3) Extension Farm Financial Management Associates training**, Ames, February 14, 2011 (12 attendees; ISU Extension farm financial management consultants)

Content: Overview of existing resources including case studies, benefits of machinery sharing, types of machinery to share, business structures/arrangements for sharing, operational considerations (scheduling use, handling repairs and maintenance, transportation, joining and exiting the arrangement), common concerns and strategies for overcoming them, choosing partners, future extensions.

Two workshops for producers were scheduled. One was directed at fruit and vegetable growers, and was postponed until next fall. The other one was cancelled due to low pre-registration, but educational materials were mailed to the producers who did register. They were provided with copies of the "Farm Machinery & Labor Sharing Manual," an 87-page publication from the Midwest Plan Service.

Future activities include scheduling a workshop for horticultural crop producers in northeast Iowa in the fall of 2011, and refining materials on transferring use and ownership of farm machinery between generations as part of an educational program funded by the North Central Risk Management Education Center on transferring farm assets.

During the course of the year, we identified an interest in machinery and labor sharing information among Iowa's fruit and vegetable growers. Many of these growers are currently planning for expansion, but lack good information regarding how to scale up their operations. In particular, there is a need for targeted educational materials and programming related to evaluating machinery adoption and planning for mechanization.

In response to this need, we developed a handout on machinery adoption decisions and presented information about the potential for machinery sharing at the annual meeting of the Iowa Fruit and Vegetable Growers Association in January, 2011. We are also currently working with the Midwest Aronia Association to develop educational materials related to owning and/or possibly sharing an aronia berry harvester. We will attend the 2011 Midwest Aronia Association conference in Des Moines on April 8 and 9 as part of this effort.

### Purpose

Northeast Iowa Food and Fitness Initiative adopted Farm to School to help ensure that school district policies and practices support healthy living of children, families and community members.

The northeast Iowa Farm to School Chapter is a unique model in that they are spearheading efforts in school districts across multiple counties. In 2009-2010 these districts included Decorah, Howard-Winneshiek, Postville, Oelwein, Starmont, and Turkey Valley. Our project focused on five components.

### Teacher Training

Expose teachers to cross-disciplinary Farm to School curriculum with ties to core standards.

### Cross-Age Teaching

Engage high school students as educators, creating lessons that focus on a local food.

### Field Days/Producer visits

Provide opportunities for students to meet farmers

### Food Service Training

Provide opportunities for food service to further culinary skills specific to local foods.

### School Gardens

Create school gardens involving students, teachers, staff and administration in the process.

### Food Service Outreach & Training

Northeast Iowa has the three key ingredients for Farm to School: dedicated food service leaders, innovative farmers seeking local markets, and passionate students and parents. In the first year of this grant project, the funding from the Leopold Center was used to invest in educational and networking opportunities for food service employees and to connect farmers to schools.

#### Food Safety

Having a basic understanding of proper handling of foods is foundational in any school kitchen. Food safety trainings equip food service employees with necessary skills to properly handle and use local foods. Two nationally accredited courses, *ServSafe*® and *SafeFood*, were offered.

The 8-hour *ServSafe*® Training included 14 participants from five schools. At the end of *ServSafe*® training all the participants passed a test to certify them for five years. The two-hour *SafeFood Training* included 28 participants from five schools.



#### Networking Opportunities

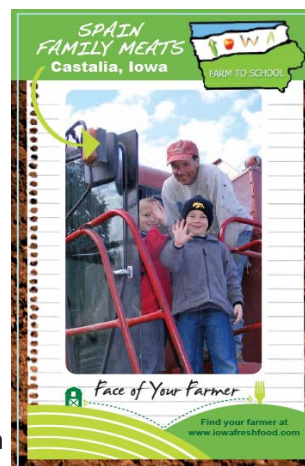
Our project hosted two networking meetings for food service in the project year. The focus of the meetings was to talk about procurement of local food, what has worked in other schools, sharing favorite local food recipes and to share best practices. The meetings were attended by the nutrition consultant from the Iowa Department of Education.

#### Skill Development

Fresh, whole foods from farmers and school gardens need to be cut and processed before use. Food service staff had the opportunity to learn culinary knife skills from ISU Extension Nutrition Specialist Cindy Baumgartner. In August, FFI hosted a 5th Season Workshop to teach food service staff to process and freeze garden produce for later use in school meals. Chef Monique Hooker shared her skills with the group as they made ratatouille.

#### Face of the Farmer

Farm to School efforts bring fresh, less-processed and healthy food to Northeast Iowa's kids and open up a growing market for our region's small- and mid-sized farmers. FFI launched the "Face of the Farmer" project in the Postville school district to introduce the students and staff to local farmers. Students prepare for the farmer's visit by watching a brief video and reading a story about their farm. On the day of the visit, school food service prepare a food or samples of food from that farmer. When kids taste the food, they can get a trading card from the farmer.



# **Developing production, processing, and marketing of aronia berries on small family farms in southeast Iowa**

## **M2009-05**

### **PRINCIPAL INVESTIGATOR:**

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The second year of the project focused on working with project cooperating farmers to determine best management practices along with assisting the farmer cooperators with market development. The year also included a field day in late June at one of the grower cooperators and a post-harvest wrap up meeting in October.

