FarmLab Feasibility Study

Phase 2 - Program Identification and Development

Prepared for the Elkhart County Redevelopment Commission

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www.thefarmlab.net

Contents

Introduction

The purpose of this report is to fulfill Phase 2 of the FarmLab Feasibility Study by identifying potential programs and activities and developing a foundation for a sustainable business plan. The Phase 1 Needs Assessment identified Farm to School (FTS) as a strategic focus area for the FarmLab and characterized the current context for program development.

This report describes potential FTS activities that could fulfill the original FarmLab aims for supporting local food production and agricultural education, while also catalyzing food systems innovation and enterprise as part of a broader food localization strategy for economic development. At the heart of these activities are the essential FarmLab functions of facilitating new cross-sector connections and collaboration among existing stakeholders, and of providing a "lab-based" environment for sustained innovation and education. The report concludes with descriptions of specific projects that could serve as prototypes for FarmLab programs and with recommendations for incorporating as a not-for-profit organization to access available funding.

Project Scope

The FarmLab study evaluates the feasibility of a farm-based education center located at the Crystal Valley Farm site within the Middlebury Ag TIF district. Recognizing the need for local food production partnerships, facilities, and training to access new local and regional markets, the Elkhart County Redevelopment Commission (RDC) allocated TIF funds to support this study in assessing the potential development opportunities for corresponding FarmLab activities.

The feasibility study proposal submitted to the RDC includes three phases:

- Phase 1 Needs Assessment: Identify and quantify needs and opportunities for a farm based education facility that serves schools as well as the food production industry.
- Phase 2 Program Identification and Development: Preliminary financial feasibility test, and foundation for business plan.
- Phase 3 Business Plan Development: Fully developed business and facility plan that can establish organizational structure and financial operations.

The Phase 1 Needs Assessment was presented to the RDC in October 2016. Based on the results and proposed direction for Phase 2, the RDC authorized proceeding with the Phase 2 study.

The Phase 1 Needs Assessment and all appendices can be found at www.thefarmlab.net.

Project Background

The vision for the proposed FarmLab project was conceived by Elkhart County Commissioner Mike Yoder as a strategy for preserving local agricultural land and capacity. The project initially focused on restructuring the Crystal Valley Dairy Farm to support a farm-based experiential learning center. The Needs Assessment demonstrated that throughout Elkhart County school districts, there is increasing interest in food and agriculture as a focus for curricula incorporating experiential learning and project-based learning pedagogies. At the same time, a growing local food movement continues to generate unmet demand for local producers willing to diversify production and serve new markets. As one of the largest agricultural counties in Indiana, Elkhart County offers an abundance of opportunities for catalyzing innovation, enterprise, and economic development around our agricultural resources and heritage.

For the Needs Assessment, we (the authors) interviewed community ag and education leaders and reviewed relevant studies and secondary data for the following key constituencies: producers, consumers, schools, organizations, and government agencies. While we encountered a wide range of perspectives on the issues at hand among these overlapping groups, there was general agreement about the need for better communication, networking, and collaboration. The value of connecting and building upon the work already being done was also evident, along with a desire for facilitation and additional leadership regarding the identified needs and opportunities.

Project Development

The stated purpose for the FarmLab at the beginning of this study was to be a farm-based education center that:

- Sustains and expands local agricultural knowledge;
- Promotes agricultural career pathways;
- Preserves agricultural land and productivity;
- Improves access to local, healthy food; and
- Opens new markets for local food production.

In line with the breadth of these objectives and the interdependent nature of local food systems, the corresponding needs and opportunities identified in Phase 1 were far ranging and diverse. Overall, they affirmed the value of the aims listed above and pointed to four complementary directions for pursuing them:

- Food and ag literacy
- Ag-based curricula
- Ag innovation
- Food localization as economic development

Supporting and advocating for increased Farm to School (FTS) activities throughout Elkhart County emerged as a central focus for advancing these interests. Several essential functions therefore stood out for the FarmLab to perform:

- Network building and improving communication within and across constituencies.
- Providing expertise and coordination to emerging FTS and ag education initiatives.
- Serving as an innovation and incubation lab designed to support local producers and institutions.
- Providing value chain facilitation to better connect local producers to schools and other markets.

With FTS as a strategic focal point, the question guiding the Phase 2 study was how to frame the proposed roles within tangible programs or projects that would help inform potential cost-benefit analyses and evaluate feasibility for implementation. The Needs Assessment suggested that at early stages of development, facilitation would be more valuable than facilities in advancing FarmLab objectives, placing greater value on knowledgeable and committed staff — willing to build relationships with current stakeholders and potential partners — than on potential applications of physical infrastructure.

Two developments concurrent with the commencement of the Phase 2 study were also influential. Based on informal conversations with Goshen Health and Middlebury Community Schools regarding potential FTS activities, the project leaders were invited to submit a proposal for a grant-funded exploratory pilot project. Meanwhile, increasing prospects for the sale of the Crystal Valley FarmLab site led to uncertainty regarding the availability of farm revenue or existing infrastructure to subsidize initial operations, reinforcing the shift to broader facilitation rather than centralized operations.

The "FarmLab Farm to School Pilot Program Proposal" prepared for Goshen Health is attached as Appendix B. The current feasibility study targeted a planning-based approach to mapping the strategic development of the FarmLab and informing its formation as an independent organization. The activities supported by the Pilot Program proposal were designed to complement the planning process through open-ended action inquiry and "boots on the ground" research. While the proposal was unable to secure the private funding and resources needed to move forward, it directly engaged stakeholders in the process (including producers, educators, food service directors, and various specialists) and created a productive environment for identifying new directions and opportunities. The proposal describes and reflects the value of "lab-based" participatory and exploratory research as a guiding methodology for FarmLab operations.

The farm to cafeteria and mobile hydroponic projects presented in this report as prototype projects for further evaluation represent practical applications of the FarmLab functions described below. By focusing on FTS programming as a leverage point for increasing local food

production and providing project-based agricultural education opportunities for students, the FarmLab could facilitate local food systems innovations that create new pathways for ag entrepreneurship and economic development. The Phase 3 study could support advancement of the farm to cafeteria and mobile hydroponic projects and incorporating the FarmLab as a not-for-profit organization.

Program Characteristics

The Phase 1 study identified a broad range of needs and opportunities with respect to the proposed FarmLab aims and the current contexts for agriculture and education. Based on our assessments, several key trends emerged through which the interests of the various stakeholders began to align, providing four complementary directions for the FarmLab to initially pursue: food and ag literacy; ag-based curriculum; ag innovation; and food localization as economic development.

This section summarizes these potential focus areas for FarmLab activities and identifies Farm to School programming as a practical point of convergence. The focus areas are described in greater detail in the corresponding white papers appended to the Phase 1 report. This section also proposes four general functions for the FarmLab to organize itself around while utilizing existing resources and developing the capacity to pursue its proposed aims through the identified focus areas.

Focus Areas

Food and Ag Literacy

Ag education and ag in the classroom activities seek to develop appreciation for the many relationships between agriculture and society. By better understanding where their food comes from, students can become more self-sufficient and will be more likely to pursue careers in agriculture. Yet, this is not enough to empower consumers to take control of their health and nutrition; they also need access to healthy food and the knowledge of how to prepare it in a safe and practical manner.

