LOCAL FOOD ENTREPRENEURSHIP SUPPORT

Needs and Gap Analysis

Dr. Karin Allen, Department of Nutrition, Dietetics and Food Sciences, and Dr. Ruby Ward, Department of Applied Economics

Utah State University Economic Research Institute Report #2018-01

October 2018
Contact Information

Karin Allen, PhD
Department of Nutrition, Dietetics and Food Sciences
Utah State University
8700 Old Main Hill, Logan, UT 84322-8700
karin.allen@usu.edu

Ruby Ward, PhD
Department of Applied Economics
Utah State University
4835 Old Main Hill, Logan, UT 84322-4835
ruby.ward@usu.edu

Acknowledgments

This study was funded in part by the Utah Farm Bureau Federation.
Executive Summary

High Priority Short-term Opportunities - These opportunities are fairly low-cost and can be implemented quickly.
- Create in-person and online portal for existing programs.
- Facilitate business-to-business communication.
- Coordinate programs and services across partners.
- Start a conference for food producers.

Other Short-term Opportunities
- These options require additional resources and may not be applicable to a broad range of commodities.
  - Business incubator space including meeting and office space.
  - Kitchen incubator or processing space to test and/or produce new products.
  - Provide additional services that are required (e.g. safety analysis) or useful (e.g. nutritional testing, market research) for food businesses.

Long-term Opportunities - These ideas are higher cost and will require determination of what types of products to support. Many are outside the scope of Utah State University. Before pursuing these options, further study is recommended.
- Creating additional contract packaging services or facilities.
- Loans and other financing for growth of food entrepreneurship companies.
- Trained food-related temporary labor and pooling or sharing labor.

- This study looks at the current needs as well as resources available to identify gaps in services and provide recommendations about how programs could be improved or added in support of the Utah food production system.
- Multiple definitions for Food Innovation Centers are used. This study uses a broad definition that includes research, production, and business assistance. Aspects such as aggregation, distribution and collective marketing services are the focus of food hubs and will not be addressed in this report.
- Utah Agriculture Production and Food Processing Climate: Utah agriculture is dominated by cattle and dairy with the associated feed production. Cash receipts from fruits and vegetables is small overall, but the receipts per acre are higher than other crops. Utah food processing echoes production agriculture with almost half of processing related to animal and dairy products. Food processing accounts for 14 percent of manufacturing jobs in Utah. Most food processing companies have fewer than 20 employees.
- Support for local food production systems encompasses all aspects from farm to fork.
  - Local Food Advisory Council (HB 121), established in 2017, is setting priorities for protecting and enhancing the local food supply. A report of recommendations will be submitted from the council by the end of 2018.
  - Several programs are offered in Utah targeting food processors, including non-profits, government, and Utah State University Extension. Services include research facilities, product development support, production space, specialized trainings, business assistance, and regulatory compliance.
- Analysis was conducted including assessing both the current resources and programs as well as recommendations from food entrepreneurs and others to find gaps in programs. The overall recommendations were categorized by cost and time to implement compared to potential for impacts.
The farm share of the food dollar is the percentage of farm commodity sales tied to the money spent on food. It was 14.8 cents for 2016 according to USDA, Economic Research Service (ERS) Food Dollar Series. This was down significantly from the previous year. At the same time the total food dollars had increased over 3 percent. Historically the food system encompassing the steps food passed through from the farm gate to the final consumer was referred to as the supply chain. The concept of the food value chain in contrast has evolved to not only encompass the steps a product passes through, but doing so in a way that captures social values among other things. As food entrepreneurs seek to provide products that include these additional values, they may need a higher level of support in product formulation, packaging, marketing strategy, and regulatory compliance. A discussion of Food Value Chains can be found at https://www.ams.usda.gov/services/local-regional/food-hubs.

There have been several programs and centers that seek to enhance food entrepreneurship, assist in developing products, marketing and business plans, and assist in compliance with regulatory and food safety issues. These programs have been described by terms such as incubator kitchens, food innovation centers, kitchen accelerators, and community kitchens (for specific definitions, see Meader McCausland et al., 2018). While there was more differentiation in the various concepts when they started to emerge, lines have blurred as various programs provide a set of services that can overlap with other definitions. While traditionally Food Innovation Centers (FIC) were associated more specifically with universities or research centers, we will use the definition of Babbcoock (2008): “Any program that offers facilities for food processing and testing, and often includes technical assistance for marketing, business development, and regulation compliance.” These can be more like an incubator kitchen combined with business planning services or can be more focused on one defined commodity focusing on research and development. Taking a product to market is a complex process, and there are many issues that an average entrepreneur is unfamiliar with, untrained in and/or unaware of. While both large and small companies need to go through the same basic steps, there are significant differences in how those might be accomplished. For more details see Appendix A.

