

Detroit Community Foods

Business Plan and Final Report

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Detroit Community Foods

Small Business Innovation Project Business Plan

Prepared By: Christine Holmes, Sean Kammer, Derwin Munroe, Martha Potere and Karen Zarowny

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COMPANY DESCRIPTION

Detroit Community Foods is based on a special story. After hearing that Detroit Public Schools purchased Michigan-grown apples for their school lunch programs, but had to send them to an Indiana facility to be processed into standard portion sizes, our group decided to explore the viability of a fresh-cut food processing facility here in the Motor City. We envision a business under a cooperative structure in which farmers could purchase an ownership interest and bring their produce to be processed and packaged, as close to fresh as possible while still meeting required USDA and FDA standards. We analyzed the co-op structure, and realized that the more buy-in we had from our suppliers, the more robust our company's portfolio and distribution capabilities would be. We also wanted to ensure that neighborhood residents were a part of the action, so our operating plan includes job training for high school students. In short, we decided to pursue an economic development project to keep local food truly local.

The mission of Detroit Community Foods is to connect Michigan farmers with local markets for fresh cut produce. This includes a facility where fresh produce can be washed, cut and packaged by neighborhood residents. We would be the first produce processing/packaging business in Detroit using a cooperative structure and to exclusively source Michigan produce, thereby differentiating our company from the competition. We aim for equity with our cooperative ownership structure and local training and hiring practices. You will find us in our Detroit location every Monday – Friday, from 7am – 4pm. We will call Southwest Detroit our home, primarily to take advantage of the shipping and receiving activities happening at the Detroit Produce Terminal, located on 7201 W Fort St., and also to integrate ourselves into one of the City's most vibrant neighborhoods. The residents of Southwest Detroit already have a

passion for food and entrepreneurship, evidenced by their fantastic collection of grocery stores and entrepreneurial food production facilities.

INDUSTRY ANALYSIS – MICHIGAN AGRICULTURE

DCF will be able to draw on the regional and state supply of vegetables, based on its proximity to the Eastern Market, one of the two terminal markets for Michigan agriculture. Michigan's food and agriculture system is a large part of the whole state economy. It accounts for \$91.4 billion in total economic activity (direct, indirect and induced activity in agriculture, food processing and manufacturing and wholesaling, retail and food service and ethanol). The impact of the food processing and manufacturing sector is \$24.5 billion in 2010, with most of the value added coming from food processing and wholesale and retail markets (Knudson and Peterson 2012). Vegetable production generated \$462 billion in cash receipts (or 11.5%) of the total value of agricultural production in the state in 2010 (USDA 2011). There were 2,558 farms producing vegetables harvested for the fresh market in 2007 (USDA 2007). Much of this production was small scale (the average farm selling to the fresh market was 26 acres), while vegetables harvested for processing came from a smaller number of much larger farms (farms had an average of 181 acres) (USDA 2007: Table 30). DCF will thus be established in a location and in a state that provides advantages for obtaining adequate supplies of vegetable produce for processing.

There is evidence that farmers want more access to better processing opportunities of the kind to be offered by DCF, but are anxious about the challenges of marketing to institutional buyers. Matts and Fisher (2013) surveyed 300 farmers across the state and found that institutional buyers were not a significant source of farm income: over 75% of the farmers reported that they sold \$5,000 or less to institutions in 2011, indicating that these institutional

markets are generally not a significant source of total farm income. Eighty percent of these farmers also sold produce at farmers markets, and 61% of also sold their fresh market vegetables through a farm store/stand. Selling to institutional markets was seen as desirable by over 77% of farmers in the survey, but they also acknowledged significant challenges. Packaging requirements, demands by buyers for product consistency, and demanding delivery requirements meant that most farmers (60%) felt that they did not have the capacity to meet the needs of this kind of buyer.

Influences on Selling to Institutional Markets

Motivators for Selling to Institutions	%	Concerns about selling to institutions	%	Challenges for selling to institutions	%
Supplying healthy foods to customers	77	Timely payments	69	Packaging requirements	61
Fair, steady prices	77	Prices too low	65	(Product) consistency requirement	60
Supplying local foods to customers	76	Regular communication needed with customers	61	Delivery Requirement	59

Source: Matts and Fisher 2013

Farmers were also concerned about obtaining fair prices (89%), reliable payments (87%), and the market value of local food and farming (80%), and these considerations influence in farmers' selection of markets. New national legislation governing production standards in agriculture may also have the effect of making it more difficult for farmers to engage in direct sales (Darnton 2013, Junior 2013). All of these factors create a better opportunity for DCF to 'capture' a larger share of the state's vegetable production.

DCF will be able to offer member-farmers (as well as others who sell their produce to the company) some guarantees that they will be able to expand production and increase sales without a significant investment in the facilities or marketing capabilities necessary to engage with larger institutional buyers. Smaller farmers would obtain particular benefit by being able to delegate

packaging, production standards and delivery problems to DCF while expanding their own production to satisfy the increasing demand from the firm.

One important challenge facing DCF is the overall structure of vegetable production at the state level. A significant amount of land is devoted to vegetable production, but most of the land and production is devoted to a few commodities that are tied to large scale commercial food processing (snap beans, cucumbers and tomatoes); a considerably bigger total acreage is devoted to a greater range of fresh market vegetables, but the volume of production is significantly smaller and less consistent (USDA 2011 ‘Vegetable Production in Michigan 2010’).

Small farmers generally make decisions about what and when and how much to plant based on long run expectations about sales and the distribution of produce to a range of markets: small farmers may have a choice of making direct sales at farm stores/farm stands, sales in farmers markets, or to community supported agriculture’ arrangements (Adair 2013). Larger farm operations may also rely on sales under contract to food processors.

This means that DCF will need to provide profits or incentives for farmers to a) make medium term (1-2 years) production/planting decisions with DCF in mind as the preferred outlet, and b) within a season and over years DCF would need to coordinate participating farmers so that harvesting and the type and volume of produce matches the orders as they are received from institutional buyers. DCF may be able to overcome short-term gaps in supply with purchases on the regional ‘spot’ market for vegetables, but would need to coordinate farm production over the long run so as to guarantee consistent supply and the fulfillment of orders.

