GUELPH COMMUNITY FRESH FOOD STORAGE & DISTRIBUTION: FEASIBILITY STUDY AND PILOT PROGRAM PLAN

THE SEED
WORKING TOGETHER TO SHARE GOOD FOOD

Ontario Trillium Foundation
Fondation Trillium de l'Ontario

An agency of the Government of Ontario.
Relève du gouvernement de l'Ontario.

TABLE OF CONTENTS

ACKNOWLEGEMENTS

This study was completed by Tom Armitage, on behalf of The Seed Community Food Hub, with the support of the Ontario Trillium Foundation and Guelph Community Health Centre.

The following people contributed an immense amount of knowledge and skill that contributed directly to the writing of this report:

Carly Fraser – Research Shop Intern – survey support, report writing
Alex Therien – Research Shop Intern – survey support
Lindsey Thomson – Research Shop Interim Project Manager – intern support and report feedback
Karen Nelson – Research Shop Project Manager – intern support and report feedback
Alexis Van Bemmel – UofG Masters Student, Geography – food waste diversion articles
Marion Davies – UofG Undergraduate Student, Geography – Wellington County stats and figures
Andrew Reimer – General Manager, Crown Dairy – trucking logistics and industry contacts
Bob Moore – Food Procurement Coordinator, Hope House – procurement insights

The POD Advisory Committee, who generously contributed their time and expertise in helping move the distribution work forward:

Barb McPhee – Manager, North End Harvest Market
Peter Gill – Board Member, Chalmers Community Services Centre
Gavin Dandy – Executive Director, Everdale
Karen Kamphuis – Executive Director, Hope House
Lyndsay Sytsma – Development Director, Hope House
Brendan Johnson – Executive Director, Guelph Neighbourhood Support Coalition
Andrea Webber – Directing Coordinator, The Seed Community Food Hub

Special thanks to all emergency food providers interviewed for this plan who contributed their insights during the consultation period, and a big thank you for contributing greatly to food security efforts in a dignified, respectful, collaborative, and impactful way:

Lakeside Hope House – Chalmers Community Services Centre – The Welcome In Drop In – The Salvation Army – The Central Students Association Food Bank at The University of Guelph – The North End Harvest Market

And last but not least, thank you to The Seed Community Food Hub's Steering Committee, without their contributions over the last several years The Seed would not exist.

EXECUTIVE SUMMARY

Food insecurity is a significant problem in Guelph, Ontario. Recent reports on food insecurity in Canada have estimated that between 13.2 – 16.4 per cent of Guelph households experience some form of food insecurity. A 2015 report completed by the Guelph-Wellington Poverty Task Force indicates that during the month of February 2015, emergency food was accessed from 8 small- to mid-sized providers for a total of 3768 people, including 2251 adults and 1517 children (17 years and under). During the month of March emergency food was accessed for 4040 people, including 2374 adults and 1666 children. Furthermore, it is estimated that only 25 per cent of people who are food insecure access emergency food services. This has led some groups to reflect on what changes or additions to the food system could be made to alleviate this issue. Through the collaboration of several organizations based in Guelph and Wellington working to resolve the root causes and resulting effects of food insecurity, The Seed emerged. The Seed is a collaborative initiative of community partners in Guelph & Wellington with the shared vision of strengthening the local emergency food system, using the power of food to build healthy communities and addressing the underlying issues of food insecurity and poverty. To this end, The Seed, in collaboration with a number of emergency food providers throughout Guelph, are seeking to address concerns with the existing emergency food system, in particular there is/are: an insufficient food supply, particularly in the case of nutritious and/or fresh food, as well as various high-demand items; a lack of adequate staff, volunteers, and overall community engagement; insufficient space for food storage; difficulties with transportation to and from emergency food provision organizations; insufficient communication and collaboration between organizations.

This report explores the potential of community fresh food storage and distribution hub to alleviate some/all of the above listed concerns. This exploration is broken down into three main chapters. The first chapter is entitled “The Feasibility of Operating a Cold Storage and Distribution System that Supports Emergency Food Providers”. This chapter demonstrates that there are already initiatives operating in other cities that are addressing food security issues in a manner similar to what The Seed is working to implement. These organizations have set a precedent showing that fruits and vegetables can be distributed to clients in respectful, inclusive, and sustainable ways. Inspired by these organizations, The Seed has sought to determine whether similar approaches could be implemented within Guelph. Meetings with farmers, retailers, and wholesalers have proven valuable, as members of each of these groups have indicated a desire to support the emergency food system in some way - either through donations, access to gleaning opportunities, or reduced pricing on particular items. Consultations with emergency food providers revealed that there is a definite interest in collaboration to ensure that the fruits and vegetables acquired are distributed to the community. Although the consultations revealed a number of limitations facing emergency food providers, each limitation had a corresponding opportunity that the distribution work could apply to overcome it. Consulting with the broader food community, presenting preliminary findings and requesting input on the direction the work is taking was a valuable exercise that again revealed broad support for the project. Enlisting the help of a graduate student to describe the nature and extent, and opportunities and challenges associated with food diversion was valuable in determining how to avoid the social stigmas associated with distributing food that would otherwise go to waste. Knowing that there are other organizations within Southwestern Ontario and Canada in general that have built successful and respected programs that receive diverted food is encouraging. Because of the precedents that

exist and overwhelming supports that this early distribution work has received from the community, it is clear that a community fresh food storage and distribution hub is feasible from a social perspective.

The second chapter is entitled “The Pilot Operational Plan for a Cold Storage and Distribution System that Supports Emergency Food Providers”. This chapter demonstrates that The Seed has the requisite materials, funding, and potential income to begin operating a pilot distribution program. The Seed's Ontario Trillium Funding covers the cost of purchasing a truck, the fuel needed, money for repairs, in addition to other capital funding and money to pay for a Distribution Coordinator to oversee the project. That said, there are some notable gaps in funding, particularly when it comes to insuring the vehicle, and paying for the rental of cold storage space. The budget presented in this chapter shows that the majority of costs are covered, freeing up the income from the distribution of produce to be put towards the uncovered insurance and rental fees. In the early going it may be important to cover the first few months of insurance and space rental through a means other than the projected income to ensure that the project would indeed be able to cover these costs in the long term from income alone. Important to note is the Trillium funding covers two years beginning February, 2016. Within this two year period it will be important to either create more income generating enterprises or find a consistent and reliable source of funding to maintain operations should the community need for fruits and vegetables persist. It is clear that given the funding available and potential for income that the distribution project is feasible from an economic perspective, at least in the short term.

The third chapter is entitled “Evaluation Framework for A Pilot Program”. The initial framework for the evaluation program was written and developed by Tom Armitage, which was then further developed by the Poverty Task Force’s Research and Knowledge Mobilization Committee. The full evaluation framework including the plan for implementation and timelines are included in this chapter.

The results from this feasibility study and operational plan point to The Seed being well positioned to pilot a produce distribution program in the spring of 2016. With an evaluation plan in place, and the resources available to collect and analyze data, The Seed will ensure that any gaps or shortcomings can be identified and rectified in future iterations of a fresh food storage & distribution program.

INTRODUCTION

Background: what is The Seed and from where did it emerge?

Food insecurity is a significant problem in Guelph, Ontario. The City of Guelph has one of the highest rates of food insecurity in Canada at 16.4%.[1] This translates to roughly 18,850 individuals. In addition, the majority (62.2%) of food insecure households are reliant on wages or salaries from employment.[1] This has led some groups to reflect on what changes or additions to the food system could be made to alleviate this issue. Given that emergency food provision is among the primary places a person can go to receive assistance and avoid hunger, it was worth exploring how the involved organizations are able to contribute to the wellbeing of their patrons. To this end, the Guelph Wellington Food Round Table (GWFRT) and Guelph & Wellington Task Force for Poverty Elimination (PTF) partnered with the University of Guelph's Research Shop to conduct several community-based research projects. This was done in an effort to better understand the existing local emergency food system by creating a demographic profile of service users, identifying what is working with the current system, as well as determining areas for improvement. These investigations were performed between 2010 and 2013, and revealed a number of issues with the existing system in Guelph-Wellington,[2] in particular there is/are:

- an insufficient food supply, particularly in the case of nutritious and/or fresh food, as well as various high-demand items;
- a lack of adequate staff, volunteers, and overall community engagement;
- insufficient space for food storage;
- difficulties with transportation to and from emergency food provision organizations;
- insufficient communication and collaboration between organizations.

In response to these identified issues, an ad-hoc committee was convened by the PTF in February 2012 and 2013 to review and analyze the reports, identify concrete recommendations for improving emergency food services, and reduce food insecurity in Guelph/Wellington. Several short-term recommendations were made reflecting the key areas for improvement identified in the report including accountability, accessibility, food quality, eligibility requirements and stigma. Included in these recommendations was the establishment of a centralized hub to provide cold storage and distribution of fresh food to emergency food providers. Additionally, a long-term vision was defined and recommendations were made which focused on establishing a 'hub and spoke' model to strengthen the existing emergency food system in Guelph/Wellington. As part of this hub & spoke model, the vision for The Seed emerged.

---

[1] Tarasuk, V, Mitchell, A, Dachner, N. (2014). Household food insecurity in Canada, 2012. Toronto: Research to identify policy options to reduce food insecurity (PROOF). Retrieved from http://nutritionalsciences.lamp.utoronto.ca/

[2] Using Emergency Food Services in Guelph-Wellington, 2013 - http://www.theresearchshop.ca/sites/default/files/Using%20Emergency%20Food%20Services%20in%20Guelph-Wellington%20-%20FINAL.pdf

The Seed is a collaborative initiative of community partners in Guelph and Wellington with the shared vision of strengthening the local emergency food system, using the power of food to build healthy communities and addressing the underlying issues of food insecurity and poverty. The Seed works with its community partners and community members to share good food by: (1) Increasing access to healthy food for everyone in our community; (2) Creating opportunities for food skills and knowledge to be shared and developed; (3) Providing spaces for community members to come together with food, connect to resources, and build social support networks; and (4) Supporting community members in raising awareness of and advocating for policies that target the root causes of food insecurity.

Some examples of how these directives can be achieved include: providing centralized storage and distribution of fresh, healthy food for emergency food providers; partnering with other community stakeholders on advocacy and public awareness campaigns related to food security; focusing on fundraising and build intentional linkages with local farmers and food retailers to improve the quality and quantity of available food; and developing a system of transporting food to neighbourhood-based emergency food providers (the 'spokes').

Members of this emergency food services ad-hoc committee committed to continuing to work together as The Seed Steering Committee – an aligned committee with the PTF – in order to move forward with the vision. Member organizations of The Seed Steering Committee currently include:

- Guelph Community Health Centre
- Guelph-Wellington Poverty Task Force
- Guelph Neighbourhood Support Coalition
- Upper-Grand District School Board
- City of Guelph
- Country of Wellington
- Wellington-Dufferin-Guelph Public Health
- University of Guelph
- Community Voices

In 2014, The Seed Committee received an Ontario Trillium grant of $267, 300 over three years to support the initial stages of development of The Seed. Additionally, several community consultation events took place during this time to inform the direction of the emerging initiative. In early 2015, a directing coordinator, Andrea Webber, was hired to work with the steering committee and oversee the project. The Guelph Community Health Centre currently acts as the host agency for The Seed – providing management of funding, supervision for staff and organizational resources.

Developing a feasibility and operational plan for a cold storage facility that supports the efforts of emergency food providers has been one of the first major projects The Seed has begun. A significant component of this work has involved collaboration. The Seed values the collaborative effort from which it was formed, and recognizes that a tremendous amount of work is required to alleviate

the above listed concerns. The following section outlines the groups that The Seed has collaborated with in the development of this project.

Collaboration

In early 2015, a group of emergency food providers, in partnership with The Seed, met to discuss the potential of developing a cold storage and distribution facility that could provide them, and other groups, with consistent and reliable access to fresh, perishable food. Owing to some very positive conversations they decided to meet monthly as the Cold Storage Working Group (CSWG).

The CSWG consists of the following organizations and their representatives:

- Lakeside Hope House – Karen Kamphuis, Executive Director; Lindsay Sytsma, Development Director; Bob Moore, Retired School Principal and Hope House Board of Directors
- Chalmers Community Services Centre – Peter Gill, Chair; Diana Sterenberg, Administrator; Sarah Dermer, Program and Volunteer Coordinator
- Guelph Neighbourhood Support Coalition – Brendan Johnson, Executive Director and Co-Chair of The Seed Steering Committee
- The Seed – Andrea Webber, Directing Coordinator; Tom Armitage, Distribution Coordinator
- Garden Fresh Box - Tom Armitage, Coordinator

Given that some of The Seed's Trillium Funding was allocated to establishing a cold storage facility and the purchase of a refrigerated truck, Andrea Webber and Tom Armitage have taken the lead within this collaboration with ongoing and consistent support, feedback, expertise and guidance from the CSWG. Their contributions to this report have been invaluable.

Report Description

This report is broken down into three chapters. The first chapter is entitled "***The Feasibility of Operating a Cold Storage and Distribution System that Supports Emergency Food Providers***". This chapter covers several topics: (1) an overview of other projects in Southwestern Ontario that have inspired The Seed's distribution work, including their objectives and operational outlines; (2) a description of the research components that have informed this report, including rationales, objectives, and methods; (3) a detailed look at the results from consultations with emergency food providers, our farmer outreach efforts, and our retailer/wholesaler partnership outreach; (4) results from an outreach event hosted by The Seed; (5) and these sections will lead into a concluding section that details whether operating a cold storage and distribution system is feasible from a social perspective.

The second chapter is entitled "***The Operational Plan for a Cold Storage and Distribution System that Supports Emergency Food Providers***". This chapter covers several topics: (1) an overview of the value propositions the distribution work will aim to offer emergency food providers, which will include a theory of change; (2) a review of potential cold storage sites available and rationale for the use of this space; (3) a timeline for operations and a tentative schedule for when food

could be picked up and delivered; (4) a detailed look at budget lines; (5) and finally a description of enterprises that could be established after a review of initial pilot program activities take place. Each of these sections will lead into a concluding section that details whether operating a cold storage and distribution system is feasible from an economic perspective.

The third chapter is entitled ***"Evaluation Framework for a Pilot Program".*** The initial framework for the evaluation program was written and developed by Tom Armitage, which was then further developed by the Poverty Task Force's Research and Knowledge Mobilization Committee. The full evaluation framework including the plan for implementation and timelines is included in this chapter.

CHAPTER ONE

THE FEASIBILITY OF OPERATING A COLD STORAGE AND DISTRIBUTION SYSTEM THAT SUPPORTS EMERGENCY FOOD PROVIDERS

Chapter Overview

To establish precedents and determine some best practices for supporting the emergency food system, this chapter begins with an overview of food security projects in Southwestern Ontario. Three organizations in particular are reviewed for their similarities and approaches to supporting efforts surrounding food insecurity. Based on these precedents, among other resources, several avenues for research and partnership development are identified and described in the section that follows. Section Three of this chapter outlines some results from consultations with emergency food providers, particularly around limitations and opportunities that exist within Guelph's emergency food system. Following these consultations, community groups involved in emergency food were invited to a strategic planning session, the outline and results of which are captured in Section Four. Given that relationships with farmers, wholesalers, and retailers comprise a large component of emergency food distribution among the precedent-setting organizations reviewed earlier, an outreach strategy is covered in detail in Section Five. This is then followed by Section Six, results of these outreach efforts. Each of these sections are used to inform the conclusions presented in Section Seven, whether or not these efforts are feasible from a social perspective within Guelph.

1. AN OVERVIEW OF FOOD SECURITY PROJECTS IN SOUTHWESTERN ONTARIO

Guelph is not unique in its need for responses to food insecurity, and because of this, we are able to look to other communities and how they have approached alleviating food access and equality issues. Many feasibility studies, primary reports, and research papers exist, and have acted as substantial resources in the planning and beginning stages of the execution of The Seed's storage and distribution initiative. As such, this section is devoted to describing projects that exist in other communities and the precedents they have set. We will look at their mission and development, structure and programs, and how they have inspired The Seed's distribution work. The work of three organizations in particular have been inspirational in the creation of this document and the early operationalizing of The Seed's emergency food distribution work; they are: FoodShare, Toronto; The Local Community Food Centre, Perth County; and Food For Life, Halton Regional Municipality.

Organization: FoodShare, Toronto

Mission and Development

FoodShare was created in 1985 as a response to the concerning rate of poverty in Toronto, which at the time was affecting 1 in 6 people and growing. It began as a pilot program wherein volunteers received calls from people/parties interested in donating food as well as those in need, and connecting the two groups. This program was started by then Toronto Mayor, Art Eggleton, who funded the program with $20,000. In 1986, Reverend Stuart Coles - FoodShare's Chairman – (from the FoodShare site) explained that a continued reliance on food banks to supplement a failing welfare system may lead to an acceptance of stopgap solutions to hunger without dealing with its root causes. Coles also discussed that increased social assistance benefits, improved employment programs, increased minimum wage rates and a guaranteed annual income were complementary actions needed to tackle the root causes of poverty. In 1986, FoodShare began its advocating for long-term solutions to hunger and statement of objectives included "lobbying for income distribution, housing, social assistance and minimum wage rates, day care, and work assistance programs."[3] To this day FoodShare continues to work towards these objectives through its various programs.

Programs

FoodShare's programs have evolved considerably over the past 30 years since they began operations in 1985. In 2015, they have the following programs directly related to fresh food distribution (as described on the FoodShare site): (1) **The Good Food Box (GFB)** is a non-profit fresh fruit and vegetable distribution system created by FoodShare. The GFB runs like a large buying club with centralized buying and coordination; (2) **Mobile and Good Food Markets** where high quality, affordable fruits and vegetables are sold via FoodShare trucks. They bring healthy produce to

[3] http://www.foodshare.net/1985-1989

neighbourhoods where it might not otherwise be available, and where farmers' markets are not viable because sales are too low to cover costs; and (3) **Bulk Produce Buying Program for Schools and Community Groups**, making fresh vegetables and fruit available at an affordable price to school programs to promote increased consumption amongst children. The program offers locally grown and seasonal produce when available which is delivered directly to student nutrition program sites on a weekly basis.[4]

How this organization has inspired The Seed's distribution work

FoodShare has been a pioneer in the community food security movement for decades. Their Good Food Box program inspired the Guelph Community Health Centre's Garden Fresh Box program, which has partnered on the development of The Seed's distribution work. Through a partnership with the University of Guelph's Masters of Applied Nutrition program, The Seed is also in the early stages of exploring the need and/or desire for a mobile market in Guelph. FoodShare's Mobile and Good Food Markets have been in operation for several years now, and have established a viable model that could be duplicated using The Seed's future resources (delivery truck, Distribution Coordinator, volunteers). Finally, The Seed's distribution work takes inspiration from FoodShare's Bulk Buying Program. Early in 2016, The Seed will be investigating the need for brokerage between local farmers and school lunch programs, and before and after school programs, and whether The Seed could act as the broker.

Related resources:

- Good Food Market - Improving Food Access: Stories from the Mobile Good Food Market
- Good Food Market - Manual
- Good Food Market - Planning Tools for New Markets
- And many others here: http://www.foodshare.net/Program-Resources

Organization: The Local Community Food Centre, Stratford, Perth County

Mission and Development

Responding to the fact that 11% of people in Stratford were food insecure in 2011, a problem that continues. The Local was established as a division of the United Way of Perth-Huron. The Local Community Food Centre (CFC) was borne out of the need for an organization with the infrastructure that could handle large-scale donations meant for distribution to food banks within Perth County. The United Way of Perth-Huron assembled a group of interested individuals to tackle this issue, with the decision ultimately being to develop a CFC in partnership with Community Food Centres Canada. A former farm supply store was converted to a food centre that now houses a large common area for programming, a commercial kitchen with equipment donated by General Electric, office space, and a 3,700 square foot warehouse dedicated to distributing purchased and donated food to area food

[4] http://www.foodshare.net/fresh-produce-our-good-food-programs

banks. The Local CFC opened its doors to the public in November of 2012 and has been providing food-related services ever since.[5]

Programs

The goal of The Local CFC is to foster food security in Perth County through the creation of a food-centred community space that includes: a Food Distribution Centre to supplement healthy food to food banks and other not-for-profit food services; community gardens and a greenhouse; nutritious drop-in meals; community cooking sessions; activism, advocacy and community development opportunities; and food education resources and programming.

How this organization has inspired The Seed's distribution work

The Local CFC's Storehouse distribution centre has been the primary influence on the route The Seed has taken with its initial food distribution efforts, with The Local's larger food security portfolio being inspirational to The Seed's overall goals. As mentioned above, The Storehouse acquires and distributes food to approximately 65 organizations throughout Perth County. This program was developed in response to the community's stated need for a more centralized food procurement option that could increase communication and coordination between emergency food providers. As highlighted earlier, the University of Guelph's Research Shop identified a similar need for increased communication, collaboration, and a centralized distribution system that could take advantage of large-scale donations. Due to these similarities, and the successes that The Local has had over the last three years with their Storehouse, their distribution model has acted as an obvious point of reference as The Seed develops this feasibility and operational plan. In particular, elements of the Perth Food Hub Feasibility Plan done by Cathy Lang Consulting and Eko-Ethonomics have been informative as we have worked through our own calculations and considerations.

Related resources:

- Perth County Regional Food Hub Feasibility Study - http://www.perthcounty.ca/fileBin/library/ecDev/documents/Food-Hub-Study-2013.pdf
- The Local's 2014 Impact Summary - http://thelocalcfc.org/wp-content/uploads/2015/05/The-Local-CFC-2014-Impact-Summary_Low-Res.png
- The Local Community Food Centre Overview - http://thepod.cfccanada.ca/sites/thepod.cfccanada.ca/files/The%20Local%20Community%20Food%20Centre%20Overview.pdf
- Regional Food Distribution Hub Feasibility Study, Simcoe County - http://edo.simcoe.ca/Pages/Food-Distribution-Hub.aspx

[5] The Impact and Potential Roles of Community Food Centres on Local Food Distribution in the Southwestern Ontario Context - https://atrium.lib.uoguelph.ca/xmlui/handle/10214/9113

Organization: Food For Life, Burlington, Halton Regional Municipality

Mission and Development

Food for Life began through the work of George Bagaco, who saw that there was a specific need for fresh food in the Oakville area. At first using his own vehicle, he collected food from bakeries and other places with surpluses, which he distributed to families in his neighbourhood. From these modest beginnings, Food for Life began receiving capital donations in the form of a delivery van and warehouse space, which was soon followed by a part-time delivery driver and part time Executive Director. Continuing with George's original mission, Food for Life developed partnerships with local social service agencies to whom they delivered food on a weekly basis. Along with these partnerships came the need for more food acquisition, and more space to store and handle it. They have since secured 6,000 square feet of warehouse space, and in 2013 delivered over 1.4 million pounds of food (a retail value of over $5 million).

Programs

Food For Life is distinct from the two organizations listed above in that they are focused on one specific program, the redistribution of food. Their website states:

> "Food for Life holds a unique niche among Canadian food relief charities in that we focus on redistributing fresh, nutritious food as opposed to traditional food bank fare such as canned goods. Our clients tell us that they are often not able to afford fresh food and that having access to this healthy food allows them to focus on obtaining other life essentials as they work towards no longer relying on our services."[6]

How this organization has inspired The Seed's distribution work

The Seed would like to support emergency food providers' procurement efforts, to increase the efficiency of community food procurement. These efficiencies may lead to partner agencies having staff time freed up to focus more directly on the programs they operate. Food for Life was able to achieve this with a number of their partner agencies through their sourcing of donations from wholesalers, distributors, and manufacturers. The partnerships with wholesalers and distributors have also served as inspiration for The Seed. The Seed recognizes that Food Waste is a huge issue that is gaining considerable interest in both traditional media circles as well as academia. Food for Life's redistribution program titled "ReFresh" has demonstrated that a successful program can be built on donations of high-quality food that would otherwise go to waste.

Related Resources:

- Reassembling Community Food Flow - http://tfpc.to/wordpress/wp-content/uploads/2014/02/CFP-Community-Food-Flow.pdf

[6] http://www.foodforlife.ca/whoweare.php#objective

- Finding Food - http://tfpc.to/wordpress/wp-content/uploads/2014/02/CFP-Finding-Food.pdf

2. DESCRIPTION OF RESEARCH COMPONENTS

Introduction

The Seed's goals in developing this feasibility and pilot operational plan are to: identify opportunities to increase the amount of fresh produce available to emergency food providers; define the storage needs of EFPs and possible locations; define the timing, costs, and support required for the distribution of produce; and support a collaborative atmosphere in reaching these goals. Based on precedents set by the organizations outlined above, among others, as well as the resources available to us, The Seed identified several avenues for research and partnership development towards achieving these goals. Each component took its own particular form as the objectives and support available differed from one projected outcome to the next, which are outlined below. The review of objectives and methods will be followed by results from each outreach avenue.

Research and partnership development avenues: (1) community consultations with emergency food providers; (2) farmer outreach; and (3) partnership development with retailers and wholesalers.

Community consultations with emergency food providers

Objectives

1) Determine the types and quantities of produce needed by emergency food providers. The information provided will help The Seed acquire amounts that do not exceed demand, thus avoiding food waste and inefficiencies.
2) Determine the space needed for refrigeration, freezing, and storage in a cold storage facility. The information provided will be used to establish the square footage of the facility, staffing requirements, and how The Seed can link each organization's needs.
3) Develop a potential schedule for the cold storage site/reefer truck. The information provided will be used to determine staffing needs, how often the truck will be used, and distance travelled.