This study looks at the current needs as well as resources available to identify gaps in services and provide recommendations about how programs could be improved or added in support of the Utah food production system. Aspects such as aggregation, distribution, and collective marketing services are the focus of food hubs and will not be addressed in this report. Below, a more in-depth background on FICs is presented, followed by a brief description of Utah’s food climate. We then present the methodology used and the analysis, followed by our final recommendations.
This section provides a brief overview of Utah agriculture and food processing followed by background information about FICs. Interest in local food is also discussed.

**Utah Agriculture Production**

Utah agriculture production is dominated by cattle and dairy with the associated production of the hay that is used as feed. Figure 1 shows the mix of agriculture production receipts for Utah. There are also many small urban farmers who are mainly focused on fruit and vegetable production for direct-to-consumer sales. So cattle and dairy operations also focus on direct-to-consumer sales. While the overall cash receipts for fruit and vegetables (included in all other crops) is a small overall amount, the cash receipts per acre are significantly higher. Figure 2 provides a comparison of the cash receipts and associated economic impact for 100 acres of both wheat and vegetables in Davis County (direct effect shows value of cash receipts, and the indirect and induced effects estimate the value of additional economic impacts). For urban areas with higher land values, more intensive agriculture production with higher sales values is more economically viable.

**Utah Agriculture and Food Processing**

Utah agriculture and food processing echoes production agriculture with almost half of processing related to animal and dairy products (Figure 3). Food manufacturing in Utah is a significant part of manufacturing in Utah. It accounts for 14 percent of manufacturing jobs in Utah and for the Logan Utah-Idaho Metropolitan Area, food manufacturing accounts for over 32 percent of manufacturing jobs (Table 1). Most of the companies in the food processing sector have fewer than 20 employees (Figure 4).

**Food Innovation Center Defined**

A Food Innovation Center (FIC) could refer to a variety of enterprises. Babcock (2008) defines an FIC as, “Any program that offers facilities for food processing and testing, and often includes technical assistance for marketing, business development, and regulation compliance.” The breadth of services offered by FICs around the country varies. Some small centers are mostly commercial kitchens with storage facilities to large centers with specialized food science research capabilities. Farmers use them for value-added, entrepreneurs use them for production space, established companies use them for
R&D or to test how to address a specific product issue. Which group is more actively using a specific center depends upon the focus of the center. An FIC that would focus on value-added products, food safety assistance, and business advising for individual farmers would look very different from one focused on narrow R&D issues for specific commodities.

While individual FICs will have unique combinations of services, they can be categorized in two main groups. The first is food entrepreneurship support centers and the second is food research centers. It is important to understand the difference between an FIC and a shared kitchen or food science lab. A shared kitchen provides very basic equipment to use and minimal storage. Business resource centers and Small Business Development Centers provide business planning. Both of these lack laboratory services. Food science labs offer testing and research, but not business expertise.

The FICs for food entrepreneurship focus on developing business and marketing strategies. They can also include basic testing services. These centers are normally located in an accessible area and many customers are from the local area. They provide the equipment and space for product development and testing as well as staff that can assist business owners in developing business and marketing strategies. Many centers offer educational seminars, trainings, and workshop series addressing everything from food handling to marketing. FICs can also help connect entrepreneurs with local co-packers and producers.

One of the largest of this type of center is Oregon State University’s Food Innovation Center in Portland, Oregon. They service a wide variety of customers and products. These FICs supporting food entrepreneurship combine basic testing and research service with business planning and support to comply with food safety regulations and labeling. FICs are funded and staffed through either university, government or non-profit partnerships, maintaining their facilities through a combination of grants, client service, and rentals fees. Generally user fees are kept to a minimum and only just cover facility costs (Babcock, 2008). All facilities must meet FDA or USDA regulations according to the type of food processed.

The research centers are the second main type of FIC and focus on one or more commodities. These centers are usually located at a research university and would have multiple university faculty members who specialize in research around that topic. Customers would come from a larger geographical area and search out technical expertise related to that commodity. Examples include the JBS Global Food Innovation Center in

Table 1. All Manufacturing and Food Manufacturing in Utah and Utah Metropolitan Statistical Areas (U.S. Census Bureau, 2016)

