

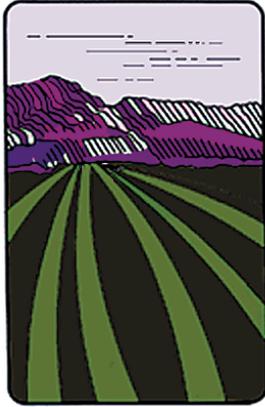
**BROADENING LINKS BETWEEN AGRICULTURAL PRODUCERS
AND SCHOOL FOOD PURCHASERS AND OTHER INSTITUTIONS
FY 2008**

This project builds on a FY 2007 FSMIP farm to school project conducted by the Oregon Department of Agriculture and partners entitled "Developing School Food Products and Links Between Agricultural Producers and Schools." Under that project, surveys helped identify the amounts and types of local processed products purchased or desired by school systems, and revealed interest among schools in fresh crops such as carrots, cauliflower, broccoli, cucumbers, squash lettuce apples, pears and strawberries, all of which grow in Oregon. The FY 2008 project focused on identifying barriers and opportunities faced by processors, schools, farmers and distributors; continued development of new healthy food products using "farmer-to-processor" ingredients; training of school foodservice staff at a culinary school with professional chefs; and continued development and implementation of Phase 1 of an easy-to-use interactive system to connect farmers, processors, schools and distributors, known as Food Hub.

FINAL REPORT

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Oregon
Department
of Agriculture

Broadening Links Between Agricultural Producers & School Food Purchasers and Other Institutions

Grant Agreement N. 12-25-G-0676 Final Report

The work herein built upon the 2007 FSMIP grant, “Developing School Food Products and Links Between Agricultural Producers & Schools.” The grant provided for expanding market opportunities for Oregon agricultural processors and farms through the development of products for Oregon school meal programs, with an emphasis on identifying farm crops and distribution partnerships, as well as identifying institutional users beyond K-12 schools. The Oregon Department of Agriculture’s Agricultural Development & Marketing Division conducted this project in cooperation with Oregon State University Food Innovation Center, the Oregon School Nutrition Association, Oregon Department of Education, and industry partners.

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INTRODUCTION

Background

Oregon has a strong, highly diversified agricultural base, with 40,000 farms, and over 225 crops grown commercially. The average farm size is less than 500 acres. The majority of Oregon's edible crops are sold to packers or processors and sold out-of-state. The Oregon Farmers Markets Association and Oregon State University Small Farms Programs estimate 1,000 farms sell directly to consumers at farm stands or at farmers markets throughout the state but the number of farms able and interested to sell directly to school districts or to processors to manufacture products specifically for schools was not known. A very small percentage of farm direct sales to schools or institutions has been identified and measured and interest has grown in the past few years.

Oregon's 198 school districts serve at least 22 million school breakfasts and 47 million school lunches annually. Approximately \$60 million are spent on food purchases, including \$9 million on USDA commodity foods using entitlement dollars. Amounts and types of local processed products purchased or desired were identified through Oregon's 2007 FSMIP project surveys and outreach in cooperation with the Oregon School Nutrition Association and other partners. Additional interest in purchasing fresh crops surfaced through 2007 project work, including carrots, cauliflower, broccoli, cucumbers, squash, lettuce, apples, pears and strawberries. These crops are all grown in Oregon but growers able to supply school districts in various regions of the state was not known. Preliminary information indicated that local products purchased, other than milk, still represented a small percent of total purchases. A continuation of our 2007 FSMIP project focused specifically on farms and addressed this piece of the farm direct opportunity equation.

The momentum and interest in building partnerships with schools, Oregon farms and food processors continued to grow in the last year. The Oregon Department of Agriculture's new Farm-to-School Manager fielded numerous inquiries, and easily identified a qualified volunteer intern from a pool of interested candidates to assist with our 2008 FSMIP project surveys to connect food processors, schools and develop desired school foodservice products.

As pointed out in our 2007 proposal, limited numbers of schools have scratch kitchens and most schools have a practical need to use distributors. FSMIP 2007 project work further identified the need to develop distributor partnerships between growers, processors, and schools. This is a critical element to realistically increase the volume of Oregon grown crops and food products into Oregon schools and other institutions.

A couple of new healthy food products utilizing processed ingredients, such as dried or frozen fruit and seafood were identified and prototype work or problem solving was done at the Oregon State University Food Innovation Center. A pilot project implemented at one school district using one of the new products clearly identified lower price point raw products for further processing will directly impact school districts ability to purchase the

new products. Logical and important next steps include identifying more farms with crops that are of limited or no marketable value to the grower without further steps. Crops not meeting premium grade standards have ideal price points for new products that fit school budgets. Thorough identification of and surveying farmers in the different regions of the state was an important component to the continued effort of linking school purchasers with locally grown and processed foods. In addition to identifying crops and farms, identifying distributors to facilitate fresh crop deliveries to either schools or processors also was included as a part of continuation of this project.

Some of the new “lightly processed” products and identified crops may also have applications in additional foodservice/institutional settings with scratch cooking limitations or desiring local foods, such as hospitals, retirement facilities and universities. Our 2008 project included a very preliminary attempt to identify this group of potential users and they can be included in the on-line Food Hub system (described later in this report).

Conversations with two school districts piloting direct farm purchases or cafeteria-ready healthy processed products made from primary and secondary ingredient processors, indicated a real need for focused education and training with school foodservice staff. Therefore some efforts as well were directed to school foodservice staff education and training.

Our 2008 FSMIP project focused on identification of processors, schools, farmers and distributors; continued development of new healthy food products using “farmer-to-processor” ingredients; training of school foodservice staff; participation in the continued development and implementation of an easy-to-use interactive system to connect farmers, processors, schools and distributors, known as Food Hub. It should be noted that the creation and success of launching the Food Hub web-based system required numerous partners and resources far beyond the scope of FSMIP. At the time of writing this report, Food Hub has been launched, but is in ‘phase one’ of a three phase system, with further phases envisioned to be able to offer actual business-to-business transaction capabilities.

The Food Hub system as well as the education and training pieces can be copied or adapted by other states. This project's successful outcome, a system to link growers, primary and secondary processors with school purchasers and distributors, as well as the creation of new products that are welcomed by schools, may also lead to additional market outlets for producers, such as universities, hospitals and retirement facilities. This system could be used as a template by many other states, and achieve the goal of creating new market channels for agricultural producers.

Work Plan

Farm Survey - The Oregon Department of Agriculture designed and conducted a survey of 200 Oregon farms to enhance and complement the 2007 survey work from 2007's project. Farms were identified through the Oregon Department of Agriculture's Commodity Inspection Division, commodity commissions, farmers markets, extension offices, local food policy councils and outreach through media utilized by the agriculture community. The survey targeted all geographical regions of the state to identify farms that 1) grow crops that comply with USDA nutritional guidelines, 2) use good agricultural and good handling practices (GAP/GHP), 3) interested in supplying local processors and schools and may have capabilities to deliver directly or develop cooperative networks through Food Hub.

Food Product Development - Data from the farm survey identified crops used by the Oregon State University Food Innovation Center (FIC) food technologists to develop or enhance new "lightly processed" products with input from the FSMIP project manager, School Food Purchasers and Processors Advisory Group established in the 2007 FSMIP project.

Food Hub System – In cooperation with many partners, an interactive, on-line system to connect Northwest farmers, ranchers, school food purchasers, retailers, restaurants and distributors was developed over a two year period and launched in the late Fall of 2009.

School Foodservice Staff Education and Training - A foodservice training program was developed in cooperation with Oregon School Nutrition Association members, and input from Oregon Department of Education staff. A two-day workshop was held to test the format for future statewide training.

OREGON FARM SURVEY

An Oregon farms survey was conducted to explore barriers and opportunities to sell to K-12 schools in their regions. The survey was designed to identify: Oregon farms' interest in selling to schools as well as those already selling to schools; knowledge needed by farms to establish selling agreements with schools; whether farm size limits opportunities to sell to schools; whether perceived product volume requirements are barriers/challenges; percentage of farms with third party food safety certifications; sales transaction ranges desired by farms to maintain consistent working relationships with schools; current sales outlets; interest in using a web-based system such as Food Hub in order to grow business opportunities.

The results substantiated known factors but also provided insight and data to support interest in selling to local school districts as well as interest in using an on-line system such as Food Hub. Summarized results follow.

Total surveys sent:	250	
Total completed surveys:	168	(75.6% return rate)

1. Do you currently sell product to school cafeteria programs?

Yes	11.8%	18
No	88.2%	160

Small Percentage

The 11.8% of farms surveyed that currently sell to schools were predominately selling fruit and vegetables for salad bars and some vegetables to complement center-of-the-plate items, such as carrots, parsnips and hard squash in the fall and winter. Whole pears and apples were also a dominant category for sales over the autumn and winter months. Some strawberries were sold in the late spring and some stone fruit.

The transactions reported represented only small percentages of farms total revenues and also represented just a few sales per school in a given year. The goods were sold at wholesale and below wholesale price and the largest transactions were for harvest of the month programs.

Opportunities with Harvest of the Month Programs Statewide

Established harvest of the month programs to-date have been an easier target for farm direct sales as they were product specific, timed to match the season and purchase volumes was pre-determined. Harvest of the month programs were designed to connect with core curricula and offer students the chance to explore, taste and learn about the importance of eating fruits and vegetables; linking the classroom, cafeteria, home and community to motivate and support students to make healthy food choices and be physically active every day.

Harvest of the Month programs provides a vehicle for farms to work with schools and forecast volume product sales using a method known as forward contracting. For example, if by Mid-May a pear orchard farmer predicts a surplus of fruit, he/she can contact a school to negotiate a sale for September or October. Pilot Harvest of the month programs have had high participation rates throughout school districts, therefore created volume sales for farms with products generally used in one day.

The participating farms are often showcased as an educational component in the cafeteria; the fruit arrives ripe, giving a higher level of satisfaction to students and therefore a repeat request for more of the product plus the economic benefit remains in the regional agricultural economy.

The results from the 2008 FSMIP farm survey will be used by a newly established Oregon Farm to School Network as part of their efforts to find support for a statewide Harvest of the Month Program.

Rural Areas Provide Easier Access

It was noted in the survey that many farms that already sell to schools were in small rural communities where the farm is already a known entity in the community. Quantities of food purchased are small and manageable and periodically sold slightly below wholesale cost. For example in one small town in NE Oregon, where the total student population in the entire district is 200, one grower sells lettuce for the grade/ middle school salad bar and a local ranch sells beef for the cafeterias hamburgers and burrito fillings. These transactions are very manageable when the district is small with 400 or less students.