Methods

1) Develop a list of questions that will result in the acquisition of enough data to meet the objectives listed above
2) Identify and compile a list of emergency food providers in Guelph
3) Rank the list according to program size and organizational capacity, with larger capacities interviewed first
4) Write an information letter that outlines the objectives and how The Seed wishes to collect data
5) Contact key staff at each organization, delivering the information letter and requesting an interview
6) Perform semi-structured interviews with representatives from emergency food providers
7) Collate data

8) Search for themes
9) Calculate space, staffing, and scheduling requirements based on collected data

Given these objectives and our available resources, we conducted a phased approach to interviewing organizations. The largest emergency food providers (Lakeside Hope House and Chalmers Community Services Centre) were interviewed first, because in addition to their free market they redistribute to smaller pantries. From there, The Salvation Army, North End Harvest Market, Welcome In Drop In, and the University of Guelph's Central Student Association Food Bank were interviewed.

Farmer outreach

Objectives:

1) To identify whether, and how much, particular farmers are able/willing to donate to the initiative
2) To coordinate staffing and delivery schedules according to farmers' availabilities
3) To determine whether there is interest in The Seed operating as a non-profit business in the future that helps local farmers distribute their produce for profit

Methods:
For this component of The Seed's outreach strategy, we enlisted the support of the University of Guelph's Research Shop. From here, we established the following key activities:

1) Develop list of potential participants along with key contact information
2) Write information letters/email templates that explains the purpose of the surveys and overall work
3) Develop interview questions
4) Contact potential participants via telephone/email to arrange interview days/times
5) Conduct interviews with confirmed participants
6) Type out hand-written notes/clean up typed notes
7) Organize data according to their applicability to the five listed community concerns
8) Analyze whether the data are adequate to make claims whether the listed concerns would be alleviated by a hub with support from academic/grey literature
9) Determine the potential impact of a food hub on Guelph-Wellington farmers with support from academic/grey literature
10) Combine all written aspects into a final report
11) Revise/finalize summary report

Food waste diversion / wholesaler and retailer outreach

Objectives

1) To establish contacts with food industry professionals who can connect us with the produce we need (based on results from community consultations)
2) Develop relationships with organizations with the potential to support The Seed and this initiative in other ways (e.g. use of storage space)

Methods

1) Write an information letter that describes the work and our intended outcomes, and how partner organizations may benefit
2) Create a list of organizations that can be approached. The list could be organized and prioritized according to headings such as “probable donors”, “improbable donors”, and “unknown”. Organizations can be categorized according to information available through the media (e.g. newspaper articles they are featured in), prior participation in similar programs, philosophical alignment, and/or personal knowledge
3) Find relevant contacts at each organization and send them the information letter. The letter will prompt them to follow up with us if they are interested, and we will note that we will also follow up with them after a certain amount of time has passed
4) Follow up on the information letter by calling “probable donors”, and begin meeting with them. Continue to call probable donors until we have established enough connections to allow us to meet the 2,600lb weekly goal. Move into “unknown” list where needed, and improbable donors thereafter

Because the objectives of this outreach endeavor are more relationship-based rather than informational, the methods we are following have more to do with relationship building rather than strict academic information gathering. Because of this, the description of the results from this effort may appear to be more informal within this document compared to the results of the first two outlined outreach efforts.

3. RESULTS FROM CONSULTATIONS

There are two main components to the results from interviews with emergency food providers. In the first instance, their responses revealed that they still face a number of limitations when it comes to providing their guests with fresh produce, which are outlined below. These findings are consistent with those described in The Research Shop's 2011 and 2013 reports on food insecurity in Guelph referenced earlier. This demonstrates that the need for collaboration and a focused approached to procuring fresh produce is ongoing. Second, the results from the 2015 interviews has informed the creation of a potential delivery schedule that includes the types and quantities of produce desired. This information is presented in Chapter 2.

Limitations facing emergency food providers

1. Volunteer shoppers and on-farm pickups

Each emergency food provider that was interviewed makes use of volunteer shoppers to varying degrees. These volunteer shoppers hunt for the best deals on produce and non-perishable items. The amount of time spent on price hunting varies by organization, but is a task that could be significantly reduced through a coordinated procurement approach. Additionally, several organizations either employ someone or have volunteers that go to farms or established not-for-profit distributors to pick up excess produce. Within this approach, staff have stated the concern of needing to make oneself available at any time because they do not want to pass on a donation for fear of not receiving an offer again.

2. Inconsistency and unpredictability of produce donations

Emergency food providers struggle with the inconsistency of donated produce. Relying mostly on the excess from local farms to supplement their budgets for produce, they are subject to the effects of seasonality, bumper crops, and market demand for farmers' products. As a result, it is nearly impossible for organizations to predict with any regularity what they might be able to offer their clients/guests. This results in fluctuations in the diets of those accessing emergency food.

3. Fruit is in high demand, but hard to acquire

Each organization that was interviewed noted that their guests absolutely love fruit, and it does not stay on their shelves for very long. Because emergency food providers work with a limited food budget and rely heavily on donations from local farms, they have a particularly hard time acquiring fruit. The fruit season in Ontario has a very small window, and items that store well (e.g. apples) tend to have an extended market for their sale.

4. Amount of produce available over winter is significantly decreased

Just as the fruit season is very short, the window for Ontario produce donations is also relatively slim. Produce is available in abundance for five months (roughly June to October) out of the year, leaving seven months where emergency food providers are left to purchase imported produce with their lean budgets. It is likely that a direct result of this is that the fruit and vegetable consumption of people

accessing emergency food is significantly limited. This can have long-term health implications for those who have an ongoing need to access emergency food.

5. Smaller buyers do not receive bulk deals or special price lists

One organization interviewed makes large purchases through a local distributor each month. Because of this, and owing to the non-profit nature of this organization, they are offered special deals on items. Smaller buyers do not have this luxury, and as a result are either unable to stretch their food purchasing dollars as far, or rely heavily on volunteers to seek out the best prices available in the city. Where possible, the organization receiving deals will coordinate with other providers to help them capitalize on the discount pricing.

6. Several organizations are often offered significant donations

Despite receiving large offers, EFPs are often unable to take them for two reasons: a) they do not have the storage capacity and b) they cannot make use of it all. One emergency food provider has an on-site walk-in cooler and a truck used for pickups and deliveries, so they are able to take advantage more than other organizations, and will often redistribute some excess donations to other EFPs. Despite their on-site resources, they still face limitations when it comes to storage and distribution.

Opportunities resulting from the above

1. Increased efficiencies will result from the coordination of fruit and vegetable procurement

It is clear that organizations are reliant on volunteers generously offering their time to procure food on their behalf. Despite this occurring at no financial cost, organizations have an incentive to pool their needs and take advantage of a centralized procurement and distribution structure. This would free up a significant number of volunteer hours that could be used to maintain or develop other programs. Additionally, those that employ staff to procure food alongside their other duties would have some time freed up to focus their efforts elsewhere.

2. Increased consistency and predictability of produce deliveries

The Seed is consulting with retailers, distributors, and farmers to quantify the availability of produce that could be donated to this initiative on a consistent basis. Resulting from the emergency food provider consultations, The Seed knows the amounts and types of fresh food required, as well as ideal delivery dates and times. Using this information, The Seed can make specific requests from farmers, retailers, and distributors with the intention of supplying exact amounts of requested items, or at the very least close substitutes.

3. Increased access to fruit through minimal reliance on seasonality

It is likely that the bulk of donations will come from distributors and retailers given the sheer volumes they deal with. Distributors in particular have large buying power, and are not subject to seasonality. As a result, they have year round access to oranges, bananas, and other popular fruit. Receiving fruit

donations from distributors will increase both the quantity of fruit given out week-by-week, and the number of weeks in which it is available.

4. Increased availability of produce over the winter months

Similar to the year-round acquisition of fruit, relationships with distributors and retailers will increase the quantity of produce available during the lean winter months. These partnerships will decrease the reliance on the local food system, and will capitalize on the luxuries associated with a global food system. This also goes hand-in-hand with ensuring consistency and predictability of produce deliveries, allowing organizations to plan ahead and require less adaptation as the seasons change.

5. A decrease in the cost of produce through bulk purchasing

As mentioned earlier, one organization in particular is able to access discounts through bulk pricing. While these discounts are often extended to other organizations, it is an informal arrangement, occurs at a small scale, and is infrequent. When organizations begin to pool their purchasing and procurement efforts, these cost savings can be extended to all participating groups. This has the further benefit of requiring fewer volunteer hours to be spent hunting for the best prices on produce.

6. Increased intake of larger donations that would otherwise go unclaimed

With the cold storage that The Seed has access to, large donations that have had to go unclaimed could now be acquired, stored, and distributed across agencies. This leads to both greater access to fruits and vegetables and reduces the amount of food that may end up in food waste streams. Some large-scale donations, such as potatoes, have the potential to be stored over a period of several months, and slowly distributed according to week-by-week need.

4. RESULTS FROM COMMUNITY-BASED STRATEGIC PLANNING SESSION

Background

On Friday, November 6th, 2015 The Seed convened a strategic planning session with community members who have been or are interested in being involved establishing a fresh food storage and distribution hub to increase access to fresh food available through emergency and community food programs in Guelph. Approximately 25 people attended the session, representing a wide-array of programs, organizations, and perspectives. Those invited were specifically chosen for both their initial collaboration on the distribution project in the past, and to further extend the project's community reach. The planning session was facilitated by Rebecca Sutherns of Sage Solutions. There were four goals established for the day, which were: (1) to update the community on the work that had been done with respect to the distribution project; (2) to develop shared understanding of the project background, goals and vision; (3) to share preliminary findings from the feasibility study and proposed operational plan for a pilot program; and (4) to clarify and determine roles, resources, and best ways forward. After an initial presentation which addressed the first three goals, the facilitated portion of the session was dedicated to addressing the forth goal for the day. This document focuses on the outcomes of the latter portion of the session.

Resources

A main component to the facilitated session was a discussion around resources with the goal of determining what resources are needed, currently exist and could be acquired through the group. This was broken down within four broad categories:

- "Have it", i.e. The Seed and/or workshop participants currently have these resources to support the project;
- "Need it", i.e. the distribution project is in need of these particular resources;
- "I can do this", i.e. I personally have something I can offer the project be it space, tools, or skills; and
- "I have this friend (…or I wish I did), i.e. I know someone who can offer the project some support, be it space, tools, or skills.

Participants were encouraged to share their thoughts and resources on chart paper placed around the room, each containing one of these headings. The results of their contributions are captured in the chart that follows, where each "Needed" resource is matched with a corresponding "Have" or "Can" resource, where possible.

Need it	Have it	I have this friend	I can do this	Follow up actions
Safe food handling training	Tom Armitage – Distribution Coordinator, The Seed			
Equipment safety training, e.g. skid steer	Tom Armitage – Distribution Coordinator, The Seed			
Schedule of volunteers who can act quickly to glean from farms	Growing network of general Seed volunteers	Who organizes volunteers for the Guelph Community Health Centre		Outreach/development of list of volunteers willing to do this specific task - The Seed
A network of farmers and distributers willing to donate staples and partnership agreements	List of farmers/distributers to approach	Farmers looking for more cold storage, willing to donate	Sweet corn and pie pumpkins, but would need people to pick and process for freezing – Amy Strom	Reach out to farmers to develop partnerships and solidify support
Space	Offers to use space to get started with pilot Potential offer to purchase/fund (long-term) space Potential land for permanent cold storage facility	Who would have space/any needed resources to store food Local builder to offer trades to build facility		
Storage Equipment – ie. refrigerated unit/freezer	Refrigerated space in existing spaces to use for pilot Potential in-kind donation of cooler/freezer -	Who has a small cooler unit for sale - Heather Lekx(Ignatius Jesuit Centre)		

Need it	Have it	I have this friend	I can do this	Follow up actions
	Lowes			
Distribution materials	Money for distribution resources (crates, dollies, freezers, etc.)			
A truck and funding to operate (Insurance money)	Money for a truck Gas/Maintenance funds			
Parking space for truck	Offers to use parking spaces for truck (HOPE House, The Salvation Army)	Who knows where we can park the truck		
Dedicated Staff	Funding for a part time Distribution Coordinator for 2016/17			
Additional funding opportunities and resources	Interest from some interested funders Completed applications to selected funds – e.g. Wellbeing Fund	Who may want to invest (Kate Vsetula and Brendan Johnson)	Kate Vsetula – Community Health Manager, Guelph Community Health Centre – fundraising, grant writing Lyndsay Sytsma – Development Director, Hope House - Proposal and grant writing	
Additional resources offered, not associated with a specific “need it”				

Need it	Have it	I have this friend	I can do this	Follow up actions
Detailed operational/business plan	Feasibility results – forthcoming in early 2016	University connections, e.g. The Food Institute Connections with local food caterers and restaurants – Karen Kamphuis, Executive Director, Hope House		

Clarifying and determining roles and structure

This discussion began with an outline of supports the project would need in general, and subsequently the types of skills the distribution project would need both now and in the coming months and years. In terms of support, participants suggested that the distribution hub could benefit from having access to individuals or organizations with expertise in the following areas: distribution and logistics; farming; retail; accounting; volunteer management; those with lived experience of food insecurity; and someone with political connections. To this end, it was decided that it would be appropriate to create an ad hoc advisory group made up of members who can provide knowledge, experience, and connections within these realms. In this session, Rebecca Sutherns asked the group for volunteers who would like to be part of this ad hoc committee, to which seven people put their names forward. It was suggested that this group meet as soon as possible and address issues such as: longer-term ownership and governance; outreach to individuals who could provide knowledge and experience in areas not yet covered; the possibility of moving to be a more action-oriented group alongside their provision of advice.

Best ways forward

After participants were given a chance to fill out the chart paper, Rebecca guided the group through the responses. As you can see in the table above, each of the “Need Its” had corresponding offers for contacts and resources. As a result, the question was posed, “what’s next?” Overwhelmingly participants shared the sentiment that The Seed should proceed with the pilot project given the resources available that can address the issues that emergency food providers face. Because this support exists, the question was posed “what advice do you have for the short and medium-term work plan?”

Participants suggested the following:

- Follow up with contacting those that offered support or connections

- Continue to investigate the offers of cold storage space
- Continue to investigate sources of donations
- Buy the truck.

While completing these tasks, and planning for future work, participants advised that The Seed should give thought to several items and how they should guide decision making, particularly:

- The development of a system of measuring success and failure during the pilot project, and what to watch for and learn from in the early months running the program;
- A staged approach was encouraged, slowly adding elements and programs once The Seed is confident that current activities are successful and efficient;
- Staying “nimble”, “responsive”, and “flexible” were key attributes that participants suggested could lead to the sustainability of the work;
- Maintain a “culture of involvement”, that is “diverse”, “inclusive”, and “collaborative” can lead to choices that are reflective of community needs and wishes.

Next steps

The Seed is committed to continuing to moving forward with leadership of the pilot program and has set a goal to begin this pilot in February 2016. The Advisory Group will be meeting regularly to advise this work, as well as continue to support the development of the long-term project. One final item that came out of the consultations was a name for the community fresh food storage & distribution project – The POD (Procurement, Ordering and Distribution) - that will be used going forward in this document.

5.1 FARMER OUTREACH CONTEXT

Introduction

This section begins with a report written by Marion Davies, a Seed volunteer, that is meant to provide some context to the farming community within which The Seed's distribution work is situated. It examines changes in the nature of farms in Wellington County, Ontario over the past 25 years. This report particularly focuses on the area and number of farms in the County, as well as their capital value and industrial focus. This report concludes that there has been a trend towards farmland consolidation in Wellington County, resulting in fewer, larger, more-valuable farms that are increasingly focused on grain and oilseed production. This report also provides a short context comparison, which demonstrates similar trends in the farmland characteristics of Simcoe County. These findings point to the urgency of engaging Wellington County's small-scale farmers in meaningful business and marketing opportunities to slow the trend towards consolidation.

Brief overview of the risks associated with farmland consolidation

There are a number of socioeconomic and environmental risks associated with farmland consolidation. Socioeconomically, a trend towards fewer and larger farms results in a decrease in the average income of rural citizens,[7] which leads to a rural exodus.[8] Consolidation can lead to instances of greater income inequality, higher unemployment rates, greater poverty, increases in crime and civil suits, fewer community organizations and services, among several other impacts related to industrialized agriculture.[9] Environmentally, larger farms lead to greater instances of watershed pollution,[10] wind and water erosion,[11] a decrease in biodiversity,[12] and an increase in carbon dioxide production.[13]

This section below covers the statistics and trends in Wellington County, and topics surrounding farmland consolidation. This section is an abridged version of the full report (see Appendix A for full stats, figures, and citations).

Total area under cultivation in Wellington County

In Wellington County, the number of acres being farmed has increased since the early 1990s. Given this trend, it is expected that the area dedicated to farmland in Wellington County will continue to increase in the short-term.

Number of farms and average farm size in Wellington County

The number of farms in Wellington County steadily declined between 1991 and 2011. Given this prolonged decline, it seems unlikely that the number of farms in Wellington County will increase

[7] Durrenberger, E., & Thu, K. (1996). The expansion of large scale hog farming in Iowa: The applicability of Goldschmidt's findings fifty years later. Human Organization, 55(4), 409–415.
[8] Goldschmidt, W. (1978). Large-Scale Farming and the Rural Social Structure. Rural Sociology, 43(3), 362–266.
[9] Lobao and Stofferahn (2007)
[10] Broussard, W., & Turner, R. E. (2009). A century of changing land-use and water-quality relationships in the continental US. Frontiers in Ecology and the Environment, 7(6), 302–307.
[11] Lal, R. (2004). Carbon emission from farm operations. *Environment international*, *30*(7), 981-990.
[12] Belfrage, K., Björklund, J., & Salomonsson, L. (2005). The effects of farm size and organic farming on diversity of birds, pollinators, and plants in a Swedish landscape. Ambio, 34(8), 582–588.
[13] Peters, C. J., Bills, N. L., Wilkins, J. L., & Fick, G. W. (2008). Foodshed analysis and itsrelevance to sustainability. Renewable Agriculture and Food Systems, 24(01), 1.

in the next few years. The number of farm operators in Wellington County has also declined during this period. Since 2006, there has been an increase in the number of large farms (defined here as 180-559 acres) in Wellington County; meanwhile, the number of small farms has declined.

Farm types in Wellington County

The use of farmland in Wellington County is changing. The amount of land dedicated to the following uses has increased since 2006: summer fallow, Christmas trees, woodlands, and wetland land-use. There was also an increase in total land farmed. In contrast, there was a decline in the area of farmland used for pasture. Some farm industries experienced growth between 2006 and 2011. In particular, there was an increase in the number of farms in the following industries: poultry and eggs, sheep and goats, and grain and oilseed production.

Farm value in Wellington County

Since 2006, there has been a decline in the number of farms of lower values, although the number of farms valued at over $500,000 has increased. This supports the argument that farms in Wellington County are becoming more capital-intensive.

Context comparison

Simcoe County underwent a level of farm losses comparable to those of Wellington County between 1991 and 2011. The area of farmland increased in both Wellington and Simcoe Counties between 1991 and 2011. This issue, among others, prompted an investigation into the merits and feasibility of a food hub in Simcoe County to act as a local food broker, ostensibly to create more markets for smaller farms.

Conclusion

This report demonstrates the changing characteristics of Wellington County's agricultural sector, reflected by trends of fewer farms, of larger size, and of higher value. Consolidation in Wellington County is reflected by a declining number of farms, despite an increase in large-sized farms and total farmland acreage in the County. Further, there has been a decline in the number of low-value farms, while the number of high-value farms has increased. These trends are mirrored in Simcoe County, suggesting that farmland consolidation is occurring on a regional level in Southwestern Ontario. There is literature that suggests that food hubs have the potential to be a key piece of local food infrastructure, and so could become a notable piece for The Seed to investigate what its role could be amongst its other distribution work.

It is within this context that the work of The Research Shop is situated, and is described in the next section.

5.2 FARMER OUTREACH RESULTS

Introduction

The Seed is investigating the capability of farmers, distributors, and retailers to donate fresh fruits and vegetables. Also, some community groups have modest budgets for produce, so the system would not be entirely reliant on donations. The Seed is also looking into the feasibility of developing a brokering model where the storage facility acts as a liaison between farmers and retailers. This report details the findings of informational surveys conducted by Research Shop interns with farmers from Wellington County for the purpose of creating an operational, business and sustainability plan for The Seed's cold storage and distribution centre.

Research Goals

The following 5 concerns were listed by emergency food providers, that there is/are:

1. an insufficient food supply, particularly in the case of nutritious and/or fresh food, as well as various high-demand items;
2. a lack of adequate staff, volunteers, and overall community engagement;
3. an insufficient space for food storage;
4. difficulties with transportation to and from emergency food provision organizations;
5. insufficient communication and collaboration between organizations.

The purpose of the survey was to determine if farmer support can help alleviate the concerns listed by emergency food providers and conversely, to see how the storage facility might be able to support farmers. Specifically, surveys were conducted to help inform prospective budgets, scheduling, and staffing for the cold storage and distribution centre.

Methods

Farmers were primarily identified through the Taste Real Guelph Wellington local food map. Towards the end of each of our surveys, farmers suggested names of others that may be interested in participating. In total 28 farmers were contacted via phone, email, or in person. Of the 28 contacted, informational surveys were conducted via phone or in person with 12 farmers.

The Research Shop and The Seed collaborated to develop initial survey questions, which were then expanded by referencing a similar food hub feasibility study done in Perth County (Turnbull *et al.*, 2013). These were adopted to suit the needs and scope of the food hub in Guelph. See Appendix B for full survey.

Results

Overall the farmers that were surveyed are interested in maintaining contact with and receiving updates on the cold storage and distribution hub. There is variation in the way that farmers would like to be involved with the hub. Specifically noted, two farmers (2/12) indicated that they are interested in

the project but it is beyond their capacity to participate at the moment; three farmers (3/12) indicated that they could be involved in a minimal capacity and only when they can find the time or have surplus; one farmer (1/12) indicated they would be available for consulting if new famers needed support; and one farmer (1/12) sits on The Seed committee and is actively involved in the development of the storage hub.

Four farmers (4/12) are interested in developing pre-season contracts with the hub and said they could also help with pre-season planning. Famers with less production variety know which products they are able to provide, while farms with a wide variety of produce (CSA oriented farmers) are willing to cater to the needs of the hub if consulted early enough in their planning season. There are small amounts of land available for growing specific crops in need. The following discussion presents the findings of the surveys with farmers as they pertain to the concerns listed by emergency food providers. Academic and grey literature has been used to support, contrast or nuance the answers provided by farmers.

Addressing emergency food supply

The ability for Guelph Wellington locally-focused farmers to contribute to the emergency food supply is unclear as many farmers noted variability in their surplus or ability to contribute high volumes of produce to the hub pending time and resource constraints. All farmers indicated that they do have an overabundance that they would be willing to donate when possible; three farmers (3/12) specifically mentioned that they already donate their products to food banks. Farmers noted that either they or other farmers might be more interested in participating in the hub if they were compensated at wholesale price, or partially compensated with transportation costs or percentage of donation value. Also participation is more likely if they know exactly what is to be expected of them or if they have a rise in surplus in the future. Other food hubs note that it may take some convincing to get producers interested in the food hub when they have marketing relationships set up elsewhere and that the hub should work to educate farmers on the benefits of participating (Matson *et al*., 2014).

The potential supply of fresh foods is mainly seasonal. Seasonal extension structures are used by some farmers and others have the capacity to store vegetables for supply over winter. Potatoes (3 farmers), sweet corn (2), beets (4), carrots (5), squash (2) were all identified as products grown in large volumes by multiple farmers. Raspberries, cabbage, tomatoes, peppers, onions, garlic, beans, broccoli, salad greens, kale, cucumber and parsnips are also grown in large volumes but not across multiple farms. A wide variety of other vegetables and some fruits are grown by farmers however they are grown in smaller quantities and geared for specific markets that may change year to year (CSA customers, restaurant contracts).

When farmers donate or sell their imperfect produce, also known as ‘seconds’, to hubs, clients can have a direct link to quality fresh food. Barham *et al*. (2012) note that this helps steer hubs away from becoming a place where retailers might only contribute ‘leftovers’ which are food items that have been sitting in the food supply chain for longer and may be damaged or over ripened foods. This is not to say leftover contributions should not be welcomed, rather to draw attention to the differences in food qualities between farm surplus and retail surplus. Seeing seconds as valued food items also gives farmers access to a new market they may not have access to otherwise.

Based on the number of farmers surveyed, and the variation in their capacity to contribute to the hub, this report can conclude that there is potential to supplement the food hub with fresh produce from the farmers surveyed. Relationships with more farmers and other organizations, such as food retail, will be needed to ensure consistent supply of fresh food year round. Organizers should engage early with interested farmers for pre-season planning of specific items. They should also plan ahead for processing expected produce that will arrive at variable times and in a range of quantities.

Staffing and volunteers

Emergency food providers' concern over lack of adequate staff, volunteers, and overall community engagement carries into the discussion with farmers. While farmers indicated a desire to contribute to food security and community development in the county they also added the reminder that they still need to maintain farm income though their priority markets. Labour constraints were a recurring barrier to participation. Three farmers (3/12) specifically mentioned that they are maxed out in current capacity so adding on other projects and absorbing any extra costs was a big concern.

For some farms the availability of gleaners helped to change what might be available to donate to the hub. Gleaners are volunteers who go to farmers' fields after harvest to collect any produce that may have been left behind or may otherwise go unharvested for a variety of reasons. One farmer noted: "*If people came to harvest it would encourage us to do it. Providing harvesters, that changes things quite a bit*." Most farmers were interested in at least having access to a list of gleaners that could be contacted and organized quickly. Two farmers (2/12) open to gleaners noted that it would be helpful to have some consistency in participation as there is some training required for proper crop harvesting and management to maintain the fields. Depending on the structure of the farm, organizing last minute gleaning is possible. Others are interested in developing a more consistent schedule that may involve a yearly, monthly, bi-weekly gleaning, or through a barter agreement on specific products.