<table>
<thead>
<tr>
<th>Region</th>
<th>Categories</th>
<th>All Manufacturing</th>
<th>Food Manufacturing</th>
<th>Food (as % of all manufacturing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td># of employees</td>
<td>11,590,420</td>
<td>1,506,793</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Annual Payroll ($1000)</td>
<td>$663,734,098</td>
<td>$65,277,504</td>
<td>10%</td>
</tr>
<tr>
<td>Utah</td>
<td># of employees</td>
<td>120,947</td>
<td>17,290</td>
<td>14.3%</td>
</tr>
<tr>
<td></td>
<td>Annual Payroll ($1000)</td>
<td>$6,821,843</td>
<td>$723,753</td>
<td>10.6%</td>
</tr>
<tr>
<td>Logan UT-ID Metro area</td>
<td># of employees</td>
<td>12,128</td>
<td>3,823</td>
<td>31.5%</td>
</tr>
<tr>
<td></td>
<td>Annual Payroll ($1000)</td>
<td>$508,950</td>
<td>$154,430</td>
<td>30.3%</td>
</tr>
<tr>
<td>Ogden-Clearfield UT Metro area</td>
<td># of employees</td>
<td>31,241</td>
<td>4,331</td>
<td>13.9%</td>
</tr>
<tr>
<td></td>
<td>Annual Payroll ($1000)</td>
<td>$1,826,724</td>
<td>$182,694</td>
<td>10.0%</td>
</tr>
<tr>
<td>Provo-Orem, UT Metro Area</td>
<td># of employees</td>
<td>17,565</td>
<td>2,668</td>
<td>15.2%</td>
</tr>
<tr>
<td></td>
<td>Annual Payroll ($1000)</td>
<td>$917,857</td>
<td>$114,469</td>
<td>12.5%</td>
</tr>
<tr>
<td>SLC, UT Metro Area</td>
<td># of employees</td>
<td>52,388</td>
<td>5,265</td>
<td>10.1%</td>
</tr>
<tr>
<td></td>
<td>Annual Payroll ($1000)</td>
<td>$3,223,227</td>
<td>$226,100</td>
<td>7.0%</td>
</tr>
<tr>
<td>St. George, UT Metro Area</td>
<td># of employees</td>
<td>2,574</td>
<td>184</td>
<td>7.1%</td>
</tr>
<tr>
<td></td>
<td>Annual Payroll ($1000)</td>
<td>$102,791</td>
<td>$8,548</td>
<td>8.3%</td>
</tr>
</tbody>
</table>
Honor of Gary and Kay Smith (Colorado State University, focus on meat), the California Processing Tomato Industry Pilot Plant (UC Davis), and the Western Dairy Center (Utah State University). Because of the specialization of laboratory equipment and technical expertise, these types of FICs usually focus on one commodity area. These types of FICs would generally have higher user fees and funding would come from university, government, grants, and project support. The Michigan State University Food Processing and Innovation Center combines aspects of both types of FICs.

Local Food Interest

Recently there has been a lot of interest in local foods and urban agriculture in Utah. The Local Food Advisory Council was established in 2017 by HB 121 to set priorities for protecting and enhancing local food supply. This has pulled together a broad panel of interested parties and also created four sub-groups. The primary charge of the Local Food Advisory Council is to make recommendations on how best to promote vibrant, locally owned farms, promote resilient ecosystems, promote strong communities and healthy eating and develop a robust, integrated local food system. A report with recommendations will be submitted by the end of 2018. The interest in urban agriculture has been increasing as seen through the growing number of farmers markets in Utah as well as interest in beginning farmer programs in Utah. The beginning farmer track sessions at the Urban and Small Conference have had the highest overall attendance. Cities and counties have also been supportive of urban and small farming programs as they relate to local food.

There are several incubator kitchens throughout Utah and other programs to support local food and food entrepreneurs. These resources include: Spice Kitchen Incubator (SLC), offering intensive start-up food business counseling for all food business types with a focus on refugee entrepreneurs; Cache Business Resource Center (Logan), offering business advice and kitchen rental space for all food business types; Community Action Center (Provo), offering kitchen rental space for packaged food businesses with a focus on low-income populations; and Square Kitchen (SLC), offering kitchen rental space and community events for all food business types.

The space, availability, and focus of these programs varies greatly, making it difficult to fully assess the current gap in needs. For example, while only one of these programs is limited to packaged foods (Community Action Center), all others offer production space to food service businesses (e.g., catering, food trucks) as well as processors. To assess whether there is enough production space to meet current needs for processors, it would first be necessary to determine if there were competing seasonal demands for space between the two types of food businesses.

Figure 3. Agricultural Processing and Manufacturing Sectors, 2014, $10.4 Billion

Figure 4. Utah Food Processors by Size, 2017, NAICS 311
Source: Utah Department of Workforce Services Industry Data (https://jobs.utah.gov/jsp/find/#)
Resource Assessment

For this study, we used a variety of methods to gain an understanding of the current needs for an FIC as well as current resources available. These included in-person visits, a focus group, and a survey of faculty and USU Extension personnel. This information was summarized and then we used a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to both synthesize the information and also assess the needs of the local food system in Utah and identify gaps. The information gathered from the focus group and survey of USU current programs and resources is summarized below. In the next section, the SWOT analysis is presented. This uses both the information gathered directly as well as additional information gathered through literature review and in-person visits.

