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Investigating Feasibility of Food Hub Node Expansion in Dubuque, Iowa

M2016-05

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Table of Contents

- Non-Technical Summary
- Detailed Report
 - Introduction
 - Project Design, Methods and Materials
 - Results and Discussion
 - Conclusion
 - Impacts of the Results
 - Outreach and Information Transfer
 - Publications
 - Education and Outreach
 - Leveraged Funds
 - Evaluation
- Budget Report

Non-Technical Summary

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Q: Are food hub nodes a viable means to expand the reach of food hubs in Iowa?

With the necessary personnel support, food hub nodes can be a viable means to expand the reach of existing food hubs. Using the food handling systems, producer networks, infrastructure and management and sales expertise of an existing hub, localities can increase access to local foods without intensive capital investment.

Project Overview

In 2012, Allamakee New Beginning launched a food aggregation and distribution business called the Iowa Food Hub (IFH). The goal of the Iowa Food Hub is to source product from farmers and food processors within 150 miles of their warehouse in West Union, Iowa. Since its inception, the food hub has made great strides in progressing its chief goals:

- To increase sales and consumption of locally grown products
- To distribute quality fresh foods into underserved communities
- To operate a more efficient local food distribution system, saving farmers and buyers time, gas and money
- To support local small and mid-sized farms that can supply the wholesale marketplace of schools, hospitals, grocers and restaurants.

The Leopold Center funding was used to explore the feasibility of and pilot a food hub node in Dubuque county, managed remotely by the Iowa Food Hub. Funds were used to connect the Iowa Food Hub with additional Dubuque area farmers, to secure cold storage in the area, to account for travel to and from Dubuque, and to evaluate and develop the local foods market in and around Dubuque.

During the year preceding this project, there were four farmers in the area working with the Iowa Food hub and five buyers purchasing from the food hub.

During this project, IFH purchased local foods from seven farmers in the area and began sales to five anchor buyers. This amounted to \$8,788 purchased from area farmers, and \$14,396 sold into the county. This was an increase of \$2,028 in sales and approximately the same level of purchasing from area farmers, compared to the previous year.

DETAILED REPORT

INTRODUCTION

In his 2013 white paper, author Shane Tiernan (1) proposed the theory of food hub nodes as a viable way to increase access to aggregation for farmers throughout the state.

Food hub “nodes” are small cold storage facilities managed remotely by a larger hub. Nodes provide easy access for local farmers to tap into a larger distribution system as well as provide the opportunity to increase services to valuable urban markets with negligible increases in transportation costs and transaction costs. This will increase the amount of local food demanded in NE Iowa and increase opportunity for local farmers to engage in the food system.

The 2013 National Food Hub Benchmarking study (2) indicates that viable food hubs have at least \$1,500,000 in annual sales. In Iowa, that translates to hub service areas of 100 miles or more to meet that volume. This suggests that geographically-centered food system efforts need to work together.

Iowa’s Regional Food System Working Groups (RFSWGs) consist of community members that come together across 3-10 counties to support local food system development and outreach. In this project, two RFSWGs joined forces to build the local food market. Region 4 consists of six counties in NE Iowa and Region 11 consists of 3 counties in the Dubuque area. Each RFSWG is led by a Local Food Coordinator, and in this case, both the coordinators are employees of Iowa State University Extension and Outreach. These regions have been investing in food system work for 10 years and 5 years, respectively.

Perceived competition between farmers in different counties or regions can inhibit collaboration. In this project, RFSWGs worked together to create partnerships where farmers in each region could benefit. If financially viable food hubs are important to the success of local food production in Iowa, then partnerships between different regions will be key.

This project used the Iowa Food Hub infrastructure and sales platforms to further facilitate rural-urban partnerships, test the concept of a food hub node in order to increase food hub development, and increase markets for locally produced food. This project was viewed by Dubuque stakeholders as their next step to increase local food commerce in the region.