This sentiment is mirrored in the literature. Food hub operators stress that workforce stability is good for longevity as specific skills are needed to run a successful food hub; effort should be made to grow and maintain these skills (Barham *et al*., 2012; Matson *et al*., 2014; Fischer *et al*., 2013). Volunteers are recognized as valuable to the start-up phase but a long-term plan should be in place that minimizes reliance on volunteer work. Food hubs noted that volunteers can be hard to train and manage and would go about it differently if they could do it over again by developing training materials (Matson *et al*., 2014).

Collaboration and community engagement

Collaboration with agencies was one of the ways farmers saw the hub benefiting their business. With smaller and variable quantities of surplus, having a hub helps to focus donations. Farmers also saw this collaboration as beneficial to community development as they repeatedly expressed the importance of engaging with local food security through their operations.

It is worth noting that many established food hubs have encouraged or emerged out of collaboration between farmers (LeBlanc *et al*., 2014). While The Seed is actively looking for farmer input in the development of the cold storage facility, it is ultimately a Seed-driven endeavor. These

surveys have acted as the first step towards increasing possible collaborations with farmers as they remain an integral part of the food community.

Addressing storage concerns

Farmers gave mixed reviews in their willingness and/or need to store food products at the hub. Farmers indicated that rental fees would make sense for storage space, especially if there were freezers or specialized storage units for products (such as garlic and onions). Rental fees based on percentage of sales or in exchange for a proportion of the product were suggested. Matson *et al*. (2014) note that this is a valuable way to produce extra income for the hub. They also note that it may be more appropriate for smaller hubs to adopt a "just in time" exchange schedule to avoid the need for excessive storage.

Some general comments that emerged in surveys around storage concerns include:

- Recommendation of an automated washing facility so that higher volumes of products can be dealt with if donated.
- Three of the farms were certified organic. The labeling of such products is a needed consideration for the hub as some farmers would like to differentiate their products. Other than this, labeling issues were not a priority.

Issues of transportation

Matson *et al*. (2014) note that transportation is one of the main operation costs for food hubs to manage. The Seed has secured funding for the purchase of a truck to help facilitate produce transportation. Farmers were asked about their transportation needs.

Having products picked up from the farm is helpful but varies as a requirement for participation in the hub. For example, four farmers (4/12) indicated that they would not mind bringing products in if they are on their way to a drop-off elsewhere in town. In this case, farmers did not expect to be compensated for the drop off because they are interested in donating products to the hub. There was brief mention by one farmer (1/12) however that if funding is available it would be helpful to offset transportation costs at times to ensure sustainability: "*If there is funding, I would like to get money for delivery, but I want to donate as much as possible*." Farmers that were further away or had more variation in surplus timing would require transportation to make participation viable. Logistically, one farmer (1/12) noted that it is good to have crates to pick up items from the farm.

Communication

All farmers indicated that they do not have a lot time to communicate what is available for pick up. For certain crops it may be 1-3 days' notice. For other crops, such as sweet corn, a more general idea of what will be leftover can be made available one month in advance with a two-week window for pick up. Developing contracts for particular items would help for the reliability and predictability of products. Furthermore, Matson *et al*. (2014) recommend careful consideration of software use as the hub develops. If software is being developed from scratch, there needs to be room for changes to be made as the hub develops. There is no software exceptionally favoured by food hubs noted but they range from simple excel sheet tracking to more complex websites and ordering systems.

Brokerage Potential

Brokerage services were not a priority for famers at the moment, yet there is potential for this interest to grow in the future as the hub becomes more established. Some farmers felt the brokerage service did not fit within their farm model; they prefer to have a more direct relationship with their customers. Others felt they were busy enough with their farm operations that this was not needed and they saw the hub as more of a donation centre.

While Guelph Wellington local farmers may be hesitant at this time, elsewhere food hubs have contributed to economic success for farms of various sizes by providing an alternative to dominant agri-food markets. Hubs have been noted as especially helpful to medium-sized farms "who are too large to rely on direct marketing channels as their sole market outlet but too small to compete effectively in traditional wholesale supply chains" (Barham *et al*., 2012, p. 5). Food hubs have helped farmers grow their businesses by dealing with marketing, transaction costs, facilitating market access, and providing steady income with higher price guarantees (Barham *et a*l., 2012). Considering the growth in demand for local food in Ontario (Sumner, McMurtry, & Renglich, 2014) there is potential for economic partnerships to be made between the distribution hub and local famers in the future through a brokerage model following and building on the success of established and/or establishing food hubs (see also Fischer *et al*., 2013).

Conclusions

Guelph Wellington farmers gave insight into where they stand currently with the development of the Seed's cold storage and distribution hub. Judging by farmers' responses, there is a willingness and anticipation to participate and this will increase as more structures are put into place. According to LeBlanc *et al*. (2014) "moderate involvement of farmers [is] characteristic of start-up food hubs" (p. 126), but that increased farmer involvement is crucial to food hub success especially in the non-profit sector. Overall there are ways for the needs of emergency food providers to be supported seasonally and partially by local famers with potential for growth in the future.

Limitations of the Report

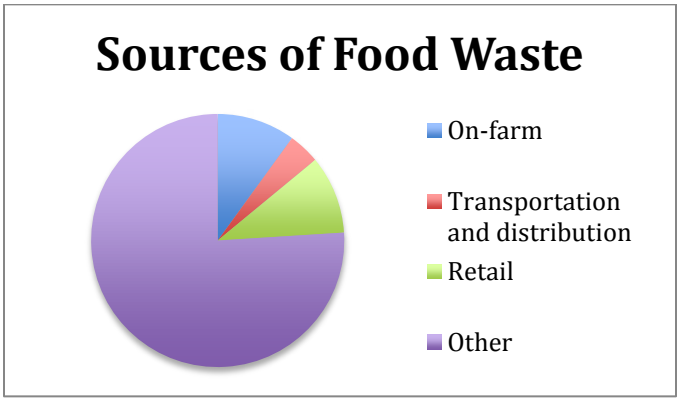
The research for this report occurred alongside farmers' growing season. Time constraints permitted securing surveys with only 12 farmers. The list of farmers who may be interested in collaborating is growing as word spreads about the distribution centre.

6. RETAILER AND WHOLESALER OUTREACH

This section of the report begins with a description of the nature and extent of food waste in Guelph, Southwestern Ontario, and throughout Canada. It was written by a volunteer, Alexis Van Bemmel, who is a University of Guelph Masters student in the Department of Geography studying food waste. This section is included to demonstrate the need for diversion strategies to decrease food waste, and how The POD can be a channel for these products. Logistics, social stigma, and other operations that currently divert "waste" are explored. This is followed up with a step-by-step approach to reaching out to retailers and wholesalers.

The nature and extent of food waste in Guelph / Southwestern Ontario / Canada

Food waste is increasingly recognized as a serious issue that carries significant environmental, social, and economic consequences.[14,15] Food waste refers to food that is fit for human consumption, but is, for a number of reasons, not eaten. This consumable food often never even reaches the consumer. This is especially true in the retail and wholesale sectors, where food becomes waste due to appearance standards, misunderstood best before dates, and over supply, just to name a few causes.[16] For example, it is estimated that 10% of food waste occurs on the farm, before even reaching retailers, 4% occurs during transport and distribution, and another 10% occurs at the retail level.[17] Five to six percent of the waste in the retail sector alone occurs in the produce section.[18] Since there is so little data available for Canada in specific, statistics from the UK retail sector have been used to indicate that the highest levels of waste occur in the produce, dairy, meat, and bakery sections.[19] In many developed countries, the majority of food waste is largely avoidable, which means that the food was edible prior to being thrown away.[20,21]



[14] FAO, 2011
[15] Lipinski, 2013
[16] Stuart, 2009
[17] Gooch, 2014
[18] Ibid., 2014
[19] Ibid., 2014
[20] Quested, 2011
[21] Lipinski, 2013

Although the amounts of food waste in Guelph are not currently known,[22] almost forty percent of food produced in Canada is wasted, and twenty percent of this is completely unnecessary and could have been eaten by people. Economically, this equals $31 billion annually in wasted food.[23,24] In addition, approximately four million Canadians are food insecure, which equals about thirteen percent of households.[25] According to the food recovery hierarchy, the best option is to decrease edible food waste by reducing it at the source and by distributing it to those experiencing food insecurity.[26,27]

Research has indicated that food-insecure diets often lack fresh and nutritious items, such as fruits and vegetables.[28] Further, diets low in fresh fruits and vegetables are shown to increase the risk of chronic diseases.[29] Therefore, redistributing surplus food increases overall available nutrients to people, thereby addressing food security issues.[30]

The potential for a cold storage facility to divert potentially wasted produce

Logistics

Donating food "waste" or surplus food to those in need is a well-established practice. In Ontario, the Donation of Food Act (1994) was implemented to remove any liability for those donating food "in good faith"; however, the wording of the Act is somewhat vague, and there is no direct mention of food that has passed its best before date, which leads to retailer interpretation of the edibility of these foods.[31,32] Because of this, fears of legal culpability remain a major barrier; however food providers should continue to stress that the Donation of Food Act is in place to remove any liability should the food be found to be unsafe. Other identified barriers to the donation of fresh and quality food include distribution logistics, storage issues, and institutional standards that regulate what food can be accepted for donation.[33, 34, 35, 36]

It comes as no surprise that refrigerator and freezer capacity extends the life of perishable foods.[37] However, a key barrier is the absence of proper infrastructure, particularly cold storage, required by emergency food providers/charities in order to accept and store perishable foods.[38]

[22] Beattie, 2015
[23] Gooch et al., 2010
[24] Gooch et al., 2014
[25] Tarasuk & Dachner, 2014
[26] Papargyropoulou et al., 2014
[27] EPA, 2014
[28] Finn et al., 2014
[29] van't Veer et al. 2000
[30] Griffin et al., 2008
[31] Donation of Food Act, 1994
[32] Schneider, 2013
[33] Alexander & Smaje, 2008
[34] Stuart, 2009
[35] Schneider, 2013
[36] Uzea, Gooch & Sparling, 2013
[37] Finn et al., 2014
[38] Uzea et al., 2013

Due to the amount of perfectly edible excess food (i.e., still edible but unsalable food – damaged packaging, food close to its best before date, not up to industry standards, oversupply, etc.) exiting our food system and entering the waste stream, there is a strong need to capture and redirect these still high quality foods to hungry people. This is in no way suggesting that hungry people should eat "wasted" food, but rather that this food is good for consumption by anyone, and that food waste is unacceptable in the context of hunger. In order to counter many of these barriers, food rescue organizations need proper infrastructure, such as cold storage, freezers, and refrigerated trucks.[39] Aside from needing storage space for perishable items, commonly rescue organizations are relied upon to pick up food from donors.

There are a few examples in Canada of organizations that are overcoming these barriers. Food for Life,[40] the largest food redistributor in the Halton Region, focuses its efforts on both fresh and frozen perishable foods. They have a storage warehouse, cold storage facilities, and three delivery trucks that make it possible to divert approximately two million pounds of food per year from the landfill. In most cases, Food for Life has partnerships with retailers, farmers and wholesalers who call or email when they have items available, which Food for Life then picks up from their locations.

A partnership between the Mustard Seed Food Bank and Thrifty Foods, in Victoria, BC, are developing a food rescue project involving refrigerated trucks and cold storage in a distribution hub, made possible by a grant from the Victoria Foundation. The spokesperson for the foundation exemplifies the importance of cold storage transportation and storage, stating that surplus food cannot be collected until there is a proper way to collect it and a place to store it.[41]

Although not a Canadian initiative, Fork it Over![42] in Portland, Oregon, paired the Metro Food Bank with a solid waste agency to share resources and contacts in order to create and coordinate programs to both reduce and divert waste, as well as provide the food bank with healthy foods. In the research conducted for this project, it was found that the key barrier to accepting healthy foods by emergency food providers was the limited amount of equipment for recovering, transporting, storing, and distributing perishable foods safely. Grants were given to food rescue agencies to help them purchase refrigerated trucks, coolers, freezers, and other equipment needed.

Distributing products as-is or requiring further processing

Many food rescue organizations distribute the product as-is, often on the same day it is picked up. However, many organizations also process foods further in order to extend the shelf-life of the food, or to provide meals to meal programs, or to organizations that do not possess the

[39] Finn et al., 2014
[40] Food for Life
[41] Dedyna, 2015
[42] Tools of Change

infrastructure to do so themselves. A few examples of these practices in Ontario are discussed below.

Loving Spoonful in Kingston,[43] collects fresh/perishable excess food from restaurants, grocery stores, etc. in order to redirect it to those in need. In 2014 they diverted 47,000 pounds of food from the landfill. They pick up food and deliver it on the same day to emergency food providers in the area. They also have a "Reserve Preserves" program, which cans, freezes, juices, or dehydrates perishable foods (over 3,000 pounds) to be able to supply emergency food providers and meal programs with nutritious foods throughout the year.

Second Harvest[44] in Toronto rescues and delivers fresh, perishable foods to over 200 emergency food providers, diverting over 7 million pounds of food from landfills per year. They are able to do this with the use of seven trucks (and one van) on the road seven days a week. They also have a collective kitchen, that not only teaches food skills, but also prepares meals for guests as well as for agencies that do not have the infrastructure to do so themselves. This extends the life of perishable foods as well as allows for a range of quality of foods to be accepted.

The Ontario Christian Gleaners[45], in Cambridge, Ontario dehydrate all donated products in order to increase shelf life (while they send all their products overseas to combat hunger in developing countries, it is still a worthy endeavor to make food last and capture nutrients).

Potential concerns

Stigma

A major barrier that exists within emergency food provision and food "waste" donation is the stigma associated with "second-class products for second-class people".[46] These kinds of statements are highly problematic; firstly, the recipients of food donations are not 'second class people', and secondly, the food donated to charities is still often high quality, otherwise the food industry would likely not donate it in the first place.[47] It has also been noted that society's expectations of food are at fault here, where only the best looking and freshest are deemed appropriate, and an overly cautious view of food safety exceeds the actual edibility of many products.[48] Recommendations for overcoming these misconceptions can be achieved by raising public awareness, and educating policy makers, authorities, and companies around this issue, such as by publishing guidelines that deal with this issue.[49]

[43] Loving Spoonful
[44] Second Harvest
[45] Ontario Christian Gleaners
[46] Schneider, 2013
[47] Midgley, 2013
[48] Schneider, 2013
[49] Ibid., 2013

Reduced quality

One concern that accompanies the donation of food is the quality. As noted above, fear over quality of products and food safety is often a barrier for retailers in donating surplus foods. Despite this, the responsibility often falls on the food redistribution organization to ensure the donated food is of suitable quality,[50] which requires labour-intensive sorting practices done by volunteers.[51] Although the additional processing of items (i.e. chopping, drying, preserving, etc.) allows for a range in quality of products to be accepted (and less food to be wasted), this is also dependent on the work of the food redistribution organization, and usually volunteer labour.

It has been noted that donations are typically bigger, more reliable, and of better quality the earlier they are accessed within the food supply chain.[52] Relationships with food producers, distributors, and retailers must be fostered in order to increase the flow of excess food to emergency food providers.[53]

References

Alexander, C., & Smaje, C. (2008). Surplus retail food redistribution: An analysis of a third sector model. Resources, Conservation and Recycling, 52(11), 1290–1298. http://doi.org/10.1016/j.resconrec.2008.07.009

Beattie, S. (2015, September 3). Guelph researchers and local retailers tackle food waste dilemma. Guelph Tribune, retrieved from http://www.guelphtribune.ca/community/guelph-researchers-and-local-retailers-tackle-food-waste-dilemma/

Dedyna, K. (2015, August 11). 'Food Rescue' project to deliver more perishables to the hungry. Times Colonist, retrieved from http://www.timescolonist.com/news/local/food-rescue-project-to-deliver-more-perishables-to-the-hungry-1.2026612

Donation of Food Act. (1994). S.O. 1994 Chapter 19. Retrieved from http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_94d19_e.htm

Environmental Protection Agency (EPA). (2014). The Food Recovery Hierarchy. Retrieved from http://www.epa.gov/foodrecovery/

FAO. (2011). Gustavsson, J., Cederberg, C., Sonesson, U., van Otterdijk, R. & Meybeck, A. Global food losses and food waste: Extent, causes and prevention. Swedish Institute for Food

[50] Midgley, 2013
[51] Tarasuk & Eakin, 2005
[52] Midgley, 2013
[53] Finn et al., 2014

and Biotechnology (SIK) and FAO.

Food for Life, http://www.foodforlife.ca.

Finn, S. M., O'Donnell, T., & Walls, M. (2014). The time is ripe for food recovery. BioCycle, September.

Gooch, M. & Felfel, A. (2014). "$27 BILLION" REVISITED THE COST OF CANADA'S ANNUAL FOOD WASTE.

Gooch, M., Felfel, A., & Marenick, N. (2010). Food Waste in Canada Opportunities to increase the competitiveness of Canada ' s.

Griffin, M., Sobal, J., & Lyson, T. a. (2008). An analysis of a community food waste stream. Agriculture and Human Values, 26(1-2), 67–81. doi:10.1007/s10460-008-9178-1

Lipinski, B., Hanson, C., Lomax, J., Kitinoja, L., Waite, Ri., & Searchinger, T. (2013). Reducing Food Loss and Waste, (May), 1–40.

Loving Spoonful, http://lovingspoonful.org.

Midgley, J. L. (2013). The logics of surplus food redistribution. Journal of Environmental Planning and Management, 57(12), 1872–1892. http://doi.org/10.1080/09640568.2013.848192

Ontario Christian Gleaners, http://ontariogleaners.org/365.

Papargyropoulou, E., Lozano, R., K. Steinberger, J., Wright, N., & Ujang, Z. Bin. (2014). The food waste hierarchy as a framework for the management of food surplus and food waste. Journal of Cleaner Production, 76, 106–115. http://doi.org/10.1016/j.jclepro.2014.04.020

Quested, T. E., Parry, a. D., Easteal, S., & Swannell, R. (2011). Food and drink waste from households in the UK. Nutrition Bulletin, 36(4), 460–467. http://doi.org/10.1111/j.1467-3010.2011.01924.x

Schneider, F. (2013). The evolution of food donation with respect to waste prevention. Waste Management (New York, N.Y.), 33(3), 755–63. http://doi.org/10.1016/j.wasman.2012.10.025

Second Harvest, http://www.secondharvest.ca.

Stuart, T. (2009). Waste: Uncovering the Global Food Scandal. London, UK: Penguin Books.

Tarasuk, V. & Dachner, N. (2014). Household food insecurity in Canada, 2012. Toronto: Research to identify policy options to reduce food insecurity (PROOF). Retrieved from http://nutritionalsciences.lamp.utoronto.ca/.

Tarasuk, V., & Eakin, J. M. (2003). Charitable food assistance as symbolic gesture: an ethnographic study of food banks in Ontario. Social Science & Medicine, 56(7), 1505–1515. http://doi.org/10.1016/S0277-9536(02)00152-1

Thang, H. (2008). Food reclamation as an approach to hunger and waste : A conceptual analysis of the charitable food sector in Toronto , Ontario. Esurio: Journal of Hunger and Poverty, 1(1), 1–10.

Tools of Change, Fork it Over!, http://www.toolsofchange.com/en/case-studies/detail/166.

Uzea, N., Gooch, M., & Sparling, D. (2013). Developing an Industry Led Approach to Addressing Food Waste in Canada.

van't Veer, P., Jansen, M., Klerk, M., Kok, F. (2000). Fruits and vegetables in the prevention of cancer and cardiovascular disease. Public Health Nutrition, 3(01), 103-107.

The evidence presented above by Alexis Van Bemmel suggests that there is a significant opportunity to divert food from being sent to landfill and composting facilities, both in Ontario and Wellington County specifically.

How this enterprise fits with the community need and capacity of emergency food providers:

The question was posed, 'would you like to order more perishables?', to which emergency food providers overwhelming responded yes; however, there was a caveat. Due to budget constraints, one of the larger providers of produce can only distribute produce that is donated to them, and the other larger provider already spends to the limits of their budget. In both cases they would like to increase the proportion of produce to non-perishables, but would need to receive the produce for free. **By capturing some of the food that would otherwise go to waste, this enterprise could provide more produce to organizations. These organizations would not otherwise have the capacity to acquire more, despite the needs of their patrons.**

One of the questions posed to the Cold Storage Working Group by others is, 'what will you do in the winter months to acquire produce?'. This question comes as a result of our commitment to supporting local farmers where possible, and obviously in the winter months we would be relying more heavily on farmers who have storage capabilities, and in some cases assisting them with storage of their products. Despite this, we don't initially expect that the budgets of organizations, nor the quantity of local food stored will be able to meet the community need.

Most importantly, both Hope House and Chalmers are reliant on donations of fresh produce to either completely support or supplement their produce programs respectively. In the winter, Hope House's produce offerings are nearly completely diminished, while Chalmers' is decreased by roughly 45%. **Therefore, in the winter months, the food waste diversion enterprise will be able to supplement the overall produce provision efforts, and maintain a high level of quality and quantity of food made available to their clients.**

Some organizations have noted a particular difficulty in acquiring fruit, especially in the winter months. **Fruit acquisition will be emphasized within the food waste diversion enterprise.**

Precedent(s):

As mentioned above, there are a number of organizations within Ontario that are successfully running operations that either glean or receive donations of high quality food that would otherwise go to waste. Their efforts are summarized in the table below.

Organization	Location	Food Diverted From	Food Diverted To	Amount Diverted
Food Not Waste	Waterloo Region	Farmers' markets, restaurants, retailers	House of Friendship (free), farmers (paid)	Over 7,000lbs in five weeks
Loving	Kingston	Caterers, restaurants,	25 local agencies	47,000lbs in

Organization	Location	Food Diverted From	Food Diverted To	Amount Diverted
Spoonful		hotels, farmers	(shelters, meal programs, drop-in centres, pantries)	one year
Food for Life	Halton Region	Corporate food sector (primary food producers, wholesalers, processors, distributors, manufacturers)	Local food banks and social service agencies (more than 27 agencies)	Over 1,400,000 lbs of food in 2012/13
Ontario Christian Gleaners	Cambridge	Farms, produce packaging and distribution companies, processing plants	Food insecure communities overseas	4000-7000lbs per week
Second Harvest	Toronto	Food retailers, manufacturers, restaurants, caterers	Over 200 social service agencies in Toronto (food banks, meal programs, breakfast programs, community centers, drop-in centres, shelters)	> 7 million lbs per year
Forgotten Harvest	Windsor/Windsor-Essex County	Farmers, manufacturers, wholesale food distributors, grocery stores, restaurants, caterers, dairies	Emergency food providers (schools, transitional group homes, church feeding programs, and food banks).	More than 1,500,000 lbs since 2011

Concern(s):

1. **Perception** is a serious concern with this enterprise, and we will have to be very careful in the development phase to avoid the stigmas associated with consuming food that others did not want. As mentioned earlier, such an enterprise could be viewed as contributing to the class divide, where one group of citizens pays for the best of the crop while those who are unable to pay consume what remains.

How to alleviate this concern: There are several methods of acquisition and distribution that could be followed:

a) **Sources of food that are not considered "waste" at the time of acquisition** – e.g. farmers markets, where farmers may be willing to donate what remains on their stands at the end of the day rather than sell it for cheap and encourage customers to come late to take advantage. (Need to consider whether the Guelph Food Bank still does this).

b) **Processing the food acquired from retailers** – e.g. retailers may not be able to sell carrots that have gone soft, or zucchinis that have lost some of their lustre, and these are not products

we would expect anyone to consume out of sheer need. However, these types of items present a great opportunity to be furthered processed, either in cooking classes, collective kitchens, or supporting social enterprises looking to redeem fruits and vegetables that would otherwise go to waste.

c) **Gleaning farmers' fields** – e.g. Farmers often grow more than their markets require as a risk-management strategy. Many vegetable farmers in Wellington County operate on a smaller scale and often require a greater number of labourers in order to decrease/eliminate the use of chemical sprays. This causes the cost of production to increase, and so the products cost more. With a gleaning program we would be harvesting and delivering produce that is not only fresh, but typically out of reach for low income individuals.
d) **Acquiring food from distributors** – e.g. in this scenario there may be food that is approaching the best before date that would not work for retailers, since they would have to receive, stock, and sell the item in a certain timeframe. If this timeframe is tight, they may not want to buy that particular product, thus decreasing their risk that they may be unable to sell. If the "food waste enterprise" is designed to turn over stock quickly, then the best before date becomes less of a concern because the products will still be fresh.

2. Having **appropriate and adequate destinations** for all of the food acquired will be very important.

How to alleviate this concern: There are at least two ways of handling this concern, one being proactive the other reactive.

a) Proactive – e.g. knowing how much food emergency food providers need, what types of foods their clients desire, and how often and what particular days they make food available will allow us to acquire only as much as can be consumed. Operating within a "in one day, out the next" framework, we can maintain a tight inventory while decreasing our chances of wasting food. Through consultations with emergency food providers, we have quantified the need, which is summarized in Chapter Two of this feasibility/operational plan.
b) Reactive – e.g. no matter how tight we design our "in one day, out the next" inventory, we are likely to have some spoilage. Products may be delivered to us in bulk, with healthy-looking tomatoes at the top, and some inconsumable/too-far-gone-to-process tomatoes below. In this situation, we could do one of two things: (1) establish an on-site composting system to deal with spoiled produce; or (2) sell/donate the spoiled products to pig farmers since pigs happily consume food scraps.