Producers Focus Group

The focus group of food producers was conducted January 28, 2018 in Sandy, Utah. Three food producers were in attendance. They were recruited to represent a variety of products and stages of business development. Additional producers were invited, but unable to attend. The three food businesses were each under regulations from a different entity: a meat-based frozen sauce regulated by the United States Department of Agriculture (USDA); a vinegar regulated by Food and Drug Administration (FDA) and Bureau of Alcohol, Tobacco and Firearms (BATF); and a bottled sauce regulated under FDA acidified canning regulations. While the regulations for each were different, they faced many of the same issues.

The overall responses are summarized in Table 2. The overall need was to provide a focused access point to the various services and programs available into one place that would be easy to access and provide more visibility. They all indicated that they had used a variety of sources. While they found various programs very useful, access to the programs would improve if there was one place to go to get the information about all the programs and help available. This would also allow increased understanding about how to get started and compliance with regulatory issues.

They agreed that one of their biggest needs was access to production space or co-packers. Co-packers are food processing companies that will do limited small runs for other companies using their recipes and labels. As their business grew, they became too big to do everything in a commercial kitchen but were not big enough to get financing to build their own production facilities. So access to co-packers or production space became the biggest factor limiting their ongoing success and growth.
Utah State University Facilities and Other Service Providers

In January 2018 a survey was conducted of USU faculty housed in the College of Agriculture and Applied Sciences (CAAS) with Extension, research, or outreach programs related to food production. This included both an online survey and selected in-person interviews to determine the current programs and services being offered in areas such as production agriculture, food processing, food safety, and business assistance. It also gathered information about services provided by partners and collaborators, including government, non-profit and commercial providers. A summary of programs and services at USU can be found in Table 3.

The mission of CAAS is “to enhance the lives of people through education, discovery and outreach, which collectively guide the ethical and sustainable use of land, food, water, and economic resources, thereby improving the health and well-being of humans, plants, animals and the environment.” This is evident in the broad range of food-related programs and resources that are offered by various departments within the College, covering aspects from farm to table. Production agriculture programs offer specialized field equipment and research farms to identify crops with increased yields, decreased water usage, or improved nutrient profiles. There is a strong focus on meat and dairy, with specialized facilities for harvest and processing including the Animal Harvest Facility, Meat Research Laboratory, and the Gary H. Richardson Dairy Products Laboratory where Aggie Ice Cream is produced. The Western Dairy Center, a regional center headquartered in the Department of Nutrition, Dietetics and Food Sciences, provides short courses in topics such as cheesemaking for small to mid-sized dairies across the Intermountain West. The newest addition (September 2018) is the Aggie Chocolate Factory, which offers research and pilot-plant production space for research, small business outreach and short courses, and the production of USU branded chocolates.

In addition to specialized commodity assistance, several programs focus on general food business assistance. Food safety short courses and workshops provide required regulatory trainings such as Hazard Analysis and Critical Control Points (USDA), Hazard Analysis and Risk-Based Preventive Controls (FDA), and Produce Safety (FDA). Food safety testing and process evaluation services are also available to Utah companies to meet additional regulatory requirements. The USU Food Process Laboratory provides space for small processors to test new product formulations, and the Sensory Laboratory can work with companies to conduct consumer taste panels to determine whether new products are acceptable and ready to market. Assistance is provided to identify ingredient and packaging options, create nutrition facts panels, and review labels for regulatory compliance. Finally, the USU Incubator Kitchen provides space (free of charge for the first 6 months) to entrepreneurs who do not qualify under the Utah Cottage Food Rule or wish to market their products out of state.

Utah State University offers many programs to assist with business planning. USU hosts the Utah Small Business Develop-
Table 3. Services Currently Provided by Utah State University for Agriculture and Food Products.

