

DAWSON COMMUNITY FOOD SURVEY
AND
MARKET EXPANSION STRATEGY

CONSERVATION KLONDIKE SOCIETY

AUGUST 2011

ACKNOWLEDGMENTS

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CASE STUDY WEB SITES

| | |
|---------------------------------|--|
| Horse Lake Community Farm Co-Op | www.horselakefarmcoop.ca |
| Glen Valley Organic Farm | www.glenvalleyorganicfarmcoop.org |
| Fraser Common Farm Cooperative | www.frasercommonfarm.com |
| Providence Farm | www.providence.bc.ca |
| Greens, Eggs & Ham | www.greenseggsandham.ca |
| North Creek Community Farm | www.northcreekcommunityfarm.com |

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TABLE OF CONTENTS

| | |
|--------------|---|
| INTRODUCTION | 5 |
|--------------|---|

PART ONE CONSUMER AND BUSINESS SURVEY

| | |
|-----------------------------|----|
| 1. DOMESTIC CONSUMER SURVEY | 8 |
| 2. RESTAURANT SURVEY | 11 |
| 3. GROCER SURVEY | 13 |
| 4. LOCAL PRICING SURVEY | 15 |
| 5. SURVEY CONCLUSIONS | 17 |

PART TWO MARKET EXPANSION STRATEGY

| | |
|--|----|
| PREAMBLE | 20 |
| 6. NEW LOCAL MARKETS | 21 |
| 7. EXPORT FEASIBILITY | 23 |
| 8. LOCAL DOMESTIC CONSUMER DEMAND | 26 |
| 9. LOCAL PRODUCER NEEDS | 28 |
| 10. COMMUNITY SUPPORTED AGRICULTURE (CSA) MODELS | 29 |
| 11. LAND POTENTIAL | 33 |
| 12. DISTRIBUTION | 35 |
| 13. COMMUNITY PARTNERSHIPS | 37 |

RECOMMENDED STRATEGY

NEXT STEP

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INTRODUCTION

Background

Conservation Klondike Society (CKS) is a charitable, non-profit organization run by a Board of Directors. The Society was initially formed in 1992 by a diverse group of individuals interested in helping Dawson to become more sustainable. The mandate of the Society is to promote the conservation of resources and educate the public on the social and environmental costs of excessive consumption. It aims to demonstrate and facilitate ways by which people can moderate their habits and help create a sustainable community.

In past years, the primary focus of CKS has been the operation of the town's recycling facilities. More recently, the Society has begun to gear its efforts towards increasing the community's self-sufficiency and resilience. Through partnerships with the City of Dawson and Tr'ondëk Hwëch'in it has helped to form Dawson's first community garden and community greenhouse. CKS has also done research on electric transportation usage in Dawson in order to decrease dependence on fossil fuels. All of these projects fall under the banner of responsibility to implement the Dawson Climate Change Adaptation Plan that CKS has assumed. The Plan came about through a community driven process to identify areas where Dawson is most vulnerable to climate change and the issue of food security is prominently identified.

Farmers in the Klondike produce only a small percentage of the food needs of the community. Due to the vulnerabilities this relatively isolated northern community faces, it was determined that a concerted effort is needed to become more resilient in the face of coming changes and take greater advantage of the agricultural potential of this region. CKS is committed to providing the leadership necessary to identify methods to support farmers and facilitate the sector's ability to meet the needs of the community and support the goal of local food security.

Objectives

Across the continent there is an increased desire for locally produced food and a recent report¹ offered a very brief overview of the Klondike region, noting that **local growers cannot meet the demands of the market**. However, a clearer understanding of the current buying practices and attitudes towards local foods in the Klondike was needed before a strategy towards meeting the goals can be determined and action taken. The objectives of this project were hence:

- To gather base-line data and understand what hurdles consumers and suppliers face in obtaining and supplying locally produced food, focusing on produce, meat, eggs and dairy.
- To identify whether or not individuals support local farmers and why/why not, challenges local distributors have with supporting local farmers, which types of products consumers would like access to, how and when they would like to purchase them, what premium, if any, they would pay for local, organic, free-range products and so forth.
- To use the results of the survey to clearly understand current regional demand for local food, current available supply and the potential for supply to increase to meet demand
- To use the results of the survey as direction for extensive research into potential distribution models to be employed in the Dawson community in order to expand the local food market

¹Strengthening Yukon Local Food, Zapisocky and Lewis, 2010

Project Mission Statement

What is the production gap between supply and demand of food in the Klondike and what is required to increase the size or scope of the Klondike food system so as to close that gap?