Process towards establishing a Food Waste Diversion Enterprise:

1) Quantify the need for perishables in Guelph Wellington by weight and desired types of fruits and vegetables
2) Identify potential partners: retailers, restaurants, distributors, farmers etc.
3) Interview interested organizations to determine how much waste they produce, the type of waste, and of what quality
4) Have organizations measure their waste for a month before determining whether the organization would become a pickup point
    a. From here they could break it down to weekly averages and determine what day is likely to be best for pickup, etc.

5) Create volunteer teams and scheduling for pickups and deliveries
6) Begin project incubation phase
7) Receive feedback and revise the program where necessary

Project Incubation Phase:

To help manage expectations, let partner organizations know that we will be doing a trial period for several weeks, with a break to determine the effectiveness of the program. If it is determined that the program is effective for all parties, activities will resume. This break will also allow for a focused look at how efficient the system is operating, and where improvements can be made. These improvements could very well be developed as the project progresses, but the pre-determined break serves to punctuate that the program may very well be temporary.

7. CONCLUSION: FEASIBILITY FROM A SOCIAL PERSPECTIVE

This chapter demonstrated that there are already initiatives operating in other cities that are addressing food security issues in a manner similar to what The Seed is working to implement. These organizations have set a precedent showing that fruits and vegetables can be distributed to clients in respectful, inclusive, and sustainable ways. Inspired by these organizations, The Seed has sought to determine whether similar approaches could be implemented within Guelph. Meetings with farmers, retailers, and wholesalers have proven valuable, as members of each of these groups have indicated a desire to support the emergency food system in some way - either through donations, access to gleaning opportunities, or reduced pricing on particular items. Consultations with emergency food providers revealed that there is a definite interest in collaboration to ensure that the fruits and vegetables acquired are distributed to the community. Although the consultations revealed a number of limitations facing emergency food providers, each limitation had a corresponding opportunity that the distribution work could apply to overcome it. Consulting with the broader food community, presenting preliminary findings and requesting input on the direction the work is taking was a valuable exercise that again revealed broad support for the project. Enlisting the help of a graduate student to describe the nature and extent, and opportunities and challenges associated with food diversion was valuable in determining how to avoid the social stigmas associated with distributing food that would otherwise go to waste. Knowing that there are other organizations within Southwestern Ontario and Canada in general that have built successful and respected programs that receive diverted food is encouraging. Because of the precedents that exist and overwhelming supports that this early distribution work has received from the community, it is clear that The POD is feasible from a social perspective.

CHAPTER TWO

THE PILOT OPERATIONAL PLAN FOR A COLD STORAGE AND DISTRIBUTION SYSTEM THAT SUPPORTS EMERGENCY FOOD PROVIDERS

Chapter Overview

This chapter begins with an overview of value propositions, i.e. what The POD will offer emergency food providers to alleviate their expressed concerns. Following this is a review of the locations that have offered cold storage space and amenities. Section Three contains further results from the community consultations described above, specifically how they informed a timeline of operations and a potential delivery schedule. Using this information, along with other compiled ideas and data, a preliminary budget has been created and is presented in Section Four. Although this feasibility and operational plan is predominately focused on the development of a pilot distribution program, there are other enterprises that could compliment this work quite well, and are presented in Section Five. Following each of these sections is a conclusion stating whether The POD presents itself as a way to meet the needs of community members and emergency food providers, primarily from an economic perspective.

1. OVERVIEW OF VALUE PROPOSITIONS

Given that The Seed's work is a result of consultations with emergency food providers, and is attempting to resolve each of the concerns expressed in prior reports, the following table is a categorical description of how The POD proposes to resolve the concerns. We are using the term "value proposition", which is an innovation, service, or feature intended to make a company or product attractive to customers. These propositions will guide the operations carried out at The POD.

Community Concern	Value Proposition(s)
Insufficient fresh, high-demand food items	• Increase access to healthy and high-demand food at community organizations • Reduce food costs[54] • Enable organizations to be more intentional about healthy food • Divert food that would otherwise go to waste
A lack of adequate staff, volunteers, engagement	• Release staff-time to focus on program planning and outreach • Increase capacity for food program delivery
Insufficient space for storage	• Acquire space through donation or funding to support the storage needs of emergency food providers
Difficulties with transportation	• Create more dedicated community food distribution capacity for the sector
Insufficient communication and collaboration	• Collaborate and consult with emergency food providers • Be transparent in communications

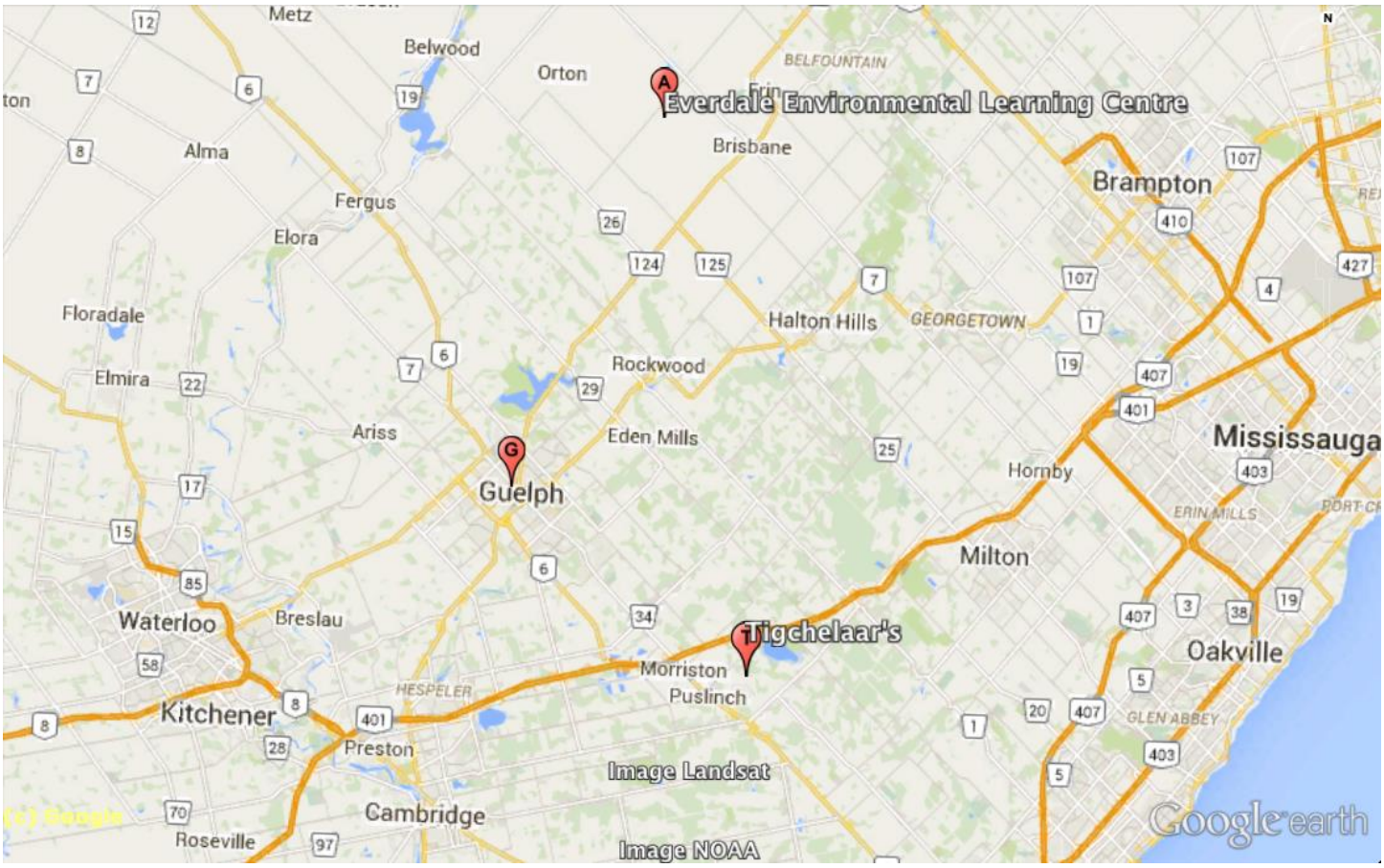
How each of these value propositions will be implemented will become clear over the next several sections that outline the pieces that will make up the pilot distribution program.

[54] "A dedicated wholesaler would almost certainly offer overall better prices than the nearest supermarket" (Discussion Paper: Options and Solutions in Food Distribution and Procurement in Toronto).

2. SPACE AND OPPORTUNITIES

The Seed has been fortunate to have received offers for the use of refrigerated space in two locations. The first is in Puslinch, Ontario and includes both a 100 sq. ft. cooler and a separate 864 sq. ft. cooler with racking and a 16ft high ceiling. They have a forklift and other items that would be very useful in storing and handling produce. This space would act as the main depot for large-scale and/or long-term donations from retailers, wholesalers, and farmers.

The second space is in Hillsburgh, Ontario. The space offered here is considerably smaller, but the value of the partnership could be high. The farm is willing to ask for, and is prepared to receive, donations of high-quality produce that would be delivered alongside his normal orders. These could then be stored on-site and picked up for delivery to emergency food providers. These two locations can be seen in relation to Guelph in the map below:



Current opportunities & rationale for pilot program

While work towards the establishment of a more long-term storage and distribution hub are underway, the two offers of refrigerated space offer a great opportunity to pilot the food distribution program. The farm located in Puslinch, has unused cold storage space and has expressed interest in partnership to support a pilot program. After initial visits and discussions, a proposal for a pilot

program run by The Seed using this space has been developed. The rationale for this pilot program is:

1. The building of a facility dedicated to distributing fruits and vegetables throughout Wellington County is at least a year away, and may not be operational for two years. A pilot program would provide an opportunity to support the efforts of emergency food providers in the immediate future.
2. Complete funding to support storage and distribution through the Ontario Trillium Fund work will begin as of February 2016. This would allow The Seed to use this funding to meet project goals.
3. A pilot program will provide the opportunity to collect real-world data to better inform the evaluation of the pilot program and will lead to the development of a strong case for support when the time comes to apply for additional funding
4. Issues surrounding food waste are gaining a lot of traction in both the media and academic circles. Starting a pilot now represents an opportunity to be part of the groundswell in this area.

The following is an outline for how a pilot fresh food storage and distribution pilot program could begin and be sustained in the near future.

Factors to Consider

When The Seed can begin the pilot program depends on a number of factors, each of which have their own associated timelines that are outlined in the following table.

Task	Who involved?	Timeline for completion
Purchase truck	- Distribution Coordinator - Directing Coordinator - Volunteer mechanic - Seed Committee	Can occur anytime, could be timed to coincide with the completion of all other tasks (avoid paying for insurance on an underused truck)
Partner with organizations who will donate/divert produce	- Distribution Coordinator - Directing Coordinator - Food waste volunteer consultant, Alexis Van Bemmel	This project could feasibly be completed within a month. To meet the needs of EFPs we need approximately 2700lbs per week, but we could begin operations once we reach half this amount.
Secure cold storage space - agree to terms	- Distribution Coordinator - Directing Coordinator - Seed Committee	We could work to establish an agreement that precedes the completion of consultations with donors
Complete farmer consultations	- Carly Fraser (Research Shop) - Distribution Coordinator - Directing Coordinator	Final report due mid-December

Task	Who involved?	Timeline for completion
Confirm schedule for delivery with partnering emergency food providers	- Distribution Coordinator - Directing Coordinator	Could occur anytime
Secure additional funds for rent and vehicle insurance	- Distribution Coordinator - Directing Coordinator	Wellbeing Grant application submitted – if successful funds would begin April 2016
Purchase additional distribution equipment (with OTF funding)	- Distribution Coordinator	Could occur anytime

Based on information above, a pilot program could begin using the space on this farm as early as February 1st, 2016. The main challenge to meeting this date will be establishing relationships with farmers, retailers, and distributors who will donate produce. As stated, we need approximately 2,700lbs per week of donations to meet emergency food needs. It is possible that one or two partnerships with larger retailers and/or distributors could meet this need. How this operation could work, among other factors, are outlined in a separate document. Additionally, securing additional funds – specifically for rent and insurance - that are not covered in the Ontario Trillium Fund (OTF) grant stand as a limitation to beginning operations at this point.

3. OPERATIONS AND SCHEDULING

One of the intentions of interviewing emergency food providers was to gather enough information that a delivery schedule could be made that suits all parties involved. By knowing when food is normally picked up or delivered, and when it is made available to their clients, a corresponding delivery schedule can be made. Developing a schedule independent of this information could lead to food being wasted if it does not fit with the timing of their clients' arrival.

Scheduling

The first table below shows the time produce is made available to clients. This information is used to inform when is a logical time to deliver produce to them to ensure that the greatest amount of it will be distributed. Some locations are open once a week, others are open multiple days over the course of a week. Those that are open throughout the week will likely require multiple delivery days to ensure that the produce delivered does not spoil as a result of having too much delivered at once and sitting unrefrigerated.

Times Produce is Provided to Clients

Day	Monday	Tuesday			Wednesday				Thursday			Friday	
Time	Afternoon	All day	All day	10:30am to noon	All day	7-8pm	6-7:30pm	10:30 to noon	Afternoon	10am to noon	10:30am to noon	10am to noon	10:30am to noon
Organization	Hope House	Hope House	CSA Food Bank	Salvation Army	Hope House	Chalmers	NEHM	Salvation Army	Hope House	Chalmers West	Salvation Army	Chalmers	Salvation Army

Building on this information as well as the needs expressed in the consultations, the second table shows potential delivery days and amounts delivered. The amounts to be delivered listed in the table are based on each organization's informed estimations of how much food they purchase, receive in donations, and make available to their clients on a weekly basis. In some instances, particularly among groups that rely heavily on donations, the amounts that they currently give out weekly are not reflected here. Instead, the numbers shown are a reflection of how much they give out during peak season. As noted in Chapter One Section 3 (limitations EFPs face), the amount of produce made available to the community during the winter months is significantly decreased. Because The Seed's efforts are meant to decrease the cost of produce to organizations, the amount of food purchased can be increased over the winter months and contribute to a more stable diet among food insecure individuals and households.

Potential Delivery Days and Schedule

Day	Amount (lbs)	Location	Delivery Time	Minutes Req'd		Total mins
				Pickup	Delivery	
Monday	800	Hope House	Morning		90	90 – 120
	75	CSA Food Bank				
	200	Salvation Army				
Tuesday	Pickup 1625lb Tuesday order for Wednesday delivery		Anytime to farm	90		90 – 120
Wednesday	800	Hope House	12pm	40	15	130 – 175
	400	Chalmers	12:30pm		15	
	350	NEHM	1pm		15	
	75	CSA Food Bank	11:30am		45	
Thursday	No Pickups or Deliveries					
Friday	Pickup 1075lb Friday order for Mon delivery		Anytime to farm	120		120 – 150
						430 – 565

Also included within the delivery day and schedule table is an estimation of the amount of time required to pickup and deliver produce each day. These estimations are based on calculations that appear in the next section. Using the total minutes for each task and putting a dollar amount to the hourly rate for the work to be completed, a budget has been created (see next section).

Absent from this pickup and delivery schedule is the space offered at Everdale. At the moment, it is difficult to predict how much purchased and/or donated produce will come through this partnership as the conversations with farmers in the surrounding area have yet to begin.

4. BUDGETING

This section begins with calculations that establish what the one-time and ongoing costs will be before grouping expenses, together with revenue, into a table. Done this way, the reader has a chance to understand the logic and method used to establish the budget.

Expenses

The POD will have the following expenses that include one-time capital costs and ongoing costs of operation:

	Item	Covered by OTF?
One-time capital cost	Refrigerated truck	Yes
	Plastic crates for food distribution	Yes
	Equipment for loading and unloading produce	Yes
Ongoing costs	Truck in transit (fuel costs)	Yes
	Truck in transit (staff costs)	Yes
	Distribution Coordinator administration time	Yes
	Truck maintenance	Yes
	Insurance cost of vehicle	No
	Insurance cost of Seed employee working off-site	No
	Rental cost of off-site space	No

Because the funds are available for the one time capital costs, they will not be a focus of this expense section. Note that there are several ongoing costs that are listed as being covered by The Seed's OTF grant, however this is only true for the first two years of operation. Because of this, we will delve into each of the costs associated with these items and activities.

Truck in transit (fuel) costs

- I have estimated the fuel consumption of a truck with a 16ft box at roughly 12.2L per 100km (while empty)*
- In the interest of being conservative, an additional 15% fuel cost will be added to run the reefer while driving with a full truck, which becomes 14L/100km
- The price of diesel, as of August 28, 2015 in Guelph is: ~$1.00 per litre
- This equates to a cost of approximately $14/100km of driving
- One trip to Stratford** is 148.6km round trip

- Therefore one trip to Stratford, round trip, would cost $20.80 in fuel

Truck in transit (staff) costs

These calculations consider a pay rate of $22.88 per hour:

- Trip to Stratford staff time for 2hrs and 10 minutes (time in the truck) - $49.57
- Additional staff time for loading and unloading (approximated at an hour) - $22.88

Adding the total fuel costs to the staff costs resulted in a total estimated cost of a trip to Stratford at $93.26***

*This is at the low end. Bob Moore of Hope House has a 16ft cube van that is rated for 18L/100km. Adding in refrigeration at 15% and this becomes 20.7L/100km. This increases the total estimated cost to $103.21.

**Stratford was chosen as an example due to the possibility of receiving donations from The Local Community Food Centre, which already distributes to Hope House

***This does not factor in insurance or vehicle maintenance

Trillium Funding to Cover Fuel and Maintenance

- As part of The Seed's Trillium funding, $2,200 is allocated in both years 2016 and 2017 towards gas and maintenance for the vehicle.
- Let's say that 20% of this value goes towards maintenance each year, that would be $440*. This leaves us with $1760 to cover diesel costs annually.
- Using the above fuel mileage estimations, the truck could travel 12,571kms** +/- 5% to account for fluctuations in diesel pricing.
- This equates to 85 round trips to Stratford. Realistically, in a year Hope House may make approximately 20 trips.

*This is a very low rate to dedicate towards the maintenance of a commercial vehicle, especially given that refrigeration units have a reputation of breaking down regularly. That said, The Seed is negotiating with truck sales and rental agencies on leasing and renting options that cover full service.

**Low end of the estimate. 18L/100km consumption rate would decrease the covered cost of annual kms traveled to 8,502.42.

Combining fuel and staff costs to create a "Per Kilometre Fee"

As established, we are working with an estimated range of fuel economy between 14L and 18L; the following calculations are considered at 14L/100kms and later adjusted for 18L/100kms to complete the range.

Gas costs: $14/100km of driving, or $0.14 per kilometre. Diesel is currently priced at $1/Litre

Time spent is calculated at an average pace of 60kms an hour (highway and city driving combined), so a 100km trip equates to 1 hour and 40 minutes, or 100 minutes total. This equates to 1 minute per kilometre.

Staff costs $22.88 per 60 minutes, which equates to $0.38 per minute.

With the above in mind, there will be times where both staff and gas are “in use”, this time will be calculated at $0.52/km. When the staff person is simply loading the truck, and the truck is stationary, this time will be calculated at $0.38 per minute.

The following table uses two hypothetical scenarios, one involving a pickup from The Local in Stratford and the other a pickup from a local farm 35kms from downtown Guelph. The total works out accordingly:

Cost Breakdown of Delivery Fees for Two Scenarios

Scenario	Distance (Round Trip in KMs)	Time (average pace of 60km/hr)	Time (minutes) * Fee (Driving)	Time (minutes)* Fee (Loading)	Total
The Local Pickup	148.6	148.6	148.6*0.52	30*0.38	$88.67
Farm Pickup	70	70	70*0.52	30*0.38	$47.80

These totals represent the low-range estimate. The high-range estimate would be $0.04 more per kilometre driven. It would change the above totals to $94.62 and $50.60 respectively. These latter calculations are much closer to the estimated driver costs calculated earlier and so will be used going forward.

Note: It will be important to track fuel mileage for the first couple months to acquire real world numbers specific to the truck/reefer that is purchased. This will allow for more accurate fees and cost coverage. Given that the truck will likely need a Commercial Vehicle Operators Licence (CVOR), tracking kilometres and destinations will be a requirement anyway.

Should the truck be used to travel a total distance beyond the 8,500-12,500kms estimated, or should the costs of repair exceed what is allocated annually, further funding or financial input of some sort would be required. As mentioned earlier, The Seed has funding for some ongoing costs over two years, and has yet to acquire funding for insurance and the rental of a facility. How these two important pieces could be covered financially will now be explored within the Revenue section.

Revenue

Having some revenue-generating streams at The POD, no matter how modest, relieves some of the pressure related to relying on outside funding to maintain programming and contributes to the sustainability of the model. As mentioned in the previous section, there are a couple areas in particular where The Seed is short on funding. This section outlines how The POD can recoup some of the costs associated with running the emergency food distribution program, while doing it in such a way that allows partner organizations to tangibly contribute to the sustainability of the project.

Markup on delivery

To start, within the discussions with emergency food providers, The Seed inquired about each organization's willingness to contribute financially to the distribution effort in some way. What made most sense was to establish a delivery fee that would cover a small amount of the operational expenses. Because all of the food will be weighed prior to delivery, the value of the food will be difficult to determine, and The Seed recognizes that many if not all groups rely on a tight budget, the following was proposed: emergency food providers will pay the dollar equivalent equal to 10% of the weight of the food delivered. For example, if 100lbs of food is delivered, the food provider will pay $10. Taking the average cost per pound of nine common fruits and vegetables using the Canadian Price Index (CPI)[55], I calculated the average cost per pound overall. This worked out to be $1.52 per pound. Using this average, the dollar value of 100lbs of produce would be $150, therefore in this fee for delivery model EFPs are saving roughly 93% on the cost of food, i.e. paying $10 and receiving $150 worth of produce. This fee will be referred to elsewhere as a "markup", though strictly speaking it is simply a fee.

Next, from the consultations we know exact quantities in pounds that each emergency food provider would like to receive each week. Using this information, we can calculate what the total income from this operation would be. This information is displayed in the next table.

Amount to be delivered weekly and the associated costs

Location	Chalmers	Welcome In Drop In	Hope House	CSA Food Bank	NEHM	Salvation Army	Total
Poundage delivered	900	900	1000	700	650	250	4400
Cost of delivery	$90	$90	$100	$70	$65	$25	$440

As it stands, each of the organizations are only responsible for paying the 10% markup on the food that is delivered to them directly, rather than paying 10% for the whole order. Should The POD

[55] Prices acquired and adapted from: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/econ155a-eng.htm

manage to deliver the above quantities on a weekly basis, this could result in an income of $440 from the distribution of emergency food. To reiterate, The Seed is only looking to recoup some costs associated with food redistribution, and not to profit from it. In the above scenario providers are receiving produce with an approximate retail value of $6600 for just $440.

There may be circumstances where relying on donations leads to a decrease in quantity and/or quality. In this case, The Seed and its partners should consider "opportunity buys", described below.

What are "opportunity buys"?
Wholesalers and retailers create their orders according to previous sales data, and attempt to make predictions on what they may sell in the future. There are many variables involved in whether these predictions turn out to be accurate and all their produce is sold, or the alternative where they are left with an abundance of particular items that they are unable to sell. In the latter case, these items are often sold off at a reduced price at the retail level, for example at Loblaw's stores they appear as pink 50% off stickers. Wholesalers also sell particular items at reduced costs when their projections are not in line with actual demand. The ability to buy these products at reduced costs is termed "opportunity buys".

Why consider opportunity buys?
There is some risk associated with relying completely on donations, specifically: there may be a decrease in the quality; there may be some degree of unpredictability in terms of what food is available, how much, and how often; there may be periods where no donations are available at all. The Opportunity Buying Model is meant to mitigate the above risks. If retailers and wholesalers know they can recoup at least some of the sunken costs that they may otherwise lose, they may be willing to sell high quality products that are reaching a best before date and need to be cycled off the shelves in favour of new shipments. Also, approaching for-profit retailers and wholesalers with empty pockets may result in short conversations if they've been approached before and/or if they see coordinating donations as something not worth their time. That said, The POD will continue to prioritize the acquisition of donated perishables above all other methods.

How would this model work?
There are two methods to setting up a system that is capable of taking advantage of opportunity buys. The first will be referred to as The POD's Food Purchasing Fund, wherein The Seed applies for and acquires funding to begin purchasing food on behalf of emergency food providers. The second will be referred to as Emergency Food Provider's Purchasing Fund, wherein each group that has a budget and wants to participate can front a certain amount of money that The POD can then use to procure produce through opportunity buys. The similarities and differences are laid out in the table below, which also contains further descriptions of how the model could work.

	The POD's Food Purchasing Fund	**Emergency Food Provider's Purchasing Fund**
Source of funds	Fundraising, grants, sources external to The Seed and emergency food providers	Emergency food providers pool financial resources from their own budgets to start operations
Associated costs	The POD will incur administrative and operational costs while negotiating with retailers/wholesalers, driving when picking up/delivering produce, and communicating	

	The POD's Food Purchasing Fund	Emergency Food Provider's Purchasing Fund
	availability. These costs will be reimbursed through the 10% mark-up on the weight of food delivered.	
Payment method	The POD pays for reduced cost food on behalf of emergency food providers who then pay for the produce dollar for dollar. E.g. The POD purchases $500 of food, emergency food providers pay $500 for the food (in addition to the weight mark-up)	Emergency food providers fund the start-up. For example, EFPs give $500 to The POD to begin purchasing. The POD buys $500 of food, then sells it back to EFPs, dollar for dollar. The POD then has $500 to put towards purchasing the following week.
Advantages	EFPs pay only after receiving food.	Avoids having to put time and resources towards grant writing.
Disadvantages	Grants may be hard to come by for this particular work. Grants are time consuming.	Not all EFPs have budgets to put towards the purchasing of produce.