<table>
<thead>
<tr>
<th>Service</th>
<th>Commodity or Product Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Meat and Meat Products</td>
</tr>
<tr>
<td>Production Systems and Management</td>
<td>• Herd management</td>
</tr>
<tr>
<td></td>
<td>• Livestock genetics</td>
</tr>
<tr>
<td></td>
<td>• Poultry flock management</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing Systems and Product Development Assistance</td>
<td>• Sensory evaluation</td>
</tr>
<tr>
<td></td>
<td>• Meat research lab</td>
</tr>
<tr>
<td></td>
<td>• Product safety testing</td>
</tr>
<tr>
<td></td>
<td>• Process evaluation</td>
</tr>
<tr>
<td></td>
<td>• Food regulation guidance</td>
</tr>
<tr>
<td></td>
<td>• Nutrition facts panels</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Related Trainings</td>
<td>• Hazard Analysis and Critical Control Points (USDA)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Assistance and Trainings</td>
<td>• Marketing (commodity)</td>
</tr>
<tr>
<td></td>
<td>• Finance and Profit Strategies</td>
</tr>
<tr>
<td></td>
<td>• Business Plans</td>
</tr>
<tr>
<td></td>
<td>• Income and Self-Employment Tax</td>
</tr>
<tr>
<td></td>
<td>• Communicating with the Public</td>
</tr>
<tr>
<td></td>
<td>• Value Added Workshops</td>
</tr>
<tr>
<td></td>
<td>• Small Business Development Centers</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ment Center (SBDC) network and runs most of the centers in Utah providing one-on-one help for new and existing businesses to create business plans. USU is also involved in several programs in support of food entrepreneurs with various partners. A list of current and past events that USU holds with partners includes Home and Small Producer Workshops, the Food Entrepreneur Round Table, the Farm-Chef-Fork Program, and Farmer and Pro-
ducer Partnerships. For example, the Home and Small Producer Workshops target start-up food companies, providing business, food safety, and regulatory information. These ongoing work-
shops, which began in 2013, have been offered around the state and include a multi-disciplinary team from USU (Departments of Nutrition, Dietetics, & Food Sciences and Applied Economics) working with community partners including Associations of Gov-
ernments, Chambers of Commerce, and business counseling
groups. The Food Entrepreneur Round Table, held in conjunction with the Spice Kitchen Incubator, Salt Lake County, the Women’s Business Center, and The Microbusiness Connections Center, targets small to mid-sized food companies including processors, caterers, food trucks, and restaurants, and has been held annu-
ally since 2017.

Additional programs are also available to assist food entrepre-
nears mainly focusing on business support and regulatory com-
pliance. These programs work in conjunction with the above USU programs and provide referrals between the various groups as needed. Business support is provided in conjunction with groups such as Utah’s Own, SCORE, the Women’s Business Center, and the Suazo Business Center. Programs focusing on meeting regulatory requirements work closely with the Utah Department of Agriculture and Food. Strong partner-
ships exist with the USDA, including Rural Development and the Natural Resource Conservation Service. Private busi-
nesses, such as testing laboratories and consultants, can provide services that USU and partners are not able to offer and when other programs are full to capacity.
To analyze the information gathered from the various sources, a SWOT analysis was used to assess FIC program potential in Utah. A SWOT analysis is a strategic planning tool. It allows assessing the internal strengths and weaknesses as well as the external threats faced and the opportunities. It provides a good method of summarizing qualitative information and analyzing it. Table 4 provides the overall SWOT analysis results which are discussed below.

**Internal Strengths and Weaknesses**

The **internal strengths** for supporting food innovation in Utah include USU with its combination of research, Extension, and teaching found at a land-grant university that includes both the research expertise and capabilities combined with the various outreach programs, partnerships and collaborations. USU has a strong established research program that has focused on dairy and meat. This includes both the various faculty expertise with their laboratories as well as the production facilities and the Western Dairy Center. The Western Dairy Center (headquartered at USU) is a network of universities, researchers with a focus on dairy science and technology, USU Extension network of both various established programs and partnerships, including the Small Business Development Center network at USU, as well as programs in food business and business and marketing strategy. Other strengths include the resources provided by various groups including UDAF programs and kitchen incubator space.

The **internal weaknesses** for food entrepreneurship support in Utah include issues with navigating USU’s various programs and structure. The USU Extension and research programs are housed in various colleges and departments, both on and off campus. It can be difficult for an outside person to be aware of the many programs and how to access them. Another weakness is the limited USU faculty for all areas. Some faculty and programs are already at maximum capacity. Logistical constraints also limit the efficiency due to travel time. For example, there is not a convenient drop-off point for samples for food safety testing. Currently, this may include communication with individual businesses and USU Extension personnel who may be traveling through an area for other reasons. It is also difficult to find all of the other agencies and partners outside USU that a food entrepreneur might use or may need to work with to comply with regulations. The low number of commodities grown in Utah as well as the seasonality of production can also be a weakness. In Oregon, the climate allows a plethora of raw agricultural commodities, which enhances the opportunities for value-added product development. Finally, as echoed by the Focus Group, very few processing facilities provide contract packing (co-packing) services. Lack of access to periodic, mid-scale production runs can severely limit a small company’s ability to fulfill larger orders or expand distribution.

**Opportunities**

The opportunities section lists the various opportunities that exist as part of the SWOT analysis without determining which should be pursued. The recommendations and discussion section below will provide details about actual recommendations.