Cultivating food literacy is at the forefront of the work of school wellness committees, Elkhart County Extension's Food and Nutrition Program, charitable food networks, and nutritionists throughout the health system. It can begin with getting healthy food onto school plates, factoring in limited access and cultural preferences to insure that lessons learned remain relevant beyond the cafeteria. These lessons would deepen ag literacy and encourage positive perceptions of agriculture by connecting these consumers more directly to the source of their food.

The "Food and Ag Literacy" white paper (included as Appendix E in the Phase 1 report) provides guidance for FarmLab activities with respect to helping consumers make more informed, healthful decisions about the foods they consume.

Ag-based Curricula

Ag education and ag in the classroom programs offer extensive curricula designed to nurture appreciation for agriculture and guide students towards a variety of related career pathways. Other schools and teachers are increasingly implementing pedagogies that seek to engage students more effectively by connecting lessons to practical experience and relevant issues. Curricula based on local food and agriculture can help fill this niche well, providing an engaging focus for many subjects while simultaneously cultivating food and ag literacy.

Existing ag-based resources already aligned with required standards can provide a useful foundation for integrating food and agriculture into new or existing curricula outside of formal ag education programs. These curricula can be reinforced with educational ag experiences such as school gardens or farm tours, or through alignment with foods introduced through school meals. Yet there are gaps between current aspirations, available teacher time and energy, and awareness of available ag-based resources.

The "Ag Education Background" white paper (included with the Phase 1 report as Appendix C) provides an overview of the ag education resources supporting current programs that could benefit other schools. The paper describes the range of existing resources that the FarmLab could help integrate into curricula.

Ag Innovation

While conventional ag and global food systems continuously innovate to remain profitable and feed a growing population, many smaller scale innovations are taking place at a local level. These localized innovations are largely a response to growing demand for products that can be traced back to local farmers and alternative practices that place a premium on nutrition, relationships, and sustainability. In addition to new production practices and technologies, innovation is taking place throughout local food value chains to fill gaps in aggregation, storage, processing, and distribution between producers and consumers.

Consumer demand for local and specialty produce continues to outpace available supply. At the same time, farmers are increasingly looking to preserve their farms by diversifying and accessing new markets to increase profitability and by creating sustainable new enterprises for their children. The wealth of small farms, off-farm income, and entrepreneurial capacity place Elkhart County in a privileged position to explore and develop these market opportunities. Because the risks can be high and the returns slow, however, most farmers must be conservative about adopting new practices – a need the FarmLab could help address.

The "Agricultural Innovation" white paper (included as Appendix F in the Phase 1 report) highlights current innovations in agriculture relevant to local needs, capacities, and potential that FarmLab operations could help support.

Food Localization as Economic Development

Facilitating new food value chain connections can lead to new livelihoods and improved access to local food throughout the community. Economic impact assessments from nearby regions and communities highlight the potential for new jobs, production, and tax revenue generated by food localization efforts. Local food networks forming in these communities are supporting more efficient, cohesive, and resilient business clusters and further increases in production. As a result, support for economic development strategies centered on local food systems is coming from the USDA and ISDA, as well as local communities, making the necessary investments in strategic infrastructure more attainable.

The "Food Localization as Economic Development" white paper (included as Appendix G in the Phase 1 report) examines various studies supporting food localization as a means of economic development, providing additional rationale for advancing FarmLab operations.

Farm to School

Farm to School initiatives stood out as a practical point of convergence for the above focus areas in addressing the needs identified in this study. As an independent organization, the FarmLab could serve as an education and innovation lab for exploring opportunities to advance FTS initiatives in Elkhart County through "boots on the ground" research, prototypes, and pilot initiatives. As a common focus, FTS collaboration could provide a rich context for building stronger networks and facilitating better communication across the targeted constituencies.

In practice, the FarmLab could work with local producers and school food service directors to identify and develop farm to cafeteria procurement programs and processes. A group of schools focusing on specific products (i.e., sweet potatoes) may provide a large enough market to justify education and aggregation support for farmers interested in diversifying their production. The FarmLab could help fill current gaps in the supply chain by trialing production, aggregation, storage, and distribution strategies to identify scalable solutions.

These projects could provide opportunities to collaborate with ag education programs in actual production and in hosting supervised agricultural experience (SAE) placements for students. Successful farm to cafeteria projects would also provide a focus for ag-based curricula, which the FarmLab could help source and integrate into the schools. The FarmLab could also help facilitate experiential learning opportunities by supporting demonstration gardens at the schools or arranging field trips to visit the site or participating growers. Mobile demonstrations and production units could also provide valuable hands-on learning opportunities.

The "Farm to School" white paper (included as Appendix H in the Phase 1 report) provides a broader overview of FTS programming and describes potential activities through which the FarmLab could help facilitate the development of such programs in Elkhart County.

Primary Functions

Network Building and Communication

The FarmLab could play a key role in convening and networking constituencies by facilitating communication and cultivating a shared understanding of the challenges and opportunities associated with the various aims. This would be especially valuable for aligning stakeholders focused on increasing food and ag literacy in Elkhart County, since initial successes and relationships would help enhance community engagement and provide a stronger foundation for collaboration in the other areas as well.

Expertise and Coordination

As relationships are formed and networks converge, the FarmLab could help fill gaps in each focus area by injecting appropriate knowledge and expertise. With respect to supporting ag-based curriculum, this could involve connecting teachers and administrators to existing resources and opportunities, such as ag in the classroom programs with the Farm Bureau and ag education materials that have already been cross walked with national standards. As a leader in broader FTS initiatives, the FarmLab could also help reinforce new curricula by connecting it to field trips, educational gardens, and farm to cafeteria efforts. The FarmLab could also play a supportive role in the design and implementation of new ag education programs, as well as coordinating new SAE's and potential career paths for existing programs.

Innovation and Incubation Lab

A "lab" designed to demonstrate new crops and practices, incubate new programs, and prototype value-added enterprises on a small scale would represent an almost unprecedented resource for catalyzing ag innovation and entrepreneurship. Guided by "boots on the ground" research and collaboration with local partners, such a lab could support initiatives to improve food access and pursue a wide array of grant opportunities. Shouldering the burdens of networking, assessment, funding, and especially the risk of failure would help attract producer participation to harvest relevant, critical feedback throughout exploratory processes.

To produce substantive change, the social work of building relationships and cultivating shared understanding among stakeholders will need to be reinforced with practical projects that provide genuine learning opportunities and safe environments for exploration and experimentation. As a "lab", the FarmLab could function as an incubator for hosting prototype projects, gathering feedback, and helping scale up successes and learning from failures. These projects could provide authentic opportunities for ag-based experiential learning model

processes for broader innovation and strategic intervention in Elkhart County's local food system.

Value Chain Facilitation

The FarmLab could play a practical role in connecting the dots throughout the local food value chain. By using accumulated experience to consistently assess, align, develop and leverage available capacities, the FarmLab could proceed to test and implement new food localization strategies intended to increase local production, create new jobs, and access new markets. Facilitating connections between producers and school food services, as a specific market with unique infrastructure and logistical challenges, would provide an initial strategic focus for FarmLab operations.

Program Outputs

The broad nature of the focus areas and functions described above could include many different activities. A central challenge for the FarmLab will be balancing the need to offer clearly defined programs with the task of remaining responsive to the emerging needs of the producers, institutions, and educators it seeks to support. The FarmLab could be best viewed as a service provider in a dynamic market. Primary services could include:

- Support for Producers - Helping small acreage farms diversify and build production capacity.
- Farm to Cafeteria Support - Facilitating contracts, connections, and logistics between producers and institutional food services.
- Support for Educators - Assisting with ag-based curricula, resources, and connections for schools.