Vegetable Production in Michigan, 2010

Item	Harvested	Production
Fresh Market	acres	1000 cwt
Asparagus	10,500	168
Beans, snap	3,200	144
Cabbage	3,000	840
Carrots	1,900	475
Celery	1,900	1,000
Corn, sweet	9,400	940
Cucumbers	4,300	903
Onions	4,000	880
Peppers, bell	1,600	368
Pumpkins	6,800	952
Squash	6,600	1,320
Tomatoes	2,000	400
Processing		
Beans, Snap	14,800	58,910
Cucumbers	31,000	198,400
Tomatoes	3,500	115,500

Source: USDA 2011

DCF will be able to provide an additional market for farmers in this segment of the overall Michigan production system, and allow farmers to expand their production alongside their other commitments to production for large scale processing firms.

The expansion of urban agriculture in Detroit also offers the opportunity for DCF to tap into and coordinate an expansion of production within the city. The overall size of this effort is unclear, and various estimates of the number of farms and of their total output exist. In 2012, residents were responsible for creating and maintaining 1,416 vegetable gardens in the city. There were 200 community gardens in the Brightmoor neighborhood, one of the poorest in the city (Carey 2013). Greening of Detroit's Garden Resources Program Collaborative reported that in 2010 it had engaged more than 5000 adults and 10,000 youth in more than 1,200 vegetable gardens, producing more than 160 tons of food. Some urban farming operations are already increasing in scale. D-Town Farm has been in operation for six years and recently acquired a 10-

year lease from the City of Detroit: the farm has expanded from 2-acres to a 6-acre plot growing chemical-free, organic vegetables. There are 70+ crop varieties reported in production Detroit urban farms, and 313 Wayne County farms sold \$2 million in vegetables in 2010.

There are clear economic benefits for the city if urban agriculture can be encouraged, as employment, sales and the matching of food needs to supply can be partially addressed by this initiative. The legal and policy environment could be modified to facilitate urban agriculture in Detroit (Mogk et al 2010). An expansion of urban agriculture could play an important role in food provisioning in Detroit: Colasanti and Hamm (2010) argue that if high-yield, bio-intensive growing methods were used, 31% of the seasonally available vegetables and 17% of fruits, that are currently consumed by 900,000 people could be supplied on less than 300 acres.

DCF is poised to take advantage of any expansion of supply from the Detroit/Wayne urban agricultural complex as it emerges, but an increase in urban supply could be absorbed by direct local consumption. Although there is a significant difference in scale between Detroit and the larger metropolitan area, there is a basic similarity in the composition of the basic foods consumed at home. Based on data from the 2005 Consumer Expenditure Survey, Shuman (2010: Table 3) estimated that about 16% of household food expenditure by people in Detroit and in the five metro counties goes to fruits and vegetables, with the largest share of this spent on fresh as opposed to processed fruits and vegetables. A slightly larger share of household food expenditures is also spent on food at home in Detroit (compare to spending on food away from home and alcoholic beverages), and this adds further evidence to the claim that there is a significant market for fresh vegetables and fruit in the Detroit area.

Table 3: Food Expenditures in Five County Region and Detroit in 2005

	5-County Region	% of food at home	Detroit	% of food at home
ALL FOOD	\$10,799,657,991 (100%)		\$1,528,685,112 (100%)	
FOOD AT HOME	\$5,922,220,561 (54.8%)		\$881,730,217 (57.67%)	
Cereal & Bakery Products	\$798,373,127	13.48	\$119,339,752	13.53
Meats, Poultry, Fish, Eggs	\$1,368,708,305	23.11	\$206,785,301	23.45
Dairy Products	\$678,429,920	11.45	\$101,207,570	11.47
Fruits & Vegetables	\$992,395,752	16.75	\$146,631,052	16.62
•Fresh Fruits	\$327,978,625		\$47,861,316	
•Fresh Vegetables	\$315,248,272		\$46,220,116	
•Processed Fruits	\$189,935,894		\$28,306,172	
•Processed Vegetables	\$158,604,515		\$24,209,150	
Other Food at Home	\$2,083,645,882	35.18	\$307,614,722	34.88
FOOD AWAY FROM HOME	\$4,877,007,669 (45.1%)		\$646,914,933 (42.31%)	
ALCOHOLIC BEVERAGES	\$787,175,707 (7.2%)		\$104,777,798 (6.85%)	

Note: Five County region: Wayne, Washtenaw, Macomb, Monroe, Oakland

Source: adapted from Shuman 2010

There is a real opportunity for DCF to utilize local fresh produce and to play a role in integrating traditional and urban agriculture activities in the state. In the short run, however, DCF will need to identify a wide range of sources of supply from among Michigan farmers.

To do this, DCF will be able to draw on the efforts by state level organizations to develop ‘food hubs’. MSU Center for Regional Food Systems has partnered with MDARD to integrate food hubs and regional food commerce: there are already five locations across state, and there are efforts being made to coordinate farmers to match local production with demand, and more funds being made available to finance the aggregation of agricultural produce (Darnton 2013). DCF will also be able to overcome the coordination problem that potentially exists by drawing on the organizational help of a network of regional food hub consultants that has recently been created to provide assistance to farmers and small businesses engaged in aggregation and small scale processing (Junior 2013).

MARKET ANALYSIS

Detroit public and private institutions represent a large potential market for fresh cut produce sold in bulk. One need only think back on their own school lunch experience to remember packets of baby carrots, for example, as the mandated serving of vegetables provided by public schools. For this reason, our primary market clearly includes Detroit Public Schools. Their most recent enrollment figure stands at 51,674 and their free lunch enrollment is 100% in several schools across the City. This means that the majority of school children are provided with a hot lunch every day. Another component of our primary market includes care facilities throughout the City and the region. There are an estimated 149 nursing homes within the southeastern Michigan region, and at an average of 150 beds per facility, we have concluded that 22,500 seniors represents a strong potential market for healthy, fresh-cut produce. Additionally, the hospitals within Detroit (including the Henry Ford Hospital branch located on Grand Boulevard and the Detroit Medical Center’s Receiving Hospital) have a combined total of 617 beds. We could easily tap into these numbers as major sources for our primary market. Our

secondary market includes student cafeterias at Wayne State University, College for Creative Studies and corporate cafeterias of large companies such as General Motors, Blue Cross/Blue Shield and Quicken Loans. Recent trends show that consumers are increasingly choosing the local food movement over conventional produce options, and that organizations (such as schools, corporations, etc.) have also begun to embrace this shift. We believe that with the right marketing, we can convince institutional food buyers to spend their dollars on the local economy and purchase their packaged, fresh-cut produce from Detroit Community Foods.