2. If not selling now to schools, are you interested in selling directly to school cafeteria programs?

Yes	61.0%	136
No	39.0%	33

Price Issue

Surveyed farms view schools as potential high volume sales opportunities when a school has over 200 students. The survey revealed that schools lack the ability to pay for farm products that meet the retail and wholesale prices that farms receive from restaurants, farmers markets, retail stores, college campuses, corporate campuses and processors. Farms selling to schools have a genuine interest in contributing to healthy meals in the cafeteria programs and will sell product at a break even price point in order to ensure fresh local product is being sold to schools. These types of transactions will not sustain Small-to-medium sized farms over a long period of time.

In order for the school food service to be a major receiver of local farm goods and high quality processed foods, the prices that schools pay will need to be competitive with other wholesale marketplace competition.

Wholesale Alternative

An alternative to farm direct sales are partnerships with distributors that have existing accounts with school districts. Some of the farms surveyed stated they have partnerships with produce companies that sell their produce to schools. The farms do not grow the product specifically for schools, but products that are farm source identified are available to schools via the produce company. The farm saves time and money by doing just one drop off or pick up. The produce company covers the liability insurance affiliated with food safety, once the exchange is made. Where district policies make it difficult to purchase direct due to liability insurance, lack of following a request for proposal phase or food safety certification, requesting a produce company to handle the transaction is one practical solution to local products being sold to schools.

3. What do you perceive or know as the major barriers when selling direct to schools? Please check all that apply.

Price	43.5%	37
Distribution barriers	51.6%	42
Liability insurance	24.2%	20
Food safety certification requirements	37.1%	23
Quantity	56.5%	35

Price

As revealed in the previous question, farms have concerns about schools ability to pay prices that farms charge to existing wholesale and retail markets. School cafeterias receive between .25 and .30 cents to spend on fruits or vegetables per lunch meal and even less for breakfast.

Many farms don't consider the USDA Food and Nutrition Services nutritional guidelines when developing crop plans. This provides challenges of meeting volume needs for some crops. It also increases to challenge for school food service managers, as they have to know what they can purchase from farms to match the guidelines.

Distribution Barriers

Surveyed farms indicated they travel into the city during farmers' market days or restaurant drop off days, generally twice weekly. Adding school drops that aren't close to other customers adds logistic challenges and added time.

Another identified barrier included long-term contract relationships that schools have with large produce and broad line companies so that making adjustments to local purchasing directly with farms are a violation of the contract.

Quantity

The majority of farms that responded to the survey were small farms under 50 acres. Many farms cannot meet the quantities required on a weekly schedule. Oregon school

districts can have anywhere from 200 to 40,000 students. The average is about 500 students per district statewide. The volume level for fresh produce can be hundreds of pounds per order.

4. If you have a food safety or other active certification program, which one is it?

Good Agricultural Practices /Good Handling Practices	26.7%	31
Certified Organic	26.7%	31
Salmon Safe	3.3%	11
Food Alliance	1.7%	3
Other	8.3%	23
None	48.3%	69

Food Safety Certification Requirements

Good Agricultural Practices (GAP) has become the standard certification nationally that school districts acknowledge and may require. GAP is the preferred certification that schools in Oregon are requesting as it addresses record keeping, worker hygiene, water use, pesticide use and recording of, manure use, compost use, wild animals on the farm, harvest sanitation, post-harvest handling and farm bio-security.

Other certifications such as organic, Salmon Safe and Food Alliance were not found to be of value to schools but more useful in retail and direct consumer marketing.

With almost half of the farms stating that they have no certification agencies involved in analyzing their farmland, there is an opportunity for state audited programs like GAP to expand and assist small farms in particular to practice food safety on the farm and use the certification as a marketing and quality assurance program to empower their sales to the wholesale and retail market.

However, school districts do not necessarily require any food safety certification when purchasing direct and it is up to each district to set a standard and requirement if desired. Many districts in Oregon use their own questionnaire that is based on the fundamental aspects of GAP certification. The questionnaire is then filed and used to prove some due diligence was used when negotiating with the farm.

5. What is the size of your farm based on actual productive acreage?

10-15 acres	43.1%	75
15-25 acres	6.9%	15
25-50 acres	15.5%	25
Over 50 acres	34.5%	53

Average Size of a Farm in Oregon

The average size of a farm in Oregon is 444 acres. The average size of farms surveyed was about 21 acres. Over the last 15 years small farms in Oregon have risen in quantity and have aided in the growth and success of farmers markets, niche markets,

advancement of specialty crops, creating awareness for consumers about issues surrounding the local food movement and supporting the food service industry with marketing tools and storytelling about rural landscapes and the importance and pleasures of supporting local farms. Many of the farms actively showing interest in selling to local schools are less than 50 acres.

6. Would you be willing to commit to providing a school district with a prearranged quantity of product in advance of the school year?

Yes	57.1% 97
No	42.9% 71

Forward Contracting

The majority of farms surveyed were interested and requested specific school district contact information in order to arrange meetings to discuss forward contracting. This requires that a farms become educated about school cafeteria programs and the items they prepare frequently and for food service directors to understand the dynamics of farming, harvest, storage and transportation barriers. As mentioned earlier, harvest of the month programs in particular offer an opportunity to purchase fresh product with set dates for delivery, set price point and set volumes.

Forward contracting may also create opportunities for farms to sell blemished items, or bumper crops that exceed harvest estimates and can be used fresh, or processed into a school lunch or breakfast product at a lesser price point.

7. Is this type of contracting a desirable transaction? Please mark one.

Preferred	13.8% 12
Desirable	43.1% 78
Not desirable	43.1% 78

Preferred

A small number of farms indicated they preferred forward contracts because they helped them plan, have a known quantity to sell, pre-determine prices and ability to sell product into schools to diversify their customer base.

Desirable

Farms mentioned wanting to be affiliated with selling fresh product to school districts and including them as part of their customer base; they also liked anticipating a high volume advance sale once or twice a month to a harvest of the month program.

Not Desirable

Reasons identified for not finding contracting desired included prices and quantities change depending on harvest and conditions.

8. What is your ideal transaction amount to make selling to a school once a week profitable? Please mark one.

\$0-\$500	50.0% 83
\$500-\$1000	26.8% 35
\$1000-\$1500	12.5% 22
\$1500-2000	1.8% 4
Over \$2000	8.9% 24

Preferred Transaction Amount

The preferred transaction amount of \$500.00 or more is close to the dollar amount the average sized local restaurant and retail account would purchase from small farms on a weekly basis. This figure suggests that small farms selling to schools want the price point to be the same and the volumes to be similar to other retail type accounts. Farms in the small to medium size range ideally carry 8-12 accounts in order to create the revenue and diversity they need to be viable. Schools can be part of a small to medium sized farm customer base, as long as they can afford the pricing structure that smaller farms require in order to keep quality land, use quality water, have insurance and food safety certification credentials and support their labor base which can be somewhat intensive.

Larger Transactions

Farms that need the transactions above \$2000.00 will work with larger districts making volume drop offs one or twice a month with foods that are not extremely perishable or quantities of foods that can be used quickly by larger school districts.

9. To what venues do you sell product? Please mark all categories that apply.

[Many farms marked more then one category so the total numbers do not equal 168 responses, nor total 100%.]

Farmers Markets	78.7%
Retail Stores	47.5%
Restaurants	41.0%
Community Supported Agriculture Shares	24.6%
Distributors	32.8%
Hospitals	1.6%
School Cafeterias	9.8%

Farmers Markets

78.7% of the farms surveyed identified farmers markets as their main sales venue. The number of farmers markets has tripled in the last 10 years, with approximately 100 farmers markets throughout Oregon. Community Supported Agriculture shares may also be directly linked to farmers markets because markets are a major point of distribution for some CSA's. Those two categories create the main outlet for many of the smaller farms in Oregon to sell their product.

Retail and Restaurants

Direct sales to restaurants and retail stores were found to be the second and third sales outlets. Many small farms prefer one an exclusive outlet as the sales are exact, drop off is easy and time spent marketing is minimized and directed to preferred accounts that pay within one week. One of the concerns expressed by farms when selling to schools is a payment schedule. Schools districts can take 30-60 days to make payment and this can be hard for farms whose cash flow depends on the short window of a six to nine months growing season.

Alternative Markets via Distributors

Farms selling directly to produce distributors access schools through using broader distribution channels. Every district purchases from a product company. These companies have trace-back standards that identify the growers. Selling to distributors is desirable in terms of having a single delivery location, the produce company takes on the liability insurance and there is no sell back once the product is delivered, so potential for loss is minimized.

10. Do you currently process transactions on-line via your own web site?

Yes	7.7%	18
No	92.3%	150

Food Hub's Timely Potential

This question revealed only a few small to medium sized farms currently use the Internet to send product inventory sheets and receive orders. A small quantity of farms do use the internet with restaurants because it helps them track down hard to access restaurant buyers and communicate product availability; allows the buyers to place orders and provides a written verification of pricing and orders. The majority of currently non-user farmers expressed interest in having access to the Internet for sales of their product. This helps substantiate the timeliness of launching the Food Hub system and the role that it is anticipated to fill to assist buyers and sellers.

Collaborate to Compete

Food Hub may help bring a competitive edge to farmers, processors and sellers of local food by allowing them to gather and share information about availability, pricing and easier identification of larger buyers and sellers, building orders through multiple farms, development of distribution networks and increasing sales volume through the internet.

11. If you wanted to sell product to a school are you aware of how to contact the district managers in your area?

Yes	28.6%	30
No	71.4%	138

The Food Hub system has a search engine for farms to locate schools, which should assist with closing this critical gap. Farms can contact school districts using Food Hub. Not all districts have interest in buying directly from farms. Ideally Food Hub works as a screening device that post individuals and businesses that are interested in purchasing and allows them to communicate. Food Hub will assist with tracking the growth of sales to schools as well as promote local foods in schools.

12. The Oregon Department of Agriculture is currently working on an on-line statewide database directory that would assist linking local producers, distributors and buyers. For a small fee and the ability to maintain and list your on-line inventory, would you be interested in being listed as a potential seller for institutional buyers to contact?

Yes	55.4%	91
No	44.6%	77

The majority of surveyed farms expressed interest in an on-line system (Food Hub), and would be invited to participate in Food Hub, which went live on October 30, 2009.