The four project participants initially planted approximately five acres of commercial aronia plantings in fall 2009 and spring 2010 in four southern Iowa counties (Jefferson, Davis, Washington, and Keokuk). Numerous other producers in the area established in excess of eight acres of aronia as a result of the informational meetings and association with project participants.

As expected the cooperators did experience some browsing from deer and rabbits (generally less than 10%, except for the grower in Washington County that experienced some damage on greater than 50% of plants). At one site an unexpected cause of damage was from snow mobiles.

A web page with aronia information was placed on the Agricultural Marketing Resource Center (AgMRC) website at: [http://agmrc.org/commodities\\_\\_products/fruits/aronia\\_berries.cfm](http://agmrc.org/commodities__products/fruits/aronia_berries.cfm)

Other findings included an initial berry analysis conducted by the Midwest Grape and Wine Industry Institute in the Department of Food Science and Human Nutrition at Iowa State University. Results of the chemical analysis for aronia juice are as follows:

pH hydrogen ion concentration = 3.54

TA titratable acidity (g/L malic acid) = 8.2

TSS Total Soluble Solids (°Brix) = 6.9

Squeezing the berries submitted and analyzing the juice yielded a titratable acidity of 9.4 g/L. The primary acid in aronia berries is malic acid. The sugar content of the juice was rather low with an average reading of 6.9 °Brix.

One of the cooperators who has an existing vegetable farm marketed berries (fresh, frozen, and in baked products) and juice both of which were obtained from a western Iowa source at Farmers' Markets and on farm. Acceptance of the various aronia products was very high. This grower planted an additional 2 acres in fall 2010.

## Executive Summary: Preliminary Results: Analysis of Consumer Attitudes about Produce Characteristics

Anthony Townsend & Brian Mennecke

This executive summary details the results of a preliminary analysis of data collected to examine the market for local produce in Iowa and surrounding states. When consumers are looking for fruits and vegetables that are healthy, green, fair, and affordable, many times local sources offer fresh, high quality, and low cost alternatives. Although people like the idea of local food and might be willing to pay a premium for it, this relationship has not been empirically examined for local Iowa produce. This portion of the study focuses on examining this question in the context of the "locavore" concept, which suggests that some people prefer local products for some or all of the products they consume.

We have engaged in a variety of data collection and analysis activities to address questions related to this component of the project, but the primary methodologies used to examine this research question involved interviews and focus groups followed by a pilot survey of 150 consumers from the Midwest.

The researchers engaged in more than two dozen interviews, site visits, and other meetings with stakeholders. These meetings were used to gather background information about the local produce value chain, including product characteristics of interest to retailers and consumers (additional data pertaining to the supply chain structures, value propositions, constraints, and opportunities have also been collected but are not reported here). The results of this analysis suggest that eight product characteristics are likely to be considered by consumers:

1. Cost of Produce
2. Quality
3. Freshness
4. Region of Origin
5. Growing Methodology
6. Appearance
7. Traceability
8. Farm Ownership

The results of the conjoint analysis show that price, quality, and freshness are the most important factors influencing consumer attitudes about produce whereas location had less than half the relative importance compared to price. This is not surprising since most previous research as well as our own interview data indicates that price and freshness are considered to be very important factors influencing consumer attitudes about produce. It is surprising, however, that this relative rating of importance is robust relative to the various segmentation variables we examined. We looked at factors such as environmental attitudes, perspectives on the value of local, and demographic factors such as income and education. Nevertheless, the results were consistent in that Location of Origin was consistently shown to be the fourth most important factor in the evaluation of the produce product and ranged between one half and one third the level of importance of the Cost of the produce.

The next stage of the research will consist of doing a large sample survey of Iowa and other Midwest consumers. After examining the results of the pilot survey we have modified the conjoint survey to improve its reliability and internal consistency. We requested a delay in completing the survey until this spring, which is a time when subjects will be more likely to be cognizant of local produce and therefore realistically assess the relevance of the survey questions. We anticipate completing the report in early summer, 2011.

## **M2009-15**

**The Actual cost of Food Systems on Roadway Infrastructure Conclusions,** \$24,923, 1 year, Omar Smadi ISU Center for Transportation Research and Education, Corresponding Investigator: Inya Nlenanya, [inya@iastate.edu](mailto:inya@iastate.edu), 515-294-2373.

### **SUMMARY**

This research study investigated the impacts of the conventional, regional, and local food systems on the roadway infrastructure. This was done by analyzing data that provided information on the vehicle miles traveled (VMT) in moving food from farm to table, types of vehicles used, and the weight of food moved. Food freight increased five percent between 2002 and 2008. It is expected to increase more than 80 percent by 2035. Understandably, the external costs are expected to increase proportionally with the freight increase. The external costs of moving food on the conventional and regional food systems far surpasses the total revenue the state brings in for transportation-related programs, so much that, at the current levels, it cannot even support pavement maintenances.

From the available data, the regional food system moves more freight in terms of weight than the conventional, due to the fact that data did not track the freight that passes through the state. Encouraging the development of a regional food system will not do much to change the food freight trend. Currently, the cost for moving fresh fruits and vegetables within Iowa comes to a staggering \$76 per pound. This price tag is not accounted for when the consumer checks out at the grocery stores.

The case for a local food system is all about reducing the distance food travels, which makes it feasible to move the food with a lighter-weight vehicle that has negligible impact on the pavement, compared to the semi-trailers that dominate the state's highways.