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The Leopold Center funding was used to explore the feasibility of and pilot a food hub node in Dubuque county, managed remotely by the Iowa Food Hub. The project connected the Iowa Food Hub with additional Dubuque area farmers, secured cold storage in the area, provided funds for travel of food hub staff to Dubuque, and evaluated and developed the local foods market in and around Dubuque.

(1) Tiernan, Shane. 2013. Can a Diversified Locally Grown Food Aggregation (Hub) Facility be Economically Sustainable in Iowa?. Accessed 6/24/2015.

(2) <http://ngfn.org/resources/food-hubs/benchmarking-study/press-release-food-hub-benchmarking-study>

PROJECT DESIGN, METHODS AND MATERIALS

The Iowa Food Hub used Leopold Center funds to explore the feasibility of a food hub node in the Dubuque area. This was executed by using the time and subject knowledge of Iowa Food Hub and ISU Extension and Outreach staff.

The project team included Georgia Windhorst, IFH General Manager, and Carolyn Scherf, Dubuque Co. ISU Extension and Outreach, as well as local food system advocates. The team worked toward the following objectives:

- Establish 5 anchor farmers (suppliers) in the area
- Establish 5 anchor buyers in the area
- Locate and coordinate a cold storage facility to act as a node in Dubuque
- Further develop routes and deliveries in the area

Selection of Anchor Buyers and Growers

The project team utilized the concept of “anchor buyers” and “anchor farmers” to identify partners for this project. This concept was previously discussed in M2015-06 “Increasing Local Food Consumption in Rural Communities by Partnering with Non-Traditional Food Retailers.”

Anchor buyers are businesses or institutions that purchase local products in significant volumes and on a consistent basis. Examples of anchor buyers include colleges, school districts, hospital food service or care centers. These accounts shoulder most of the delivery costs to that town, and it becomes easier to serve smaller volume customers.

One college, one Catholic motherhouse, one hospital and two public school districts were identified as anchor buyer prospects. IFH staff scheduled meetings with the prospects to determine their needs and goals for local foods, and to gauge interest in relation to local food purchasing. It was understood that some of these anchor buyers are colleges and schools, and therefore purchasing may not begin until August.

Likewise, anchor farmers are producers who have significant volumes of project on a consistent basis. Production planning is key part of the availability. For this project, the team identified “local” farmers as those in Dubuque and surrounding counties and “regional” farmers as those within 150 miles.

The selection of anchor farmers was centered on building upon existing relationships and building new ones. It was necessary to gauge the starting capacity of area growers, as well as their interest in expanding their markets to include wholesale and food hub sales. IFH and ISU staff contacted area growers and told them about the project.

After weeks of communication and surveying, a grower meeting was held in Dubuque to connect food hub staff with new producers. Unfortunately, the day of the meeting was a glorious day to be in the field after many bad weather days. This meant that some producers opted to tend to their farming tasks instead of attend the meeting, meaning some connections were not made.

Establishing Cold Storage

To develop a food hub node away from the central hub warehouse, one key element was establishing a central location with access to cold storage. The food hub truck is only in the area once a week. A central spot provides flexibility for farmers to drop off and efficiency for the food hub while maintaining cold-chain for food safety.

Building new cold storage facilities is costly, and access to existing infrastructure can be limited. Ms. Scherf researched area facilities, seeking warehouses with cold storage space available for rental in Dubuque. She contacted one individual who had a large cold storage facility available for use. In opening discussions, it was determined that the following barriers could render this option non-viable:

1. Cost: The rent proposed by this project was not enough to cover the costs of operation of the facility.
2. Security: This facility was on private property and often unattended. This made it difficult to grant security access or coordinate narrow drop-off times with farmers. Additionally, farmers expressed the desire to coordinate drop-off times into their existing delivery schedules.
3. Location: Many growers did not travel to the city of Dubuque often, and did not desire to deliver frequently to a site that is within city limits.

After identifying these barriers, the project team started looking at other cold storage options that would be a better fit.

Food hubs in other parts of the country have seen success with mobile cold storage trailers. This approach decreases the cost of storage rental or construction, and would allow for location changes if any location proved to be an unsuitable drop site. Many farmers and food hubs have used CoolBot technology to build effective, efficient and inexpensive cold storage. A CoolBot is a device that can be added to a household air conditioner to cool insulated spaces to temperatures suitable for cold storage. We determined that this could be a great fit for the project.