FARM SURVEY CONCLUSIONS

The results from the farm survey substantiated and emphasized some of the barriers and challenges facing successful farm-to-school relationships and the need to continue to identify farmers, distributors, school purchasers and create links between them. The identification of farms and their crops and the tools they need to be able to sell to schools or for their crops to be used in processed products for schools was helpful information for the refinement of the Food Hub system.

The farm survey also helped identify new or continuing training that will support and build on pilot projects and efforts regionally and statewide:

Train school buyers on how to negotiate forward contracting by using statewide Harvest of the Month programs. Forecast purchasing, select items, target easy to grow products and create materials, preferred farms lists.

Food safety training seminars including introduction to GAP/GHP certification.

School food service managers training sessions. Introduce farmers directly to school district buyers and offer information on crops, seasonal offerings, menus, harvest of the month programs, pricing structures, liability insurance requirements and create a better understanding of how direct farm sales to schools and institutions can work together.

FOOD HUB

The Oregon Department of Agriculture FSMIP project manager, along with other staff members worked in cooperation with Ecotrust and other private and public partners to develop and launch the web-based interactive system, Food Hub. As stated earlier, Food Hub required resources far beyond the scope of the 2007 and 2008 FSMIP projects but through partnership collaboration, the live system launched October 30, 2009 has far wider applicability than originally envisioned when the 2007 FSMIP project began. The following information is presented to provide a comprehensive description of Food Hub.

INTRODUCTION

Food buyers of every kind—from those at hospitals to sports arenas to corporate campuses to retail grocers to public schools to caterers to fast-food chains to white-tablecloth restaurants—are localizing supply chains to respond to increased consumer demand for local food.

But point of origin, albeit important, is only part of it. Being able to share the rich stories behind our food—the names of the farmers' kids, what led the farm family to switch to organic practices, how they knew when to harvest the cherries for maximum sweetness, which cow took the blue ribbon at the county fair, tall tales from the sea, and which bend in the river provided respite to the native salmon on their annual run back home—provides a crucial competitive advantage to all those who merchandise local food.

FoodHub keeps the story intact as it moves through the food chain.

FoodHub launched in the Pacific Northwest in the Fall of 2009. The system offers sophisticated search and discovery features so that food buyers and food sellers can find one another, and do business. In time, additional features will be added that make it possible for online commerce to take place, but not before regional buyers and sellers have fully vetted FoodHub at its most basic service level.

EXECUTIVE SUMMARY

While the market for local food was once largely the domain of high-end restaurants, larger-volume and institutional purchasers such as public schools, colleges, hospitals, retail grocery stores and many others are now also assigning geographic preference to their key purchase criteria along with long-standing cost, quality, quantity and delivery requirements.

Yet every year more farmers, ranchers and fishermen go out of business, having not found a viable method for promoting and delivering their products to willing buyers. FoodHub is an online directory and marketplace that makes it easy and efficient for buyers and sellers of regional food to find one another and conduct business.

Designed to combat the structural barriers that limit the growth of regional food markets, FoodHub will offer three levels of service when fully realized:

Service Level I (Directory): Buyers and sellers maintain online business profiles, providing details such as contact information, certifications held, products available for purchase, and pick-up, delivery and distribution information, giving both buyers and sellers a direct line of sight to one another.

Service Level II (One-to-One Transactions): Buyers select sellers who meet their requirements for volume, price, insurance coverage, etc. and purchase products directly through FoodHub's shopping cart. Standardized purchase orders and invoices are available and all transactions are one to one.

Service Level III (Aggregated One-to-Many Transactions): Larger and more complicated purchases are fulfilled using logistics coordination and product aggregation at rural and coastal distribution hubs in partnership with third-party trucking and warehouse operators who handle inbound deliveries, cross-dock and order staging. Transactions are one to many so that multiple vendors can bundle products to meet larger orders.

Rather than competing with existing wholesale distributors, FoodHub works in partnership with them. The system hopes to become sustaining by generating revenues from membership and transaction fees as well as advertising. FoodHub will be launched in phases in the Pacific Northwest, with the directory and search features of Service Level I operational by fall 2009 and Service Levels II and III introduced in succession.

FoodHub accommodates food producers and food buyers of every scale and production type. An extensive taxonomy has been developed across all food product categories. Given that there are at least 150,000 buyers and sellers of food in the Pacific Northwest, it is estimated that in five years, FoodHub will generate just under \$1 million in revenue from Service Level I features alone, having captured 5 percent of the total available market by leveraging extensive networks and deep relationships, and focusing on early adopters and those most motivated to buy and sell regional food.

FoodHub is a project of the nonprofit Ecotrust, headquartered in Portland, Oregon, in cooperation with the Oregon Department of Agriculture, Washington Department of Agriculture and other public and private entities. Ecotrust, in addition to numerous other functions serves as the Western Regional Lead Agency for the National Farm to School Network and has been able to leverage relationships and partnerships to launch FoodHub.

FOODHUB IN DETAIL

FoodHub's success will be measured by its ability to increase regional food trade in the regional marketplace.

FoodHub has the following clearly defined objectives:

- Provide food producers, processors and manufacturers with a simple way to provide general information about their businesses, and organize and publish their available products.

- Provide food buyers with a simple way to provide general information about their businesses and to access information about food producers and order products based on specific requirements (e.g. certification, proximity, distribution model and price).
- Provide professional tools for buyers and sellers to form new partnerships.
- Simplify and professionalize the ordering, purchasing and delivery process for buyers and sellers of regional food.
- Support multiple mechanisms for conducting transactions (pick up at farmers' markets, direct delivery, delivery via third-party logistics providers).
- Log traffic patterns, user connections and transactional records for outside analysis.

FoodHub will offer three levels of service:

Service Level I: Directory

Profile page

Both buyers and sellers create detailed online profiles providing basics such as contact information, certifications held, products available for purchase, and delivery and distribution options. All FoodHub members will be encouraged to provide narrative about their business and upload a photo of their choosing. Sellers will provide harvest plans and product availability listings, while buyers will provide a detailed list of products most often purchased and/or currently desired. Member profiles offer buyers and sellers the insight they need to initiate communication and perhaps a new partnership.

Through sophisticated searches, FoodHub provides relevant, qualified data quickly and effortlessly. The casual user may utilize the browse functionality to quickly review profiles based on business type or alphabetically. The more determined user may enter specific search criteria into the search box, which will utilize key words to produce a desired return, or they may search on a basic term, such as apples, and use a faceted search menu to drill down to the specific product desired. Results are delivered in list or map view formats and all search returns can be saved for future use. Buyers and sellers have the same search experience, regardless of user type.

The quality and effectiveness of search results is guaranteed through the implementation of a sophisticated taxonomy and a data collection system that does not allow free-form entry by members. At present, the taxonomy includes over 1,000 items, including:

- Baked Goods
- Beverages
- Condiments, Dressings & Sauces
- Dairy
- Fruit
- Herbs
- Meat (including wild game)
- Nuts
- Poultry
- Seafood
- Vegetables

Each item in the taxonomy is assigned an array of attributes, which includes varieties, certifications, volume available, form and packaging.

The product requests section of FoodHub allows buyers to widely broadcast their need for specific items. This feature was developed with the guidance and insight of institutional purchasers who often plan their menus a year in advance and need to lock in forward contracts through official requests for proposals. The product request feature has been adapted to meet the needs of buyers more generally. A corollary feature allows sellers to list special promotions or sales on specific items through craigslist-type listings.

Service Level I also provides tools to increase market connections, such as a message center facilitating quick connections while online. The message center allows members to add contacts as they browse and immediately send a message or build a contact base for later use. By providing templates for purchase orders, invoices and requests for proposals, FoodHub provides standard business training services and helps professionalize the local food trade (where invoices are far too often scribbled on the sides of produce boxes).

As regional food buyers and sellers continue to develop the local food market, frustrations have routinely been voiced about systemic issues that must be addressed. For example, food buyers who support regional producers often cite concerns about inconsistent quality, while sellers will voice frustration about protracted payment terms. An extensive resource section lays the groundwork for professionalizing and standardizing business practices within the local food marketplace by providing FoodHub members with relevant information about specific sectors (such as the school food market) and tips related to best practices (e.g. how to's regarding product samples), among many other resources.

Each of the features described above addresses common barriers limiting the growth of regional food markets. FoodHub's Service Level I will quickly prove value to its users. Next phases:

Service Level II: One-to-One Transactions

Service Level II moves FoodHub from directory to transactional tool allowing buyers and sellers to search for one another and then conduct a transaction through a secure shopping cart feature. Buyers and sellers conduct their transactions using major credit cards, PayPal or EFT. No FoodHub-supported transportation services are offered; buyers and sellers make their own delivery arrangements. The physical movement of product could take place in myriad ways: pre-order and pick up at farmers' market locations, direct delivery at agreed upon date/time, or arranged through third-party logistics providers. In the last scenario, FoodHub leverages partnerships and relationships with existing wholesale distributors, making it easier for them to meet the evolving needs of their ever more discerning clientele.

Service Level III: Aggregation of Product via One-to-Many Transactions

At Service Level III, larger and more complicated purchases are fulfilled using logistics coordination and product aggregation at rural distribution hubs in partnership with third-party trucking and warehouse operators who handle inbound deliveries, cross-dock and order staging. Transactions are one to many so that multiple producers can bundle products to meet larger orders. At this level of service, FoodHub’s primary added value is the logistical coordination of the supply chain configuration that offers the most optimum solution for the actors involved—from handling scheduling and billing for farmer-owned collaborative transport services (one farmer picking up the product of one or more other farmers), to the bulk lease of pallet slots in cold storage facilities that are in turn leased to FoodHub network producers.

FoodHub Service Levels At a Glance

	I: Directory	II. One-to-One Transactions	III. Aggregation of Product via One-to-Many
Buyer and seller profiles	—	—	—
Harvest plans and menu plans	—	—	—
Sophisticated search functions	—	—	—
Search returns viewed on Google Map	—	—	—
Message center	—	—	—
Self-publishing product requests	—	—	—
Self-publishing product sales	—	—	—
Promotion of delivery and distribution information	—	—	—
Detailed reporting	—	—	—
Best practices and standard business tools	—	—	—
Administrative tools allowing password assistance, reporting, taxonomy augmentation	—	—	—
E-commerce with standardized invoicing		—	—
Enhanced message center		—	—
Inventory tracking		—	—
Logistics coordination			—
Aggregated ordering			—
Customized reports			—
Detailed environmental reports			—

THE COMPETITION AND OUR COMPETITIVE ADVANTAGE

FoodHub seeks to provide services that one might consider the domain of a distributor or broker, yet distributors are key partners in FoodHub's path to success. Northwest regional distributors, such as Organically Grown Company and the Farmer's Own division of Charlie's Produce, as well as larger companies such as SYSCO, provide an important link to buyers and will benefit from gaining access to the storied food products that their customers have been seeking. FoodHub doesn't compete with existing distributors; in fact, success is dependent on mutually beneficial relationships with existing third-party logistics providers.