Methodology

- 1) A comprehensive community wide consumer and business survey to provide accurate baseline data on local food supply and the current consumer climate. Existing research was reviewed prior to developing the survey questions including facilitation of a workshop with the authors of the most recent research in the area², local producers and the Board of Directors.
- 2) Research and recommendation of a market expansion strategy including next steps, through:
 - Investigating potential new markets and their needs including mining companies, hunting outfitters, and the MUSH (Municipalities, Universities, Schools and Hospitals) sector
 - Investigating the viability of shipping surplus fresh produce to the Fireweed Market in Whitehorse, or other venues outside of Dawson
 - Examining the current available supply of local food in Dawson and the extent to which the region's supply could be increased if all suitable agricultural land was utilized
 - Speaking with local producers to understand their needs for an expanded market
 - Examining Community Supported Agriculture (CSA) models employed in other rural communities to determine a distribution model appropriate for Dawson
 - Identifying distribution challenges that exist between small local producers, grocery stores, and restaurants and working towards minimizing these challenges and maximizing the benefits of the relationships.
 - Determining the extent to which potential partners including the Dawson Community Garden, Dawson Community Greenhouse, Tr'ondëk Hwëch'in, and RSS could contribute to and/or assist in the development of a local food distribution program

Report

This report is in two parts. Part one presents the results of the consumer and business survey and an added local pricing survey. It draws conclusions on demand, price and quality of existing local food, the strengths of the current food system, the need to increase production and distribution and target products with the highest potential to impact upon local food security.

Part two identifies the challenges in potential new markets for local producers, such as the MUSH sector, mining companies and export to Whitehorse. It quantifies current local domestic consumer demand, the available supply of local food and the potential for the producers to match supply to demand. Relevant successful CSA models from across Canada and pointers for crossing barriers to production in the Klondike are highlighted. The land potential of the region is considered. Distribution and consumption gaps and opportunities, current relationships in the local food chain, community partnerships, and ways to improve them are evaluated.

Finally, strategic recommendations for expanding the local food system are made including specific steps for the next phase.

²Mike Lewis and Melissa Zapisocky (*Strengthening Yukon Local Food*, Zapisocky and Lewis, 2010)

PART ONE

CONSUMER AND BUSINESS SURVEY

1. DOMESTIC CONSUMER SURVEY

A total of 141 households representing 344 residents were surveyed between May 9 and July 7, 2011. 106 surveys, or 74.5%, were completed by in-person interview with the remainder choosing the online option. The sample was a very high 18% of the permanent population. The average household size was 2.44, age 35.9 and income \$63,700. 30.5% self-identified as being of First Nation ancestry and the sample can be considered broadly representative of a cross-section of the community based on 2006 census data.

Current Expenditure

The average weekly household expenditure on food is \$145, or \$7,540 annually. The Klondike domestic consumer food market can be estimated and segmented as shown in Table 1.^{3,4}

Table 1 – Klondike Domestic Consumer Food Market Estimates

| | Weekly Spend | % Total | Annual Spend | Locally Produced | Available Market |
|----------------------|--------------|---------|----------------|------------------|------------------|
| Total | \$112,000 | - | \$5.8 million | 8.4% | \$5.71 million |
| Fruit and Vegetables | \$29,000 | 25.9 | \$1.5 million | 12.3% | \$1.41 million |
| Meat | \$22,000 | 19.6 | \$1.1 million | 25.2% | \$1.10 million |
| Eggs | \$6,000 | 5.4 | \$0.32 million | 11.1% | \$0.32 million |
| Dairy | \$15,000 | 13.4 | \$0.76 million | 2.6% | \$0.76 million |

By comparison, Statistics Canada reported average food expenditure per Yukon household in 2009 as \$7,496⁵ and households in 2001 as spending 23% on meat and fish, 15% on dairy and eggs, and 21% on fruit and vegetables⁶. The survey results are consistent with these reports, while reflecting some regional differences such as higher fruit and vegetables and lower meat.

Households shop 5.5 times per year at the Farmers Market, spending \$22 weekly. Total annual spending at the market is \$93,000. Respondents may have included non-food purchases such as arts, crafts and in particular bedding plants and other landscaping products available there.

Demand

82% of households are concerned about long-term access to affordable and nutritious food. There is a positive demand trend (62%) for more locally produced food over the last two years.