The study of local food systems for the three counties (Story, Adams, and Taylor) demonstrates that areas that are remote from a major highway and with a low population density are more likely to develop local food systems to supply their demand. Having the big grocery stores represented in these remote areas is not feasible given it will be difficult to generate enough vehicle miles, because of the relatively small demand to make it economically viable. In the local food system in

Adams and Taylor Counties, the Farmers' Markets and roadside pick-up truck vendors are important to meet the fresh fruit and vegetable demand in the rural counties. In contrast, Story County has the benefit of being close to a major highway and the Interstate system for supplying their demand of fresh fruits and vegetables. Therefore, in more urban counties, like Story County, making a case for local food will depend strongly on making a case given the external costs of transportation.

With local food systems, the external costs of transportation are very low compared to the regional and conventional food systems. Dependence on the conventional food system has a stark disadvantage for the urban areas, as it tends to create food deserts when one group is cut off, disadvantaged by income or access to public transportation. On the other hand, developing a local food system close to the urban counties do have huge economic benefits for the state, as more and more people are beginning to question where their food comes from, and other studies have shown that consumers are willing to pay more for locally-grown fruits and vegetables.

### **High-Tunnel Resource Manual and Producer Resource Kit Providing the Tools for Profitability**

M2009-16

Ray Hansen, Principal Investigator (PI)  
Linda Naeve, Co-PI and Project Manager

As more fruit and vegetable producers are interested in adding high tunnel structures to their operations, it becomes increasingly important to provide the resources needed to make these enterprises profitable. High tunnels are inexpensive, passive solar structures in which crops are grown directly in the soil. They enable farmers to plant earlier, control the environment, and produce high yields of quality produce through an extended season. This project was developed to address the needs of new and existing fruit and vegetable growers by providing additional resources and education in high tunnel production to increase their production and profitability.

The objectives the project were:

1. Develop a production resource manual and producer resource kit for high tunnel producers that provide quick access to construction, maintenance, pest management, production and marketing issues that will impact producer profitability.
2. Develop and offer three high-tunnel training workshops with in-depth production and marketing information and to introduce producers to the resource kit and effectively use the resources provided, consequently improving the profitability of their high tunnel crops.
3. Increase the number of full- and part-time fruit and vegetable producers in Iowa.

Using information gained from a previous Leopold Center – sponsored project (M2007-05) and research from other universities, a manual was developed to serve as a textbook for the workshops and resource for high tunnel crop production. Iowa State University Extension Specialists, Dr. Hank Taber, Dr. Donald Lewis, Dr. Eldon Everhart, and the project investigators worked together to write the manual and develop the workshop curriculum. A CD containing additional resources and references was also developed for distribution at the workshops. To accompany the training, resource kits were assembled consisting of reference materials, pest identification cards, and small equipment necessary to efficiently monitor and maintain a high tunnel. The kits were made available to workshop participants who had an existing high tunnel or plan to grow horticultural crops in a high tunnel within a year of training.

Between October 2009 and July, 2010, five, day-long high tunnel workshops were conducted around the state to provide fundamental information on high tunnel production, including site selection, size, construction, soil management and fertility, efficiency, pest management, harvest, and marketing. Participants toured high tunnels to observe the components and production during the growing season. The workshops were held at the ISU Horticulture Research Station, ISU Armstrong Research and Demonstration Farm, Iowa Valley Marshalltown Community College, and twice in Decorah.

(continued on the back)

This project met the objective to increase the number of fruit and vegetable producers in Iowa. Of the 139 workshop participants, nearly 20% were traditional farmers, interested in diversifying into fruit and vegetable production and 22% were hobby gardeners with an interest in commercial production. After the workshop, 32% of the participants planned to construct a high tunnel for commercial production. Of the 35 participants who completed an online survey nearly a year after the training, 11 applied for and received an NRCS high tunnel contract in 2010 and five growers purchased a high tunnel without NRCS support. At least 11 participants (8%) constructed new high tunnels in 2010. The survey showed that 22 plan to expand their business. One participant indicated he/she intends to add another high tunnel to his/her operation.

Several other projects were funded and conducted as a result of this project, including reprinting the manual, translating and printing the manual in Spanish, 4 other grower workshops and 4 educator workshops around the state. The timely development of manual and workshop curricula enabled Extension staff to train 38 specialists from the Natural Resource Conservation Service to respond to a new USDA initiative and 3-year pilot project. Introduced in late 2009, this USDA project provides financial support for eligible farmers to construct high tunnels.

This project provided fruit and vegetable growers with the educational and resource tools necessary to grow crops successfully and profitably in high tunnels and is being sustained through a periodic e-mail to participants notifying them of legislation, events, and opportunities related to high tunnels and local food production. The resources developed through this project have leverage additional projects and serve as valuable resources to farmers, educators and NRCS staff.

**M2009-20, Enhancing Value and Marketing Options for Pawpaw (*Asimina triloba*) by Developing Pulp Separation and Preservation Techniques**

**PRINCIPAL INVESTIGATOR:**

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In 2010 (year 2) 250 pounds of pawpaw fruit from trees at the Louisa County Conservation Chinkapin Bluff Recreation Area cultivar trial orchard were harvested and brought to ISU Food Science Dept. These fruit were run through a modified pulper and produced a yield of 53% seed and skin free pulp. Pulp was frozen with and without ascorbic acid and is currently being analyzed and evaluated for content and recipe use.