This scenario changes the budgets and costing significantly as seen in the next table. The cost of food has been calculated by taking the total weight requested, multiplying it by 1.2 (retail value of produce is on average $1.50 per pound, but since this is wholesale a factor of $1.20 has been used), and dividing it by 2 (i.e. 50% reduced). The markup in this case is on the cost of food, rather than weight, which decreases the amount EFPs need to pay for delivery to help compensate for the increased cost of the produce itself.

Amount to be delivered weekly and the associated costs (Opportunity Buys)

Location	Chalmers	Welcome In Drop In	Hope House	CSA Food Bank	NEHM	Salvation Army	Total
Poundage delivered	900	900	1000	700	650	250	4400
Cost of product (approximate)	$540	$540	$600	$420	$390	$150	$2640
Cost of mark-up	$54	$54	$60	$42	$39	$15	$264

The value highlighted in green represents the income The Seed would acquire each week from this enterprise.

How availability of produce would be communicated and how purchases would be made is covered in Section 5, Logistics. In the next section we will look at applying the revenue and expense model to a "real world" scenario.

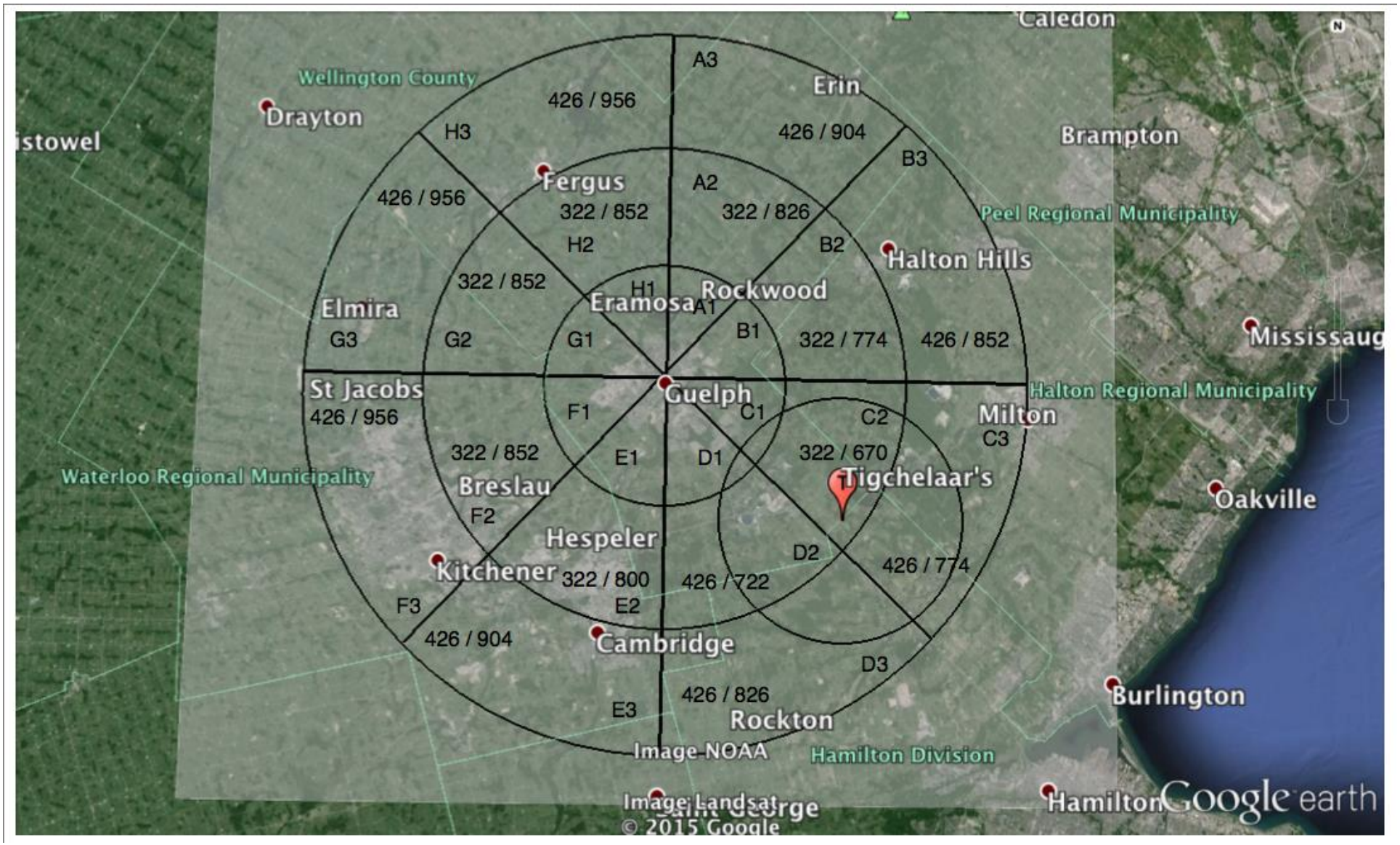
Matching revenue and expenses in a real world scenario

Efficiency is a major goal in developing this operational plan for The POD. One major component to running an efficient operation is ensuring that the truck is as full as possible at all times. To do this,

there should be as few pickup points as possible, and the value of the produce picked up should at least match the costs associated with driving there. To that end, I have created a “Zone Map”, which is presented on the following page. This map is split up into zones that represent various distances from downtown Guelph. Each zone has its own associated costs associated with driving there measured using the values listed earlier (truck in transit (fuel) and truck in transit (staff)). Using the distance, driving cost, and estimated handling costs, a total estimated cost to The Seed can be determined for each zone. From this total estimated cost, the value of the produce needed to justify the drive to that particular zone can be determined. A full breakdown appears after the Zone Map.

The distance for each zone is calculated from Guelph to the midpoint of far end of zone + straight line distance to the site + 20km (return to Guelph). In this particular chart, the calculated weight needed to justify the trek to a particular zone includes delivery to the site, handling on site, the drive back into Guelph and then the subsequent day’s activities.

Pickup Zones and Costs - No Storage / Storage: Estimates of Necessary Produce Value to Make the Trips Worthwhile



Pickup and Delivery to Storage

Zone	Distance	Driving Cost	Handling Cost	Total Estimated Cost	Weight Needed to Match Cost (lbs)
A3	65	33.8	11.4	45.2	904
A2	50	26	11.4	37.4	826
A1	30	15.6	11.4	27	722
B3	55	28.6	11.4	40	852
B2	40	20.8	11.4	32.2	774
B1	25	13	11.4	24.4	696
C3	40	20.8	11.4	32.2	774
C2	20	10.4	11.4	21.8	670
C1	20	10.4	11.4	21.8	670
D3	50	26	11.4	37.4	826
D2	30	15.6	11.4	27	722
D1	20	10.4	11.4	21.8	670
E3	65	33.8	11.4	45.2	904
E2	45	23.4	11.4	34.8	800
E1	30	15.6	11.4	27	722
F3	75	39	11.4	50.4	956
F2	55	28.6	11.4	40	852
F1	35	18.2	11.4	29.6	748
G3	75	39	11.4	50.4	956
G2	55	28.6	11.4	40	852
G1	35	18.2	11.4	29.6	748
H3	75	39	11.4	50.4	956
H2	55	28.6	11.4	40	852
H1	35	18.2	11.4	29.6	748

The next chart does not include delivery to storage, the truck will simply drive to a particular zone for pickup, then delivery directly from there.

Pickup and Delivery (No storage)

Zone	Distance	Driving Cost	Handling Cost	Total Estimated Cost	Weight Needed to Match Cost (lbs)
A3	60	31.2	11.4	42.6	426
A2	40	20.8	11.4	32.2	322
A1	20	10.4	11.4	21.8	218
B3	60	31.2	11.4	42.6	426
B2	40	20.8	11.4	32.2	322
B1	20	10.4	11.4	21.8	218

C3	60	31.2	11.4	42.6	426
C2	40	20.8	11.4	32.2	322
C1	20	10.4	11.4	21.8	218
D3	60	31.2	11.4	42.6	426
D2	40	20.8	11.4	32.2	322
D1	20	10.4	11.4	21.8	218
E3	60	31.2	11.4	42.6	426
E2	40	20.8	11.4	32.2	322
E1	20	10.4	11.4	21.8	218
F3	60	31.2	11.4	42.6	426
F2	40	20.8	11.4	32.2	322
F1	20	10.4	11.4	21.8	218
G3	60	31.2	11.4	42.6	426
G2	40	20.8	11.4	32.2	322
G1	20	10.4	11.4	21.8	218
H3	60	31.2	11.4	42.6	426
H2	40	20.8	11.4	32.2	322
H1	20	10.4	11.4	21.8	218

To summarize, each zone has its own associated costs, and if the amount picked up from that particular location is greater than or equal to the amount that The POD will receive for delivering, then The POD at the very least will break even on the exchange. The above charts make it easy to reference the quantities needed to justify driving to a particular zone. In a real world application, suppose a farmer calls up and they are located in Zone H2. They offer 200lbs of carrots, which after referencing the chart, is below the required poundage to break even. From there a decision can be made whether the value outweighs the cost. Thanks to the work of the Research Shop, we will have a strong idea of where donations will be coming from and can use the above chart to work things out ahead of time, and reference it again when unexpected calls for donations come in.

In reality, donations are likely to come from more than one location at any given time. To explore this, four different scenarios are outlined below that examine the costs associated with moving from one zone to the next.

Cost analysis and hypothetical scenarios

The following chart shows the distances between Zones and their different numbers (e.g. A1 vs. A2). For example, to calculate crossing from Zone A3 to Zone F3 you refer to the 3 to 3 row, and since you are crossing through four zones (refer to the map above) you reference the “Cross 4 zones column”. This shows that this trip is approximately 50 kms. Another example, you want to go from Zone G2 to C2. In this case you would reference the 2 to 2 row, and by looking at the map above you can see that you will be crossing three zones, so this trip is approximately 25kms.

	Cross 1 zone (km)	Cross 2 zones (km)	Cross 3 zones (km)	Cross 4 zones (km)
3 to 3	20	35	45	50
3 to 2	18	30	35	40
3 to 1	20	25	30	30
2 to 2	10	20	25	28
2 to 1	10	15	20	20
1 to 1	5	8	12	12

I have created four examples of potential trips that include travel to three separate zones, dropping off at on the farm (referred to as JT's below) space, and a return to downtown Guelph. In each example I have used the above chart to estimate the travel time and distance, and compared this against Google Maps. In each case the chart produce either an exact match or a difference of +/- 5kms.

Example 1: A3 to G2 to E2 to JT's plus return = 125km.
Example 2: H2 to G3 to E1 to JT's plus return = 98km.
Example 3: D3 to D2 to JT's plus return = 78km.
Example 4: B3 to E2 to G3 to JT's plus return = 155km.

The above four examples will result in different costs, both because of the distance travelled and the amount of pickups that each has. Each pickup point will have an additional 15 minutes of material handling time. The costs are below:

	Travel cost (time * 0.52)	Handling cost (time * 0.38)	Total cost	Value needed (lbs)	Number of pickups	Average weight needed per stop
Example 1:	$65.00	$22.80	$87.80	878.0	3	292.6 lbs
Example 2:	$50.96	$22.80	$73.76	737.6	3	245.9 lbs
Example 3:	$40.56	$17.10	$57.66	576.6	2	288.3 lbs
Example 4:	$80.60	$22.80	$103.40	1,034.0	3	344.6 lbs

When these examples are totalled, it could quite easily represent weekly driving needs and the costs incurred necessary to fulfil the needs of emergency food providers.

	Travel cost (time * 0.52)	Handling cost (time * 0.38)	Total cost	Value needed (lbs)	Number of pickups	Average weight needed per stop
Total	$237.12	$85.50	$322.62	3,226.20	11	1,171.5 lbs

These calculations demonstrate that it is possible to make several trips over significant distances and still have the mark-up match the costs associated with pickup and delivery. In the early stages of The POD it may be that donations are indeed spread over 11 different farms throughout Wellington County and the surrounding area. Through conversations with organizations doing similar work, it is

generally farmers and retailers who supply the majority of produce donations. Some advice they have offered is to do the best one can to ensure you are acquiring only as much as you need, but that it is tricky in the early stages because you do not want to turn anyone down. The fear in turning down a donation is that that person may not call again. With this knowledge in mind, relationships can be built that take this into account.

The POD has a goal of decreasing costs and increasing efficiency. Should the project begin with 11 pickup locations, it could in time decrease this number. In such a case the costs of pickup and delivery would also decrease, while the weight of donations remains the same. This would allow for greater revenue, which could be put towards other expenses associated with operating the program, or used as a buffer against variable funding.

Scenarios involving multiple pickups will result in a greater demand on the Distribution Coordinator's time. This driving time ranges from 1hr41mins (Example 3) to 2hrs20mins (Example 4). If two pickups are done per week, the time required (excluding delivery) will range from 3.5hrs to 4hrs45mins per week. Add in pickup from the farm plus deliveries, and this range will be 5hrs10mins to 6hrs20 mins per week.

Putting it all together

Using calculations as described above, along with budgeting information from The Seed's Ontario Trillium Grant, the following budget was created (next page). There are several items to describe. First, the two columns to the right denote two potential streams, one where The POD receives only donations and does not make any purchases, and the other where The POD and its partners take advantage of opportunity buys. In both cases the initial funding remains the same, but begins to differ at the "User" level, i.e. EFPs would collectively pay $22,880 annually for the mark-up in the donations only column, but would collectively pay $151,008 for food and a 10% mark-up to cover delivery costs in the opportunity buys column.

The cost of the refrigerated truck appears as an expense, which affects the net surplus (deficit) line. In actuality, the value of the truck should be spread over the lifetime of the truck itself and the project, so while this budget shows a deficit, it could conceivably show a surplus of roughly $28,000 in year two. To this end, each of the capital items that are shown here in year one could have their values spread over the life of the project (they are highlighted in light green). This is $42,300 that will not show up in the expense line in year 2. Regarding the truck, there is the potential for maintenance to be covered through a rental or leasing agreement in place of outright purchasing a vehicle. One benefit of renting over purchasing is that the cost of maintenance can be very high for this type of vehicle, where reefer units are notorious for breaking down.

One further conclusion that can be made is that the Opportunity Buys scenario would not only be far more expensive for EFPs, but The Seed would also make back less money on their investment in The POD. Also, to cover the costs listed in this budget, The Seed and/or its partners would need to acquire $150,000 in funding to cover the food costs each year. In both scenarios, the project is sustainable over the two year funding period (keeping in mind the green capital costs are applicable to year one only).

Revenue		
Revenue	Pilot Budget (Donations Only)	Pilot Budget (Opportunity Buys)
Seed - Funder	53,500.00	53,500.00
Seed - Sponsors		
Seed - Users	22,880	151,008
Subtotal	76,380	204,508

Expenses		
Description	Annual Budget	YTD Budget
Salaries	19,000	19,000
Benefits	1800	1800
Subtotal	20,800	20,800
Travel (staff)	500	500
Transportation		
refrigerated truck	32,000	32000
fuel	2200	2200
insurance	5000	5000
maintenance	covered?	covered?
Resource Materials		
dollies	800	800
crates	1500	1500
fridges/freezers	5000	5000
rental space	1800	1800
Food	-	137,280.00
Printing	500	500
Allocated Admin	6800	6800
Gleaning Supplies	3000	3000
Subtotal	59,100.00	196,380.00
Grand Total Expenses	79,900.00	217,180.00
Net Surplus (Deficit)	(3,520.00)	(12,672.00)

Truck Options

One development that could affect the bottom line listed in the budget is the opportunity to affordably rent a truck for a long-term period. The Seed has been in contact with several truck rental agencies who have supplied quotes. At the time of writing, the least expensive quote (that incidentally provides the most value) is for $1850 per month, which would include insurance costs, vehicle maintenance,

licencing, and reefer hours. With tax this becomes $2118.75. Financially, a rental agreement would look considerably different from outright ownership of a vehicle. Because of this, a direct comparison of the two options is presented below.

Fixed and Variable Costs for Truck Ownership				
	Per KM cost	Per Year Estimation	3 year projection	5 year projection
Depreciation	$0.12	$1,440.00	$4,320.00	$7,200.00
Purchase cost (Total)		$32,000.00		
Insurance	$0.42	$5,000.00	$15,000.00	$25,000.00
Registration and Licensing		$426.00	$1,278.00	$2,130.00
Maintenance and Repair	$0.50	$6,000.00	$18,000.00	$30,000.00
Total Estimate	Own	$44,866.00	$70,598.00	$96,330.00
	Rent	$25,425.00	$76,275.00	$127,125.00
	Rent + In Kind	$12,712.50	$38,137.50	$63,562.50

Three project partners with expertise in trucking and logistics were consulted on the costs associated with depreciation and maintenance and repair to ensure accurate estimations. There are a few things to point out here:

1) Whether The Seed purchases a truck or rents one, more funds will have to be generated/acquired to continue the payments beyond the first year
2) The purchase cost is included as a line item in each column but does not appear in years three and five, but the initial cost is included in the total estimate in each column
3) Registration and licencing fees are billed annually
4) In the short term, renting a vehicle is the least expensive option, but after five years ownership becomes considerably cheaper*
5) The line item “Rent + In Kind” refers to the possibility that the Guelph CHC, that administers The Seed’s Trillium Fund and provides oversight for the project, could negotiate a situation where a trucking company donates half the value of the truck in exchange for charitable donation tax receipts. Of the three options, this is certainly the least expensive and should be pursued if possible.

One very important point regarding ownership and how it affects the above projections, is that $32,000 is only enough to purchase a vehicle that is roughly 4-5 years old and has considerable kilometres on the odometer. One partner who was consulted on this projected noted that after five years it is likely that the vehicle would have to be replaced.

For the sake of projecting this scenario, let’s assume this does occur. Let’s also assume that all other costs remain equal in the fifth year, and that a $32,000 truck was adequate for those five years. These numbers would become:

Fixed and Variable Costs for Truck Ownership		
	Per KM cost	Year 6 (New Truck)
Depreciation	$0.12	$1,440.00
Purchase cost (Total)		$32,000.00
Insurance	$0.42	$30,000.00
Registration and Licensing		$2,556.00
Maintenance and Repair	$0.50	$36,000.00
Total Estimate	Own	$141,196.00
	Rent	$152,550.00
	Rent + In Kind	$76,275.00

If purchasing another truck in year six, it again closes the gap between the ownership costs and rental costs. That said, the first vehicle could probably be sold for a few thousand dollars to make up for some of the loss.

One final note, not included in this table is the costs associated with having to rent a vehicle while the owned vehicle is undergoing repairs. Over a five year period this could be in the thousands of dollars.

Trucking Recommendation

Renting in the short term is likely the best route to take as the first year costs are lower, it gives a chance for The POD to establish and evaluate, and to start with a smaller vehicle that better corresponds with the amount of produce coming in. After this evaluation period, The POD will be able to determine whether continuing to rent still makes sense given the costs, or whether purchasing seems more prudent over the long run. In either case, it appears that over a six year period the costs will be relatively similar.

Summary

The scenarios outlined in this section serve to illustrate the affordability of the distribution work. The Zone Map and associated charts represent an easy way to determine whether a particular donation are worthwhile to pick up, and/or perhaps combined with another donation to increase efficiency. The revenue and expense streams in the table directly above, show how affordable the project can be, especially when taking a long view. It may make sense to have a mix of enterprises where The POD and its partners are not wholly reliant on either donations or opportunity buys, but take advantage of a mix between the two, decreasing the revenue necessary to order the products EFPs need.

As a demonstration of how affordable this particular initiative is given the funding available and the income derived from the mark-up on produce, only 31% of the dollars allocated to the Distribution Coordinator are needed for operation. Were partner organizations not to pay the 10% mark-up as described above (within the Donations Only enterprise), this percentage would increase to ~80% of the yearly funding allocated to the Distribution Coordinator. In both cases, the initiative fits within the confines of the budget.

5. LOGISTICS

Not covered in the sections above are some of the finer details surrounding the distribution of fruits and vegetables, particularly: communications and ordering; receiving, storing, and packing; payments and documentation; and routing. Each of these topics will be covered in this section on logistics.

Communications and Ordering

It is very likely that many donations and purchases will become available at the last minute. This can present difficulties in maintaining an efficient operation with quick turnarounds on produce. Here's a potential scenario/procedure for how this can be dealt with:

1. **Retailers/Wholesalers have donations and/or discounted produce (a.k.a. "opportunity buys") available. They call The POD to let them know.** *In this case, when The POD meets with prospective partners, timing should be discussed. For example, if retailers/wholesalers have particular days when they can identify what's available with The POD, the whole system can work with some predictability.*
2. **The POD identifies what's available to food providers. This can be done in three ways:**
    a. **Online ordering system** – The Seed has investigated several online ordering systems that have monthly subscriptions. The Seed has funding for a system. Using this method, The POD can populate a web form with what's available, how much of it, and what the cost is. EFPs can then purchase directly through this web portal.
    b. **Email list** – The POD can email a listserv of emergency food providers with availability. EFPs then write back with the items and quantities they would like.
    c. **Telephone calls** – The POD can phone each individual emergency food provider with availability. The EFP can respond right away or call back with the items and quantities.
3. **The POD picks up the order and delivers it to EFPs according to a schedule.**
4. **EFPs pay The POD for the food and associated delivery costs.** *The due date for payments is negotiable, but would need to work in line with the rolling budget.*

There are also advantages and disadvantages associated with each of the payments listed above, highlighted in the following table:

	Online Ordering System	Email List	Telephone Calls
Advantages	The most efficient way for The POD to communicate availability and receive orders. Once the availability information is entered, The Distribution Coordinator can move on to other things while EFPs	No additional cost (compared to renting the web platform) No learning curve	No additional cost No learning curve

	Online Ordering System	Email List	Telephone Calls
	decide what they would like. Once enough time has passed, the D.C. will see the orders and communicate the aggregated order to retailers/wholesalers		
Disadvantages	There will be a small learning curve for everyone to become accustomed to the system	Requires the Distribution Coordinator to manually aggregate order information and calculate payments	Requires significant additional work for the Distribution Coordinator – communicating the same information several times Requires the Distribution Coordinator to manually aggregate order information and calculate payments

It is clear that the online ordering system offers the greatest efficiencies in terms of communications, despite the initial learning curve. Having a dedicated online ordering system also offers several other administrative advantages, which will be highlighted in subsequent sections.

No matter what system is chosen, communication must happen quickly between The POD and emergency food providers to ensure that deals offered by distributors are taken advantage of. The deals offered may not last for more than a day, so it is important that the following steps happen according to a set schedule:

1) Distributors contact The POD with available opportunity buys (say Monday at 9am)
2) The POD populates the online marketplace with the produce information (by Monday at 10am)
3) Emergency food providers visit the online marketplace, see what is available, and place an order (Monday at 1pm)
4) The POD communicates the order to the distributors (Monday at 3pm)
5) Distributors assemble the order (end of day, Monday)
6) The POD picks up the order Tuesday morning and makes deliveries to food providers

Although the dates and times will likely differ in a real-world scenario, the tight turnaround demonstrated here is important to maintain efficiencies. Without set dates and times for populating, ordering, and delivery, The POD will not know if providers have seen the information, providers may not know whether the marketplace has been updated, and so the orders received may not match the actual demand. This would result in having a truck on the road that is carrying a smaller order than necessary, reducing efficiencies. To keep to the tight turnaround, The POD will have to have an agreement in place with distributors so both parties know when it's ideal to talk about availability, and

emergency food providers will need to know when the marketplace will be updated and when orders are due by. This allows The POD to place final orders by a given time each week. As it stands The POD will likely have two ordering days per week to fit with food providers' schedules.

Receiving and Storing

As it stands at the time of writing, no products will be received directly at the storage site. All purchases and donations will be picked up in The POD's refrigerated truck.

The POD in all likelihood will receive donations or take advantage of opportunity buys. In both cases, it is likely that the best before dates for consumption will occur shortly after receipt of the products, whether purchased or donated. In this scenario, operating efficiently is vital to ensuring the products delivered to emergency food providers are of a high quality and that items do not remain at The POD beyond their best before dates. Because of this, receiving and storing go hand in hand with communication with emergency food providers, and consistency and predictability from the procurement end are key to the success of The POD. To do this, there needs to be a tight turnaround in communications leading to a tight turnaround in pickups and deliveries.

As designed in the schedule presented earlier in Chapter 2, the longest products will stay at The POD is the Friday to Monday stretch. All efforts will be made to match the receipt of donations and purchases of opportunity buys to what the exact community need is so that products do not go unclaimed and subsequently wasted.

Products that are brought to The POD will be sorted prior to storing them to ensure complete inventories that includes weights, varieties, and quantities. Sorting prior to storage will facilitate the sale of each product and make it easier to pack orders as they come in.

As mentioned in the farmer outreach results, there is also the opportunity for long term storage of farm products such as potatoes, carrots, onions, etc. that the farmers either pay a storage fee for, or the emergency food providers buy large volumes collectively for the purposes of storing and distributing weekly.

Payments and Documentation

Because local food business are becoming more and more popular, there are now more options than ever for tracking important components of business transactions. An online ordering and product tracking system can be used to track the origins of food, destinations, quantities, prices paid, who paid, among many other things. Below are three different software options that can be used to indicate the availability of produce, facilitate the ordering and deliveries, and track payments while documenting all necessary elements.

1. Big Commerce

Price: $960/year

The Local Community Food Centre uses “Big Commerce” for online ordering. After creating an account, you will be given a store number, and the web address that customers go to will be store-abcd.mybigcommerce.com.