³For the purpose of these calculations, in the absence of any known significant local commercial production of meat, eggs or dairy it is assumed that 100% of the locally produced amounts in these segments is from self-production (including hunting/gathering) or non-cash exchange/gift

⁴For the purpose of these calculations, it is assumed that 50% of the locally produced fruit and vegetables come from self-production and/or non-cash exchange/gift

⁵*Spending Patterns in Canada*, Statistics Canada, 2009

⁶*Food Expenditure in Canada*, Statistics Canada, 2003

All the focused food segments are in 'high' demand, lead by fruit and vegetables and eggs:

| | |
|----------------------|------------|
| Fruit and Vegetables | 77.3% High |
| Eggs | 52.3% High |
| Meat | 45.7% High |
| Dairy | 39.5% High |

Factors influencing food choice were more noticeable by those that have a reduced influence, namely price, organic certification and particularly packaging:

| | |
|-------------------|----------|
| Cleanliness | Strong |
| Appearance | Strong |
| Packaging | A Little |
| Price | Moderate |
| Local | Strong |
| Certified organic | Moderate |
| Free-range | Strong |

Multiple supplementary comments noted that excessive packaging was a negative influence.

Barriers

Locally produced food is perceived to be reasonably priced, attractive in appearance, uniform in quality, clean, properly packaged and keeps well. **It is not consistent in supply.**

A high 58% of the sample (82 households) indicated specific factors that prevent them from consuming more local food, giving a total of 107 comments. Availability and access dominated the answers, which were broadly themed as:

| | |
|--------------|-----|
| Availability | 57% |
| Access | 20% |
| Marketing | 8% |
| Variety | 7% |
| Quality | 4% |
| Price | 3% |
| Other | 2% |

When asked to choose between specific suggested barriers to local food consumption, limited selection lead again, followed, perhaps surprisingly, by the limited ability to self-produce. It is noticeable that high prices are not perceived as a barrier, relatively speaking:

| | |
|-------------------------|-----|
| Limited selection | 72% |
| Limited self-production | 58% |
| Timing of market | 52% |
| Limited hunt/gather | 50% |
| Knowledge | 26% |
| High prices | 26% |
| Location of market | 7% |

Access

In light of access being such a prominent barrier to consumption, the current practices of accessing local food and the expressed preferences were compared:

Table 2 – Local Food Access: Practice and Preference

| | Current Practice | Expressed Preference |
|-----------------------|------------------|----------------------|
| Self-produce | 4 th | 1 st |
| Dawson Farmers Market | 2 nd | 2 nd |
| Grocery stores | 1 st | 3 rd |
| Hunt/gather | 3 rd | 4 th |
| Direct from farm | 6 th | 5 th |
| Home delivery | 7 th | 6 th |
| Restaurants | 5 th | 7 th |

Residents are shopping at the grocery stores for local food that they would prefer to be self-producing.

Suggested enhancements to the Farmers Market to encourage local food consumption are lead by extended or alternative hours of operation, a wider selection and more vendors. There is a mixed preference between operating on weekday evenings and weekend afternoons but the lowest interest is for Friday or Sunday.

56% were interested in a box delivery system with 19% possibly. The frequency preference would be every two weeks. 43% would be interested in participating in a local food cooperative interest with 41% possibly. 40% would use an online local food shopping with 32% possibly.

Price

Households are willing to pay a significant price premium for local production over imports:

| | |
|-------------------------|-------|
| Local production | 15.4% |
| Certified organic | 10.6% |
| Local certified organic | 15.3% |
| Free-range | 15.8% |
| Fruit and vegetables | 16.6% |
| Meat | 16.7% |
| Eggs | 17.5% |
| Dairy | 17.0% |

The price premium is directly proportional to household income, ranging from 17.7% for the over \$100,000 bracket to 12.5% for the under \$20,000 bracket.

2. RESTAURANT SURVEY

Five restaurants out of a total of eleven were interviewed to sample the perspective of the industry on local food. Three open seasonally and two year-round, compared to a sector spread of eight seasonal and three year-round. The average opening season was 31.4 weeks.

Current Expenditure

The average restaurant spends \$6,375 per week on food when open, being \$200,000 annually. Adjusting for seasonality, this equates to \$1.91 million annually over the whole industry, which is 32.9% of the reported domestic consumer market, or 24.8% of the combined market.