Particularly at early stages of development, identifying and responding to the changing needs of its clients will depend on knowledgeable and committed staff who are motivated and capable of building relationships with them. By observing client needs and identifying their existing assets, the FarmLab would be positioned to help facilitate collaboration and innovation with an eye to generating broader community benefit.

To produce substantive change, the social work of building relationships and cultivating shared understanding among stakeholders would need to be reinforced with practical projects that provide genuine learning opportunities and safe environments for exploration and experimentation. As a "lab", the FarmLab could host prototype projects that provide authentic opportunities for ag-based experiential learning and inform further research.

Functioning as a lab would also compel the FarmLab to share and disseminate successful projects into the community rather than develop them as ongoing programs to be operated

and sustained by the organization itself. Based on the Phase 1 Needs Assessment, the community does not need another institution operating alongside existing programs – and potentially competing for funding – but an organization that can help facilitate more connection and collaboration across the current food system and help fill critical gaps.

The projects presented below reflect these considerations, focusing on scalable, strategic interventions to benefit producers, food services, and educators. They represent starting points for convening stakeholders and for catalyzing further activity, rather than long-term plans. By focusing on engaging existing knowledge and relying on mobile infrastructure instead of fixed investments in facilities, the FarmLab could preserve financial and organizational flexibility to adapt its services to the changing needs of the community.

Services

Support for Producers

> *I think our county has a resource that a lot don't have – we have vegetable growing experience and they are used to working on small farms … We've got that ability and that interest in growing the small backyard garden – more than a garden, (it can become an) income producer. There's an entrepreneurship aspect here that you don't have in other communities too. It's there and lingering; how do you take it to the next level? (Jeff Burbrink, Elkhart County Purdue Extension)*[1]

> *An aggressive "growing farmers" program could be pursued with the purpose of increasing the number of producers in the state in all forms of value added agriculture. This should be accomplished through comprehensive, incentivized and/or subsidized apprenticeships with producers that are currently involved in value added agriculture, production, processing, marketing and distribution in coordination with agricultural organizations, colleges, and universities and the Indiana State Department of Agriculture (ISDA). (Reding and Moody)*[2]

Healthy farms and farmers are the backbone of a sustainable and productive local food system. Many communities looking to localize their food systems run into the nearly insurmountable barrier of building additional production capacity with few skilled farmers, diminished productive land, and steep competition with global markets. Elkhart County and the

1 Personal interview for FarmLab Needs Assessment

2 Reding, G. and Moody, A. (2011). "Sustainable Local Food Initiative Report." Prepared for the Indiana Office of Community and Rural Affairs by a Grant through the Indiana Cooperative Development Center, in coordination with Purdue University and the Indiana Farm Bureau. February, 2011.

surrounding region are exceptional because of an abundance of intact small-acreage farms and skilled agricultural labor, with access to strong markets and abundant opportunities for supplemental off-farm income.

Elkhart County is one of the leading agricultural counties in Indiana for the production of livestock, dairy, and commodity crops. But it is also a leader in small-scale, diversified production with relatively high direct sales.[3] Much of the distribution and capacity of these small-acreage farms can be attributed to the high concentration of Amish in the area.[4] While many Amish derive their primary incomes off the farm, they still maintain functioning farms to support their lifestyle. Many of these producers would welcome the opportunity to generate supplemental income from these resources and transition to full-time farming if possible. For Elkhart County, as demonstrated in the Needs Assessment, the key to unlocking this potential is rebuilding intermediate aggregation and distribution infrastructure and opening up new wholesale markets.

The next sections describe how FTS programs could support producers by offering consistent high-volume markets and by helping cultivate the next generation of farmers through new ag education opportunities. However, new and existing farmers still face substantial challenges in adapting their operations to serve local markets, inviting the FarmLab to provide leadership and assistance in building local capacity. Beyond programs specifically focused on FTS, the following core activities illustrate the range of services that the FarmLab could also provide:

- Building relationships and networks with specialty and small acreage producers.
- Exploring outlets and strategies for supplemental income for functioning farms primarily supported by off-farm income.
- Piloting, demonstrating, and disseminating ag innovations in collaboration with Elkhart County Extension.
- Growing field trials for demonstration and for exploring market demand.
- Supporting and advocating for best practices in soil management and opportunities for farmland conservation.
- Working directly with growers and community partners to explore opportunities and develop strategies for improving community food security.

[3] See Appendix F in the Phase 1 report

[4] See Appendix B in the Phase 1 report

Intervale Center Farms Program

One of the oldest ongoing farm incubators in the U.S. is the Intervale Center Farms Program in Vermont. Each year, their Farms Program helps up to 3 new independent farm businesses get started by providing access to land, infrastructure, and business planning assistance. The Farms Program also leases land to 7 established mentor farms, who provide mentorship to the incubator farms. The Interval Center manages a complementary array of programs aimed at supporting local food systems, including the Intervale Food Hub which helps provide markets for the incubator farms.

www.intervale.org

Longer-term aspirations for the FarmLab could include providing training and technical assistance for new farmers. The National Farm Incubator Training Initiative[5] supports a growing network of farm incubator projects across the country, which help growers develop the skills and knowledge necessary to serve emerging local markets. The Intervale Center Farms Program sidebar highlights a relevant illustration of this type of program.

In addition to training and education, farm incubators typically help new growers gain access to land and equipment. These resources are usually managed at a central site hosting multiple growers. For Elkhart County, new growers with access to land and existing growers seeking to diversify production might benefit more from mobile infrastructure serving multiple operations and functions. To this end, the FarmLab could help administer mobile infrastructure such as:

- mobile cold storage - supporting aggregation, storage, and distribution for local producers to supply school food services or other markets.
- custom harvesting and processing equipment - equipment designed to harvest specific crops such as berries or green beans that would otherwise be too labor intensive or expensive for producers to manage, and that would generally be beyond the resources of a single producer to justify investment in.
- mobile flash freezing equipment - processing and preserving specific crops on-site to add value and availability for school food services or other markets.

[5] New Entry Sustainable Farming Project - https://nesfp.org/food-systems/national-incubator-farm-training-initiative

Connecting Farms to Schools

> *Perhaps the most significant opportunity created by farm to school activity is the forum it creates for parents, students, farmers, school officials, and other stakeholders to convene, working together to make proactive choices regarding the foods that will be served in school nutrition programs, and to do this in a manner that builds new connections, and more food choices, in the broader community. (Ken Meter)*[6]

The Needs Assessment identifies key challenges facing local producers who desire to scale up their production of specialty crops, as well as retailers and distributors seeking to offer local produce. Filling the gap between these efforts requires intermediate aggregation, processing, and distribution infrastructure that must be grown simultaneously with efforts to increase production and efforts to increase demand — these challenges are too interconnected to be addressed independently.

Procurement practices for schools and institutions represent a microcosm of the overall food system, with a wide range of possibilities for scalable and actionable interventions with mutually beneficial potential outcomes for producers and consumers. The "Food Services in Elkhart County Schools" white paper describes current Elkhart County school district local procurement efforts and their interest in doing more, while the "Ag Innovation" white paper describes various strategies for increasing local production to meet such demands. Primary services focused on connecting farms to institutions could include:

- Providing a point of contact for local farmers looking to diversify production and/or sell wholesale to institutions (in coordination with Elkhart County Extension services).
- Identifying and enabling the production of cafeteria-appropriate local crops with manageable processing and storage requirements.
- Facilitating contracts and connections between producers and institutions.
- Piloting aggregation and distribution strategies to help meet producer and institutional food service needs.