- **Food Entrepreneurship support FIC.** One opportunity for an FIC in Utah is to support food entrepreneurship and be centered in the Salt Lake Valley as a phased development that would start with centralized access to existing resources which could be both face-to-face and online. Existing programs within USU and others already can help with business plans, marketing strategy, finance, process verification, food safety testing, and regulatory compliance. Initially this could start with a manager and maybe some staff time. They could work with individuals and streamline access to programs and resources. Subsequent phases could include a basic facility with focus group room, limited but functional sensory, and basic food safety testing.

- **Practices to Measure FIC Impacts.** Many of the programs we interviewed and the literature we reviewed stressed that FICs were too busy trying to fund their operations and work with clients to assess their impacts. They did not have standard methods established for tracking and measuring impacts.

- **Increased Coordination Across Partners.** Various groups have resources and interest in supporting food production in Utah, but a formal time and method of coordinating does not currently exist.

- **Increase Use of Locally Produced Agriculture Products as Ingredients.** Opportunities also exist to connect growers with food processors to increase the use of local agricultural commodities. USU, in cooperation with Utah’s Own, has begun addressing this as of February 2018. Initial feedback from both growers and food processors has been positive. Some programs that have connected farmers to chefs could be continued and enhanced.

- **Establish Annual Food Conference.** This would be similar to the Urban and Small Farms Conference but focus on food production.

- **Targeted Pilot Plant.** A longer-term, higher-cost alternative could include a targeted pilot plant. The pilot plant would
<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
</table>
| • USU Established research programs (Dairy, Meat)  
  – Specialized laboratories, production facilities, faculty  
  – Western Dairy Center  
• USU Extension programs  
  – Product advisement (Ingredients, process, safety, regulatory)  
• Small Business Development Center network at USU  
• Partnerships and Collaborations  
• Existing Incubator Kitchens  
  – Spice Incubator, Community Action Center, Cache Business Resource Center, Square Kitchen | • Limited access to contract packaging  
• Difficult to navigate existing resources without guidance  
  – Programs spread across departments, colleges  
  – New entrepreneur may not know who to approach first  
• Limited USU faculty/staff for all areas  
  – Some already at maximum capacity  
  – Faculty focus on programming needs, have limited time to coordinate  
• Faculty answering simple questions  
  – Could be handled by dedicated staff  
  – Limited time available for curriculum development, etc.  
• Logistical constraints  
  – Travel time, distance to cover Utah  
• Don’t know if Utah Incubator kitchen space meets current needs  
  – Square Kitchen open only since June 2018  
• Limitations in Utah commodities  
  – Low diversity  
  – Limited size on national scale |

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
</table>
| • Food Innovation Center can be developed in phases  
  – Centralized access to resources (virtual/online, face-to-face, shepherd)  
  > Additional staff or technicians for program support  
  > Targeted equipment for basic on-site testing in SLC  
  > Educational series for food companies (similar to Master Gardener)  
  – Basic facility in SLC area  
  > Focus group room  
  > Limited but functional sensory  
  > Commissary-type kitchen rental space  
  – Advanced facility  
  > Targeted pilot plant  
• Develop best practices for measuring FIC impacts  
• Research and Development  
  – Increased research at USU (new or expansion)  
  – Chocolate facility opened Sept 2018  
• Supplement industry  
  – Include supplement information in new or existing programs for food  
  – Shelf-life testing same as needed for food – give donors priority access  
• Co-packing (would require incentives for private industry)  
• Connect growers to processors to increase use of local agriculture products  
  – Pilot event held Feb 2018, additional events will be held through 2020 | • New center in Colorado will focus on Meat, Sensory  
  – Demographics of Denver may be more attractive to larger companies needing sensory testing  
• Oregon FIC  
  – Regional and international sensory testing due to Portland’s unique demographics  
  – Extended growing season with 226 commodities grown  
• Ag producers and farmers don’t often use FICs  
• Larger established companies have services in-house  
• Intellectual property issues with product development  
• Limited impact studies for FICs  
  – No established metrics to gauge success  
  – Staff time not allocated to measuring impacts  
• Funding sources and issues – one-time vs. ongoing  
  – Premature growth and expansion  
  – How to prioritize new hires and capital outlays |
need to be targeted as different types of similar commodities or products require specialized processing line equipment. For example, a chunky salsa requires different processing and packaging equipment than a tomato sauce or blended salsa, even though they contain similar ingredients.

- **Incentivize Private Companies to Co-Pack.** Incentivizing private companies to engage in co-packing services could expand the opportunities for use of co-packing in Utah.

**Threats and Factors that Would Limit Success**

In looking at the various opportunities, the threats that would affect the potential success should also be considered.