Table 3 – Klondike Restaurant Food Market Estimates

| | Weekly Spend | % Total | Annual Spend | Locally Produced | Available Market |
|----------------------|--------------|---------|----------------|------------------|------------------|
| Total | \$36,731 | - | \$1.91 million | 2.4% | \$1.84 million |
| Fruit and Vegetables | \$9,038 | 24.6 | \$0.47 million | 8.6% | \$0.43 million |
| Meat | \$10,538 | 28.8 | \$0.55 million | 1.1% | \$0.54 million |
| Eggs | \$4,038 | 11.0 | \$0.21 million | 0% | \$0.21 million |
| Dairy | \$4,808 | 13.1 | \$0.25 million | 0% | \$0.25 million |

While there is a small amount of self-production in the industry, mostly micro-greens such as herbs, local food sourcing is primarily direct from the producer and occasionally at the Farmers Market or grocery stores. The industry typically expects product to be delivered to the premises.

Demand

There has been some increased demand over the last two years and all respondents rate their current demand as high in all the focused food segments. The same applies to all the common meat varieties - beef, chicken, turkey, pork and duck. One respondent rated traditional wild meats such as bison, elk and caribou medium. Lamb, fish and goose also have high demand.

Restaurant purchasing decisions are influenced differently from the domestic consumer as shown in Table 4. Packaging is much more important, while cleanliness less, likely due to a better access to washing facilities. Free-range is not a selling point for restaurants.

Table 4 – Comparison of Restaurant and Domestic Consumer Purchasing Influences

| Influence | Restaurant | Domestic Consumer |
|--------------------------|----------------------|--------------------------|
| Cleanliness | Moderate to Strong | Strong |
| Appearance | Strong | Strong |
| Packaging | Strong | A little |
| Price | Moderate | Moderate |
| Local production | Strong | Strong |
| Certified organic | A Little to Moderate | Moderate |
| Free-range | A Little to Moderate | Strong |

Restaurants prefer better packaging to protect the produce. Professionals use a bag and box method but even boxes with lids are better than open crates/boxes at least. That said, restaurants actually regard present local food similarly to the domestic consumer, being reasonably priced, attractive in appearance, uniform in quality, clean, properly packaged and keeps well. ***It is not consistent in supply.***

Barriers

Availability is all – one restaurant was told there was none available as all production was reserved for existing clients. Consistency of supply is an issue but nonetheless if bulk offers can be made, the industry will buy and order less from Outside. Delivery to restaurant premises is essential and any form of coordinated system would be welcomed, online or not.

Two restaurants would take part in a cooperative, one very enthusiastically, while others are unsure without further details.

Price

Restaurants are willing to pay a price premium for local production over imports, although 5-6% less than the domestic consumer. Again, certified organic and free-range are notable for a reduced tolerance of price premiums.

| | |
|-------------------------|-------|
| Local production | 11.0% |
| Certified organic | 9.0% |
| Local certified organic | 9.0% |
| Free-range | 9.0% |
| Fruit and vegetables | 11.0% |
| Meat | 11.0% |
| Eggs | 11.0% |
| Dairy | 11.0% |

Miscellaneous

Restaurants are sourcing meat and fish such as bison and arctic char from Whitehorse. Quality is critical for beef so Albertan sources are often preferred for this. A big problem with the meat market is the seasonal cycle of butchering relative to the tourist season but players are beginning to adjust efforts to address this. Abattoir access and costs can also add significantly to the market price of local meat. One farmer is growing produce to order and a number of micro-producers are supplying restaurants with amounts of herbs and berries. There is generally a huge appetite to buy – peppers would be particularly welcomed.

'If any producer came to us with product we would buy it'

'Grow more! Even small producers contribute to the larger picture'

'If the price of local produce is a little bit more, it's okay because we can charge more to our customers for a local product. They are interested in anything local'

'We really like to use local produce'

'Currently no pork or chicken available which we have a special interest in'

'It's difficult to get local produce, these guys can't grow enough'

3. GROCER SURVEY

One of the two dominant grocery store operators was interviewed to sample the perspective of the industry on local food. Multiple attempts were made to interview the other operator but although this did not prove to be possible it was indicated that it was unlikely that the outlook would differ markedly.

The domestic consumer market size estimates were presented for verification. While the total market size was considered to be right, the fruit and vegetables and dairy estimates were felt to be a little too high and the meat segment a little too low. Grocer estimates for these segments were \$1.16 million, \$1.2 million and \$725,000 respectively.

Only fruit and vegetables are being sourced locally, in the 0-9% range of annual supply.