The "Farm to Cafeteria Pilot Program", introduced as a potential project later in this report, provides a more specific example of how these services might be developed and applied. Fortunately, the growth of FTS initiatives across the country with support from the USDA and

[6] Meter, K. (2015). "Opportunities for Farm-to-School in Hancock County, Indiana." Crossroads Resource Center, MN. Compiled for the Indiana State Department of Health Division of Nutrition and Physical Activity, 2015. Available at http://www.crcworks.org/inhancock15.pdf

Elkhart County Procurement – By the Numbers

- Total food purchases by Elkhart County residents amount to $532 million annually.
- Elkhart County residents spend $325 million on food consumed at home.
- Consumers purchased $61 million in fruits and vegetables for home consumption.
- Direct sales between producers and consumers amount to $2.4 million annually.
- Annual food service budgets for Elkhart County school districts collectively exceed $10 million.

ACORN Matchmaking Events

Using low-cost matchmaking events to bring community producers and buyers together to increase local sales between area buyers and sellers

Aiming for 24-30 attendees, with the goal of equal representation from both the demand and supply sides, ACORN works to fill most of the spots with key businesses first. They then fill the remaining spots with other interested businesses that provide a necessary diversity to the buyer and producer profiles. This diversity prevents stagnation at the events and promotes awareness of the range of producers that exist within the county. It is not uncommon to have several, similar producers present, which provides healthy competition and the drive to successfully market to each individual buyer. The matchmaker events are most effective when producers of all profiles are present: meat, dairy, produce, value-added, etc. Similarly, including food service directors from community kitchen programs, nursing homes or senior meal sites in addition to the standard retailers, restaurants, schools and larger institutional outlets helps to round out the group of buyers. Their inclusion helps engage the full community and "open their eyes" to the possibility of integrating local product into the food they serve. Producers and buyers with existing relationships are also encouraged to attend.

"Using Food Hubs to Create Sustainable FTS Programs." Vermont Agency of Agriculture, Food and Markets[7]

[7] Vermont Agency of Agriculture (2014). "Using Food Hubs to Create Sustainable FTS Programs." Vermont Agency of Agriculture, Food and Markets, Montpelier, VT. Prepared for the Vermont Community Foundation, 2014. Available at http://agriculture.vermont.gov/sites/ag/files/FoodHubs_FTSProgram%20Guide.pdf

other authorities has generated many relevant case studies and models for possible application in Elkhart County. Appendix C highlights two food-focused community organizations in Vermont that evolved to provide similar services to those listed above. It draws from a study of regional food hubs supporting FTS programs through aggregation and distribution functions, consumer education, and producer technical assistance.

A common strategy employed by the Vermont organizations and other local food programs is to host matchmaking events that connect food service directors directly with producers. Organizing and facilitating these type of relationship building events, as described in the Matchmaking sidebar, should be a core element of initial FarmLab activities.

Support for Educators

> *Curriculum standards set by the state make it difficult to explore new programs because teachers already feel swamped. If someone would take an already developed ag curriculum and align it with state standards in a way that involves teachers … they will do it. They are an enthusiastic bunch. Teachers would want to know ahead of time what is being required of them, and what they could swap out to incorporate ag-based curriculum in the classroom. (Rachel Vallance)*[8]

'Ag in the classroom' and ag education programs utilize ag-based curricula to improve agricultural literacy and knowledge. Food and agriculture content can also enrich curricula for general subjects by providing real-world examples and practical applications. The "Ag Education Background" white paper describes the many existing resources available for supporting both of these applications in a classroom environment.

The Needs Assessment identified substantial demand for such materials, but outside of the ag education community there seemed to be little awareness of the quality of resources readily available through the National Council for Agricultural Education and other organizations. FTS programming could help make ag in the classroom and ag education activities more accessible and relevant. It could also support ag education programs by providing a focus for student projects and SAE's.

The "Food and Ag Literacy" white paper describes additional resources and considerations for helping people better understand where their food comes from so they can make healthier choices as consumers. Getting local food onto students' plates in the cafeteria – or as snacks in the classroom – would make ag-based curricula more tangible. Support for experiential learning

[8] Personal interview for FarmLab Needs Assessment

opportunities like educational gardens or field trips to local farms would further enrich the lessons.

Corresponding FarmLab services and activities could take a variety of forms, including:

- Building relationships and networks with local schools and teachers.
- Collaborating with the Elkhart County Farm Bureau to expand ag in the classroom offerings.
- Collaborating with schools and other local and statewide organizations to develop curricula rooted in local production and cross-walked with appropriate standards.
- Using FarmLab-supported programs and projects to illustrate and reinforce ag-based curricula with authentic experiential learning opportunities.
- Helping schools explore opportunities to establish formal ag education programs, and facilitating collaboration with existing programs.
- Facilitating SAE's linked to FarmLab and independent projects, and collaborating with the Elkhart County Farm Bureau to help establish additional connections.
- Helping teachers identify real-world, place-based learning connections rooted in agriculture as case studies for different subjects.
- Developing and maintaining mobile demonstration units to support ag in the classroom activities.
- Providing guidance and resources for establishing educational gardens, in collaboration with Seed to Feed or other community organizations.
- Providing a contact (in coordination with Elkhart County Farm Bureau and Elkhart County Extension) for:
  - Local farmers interested in hosting farm tours or speaking to classrooms.
  - Teachers and instructors interested in ag-based experiential learning and/or improving food literacy in the classroom.
  - Administrators interested in developing ag education programs.

Projects

Farm to Cafeteria

> *All told, the true promise of farm to school may be to educate youth about the foods that can easily be grown and stored in Indiana, and to foster sufficient growing, preparation, and eating skills that those foods which Indiana farms can easily raise, store, and ship become familiar to consumers and favored by them. (Ken Meter)*[9]

Based on the Needs Assessment findings and the personal experience and judgment of the researchers, getting local food onto students' plates through farm to cafeteria programs could effectively leverage current capacity and goals to guide while building momentum for further efforts. The researchers prepared the "FarmLab Farm to School Pilot Program Proposal" (attached as Appendix B) for Goshen Health in order to facilitate an exploratory approach to FTS programming centered on farm to cafeteria efforts. By prioritizing open-ended action inquiry and "boots on the ground" research, the proposal sought to initiate a farm to cafeteria project that the FarmLab could use to engage broader support and awareness and use as a prototype for further development.

In essence, the goals of an initial farm to cafeteria project would be to:

- Identify cafeteria-appropriate local produce and producers with the capacity to grow them.
- Negotiate successful contracts between producers and school food services.
- Coordinate the value chain logistics of storage, processing, and distribution between producers and schools.
- Verify or develop school food service capacity to process and prepare more fresh produce.
- Serve and promote cafeteria meals featuring local produce.
- Assess potential for replicating these meals in other schools.

While the Goshen Health proposal was unsuccessful in obtaining initial funding, the process of preparing it helped affirm the interest of local institutions, including Middlebury Community Schools, Bethany Christian Schools, and the Boys and Girls Club of Goshen. Goshen Community Schools also stepped forward as a potential partner when Greg Beachey, the culinary instructor for the proposed FarmLab team, became Director of Food Services in July 2017. Together, these

[9] Meter, Ken (2015). "Opportunities for Farm-to-School in Hancock County, Indiana."

institutions present a flexible range of demand that could align with different levels of available supply.