Upsides:

- The Local CFC is using it, so we can ask them their opinion on its functionality and perhaps see a demonstration of how they use it to operate
- It is simple and easy to navigate, performs all the functions one would expect from an e-commerce site

Downsides:

- No integration with Wordpress. It is standalone software.
- It is expensive, $960 per year (10% discount if you pay all up front)
- It is not particularly aesthetically pleasing (judging by what The Local has used), though B.C. states that they have many beautiful skins to choose from

2. Local Orbit

Price: They have two prices, one entitled “Start” @ $**399**/yr and another called “Grow” @ $**799**/yr.

Upsides:

- 30 day free trial
- Can watch Local Orbit in use every Tuesday at 3PM EST
- Specifically geared towards facilitating the operation of a food hub
- Relatively Inexpensive
- Customizable branding
- Manage 5 markets via one dashboard
- Strong customer service element
- No installation costs

Downsides:

- May not have as many features as Local Food Marketplace

3. Local Food Marketplace

Price: Several pricing structures, the ones most suited to the hub’s needs are: Standard (setup fee of $999 plus $149/month billed annually – a total of $**2787** in the first year, $**1788**/year thereafter); and Premium (setup fee of $1500 plus $229/month billed annually – a total of $**4248** in the first year, $**2748**/year thereafter). Standard = managing two delivery days per week, Premium = three days. Another option exists, Enterprise, which manages four delivery days per week.

Upsides:

- They appear to be very comprehensive
- Have a free mobile app

- Customizable branding

Downsides:

- Significantly more expensive and likely has functions The POD will never use

Recommendation

The logical choice is to explore the Local Orbit free monthly trial, as it is cheaper than Big Commerce and is specifically geared towards food hub operations. If, through the trial run of the software it's discovered that there are fundamental operations that cannot be completed with the use of this software, staff can inquire with The Local CFC to see whether they are able to perform these operations using Big Commerce. Again, if not, then staff could look to create a system through the University of Guelph's support or do a cost/benefit analysis to determine whether Local Food Marketplace is worthwhile.

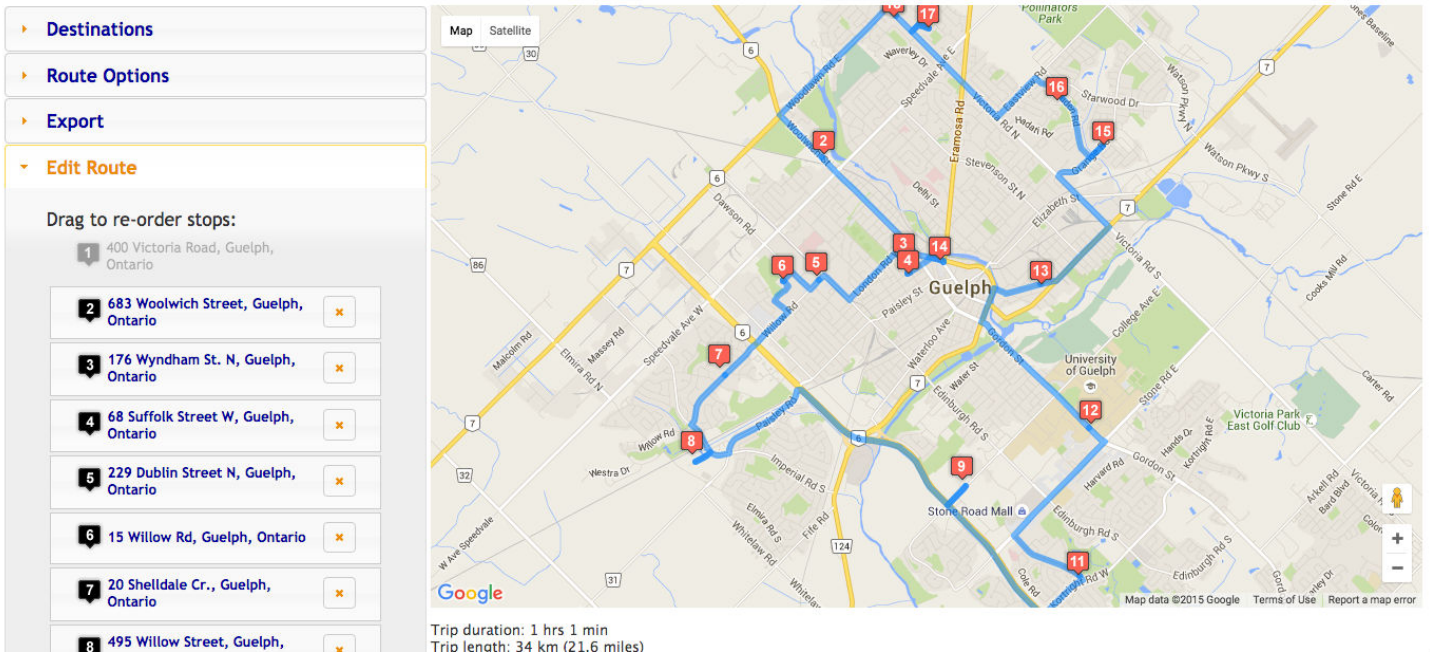
Routing

Routing software is not available through the above listed online programs as of writing, but Local Orbit does have it in development. In the mean time, there are free programs available online that allow one to enter in multiple locations and the program creates a route map choosing the most efficient route. One can create an A-Z map where the most efficient route is created between each point without a return trip to A, or an A-Z-A map where the most efficient return trip route is created.

An example round trip map was created using Garden Fresh Box pickup locations in Guelph using the web resource at http://www.gebweb.net/optimap/

To generate this map, all Garden Fresh Box pickup addresses were entered into their system at random, and the round trip option was chosen. After performing some calculations it plotted each location on the map, listed them numerically, and showed the quickest route between them. This map closely matches the route the drivers actually take, the only differences coming as a result of having to match the schedule of those at each site.

OptiMap - Fastest Roundtrip Solver



6. CONCLUSION: FEASIBILITY FROM AN ECONOMIC PERSPECTIVE

This chapter demonstrated that The POD has the requisite space, funding, and potential income to begin operating a pilot distribution program. The space offered at the site in Puslinch, and the opportunities associated with the offer of space at in Hillsburgh, have The POD set up to begin receiving donations as soon as they are made available. The Seed's Ontario Trillium Funding covers the cost of purchasing a truck, the fuel needed, money for repairs, in addition to other capital funding and money to pay for a Distribution Coordinator to oversee the project. That said, there are some notable gaps in funding, particularly when it comes to insuring the vehicle, and paying for the rental of a cooler space. The budget presented in this chapter shows that the majority of costs are covered, freeing up the income from the distribution of produce to be put towards the uncovered insurance and rental fees. In the early going it may be important to cover the first few months of insurance and space rental through a means other than the projected income to ensure that the project would indeed be able to cover these costs in the long term from income alone. Important to note is the Trillium funding covers two years beginning February, 2016. Within this two year period it will be important to either create more income generating enterprises or find a consistent and reliable source of funding to maintain operations should the community need for fruits and vegetables persist. It is clear that given the funding available and potential for income that the distribution project is feasible from an economic perspective, at least in the short term.

CHAPTER THREE

EVALUATION PLAN FOR A PILOT PROGRAM

Evaluation Partnership

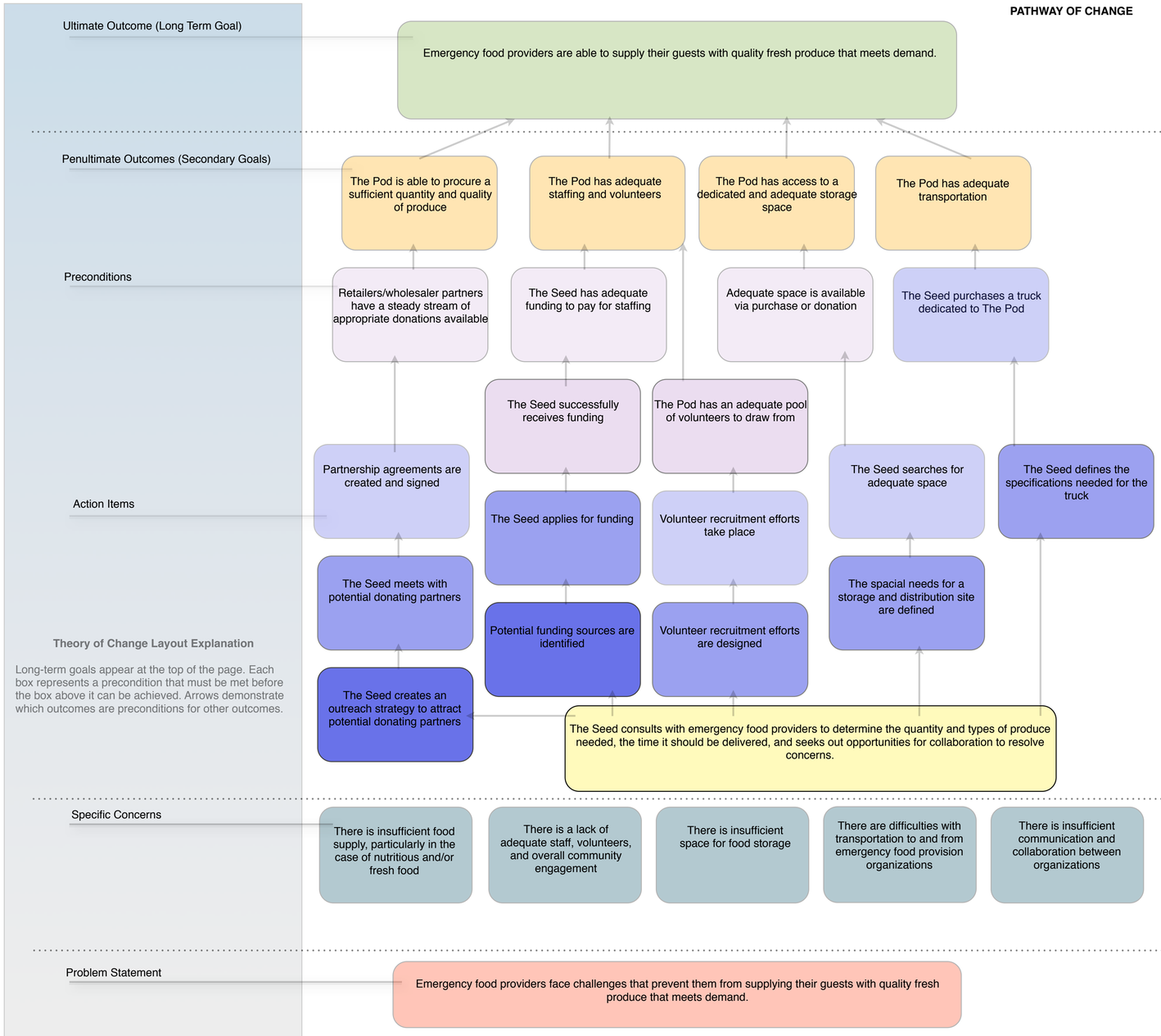
To evaluate the pilot project The Seed approached The Poverty Task Force (PTF) to request their collaboration. The PTF's primary concern was whether they had the current capacity to ensure that the product The Seed receives will be of high quality. This concern stemmed from potentially not having adequate and/or appropriate volunteers at the time of the request. However, perhaps serendipitously, Jennifer MacLeod (Chair of the PTF's Knowledge Mobilization Committee) had recently had discussions with a professor instructing a Masters of Public Health (MPH) program. These discussions revolved around pairing the students with a community project for the purposes of evaluation, and given the focus that The Seed has on increasing physical and economic access to fruits and vegetables, it made sense to be paired. Jennifer has worked with MPH students in the past and speaks highly of their work.

In addition to their instructor, these students will receive support from Jennifer MacLeod and Tom Armitage to both shape the project and supervise its evolution. However, once shaped, Tom will remove himself from the process to ensure there is a degree of separation between Seed staff and the evaluation. The students work in groups of 2-3 and are able to provide 10-12 hours of work per week beginning in January 2016 and ending in April. The PTF Research and Knowledge Mobilization Committee would continue to be involved as a sounding board for the students and could pick up the project in April when the students are finished.

The purpose of the evaluation is to determine whether The POD is meeting its stated outcomes, and in what ways can its efforts be improved. These improvements could then be implemented in the second phase of this distribution project. Because the pilot phase will likely begin in February 2016, and some data will be collected thereafter to inform decisions surrounding a more permanent space, it may be ideal that a full evaluation take place after six months of piloting the program. This would allow time for the evaluation framework to be developed. These decisions will be made in concert with the PTF and the MPH students going forward.

The expected outcomes of the project are outlined on the next page within the Theory of Change.

The POD - Theory of Change



Theory of Change Layout Explanation

Long-term goals appear at the top of the page. Each box represents a precondition that must be met before the box above it can be achieved. Arrows demonstrate which outcomes are preconditions for other outcomes.

INDICATORS

Ultimate Outcome

Each of the penultimate outcomes have been validated

Penultimate Outcomes

The Pod is able to procure a sufficient quantity and quality of produce

- Emergency food providers report that they are receiving sufficient quantity and quality of produce
- Guests of EFPs report to EFPs that they are able to take home sufficient quantity and quality of produce

The Pod has adequate staffing and volunteers

- All tasks associated with the procurement, sorting, and delivery of produce to EFPs is completed within the allotted time
- Staff not only have time to complete routine tasks, but are also able to continue developing the program to stay current
- Staff can phone in sick without jeopardizing the completion of tasks (i.e. tasks can still be completed over short absences)
- Staff can take holidays while the operation continues in their absence
- Each volunteer is paired with a task
- No food goes to waste as a result of lack of staff hours

The Pod has access to dedicated and adequate storage space

- There are no physical restrictions that impede the distribution work
- There are no temporal restrictions that impede the distribution work
- All product can be refrigerated
- The receiving of product does not result in a cramped space that restricts efficient movement

The Pod has adequate transportation

- All product destined for delivery on a particular day can be loaded onto the truck
- The truck does not frequently need repair that results in down time or inefficiencies
- The truck is either refrigerated or can be retrofitted
- The truck can be driven onto the properties of EFPs (i.e. it's not too big to enter, turn around, etc.)
- The truck does not have any weight capacity issues

Preconditions

Retailers/wholesaler partners have a steady stream of appropriate donations

- The Seed invariably receives product in the amounts and at the times they've requested without interruption
- The donations received and distributed by The Pod consistently result in satisfied guests of EFPs

The Seed has adequate funding to pay for staffing

- Staff hours remain consistent over the course of the year
- Staff hours remain commensurate with the tasks at hand
- No work is left undone due to reduced staff hours

The Seed successfully receives funding

- The funding received matches the work that needs to be done
- The funding received allows the program to operate for at least another year or as long as the program is needed

The Seed has an adequate group of volunteers to draw upon

- There are at least as many volunteers as there are tasks
- Volunteer skills and interests are matched to the tasks given to them
- Work does not go undone due to a lack of volunteer help
- Work is not delayed due to a lack of volunteer help

Adequate space is available via purchase or donation

- There are no physical restrictions that impede the distribution work
- There are no temporal restrictions that impede the distribution work
- All product can be refrigerated
- The receiving of product does not result in a cramped space that restricts efficient movement

ASSUMPTIONS

The needs of emergency food providers do not shift in such a way that the penultimate outcomes no longer serve their needs

The Pod is able to procure a sufficient quantity and quality of produce

Emergency food providers are willing to survey their guests and report some information back to The Seed

Guests of EFPs are willing to participate in a survey asking them about their consumption

The Pod has adequate staffing and volunteers

The allotted time will be reviewed periodically to determine whether operations are moving efficiently

There is enough funding to allow staff time for program development

There is a need for operations to continue while staff take holidays

A lack of staff hours may result in food waste if The Seed takes on too many donations, well in excess of what the program requires. The assumption therefore, is that The Seed only takes on as much food as is needed in the community.

The Pod has access to dedicated and adequate storage space

A review of the adequacy of the storage space will take place periodically

There will be a framework created to determine how to deal with any physical and/or temporal restrictions that may arise

The Pod has adequate transportation

A review of the adequacy of the truck will take place periodically

The need for refrigeration will be determined at a later date

Retailers/wholesaler partners have a steady stream of appropriate donations

A scenario exists where donations can exactly meet demand

EFPs are willing to survey their guests

Guest of EFPs are willing to participate in surveys

The Seed has adequate funding to pay for staffing

Funding exists that The Seed can apply for

The Seed has an adequate group of volunteers to draw upon

The work interests volunteers

Potential volunteers hear about the work available

The work is accessible to those who have interest

APPENDIX A - FARMLAND CHARACTERISTICS IN WELLINGTON COUNTY

Prepared for: The Seed – Community Food Hub
Prepared by: Marion Davies, Seed Volunteer

October 17, 2015

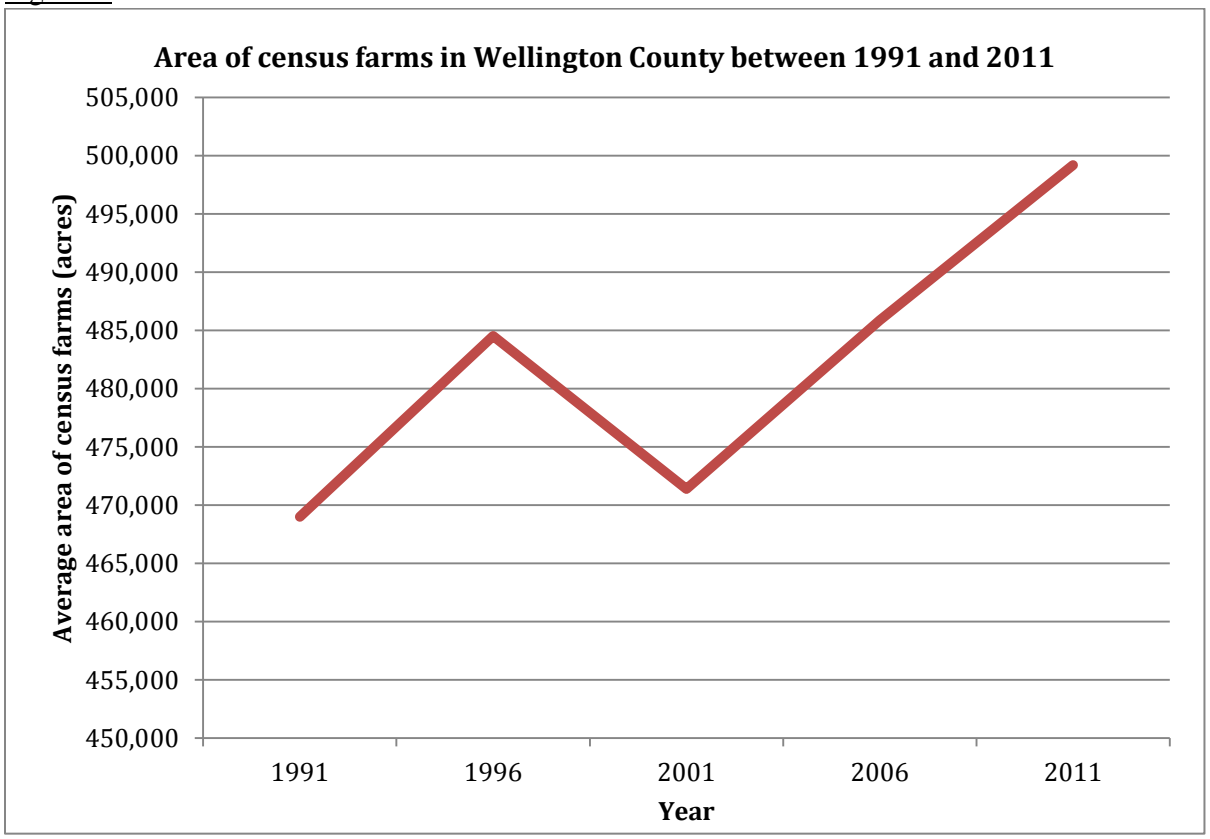
Introduction

This report examines changes in the nature of farms in Wellington County, Ontario over the past 25 years and is meant to provide context within which The POD is situated. The farmer outreach work done by the Research Shop was focused on collaboration, how farmers could support The POD and how The POD can support farmers. By providing this background context here in this appendix we present the underlying factors affecting farmers and their decision making, and how might affect their ability to collaborate. This report particularly focuses on the area and number of farms in the County, as well as their capital value and industrial focus. This report concludes that there has been a trend towards farmland consolidation in Wellington County, resulting in fewer, larger, more valuable farms that are increasingly focused on grain and oilseed production. With fewer farms growing vegetables and fruit in the area, it may be difficult to find a range of donors and partners. The second component of this report is a short context comparison, which demonstrates similar trends in the farmland characteristics of Simcoe County where a food hub is being developed. These findings point to the urgency of engaging Wellington County's small-scale farmers in meaningful business and marketing opportunities to slow the trend towards consolidation.

Total area under cultivation in Wellington County

As shown in Figure 1, in Wellington County, the number of acres being farmed increased by 30,183 acres between 1991 and 2011 (from 468,993 acres in 1991, to 499,176 acres in 2011). Areas for further research include identifying causes of the sudden peak and drop in farmland area in 1996 and 2001, respectively. Given the moderate-term increase in farmland area in Wellington County, it is predicted that a gradual trend towards an increased area of farmland will continue in the next (2016) census.

Figure 1:



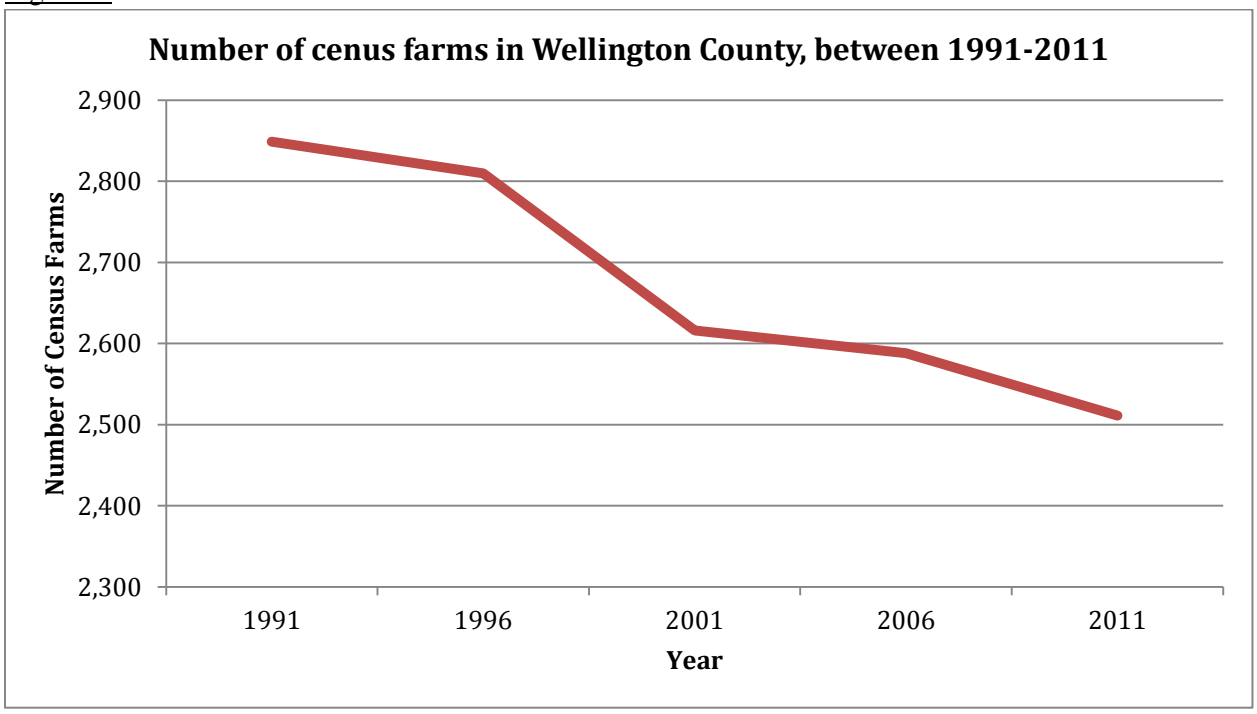
Kulasekera, K. (2012, May 17). Area of Census Farms (Acres) by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30a.htm

Number of farms and average farm size in Wellington County:

This section demonstrates the trend towards farmland consolidation occurring in Wellington County through an examination of the declining number of farms in the region, despite an increase in large-sized farms.

For example, Figure 2 identifies that the number of farms in Wellington County steadily declined between 1991 and 2011. The loss of 77 farms represents a 3% decrease in the number of farms in Wellington County over a 20-year period. Given this steady, prolonged decline, it seems unlikely that the number of farms can be expected to increase substantially in the near future. Further, relating Figures 1 and 2, an increase in the *area of land being farmed* occurring simultaneous to a *decline in the number of farms* in the County strongly suggests that farmland consolidation is occurring.