With several different modifications to the pulper, we were able to optimize the pulper for mechanically processing pawpaws. Pawpaw fruits from year 2 were sorted according to ripeness. The under ripened fruit were left in the refrigerator to continue slow ripening until needed. Some were immediately frozen for later processing. The ripe fruits were processed to obtain pulp in the pilot plant using the same modified equipment and method as last year's successful run. This gave us crop year effects, as well as a replication of the process. Length-wise halved fruits were fed into the pulper with much less jamming at the feeding tank end of the pulper, and pulp was successfully obtained. The food-grade rubber curved blades in the pulping cylinder were able to propel the fruit through the cylinder and shoot (literally) out the skins and seeds through the waste spout at the other end of the pulper. Fewer broken seeds were found than last year. All of the broken seeds were found at the exit of the pulper, and all the seeds had the same breaking pattern (They were all broken into half with a clean split.). To help control this in the future a rubber cover will be placed at the rim of the exit shoot. The pulp was stored in air-tight container in the -20 °C freezer until needed for safety and quality analyses. We are now waiting for the confirmation from the pilot plant for another pulping session using the frozen then thawed fruits to see if there is any effect on pulping due to freezing. The one year frozen pulp will also be evaluated for quality. The shared HPLE has been down, so we may send samples off site for additional analyses.

In addition to the processing, a field day was held in late June at the pawpaw orchard. There were approximately 50 participants many of which were very interested in growing pawpaws.



## M2009-23 An Automated Mechanical Intra-row Weed Removal System for Vegetable Crops

### Team Members:

Drs: Lie Tang, Brian Steward

Graduate Students: Ji Li, Mohd Taufik Ahmad, Akash Nakarmi, Simon Nielson

Undergraduate Students: Andrew Thompson, Preston Gable

### Contact:

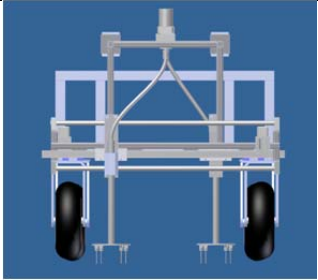

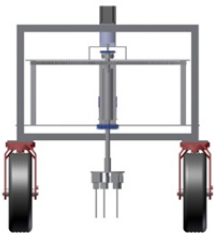

Lie Tang, Associate Professor, Agricultural & Biosystems Engineering, Iowa State University

Tel: 515-294-9778, Email: [lietang@iastate.edu](mailto:lietang@iastate.edu)

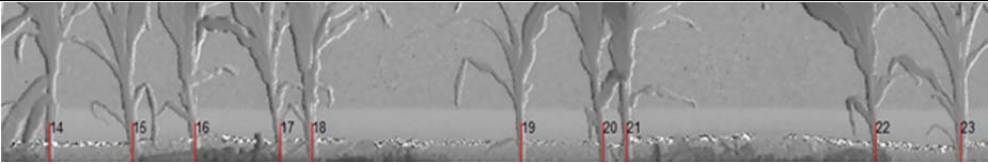
### Objectives

- 1) To develop an automated mechanical intra-row weeding system for vegetable crops
- 2) To evaluate the performance of the developed mechanical intra-row weeder

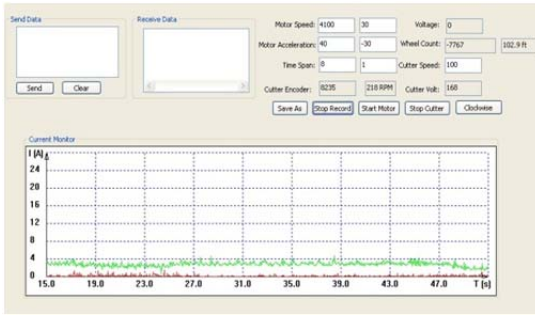
### Actuation System Design and Prototyping

<p>1<sup>st</sup> generation</p> <ol style="list-style-type: none"> <li>1) Simplicity of functional design</li> <li>2) Independent lateral motion control of each cutter-head for row following and crop avoidance</li> <li>3) Mass inertia reduction of cutter-head via flexible shaft based power transmission for high-speed motion control</li> </ol>		
<p>2<sup>nd</sup> generation</p> <ol style="list-style-type: none"> <li>1) Chain-based power transmission for improved power capacity and system durability</li> <li>2) Center pivoting-based later motion actuation for improved system efficiency, reliability, and integrity</li> </ol>		

### Sensing System Development

<p>Real-time 3D computer vision based crop stand identification</p>	
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### System Integration & Field Tests