The hub leveraged funds from another grant to build a CoolBot trailer. A 6'x10' trailer was purchased and modified for mobile cold storage. This included insulating the walls, ceiling and floor; installing food grades surfaces; installing a CoolBot and air conditioning unit; and installing a combination lock. The hub purchased the trailer and partnered with a contractor to oversee and execute the work. Using plans from the internet, the total project cost approximately \$6000 with labor.

The trailer was transported to Sinsinawa Mound collaborative farm, a partner of the local food system in Dubuque. This location was convenient for many of the anchor farmers.

Community Involvement

Several community outreach opportunities were conducted during the this project. These included:

- Dubuque Area Farm Crawl – Ms. Windhorst attended Dubuque farm crawl, providing local food snacks and ingredients bike-powered smoothies. She educated attendees about local foods and connected with the food service director at Dubuque Community School District, an anchor buyer for the project.
- Dubuque Eats Well outreach event where project staff and partners educated Dubuque employers about local food initiatives and in turn, learned about employer wellness programs in Dubuque.
- Buyer Meetings were arranged as one-on-one meetings between the buyer and IFH staff members. These included schools, colleges, Sinsinawa Mound, and a local hospital.
- Tri State Summit – Ms. Windhorst attended the Tri State Local Foods Summit, sitting on a panel for local food procurement and meeting more Dubuque area farmers. Local farmers received honorarium to attend as representatives of their business.
- Annual Sustainability Dinner – IFH provided food from area farmers for the city's annual sustainability dinner. This provided an additional opportunity to educate about IFH and support local farms.

RESULTS AND DISCUSSION

A. Selection of Anchor Buyers and Growers

Out of five anchor buyers identified, two were consistent partners for the hub and could be considered anchor buyers. Both of these were school districts with local food procurement goals.

Dubuque Community School District tripled their local food purchases during this project. Western Dubuque School District purchased local food for the first time. Their food service director set a goal to incorporate local produce throughout the year, which was a successful approach. Many schools tend to focus more on October Farm to School Month. This new approach meant that IFH was able to provide a wider range of products for students to try.

The anchor farmers used in this project were used for Farm to School sourcing, as well as for use in the food hub's retail food box program. Because some of the partnerships were made later in the season, production planning was not executed at the level needed for consistent

supply for some of these larger customers. Local growers were utilized as much as possible to source foods for the Dubuque area schools, as well as for a local foods dinner organized by the City of Dubuque.

During the year proceeding this project, there were four farmers in the area working with a food hub and five buyers purchasing from Iowa Food Hub.

Table 1. Number of partners and dollars of food transactions in 2015 and 2016.

	No. Before Project (2015)	Dollars (2015)	No. During Project (2016)	Dollars (2016)	Change Dollars
Buyers	5	\$12,368	5	\$14,396	\$2028
Suppliers (Farmers)	4	\$8842	7	\$8788	-\$54

During this project, IFH purchased local foods from seven farmers in the area and began sales to five anchor buyers. This amounted to \$8788 purchased from area farmers, and \$14,396 sold into the county. This was an increase of \$2,028 in sales and approximately the same level of purchasing from area farmers, compared to the previous year.

Three of the seven farmer suppliers supplied more than \$2000 of product to the food hub. Three of the five buyers purchased more than \$3000 in a year.

The one-on-one meetings with the buyers were successful. The setting allowed for customized discussion of quantities and delivery needs.

The Dubuque local foods team has created a Farm to Institution committee to continue efforts with buyer engagement.

Market transition was a significant challenge for this project. Changes in staff, business closures and reorganizations, restrictive procurement policies and indifference to the benefits of local food procurement affected the number of buyers who engaged in the project. Changes in farming operations also affected the hub’s ability to consistently source product from the region.