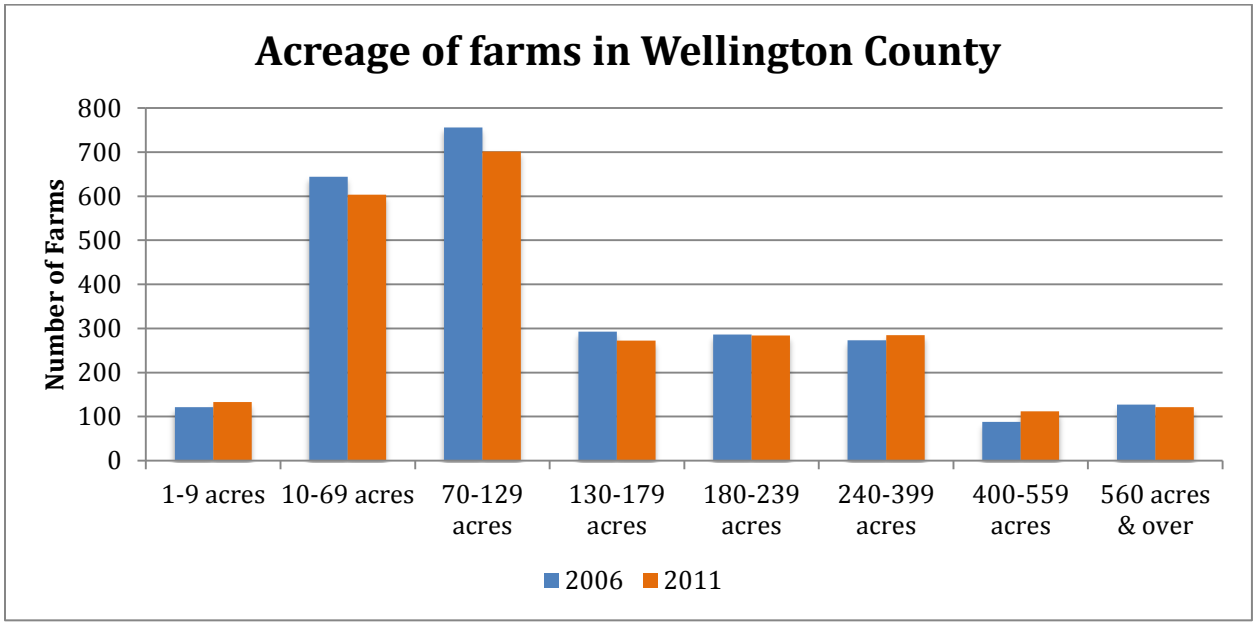
Figure 2:



Kulasekera, K. (2012, May 17). Number of Census Farms by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30.htm

Figure 3 points to the changing characteristics of farms in Wellington County. While the number of farms has declined since 1991, an examination of the size of farms reveals that the number of larger farms (180-559 acres) has slightly increased, while the number of small farms (1-179 acres) has noticeably declined. This suggests that there is a trend in Wellington County towards fewer, but larger farms.

Figure 3:

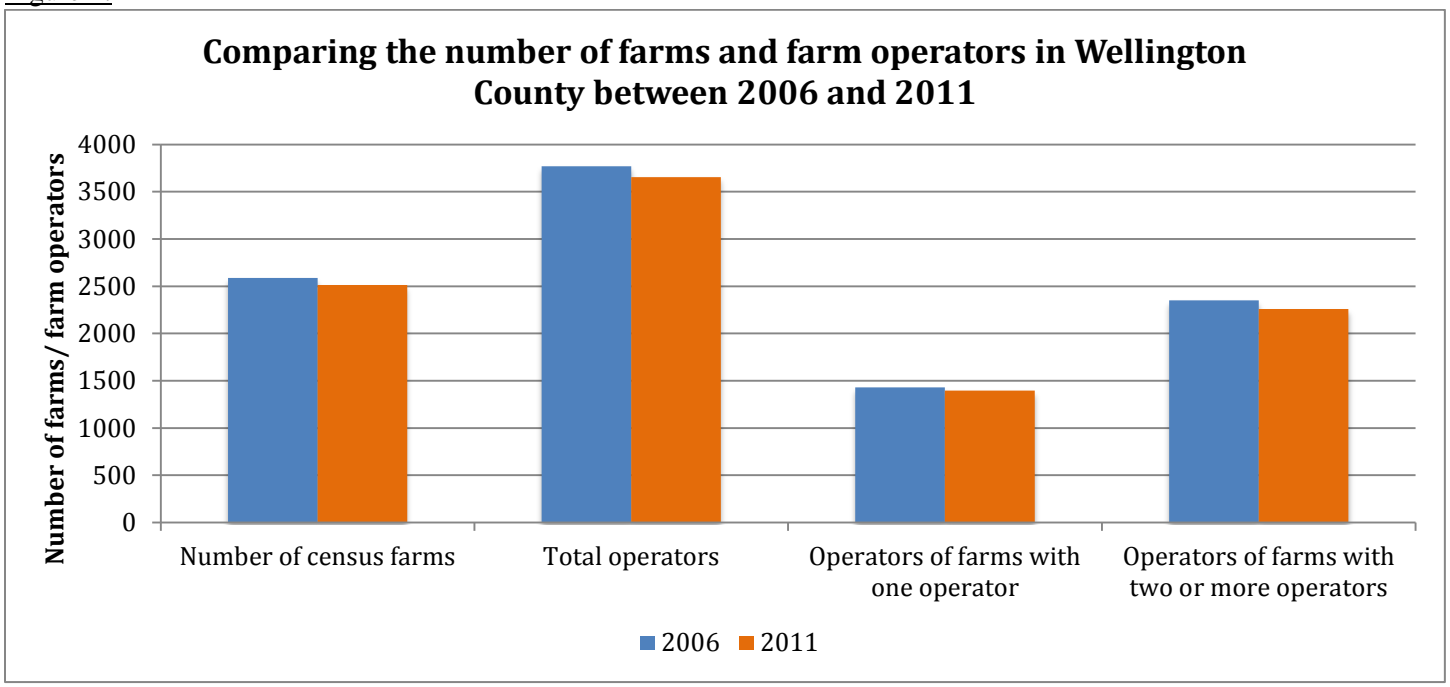


Kulasekera, K. (2012, May 17) Number of Census Farms Classified by Size of Operation, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty33_11.htm

McGee, B. (2007, May 29). Number of Census Farms Classified by Size of Operation, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty33.htm

Further, more information about this trend can be gained from examining Figure 4, which shows that across the board, the number of census farms and farm operators declined between 2006 and 2011. Logically, as the number of farms declines, the number of people employed as farm operators in the region has simultaneously declined.

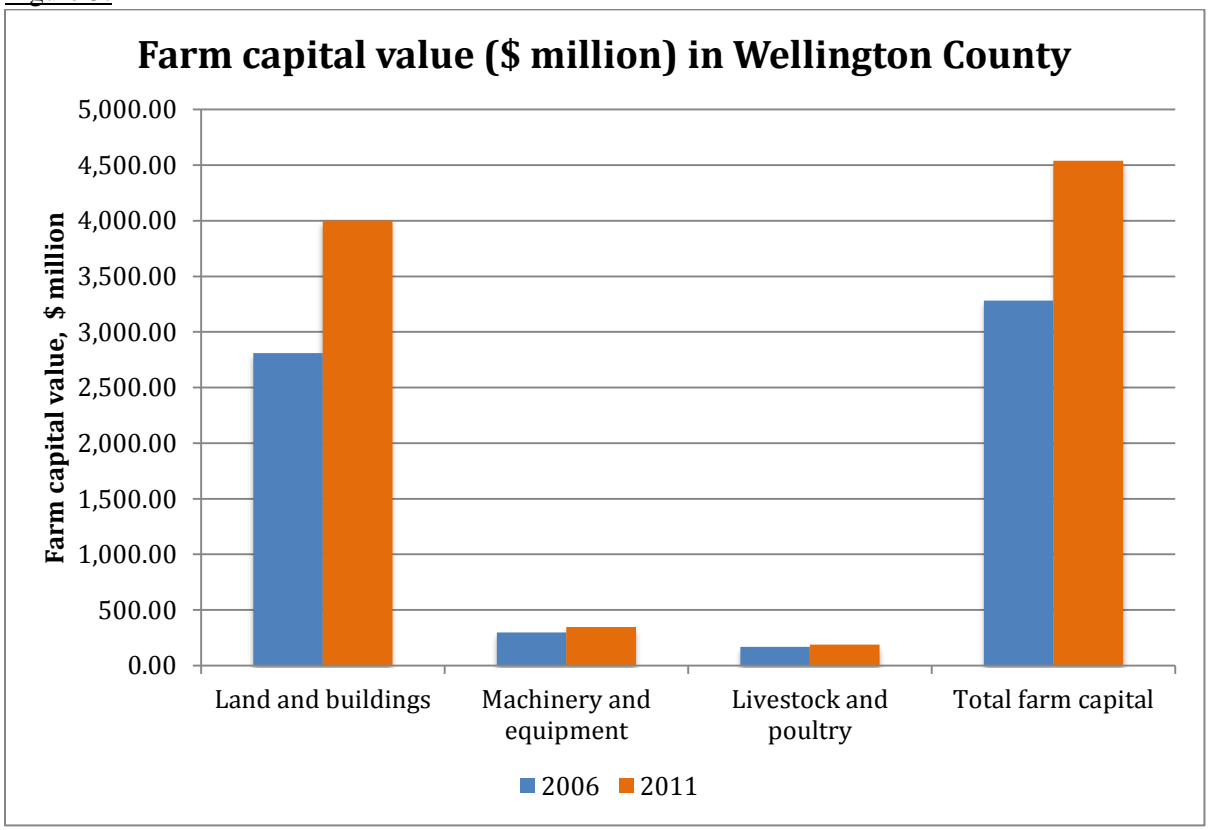
Figure 4:



Kulasekera, K. (2012, May 14). Number of Census Farms and Number of Farm Operators, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/farm_ontario11.htm

McGee, B. (2007, May 24). Number of Census Farms and Number of Farm Operators, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/farm_ontario.htm

Figure 5:



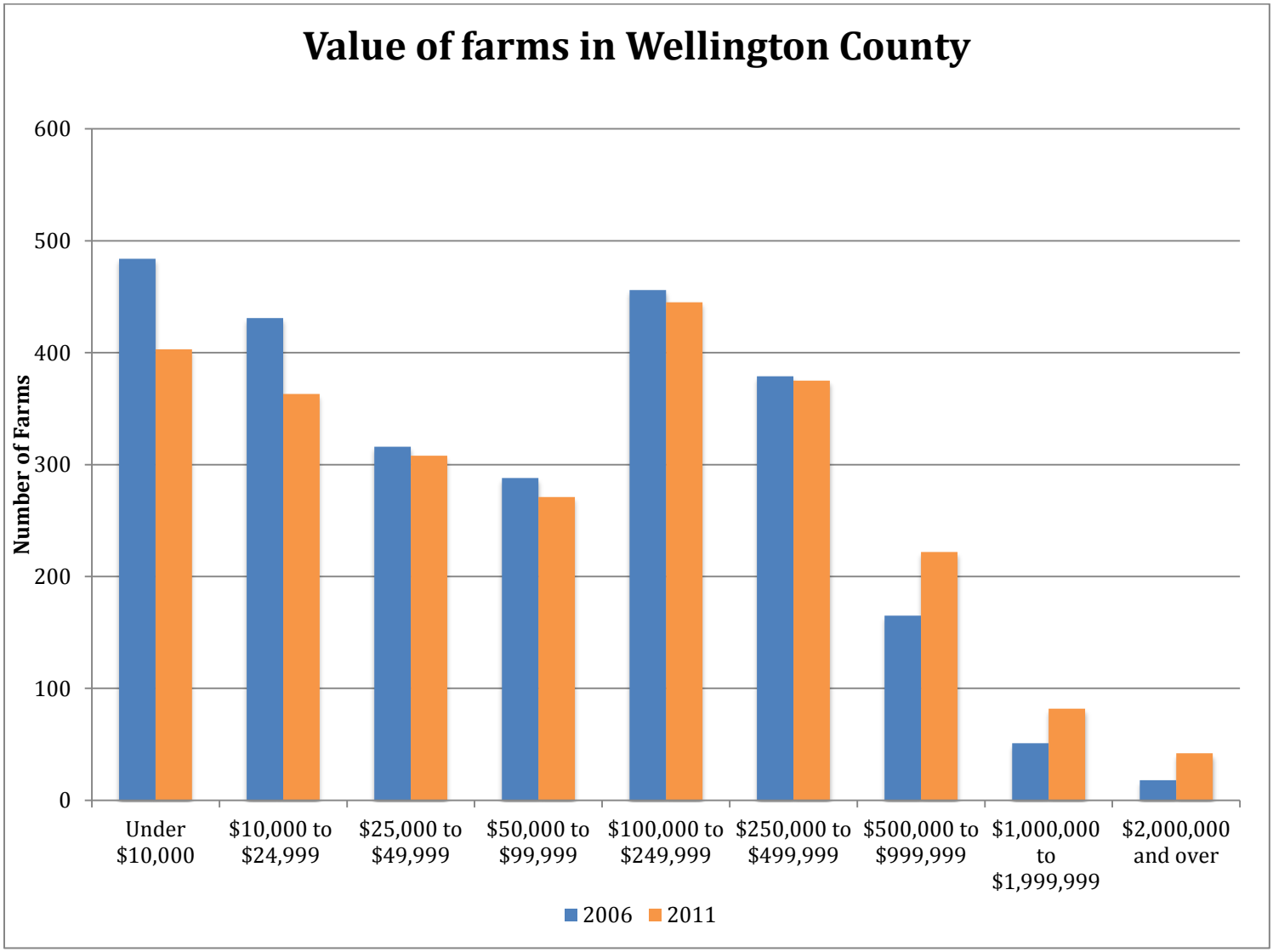
Kulasekera, K. (2012, May 17). Farm Capital Value by County, 2011, ($ million). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36value11.htm

McGee, B. (2007, May 29). Farm Capital Value by County, 2006, ($ million). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36value.htm

As the trend towards consolidation continues, the value of farms and farm infrastructure in the County increased between 2006 and 2011, as shown in Figure 5. The greatest increase of farm capital in Wellington County during this period was the value of land and buildings. This may be due to a combined increase in the average size of farms (leading to more land being owned by individual farmers) combined with increasing land values in the County since 2006 (Guelph Mercury, 2012). It should be noted that the value of farm machinery and equipment, as well as livestock and poultry, also increased between 2006-2011, although this margin of change was less significant than the increased value of land and buildings. An area for further research should be to identify (as independent variables) the changing values of land and buildings in order to determine if the increase in land value is more significant than that of increasing building value.

Interestingly, Figure 6 shows that there has been a noticeable decline in the number of farms of lower values, and an increase in the number of farms valued at over $500,000. This also points towards consolidation in Wellington County farms since 2006, which has resulted in fewer farms, of larger sizes, and of higher value.

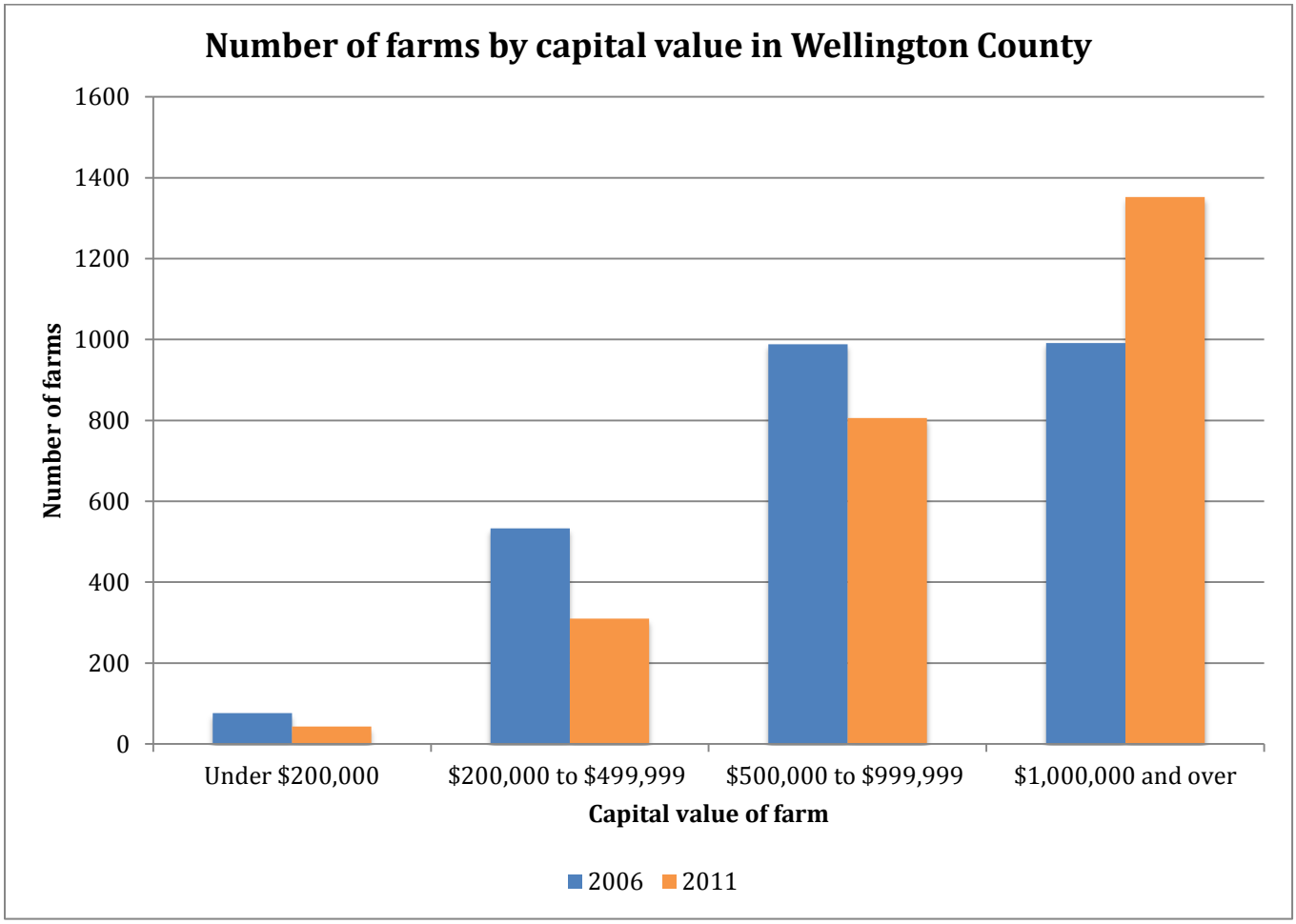
Figure 6:



Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Economic Class and Total Value of Sales, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty34_11.htm

McGee, B. (2007, May 29). Number of Census Farms Classified by Economic Class and Total Value of Sales, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty34.htm

Figure 7:



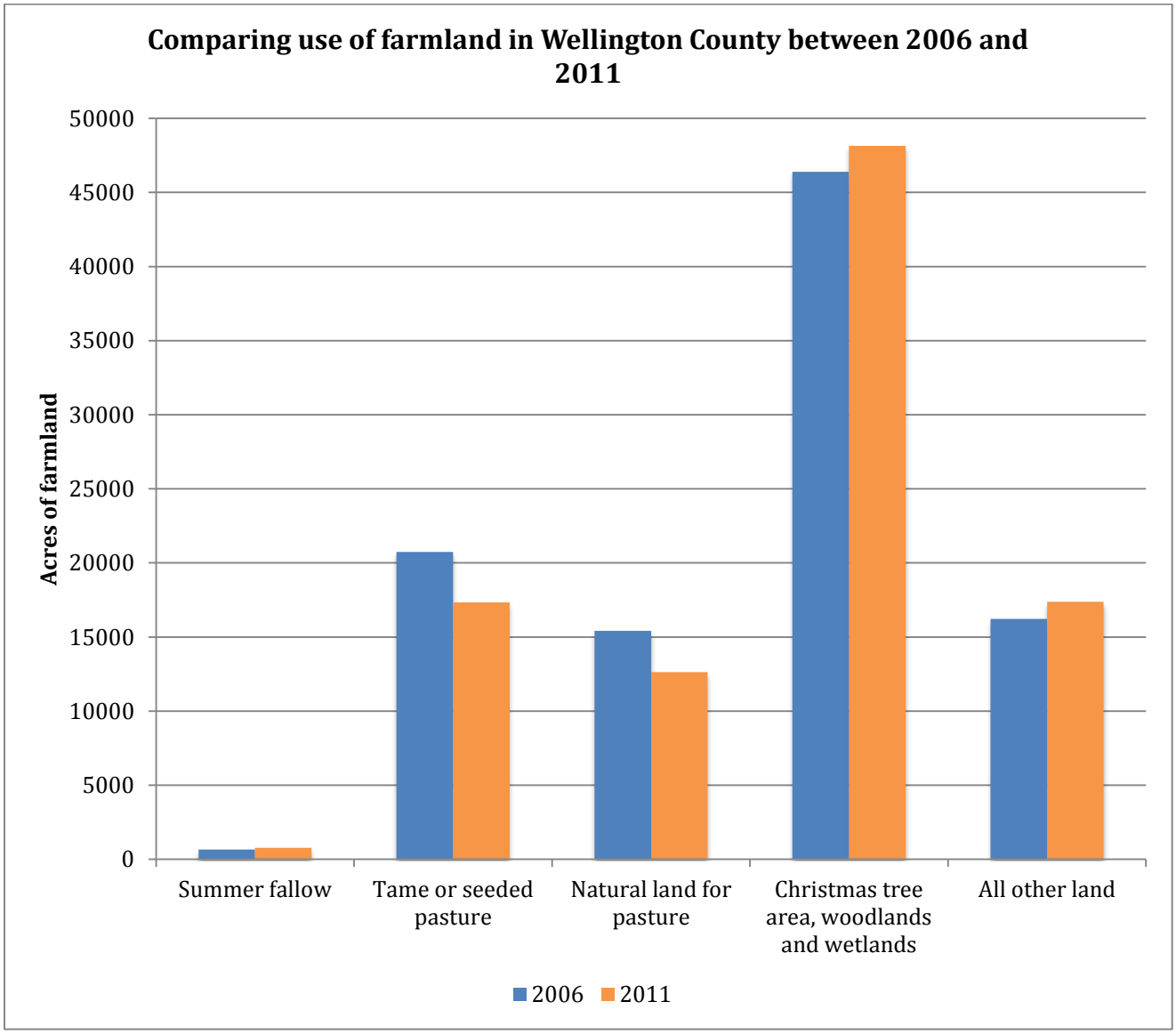
Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36_11.htm

McGee, B. (2007, May 29). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36.htm

Furthermore, Figure 7 depicts the increased number of farms valued at over $1,000,000 in 2011, which occurred during a period of declining numbers of less-valuable farms. This supports the argument that farms in Wellington County are becoming more capital-intensive. This could be due to a number of factors, including increased mechanical specialization, larger farm sizes, and increasing land value.

Farm types in Wellington County:

Figure 8:

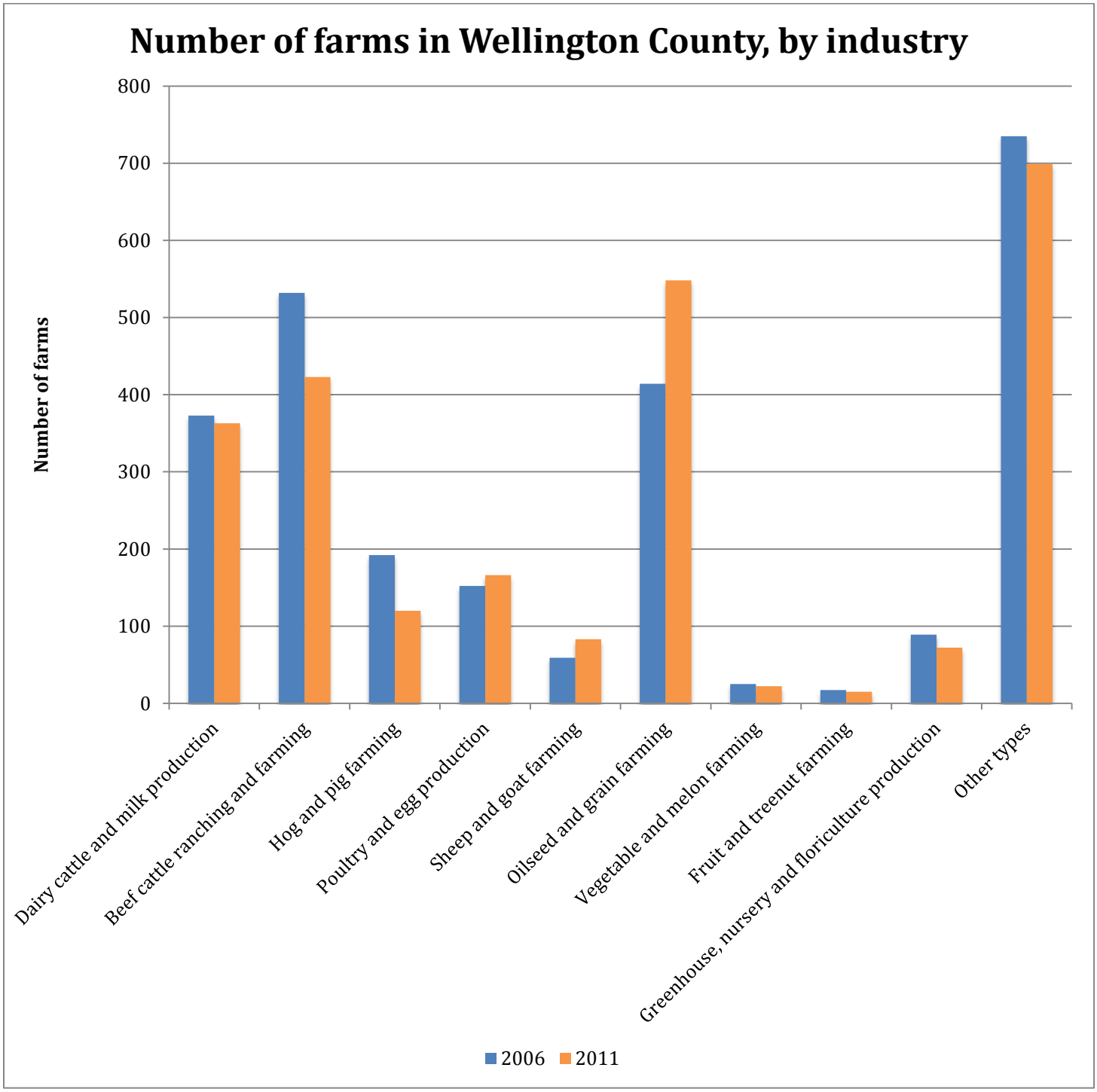


Kulasekera, K. (2012, May 17). Farmland Area (Acres) Classified by Use of Land, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty32_11.htm

McGee, B. (2007, May 29). Farmland Area Classified by Use of Land, by County, 2006 (acres). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty32.htm

Interestingly, between 2006 and 2011, the use of farmland changed slightly in Wellington County. As demonstrated in Figure 8, the amount of land dedicated to summer fallow increased slightly, along with a substantial increase in Christmas tree, woodland, and wetland land-use, as well as a moderate increase in total land farmed. These increases were contrasted by declining use of farmland for pasture.