<p>Data acquisition system that records travel speed, power consumption and rotational speeds of cutter motor and lateral motion control motor.</p> 	<table border="1"> <thead> <tr> <th>Speed</th> <th colspan="3">V=0.5mph</th> <th colspan="3">V=1.0mph</th> <th colspan="3">V=1.5mph</th> </tr> <tr> <th>Depth</th> <th colspan="3">Cutter rotation speed(RPM)</th> <th colspan="3">Cutter rotation speed(RPM)</th> <th colspan="3">Cutter rotation speed(RPM)</th> </tr> </thead> <tbody> <tr> <td>1in</td> <td>175</td> <td>250</td> <td>400</td> <td>175</td> <td>250</td> <td>400</td> <td>175</td> <td>250</td> <td>400</td> </tr> <tr> <td>2in</td> <td>175</td> <td>250</td> <td>400</td> <td>175</td> <td>250</td> <td>400</td> <td>175</td> <td>250</td> <td>400</td> </tr> </tbody> </table> <p>3 Factorial experiment: working depth, forward speed, cutter-head rotational speed</p>	Speed	V=0.5mph			V=1.0mph			V=1.5mph			Depth	Cutter rotation speed(RPM)			Cutter rotation speed(RPM)			Cutter rotation speed(RPM)			1in	175	250	400	175	250	400	175	250	400	2in	175	250	400	175	250	400	175	250	400
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## **M2009-24: Cultivating the Agrarian Dream – PI: John Lawrence, Co-PI: Andy Larson**

### Project Update

#### SITUATION

The interest in starting up small-scale, diversified farm ventures to produce differentiated products for the local and niche food marketplace continues to escalate among early- and mid-career Iowans. However, this interest often needs to be re-framed in the realistic, practical considerations of strategic business planning. Small and alternative farm businesses that start up with their destination in mind, smart goals that will keep them on track, and a network of resources to support them along the way, will be that much more likely to provide food system, lifestyle, and community development benefits.

#### OBJECTIVES

- Objective 1: To lead prospective farmers/farm families through a process of self-assessment and visioning in order to clarify their path into entrepreneurial/diversified agriculture.
- Objective 2: To network prospective farmers/farm families with veteran agri-entrepreneurs in their respective geographical areas.
- Objective 3: To make prospective farmers/farm families aware of the resources available to help them move forward, and to motivate some of them into further training.
- Objective 4: To begin to build trust and networks among aspiring farmers/farm families, with the hopes that some participants stay in touch with other members of their cohort.
- Objective 5: To assess more specifically subject matter needs of aspiring farmers/farm families that will inform future beginning farmer program development.

#### OUTPUTS

Thus far, ISU Extension Small Farm Sustainability, in concert with the Beginning Farmer Center and local coordinators (including county Extension, RC&Ds, Practical Farmers of Iowa, and farmers market managers), have offered four 3-4-hour Cultivating the Agrarian Dream sessions in Marion, Amana, Marshalltown, and Creston, with another to be held in Independence next week. There have been more than 100 attendees/participants. The sessions have gone under a variety of names, and sometimes they have been stand-alone, other times part of a longer workshop or meeting.

#### SELECTED OUTCOMES

- According to post-event evaluation survey respondents, as a result of these workshops:
  - 71% increased their understanding of creating a vision for their farm/business
  - 71% increased their understanding of setting goals for their farm/business
  - 52% said they are “more prepared” to get started in farming
- Within the next year:
  - 67% are “very likely” to share information from the workshop with others
  - 71% are “very likely” to seek out further agri-entrepreneurial training

## DISCUSSION

A typical “Cultivating the Agrarian Dream” workshop consists of:

- Participants pairing off to interview and introduce one another and how/why they want to farm
- A farm visioning process in which participants draw their guiding image of success for their farm
- An agri-entrepreneurial assessment during which participants take quizzes on their entrepreneurial skills and proclivities, as well as farming core competencies, and discuss which they believe are most important
- A panel of experienced, but recently beginning, alternative farmers who talk about how they decided to take the plunge and answer participant questions
- A goal-setting session during which participants create short- and long-term S.M.A.R.T. goals that will put them on the path towards their farm vision
- A concluding discussion about farmer training resources and changes in perceptions about agri-entrepreneurship

Experience in facilitating/delivering these sessions has led me to several conclusions:

- Beginning farmers are very diverse, in terms of age, gender, career stage, and desired enterprise
- Many beginning farmers have a very nebulous idea of where they would like their farm business to end up, but few have committed it to paper in the form of visions, missions, or goals
- Many beginners become intimidated by gaps in the skillset they feel they must have before starting a farm
- Many beginning farmers need to expand their understanding of how to acquire necessary human, physical, and financial capital – they don’t have to do *everything* themselves
- Farmers love to learn from farmers, and networking with local peers is an essential part of the process for entering agriculture, but it is hard to form a tractable cohort with one workshop and intermittent follow-up

**Building the Iowa Wine Culture Through Improved Quality**

M2010-03

Ray Hansen (PI)

Murli Dharmadhikari (Co-PI)

ISU Extension Value-Added Agriculture Program (VAAP) and the Midwest Grape and Wine Institute (MGWI) cooperatively created the first-ever “State of the Viticulture Industry” quality report for Iowa. This report is intended to identify benchmarks of quality to help determine where the industry needs to allocate additional resources and provide technical assistance in order to collectively raise the quality of wine grown and processed throughout the state. The study has also identified preliminary data to support varietal differences and characteristics across various soil profiles. The collection of this data will lay the groundwork for thorough assessments of the entire process from vineyard production practices through the bottling of the finished product. Data from this report and future studies will be critical in building and then maintaining the reputation of Iowa’s AVAs as sustainable “quality” wine-producing regions.