Inquiries by the researchers into potential producers to support local procurement and menu options have yielded positive results. The Phase 1 research emphasized the exceptional advantage that the region's high concentration of small-acreage diversified farms represents for localizing food production, meeting increasing demand, and filling niche opportunities. Whereas most FTS procurement efforts struggle to find local producers with the capacity to meet school demands for quality, quantity, and consistency, the Elkhart County region is fortunate to have existing producers eager to diversify production using existing labor and capital. Not only were initial inquiries met with serious interest, the prospect of wholesale contracts spread by word of mouth among Amish growers and brought forward additional interested producers.

Facilitating connections between these producers and school food services would address a key gap in the current system and unlock greater potential for collaboration. By focusing on the relatively consistent and predictable demand and interest of school food services, the FarmLab could help recruit producers capable of collectively filling larger volume orders. These initial farm to cafeteria efforts would provide a test case for the FarmLab to help assess and develop the intermediate infrastructure and coordination required to sustain and expand further transactions.

Once sources for specific produce quantities and criteria are confirmed, then budgets, menus, and schedules can be planned to satisfy federal requirements. Corresponding lessons, field trips, gardens, and other activities could then be planned to complement students' exposure to new produce in the cafeteria. The Batesville, Indiana Farm to School program[10] offers a useful case study for farm to cafeteria efforts stimulating broader food literacy.

The attached proposal targeted a conservative estimate of approximately $100,000 for a full year of direct support led by a paid team of multi-disciplinary advisers and support staff. Narrowing the focus to farm to cafeteria programming, relying more directly on school administrative and food service staff, and/or recruiting community volunteers could cut these costs substantially.

[10] https://vimeo.com/156494831

The segment was adapted by the Indiana Farm to School Network from the "Fencerows to Foodsheds" documentary featuring Batesville and Elkhart County as two communities supported by Purdue University's Local Foods Program.

The social nature of cultivating new relationships and the open-ended scope of increasing local production and procurement make it difficult to define a budget for facilitation. However, the Needs Assessment suggests that this is the key intervention needed not just for catalyzing FTS activity, but for broader food localization and economic development. Despite the evident potential for farm to institution procurement in Elkhart County, local transactions have been very slow to manifest without supplemental facilitation and support. The question is not whether providing value chain facilitation services could help tap this potential, but rather how much initial investment is required. The purpose of an initial farm to cafeteria prototype would be to better assess the minimum requirements for providing the services described above.

Mobile Hydroponics

> *"Planning food production, tending gardens, and preparing tasty meals have shown themselves to be valuable venues for science education, because they involve very tangible measurements of quantities and mastery of logical concepts that encourage scientific experimentation." (Ken Meter)*[11]

Successful farm to cafeteria initiatives would add value and relevance to local food production and agriculture as a focus for curricula and project-based learning. Educational gardens demonstrating the production of specific crops would provide further opportunities for hands-on learning. However, growing seasons in Northern Indiana are generally out of sync with school schedules and resources for maintaining gardens over the summer are often limited. Greenhouses and other season extension technologies can help enable more production and harvest within the school year. A further strategy is to focus on mobile production units that could be aligned with multiple school schedules and otherwise be managed off-site.

Salad greens can be produced year-round, require minimal production space, and can easily be incorporated into school cafeteria menus. Hydroponic production is a steadily growing industry that relies on a variety of technologies for controlled growing conditions and indoor environments. These additional technology elements can provide excellent experiential learning projects as well as SAE opportunities, as demonstrated by the abundance of school hydroponic projects emerging throughout the country.

Adding mobility to hydroponic operations for salad greens production could combine these benefits into a practical and actionable initial project for the FarmLab to organize. This approach could highlight applications of manufacturing technology based in Elkhart County and lead to potential collaboration with local businesses. Successful prototypes could be

[11] Meter, Ken (2015). "Opportunities for Farm-to-School in Hancock County, Indiana."

reproduced to increase local availability or to scale up production for greater volume. Units could be managed in a central location when not used by schools and management of actual production could be contracted to certified growers.

A variety of models for mobile hydroponic production already exist, so initial prototypes would not have to start from scratch. The FarmLab project would have the advantages of access to the local trailer manufacturing industry as well as connections to regional hydroponic operations interested in supporting ag education and FTS programming. The researchers are exploring potential collaboration with the Healthy Roots hydroponics operations out of Rushville, Indiana, including engineering support and production guidance. A conservative cost estimate for a fully functional prototype production trailer is $50,000.

General Recommendations

Based on our research and on lessons learned locally and through other projects, we recommend that the FarmLab move forward and incorporate as a tax-exempt corporation under section 501(c)(3) of the Internal Revenue Code. While some FarmLab activities will generate revenue, the critical activities currently necessary for pursuing the FarmLab aims will most likely require some form of subsidy if they are to preserve the flexibility and commitment to respond and adapt to changing needs. Operating as a not-for-profit organization will improve opportunities for obtaining financial support. Phase 3 should therefore include preparation of the 3-year financial projections and program documentation required for the IRS 1023 application. Phase 3 could also include preparing documents to support grant applications and budgets for the farm to cafeteria or mobile hydroponic projects introduced in this report.

While projects like the mobile hydroponic unit could evolve into self-sufficient agricultural enterprises, we recommend that FarmLab programming remain focused on exploring, prototyping, and incubating such enterprises rather than on managing and administering them long-term. This would enable the FarmLab to maintain lower overhead costs and remain more agile and responsive to the dynamic and unpredictable needs of developing local food systems and markets, and to stay focused on the areas and gaps requiring the most intervention to accomplish the FarmLab aims. By focusing on support services and by facilitating collaborative, participatory research, the FarmLab could best contribute to a growing ecosystem of local food system entrepreneurship rather than becoming an institution in and of itself.

As a not-for-profit organization, the FarmLab could provide a much-needed conduit for external funding sources that actively support innovation and entrepreneurship in local food systems.

The Phase 1 report presented a variety of relevant potential funding sources identified by Sarah Beth Aubrey in the Central Indiana Food Hub Feasibility Study.[12]

We believe that the potential for FarmLab activities to support local ag education programming, improve food literacy, and support new career pathways and entrepreneurship, could also attract funding from local foundations and corporate sponsors. To help local institutions justify strategic investment in FarmLab activities as positive interventions in local economic development and improving quality of place, we also recommend that the FarmLab secure funding and support to lead an economic impact assessment focused on further engaging Elkhart County's unique agricultural assets to increase direct sales and local food procurement.

The initial vision for the FarmLab centered on a farm-based education facility and the Feasibility Study proposed to define preliminary budgets for physical infrastructure and site development. Moving forward as a not-for-profit organization would require staff with facilitation and leadership skills more than facilities and capital investments. As a start-up operation focused on responding to the needs of partners rather than leading with its own programs, staff requirements are likely to vary with respect to capacity and availability. Volunteers and subcontractors would likely be adequate to support most initial activities. However, at least one permanent part-time staff person should be budgeted for to preserve continuity of relationships and programming. The Phase 3 study should include a corresponding job description and budget for a part-time director.

[12] Aubrey, S. (2012) "Indiana Farms, Indiana Foods, Indiana Success: Central Indiana Food Hub Feasibility Study." Prosperity Ag and Energy Resources. http://ngfn.org/resources/ngfn-database/knowledge/8-20-12%20Central%20IN%20Food%20Hub%20Feasibility%20Study.pdf

Author Bios

Mark Seeley is a farmer, certified organic inspector, and food entrepreneur. He was the farm manager and instructor for a 95-acre school farm in Detroit with over 60,000 visitors annually and has worked as a Certified Ag Education Instructor in Iowa, Michigan, New York and Missouri. He holds degrees in Ag Education and Agriculture Studies from Iowa State University and has performed graduate work at Cornell University. He has also worked as a licensed commodity broker and served as a Director and Sustainable Food Systems Coordinator for an international NGO.