Figure 9:



Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty35_11.htm

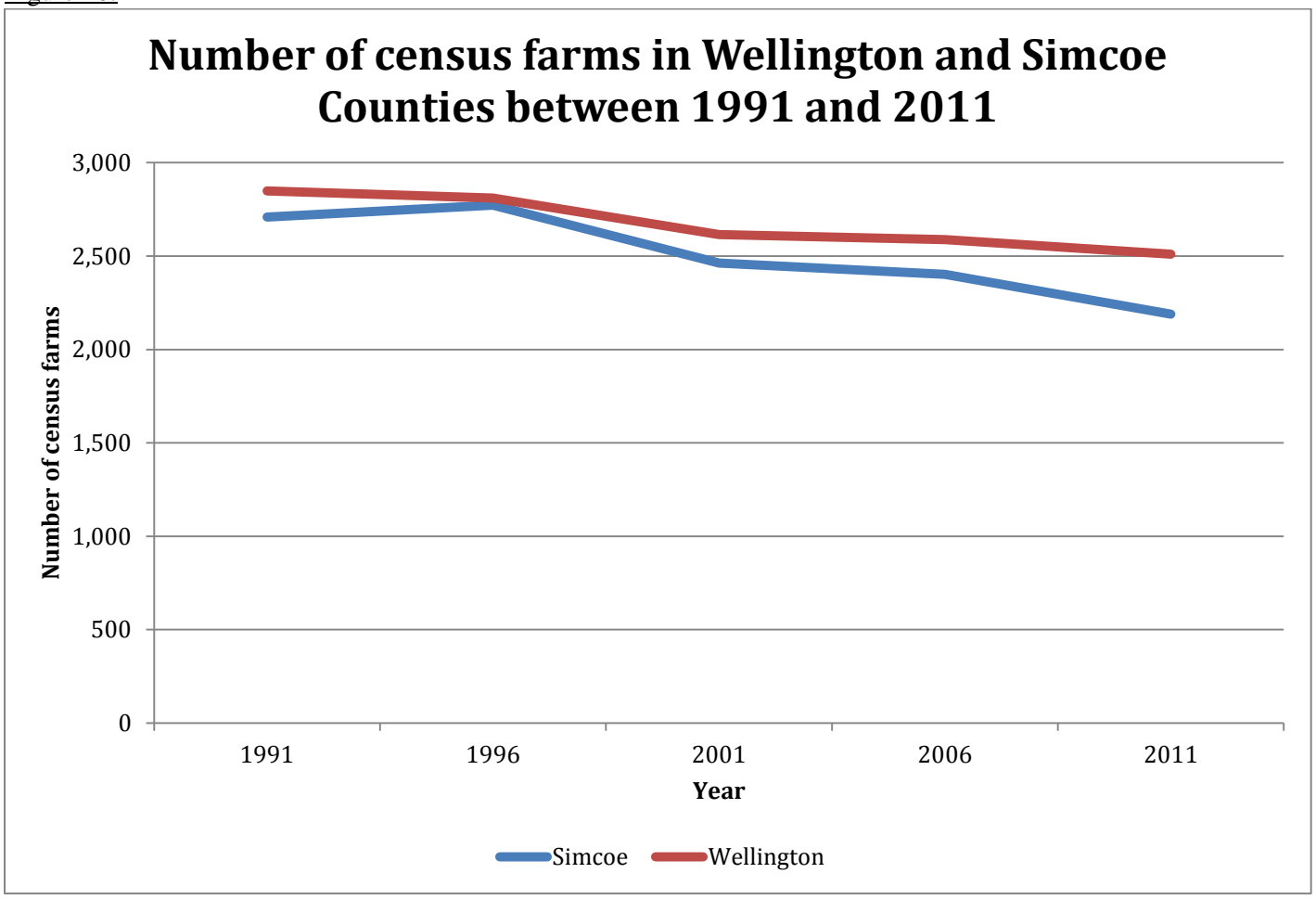
McGee, B. (2007, May 29). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty35.htm

Despite an overall decline in the number of farms in Wellington County between 2006 and 2011, some farm industries experienced a period of growth, as shown in Figure 9. In particular, there was a slight increase in the number of

farms producing poultry and eggs, and sheep and goats. There was a substantial increase in the number of farms involved in grain and oilseed production, part of a large-scale North American trend of increased grain farming. This shift to mechanization-intensive grain and oilseed production reflects a distressing trend towards consolidation of farmland in Wellington County. Once investments in cash-crop agriculture have been made, it becomes very difficult for farm operators to transition their farms back to more diversified agricultural systems that could better support community endeavors like The Seed.

Comparison between Wellington and Simcoe Counties:

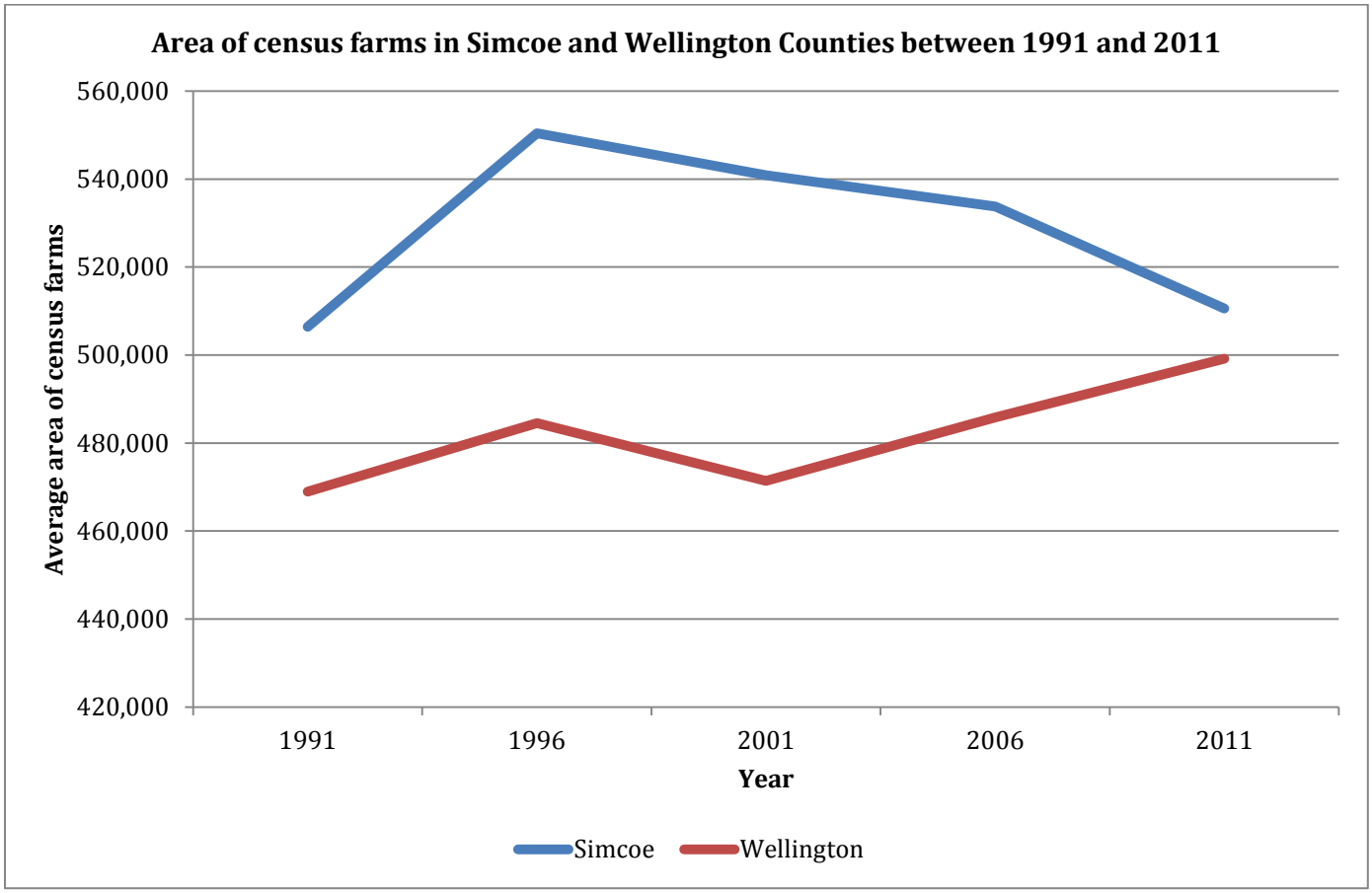
Figure 10:



Kulasekera, K. (2012, May 17). Number of Census Farms by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30.htm

Figure 10 demonstrates that Wellington County is not alone in experiencing a gradual but pronounced decline in the number of farms; Simcoe County also underwent a similar pace and level of farm losses between 1991 and 2011.

Figure 11



Kulasekera, K. (2012, May 17). Area of Census Farms (Acres) by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30a.htm

Interestingly, Figure 11 shows that the area of farmland increased in both Wellington and Simcoe Counties between 1991-2011, although the pace of growth was more gradual and sustained in Wellington than in Simcoe. Further, it should be noted that in both Simcoe and Wellington Counties, there was a sudden increase in the area of farms in 1996, perhaps due to border changes, or to a redefinition of "census farm". Further research should be conducted as to the cause of this sudden increase.

For further comparison of Wellington and Simcoe Counties, see Appendix A-2.

Conclusion

This report has demonstrated the changing characteristics of Wellington County's agricultural sector in terms of increasing farmland area, coupled with a declining number of farms, and increasing farm value. These trends are mirrored in nearby Simcoe County, suggesting that farmland consolidation is occurring on a regional level in Southwestern Ontario. In order to meet the goal of the Community Cold Storage Facility to broker local food to emergency food providers and purchasers, it is necessary to work directly with farm operators in Wellington County. Direct-marketing may provide the kind of market opportunities to keep farmers involved in community-provisioning and decrease the trend towards consolidation.

Works Cited

Kulasekera, K. (2012, May 14). Number of Census Farms and Number of Farm Operators, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/farm_ontario11.htm

Kulasekera, K. (2012, May 17). Area of Census Farms (Acres) by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30a.htm

Kulasekera, K. (2012, May 17). Farm Capital Value by County, 2011, ($ million). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36value11.htm

Kulasekera, K. (2012, May 17). Farmland Area (Acres) Classified by Use of Land, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty32_11.htm

Kulasekera, K. (2012, May 17). Number of Census Farms by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30.htm

Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Economic Class and Total Value of Sales, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty34_11.htm

Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty35_11.htm

Kulasekera, K. (2012, May 17) Number of Census Farms Classified by Size of Operation, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty33_11.htm

McGee, B. (2007, May 24). Number of Census Farms and Number of Farm Operators, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/farm_ontario.htm

McGee, B. (2007, May 29). Farm Capital Value by County, 2006, ($ million). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36value.htm

McGee, B. (2007, May 29). Farmland Area Classified by Use of Land, by County, 2006 (acres). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty32.htm

McGee, B. (2007, May 29). Number of Census Farms Classified by Economic Class and Total Value of Sales, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty34.htm

McGee, B. (2007, May 29). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty35.htm

McGee, B. (2007, May 29). Number of Census Farms Classified by Size of Operation, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty33.htm

"Wellington County Farmland Values up 52 per Cent since 2008." *Guelph Mercury*. N.p., 29 Sept. 2012. Web. 14 Oct. 2015.

APPENDIX A-2

Area of census farms (acres) by county:

Counties & Districts	1991	1996	2001	2006	2011
Wellington	**468,993**	**484,516**	**471,389**	**485,862**	**499,176**
Simcoe	**506,424**	**550,393**	**540,870**	**533,753**	**510,584**
Western Ontario	4,021,332	4,193,177	4,060,986	4,022,856	3,882,384

Kulasekera, K. (2012, May 17). Area of Census Farms (Acres) by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30a.htm

Number of census farms by county:

Counties & Districts	1991	1996	2001	2006	2011
Wellington	**2,849**	**2,810**	**2,616**	**2,588**	**2,511**
Simcoe	**2,709**	**2,773**	**2,463**	**2,402**	**2,189**
Western Ontario	21,567	21,305	19,191	18,498	16,771

Kulasekera, K. (2012, May 17). Number of Census Farms by County, 1991, 1996, 2001, 2006 and 2011. Retrieved September 29, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty30.htm

Number of census farms and number of farm operators, by county (2006):

Counties & Districts	Number of Census Farms	Total Operators	Operators of Farms with one Operator	Operators of Farms with two or more Operators
Wellington	2,588	3,770	1,430	2,350
Simcoe	2,402	3,395	1,455	1,940

Western Ontario	**18,498**	**26,350**	**10,880**	**15,480**

McGee, B. (2007, May 24). Number of Census Farms and Number of Farm Operators, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/farm_ontario.htm

Number of census farms and number of farm operators, by county (2011):

Counties & Districts	Number of Census Farms	Total Operators	Operators of Farms with one Operator	Operators of Farms with two or more Operators
Wellington	2,511	3,655	1,395	2,260
Simcoe	2,189	3,080	1,320	1,765
Western Ontario	**16,771**	**23,925**	**9,845**	**14,080**

Kulasekera, K. (2012, May 14). Number of Census Farms and Number of Farm Operators, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/farm_ontario11.htm

Farmland area (acres) classified by use of land, by county (2006)

Counties & Districts	In crops	Summer fallow	Tame or seeded pasture	Natural land for pasture	Christmas tree area, woodlands and wetlands	All other land	Total
Wellington	386,414	665	20,745	15,417	46,395	16,226	485,862
Simcoe	364,861	2,421	28,322	52,975	63,686	21,488	533,753
Western Ontario	**2,912,072**	**7,540**	**282,129**	**222,520**	**453,430**	**145,165**	**4,022,856**

McGee, B. (2007, May 29). Farmland Area Classified by Use of Land, by County, 2006 (acres). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty32.htm

Farmland area (acres) classified by use of land, by county (2011)

Counties & Districts	In crops	Summer fallow	Tame or seeded pasture	Natural land for pasture	Christmas tree area, woodlands and wetlands	All other land	Total
Wellington	402,894	781	17,346	12,636	48,143	17,376	499,176
Simcoe	363,436	1,571	25,660	46,685	51,048	22,184	510,584
Western Ontario	**2,913,965**	**5,804**	**238,009**	**188,859**	**399,446**	**136,301**	**3,882,384**

Kulasekera, K. (2012, May 17). Farmland Area (Acres) Classified by Use of Land, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty32_11.htm

Farm capital value by county, $ million (2006)

Counties & Districts	Land and buildings	Machinery and equipment	Livestock and poultry	Total farm capital
Wellington	2,811.2	300.0	171.0	3,282.3
Simcoe	2,642.9	306.4	74.4	3,023.7
Western Ontario	**20,827.3**	**2,228.3**	**1,089.9**	**24,145.5**

McGee, B. (2007, May 29). Farm Capital Value by County, 2006, ($ million). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36value.htm

Farm capital value by county, $ million (2011)

Counties & Districts	Land and buildings	Machinery and equipment	Livestock and poultry	Total farm capital
Wellington	4,002.3	348.1	188.7	4,539.0

Simcoe	3,635.5	324.3	66.5	4,026.3
Western Ontario	**29,208.9**	**2,451.2**	**1,065.0**	**32,725.1**

Kulasekera, K. (2012, May 17). Farm Capital Value by County, 2011, ($ million). Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36value11.htm

Number of census farms classified by size of operation, by county (2006)

Counties & Districts	**1-9 acres**	**10-69 acres**	**70-129 acres**	**130-179 acres**	**180-239 acres**	**240-399 acres**	**400-559 acres**	**560 acres & over**	**Total**
Wellington	121	644	756	293	286	273	88	127	2,588
Simcoe	116	642	609	227	213	273	119	203	2,402
Western Ontario	**873**	**4,095**	**4,940**	**2,002**	**1,941**	**2,277**	**991**	**1,379**	**18,498**

McGee, B. (2007, May 29). Number of Census Farms Classified by Size of Operation, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty33.htm

Number of census farms classified by size of operation, by county (2011)

Counties & Districts	**1-9 acres**	**10-69 acres**	**70-129 acres**	**130-179 acres**	**180-239 acres**	**240-399 acres**	**400-559 acres**	**560 acres & over**	**Total**
Wellington	133	603	701	272	284	285	112	121	2,511
Simcoe	133	603	701	272	284	285	112	121	2,511
Western Ontario	**798**	**3,749**	**4,448**	**1,740**	**1,726**	**1,983**	**968**	**1,359**	**16,771**

Kulasekera, K. (2012, May 17) Number of Census Farms Classified by Size of Operation, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty33_11.htm

Number of census farms classified by economic class and total value of sales, by county (2006)

Counties & Districts	**Under $10,000**	**$10,000 to $24,999**	**$25,000 to $49,999**	**$50,000 to $99,999**	**$100,000 to $249,999**	**$250,000 to $499,999**	**$500,000 to $999,999**	**$1,000,000 to $1,999,999**	**$2,000,000 and over**	**Total number of farms**
Wellington	484	431	316	288	456	379	165	51	18	2,588
Simcoe	733	550	314	231	249	193	74	38	20	2,402
Western Ontario	**3,731**	**3,275**	**2,423**	**2,364**	**3,102**	**2,119**	**933**	**356**	**195**	

McGee, B. (2007, May 29). Number of Census Farms Classified by Economic Class and Total Value of Sales, by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty34.htm

Number of census farms classified by economic class and total value of sales, by county (2011)

Counties & Districts	**Under $10,000**	**$10,000 to $24,999**	**$25,000 to $49,999**	**$50,000 to $99,999**	**$100,000 to $249,999**	**$250,000 to $499,999**	**$500,000 to $999,999**	**$1,000,000 to $1,999,999**	**$2,000,000 and over**	**Total farms**	**Total value of sales $'000**
Wellington	403	363	308	271	445	375	222	82	42	2,511	653,592
Simcoe	630	463	282	235	228	176	104	45	26	2,189	370,084
Western Ontario	**3,104**	**2,724**	**2,162**	**2,113**	**2,695**	**2,056**	**1,126**	**521**	**270**	**16,771**	**4,138,799**

Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Economic Class and Total Value of Sales, by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty34_11.htm

Number of census farms classified by industry, (North American industry classification system), by county, (2006)

Counties and District	Dairy cattle and milk production	Beef cattle ranching and farming	Hog and pig farming	Poultry and egg production	Sheep and goat farming	Oilseed and grain farming	Vegetable and melon farming	Fruit and treenut farming	Greenhouse, nursery and floriculture production	Other types	Total
Wellington	373	532	192	152	59	414	25	17	89	735	2,588
Simcoe	125	538	43	46	71	377	150	53	164	835	2,402
Western Ontario	**1,849**	**4,535**	**1,274**	**698**	**548**	**3,525**	**370**	**275**	**631**	**4,793**	**18,498**

McGee, B. (2007, May 29). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty35.htm

Number of census farms classified by industry, (North American industry classification system), by county, (2011)

Counties & Districts	Dairy cattle and milk production	Beef cattle ranching and farming	Hog and pig farming	Poultry and egg production	Sheep and goat farming	Oilseed and grain farming	Vegetable and melon farming	Fruit and tree-nut farming	Green-house, nursery and floriculture production	Other	Total
Wellington	363	423	120	166	83	548	22	15	72	699	2,511
Simcoe	88	331	13	43	64	502	119	43	152	834	2,189
Western Ontario	**1,605**	**3,096**	**701**	**674**	**580**	**4,433**	**306**	**226**	**535**	**4,615**	**16,771**

Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty35_11.htm

Number of census farms classified by capital value, by county, (2006)

Counties & Districts	Under $200,000	$200,000 to $499,999	$500,000 to $999,999	$1,000,000 & over	Total farms
Wellington	76	533	988	991	2,588

Simcoe	113	803	749	737	2,402
Western Ontario	**748**	**5,103**	**6,149**	**6,498**	**18,498**

McGee, B. (2007, May 29). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2006. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36.htm

Number of census farms classified by capital value, by county, (2011)

Counties & Districts	**Under $200,000**	**$200,000 to $499,999**	**$500,000 to $999,999**	**$1,000,000 & over**	**Total farms**
Wellington	43	310	806	1,352	2,511
Simcoe	57	479	759	894	2,189
Western Ontario	**417**	**3,070**	**5,177**	**8,107**	**16,771**

Kulasekera, K. (2012, May 17). Number of Census Farms Classified by Industry, (North American Industry Classification System), by County, 2011. Retrieved October 15, 2015, from http://www.omafra.gov.on.ca/english/stats/census/cty36_11.htm

APPENDIX B: RESEARCH SHOP SUPPLEMENTARY MATERIAL

Farmer Survey: The Seed Cold Storage and Distribution Hub

1. What products does your farm offer?

2. Do you produce large volumes of any particular products?

3. What product(s) do you consider to be your specialty?

4. Do you currently use seasonal extension structures?

5. Does your farm operate seasonally or year round?

6. Are your products:
   Certified organic
   IPM/Reduced Spray
   Conventional
   Other

7. Do you have any other certifications for your products? E.g. G.A.P.

8. What is the best way to contact you? How would you like to communicate with the storage group?
   Email (please provide preferred email address)
   Phone (please provide preferred telephone number)

Scheduling Information:

The answers to these questions will give us an idea of your ability to donate, and help us coordinate timing your needs with our staffing and distribution to other organizations.

1. On what days do you harvest?

2. Emergency food providers have particular needs that will likely be fulfilled through multiple donors. We would like to avoid having excess produce ourselves. How much time in advance are you able to let us know what you might have available?

3. On which days and at what times is it best to be in contact?

4. Do you ever have an overabundance of produce that you would be willing to donate?

5. If so, what in particular do you often have in excess?

6. When are you most aware that you have excess? E.g. following a farmers' market, CSA harvest, etc.

7. Would you deliver your produce or would you require it to be picked up?
8. If you deliver, do you charge a fee?

9. Would you be interested in having a volunteer group of gleaners come by to harvest excess product that would then be circulated to emergency food providers?
    a. If so, on which days and at what times would it be best for them to come?

Product Handling:

The answers to these questions will give us an idea of how the hub may be able to operate as a non-profit business in the future that helps local farmers distribute their produce for profit. This aspect of the initiative, if desired and practical, would occur after all the kinks are worked out of our emergency food provision program.

1. Are you interested in brokerage services? E.g. you list your products on our website weekly that food providers can then view and order, we then arrange pickup and delivery on your behalf.
    a. If yes, (i) please list the products you think you would be interested in having brokered; and (ii) what type of monetary exchange do you think is fair for this service? Please describe.
    b. If no, please describe.

2. **(If yes to question 1)** What is the ideal way for you to communicate product availability and/or for us to place orders?
    a. Online ordering system where you upload your availability and all our customers can see/order through the system (we are in planning stages on this)
    b. Telephone conversations
    c. Email

3. How do you think the cold storage hub could benefit your business?
    a. Packing _____
    b. Cooling_____
    c. Washing _____
    d. Sorting _____
    e. Labeling _____
    f. Delivery _____
    g. Other _____

4. Are you interested in potentially storing food products at the hub for the purposes of season extension?
    a. If so, what type of monetary exchange do you think is fair for this service? E.g. rental fee, percent of sales, other? Please describe.

5. Have you ever produced under contract?
    a. If yes, what percentage of your output is currently contracted?

6. Would you be interested in establishing pre-season contracts for pre-determined needs at a guaranteed price? (i.e. 1 acre of carrots for a community partner)

7. Would you participate in pre-season planning in collaboration with the cold storage hub?

8. How many acres could you dedicate for production of food for the cold storage hub in Guelph?

9. How would you describe your level of interest in selling food products through the cold storage hub in Guelph?
    a. Extremely interested
    b. Very interested
    c. Somewhat interested
    d. Not very interested
    e. Not at all interested

Budgets/Finances:

1. How do you prefer to receive payments?
    a. Cash on Delivery
    b. Prepaid
    c. Invoice
2. What are your plans for your operation within the next 3 years?
    a. Maintain the current size and type of production
    b. Expand the scale of the existing business (increase acreage and/or livestock numbers
    c. Invest in farm equipment or structures to extend the growing season
    d. Diversify (new crops/livestock on existing acreage
    e. Diversify (new crops/livestock on increased acreage
    f. Downsize
    g. Exit the industry by transferring the business to a new owner
    h. Other

Other:

1. Are you interested in being involved with the development of the cold storage hub?
    a. If so, how?

2. Is there anything that you can think of that is an immediate barrier to participating in the cold storage hub?

3. Is there anything that would make you more likely to participate in the cold storage hub? Is there anything else you would like to say about your potential participation in the hub?

4. Is there anyone else you think would be interested in participating in this survey? Or in assisting with the cold storage hub? Please provide their preferred contact information…