B. Establishing Cold Storage

The use of a CoolBot trailer proved to be a great solution for this project. It allowed for low-input storage available to all farmer partner, and security was easy to implement with the use of a combination lock. Additionally, since farmers had access and were able to securely store their product there, they were allowed to deliver to the trailer 2-3 days before the food hub’s truck would pick up. This provided flexibility so farmers were able to come when it worked best for them.

One drawback of this cold storage arrangement was that there was no access to freezer space. Meat vendors still had to coordinate a meeting location with the food hub truck.

There were some setbacks at the beginning of the project due to the learning curve associated with the trailer and setup of the cooling unit. In one instance, the trailer was not turned on properly, and some of the produce was lost on a hot summer day.

CONCLUSION

1. Continued engagement of buyers and suppliers is needed.
2. One-on-one interactions with buyers is most effective. Assistance with goal setting is beneficial. Having a local sales staff member of contractor could have been a more cost effective strategy for buyer engagement.
3. The system is fragile. Some businesses closed; others stopped buying after personnel changes. Even farm operations changed product mix and target markets (direct vs. wholesale).
4. The project reflects the experience and sales numbers of the Iowa Food Hub. Other local food suppliers are also working directly with food buyers.
5. Proteins (meat, milk and eggs) are a more consistent product to offer buyers and provides a base to build weekly deliveries. In this project, produce was desired by the two anchor buyers. The seasonality and lack of time to effective production planning limited the success in this project.
6. A mobile, cool-bot trailer was an effective cold-storage solution for farmers and the food hub.

IMPACT OF THE RESULTS

Were the project objectives achieved?

Somewhat. We met successfully with potential buyers and farmer suppliers to create plans for local food procurement. We identified a suitable, albeit temporary, solution for cold storage. We understand the Dubuque market landscape much better. This project fell short in the projections for local food purchases. While Dubuque has several large institutions, the failure to engage more than two anchor buyers limited our success.

How will this project affect future food hub development in Iowa?

This project tested a methodology that the Iowa Food Hub has successfully used to identify and engage new buyers. The methodology remains sound. However, outside factors like restrictive procurement policies, turnover of food buyers, and lack of commitment to local food ideals remain barriers to market development.

How will this project affect food system development in Iowa?

The development of the concept of food hub “nodes” needs to continue. Members of the Iowa Food Hub Managers working group are already in discussions about cross-docking, backhauling

and mutual conveyances. These partnerships will be critical as local food distribution continues to develop in Iowa.

OUTREACH AND INFORMATION TRANSFER

- 1) Handout: "Dubuque Node Talking Points," Teresa Wiemerslage, ISU Extension and Outreach Local Foods Program, 2016.
- 2) Blog: "New Cool Trailer", <http://iowafoodandfitness.org/wegrow/2016/10/05/new-cool-trailer/>, Teresa Wiemerslage, ISU Extension and Outreach Local Foods Program, , 10/5/16.
- 3) Blog: "Iowa Food Hub Connects Schools to Farmers," <http://iowafoodandfitness.org/wegrow/2017/08/24/iowa-food-hub-connects-schools-to-local-farmers/>, Teresa Wiemerslage, ISU Extension and Outreach Local Foods Program, 8/24/17.
- 4) Presentation at 10th Annual Growing Sustainable Communities Conference, Dubuque, 10/3/17
- 5) Full report can be found on ISU Extension and Outreach resource pages, Northeast Iowa Food and Fitness resource pages, and Iowa Food Hub website.
- 6) Findings made available to Iowa's Food Hub Manager Working Group

LEVERAGED FUNDS

This grant was supplemented with funds from a USDA Local Food Promotion Program grant to provide cold storage. \$6000

EVALUATION

Evaluation of the project objectives and results have been discussed in previous sections of this report.

BUDGET REPORT

A. Total Request: \$21,987

Expenditures for year one = \$21,987

B. Primary Expenditures

The primary expenditures for the grant were for wages for food hub staff, food hub staff, honorarium wages paid to Dubuque-based consultants, space rental, and transportation costs.

C. Agencies or additional funding and approximate value.

USDA Local Food Promotion Program grant, \$6,000