To determine potential sales figures, we performed a small case study using peeled baby carrots as an example. The average serving size (as determined by the Food and Drug Administration) is .25lb, or 4 oz. The price of a 1 lb. bag was quoted at \$1.34 in the United States Department of Agriculture's Fruit and Vegetable Retail Report from April 19th, 2013. This would make a 4oz. bag \$.36 in price. Given the statistics listed above for our primary market, we have an estimated 74,791 individuals. If, for example, we could provide one bag of peeled baby carrots to each individual in our primary market, we would take in \$26,925 per day in revenue. Based on data taken from the Southeast Michigan Council of Governments (SEMCOG) and the Michigan Economic Development Corporation, the annual growth rate in the state is estimated to be .0008 between 2012 to 2013. While this may seem quite modest, the figure does not consider the impact of the Baby Boomers on our primary market involving health care facilities and retirement homes. We feel strongly that our markets will expand, and that our product will perhaps eventually receive some shelf space in the produce section of local supermarkets throughout the southeastern Michigan region.

CUSTOMERS

We believe the demand for minimally processed produce to institutional customers in the Detroit metro area is sufficient to create a profitable company. Institutions understand that purchasing local food products provides their customers with high quality, nutritious meals while supporting local farmers, food producers and processors, and helping the Michigan economy as a whole. By positioning our business in Detroit, we can capitalize on opportunities with local institutions that have been actively involved in the local food movement and vested in Detroit's economic development successes.

The budget and operational realities facing institutional food buyers results in widespread reliance on food distribution companies for convenience and cost savings. While these institutions would ideally like to buy produce directly from farmers, they lack the budget to retain large kitchen staffs to prepare product and do not have the storage capacity to maintain unprocessed produce. DCF plans to fill the gap between the institutions' desire to utilize more local food and the necessity for the use of minimally processed food. The following represents a description of the purchasing drivers for our primary markets.

K-12 Schools

A 2004 statewide survey of 383 Michigan school food service directors showed that 73% of these directors were interested in purchasing food directly from local farmers. That figure increased to 83% if the product was made available through existing suppliers (Michigan Good Food Report). Requirements for selling to K-12 schools vary by district and most schools have tight food purchasing budgets, so pricing must be competitive.

Federal and state policy initiatives have contributed to increased school purchases of local foods. The USDA Food and Nutrition Services, which regulates federally funded school

food purchasing, previously restricted schools from including a geographic preference in food purchase bids. This restriction was lifted in 2008 in order to encourage the purchase of unprocessed food products. However, schools often did not have the financial and human resources to convert unprocessed foods, which prevented them from purchasing local produce. The USDA subsequently re-defined “unprocessed” to include minimally processed, ready-to-eat foods. Additionally, in 2012, the USDA launched a “Fresh Produce Pilot Program” in Michigan and Florida with the goal of allowing schools to develop programs directed toward purchasing fresh, local produce. As stated by the USDA, “this program is relevant to the needs expressed by schools and other stakeholders to allow for greater use of locally-grown foods in school meal programs using entitlement funds.”

In the state of Michigan, school nutrition guidelines were adjusted in 2010 to require more fresh fruits and vegetables on school menus. State policy initiatives such as Healthy Kids Healthy Michigan also promote programs to offer fresh, nutritious food in schools. However, the most active advocates for connecting schools with local produce are non-profit and educational collaboratives such as the Michigan State University Center for Regional Food Systems. That organization runs the Michigan Farm to School initiative, a platform for sharing ideas, tools, and resources to support efforts to link schools with local agriculture in Michigan.

The Detroit Public Schools are beneficiaries of these federal and state grants and initiatives and have incorporated an increased amount of produce into the menu. Through the USDA, DPS receives funds of \$50 - \$75 per student each school year to spend on fresh fruits and vegetables, which are often served in snack-sized pre-packaged portions. As a result of this program, combined with farm-to-school initiatives, we consider DPS a main customer opportunity for our company.

Hospitals, Nursing Homes and Other Healthcare Facilities

The food requirements of hospitals and other healthcare facilities are not limited to their patient meals. Large hospitals also provide food to visitors and employees through cafeterias, cafes and convenience stores. Healthcare facilities have a responsibility to be models of health and well-being for their patients, employees and the communities in which they operate. The purchase of fresher, more flavorful, and more nutritious local foods is integral to this responsibility. Hospitals are also economic development engines in places like Detroit, where “eds and meds” are an important part of the central city’s economy. As community leaders in the economic development arena, they often have programs related to local workforce development and purchasing local products, including food.

Henry Ford Hospital, DMC, St. John’s Providence and Beaumont Hospital are all purchasers of local food. While the total and local food purchase figures are not available, a 2010 Detroit News article stated that St. John Providence Health System buys more than \$1.5 million in produce each year from local farmers. Increasing local Michigan food products in the hospital food supply chain is also a priority of a major healthcare industry advocacy group. The Michigan Healthcare and Hospital Association, an advocacy group for Michigan’s community hospitals, has listed as one of its goals to “Increase quantity of Michigan products offered by food distributors and improve local, sustainable labeling by major and local food distributors.” To accomplish this goal, they have developed relationships with the major Michigan and regional foodservice vendors. As a result of individual hospital and industry association initiatives, we believe the healthcare segment represents considerable market potential for a company like DCF.

Barriers

The primary challenge when selling to institutions is that most of them purchase products through food distribution companies, due to the convenience and cost savings of having one primary contractor. However, food distributors also have to be sensitive to their customer's needs, and many of the large distributors, such as Sysco and Avi Foodsystems, have begun procurement programs for local products at the request of their customers. As a result, DCF will need to develop relationships with foodservice vendors in addition to the relationships with the end customer. To do this, we will need the support of the community advocates such as the aforementioned MSU Center for Regional Food System and the Michigan Healthcare and Hospital Association.

COMPETITION

We did not find evidence of any other food processors in Detroit or in Michigan that specialize in Michigan grown produce, nor did we find any that were structured as a cooperative. There are some small distribution companies that focus on Michigan-only foods. One such company, Cherry Capital Foods located in Traverse City, helps its customers (mostly restaurants) find sources for specific Michigan food products. Its primary target market is St. Ignace – Mt. Pleasant – Grand Rapids, although it does make weekly deliveries to the Detroit/Ann Arbor area. This company has partnerships with local North and West Michigan farmers, but these farmers do not have an ownership interest in the company.