Market knowledge alone will not guarantee success, but coupled with an exemplary development team and a core user base of forward-thinking agricultural and culinary businesses, it provides FoodHub with a distinct edge in the market.

Strengths of FoodHub infrastructure:

- Years of experience building relationships in the Pacific Northwest.
- Extensive relationships and networks of regional food producers and buyers that can be activated immediately.
- FoodHub has been built in partnership with many other deeply vested partners who share a sense of responsibility for and ownership over FoodHub's success.
- Sophisticated understanding of emerging technologies, and how they can be deployed in service of relationships, not in place of them.
- Transparent business model and operations that address an immediate need by both buyers and sellers for a systemic approach to meeting local food demand.
- A market responsive product; innumerable food buyers and sellers in the Pacific Northwest co-designed FoodHub and provided invaluable feedback throughout the development process.

MARKET SITUATION

Demand for local food is at an all-time high. Consumers are increasingly becoming more concerned about their personal health, their communities and their environment.

Indeed, the data regarding the growing size of the market for local food are clear. Farmers' markets across the U.S. have grown from 1,755 in 1994 to 4,684 in 2008. From the local co-op to national chains, grocery retailers are merchandising and actively promoting locally grown foods.

Hospitals across America have taken the Healthcare without Harm pledge to source sustainably grown items for hospital food service while the National Farm to School Network reports that public school districts in 41 states from Maine to Montana are aggressively pursuing "farm to school" strategies as they attempt to localize school lunchroom offerings.

Regional quick service restaurants and some national restaurant chains are setting local food purchasing goals.

SO WHAT'S THE PROBLEM?

While demand for and interest in local food is at an all-time high, farmers, ranchers and fishermen continue to go out of business, not having found a viable method for accessing and profiting from the burgeoning local food market.

Why?

Growth in regional food markets is constrained by two key factors: (1) lack of knowledge and information about who is buying and selling and (2) distribution bottlenecks that make it difficult for all but the largest-volume producers to access the market with differentiated, storied products. Inefficiencies and discontinuity of information and story pervade the current system at every turn.

Problem #1: Lack of Knowledge and Information

From school food service directors just beginning to seek out local products to seasoned retailers who purchase and merchandize local food for years, motivated buyers lack complete information about who is selling what. The search and discovery process is cumbersome, costly and time consuming. The need for FoodHub is no less acute on the seller side.

Problem #2: Distribution Bottlenecks

Beyond gaps in information, once a match has been made, the challenges associated with getting local food to market are equally vexing. Sellers traditionally have had two options for getting products to market: (1) Sell products as undifferentiated goods into the commodity market at a low price, or (2) Attempt to garner a higher price by differentiating their products.

In the quest to differentiate their products, many food producers increasingly use direct market strategies and deliver products to buyers via their own means of transportation. This is a primary impediment for many retail and institutional customers who cannot afford the extra operational complexity—registered as additional person hours, receiving dock traffic, and additional account management—that attends farmer-direct delivery. Indeed, scaling the farm-direct approach to bring more regionally-produced food into the mainstream marketplace is critical.

For ease and efficiency's sake, many buyers of regional food would prefer to work with their mainline distributors to receive product. Consider however that wholesale buyers typically demand large volumes and product uniformity in order to cater to an end consumer who, until recently, wanted low prices and consistent quality to the exclusion of other attributes. Over time, broad line distributors have created a model that guarantees consistent product availability year-round but doesn't necessarily guarantee widespread availability of regionally grown products or the stories that go with them.

Thus, when food buyers approach their suppliers and request local or regionally sourced products, distributors often come up short. Too often they cannot source the desired products, nor can they verify the origin of the products they do carry; though they do have a warehouse full of high-volume, low-cost products sourced globally from anonymous producers.

Indeed, conventional food distribution makes little room for product differentiation based on context or story. Often a product description and an SKU code are all the information a buyer has to inform their purchasing decision. The opacity of existing supply chains is increasingly viewed as problematic, even unacceptable. The market is demanding a level of supply chain transparency that the existing supply chain is unable to deliver. Buyers don't just want "apples – red delicious."

In stark contrast, FoodHub offers an unparalleled level of supply chain transparency by keeping the story intact while supporting multiple distribution models so that one could buy "apples – red delicious – organic – from Applegate Farms in Hood River" in a wide variety of ways, all based on buyer preference (e.g. pre-ordered and picked up at the farmers' market, delivered direct, loaded onto the SYSCO truck or bundled with products from neighboring farms).

Indeed, personal connection is the ultimate differentiation strategy. Unlike many online marketplaces that emerged—and then failed—in various industries over the past decade, FoodHub seeks to support real human relationships, not replace them. FoodHub embraces the fact that food systems, and particularly local food systems, are built on relationships.

Helping buyers and sellers meet, build trust and make a deal is the core of our business. FoodHub makes it possible to find the needle in the haystack. In fact, it becomes possible to find more than one and to learn the stories of each.

FoodHub offers three standard profile types: buyer, seller and dual buyer/seller for those who both buy and sell.

Buyers

Retail grocers, institutional food buyers, white-tablecloth restaurants, multi-unit quick-service operations, caterers and manufacturers looking for raw ingredients all share a basic business need to localize supply chains. A FoodHub prototype was reviewed with varying types of food buyers throughout the region: retailers, multi-unit restaurants (white-tablecloth restaurants and institutional buyers, including Oregon's largest school district. It was confirmed that FoodHub will streamline procurement practices and create much needed efficiencies for food buyers.

Sellers

FoodHub allows sellers to see and be seen by the region's most motivated food buyers, offering immediate market research and marketing opportunities for farmers, ranchers, dairymen, fishermen, food processors and manufacturers, and wholesale distributors with

product to sell. From the new immigrant farmer with five acres of peaches to the fourth generation hundred-acre integrated livestock and vegetable operation to the coastal family managing a fleet of four boats, FoodHub provides a critical service: easy access to the universe of interested buyers in the region. Raw ingredient suppliers (mint for mint-chocolate-chip ice cream) and producers of fresh fruits, fish, vegetables, bread, meat, cheese or ready-to-serve meals all need a way to easily and efficiently market their goods.

Buyers/Sellers

FoodHub members who play the dual role of buyer and seller get the best of both worlds. For example, a retail and wholesale bakery operation with outlets in Seattle and Portland can use FoodHub both to find raw ingredient vendors and to market finished products at the wholesale level.

Secondary Audiences

FoodHub's value extends to secondary users as well. Distributors who seek to cultivate relationships with producers in order to accommodate market demand will benefit from FoodHub's services and can market themselves as either FoodHub buyers or sellers, or both. Additionally, certification agencies such as Oregon Tilth and Food Alliance, or advocacy organizations such as Gorge Grown Network and Bellingham's Local Food Connections, can all complement their existing marketing and outreach strategies by participating in FoodHub through affiliate profiles and/or inclusion in individual buyer/seller profiles.

SIZE OF THE MARKET

Initially the FoodHub system will target buyers and sellers of regional food in the Pacific Northwest (e.g. Oregon and Washington) Fisheries data includes fishermen in Alaska. The size of FoodHub's total available market is potentially vast.

On the buyer side, conservative estimates suggest there are at least 60,000 food buyers in the Pacific Northwest who could use FoodHub to streamline their local procurement practices. On the seller side, the number of potential FoodHub users is equally large, with roughly 90,000 farmers, ranchers, fishermen and food processors in the Pacific Northwest who could benefit from maintaining FoodHub profiles. By year five, we aim to capture just under 5 percent of the total available market by principally targeting those already engaged in or at the periphery of the local food marketplace.

The local food marketplace in the Pacific Northwest was built first by upscale urban restaurant chefs and family-scale retail grocers working directly with small- to medium-size fruit and vegetable producers. We expect early adoption from these groups, followed quickly by widespread membership across all product categories and buyer types, with ranchers, fishermen, beverage producers, institutional food buyers, food processors and manufacturers all purchasing FoodHub memberships. Early adopters, those who are interested in and committed to buying locally, will be quick to sign up for FoodHub membership, with growth emanating from the core to those just getting started.

	Estimated # in Market	Estimated Dollar Value of Industry
BUYERS		
Restaurants	21,000	\$9.4 billion
Food Service	40,000+	
Retail Grocers	4,500+	
Processors and Manufacturers	1,237	\$12.5 billion
	Estimated # in Market	Estimated Dollar Value of Industry
SELLERS		
Farmers and Ranchers	80,000	\$11.1 billion
Fishermen	4,111	\$2.9 billion
Processors and Manufacturers	1,237	\$12.5 billion
Other (Beverages, Distributors, etc.)	1,200+	\$4.1+ billion

BUYERS

Restaurants

According to the National Restaurant Association, Oregon's 9,000 restaurants generate approximately \$4.7 billion annually while Washington's 12,000 restaurants annually contribute \$9.4 billion to the state economy. The vast majority of these restaurants are single owner-operator establishments with fewer than 50 employees and strong connections to the communities they serve.

Food Service

Food service operators include everything from special event and wedding caterers to corporate food service operators to university dining halls to K-12 school cafeterias to hospitals to prisons to day care facilities to retirement homes to hotels and resorts. Conservative estimates indicate there are no fewer than 40,000 food service operators in the Pacific Northwest.

Hospitals in the Northwest were among the first to take the national Healthcare Without Harm Healthy Eating Pledge, a move that seems prescient given the American Medical Association's recent declaration in support of sustainable food systems. With regard to corporate cafeterias, Bon Appetit Management Company's Farm to Fork program provides a great example of institutional interest in local buying. Bon Appetit Management Company encourages chefs to purchase seasonal product from farms within a 150-mile radius and streamlines payment procedures for Farm to Fork participants. The company operates dining services at fifteen Oregon colleges and corporations and an equal number of locales in Washington.