- **Competition from FICs in other states.** This includes the new center with a focus on meat and sensory testing that is being opened in Colorado and Oregon State University’s FIC in Portland. Portland’s unique demographics have made this an attractive place for sensory testing and focus groups for national and international brands wanting regional product testing. With the new facility in Colorado also offering these services, this will have a high level of competition for a sensory facility in Salt Lake City.

- **Few FIC clients are agriculture producers.** The Oregon FIC indicated that with their 226 commodities grown in Oregon, they have a wider group of agriculture producers to pull from, but they are not the primary clientele. Research studies have also echoed this.

- **Large companies have many of the services of an FIC in-house and would not seek the services of an FIC.** Small start-up companies cannot pay for full cost services.

- **Pilot or production-scale equipment is highly specialized and costly.** The high cost of specialized equipment means that an efficient FIC cannot be all things to all groups.

- **There are no established metrics to gauge success.**

- **FIC Funding issues are similar to those faced by private industry.** This is both the initial one-time funding and the ongoing cost of operations. Centers have indicated that pre-mature growth or expansion, can put additional pressure on funding and limit success.
Table 5. Options for Enhanced Food Innovation Support in Utah.

<table>
<thead>
<tr>
<th>Option</th>
<th>Timeframe</th>
<th>Annual Operating Costs</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| Food Entrepreneur Support FIC In Salt Lake Valley | 1 year or less, but ongoing as additional services and equipment | $100,000 to $500,000   | • Low cost  
• Variety of clientele  
• Quick results  
• Could cover all commodities (no need to specialize)  
• Increase visibility and streamline access | • Limited to no processing space  
• No co-packing, packaging services  
• Limited product development help |
| Measure FIC Impacts                        | Developed after one of the other options | Minimal (some time for existing personnel) | • Help to establish value of current programs  
• May help predict value of future programs | • Variable stakeholder expectations |
| Coordinate with partners                   | 1 year or less and ongoing | Minimal (some time for existing personnel) | • Enhances effectiveness of programs | • Partners may have conflicting ideas or priorities |
| Assist Food Processors, Restaurants, etc., to use local ingredients | Some work already started | Minimal (some time for existing personnel and other operating costs) | • Increased market for local products  
• Enhanced supply chain coordination | • Seasonal /limited availability |
| Annual Food Conference                     | 1 year for first one, and ongoing | $10,000 if no staff time to $80,000, including staff and out-of-state speakers | • Improved networking  
• Centralized place for education | • Limited grant opportunities for food processing education focus |
| Targeted Pilot Plant                       | Long-term                | $500,000+ ($1 million + in start-up costs, e.g., equipment) | • Increased options for advanced processing and packaging  
• Assistance with scale-up  
• Prototypes can be produced before investing in equipment | • Narrow range of products supported  
• Larger space and more expensive specialized equipment |
| Incentivize private companies to co-pack   | Uncertain                | Uncertain              | • More opportunities for food products establishing regional markets | • Would require some type of legislation or financial incentive  
• Increased liability for co-packing companies |
Final Recommendations

The above information and analysis highlighted both the various opportunities and strengths of existing programs. A summary of the various options with advantages and disadvantages is provided. This is followed by initial recommendations organized by high-priority short-term steps, other short-term opportunities, and long-term opportunities.

**Option Comparison**

Options were compared based on the timeframe for implementation, the cost as well as advantages and disadvantages. Table 5 provides a comparison of the various options. A food entrepreneurship support FIC in Salt Lake Valley could streamline resource and program access. This could be initiated with a staff person in an office with additional services and space added as needed and resources became available. There are also several opportunities that would require minimal cost to implement, could service food entrepreneurs producing a wide variety of food products, have few disadvantages, and several advantages. Other options come with a higher cost, more limited array of food products they could service, and longer timeframe for implementation.

**High Priority Short-term Opportunities**

The advantage of these steps are: they do not require determining what sub-set of products to focus on, they are fairly low-cost, and can be implemented quickly.

- Create an in-person and online portal for existing programs.
  - Convert existing resources to more usable formats.
  - Link programs and resources together. One online and in-person portal would access programs across various departments and locations.
  - Increase visibility of existing programs and materials.
  - Staff in-person and online office to triage clients and guide them through the process of services and steps.
    > Assess initial needs and provide list of information clients should collect.
    > Sent clients to appropriate programs both within USU and others.
    > Follow-up and guide clients through various questions and next steps.
- Facilitate business-to-business communication. Focus group participants indicated that being able to communicate and network with peers facilitated their business growth and efficiency. This could be done with creating peer groups. The pilot program that linked food growers and processors together could be continued. Quarterly meetings or networking opportunities, this might also be done by coordinating with partners.
  - Bring various partners to the table to coordinate programs and services. Various partners have an interest in working in this area. Providing a mechanism to efficiently allow coordination across entities could enhance the overall programs available in Utah.
  - Start a conference similar to the Urban and Small Farms Conference held in Utah each year for food producers. A limitation is that grant dollars are used to fund that conference, and grant programs for food producers are not as readily apparent.