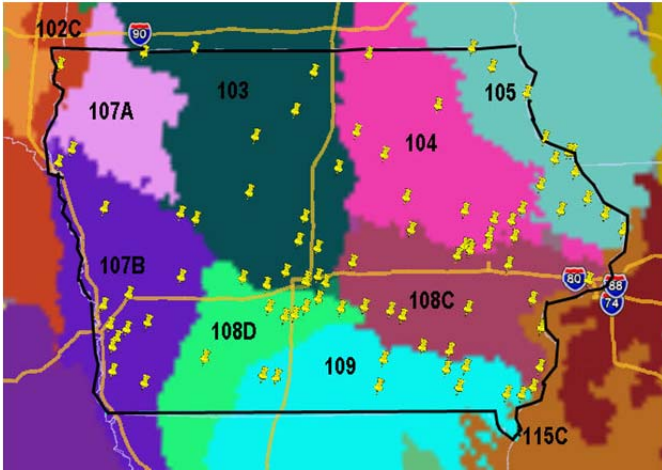
To accomplish this task, the ISU Extension VAAP and the MGWI staff surveyed wineries and collected and analyzed wines from across the state to determine the current norms for which future comparison will be made. The MGWI, under the supervision of Dr. Dharmadhikari, conducted a regimen of standardized lab tests to develop a composite picture of the state’s current wine quality profile. The MGWI evaluated the wines based on their standard Vintners Quality Alliance (VQA) protocol available through their wine quality lab services. This project targeted wineries that are not currently using or familiar with the benefits of using the lab services. In addition to the actual wine sample, basic production and processing data was collected to help identify consistencies and variability in quality assessments.

Because the grape composition is influenced by both the terroir and the genetic makeup or varietals characteristics, each winery was asked to submit samples of cold climate varietal wines made predominantly from Iowa grown grapes. Production and processing data collected from these varietal wines provides initial insight about sustainable production issues related to climate, soil types, production methodology and other standard operating procedures impacting the industry’s sustainability. In some cases the terroir has a dominant impact on fruit composition and in others the genetic makeup plays a greater role. Major Land Resource Areas (MLRA) as defined by the USDA were used to isolating these soil based terroirs. Additionally, climatic data was collected from these regions to correlate the impact on rainfall and Growing Degree Units (GDU) on quality attributes.

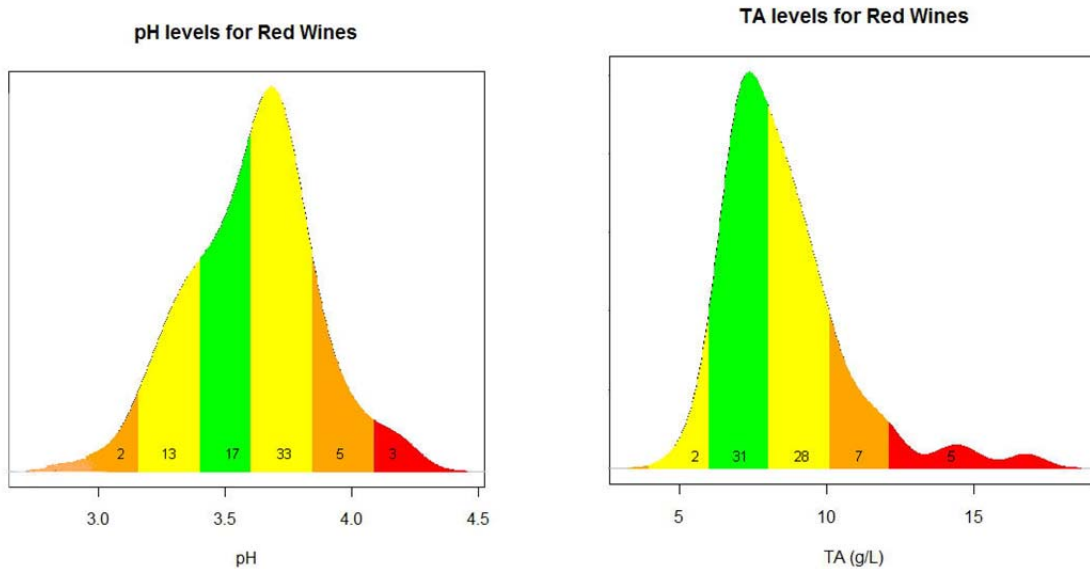
Wineries were asked to submit samples of cold climate varietal wines made from Iowa grown grapes. Varietal wines that had 5 or more submission are also compared in the data sets. Production and processing data collected from these varietal wines will provide valuable baseline data about sustainable production issues related to soil types, varietal selections, production methodology and other standard operating procedures impacting quality. For this study 145

samples were collected from wineries and that data was combined with data collected by MGWI's VQA participating members to provide a comprehensive snap shot of the baseline quality parameters of the Iowa Wine industry.

The following map illustrates the distribution of all Iowa wineries across the Major Land Resource Areas (MLRA) used to segregate the data for this project. The soils data should be useful in defining the wine produced from grapes grown in each MLRA.



The following chart is an example of how the data was used to show the distribution of the 72 red wine samples for pH, TA. The green bar represents the recommended range. Samples in yellow are one standard deviation off the recommended range, orange is two and red is three or more standard deviations from the norm.



An individual and comprehensive lab analysis reports will be made available to all participating wineries. MWGI will also provide sensory analysis notes. These results will provide the wineries a baseline for self-assessment and improvement as well as a comparison to the state norms. These results will help the individuals and technical assistance providers focus their educational, research and business development effort.