Caterers in the Northwest are used to demands for local products as discerning residents demand "organic weddings" and "low-impact bar mitzvahs." Northwest K-12 public schools are setting a national example for localizing school food offerings with positions within state government in both Oregon and Washington dedicated to regionalizing

school food supply chains. The Portland Oregon Visitors Association champions the local food sourcing efforts of area hotels, such as the Doubletree, as a key reason for national conventions and trade shows to select Portland as a meeting location.

Even the Portland Multnomah County Food Policy Council passed a recommendation requesting that correctional facilities in Multnomah County source local food for inmates whenever possible. Aramark answered the call by purchasing \$370,000 worth of produce from 16 local farms for the 20,000 daily meals it provides to Oregon correctional-facility inmates. Aramark's Larry Sterba says the company may soon negotiate directly with farmers -- it currently shops through a Portland-based distributor -- and requisition specific crops.

Northwest food service operators, large and small, will undoubtedly be prime users of FoodHub.

Retail Grocers

While the Northwest Grocery Association represents 1,683 member retailers, wholesalers and suppliers in the Northwest, 2,315 computer profiles for grocery stores in Oregon exist online, with likely similar numbers for Washington.

SELLERS

Farmers, Ranchers and Food Processors

2007 USDA census data indicate there are just under 80,000 agricultural entities in Oregon and Washington. The two states show a combined total of \$11.1 billion in farm gate sales. Adjusting the total available market to account only for food products, excluding Christmas trees, for example, results in total farm gate sales of \$6.7 billion.

The Oregon Department of Agriculture estimates that approximately 80 percent of these goods leave the region, with 40 percent being shipped internationally. By this measure, the current regional food market in Oregon and Washington is \$1.34 billion.

However, farm gate sales represent only a fraction of the total food market, as there is a symbiotic relationship between agriculture and the many ancillary business activities it stimulates. Consider, for example, that in 2007, the food-processing sector in WA had 937 establishments and grossed \$9.1 billion, while in Oregon, food processing is the state's third-largest industry, with annual revenues of \$3.4 billion and at least 300 establishments.

Fisheries

The fisheries sector is also an important contributor to the economies of Oregon, Washington, and Alaska. Commercial fish landings totaled 271.1 million pounds in Oregon in 2007, 109.4 million pounds in Washington in 2006, and 3,756 million pounds in Alaska in 2007. The corresponding dollar values for fishermen's earnings were \$96.7 million for Oregon \$65.1 million for Washington and \$1.3 billion for Alaska. In addition, aquaculture and mariculture production contribute further to the economies of these three

states (for example, the harvest value of aquaculture in Washington in 2006 was \$81.1 million).

The high tonnage of fish landed and the data on fishermen's earnings suggest that there may be a large number of fishing operators in Oregon, Washington and Alaska who would be interested in FoodHub. However, data on the exact number of fishing operators is difficult to find. According to the Alaska Commercial Fisheries Entry Commission, in 2007, 9,775 fishermen fished in Alaska and 12,834 permits were fished. (The number of permit holders was 13,908 and the number of vessel licenses was 9,695). In Oregon, a total of 963 vessels with an Oregon home port made deliveries in the state in 2006.

The majority of these operators are small businesses. In 2004, the Pacific State Marine Fisheries Commission reported that 69 percent of fishing vessels in Washington, Oregon and California generated less than \$50,000 in annual revenue. This comprises 2,827 of the estimated 4,111 vessels in the three states. In 2006, there were a total of 963 vessels with an Oregon home port that made deliveries in the state. An estimated 607 of these vessels (63 percent) had annual revenue of less than \$50,000 and these smaller operators would be prime targets for FoodHub.

Wine, Beer and Craft Spirits

While not a direct focus of FoodHub, the wine, beer and craft spirits market in the Pacific Northwest is also vibrant and increasingly tailored to preferences for locally crafted beverages. Washington and Oregon are the second and third largest wine producing regions in the United States. The two-state region boasts more than 1000 wineries and nearly 1200 vineyards. In Oregon, the number of wineries continues to increase, with 25 new businesses coming online in 2008, adding ten percent to the state's total cooperage. Winery sales exceeded \$644 million in 2008. In Oregon, only 21 percent of case sales were in state, while 97 percent of total production was distributed domestically. Craft breweries in Oregon and Washington total approximately 170 with \$3.45 billion in sales. The recent formation of the Oregon Distillers Guild, the first such guild in the country with 16 members, is strong evidence that Oregon is becoming a leader in artisan spirits, too.

As noted earlier, FoodHub will pursue a controlled growth strategy, ensuring that key performance indicators associated with Service Level I have been met before launching Service Levels II and III. A first priority at launch was to develop deep user engagement and learn from the ways in which customers use FoodHub. Rigorous review of user patterns and detailed customer feedback will allow finalizing design plans for Service Levels II and III with the benefit of real customer experience. Once recruitment, commercialization and user experience goals have been met, Service Level II will launch. By “hurrying slowly” the chance for success will be maximized.

To introduce FoodHub in the Pacific Northwest the system was populated with high-profile and respected “Early Adopter” buyers and sellers. Through networking partnerships, thousands of other FoodHub records on farmers, ranchers and buyers will be created, ready for activation; FoodHub “Ambassadors” will receive orientation and training to be able to incorporate FoodHub into day-to-day interactions and shared networks; FoodHub will be introduced at industry meetings, events, through publications, conferences.

FoodHub members will also be encouraged to act as Ambassadors through referral and loyalty programs. In addition, FoodHub personnel will communicate with all members through a monthly newsletter and ongoing blog, which will continually alert users to new postings. Both vehicles provide an opportunity to share tips and tricks for success and drive energy and enthusiasm for FoodHub, as well as solicit feedback on proposed site improvements and promote success stories. Newsletters will be sent to both registered members and businesses with shell profiles, establishing yet another reminder to complete the profile registration process.

It is anticipated that adoption rates will be highest among fruit and vegetable producers and upscale restaurant buyers along with family scale retail grocers, those that have historically been at the vanguard of the local foods movement. Interest in regional food has pervaded the market across all product categories and buyer types, however, thus we expect memberships in all categories to continue at a healthy pace.

At the end of Year 1, it is expected there will be a minimum of 2,000 active members within FoodHub. Given the demonstrated need for FoodHub and the relatively low cost of entry (\$100 per profile), retention rates should be high (80%) from year to year. Registered users are expected to double from Year 1 to Year 2, with a 25% per annum growth rate thereafter.

<i>Service Level I:</i>					
<i>Memberships</i>	Y1	Y2	Y3	Y4	Y5
Buyers - Restaurants	350	700	875	1,094	1,367
Buyers - Food Service	250	500	625	781	977
Buyers - Retail Grocer	50	100	125	156	195
Buyers – Processor / Manufacturer	50	100	125	156	195
Buyers – Other	50	100	125	156	195
Subtotal	750	1,500	1,875	2,344	2,930
Sellers – Farms	700	1,400	1,750	2,188	2,735
Sellers – Fishermen	250	500	625	781	976
Sellers – Ranchers	100	200	250	313	391
Sellers - Processor / Manufacturer	100	200	250	313	391
Sellers – Other	100	200	250	313	391
<i>Subtotal</i>	1,250	2,500	3,125	3,908	4,885
Total:	2000	4000	5000	6252	7815

Development Team: ISITE Design

Building FoodHub required a technologically savvy team. ISITE Design, an interactive agency serving global clients from their home office in Portland, Oregon and satellite offices in Dallas, Texas and Boston, Massachusetts, was selected through an open competitive request for proposal process. ISITE brings industry insight to FoodHub, having worked with organizations such as Farm Aid and Melissa's Produce. ISITE has also amassed deep technological expertise developing enterprise solutions and complex media delivery for clients such as Siemens, MTV, Ringor, MIT and Zip Car.

OVERSIGHT AND GOVERNANCE

Trusting relationships form the backbone of FoodHub. A key component toward building this trust will be transparency of the venture's operation and finances. Traditional distributors and brokers hold information (such as market pricing and supply chain bid procedures and discounts) close and use this confidentiality to their competitive advantage. This buy-low, sell-high model increases profitability for the middle positions while decreasing the financial stability of their suppliers, the farmer, fishermen and other producers. FoodHub plans to counter this strategy by opening up the information flow and allowing market conditions to be seen by all.

FoodHub will pursue creation of a member-driven governance structure to ensure that FoodHub is responsive to, and representative of, member interests and priorities. The Governance Committee will include representatives from all the producer and buyer FoodHub membership categories in both Oregon and Washington, as well as affiliated organizations and trade associations in our Ambassador and Network community. Ecotrust/FoodHub personnel will staff the Governance Committee.

SOCIAL AND PUBLIC BENEFIT OUTCOMES

Environmental Outcomes

North American produce is typically distributed via large-scale centralized distribution. It is not uncommon for food to travel thousands of miles before reaching its destination. Such a system requires tremendous energy and fuel inputs, contributing significantly to greenhouse gas emissions. Studies have shown that conventional distribution systems use up to seventeen times more fuel than a system that relies on local and regional sources of food. Interestingly, the same researchers also found that coordinated regional distribution systems can be up to four times more fuel-efficient than local food systems.

Increasing market opportunities for farmers will also create more economic incentive to keep farmland from being developed, which will bolster existing agricultural land, air and water conservation strategies.

Economic Outcomes

Producers selling into conventional wholesale markets frequently pocket less than ten cents of every food dollar. It is anticipated that FoodHub sellers will receive an estimated 10%-20% increase in revenue over sales to conventional wholesale distribution companies, depending upon the value of goods sold.

Anticipated annual cost savings, as it relates to distribution of food sold through FoodHub, will be most significant once Service Level III is added. Data will vary according to the volume of goods currently delivered directly, but for an average farmer making 30 weekly 350-kilometer round trips to directly deliver one pallet load of produce (40 20-pound boxes), the annual cost savings would be approximately \$7,800 per year, \$4,800 of which would be gained through labor savings, and \$3,000 of which would be gained through avoided fuel costs, as well as depreciation and maintenance costs on their vehicles.

Comparison of estimated annual (30 weeks) environmental and economic costs of ten individual weekly direct deliveries versus equivalent aggregated deliveries through FoodHub.