Phil Metzler is a former engineer working to promote and facilitate the growth of local food systems in Elkhart County. He directs the Community Resilience Guild, a local non-profit focused on building community networks and facilitating collaborative initiatives. His marriage to an instructional guide for experiential learning curricula has given him a passion for supporting education, particularly food literacy and place-based learning.

Appendix A – Phase 1 Needs Assessment Appendix List

- Appendix A – Elkhart County Ag Overview: surveys available data relevant to local consumers and producers to identify and understand ag trends.
- Appendix B – Amish Influence: considers the potential influence of area Amish populations on local agriculture and the unique capacities they bring.
- Appendix C – Ag Education Background: provides an overview of ag education resources supporting current programs that could benefit other schools.
- Appendix D – Food Services in Elkhart County Schools: summarizes current local food interest and procurement efforts among school food services in Elkhart County.
- Appendix E - Food and Ag Literacy: addresses two frameworks for helping consumers make more informed, healthful decisions about the foods they consume.
- Appendix F – Agricultural Innovation: discusses current innovations in agriculture relevant to local needs, capacities, and potential relevant to possible FarmLab operations.
- Appendix G – Food Localization as Economic Development: examines various studies supporting food localization as a means of economic development.
- Appendix H – Farm to School: describes the concept and application of farm-to-school programs.
- Appendix I – Questions: Offers guiding questions for the FarmLab to consider as it moves forward.
- Appendix J – Interview Summaries: Summaries of the interviews conducted by the project consultants with leaders from key constituencies.
- Appendix K – Bibliography

Appendix B

FarmLab Farm to School Pilot Program Proposal

FarmLab Farm to School Pilot Program Proposal

prepared for Goshen Health

by the Community Resilience Guild
on behalf of Mike Yoder

November 14, 2016

Food and health are integrally linked. In a county where 30 percent of residents are classified as obese and 1 in 5 children are food insecure, developing local strategies to assure adequate access to fresh, healthy, and affordable food is imperative. Cultivating healthy eating habits and educating youth about where their food comes from are essential to promoting wellness and empowering them as consumers. Farm to school initiatives have proven to be an effective strategy for addressing these needs. The purpose of this proposal is to outline a pilot program for advancing farm to school programming in Elkhart County.

The FarmLab is an emerging local initiative to sustain agricultural land, knowledge, and careers while improving access to healthy food and creating new markets for local food production. The current FarmLab vision includes transitioning the Crystal Valley Dairy Farm in Middlebury into a farm-based education center that would use production revenues to sustain FarmLab operations. The Elkhart County Redevelopment Commission is currently sponsoring Phil Metzler and Mark Seeley to evaluate the overall feasibility of the project and provide recommendations for moving forward. Extensive documentation supporting the initial needs assessment can be found at www.thefarmlab.net.

The assessment describes the current context for food production, education, and health in Elkhart County and lays out a compelling rationale for farm to school as a strategic focus for transformative change in these areas. Farm to school programming typically includes farm to cafeteria initiatives; classroom activities and curricula related to food and agriculture; educational gardens; and farm visits.

We believe that farm to school programming could catalyze the growth of a robust, community-based food system while increasing food literacy and experiential, place-based learning opportunities for children. As a pilot project, the goal would be to create practical and tangible initial results that illustrate the potential for farm to school programs to improve child nutrition and community well-being over time. The pilot would culminate in getting specific crops onto students' plates in one or more schools in the fall of 2017.[1] The pilot would also provide a

[1] For a useful illustration of farm to cafeteria to classroom programming, see this video clip: https://vimeo.com/156494831
The segment was adapted by the Indiana Farm to School Network from the Fencerows to Foodsheds documentary featuring Batesville and Elkhart County as two communities supported by Purdue University's Local Foods Program.

foundation for the FarmLab to carry farm to school efforts forward and for convening a coalition of cross-sector support for related activities.

Based on the needs assessment, the following conditions highlight the potential for an action-oriented process to test current understanding while exploring and prototyping strategic innovations:

1. Farm to school activities have been slow to emerge in EC.[2] Most food service programs that have attempted to procure local food have been unable to connect with local suppliers. This means that very little of the more than $10 million spent annually on food by public schools alone supports local production.

2. The primary barrier to most aspiring farm to cafeteria programs is limited local supply. However, Elkhart County has a significant strategic advantage with more small farms than any other county in the midwest (more than 1,000 farms less than 50 acres). With growing demand for local food, many of these farms - particularly Amish producers - are interested in diversifying their production to serve new markets. What has been missing has been coordination and appropriate distribution infrastructure.

3. There is abundant “top-down” support for farm to school programming from the USDA, the Indiana Department of Health, and the Indiana Department of Education, who are actively seeking innovative programs that they can champion and use to inspire other locations.

4. Elkhart County schools have expressed strong interest in participating in farm to school programming but lack the capacity to do so on their own.

5. While Elkhart County and Indiana efforts to implement farm to school programs are far less developed than those of other states, we have the opportunity to learn from the many successes and failures of more advanced programs and adopt those with the greatest potential for Elkhart County; we don’t have to start from scratch.

6. As a prospective organization, the FarmLab would represent an almost unprecedented resource for tapping and stimulating local production and guiding farm to school collaboration throughout the county.

The current feasibility study supports a planning-based approach to mapping the strategic development of the FarmLab and informing its formation as an independent organization. The activities supported by this proposal would complement the planning process through action inquiry and “boots on the ground” research aimed at prototyping potential innovations. Examples of possible activities include:

[2] Reference Appendix D - Food Services in Elkhart County Schools, and Appendix H - Farm to School, in the FarmLab Feasibility Study

- Identifying cafeteria-appropriate local crops and supporting producers with the capacity to grow them.
- Facilitating contracts for these crops between producers and school food services.
- Helping school food services develop the capacity to process and prepare more fresh produce.
- Collaborating with existing distributors to help “connect the dots” between school food services and local producers.
- Engaging chefs and nutritionists to help develop new recipes and menus incorporating local produce.
- Serving cafeteria meals featuring specific local crops and building the capacity to replicate them in other schools.
- Quantifying and prioritizing the strategic investments necessary for all schools to procure and serve more fresh and locally sourced food.
- Building relationships and networks with local teachers and staff interested in farm to school activities.
- Working with schools and other local and statewide organizations to develop curricula supporting farm to cafeteria initiatives that meets appropriate standards.
- Providing guidance and resources for establishing educational gardens.
- Helping teachers identify real-world, place-based learning connections rooted in agriculture as case studies for different subjects.
- Helping schools explore opportunities to establish formal ag ed programs, and facilitating collaboration with existing programs.
- Engaging cross-sector partners in promoting food literacy and wellness beyond the schools.
- Implementation of clear monitoring plan for continuous learning and evaluation.

The FarmLab pilot activities would primarily focus on Middlebury Community Schools based on their high level of interest, past efforts to implement farm to school programming, and geographic proximity to the proposed FarmLab site. Pilot activities may be expanded to other schools and education-based institutions depending on initial success and available resources. In particular, Wa-Nee and Goshen Community Schools have expressed interest in procuring local food and advancing school wellness initiatives, as have the Boys and Girls Club of Goshen and Bethany Christian Schools.