Detroit is home to at least two large fresh-cut food processing companies, Riggio Distribution and Pellerito Foods. Riggio Distribution, which operates under the Aunt Mid's brand name, is a produce wholesaler, processor and distributor. The company has 50,000 square feet of wholesaling space on the Detroit Produce Terminal and a 100,000 square foot packaging

facility less than a mile away from the produce terminal. Riggio services retail and foodservice customers within an approximate 400 mile radius around Detroit, including Canada. Pellerito Foods is a processor and distributor of fresh-cut vegetables including potatoes, celery, carrots and lettuce. The company is based in the Eastern Market area, and services customers within a 100 mile radius. The company is currently expanding, expecting to add 50,000 SF of production space by the end of this year. Pellerito sells to prepared food manufacturers, soup companies, and national wholesale distributors, and also provides custom-cut produce for retail sale.

DCF's competitive advantage is based on its focus on local product sources and on local markets. Large fresh-cut suppliers like Riggio and Pellerito need to preserve produce over long periods of time while the products are in transit. This requires investment in highly sophisticated and expensive technologies. Because DCF is sourcing and selling locally, the time from harvest to delivery is much shorter. We should be able to produce a high quality product at a lower cost, since we do not need to maintain the product over a long period of time. In addition, DCF will appeal to those customers who perceive value in supporting both Michigan agriculture and economic development in Detroit.

MARKETING PLAN

Marketing is an essential, yet often overlooked element in economic development projects. Effective marketing can help a small business enter the marketplace and remain viable, but can also be expensive. Small businesses struggling in environments not entirely conducive to market activity will have trouble maintaining a traditional marketing strategy. As far as economic development is concerned, innovative strategies need to be employed to overcome these barriers.

As a resource-strapped, start-up cooperative, Detroit Community Foods will require innovative marketing tactics that are both affordable and effective. Economic development

projects rely on innovative solutions for businesses, institutions and individuals to overcome the challenges posed by their environments. There are many areas in Detroit that are not conducive for commercial and industrial activity. As a result, companies operating in these areas utilize government and non-profit economic development opportunities to overcome their marketing challenges.

The goals of marketing by Detroit Community Foods are to generate interest from local producers and then connecting them to local markets in the Detroit area. Additional marketing efforts should be focused upon soliciting co-op membership in order to increase capital, productive capacity and sources of raw materials. Marketing efforts should highlight DCF's ability to wash, cut and process fresh produce efficiently, and it should be emphasized that joining DCF will improve access of local producers to local markets. Emphasis will be placed upon the benefits of cooperative agriculture as a means to increase bargaining power in the marketplace, share resources and establish economies of scale.

It should be noted that a serious barrier to marketing activities is the lack of financial resources for our start-up cooperatives. The majority of the capital will be procured via members' initial investment, however this may prove to be insufficient to cover expenses of marketing, advertising and recruiting. As a result, informal and inexpensive marketing alternatives must be considered. More traditional marketing strategies can be utilized later, once the company ascends to the next level in the cycle of business growth. For now, Detroit Community Foods must focus on methods of marketing that are efficient and consume little energy and money.

Marketing efforts should include everything from simple strategies to more sophisticated, yet affordable, methods. Simple strategies include *word-of-mouth* advertising. This includes making the company highly visible by operating in areas saturated with potential clients. Location of the

business may have beneficial marketing side-effects. Having a physical presence in the area of commercial activity will improve the probability of attracting customers. Marketing channels will include the extensive use of the internet, including social media, specialty small-business websites, and email to advertise DCF's services to its target demographics. The internet provides small businesses with many types of innovative solutions capable of reducing marketplace barriers. One particularly applicable web platform is Local Orbit, a website providing e-commerce, marketing and management tools for small businesses and organizations building local food supply chains. In addition to linking local sellers and local institutional and restaurant buyers, the website can help DCF with ordering, inventory organization, company budgeting, and most importantly online marketing. The marketing services offered by Local Orbit provide Detroit Community Foods the ability to identify and contact potential members and clients. It would circulate knowledge of its services to key market sectors, provide greater access to a share of the market.

Social media has often been an underestimated force in the business world. These outlets can actually prove to be very useful to small businesses in terms of networking with potential marketing partners, connecting them with similar groups and potential clients. Recently, Twitter opened up its advertising platform to all U.S. based small businesses. Social media sites have the capacity to allow user-based innovative solutions for small businesses attempting to reach new audiences. Indeed, sites like Facebook and Twitter may provide Detroit Community Foods with *unexpected* sources of new members and customers.

As an agricultural cooperative, Detroit Community Foods will begin with and remain sustained by activities and investments made by members. Because new members provide additional capital and raw material, effective marketing strategies are essential to connect with

them. In order to convince local farmers and agricultural producers to join and invest in Detroit Community Foods, it is important to convey the benefits of membership in an agricultural cooperative. First, it should be emphasized to prospective members that membership allows greater bargaining power in the marketplace. It increases the economy of scale, thereby allowing an aggregation of individual efforts to lower the overall costs of equipment. Economy of scale is important because it allows many united local producers to remain competitive with larger corporate entities. Cooperatives also have the benefit of being member controlled and operated. This is an important feature that may attract many local producers. Not only will they have a competitive advantage with larger organizations, they will also have a vote. These features of agricultural cooperatives must be emphasized in literature and other outreach efforts to attract new members.

REGULATIONS

As a food manufacturer of a product that is considered ready-to-eat, Detroit Community Foods is required to receive various certification on the federal, state, county, and city level.

On the federal level, our business must receive certification from the Food and Drug Administration. Our facility must be registered with the FDA before we begin operations. This includes company information (address, contact information, owners, food types), as well as assurance that the FDA will be able to inspect our facility. This comes at no fee to us, and the purpose is to monitor national food safety. Registration can be done online, and the first inspection of operations must take place within 5 years after registration—after that, follow up inspection will occur approximately every 3 years ().

Required by the state, our business must obtain a Michigan Food Establishment License: Whole Sale Food Processor, which costs \$175 and is issued by the State's Department of

Agriculture and Rural Development. An application with owner information is submitted with payment, and must be submitted at least 30 days prior to opening—however much sooner is advised. A plan of review must also be submitted with the application. The plan of review is basically a questionnaire about the planned methods of operation, including specifications of the facility (sink sizes, rodent control methods, interior materials, waste disposal methods, hot water usage, refrigeration sizes). We must speak with a plan of review specialist prior to submitting the plan. Once the application and plan of review are received and approved, a final inspection must be scheduled by MDARD once the facility is ready for operation. Upon approval, a license will be issued and operations may begin once the facility is FDA approved. (Michigan Department of Agriculture and Rural Development).