	Individual Deliveries	FoodHub	Savings
Carbon emitted, kg	28,440	9,926	65%
Energy consumed, kJ	384,000	134,100	65%
Diesel, liters	10,372	3,622	65%
Cost, fuel and depreciation	\$ 29,295.00	\$ 8,370.00	71%
Cost, labor	\$ 36,000.00	\$ 6,000.00	83%
Total Cost	\$ 65,295.00	\$ 14,370.00	78%

Social Outcomes

FoodHub will make local food available in more outlets and, in the long term, more affordable to the middle and lower socio-economic classes that typically cannot afford the current premium prices for local or organic food. By connecting regional producers and wholesale food buyers, more money stays within the local community and the region invests in a more self-contained food system. Also, in a future where transportation and energy costs are likely to increase, a local and “smart” food network like FoodHub is necessary for local food security. **One totally achievable scenario might be that FoodHub aggregates excess product for delivery to regional food banks and/or public schools.**

Impact and Measurement

FoodHub offers excellent opportunities for data collection and analysis. By linking data collection to the day-to-day business transactions of local food commerce, the system will capture a large variety and quantity of data that can be tracked over time and used to measure the impact of FoodHub.

Knowing exactly where food travels allows us to better calculate the ecological impacts of our customers’ transactions. Aggregating this information over several seasons allows us to create indicators of the trends in local purchasing and agriculture. Furthermore, tracking food origins allows us to improve food safety and provides a frontline defense against foodborne illnesses and product recalls like the recent peanut butter and beef recalls. Metrics include: distance food traveled; carbon emissions associated with distribution, and carbon emissions saved; the multiplier effect (the amount of money recirculated within a community that otherwise would have gone elsewhere); amount of local farmland certified to be managed sustainably or transitioning to more sustainable agriculture (e.g. organic or biodynamic).

Sharing the Model

The ability for FoodHub’s service to scale will depend on its success in the Pacific Northwest region and its ability to “walk the talk” in terms of its value propositions and services. By our third year, we expect to have a robust and tested platform ready for licensing to other regions wanting to replicate the successes demonstrated in the Pacific Northwest.

Food Hub’s primary value proposition—a tool that can be used to catalyze change in the current food system—will be appealing to other regions and communities and they are anticipated to be willing to pay for the technical infrastructure needed to make this change a reality.

Organizational Outcomes

The local food sector is still growing. FoodHub is projected grow to an optimized scale and stabilize before the market fully matures. Based on our due diligence to date, we believe the social venture business model upon which FoodHub is based will enable it to operate on a sustained basis without supplemental grant or donor support after three years of operations.

Desired outcomes, our method of measurement and the level of accuracy with which the outcome can be measured.

Desired Outcome	Method of Measurement	Level of Accuracy
<i>Environmental</i>		
Decrease in food miles traveled	Direct estimation	High; estimations based on ZIP+4 granularity
Decrease in energy consumed and carbon emitted	Direct estimation	High; estimation based on ZIP+4 granularity, and truck type
Quantity and proportion of eco-labeled products sold through the platform	Direct measurement	High; based on producers “tagging” product assortment according to certification programs in place
<i>Economic</i>		
Increased levels of local purchasing by buyers	Estimation first year, direct measurement in subsequent years	Moderate to high; first year data will be compared to survey issued at initial login
Price to producers vs. conventional distribution	Direct measurement compared to distributor pricelist for same time period	High
Total number of trades and their magnitude	Direct measurement	High
<i>Social</i>		
New market connections for producers	Estimation first year, direct measurement in subsequent years	Moderate to high; first year data will be compared to survey issued at initial login
Increased levels of local purchasing by buyers	Estimation first year, direct measurement in subsequent years	Moderate to high; first year data will be compared to survey issued at initial login
Quantity of food delivered to food bank or other social benefit entity	Estimation first year, direct measurement in subsequent years	Moderate to high; first year data will be compared to survey issued at initial login
<i>Organizational</i>		
Success of the business model and ability to grow in line with projections	Direct measurement	High
Shared benefits through addition of new network nodes in the region and beyond	Direct measurement against estimated number of affiliated partners	High

TECHNOLOGY

Our challenge is unique. We seek to streamline and make more efficient what has traditionally been a handshake-to-handshake culture where, even at the wholesale level, fruit is squeezed and inspected and samples are offered well before a purchase is made.

FoodHub was designed with this culture in mind. We do not seek to replace human relationships and interactions; rather, we deepen them.

ISITE Design shares Ecotrust's commitment to an open development philosophy. Utilizing open source products for FoodHub not only offers a long-term cost savings, it brings the promise of better quality, higher reliability, more flexibility and the opportunity to collaborate with skilled developers allowing FoodHub to grow with tomorrow's next great idea.

After assessing several potential platform/language combinations, we determined the best technical fit for the project was to build FoodHub on the Open Source LAMP environment (Linux operating system, Apache Web server, MySQL database server and PHP scripting language).

While technically the platform is pretty straight forward, the beauty of the application is in the user experience and database design. The site taxonomy is fully represented within the database, with all products categorized appropriately. This ultimately powers faceted search and will allow for advanced statistical reporting.

Furthermore, since food miles matter to our users, all buyer and seller locations are geo-coded at signup allowing users to do things like search for "organic peppers within 25 miles." Considering the potential use in rural areas on dial-up and mobile devices, we will pre-compute distances between each possible search result nightly to improve site and search performance. Site templates are served up following strict W3C guidelines (including WCAG 1 Level II) to assist with device rendering. Future considerations are being made for potential development of a mobile specific application.

FINANCIAL INFORMATION

FoodHub was developed and created with substantial support and partnerships with public and private groups, foundations and entities with grants ranging in size from \$5,000 to \$90,000.

FoodHub Membership fees	
Individual Buyer or Seller Profile:	\$100 per annum (\$80 for users signing up by December 31, 2009)
Multiple Accounts:	\$100 first user, \$35 for each additional profile
Double Listings (Buyer/Seller):	\$150 per annum

The pro forma statement below calculates estimated revenue and expenses for Service Level I features and services only, with the expectation that revenue and expense projections, as well as capitalization needs, for Service Levels II and III and any potential franchising opportunities will be more fully explored once FoodHub has proven its value in the marketplace.

Year 0 represents development costs prior to launch, while Year 1 starts at launch on October 2009.

REVENUES	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Memberships						
Service Level I - Buyer		75,000	150,000	225,000	281,250	351,563
Service Level I - Seller		125,000	250,000	375,000	468,800	586,040
<i>Memberships Total</i>		200,000	400,000	600,000	750,050	937,603
Advertising Revenue						
<i>craigslist-like listings</i>		15,000	30,000	37,500	46,875	58,594
Grant Income	250,000	275,000	125,000			
Total Revenues	250,000	490,000	555,000	637,500	796,925	996,196

EXPENSES	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Operating Expenses						
<i>Staff and Consultants</i>						
Program Manager	-	73,890	77,585	77,585	77,585	77,585
Taxes and Benefits	-	22,906	24,051	24,051	24,051	24,051
Technical Support	-	17,967	20,000	20,000	20,000	25,000

Servers and IT		1,500	2,000	2,500	3,000	3,500
Total Operating Expenses	-	114,763	121,636	121,636	121,636	126,636
Research and Development						
Contracted Development Manager	35,000					
IT Consultants	135,000					
Site Maintenance/Improvement		25,000	25,000	25,000	25,000	25,000
Total Research and Development	170,000	139,763	146,636	146,636	146,636	151,636
Marketing and Outreach						
Outreach and Development I]	-	42,161	42,161	42,161	42,161	42,161
Outreach and Development II	-	42,161	42,161	42,161	42,161	42,161
Taxes and Benefits	-	26,140	26,140	26,140	26,140	26,140
Customer Acquisition Fee to Partners		10,000	20,000	30,000	37,503	46,880
PR and Design Support		12,000	12,000	15,000	15,000	15,000
Promotional Materials		8,000	12,000	12,000	12,000	12,000
Advertising		5,000	5,000	5,000	5,000	5,000
Conference Sponsorships		7,500	7,500	7,500	12,000	15,000
Meals and Travel		2,500	3,500	3,500	5,000	7,500
Conferences and Meetings		5,000	7,500	7,500	10,000	10,000
Miscellaneous		3,600	3,600	3,600	3,600	3,600
Subtotal	-	164,062	181,562	194,562	210,564	225,442
Administrative and						

Overhead						
Managerial Oversight (D. Kane)	33,512	33,512	33,512	33,512	33,512	33,512
Finance and Accounting Staff	3,185	5,639	15,557	20,557	25,557	30,557
Legal Staff	957	957	957	957	957	957
<i>Taxes and Benefits</i>	11,673	12,434	15,508	17,058	18,608	20,158
Auditing and Tax Preparation Fees	250	500	1,500	2,500	2,500	2,500
Legal Fees	5,000	5,000	10,000	10,000	10,000	10,000
Rent	1,869	4,800	4,800	4,800	4,800	4,800
Office Supplies			-	-	3,600	7,200
Insurance		3,000	12,000	12,000	12,000	12,000
<i>Subtotal</i>	56,447	65,842	93,835	104,985	115,135	125,285
Total Pre-Tax Expenses	226,447	484,430	543,668	567,818	593,970	628,998
Income Before Taxes	23,553	5,570	11,332	69,682	202,955	367,198
Taxes						
Net Income	23,553	5,570	11,332	69,682	202,955	367,198
Profit margin			1%	2%	11%	25%
						37%

The true test of FoodHub's success will come once we've launched. While we have interviewed and interacted with a whole range of potential customers, we may not know the full identity of our customers, or how FoodHub will be used, until we've launched. Quick response to user feedback and the ability to execute system improvements and additional features on demand will be key.

As with so many online ventures, a failure to comprehend trust relationships, or account for the highly social nature of market transactions, can endanger the project. The

successes and failures in the online market space over the last decade are a valuable guide, however. Food Hub seeks to support real human relationships, not replace them. The development of social networking platforms, particularly in the last three years, demonstrates how such networks can be used to bolster and enable relationships.

In addition, we assume that:

- Annual membership fees are reasonable for the service provided.
- The vast majority of participants in the *Guide to Local and Seasonal Products for Oregon and Washington* make the transition to FoodHub, and 10-25% conversion from affiliated groups is reasonable given relationships that will be leveraged in support of FoodHub membership recruitment efforts.
- It is reasonable to charge both buyer and seller a membership fee.
- Food Hub is able to attract appropriate talent and funding.