We believe that a calendar year beginning January 2017 would provide an adequate window for exploring the types of activities listed above and informing subsequent progress. If successful, the goal would be for the FarmLab to carry the work forward.

For the current proposal, the Community Resilience Guild (CRG) would provide fiscal sponsorship and ‘backbone’ support for the FarmLab pilot[3]. The pilot would be overseen by an

[3] The Community Resilience Guild is a Goshen-based 501(c)3 not-for-profit dedicated to building and leveraging capacity for collective change. It provides local leaders and

initial FarmLab advisory board directly accountable to Goshen Health. Under the oversight of this board, the CRG would provide staff for process design and facilitation, project management, and farm to school expertise by tapping the team of local experts identified in Appendix A.

The CRG would provide a clear framework and process up front for guiding the action inquiry and prototyping initiatives. Central to the process would be guidelines for the design, implementation, and evaluation of FarmLab activities in order to assure that progress is being made towards the overall aims. Facilitating a participatory process would insure engagement of diverse stakeholders, build stronger relationships among participants, and encourage a coalition of willing partners for ongoing collaboration. Emphasizing interdisciplinary and cross-sector participation would insure that lessons learned through farm to school activities could ultimately be applied and expanded to broader food production, access, and nutrition interventions and the cultivation of a thriving and secure local food system.

In addition to the outputs and outcomes of the FarmLab activities, the process will generate the following deliverables:

- **A stakeholder map and directory** of project participants (winter and fall);
- **An asset map** of information, programs, and resources tapped and produced during the pilot (fall);
- **A white paper on farm to school programming** to serve as a common reference for pilot participants and the broader community (winter);
- **A white paper on child nutrition** to deepen and align understanding and awareness of the current context in Elkhart County (spring);
- **Quarterly facilitated "retreats" and symposia** to bring participants together to network and support the DME process;
- **An evolving "action plan"** maintained over the course of the pilot to chronicle activities, outputs, outcomes and lessons learned captured through careful monitoring and evaluation;
- **Recommendations** to guide further farm to school activities as the FarmLab moves forward; and
- **A final report** documenting the overall pilot project, with recommendations for further food-related efforts aimed at improving child nutrition.

Appendix B outlines the estimated costs for a 1-year FarmLab project through the CRG. The proposed budget would be overseen by the FarmLab advisory board and administered by the CRG.

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organizations with relevant tools, skills, and resources, while cultivating a shared understanding of our current context and emerging challenges and opportunities. As networks and coalitions converge around systemic issues affecting our community, the CRG taps local resources to provide space and facilitation for co-creating positive responses.

The funding sought through this proposal would support the process and staff for the associated activities and deliverables described above. We anticipate leveraging this funding to raise additional support as needed for specific pilot activities (i.e. materials for school garden trials, or expenses for participants to attend events or visit programs in other locations), continuing the process beyond the first year, and for launching ongoing FarmLab operations.

Recognizing the scale of need and opportunities associated with improving child nutrition through farm to school programming, we assume that the proposed pilot activities would primarily serve to break the ice and catalyze ongoing work. However, by developing an integrated and collaborative action-inquiry process for farm to school programming in specific contexts, the pilot will provide a model that can continually be refined and adapted to insure that the initial successes are sustained and scaled up to serve all of Elkhart County.

Appendix A - FarmLab Project Team

Phil Metzler - Project Manager
Director, Community Resilience Guild

Phil Metzler applies his engineering and consulting background to community initiatives focused on local food systems and local economies. His primary work involves the assessment and mapping of these systems to make local relationships and resources more visible and accessible. Since relocating to Goshen in 2010 he has served on the board of directors for the Goshen Farmers Market; organized Share the Bounty Week from 2013 to 2015 to raise awareness about food insecurity; and started the Elkhart County Foodshed Initiative in 2014 as one of 2 pilot communities chosen by Purdue University for their Rebuilding Local Food Systems program.

Mark Seeley - Operations Lead
Farmer; Consultant; Organic Inspector

Mark Seeley is a farmer, certified organic inspector, and food entrepreneur. Mark was the farm manager and instructor for a 95-acre school farm in Detroit with over 60,000 visitors annually and has worked as a Certified Ag Education Instructor in Iowa, Michigan, New York and Missouri. Mark holds degrees in Ag Education and Agriculture Studies from Iowa State University and has performed graduate work at Cornell University. Mark has also worked as a licensed commodity broker and served as a Director and Sustainable Food Systems Coordinator for an international NGO.

Greg Beachey - Culinary Advisor
Chef; Education and Training Consultant

Greg Beachey has more than 30 years of experience in the hospitality and food service industry. Greg has applied his passion for food and education to teach and train staff, operators, students and educators. Greg has worked with a wide variety of institutions and businesses and a vast network of professionals. Greg has led youth culinary competitions, managed and overseen the national championships for SkillsUSA and the ProStart program, and worked with top educators in secondary and post-secondary programs as a Senior Manager for Education and Training with the National Restaurant Association Education Foundation. Having worked as a Chef Instructor for 6 years at the Elkhart Area Career Center, Greg is very familiar with food service operations in local schools.

Carina Zehr - Garden Advisor and Project Support
Sociologist; Food Corps Alum; Educator

Carina Zehr is a 2014 graduate of Goshen College with degrees in Sociology and Environmental Science. As a student, she helped start Trackside Community Garden in Goshen and helped with the process of creating a committee to gain Tree Campus certification for Goshen College. After graduation, she became a Food Corps service member whose work was to implement, manage, and integrate educational gardens in high-need schools in Tucson, Arizona. She is currently working to continue her career in education.

Sarah Metzler - Curriculum Advisor
Instructional Guide, Chamberlain Elementary School (Goshen)

Sarah Metzler followed up a degree in Fine Arts at Goshen College by earning a K-12 teacher license in English Language Development, and a Masters degree in curriculum development. She has taught at secondary, middle school, and primary levels and has been a part of curricula and instructional development for three systemic reform programs. Sarah is distinguished by National Board Certification and by Teacher of the Year honors at Westminster Schools in Colorado where she helped champion district-wide standards-based instruction in a model learner-centered ESL classroom. Sarah joined Goshen Community Schools as a Master Teacher in 2010 for the TAPP program. She is currently helping implement Expeditionary Learning at Chamberlain Elementary as an Instructional Guide and curriculum designer, focusing on standards alignment and integration for experiential learning projects. As a part-time consultant for Horizon Education Alliance, she has helped promote Expeditionary Learning and STEAM models for experiential and project-based learning throughout Elkhart County.

Nutrition Advisor
(not yet confirmed)

David Lind, PhD - Research and Evaluation Advisor
Professor of Sociology, Goshen College; Board, Community Resilience Guild

David Lind received a PhD in Rural Sociology from the University of Missouri-Columbia, where he focused on rural community food systems. He teaches courses at Goshen College including Sociology of Food and Agriculture, Environmental Sociology, and Methods of Social Research. David is a published scholar, presenter, and researcher. He has advised community surveys for the Community Relations Commission in Goshen and received a CITL Faculty Research

Fellowship for “Appraising Community Belonging through Food and Nutrition: An Exploratory Study of Latino Experience in the Goshen Community.”