Demand

Customer demand has been broadly the same over the last two years although this is hard to judge as all the local produce sells out when available. Demand is rated as high in all the focused food segments with the exception of meat. Beef is particularly problematic as quality is critical and local animals have proven to vary dramatically in quality even from the same farm and season. There is a wariness of risking the store reputation on such an inconsistent product so beef demand is rated as low. All other meats are rated as medium but duck would be in very high demand.

Quality eggs are always in high demand and can price up to \$10/dozen for organic free-range.

As to be expected, influences on grocer purchasing decisions are close to those of the domestic consumer as shown in Table 5. Packaging is mildly more important, and free-range less.

Table 5 – Comparison of Grocer, Restaurant and Domestic Consumer Purchasing Influences

| Influence | Grocer | Restaurant | Domestic Consumer |
|--------------------------|---------------|----------------------|--------------------------|
| Cleanliness | Strong | Moderate to Strong | Strong |
| Appearance | Strong | Strong | Strong |
| Packaging | Moderate | Strong | A little |
| Price | Moderate | Moderate | Moderate |
| Local production | Strong | Strong | Strong |
| Certified organic | Moderate | A Little to Moderate | Moderate |
| Free-range | Moderate | A Little to Moderate | Strong |

Grocers regard present local food similarly to the domestic consumer and a restaurant, being reasonably priced, attractive in appearance, clean, properly packaged and keeps well. Grocers appear more accepting of supply restraints, presumably being well accustomed to this in the region, and rate the uniformity of quality especially highly.

Barriers

Mainly it is supply – keeping up with demand is essential. For example, a store can sell 300 cucumbers a week in the summer, so there needs to be a guaranteed supply. Camp orders need consistency - a grocer cannot be switching between local cucumbers and lesser-quality ones that were imported, as clients will be unhappy. Professionalism is also an issue - producers need to understand retail and that retailers need to mark-up prices by a significant margin from the wholesale value they receive to cover spoilage (10%) and other costs. Some producers could benefit from education on how the food market works.

The largest barrier in the meat market is inspections. Offers of local meat products regularly have to be turned down. As above, meat quality can be unreliable so chickens are recommended as they can be sold whole and consistency of product is a lot more achievable. Even produce suppliers must be wary of the risks of food poisoning and take the best care.

There is interest in participating in a local food co-operative as a storefront and advisor.

Price

There are diverse shopping personalities. Some, especially year-round residents, will pay whatever it takes for good quality food from a store – it is a luxury that substitutes for the absence of the extensive and varied high-quality dining options that are found in larger centres. Others search all over town to save money and these customers will never be sold local food.

Price premiums are high, more than the domestic consumer. Grocers seem to prefer to target a smaller, high-paying niche in the local food market with good margins, guaranteeing to sell-out and leave the more marginal customers to the Farmers Market.

| | |
|-------------------------|-----|
| Local production | 20% |
| Certified organic | 30% |
| Local certified organic | 30% |
| Free-range | 30% |
| Fruit and vegetables | 20% |
| Meat | 15% |
| Eggs | 30% |
| Dairy | 30% |

4. LOCAL PRICING SURVEY

No survey and analysis of supply and demand in a market place can be complete without including an assessment of pricing. The value that the community places on local food is vital to any initiative to increase production to meet demand and the goal of local food security. The domestic consumer survey determined a willingness to pay an average of 16.6% more for local produce over the cost of imported goods. A comparative analysis of the prices of imported and locally produced vegetables was performed as an addition to the scope of work.

Produce prices in the community were checked on a weekly basis between June 3 and July 16⁷. Two principal grocery stores were checked on Fridays and the Farmers Market on Saturdays and the results shown in Table 6. Locally produced food is also offered for sale at the grocery stores in addition to the Farmers Market, but prices do not differ markedly.