**Other Short-term Opportunities**

These options would require more resources, and many of them would require a determination of what product(s) to focus on. These could be added, addressed as add-ons or expansions of resources developed in the high-priority section above. The items in italics would require an initial determination of which products or commodities to support.

- Business Incubator space including meeting and office space.
- **Kitchen incubator/processing space to test new products. This would be space that could be used to formulate and test new products.**
- **Kitchen incubator/processing space to produce products.**
- Providing additional services that are **required** for all food businesses.
  - Shelf-life analysis
  - **Product Safety analysis**
- Providing additional services that are **useful** for food businesses.
  - Sensory analysis (already at USU)
  - **Nutritional testing**
  - Small scale market research
    > Hands-on training for businesses to do their own focus groups and other methods.
    > How to conduct low-cost market research using farmers markets and other outlets.
  - Training on human resource management
  - Examples of pilot scale packaging equipment
**Long-term Opportunities**

Some of the ideas and options to address the gaps are outside the scope of USU, but are important to support the long-term success of Utah food companies. Before pursuing these options, further study is recommended. This includes:

- Creating additional contract packaging services or facilities.
- Loans and other financing for growth of food entrepreneurship companies. It can be difficult to obtain financing for small companies with food products.
- Trained food-related temporary labor and pooling or sharing labor.
# Appendix A.
## Taking a Product from Concept to Market

<table>
<thead>
<tr>
<th>Stage</th>
<th>Common Issues</th>
<th>How is this typically addressed by large companies?</th>
<th>How might this be done by small companies?</th>
</tr>
</thead>
</table>
| **Formulation**| • Recipe testing  
  – Ensure ingredients are consistent with desired specialty category (e.g., organic, gluten-free)  
  • Review of regulatory requirements  
  • Safety testing and reformulation as required| Most large companies use in-house R&D. Recipe development may begin on a small scale in a research kitchen, then moved to a pilot plant. Testing may be conducted in-house to confirm regulatory compliance, then sent to a private lab for verification.                                                                 | Small companies may conduct R&D in their homes by testing new recipes on family and friends. Most need outside assistance* to determine if their product meets regulatory requirements.                                                                                                                                     |
| **Packaging**  | • Shelf life testing  
  • Branding and label graphics  
  • Financial feasibility (especially for packages that can break or tear)  
  • Label components, wording, and claims meet regulatory requirements| Most large companies use in-house R&D. Many have legal and graphic design departments, while others retain specialized private counsel or consultants. Large companies may contract with universities to conduct specific testing (cost can range from tens to hundreds of thousands). | Small companies may conduct informal shelf-life testing on most products simply by monitoring the quality of the food over time. Most need outside assistance* with graphic design and label review. Many packaging companies will work with small businesses to identify appropriate packaging.                                                                                       |
| **Evaluation** | • Focus groups  
  • Trained or consumer sensory panels  
  • Identification of target market  
  • Appropriateness of product price (profitability and consumer purchase habits)  
  • Establishing quality standards| Large companies may conduct in-house sensory and quality standard testing, while others contract with specialized outside facilities that can draw from broad market segments.                                                                                                                            | Small companies may conduct informal sensory testing at farmers markets or similar venues. This is not ideal, but formal sensory testing is cost-prohibitive for the majority of small-scale processors.                                                                                 |
| **Production** | • Recipe scale-up based on production space  
  • Monitoring quality standards (within and between batches)  
  • Process evaluation to increase efficiency| Scale-up from pilot to processing plants is performed by plant managers or in-house specialists. They may also work with contract-packagers for large batches of limited-run products.                                                                                      | Scale-up from home to commissary or bakery equipment is a hurdle for small companies. Many need outside assistance.* Co-packing cost and labor requirements can hinder small businesses’ ability to meet large orders.                                                                 |
| **Market Evaluation** | • Sales performance (within and between markets)  
  • Identification of opportunities for growth  
  – Product line expansion  
  – Additional markets| Large companies contain business divisions to conduct these evaluations. Often, several divisions or departments will work together to identify expansion and growth opportunities.                                                                 | Small companies may reach out to local grocery stores, state marketing groups, or online retailers. Caution is required as orders may outpace production. Line over-expansion can intensify this issue.                                                                                                    |

*Sources of outside assistance can include inspection or regulatory agencies, food incubators/innovation centers, university food science programs, and private consultants or testing labs.*