Wayne County will provide our business with ServSafe Certification, specifically Certified Food Protection Manager which involves a \$180.00 fee, and must be renewed every five years. This certification was previously done by the city of Detroit, however these services have been discontinued, which has resulted in confusion between city and county health departments. Name registration must also be done through Wayne County.

An inspection from the City of Detroit will be needed to make sure the building is structurally viable and follows the proper zoning for food processing establishments. Food manufacturing must be zoned I- Industrial, which our site is in compliance. An inspection must maybe by appointment with Detroit's Building Department.

Barriers

While regulations alone are not deemed as barriers to Detroit Community Foods, the processes in which to meet regulations may become difficult. The timely needs of processing paper work and receiving the appropriate inspections in order to reach certifications can bring operations to a halt. Bureaucratic changes have also caused confusion in who handles processes. Until quite recently, the City of Detroit's Department of Health and Human Services was in charge of offering ServSafe Certification for Detroit businesses. Due to governmental changes and state-take overs, this is now being handled by Wayne County. In conversations with the County, there has been miscommunication between these local entities, with some concluding that this is now a state issue. Upon further investigation, it appears that Wayne County is the appropriate institution for this certification. The confusion about the correct certification body is disconcerting, because new businesses may become frustrated with the process and decide to ignore it. The concern is that it could lead to potential health danger to the public, since the process no longer ensures a safe, quality product or facility.

OPERATIONS

Detroit Community Foods' small-scale operations will ensure efficient, fresh, seasonal, just-in-time quality produce to customers. The main operational activities and resources for our company are detailed in the following sections.

Work Force

This company will operate with 4 fulltime employees and 10-20 part-time employees. Each fulltime employee will be assigned one of the following areas: Operations Management, Marketing, Accounting, and Distribution. There will be a distribution of part-time employees to

each of these areas. The Operations Manager will be a ServSafe Certified manager and maintain certification. This will ensure food safety practices are met and shared with fellow employees.

Some of the part-time employees will be student attending Cristo Rey High School in Southwest Detroit. Cristo Rey has developed a work-study program to help prepares them for their future, developing both soft and hard skills essential to being a productive employee. The “wages” earned by the students go directly toward their high school tuition. Staffing our part-time work through this program will help support the community in which Detroit Community Foods is located.

Detroit Community Foods will follow the following workflow operation: receiving, food storage, cutting, dewatering and drying, packaging, and distribution.

Receiving

Produce will be delivered, pre-cooled, by farmers to the facility on a weekly, to-be-determined schedule. All produce to be washed, cut, and packaged by Detroit Community Foods will be obtained from approved local farms via contractual agreements. These local farms will follow Good Agricultural Practices in order to reduce the risk of potential biological, chemical, and physical food safety hazards. Receiving docks will be enclosed, well-illuminated and refrigerated to prevent produce from warming during the receiving process. When a produce shipment arrives, it will be inspected to ensure its quality and inventoried to assure first in/first out rotation. Once the produce has been accepted, it should be quickly moved into the appropriate temperature storage room (Kitinoja).

Raw Storage

The storage unit maintains raw produce products at appropriate temperatures at or below 41°F and at a humidity of 90-95% (Yellow Wood Associates). Routine monitoring for properly

refrigerated storage unit temperatures involves the use of a continuous time-temperature recording device. Raw product is stored in a manner to reduce cross contamination and to meet standards identified by ServSafe (National Restaurant Association). Safety standards also require that produce be processed in a “first-in, first-out” rotation.

Cutting

We estimate that our small-scale facility will have an average production level not to exceed 800 lbs/hour. Product preparation begins when the product is taken and placed in the bin dumper, which is normally done using a forklift or pallet jack (a hand-operated lift). The bin dumper allocates the product to a metering belt, which then flows produce to a trim station. The trim stations are multi-station tables linked by a chain of belts that convey the product to and from the worker. Each worker removes the incoming washed product from the lower belt, inspects the product, performs the necessary preparation, discards the waste, and places the finished product on the upper belt, which carries the product to the cutters.

After the product has been prepped by hand, it travels via conveyor to the cutting machine, which can be adjusted to a variety of settings based on the product. Detroit Community Foods will begin operations with one cutter, and expand to a second one over time if demand calls for it.

Equipment used to cut produce must follow practices recommended by NFS to ensure equipment cleanliness and reduce cross contamination. Employees handling fruit and vegetables should maintain proper personal hygiene, using single-use gloves to prevent cross-contamination, and maintaining proper hand washing practices. (Schneider).

Washing

The washing of produce is performed as defined by the FDA Food Code. Washing will be done by either flume (elevated troughs) or spray systems (similar to a power washer, but gentle

enough for food). Raw fruits and vegetables will be thoroughly washed in water to remove soil and other contaminants before being cut, packaged, or offered for human consumption in ready-to-eat. Water temperature used to wash should be warmer than the temperature of the produce being washed to prevent infiltration of wash water (Schneider).

Dewatering and Drying

Produce will be dewatered through a perforated basket shaker. A centrifugal dryer (similar to salad spinner) will be used to dry produce before packaging (Yellow Wood Associates).

Packaging

Packaging is done at a separate station equipped with a bagging and sealing machine and then conveyed through a metal detector as required by law (Food and Drug Administration). Packaging material must be food grade and maintained in clean condition (National Restaurant Association), and the packaging material must be appropriate for the specific product. Workers will pick up finished packaged products at the end of the conveyor belt, label them, and pack them into boxes for delivery.

Packaged Storage

Similar to the cooling protocol required during the raw storage process, the packaged storage unit maintain packaged produce boxes at appropriate temperatures at or below 41°F, which is continuously monitored. The storage unit, including liner and shelving, are cleaned and maintained to provide a sanitary environment for product (National Restaurant Association). Packaged product information should conform to federal, state and rotation will follow FIFO (Yellow Wood Associates).