NEW PRODUCT DEVELOPMENT

ZAC-O-MEGA BARS

The allocated funding for development of new products was used to advance Oregon fruit breakfast bars made by Fairlight Bakery (see below) that are sold to Portland and Seattle public schools. The formula for the filling in the bars was high in water content due to lack of concentration and condensing during the initial cook down process. It was noted by some schools that a mold had developed on the cookie crust of the bars and in order determine how to correct the problem, the food labs in The Food Innovation Center preformed testing on the bars. The bars were tested in an acceleration chamber in order to determine if the fruit filling needed further reduction or evaporation of water to prevent the pre-mature molding of the fruit which carried over to the bars cookie shell.

Background on Fairlight Bakery:

Fairlight Bakery is a Wholesale Production Bakery known throughout the Pacific Northwest for fresh, made from scratch baked goods. While cookies and cookie dough are what gave the bakery its start, it also offers scones, brownies, sugar-free cookies, specialty shortbread and the all-new Zac-O-Mega snack bar, which are targeted to K-12 school lunch programs in Oregon and Washington.

Since 1998 Fairlight Bakery has served hospitals, school districts and universities, catering companies, grocery stores and coffee shops. All of the bakeries items are baked from scratch - without any added preservatives.



The Problem:

All fresh fruits have a naturally high water content. In order to evaporate the water and condense the fruit into a filing, jam, jelly, preserve or dried fruit product the fruit must be reduced, condensed and remaining water evaporated. This can be achieved through reduction in a kettle, evaporation in a condenser or slow drying in a very low oven over a long period of time. Fairlight Bakery has their fruit put into a condenser kettle and the water evaporates through the application of steam heat pumped into a stainless steel kettle. The risk of residual water always exist so each batch must be checked in a food lab in order to determine the amount of residual water remaining.

The procedure for conducting water content test on the four fruit bars made by Fairlight Bakery involved using a controlled shelf life chamber at the Food Innovation Center. Within this control environment the bars were exposed to conditions that resemble the bars in storage and/or on store shelves from one month up to twelve months.

The bars were developed especially to meet the revised health standards for public school food programs in the United States. The nutritional profile per bar:

- 5 grams of fiber
- 6 grams of Protein
- Cholesterol free
- 80% Daily Value of ALA Omega-3 fatty acids

The bars are made from scratch using "Shepherd's Grain Flour," which is a farmer's co-op consisting of Northwest wheat farmers adhering to the standards and methods of "Sustainable Farming" - (www.shepherdsgrain.com). The bars are made with real fruit that is locally grown and processed just for Fairlight Bakery.

Shelf life: 3 months refrigerated and 2 weeks at room temperature

Each test sheet included two to four protocols. The first set was the control with light gauged packaging, gas flush and no preservatives. The second set was the control with metal packaging, gas flush and no preservatives. The third set was with preservatives, metal packaging, and gas flush. The fourth set was with metal packaging, gas flush and preservatives.

The Results

It was proven that the bars did not have suspected high counts of Aerobic Plate Count E. coli / Coliform or Yeast, Mold and Mycotoxins. The problem existed within the packaging. The packaging was not air tight so exterior moisture was able to penetrate the Aluminum wrap and cause the slight molding problem that was problematic to the quality control and overall desirability of the product, especially by school age children.

The bakery moved its facility to a larger space in Vancouver, Washington and has increased their production to meet national requests for their products in stores and the Seattle Public School meal programs. The assistance provided by the funding from the grant led to the company investigating new packaging and making changes in their final sealing of the bars; keeping more diligent records and samples from every batch in order to practice more efficient and traceable record keeping.



Tom Fitzgerald. Owner of Fairlight Bakery analyzing results from the moisture and shelf life tests administered by OSU and ODA.



Production line at Fairlight Bakery



Zach O-Mega Bars Raspberry, ready for shipment from the warehouse.

Fairlight Bakery Zac O Breakfast Bars and Zac-O-Mega Fruit Bars



Peanut Butter and Strawberry Jam Bar



Honey and Oat Strawberry Zac Omega Bar



Honey Oat Apple Pie Zac Omega Bar



OCEAN TOTS

Project Summary:

The primary objective of the project was to create a nutritious, cost-effective, oven-ready seafood product fortified with docosahexaenoic acid (DHA) for school-age children using abundant and underutilized Northwest Seafood (Pink shrimp and Pacific whiting) through a partnership between the FIC, food processors, ingredient suppliers/distributors, and local school systems. The final product was intended to meet Children's Nutrition (CN) label requirements to ensure a specific nutrient contribution towards meal pattern requirements under the current child nutrition programs by the USDA.

FIC staff met with all project participants to create a project vision and project brief. Several prototype formulations for the base product were created. Prototype formulations were made with different coating (batter and breading) systems that are nutritionally and hedonically preferred by children of the target grade group (grades 1-8). The use of omega-3 fatty acid (DHA algae oil) in the seafood base was explored while working closely with the technical support personnel of the DHA oil supplier. Information on regulatory requirements to obtain CN label approval were gathered. In order to ensure the development of an economical food item for school cafeterias, where costs are a significant factor, ingredient costs were confirmed with ingredient suppliers for a primary cost analysis, so future reformulation efforts could be made within accepted price ranges.

A literature review indicated the absence of qualitative studies investigating seafood consumption among young children in the United States (similar studies have been done in Europe). Conducting a survey or focus group research to explore current seafood consumption patterns in children and consumer knowledge, attitudes and perceptions of their parents to seafood consumption may offer benefits to local seafood processors and food service providers.

The product was intended to include seafood found in the waters off of Oregon's Pacific coast. If the product could be commercialized it could potentially provide a boost for the local seafood industry that can use more outlets for abundant and under utilized species such as whiting, black cod and sablefish.

Next steps for the future would include identifying interested schools to test a prototype product, run shelf-life studies and work with processors.



Project Name: Coast to School
Date: December 16, 2008

Product Name: Ocean Tots

Objective: Create a nutritious, cost effective, heat and eat, oven/bake preparation, that meets CN (Children's Nutrition) School Food Service food item requirements, using Northwest Seafood (Salmon, Pink Shrimp, White Fish). Partnering with ingredient suppliers, and manufacturing to establish a plan and product that can be launched through the Farm to Cafeteria program that is operating out of the Oregon Department of Agriculture's ADMD at the Food Innovation Center. Coordinate basic marketing literature, perform in school taste testing to confirm student acceptance, present concept to school food service providers with Farm to School Coordinator. Support manufacturer with technical support. Coordinate partnerships between manufacturer, distributor and school systems.

Partnerships: Food Processor
Hartley's Northwest Seafoods
Phil Schmidt
Chief Executive Officer
350 South Pekin Road
Woodland, Washington 98764
360-225-3900

Ingredient Supplier
Hydroblend Inc.
Geoff Bull
Technical Sales Manager
1801 N Elder Street
Nampa, ID 83687
208-608-4441

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KITCHEN TRAINING SESSIONS

Foodservice Staff Education and Training - A foodservice training program was developed by the FSMIP project manager (a trained chef and former restaurant owner with extensive experience working with local growers and training foodservice staff in a foodservice setting) in cooperation with Oregon School Nutrition Association members, and input from Oregon Department of Education staff. The focus of the workshop was how to include more locally grown and processed products into menus, recipe development, test new or unfamiliar products and receive training from certified culinary instructors.

Why kitchen training sessions for Oregon's K-12 school lunch cooks?

Oregon has over one dozen culinary schools statewide. Some of the schools have advanced culinary kitchens with restaurants, banquet halls and extensive curriculum and two to four year programs. Other schools are located in community colleges, in rural areas and have minimal infrastructure and are usually one year programs. The shorter programs are more focused on training journeyman cooks into the trade and not necessarily training students for executive chef positions in large food service operations. The culinary schools are excellent platforms to hold kitchen training sessions for school food service personnel, focused on continuing education on how school cafeterias can

incorporate more local products into their menus, test new or unfamiliar products and receive training from certified culinary instructors.

Two Day Workshop

A two-day Farm-to-School product training and continuing education workshop was used as a pilot program to explore training/workshop formats and usefulness for future state-wide training sessions. The workshop provided a platform for professionals to work together, bring forth issues, barriers and to explore opportunities to advance K-12 school cafeteria programs.

The sessions were held in Portland in partnership with the Western Culinary Institute (WCI), a Cordon Blue certified school. The Culinary Institute infrastructure provided kitchens, trained chefs, administration, community outreach and access to products made in Oregon for institutional kitchens. (www.wci.edu) The Oregon Department of Agriculture worked in partnership with the Western Culinary Institute, Food Services of America, Sysco Foods, Oregon School Nutrition Association, Oregon Department of Education, Bob's Red Mill, Truitt Brothers and Fairlight Bakery.

The two-day training session targeted school food service administrators and kitchen managers. The sessions provided information about Oregon products available to Oregon schools and provided continuing education on the use of processed and raw ingredients in K-12 school kitchens.

The kitchen sessions took place March 11-12, 2009, just prior to the annual Oregon School Nutrition Conference in March 2009. The timing was intended to leverage targeted food service managers already scheduled (and budgeted for) to travel and attend their annual conference on the Oregon coast.

E-mail invitations were sent out to 200 directors state-wide with communication assistance from the Oregon School Nutrition Association. Session capacity was limited to 30 participants because of kitchen size and staffing availability at WCI. The 30 attending participants were competent school cafeteria cooks and district managers. They all exhibited a curiosity to expand their repertoire of Oregon foods in their school kitchens and experiment with products with which they were not familiar.

The sessions began with a Pacific Northwest product seminar presented by Food Services of America and Sysco Food Services. Fresh and processed products from the Pacific Northwest were examined, tested, tasted and then eventually used for the kitchen training sessions. This workshop specifically showcased Pacific Northwest processed products available and covered pricing, distribution and use of the products in preparation suitable to school food service menus.

The Oregon based products in the training included Fairlight Bakery Zac-O-Mega Bars, Bob's Red Mill polenta, non-gluten pizza dough mix, granola and all-purpose flour for gluten-based pizza dough, and Truitt Brothers' vegetarian chili using Oregon beans.

Other fresh and frozen Oregon produce included beets, potatoes, leeks, onions, spinach and berries from Norpac in the Willamette Valley.

The two day seminar included two five hour sessions in the Western Culinary Institute teaching kitchens, focused on incorporating processed and fresh product together with some scratch cooking. Recipe testing, use of Oregon products, use of state-of-the-art equipment, and free time to create new recipes was also part of the curriculum. (See recipes and photos from the seminar, attached.)



Food representatives and chefs from Sysco Foods discussing local purchasing options with school district buyers.