Table 6 – Comparison of Import and Local Food Prices

| Product | Season Average | | | Most Recent – July 16 ⁷ | | |
|-----------------------------|----------------|--------|------------|------------------------------------|--------|------------|
| | Import | Local | Premium | Import | Local | Premium |
| Broccoli/lb. | \$2.56 | \$3.50 | 37% | \$2.49 | \$3.50 | 41% |
| Green Cabbage/lb. | \$1.56 | \$1.50 | -4% | \$1.69 | \$1.50 | -11% |
| Cauliflower/lb. | \$2.92 | \$1.99 | -32% | \$2.29 | \$1.99 | -13% |
| Carrots/lb. | \$1.20 | \$1.90 | 58% | \$1.20 | \$1.90 | 58% |
| English Cucumber/ea. | \$2.78 | \$2.67 | -4% | \$2.59 | \$3.00 | 16% |
| Field Cucumber/ea. | \$1.74 | \$2.00 | 15% | \$1.79 | \$2.00 | 12% |
| Kale/bag | \$2.49 | \$3.50 | 41% | \$2.49 | \$3.50 | 41% |
| Potatoes/lb. | \$1.36 | \$1.45 | 7% | \$1.36 | \$1.45 | 7% |
| Romaine Lettuce/lb. | \$2.80 | \$3.00 | 7% | \$3.19 | \$3.00 | -6% |
| Tomatoes/lb. | \$3.24 | \$3.50 | 8% | \$3.49 | \$3.50 | 0% |
| Turnips/lb. | \$1.74 | \$1.75 | 1% | \$1.74 | \$1.75 | 1% |
| Zucchini/lb. | \$1.99 | \$2.50 | 26% | \$1.99 | \$2.50 | 26% |
| Overall | | | 13% | | | 14% |

While there are some dramatic product-dependent variances, local food prices are 13% higher than imports on average and 14% in mid-season. Carrots, broccoli and kale are offered at a significant premium but green cabbage and cauliflower actually trade at a discount.

Applying the 16.6% local produce price premium tolerance from the consumer survey, a theoretical price that the market would bear can be calculated for each local product. The actual price is then compared (See Table 7 on the next page). Overall, local foods are 3% overpriced on average and 1% in mid-season.

Pricing of local food is broadly correct and in line with consumer expectations relative to imports

⁷Carrot and potato prices were sampled August 20 as unavailable locally earlier in the season

Table 7 – Comparison of Actual and Theoretical Local Food Prices

| Product | Season Average Local | | | Most Recent Local – July 16 ⁷ | | |
|-----------------------------|----------------------|-------------|------------|--|-------------|------------|
| | Actual | Theoretical | Under/Over | Actual | Theoretical | Under/Over |
| Broccoli/lb. | \$3.50 | \$2.98 | 17% | \$3.50 | \$2.90 | 21% |
| Green Cabbage/lb. | \$1.50 | \$1.82 | -18% | \$1.50 | \$1.97 | -24% |
| Cauliflower/lb. | \$1.99 | \$3.41 | -42% | \$1.99 | \$2.67 | -25% |
| Carrots/lb. | \$1.90 | \$1.40 | 36% | \$1.90 | \$1.40 | 36% |
| English Cucumber/ea. | \$2.67 | \$3.24 | -18% | \$3.00 | \$3.02 | -1% |
| Field Cucumber/ea. | \$2.00 | \$2.03 | -1% | \$2.00 | \$2.09 | -4% |
| Kale/bag | \$3.50 | \$2.90 | 21% | \$3.50 | \$2.90 | 21% |
| Potatoes/lb. | \$1.45 | \$1.59 | -9% | \$1.45 | \$1.59 | 7% |
| Romaine Lettuce/lb. | \$3.00 | \$3.26 | -8% | \$3.00 | \$3.72 | -19% |
| Tomatoes/lb. | \$3.50 | \$3.78 | -7% | \$3.50 | \$4.07 | -14% |
| Turnips/lb. | \$1.75 | \$2.03 | -14% | \$1.75 | \$2.03 | -14% |
| Zucchini/lb. | \$2.50 | \$2.32 | 8% | \$2.50 | \$2.32 | 8% |
| Overall | | | +3% | | | +1% |

5. SURVEY CONCLUSIONS

Strengths to build on

While statistics on 'local' food consumption proportions elsewhere in Canada were not found, it is instinctive that, even at just 8.4%, a larger portion of food is produced or harvested locally in the Klondike than in many other communities. Previous studies have found that, on average, food items can travel 4,497 km even to a better environment such as Waterloo, Ontario⁸.

Local meat in particular, at 25.2%, is very high, the results of a still-strong culture of wild meat harvest by not just the traditional First Nation peoples - over 50% of households consume at least some wild food. Yukon Government Conservation Officer Services harvest statistics validated this number. Averaging and pro-rating these statistics gave a rough-cut estimate of the value of the local wild meat harvest of \$285,000, or 19.4% of the total value of Klondike meat consumption, based on pound-for-pound store-replacement value. Considering other amounts of wild meat may be leaking in, local farm-gate meat and self-production and the proportion of local meat sourcing is validated well within the survey margin of error.

Likewise, 53% of households report taking part in some self-production of food.