Delivery Service

Delivery will be conducted to customers twice a week as determined by contracts. The service area will be limited to the Tri-County area (Wayne, Oakland and Macomb counties). The produce will be moved via a refrigerated truck, which has moveable bulkheads to ensure proper storage of multiple products. We have the option to purchase a truck and hire a driver, or to contract transportation to a third party. At the outset, we plan to outsource transportation activities to save on capital costs. As the company grows, it will mostly likely make sense to bring this activity in-house.

Facility Needs

Our facility will be leased from the Detroit Produce Terminal with at least 10,000 square feet. The produce terminal lease rates are relatively cheap at \$3 - \$6 per square foot. The facility will already be equipped with the following amenities:

- Loading Docks
- Receiving Area & Cold Storage
- Production Room
- Accessibility to water/sewage appropriate for this production
- Future Expansion Area
- Finished Product Storage and Shipment
- Offices and Employee Area

Equipment Needs

The amount and cost of equipment needed, just for small fresh-cut food processing, is quite expensive. However, quality equipment is necessary to ensure a quality product. There are a few companies that specialize in small-scale fresh-cut food processing, such as Freshline

(Yellow Wood Associates), which provides an option to source the equipment. A list of the main equipment requirements and indicative prices is as follows:

- Bin Dumper \$14,000
- Metering Belt \$15,000
- Trim Station \$25,000
- Cutter Machine \$40,000
- Flume Washer \$30,000
- Spray Washer \$16,000
- Centrifugal dryer \$8,000
- Packaging Station \$24,000
- Packaging (bags, labels, boxes) \$8,000 annually

Barriers

Above all, health and safety standards must be maintained throughout the operations process to comply with regulations and ensure a safe, healthy product to our customers. The primary barrier lies not in the cost of the health and safety certification, but potentially in the lengthy and confusing process. We also must carry liability insurance to protect against potential lawsuits, which is an added expense for a small company.

Additionally, equipment must be properly maintained because fresh-cut produce production relies heavily on reliable, safe, precise, quality equipment. However, the maintenance protocol and lifespan of such equipment at this scale of operations is unknown and could prove costly.

FINANCIAL PLAN

Creating a meaningful financial plan for a fresh-cut produce processing company would require knowledge of the industry beyond what is publicly available. Since most produce processing facilities are privately owned, we do not have access to information regarding cost or capital structures for the industry. Our approach is to focus on the estimated upfront costs and ongoing fixed and variable costs in order to determine start-up capital needs and to calculate indicative breakeven sales in terms of quantity and dollar volumes. In the process, we can identify the challenges that would likely be encountered while starting up this type of venture. The following two sections represent the primary assumptions underlying the financial analysis.

1. Start-up Costs

The indicative start up costs for Detroit Community Foods are substantial, mainly due to the capital intensive nature of the business. The initial sources and uses of funds are detailed as follows:

Sources of Capital

Owners' and other investments	\$15,000
Bank loans	167,600
Grants	168,465
Total Source of Funds	<u>\$351,065</u>

Startup Costs

Leasehold improvements	80,000
Capital equipment	215,565
Location/administration expenses	28,500
Opening inventory	25,000
Advertising/promotional expenses	2,000
Total Startup Costs	<u>\$351,065</u>

While the list of startup expenses in the chart may not be exhaustive, it represents many of the major items we will have to consider. Further explanation on the line items can be found below:

- Leasehold improvements represent the remodel and build-out of the facility to accommodate the production line equipment and to make sure the building meets food safety standards.
- Location and administration expenses include deposits for rent and utilities, legal and accounting fees, pre-paid insurance, architectural plans, and salaries that will have to be paid to marketing and business management staff prior to beginning operations. These are “soft costs” that can be very difficult to predict.
- Opening inventory represents the amount of raw product and other supplies we will have to purchase at the time we begin processing.
- Advertising and promotional expenses are the costs involved to obtain customers and suppliers.
- Equipment represents the single largest upfront cost. The type of equipment we will need to purchase was provided in the Operations section. The startup capital equipment costs also include furniture and fixtures required for the office area of the facility.

We have explored and considered various sources of financing for our start-up costs. As a cooperative, the member-owners contribute capital, which is the first source of financing.

However, since the initial members are mostly farmers, this will be a relatively small component of the beginning capital structure. A second potential source is loan financing for a portion of the cost of equipment, which could be used as collateral for the loan. As a startup, especially one with a small amount of equity, DCF would not be a good candidate for traditional bank lenders.

We would most likely approach a Detroit-based Community Development Financial Institution (CDFI) such as Urban Partnership Bank or First Independence National Bank of Detroit. CDFI's are mission-driven financial institutions that provide loans and depository products to communities that are underserved by the traditional banking industry. The largest portion of the upfront financing is expected to come from USDA and MDARD grants. Both of these government entities have value-added agriculture grant programs, which specifically include processing companies and agricultural cooperatives as eligible applicants. MDARD's value-

added grant program offers grants from \$20,000 to \$200,000, which would meet DCF's requirements.

2. Breakeven Analysis

The breakeven point represents the amount of sales required to cover fixed and variable costs. The appropriateness of the analysis depends on assumptions made for average per-unit revenue, average per-unit cost, and fixed costs. As the analysis below illustrates, the breakeven point in dollar volume is about \$700,000, which translates to about 400,000 lbs of product sold. We believe that this is feasible from two different points of view. The proposed operational facility was designed to handle 800 lbs per hour. The breakeven volume of 400,000 translates into approximately 1,500 lbs per day, so we will definitely have the capacity to handle the breakeven volume. To put the required breakeven dollar volume revenue into perspective, we can go back to the hypothetical baby carrot example from the Market Analysis section of the paper. The analysis indicated a primary market of \$26,925 per day in revenue. Assuming DPS consumption of five days per week and 9 months/year, and healthcare consumption of 365 days/year, the total market is \$6.4 million. At a breakeven sales level of \$700 thousand, we would need to capture market share of about 11%.

Sales		
Sales price per unit	1.75	
Sales volume per period (units)	402,000	
Total Sales		703,500.00
Variable Costs		
Direct Labor	0.33	
Direct material per unit	0.35	
Shipping per unit	0.07	
Packaging per unit	0.08	
Other variable costs per unit		
Variable costs per unit	0.83	
Total Variable Costs		334,866.00
Unit contribution margin	0.92	
Gross Margin		368,634.00
Fixed Costs Per Period		
Administrative costs	195,000.00	
Insurance	40,000.00	
Depreciation	21,550.00	
Rent	15,000.00	
Utilities	36,000.00	
Interest	13,400.00	
Other fixed costs	47,200.00	
Total Fixed Costs per period		368,150.00
Net Profit (Loss)		484.00

Barriers:

The primary barrier to the feasibility of this project is the seasonality inherent in Michigan agriculture. It probably is not possible to source all of the products required to operate on a year-round basis. We can explore the ability to supplement the off-season by buying produce at auction or contracting with farmers using hoop house technology, but it is not clear how this might impact the financial plan or the relationship with our customers.