Experimenting with Bob's Red Mill Pizza Dough. Making pizzas from scratch with tomato sauce and frozen Oregon vegetable filling.



School food service managers experimenting with Bob's Red Mill polenta sticks and pizza dough.

The final day included desserts (such as a strawberry and apricot tart), calzone, green salad and roasted Oregon Yukon Gold potatoes.





Non-gluten bread sticks with Truitt Brothers vegetarian chili in bowl and commodity turkey in meatball form, ready to be baked.



Chef Jim Rowan from Astoria Oregon School District looks on as WCI instructor Paul Folkestad leads demonstration.

Conclusions and Feedback:

The training session was successful and provided insight into how other Cordon Blue Schools nationwide and any culinary program can assist with incorporating local product and farm-to-school options and continuing education for school food services administrators.

Culinary schools are excellent venues for these types of programs as they are fully equipped, have teaching staff, ability to receive product, provide tested recipes and recruit community support. Many of the schools are accredited and are interested in promoting their culinary programs by exposing potential students to the programming.

The key components to organizing training sessions such as this pilot program involve the following:

Contact a culinary school that wants to support a one or two day program in their kitchen and assist with curriculum development.

Locate a lead school food service manager from a district that can assist with contacting participants, choosing recipes that fit the national standards for child nutrition programs and assist with organizing the group.

Locate products that are produced in the region and that may not be as known or readily available to school district buyers.

Get major food service food distributors to participate, donate product, have a sales representative attend and offer product updates and cuttings (side by side comparisons), tastings and pricing information.

If video equipment is available, tape the sessions for continuing education and analysis.

Attempt to document the format and develop a template that applies to the state's products and work to develop recipes around the products or offer direct links to where those products can be located.

Each participant filled out an evaluation form after the workshop:

Did you find the kitchen sessions helpful?

All 30 participants responded yes and wanted to see programs such as this one continue.

What information would you have liked to have covered that was not?

More information on where to locate new products and more recipes that match up to the National Schools Lunch Nutritional Standards.

More recipes that included fruits and vegetables and recipes that incorporated commodity products.

Do you think this type of training could be formatted and used in conjunction with other culinary schools and school food service administrators?

All 30 participants responded yes.

Will you apply any of the examples of recipes covered in this session into your school kitchens?

All 30 participants answered yes. However participants from larger school Districts (over 1000 students) commented that many of the scratch cooking recipes would not translate into their kitchens, as time and labor would not allow for the more extensive preparation.

If “yes” to the question above, which recipes and why?

The most popular items were the Truitt Brothers’ Chili, Bob’s Red Mill flour and non-gluten based products, roasted potatoes, roasted beets and commodity turkey meatballs. (See photos)

Bob’s Red Mill polenta sticks

Pizza dough from scratch using Bob’s Organic Red Mill Flour

Truitt Brothers Vegetarian Chili with commodity ground turkey added

Ground Turkey Meatballs with quinoa

Roasted Beets (see video)

Baked Oregon apples with cinnamon and apple cider

What would have you like to see more of in these sessions?

Some commented that this type of training would be excellent at regional and national conferences.

Include farmers from the region as part of the training.

Include more breakfast items.

Include more recipes that incorporate commodity products.

Will this training sessions prompt you to seek out more Oregon products for your school cafeterias and/or implement more from scratch recipes in your kitchens?

All 30 participants responded yes.

Participants found the trainings beneficial for numerous reasons including the opportunity to have hands on in-depth discussions in a kitchen setting with colleagues about food, menus, recipes and product options.

The participants wanted more recipes that fit the national school nutrition and lunch plan guidelines.

A commonly held misconceptions is that school food service personnel in the K-12 kitchens do not have the cooking skills necessary or the time in a working day to incorporate scratch cooking programs. The 30 pilot program participants dispelled that

misconception, as all were well trained in basic kitchen skills. The post session comments noted that lack of time and cost of raw product is more of an issue than lack of skills or equipment.

Continuing education is important for this underserved sector of workers. The school food market is not always considered an industry platform that adapts to new standards, recipes or ingredients. This workshop was intended to display new local products and show ways in which to use them in conjunction with approved child nutrition standards. Child nutrition standards can be re-authorized or changed every five years. The state financial support for school breakfast and lunch programs may increase over time, offering some discretionary food purchases to include more local and regional choices.

Producers of local products struggle with school price point limitations that must be in line with enforced budgets. Therefore incentives to explore the school market exclusively are not enticing, but when other institutions and hospitals are included as target customers, the markets expands and makes innovations and development of specialized product a stronger possibility.

RECIPES

Examples of recipes used for the trainings:

(Bobbi Phillips, Food Service Administrator for the Springfield School District, provided the recipes.)

FROZEN VEGETABLES

APPROXIMATE COOKING TIME IN MINUTES AT 350 degrees F

3 to 5	spinach
6 to 8	corn
8 to 12	green peas
5 to 10	squash
10 to 12	broccoli, green beans, cauliflower
10 to 15	carrots, mixed vegetables, lima beans, Brussels sprouts

10 lbs edible portion diced, chopped, cleaned frozen

Vegetable (broccoli, Brussels sprouts, cauliflower, carrots, corn, green beans, peas, mixed vegetables, lima beans, spinach, squash)

1. Frozen vegetables should not be thawed prior to cooking. Just break them-up in order to pan.
2. Add prepared frozen vegetables to line pans and cover with a minimal amount of water. Prepare in batches of no more than 10 pounds per batch so as to minimize warm holding times.
The less water used, the better the nutrient retention, so use as little water as possible in order to steam vegetables in covered line pan.
3. Spread vegetables in line pan.
4. Lightly sprinkle with 1-3 qts of water, as above, then tightly seal pan edges with foil.
5. Cook approximately, as chart below in order to heat through, only long enough to bring to 160 degrees F.
6. Minimize cooked vegetable holding times to retain nutritional quality and texture.
7. Heat all vegetables just to temperature, attempting to retain their brightest color throughout service.

Roasted Beets (As seen in video)

12 to 15 pounds fresh, in-season beets.

Preheat oven to 400 F.

Trim off beet tops, leaving 1 inch of stem.

Scrub beets to remove dirt. Put beets on a baking pan in a single layer.

Roast until tender, approximately 1 hour. (this is a bit like baking a potato in the oven)

Remove beets from oven.

Cool 30 minutes in refrigerator or overnight.
Cut off top and root end.
Peel eyes out of beets and the majority of rough skin. No need to peel completely.
Cut large beets in half or quarters, to obtain uniform sizes and pieces.
Place in line-pans and re-heat prior to serving.
Serve as a hot vegetable selection, 1/2 cup each serving.

Squash Sticks

23 pounds of butternut squash
1 Tablespoon salt
Cooking spray or vegetable oil

Use a sharp knife or peeler to carefully trim away the peel from the squash.
Cut the squash into sticks like french fries.
Lightly spray baking sheet with cooking spray.
Arrange squash pieces on baking sheet and season lightly with salt.
Bake in preheated oven at 425 degrees F oven for 10 minutes.
Toss the squash sticks lightly when they are starting to brown and are crispy.
Bake an additional 10 minutes until brown on the outside and tender on the inside.
Serve as a one-cup serving as for a vegetable

Frozen Fruit Muffins

3 cups water
2 cups old-fashioned oatmeal
1/3 cup vanilla extract

Measure then mix these three ingredients into a large mixing bowl and let sit at room temperature approximately 30 minutes. Once the oatmeal has softened slightly, add the following:

2 cups non-fat dry milk powder
8 cups (about 1 large box) Bobs Red Mill basic muffin mix
2 cups Oregon fruit puree – pumpkin or banana or applesauce.

OPTIONAL:

2 Tablespoons spice pumpkin pie spice for pumpkin muffins
OR cinnamon for applesauce muffins.
1 cup (14 oz) mix-ins: raisins, craisins.

Measure non-fat dry milk, muffin mix, spices and dried fruit into soften oatmeal.

Do not over-mix. Do not use mixer – muffins turn-out better if just lightly mixed by hand.

Using a heaping 1 cup, measure, fill greased (cooking spray) muffin tins _ full.

Bake at 350 degrees for about 12 to 14 minutes until just lightly golden.
Makes 50 muffins

Basic Pizza Dough

4 cups White Flour, Unbleached
1 Tb Yeast, Active Dry
1-1/3 cups Warm Water (105 - 115 degrees F)
2-3 Tb Olive Oil
1 tsp Sea Salt

In a large mixing bowl stir yeast into warm water, add olive oil; set aside.

Sift flour and salt gradually into the bowl of yeast water until the dough is stiff. Let dough rest for about 10-15 minutes. Sprinkle the remaining flour onto a dry work surface. Knead dough for 10 minutes. Cover dough with a damp towel and let rise for 2 hours.

Oil two 14" pizza pans. Sprinkle the pans with a little corn meal; set aside.

Punch dough down and roll out into two thin or one thick dough round. Pinch and pull dough to fill pan(s). Prick dough in about 6 places with a toothpick. Brush crust lightly with olive oil. Spread sauce and your favorite toppings.

Preheat oven to 450°F and bake for 15-25 minutes.

Makes two 14" pizza round or one 18" pizza round.

Pizza Crust and or Bread Sticks - Gluten Free

Adapted from Special Diet Solutions by Carol Fenster, PhD.

1 Tbsp. Yeast, Active Dry
2/3 cup Gluten Free Garbanzo and Fava Flour
1/2 cup Tapioca Flour
2 Tbsp. Milk Powder (Non-Fat Dry)
2 tsp. Xanthan Gum
1/2 tsp. Salt
1 tsp. Gelatin powder, unflavored
1 tsp. Italian Herb Seasoning
2/3 cup Warm Water (105°)
1/2 tsp. Sugar
1 tsp. Olive Oil
1 tsp. Cider Vinegar
Cooking Spray

Preheat oven to 425°F.

In medium mixer bowl blend the yeast, flours, dry milk powder, xanthan gum, salt, gelatin powder, and Italian herb seasoning on low speed using regular beaters. Add warm water, sugar, olive oil and vinegar. Beat on high for 3 minutes. Add water if the dough is too stiff. The dough will resemble soft bread dough. Put mixture into 12 inch pizza pan that has been coated with cooking spray. Sprinkle extra flour onto the dough, then press the dough into the pan. Bake the crust for 10 minutes. Remove from oven, top with your favorite sauce and toppings. Bake for another 20-25 minutes.

*If dough becomes too sticky, use oil or water on your hands to help work the dough.