Isolation and necessity may actually have restrained reliance on the global food system and maintained links to traditional food sources.

There is a strong base of personal involvement in the household food supply on which to build

Demand is not the issue

There is a great deal of concern over access to affordable and nutritious food and a highly positive demand trend for local food over the last two years. Availability, supply consistency, limited selection and access are by far the largest barriers to increasing consumption.

Demand exceeds supply by a large margin and significant markets are available in all segments

Price and quality are not the issue

Perhaps unexpectedly, price and/or organic certification are not barriers. The population appears aware and accepting that local production may need to be priced higher than imports. There is a will to 'self-certify' the quality of the local product, likely resulting from a strong connection to, and trust in, well known and long-established farmers. Limited packaging is seen as favorable.

Excess demand is not sensitive to price (Up to +15-18%) or organic certification

Close community connections to farmers overcome any need for formal quality verification

Informal and limited packaging (possibly recycled) would be a positive local branding strategy

⁸Food Miles: Environmental Implications of Food Imports to Waterloo Region, Marc Zuerb, 2005

Increase production and distribution

People have a strong preference to grow more themselves of what they currently buy at the grocery store. Increased vendors and enhancements of the Farmers Market would have a compound effect on demand and distribution to the benefit of all. Overall, consumers do have a desire to become more directly involved in the local food chain.

A strong enthusiasm to increase self-production holds great potential

There is a viable consumer interest in a local food cooperative

Farmers Market meets needs as a primary distribution point but is an under-utilized asset

Box delivery and online shopping would be welcomed but are secondary interests

Target markets

While the price premium consumers will pay for local product is income dependent, there is no clear relationship between income level and current proportions of local food sourcing or the location and method of sourcing.

There are strong demand preferences for particular local food segments, being fruit and vegetables and eggs. The proportion of meat locally sourced by the domestic consumer, at 25.2%, is already high. It is likely that many of the consumers with the strongest preference for healthy, local meat products are already sourcing this through hunting.

Dawson consumers should be considered broadly homogenous and targeted as such

Primary target markets should be 'Fruit and Vegetables' and 'Eggs'

PART TWO

MARKET EXPANSION RESEARCH

PREAMBLE

The objective of part two was to conduct extensive research into the “next steps” for a local agriculture market expansion strategy, based on the results of the consumer and business survey.

Reflections on Meat Production

In terms of expanding the local food market to include more meat and eggs as protein sources, there are additional hurdles to be overcome by a producer.

Any meat that is sold in retail stores or in restaurants must involve the CFIA (Canadian Food Inspection Agency) as well as the Yukon Government Department of Environmental Health. The CFIA agent for Yukon is based in Kelowna BC. Meat must be processed in an approved facility. In Yukon there is a mobile abattoir with an operator that is approved, and can process meats of all kinds (except wild meats). Producers reportedly perceive this service as expensive. Uninspected meat may be sold at the “farm gate”, meaning at the farm where the animals are raised. This situation employs the “buyer beware” or “at your own risk” fundamental and therefore reduces the necessity of involving inspection agencies. Unpasteurized milk cannot legally be sold in any situation however.

For eggs, the same rules apply in the sense that uninspected eggs may be sold at the farm gate, whereas sales to grocers or restaurants require inspection. In this case, the farmer’s facilities and procedures, including handling, cleaning, hygiene, use of potable water etc. only are inspected periodically by YG Environmental Health i.e. an external inspection facility is not required.

Additionally, it is noteworthy that Yukon’s legislation for Health and Safety dates back to 1961. Many instances are subject to interpretation by Yukon’s Environmental Health and Safety Officer on the basis of commonsense clauses such as “all food must be clean, wholesome, and free from spoilage” (section 22 of Eating and Drinking Places Legislation, YCO 1961/1). It is recommended that any new producer wishing to sell meat or egg products communicate with Environmental Health and Safety early in their business planning to ensure their operation will address regulatory requirements in the most expedient manner.

Given the higher demand for local fresh eggs, the reduced regulations surrounding production, the recognized high carbon footprint of the livestock industry⁹, and the already very high local-meat consumption, prioritizing expansion of eggs as a locally produced animal-based protein source carries greater potential for return on investment and impact on food security and climate change adaptation than the meat sector.

The market expansion research reviewed new local markets, exporting to the larger and more affluent Whitehorse market, the under supplied local domestic market, Community Supported Agriculture across Canada, local producer needs, land potential, distribution and community partnerships to determine which models and strategies, if any, could serve the Klondike well.