CONCLUSION

While conducting our research, we came across proposals for similar local food processing cooperatives in Georgia and Wisconsin. Neither of these proposals appeared to proceed beyond the initial planning/feasibility stages, most likely due to the significant upfront

capital and soft costs involved in setting up a food processing business. The intent of these plans was similar to DCF; to fill a gap in the processing capacity required to link local farmers with local markets in an attempt to yield economic benefits to the community. A common theme throughout the Georgia and Wisconsin research, and in our research, is that success for a new food processing facility requires collaboration among state government agencies, local food advocacy groups, university agriculture extension programs, local growers and foundations.

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Note: Nursing home estimates taken from southeastern Michigan regional count of facilities (149) multiplied by the average number of beds (approximately 150)

INTERVIEWS AND MEETINGS

Meetings

Carmody, Dan. President of Eastern Market Corporation. Eastern Market Corporate Office, February 15, 2013

Hale, Kathe. Extension Educator of Michigan State University Extension, Clinton Township Office on February 14, 2013

Interviews

Adair, Roxanne. Small urban farmer, Genesee County. Interview on April 14, 2013

Darnton, Julia. MSU Extension, Community and Economic Development Educator, Interview on April 22, 2013

Junior, Cary. Michigan Food Hub Consultant, MDARD (Macomb, Oakland, Wayne counties), Interview on February 14, 2013

APPENDIX A: Synopsis of Telephone Interviews
Phone Interview with Julie Darnton, Community and Economic Development Educator,
MSU Extension (4/22/13)

Food hubs are an idea that is being replicated across the country (very successful for small farms with intensive production in Vermont).

Eastern Market operates as food hub (a terminal market). There are two terminal markets in Michigan (Eastern Market and another in Benton Harbor).

New regulations make farmers' jobs more challenging. For example, cut produce (like a lettuce leaf cut for harvesting or chopped tomatoes) is regarded as a "potentially hazardous food"; Julie does not know how MDARD will ultimately regulate cut leaves (you have to cut the leaf in order to harvest it for many greens), but the idea is that any produce that is cut will require minimal processing.

Small farmers need a "wash and pack" facility. This is especially important for school and wholesale markets. With direct sales, such as at a farmers market, you can tell your customer to wash everything again; not easily so for wholesale and school markets.

Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs) are federal standards that are regulated through MDARD. GAP requires maintaining good records, protocols/standards, etc.; GAP is harder for newer farmers because they have to learn how to maintain records on top of learning how to grow produce. Another example of a GAP is to have a sanitary latrine so that agricultural workers have somewhere to "go" other than in the field. MDARD is working on a pilot program with other states to have a central place to keep records. GHPs are even harder for farmers.

Here's a business opportunity:

- Having a food hub to take care of minimal processing so food can go to an institutional buyer (e.g. school, hospital, etc.). The food hub should have an area certified specifically for "wash and pack". Julie suggested establishing one location/place that could be inspected just one time and subsequently train users on how to use the space to stay in compliance. (i.e. better than having many food processing places across the region which would require more inspections, etc.)
- Temperature-controlled storage is very important in order to harvest a few days ahead of a delivery (e.g. if it will rain or be hot outdoors on your delivery day so you need to harvest up to a few days early)
- Food hubs may be eligible for grants through the USDA and MDARD, which secured money for food hubs and value added processing. MDARD distributed close to \$800,000 across Michigan for food hubs/value added (e.g. paid for a refrigerated truck, etc.). MDARD will offer funding again for public capital ventures (for-profit included).

- Eastern Market is expanding in response to this demand through MDARD. Eastern Market's focus is on the southern lower peninsula of Michigan and northern Ohio. Julie's perception is that there will be more demand from that region than Eastern Market will be able to fill.
- Offer mobile services to pick up produce and handle transportation logistics. Transportation and logistics is an unmet need in Michigan and would complement the services already provided through Eastern Market. (See the food logistics model of just-in-time delivery like FedEx. Forgotten Harvest in Michigan is the leader in it.)
- Offer pick up locations outside of the city so that farmers don't have to drive all the way into the city to unload their produce.
- Offer freezer capability, because getting produce down to desired/required temperatures is as important as maintaining a temperature. Conveyor blast freezers and rotary freezers are a couple forms of related technologies. Freezer capability might be good year-round especially if you use it for meat in the wintertime. For example, sweet corn is great in season – but this is only for a limited time so it would be good to have the capacity to shuck and fast freeze the corn.

Q: What could the student team's co-op differ from competitors or offer a unique edge

A: The co-op should offer to take care of the labor (for processing, etc.) so that the farmers wouldn't have to do it as they would need to do in a community kitchen. (Community kitchens are for "value added" projects, in order to meet a standard of processing beyond the cottage food level; e.g. community kitchens are used for high acid foods that require more care, such as salsa and pickles, and to make foods in large quantities than can be done in a home kitchen, such as many batches of cookies. Community kitchens are also used to keep produced food separate from one's home, such as if the producer has pets and doesn't want to risk cat fur getting in or near the food. Community kitchens are also used when people need/want to have more space for catering purposes or for those wanting to use a licensed kitchen. Ready to eat produce is made in community kitchens.)

Food hubs allow for one-stop orders. Food hubs can be established to facilitate brokerage agreements, to have a physical presence for selling, or to generate an online presence, so that farmers and buyers can go to one location.

Interview with Cary Junior, Michigan Food Hub Consultant, MDARD (Macomb, Oakland, Wayne counties), February 14, 2013 at Macomb County Food Collaborative Conference

Q: What are farm hubs and how do they fit with agribusiness/food systems?