## **M2010-07**

**“Assessing the Business Development Strengths and Needs of Women and Latino Farmers in Iowa,”** Corresponding Investigator: Dr. Howard Vanauken, [vanauken@iastate.edu](mailto:vanauken@iastate.edu), 515-294-2478.

*Investigators: Dr. Howard Vanauken, professor of finance in the ISU Department of Management; Leigh Adcock, executive director, Women, Food and Agriculture Network, and Hannah Lewis, Midwest Regional Director, National Center for Appropriate Technology*

Our goal was to gather information that would help us develop programming to better meet the business planning needs of our constituents, to improve their viability as farmers. WFAN was involved in the women farmer survey portion. Survey questionnaires were mailed to 135 Iowa women farmers. Seventy-two completed surveys were returned, for a 53% response rate.

Here are some highlights from our results.

### **Women farmers:**

**General demographic info:** Mean age is 49 years; 39% hold a BA, 33% a graduate degree; farming an average of 12 years; 78% farm with a partner; 46% of the farmers or their partners have fulltime off-farm employment; 28% have part-time off-farm employment. 26% support themselves solely with farm income; 30% would like to quit their off-farm employment and farm full-time; on an average of 151 acres, rent an average of 52; 48% list total farm assets of more than \$100,000 (not surprising as most own their land).

**Sales/business info:** Women farmers are selling a wide variety of products, primarily via CSAs, farmers' markets, and roadside stands; 4 percent sell via the internet; 33% know their break-even sales point on each product; 82% know break-even for at least 1 product; annual net income for household: 52% earn \$10K or less/year; 90% earn \$50K or less.

**Business planning assessment:** Only 32% say they have a farm business plan, but they rate the importance of having a business plan at a very high 4.1 on the 1-5 Likert scale; mean understanding of state and federal grants is 2.5; mean understanding of other financing instruments, including loans and leasing, somewhat higher at around 3. These farmers are good at keeping sales (88%) and expense (85%) records. Fewer than half (46%) track labor hours.

**Preferences and barriers to business planning information delivery:** We asked whether the women felt that gender, ethnicity or language were barriers to obtaining business financing or information; mean value was 2 on the scale. Highest rated for helpfulness in business planning were friends and mentors, free workshops, and magazines. They rated free workshops as the form of delivery they're most interested in (3.6), followed closely by friends/mentors (3.4).

**Strengths:** these women farmers are relatively young, well-educated, keep good financial records and recognize the importance of business planning.

**Needs:** Weak understanding of capital; 2/3 don't have a business plan but would like to learn more.

**Our next step:** Plan to offer free or low-cost regional business planning workshops featuring other women farmers and planning experts, which will prepare women to seek more in-depth training as from Grow Your Small Market Farm and ISU Extension Small Farms program.

*A total of 10 Mexican immigrants were interviewed in two focus groups held in Postville and Perry, Iowa. All were men between the ages of 18 and 53, with an average age of 33. An additional handful of Latino farmers who own land have been identified and will be invited to be interviewed in April.*

**Farming and gardening experience:** Eight (8) respondents grew up on a farm in Mexico, seven (7) have worked on farms as employees in the US or Mexico, and one (1) currently works on a pig operation in Iowa. Eight (8) currently have home gardens, and three (3) have community garden plots. They are growing a variety of vegetables, a few grains (corn, beans), and some livestock. In the past, most grew these crops and some also grew fruits.

**Motivations for gardening or farming:** Eight (8) ranked growing food to offset grocery costs among the top three reasons why they garden. Five (5) ranked improving the health and nutrition of their household among top three reasons; four (4) ranked gardening as a labor of love among top three reasons; and three (3) ranked giving produce to friends, neighbors and family as a top reason for gardening. Seven (7) respondents want to expand garden size, one (1) does not, and two (2) are unsure. One (1) respondent currently owns a small acreage that he and his wife purchased for farming, one (1) rents land, one (1) is actively looking for farmland, and three (3) have considered moving to the country to farm; four (4) do not plan to rent or buy land to farm.

**Business planning and marketing assessment:** Two (2) have owned or managed a small business. Two (2) kept records on gardening expenses (seeds, tools, etc.) during 2010; one (1) kept receipts for garden-related purchases, but doesn't know total expenses for 2010; seven (7) do not keep track of garden-related expenses. None of the respondents keep track of how much they harvest and consume from the garden, but estimate the value of their monthly savings on food (substituting grocery purchases with garden harvest) as ranging from a few dollars to more than \$100. As for potential market outlets, respondents suggested Mexican tiendas, which carry a variety of specialty peppers, but none fresh. Another suggested HyVee or Fareway, and another, selling to friends, family and neighbors. One said he had no idea where to sell products he grew.

**Preferences and barriers for gaining access to land:** A common barrier to farming was access to capital for obtaining farmland. Several participants were interested in learning more about Farm Service Agency beginning farmer loans. Only one (1) of the 10 people interviewed owned a small acreage for farming. Among those that want to buy farmland, the size of farm desired is very small – ranging from three (3) to 10 acres. In the Postville focus group, a few participants who were related to each other suggested pooling their resources to gain access to three (3) acres, which they felt was enough ground for growing tomatoes and other vegetables commercially.

**Strengths:** Active gardeners, prior experience farming, and knowledge of agricultural practices in vegetables, grains and livestock. **Needs:** Access to farmland ownership loans; better knowledge of markets.