Philip Thomas, PhD - Process Design and Facilitation
Principal, D3 Associates; Vice Chair, Community Resilience Guild

Philip Thomas has over twenty-five years of experience working in the fields of conflict prevention, transformation, peace building, and Democratic Dialogue. He has designed and facilitated hundreds of training programs across five continents and is recognized globally for his work in democratic dialogue and multi-stakeholder engagement processes. Philip has worked with heads of state and corporate executives as well as leaders of communities and indigenous groups, and a variety of civil-society and governmental organizations, from local to international.

Since 2005, Philip has been working as senior consultant for different UN agencies and has also been supporting other international organizations and global initiatives in capacity building as well as in the design and implementation of multi-stakeholder dialogue and change processes.

In addition to graduate studies in theology, Philip holds a Masters degree in Administration from the University of Notre Dame, a Masters degree in Organizational Development, and a PhD (abd) from Fielding Graduate University in Santa Barbara, CA.

Appendix B - Budget for FarmLab Pilot

Role	Total Wages
Project Coordinator	$12,000
Operations Lead	$48,000
Culinary Advisor	$4,000
Garden Advisor and Project Support	$12,000
Curriculum Advisor	$3,500
Nutrition Advisor	$3,500
Process Design and Facilitation	$5,000
	$88,000

Quarterly Retreats	
Space	$250
Food	$250
event total:	$500
Total	**$2,000**

Website and Communications	
Hosting and Development	$500
Content Generation and Management	$700
Press Releases and Promotion	$500
Translation	$300
Total	**$2,000**

Totals		
Wages		$88,000
Events		$2,000
Communications		$2,000
CRG Overhead	5%	$4,600
Contingency	*10%*	*$9,200*
	Total:	**$105,800**

Using Food Hubs to Create Sustainable Farm to School Programs[****]

This Appendix presents a digest and excerpts from the referenced report by the Vermont Agency of Agriculture.

Summary

The referenced report provides an overview of four Vermont food hubs' efforts responding to an institutional demand for locally grown products. Each regional food hub defines and executes their FTS program support strategies differently. These differentiated approaches stem from the unique and individualized organizational structure of each food hub as well as their desire to tailor program support based on community need. Some of these organizations serve an aggregation and distribution function for local product, while others provide Farm-to-School programming, consumer education, and producer technical assistance.

Initially, many of the food hubs believed that Vermont needed more aggregation and distribution infrastructure to connect smaller producers with institutional and wholesale markets. However, most learned through their independent projects that their areas had sufficient infrastructure, but required better coordination of the available resources.

Other times, food hubs were surprised to learn that schools' current distributors already carried local product when in season, but food service directors did not know about it. To address this, the food hubs worked with school administrators and food service staff to show them how to take advantage of these offerings, and how to do it in an economically feasible manner from food hubs as well. Some schools were also unaware that they could purchase outside of their food procurement contracts; buying instead directly from producers or through community food hubs. Farmers were similarly unaware of the viability of institutional and wholesale markets—as opportunities to sell seconds and diversify their markets. Matchmaker events were paramount to reinforcing this education and helping both buyers and producers understand the full spectrum of purchasing possibilities.

[****] Vermont Agency of Agriculture (2014). "Using Food Hubs to Create Sustainable FTS Programs." Vermont Agency of Agriculture, Food and Markets, Montpelier, VT. Prepared for the Vermont Community Foundation, 2014. Available at http://agriculture.vermont.gov/sites/ag/files/FoodHubs_FTSProgram%20Guide.pdf

Other food hubs recognized their region's need for constant and improved relationship building with school boards, administrators and food service directors. These food hubs helped reshape schools' cultures to understand and value local food, for what it provides both in and out of the classroom. Similarly, the food hubs learned that school food service staff needed additional instruction and education around purchasing local foods through their current distributors. Food hub personnel were able to directly connect school food service directors with producers through four matchmaker events. These efforts were dove-tailed with the three food safety workshops that educated producers and food service staff about food safety practices for produce production and handling from farm to cafeteria.

Agency Profiles

Addison County Relocalization Network (ACORN) – 501(c)(3)

Facilitating Food Hub: Using matchmakers to connect community producers and buyers

ACORN's decision to hold matchmaking events began in 2011 after internal conversations surrounding a Wholesale Supply and Demand Feasibility study they conducted in Addison County. The idea arose from the feasibility study's advisory group, which identified a need to better connect the county's farmers and buyers, at least initially, while ACORN assessed longer-term solutions to restoring the local food system in Addison County. Matchmaking events bring buyers and producers together to foster new relationships. This type of event aligns with ACORN's community focus and allows ACORN to create and support social and economic relationships within the county they serve.

To create the attendee list, ACORN uses the background knowledge from their feasibility study to identify those businesses that have the largest impact on the county's food system. Through the annual publication of a local food guide, ACORN also has long-term knowledge of the area's producers and buyers and now knows which businesses are most interested in engaging in these conversations.

Website: acornvt.org

Green Mountain Farm Direct (GMFD), a project of Green Mountain Farm-to-School (GMFTS) – 501(c)(3)

Support System Food Hub: Localized aggregation and distribution to increase local food sales

Green Mountain Farm-to-School (GMFTS) was founded in 2008 following a successful school nutrition and agricultural education pilot project the year prior. In order to reach more schools than the original five included in the pilot, the project partners formally organized themselves as a non-profit. They adopted improving child nutrition, reducing childhood obesity, improving access to healthy local food, and supporting local farms as their primary objectives. GMFTS accomplishes these goals by providing direct service programs that connect schools, communities, and farms through food and education.

Early on, GMFTS recognized the need for distribution of local farm fresh products to schools, and a service tailored to assisting institutional buyers in procuring these products. GMFTS created GMFD in order to provide the sales, marketing, purchasing, aggregation, and distribution services necessary to sell products from local farms to schools. In 2011, in response to rapid growth in sales and increasing demand for their services, GMFTS established a partnership with a local distribution company, D&S Distributors, to create their present model of Green Mountain Farm Direct (GMFD). Currently, GMFD delivers local food to over 90 retail and institutional customers within a seven county region. In FY 2013, GMFD sold over $230,000 in local food products from 45 producers.

Producer Benefits

GMFD lowers the barriers for entry into the institutional market by aggregating orders and delivering to multiple accounts, thereby reducing delivery costs for the producer. GMFD has established partnerships with institutional buyers, many of whom prefer to buy through one distributor rather than directly from many individual farms. Selling through GMFD allows producers to reach institutional buyers they could not reach otherwise.

GMFD also provides opportunities for farms to connect directly with buyers – in addition to matchmaker events – including, a local food show, annual dinner and other community events. GMFD consults extensively with producers on their sales base through GMFD, institutional market standards, food safety, marketing and business development, and refers producers to other service providers for specific questions that require deeper expertise.

Buyer Benefits

GMFD produces a consolidated local food Product List that helps institutional buyers purchase locally-grown foods in an efficient manner. The streamlined ordering process also facilitates a

streamlined delivery process, whereby a buyer can receive products from multiple farms, but only receive and manage one delivery.

In line with their mission, GMFD offers additional benefits to customers, providing them ordering support, purchasing advice and recipe development. The combination of a high level of individual service and the unique product line offered by GMFD is difficult for other distributors to replicate. In addition to the sourcing, ordering and delivery services they receive, customers value the educational and market development programs that GMFD provides to support local farmers, local businesses and the products sold. The association with GMFTS and the mission-driven purpose of GMFD has resulted in high customer affinity and support for the organization. The idea of participating in a "social good" is a key reason that customers buy from GMFD.

Websites: www.GreenMountainFarmtoSchool.org and www.GreenMountainFarmDirect.org