A: The USDA has a formal definition for ‘food hubs’ but essentially all of them perform similar functions

- They are engaged in local/regional aggregation, and local/regional distribution
- They serve and connect multiple markets, and participants have common financial goals (good prices, and guaranteeing quality)
- Food hubs help to build the capacity of farmers and allow them to expand, both in what they produce and how much they produce
- The main goal is to have a positive economic, social and environmental impact beyond the farmers themselves

Nationally, about 40% of food hubs are working in ‘food deserts’, but rely on a relatively narrow range of funders: philanthropy, and state economic development sources. There is expansion across the board, however

The kinds of activities that food hubs are engaged in beyond aggregation:

- Donations (from hub to hub)
- Internships and education programs for farmers and students
- Food campaigns (to increase production, diversify crop types, increase consumption of local foods), they are essentially ‘social campaigns’
- Farmer training: learning about new farm services, and entrepreneurship skills are an important gap for many small farmers and in urban agriculture especially
- Production planning for farmers and for businesses buying from them
- Connecting farmers to institutions and individual consumers as clients (retail sales and longer term contracts)

Nationally, small farmers (and urban farmers who want to get bigger) are facing big regulatory changes under the ‘Food Modernization Act’ of 2014. This will require certification by the farmers before sale and distribution. The higher standards will affect safety and liability on farms. The GHP and GAP standards will also mean that more farmers will want to get rid of more their produce to buyers and brokers rather than try to sell it themselves.

Q: What is MSU and the state doing to help with this hurdle?

A: MDARD and MSU Extension are trying to expand the regional food hubs, and to encourage farmers to join. There is money available through a competitive grant process to set up or expand hubs and food processing in the state. Facilities/businesses in Detroit (Eastern Market), Grand Traverse, Ann Arbor, Lansing and Grand Rapids have been funded in the last round

Q: What is the role of the facilitators of the Hubs?

A: The role of the consultants (like C. Junior) is to identify and connect growers, processors and end use buyers. They are to spread the word to farmers about product standards and the regulatory environment, and to promote integration into the new network

Q: What kind of technical support is out there for small farmers and those who want to start processing businesses?

A: There is technical support from MSU Center for Regional Food Systems, but also from the 'National Food Hub Collaborative' (does technical assistance, education, finance).

Q: What are the biggest challenges?

A: The biggest challenge has been finding ways for farmers to transport their produce. Working with small farmers in Macomb and Wayne countries: biggest challenge has been helping them to guarantee that their produce is 'cold chain compliant'. There is a growing demand from processors on farmers (processors only want to work with GAP certified farms).

Interview with Roxanne Adair, Small Farmer, Flint River Farm (4/14/13)

Q: What determines the choice of crops planted?

A: In a nutshell: the market, space (in field), soil (soil quality), and the season. Roxanne divides her farm field space between crops for the Flint River Farm Community Supported Agriculture (CSA) program, wholesale (i.e. restaurant) production, and Flint Farmers Market (FFM) sales as a member farmer of the edible Flint co-op (the co-op has one farm stand at the Market).

For the CSA, she chooses a variety of crops based on demand; Roxanne planned by looking at the CSA members' feedback forms from prior years. With the CSA, it helps to have money up front to be able to pay for better varieties of seeds.

For the wholesale market, she chooses crops by what gets the best price and can grow mass quantities cheaply, fast and with few problems (e.g. not a lot of labor required for weeding, etc.). Less profit is earned on wholesale sales compared with the CSA and FFM pound for pound, but wholesale offers a guaranteed sale unlike CSA and FFM. Typically for the wholesale market, she grows a salad mix and herbs (28 days from seed to harvest); she's trying green beans this year for the first time (for the new Table and Tap restaurant in downtown Flint).

To determine what to grow for the Flint Farmer's Market, Roxanne analyzed data for the past three years of the edible Flint co-op (i.e. how much produce was brought to market, how much sold, what kind of packaging was used). For example, kale and swiss chard always sell consistently and at a good price; potatoes sell at market but not at a good price given the amount of labor needed to produce them so she only brings CSA excess potatoes (potatoes not claimed by CSA members) to market.

The CSA takes the most planning in order to plan for week-to-week harvests. After the CSA, the wholesale market requires the most planning, and the farmers market takes the least amount of planning.

Q: What is the total volume for each type of produce (by weight)?

A: It depends on the farm and the crop.

Q: What happens to undistributed/unsold produce?

A: Produce unclaimed by CSA members (excess produce) is sold at the FFM through the edible Flint co-op.

Q: Are there plans for expansion or collaboration between farmers?

A few years ago, farmers weren't doing much crop planning. The only organized group in Detroit was via the Greening of Detroit. That's one thing that Detroit has not done well in the sense that Detroit farmers don't communicate. Flint is much better organized between farmers.

Greening of Detroit is a non-profit and runs a co-op. They have staff that gets paid to maintain market records, bring weighing scales to the market for the farmers to use, etc. Therefore, Greening of Detroit helps farmers on a day-to-day basis but does not seem to be building the capacity of farmers to manage some of the business aspects of farming. A farmers-led co-op would be a benefit for both expansion and collaboration of farming in Detroit. Roxanne and Julie Darnton are the co-conveners for the Edible Flint co-op. They have had issues with co-op members not paying dues, not filing required paperwork, etc. so Roxanne and Julie led the co-op in doing strategic planning over the winter (of 2013) and developed a tiered membership system as a result.

- Tier 1 (consistent moderate/average volume sellers) - more decision-making power and greater paperwork responsibilities; pay an application fee which pays for the cost of plastic bags, the farm stall etc. Farmers in tier 1 consistently sell at the market every week.
- Tier 2 (inconsistent, high volume sellers) – for sellers who contribute to the co-op’s market stall infrequently and with high volumes of produce (e.g. those that harvested everything in the garden perhaps just once per month and overpowered the consistent growers in the co-op because contributing farmers were previously being paid based on the % of produce contributed for the whole stall on that market day). Tier 2 offers a “capped” membership.
- Tier 3 (low volume sellers) – For farmers/gardeners who can only sell \$30-40 per week.

Under this new structure, the edible Flint co-op takes 10-15% of sales (proceeds) from the high and low volume sellers to enable the co-op to be more sustaining.

Christine Holmes

Sean Kammer

Derwin Munroe

Martha Potere

Karen Zarowny

Wayne State University

42 W. Warren Ave
Detroit, MI



Wayne State University
Higher Education

The mission of Detroit
Community Foods is to connect
Michigan farmers with local
markets for fresh cut produce.
This report outlines the way in
which Detroit Community Foods
would produce/package fresh
Michigan foods while utilizing a
cooperative structure where the
community has a direct stake in
the business.



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