## **M2010-19**

***“Evaluating the Impact of a Decade of Regional Food System Work on Growers in Northeast Iowa”***, \$12,636, 1 year, Andrea Geary, University of Northern Iowa.

Project Period: February 1, 2010 – June 31, 2011,

Corresponding Investigator: Andrea Geary, [andrea.geary@uni.edu](mailto:andrea.geary@uni.edu), 319-273-2573.

### Project Updates:

- UNI-CEEE identified a host of candidates to interview for the independent evaluation contract portion of this project. Penny Brown Huber was selected as the successful candidate, given her experience as the Executive Director of Grow Your Small Market Farm program and co-operator of a mall farm direct-marketing business with her husband.
- UNI-CEEE staff identified key sets of data including previously conducted surveys and narratives to include in the evaluation project.
- Penny Brown Huber created a comprehensive survey to assess impact from growers’ perspective.
- UNI-CEEE staff helped to identify key food producers that have been involved in their work since the mid-nineties, and helped to facilitate introducing Penny and the project to the producer group.
- Penny conducted in-depth producer surveys via telephone with 20-30 families involved at a high level with UNI-CEEE food programming over the years.
- UNI-CEEE staff developed a matrix of impacts and key indicators related to regional food systems work that will contribute to the evaluation project.

**M2010-21**

**Project: “Engaging Community Planners and Local Elected Officials with Local Food Systems Producers to Integrate Local Food Systems into Community Plans and Policies,” \$15,820, 1 year, Alan Vandehaar, ISU Extension.**

Project Timeline: February 1, 2010 – May 31, 2011

Investigators: Alan Vandehaar, Communities Specialist, ISU Extension [alanv@iastate.edu](mailto:alanv@iastate.edu)  
Gary Taylor, Extension Planning Specialist and Assistant Professor, ISU [gtaylor@iastate.edu](mailto:gtaylor@iastate.edu)  
Tim Borich, Director, Extension Community and Economic Development [borich@iastate.edu](mailto:borich@iastate.edu)

This project aspires to engage community planners and local elected officials with local food systems stakeholders to facilitate the integration of local food systems into community plans and policies. We will:

1. Identify examples of community plans, polices, and ordinances that address local food systems and/or local food production, farmer’s markets, community gardens, urban gardens, and farm to market issues from around the country.
2. Examine barriers and opportunities from the local foods stakeholders view as well as the community planner’s viewpoint to integrate local food systems into the plans and policies of local governments.
3. Develop local policy guidelines, model ordinances, and Extension publication(s) to inform city and county planners and policy makers on steps and strategies to promote local food systems.

To date we have held focus group discussions around Iowa involving local food producers, local elected officials, and community (city and county) planners. As planners, we are interested in learning what cities and counties can do to better support and encourage local food systems to capture more of the economic and health benefits of local food production. The broad questions we posed in each focus group included:

1. What are the barriers to aggregation and distribution of local foods to consumer, restaurants, and institutions that local government can address through land use codes and other regulations?
2. What are some policy and regulatory options that local government can or should put in place to capture the economic and/or health benefits of local food systems for their communities?
3. What key knowledge is needed for local governments to successfully navigate local food systems?

We have identified the following land-use related issues that affect locally produced foods:

Iowa agricultural exemption: Iowa’s zoning enabling legislation exempts agricultural land and buildings from zoning regulation. However, Iowa courts have provided little guidance to local governments about how to interpret the ag exemption from zoning. This has led to various interpretations among county officials and the necessity to work through such issues on a case by case basis.

A concern is how to fairly regulate local market farms in a system not designed with them in mind. Local market farms can have more complicated processing and marketing activities on site which can

lead to regulatory issues. Counties often lack rules for and knowledge of issues raised by local market farms.

Smart growth planning: A desirable location for local market farms is on the city/urban fringe which allows for relatively easy access to the largest population centers and largest potential markets. One of the problems however is this 'urban fringe' is under high development pressure (as development pushes outward from the urban areas) from developers and cities and counties for new tax bases. The local economic development leaders often don't see "local foods" as economic development and seek other higher intensity uses with known rates of returns as preferred development. The cost of land on the fringe is also a barrier to entry and expansion of local market farms.

Agriculture within city limits: Agriculture within cities (urban agriculture) is attracting national attention but few cities understand or make adequate provisions for urban farmers/gardeners. There is a need to work through some potential incompatible land uses, and cities need to see the potential benefit of urban farming/gardening for both economic development and health benefits. Planning for local foods must leave land for local market farms, but the challenge is how to do this, within the free market where alternative uses to urban farming/gardening can bid up the price of land beyond the economic viability of urban gardening. There is a need to enable marketing activities for farming to be profitable, such as on-site vendor stalls or truck garden options.

Food and Farm development districts: Local market farms are not commonly considered in local economic development plans. As such, market farmers miss out on state and local assistance and Iowa communities miss out on the economic development potential of expanded local market agriculture. Development districts treat local market farming/gardening as an economic development strategy, such as Intervale, VT. These could serve as incubators where new farmers are mentored and where infrastructure for aggregation and processing is located. Farming and gardening may be of more value as a spatially distributed activity, while mentoring, aggregation and processing may benefit from clustering. Policies should promote a critical mass of productivity in a city or county, creating opportunities for light processing and value-added development.