Given the survey results and the above, the research focused on the produce sector, as learning and approaches to this can be broadly expected to also be successful for eggs.

⁹Meat Eater’s Guide to Climate Change and Health, Environmental Working Group, 2011

6. NEW LOCAL MARKETS

A number of potential new commercial and institutional markets outside of the restaurant sector were proposed to be considered for their potential.

Mining Companies

Camp cooks are generally empowered to make purchasing decisions within set budgets and expect to source from a single, or very limited number of, preferred distribution points. In practice, this means from one of the two local grocery stores or an Outside specialized commercial distributor. Direct selling to this market is unlikely – access is via the wholesale trade with the grocers. Key learning from grocers with existing industry relationships indicates:

- Larger companies are wary of the higher perceived health risks with local produce
- Tight cost control from Outside financial officers reduces price premiums for local or organic produce
- Outside financial officers and purchasers do not know or care who local producers are
- Camp cooks change frequently and are not aware of local produce – it is difficult to build sustained relationships and market the quality of local produce
- Local camp cooks (primarily placer mining industry) do actively seek out local produce.
- Consistency of supply is key – cooks expect to receive regular and similar product and not suddenly be changed out for lower quality and/or smaller imported product at no notice

Hunting Outfitters

Four outfitting companies work in the Dawson/Dempster area for short periods of time in late summer through early autumn (August through early October). Demand from outfitters is estimated to be low, given their limited season and small group size. Outfitters are about exclusivity rather than volume. So, while they are potential clients in that they are interested in high quality foods, their demand is limited, and therefore unlikely to be a high priority market.

MUSH Sector

Municipalities – City of Dawson has no direct involvement in the food market. A restaurant concession space is leased seasonally in the Art and Margaret Fry Recreation Centre to a private sector operator but without any stipulation upon product offering or sourcing. The operator makes all purchasing decisions.

Universities – While not a university, Yukon College has a presence through the community campus and the School of Visual Arts, but no demand in the food market.

Schools – Robert Service School itself has no direct demand in the food market. The Breakfast for Learning program runs at the school, currently five mornings/week, offering small/simple foods like muffins, juice and maybe some fruit. There is interest to enhance the program and serve full hot breakfasts five days per week and hire a coordinator. There would be a small opportunity for local food sales for items like potatoes, eggs, and vegetables that were prepared for storage (due to the fact that the school year begins as the local produce season is ending).

Hospitals – A new hospital is currently under construction but planning assumes McDonald Lodge will be the provider of food services in addition to serving its own demand:

“In the future, with the addition of inpatient beds, Food Services will be required, including the capability of providing special dietary needs (diabetic meals, pureed meals etc.). Planning assumes Food Services will be contracted from McDonald Lodge for the provision of inpatient meals and maintenance of a small nutrition centre/snack counter.

Consideration will be given to consultation and collaboration with Clinical Nutritionists at WGH. In addition, opportunities and strategies for a renewed emphasis on offering culturally sensitive meal options for Aboriginal patients will be explored.”

Dawson City Hospital Functional/Facility Program, Resource Planning Group Inc., 2009

McDonald Lodge is open year round, with weekly food spending of \$500-\$1000. This includes 'meals on wheels'. Fruit and vegetables make up about 25% of this, with meat, starches, eggs/dairy making up 25% each as well. This is an annual demand of \$9,750 and a projected future demand of \$14,625 in each segment based on the relative bed capacity of the facilities. A local producer already serves them during the growing season and there is also some self-production. Residents appreciate the superior flavor of locally produced vegetables and the Lodge is willing to pay a 10 to 15% premium for local produce, organic or otherwise.

As a governmental institution, there are a number of special barriers to trade. All relationships must be by contract and local meats must be federally certified. Other barriers are the seasonal availability, and the difficulty in getting the right quantity and quality. They would be open to a weekly box program for vegetables, and also an online ordering system.

Tr'ondëk Hwëch'in food programs include 'meals on wheels' for five to ten citizens three days a week throughout the year and, during the summer months, a community lunch each Friday serving approximately twenty people on a drop-in basis. A little food is self-produced for the programs at the Community Garden and the community greenhouse. The bulk of the food purchases are made at the local grocery stores.

CONCLUSIONS

While potential for growth does exist in these markets, they are small relative to the year-round domestic consumer. The placer mining industry and the MUSH sector (essentially limited to McDonald Lodge) are already served to an extent, within the constraints of the growing season.

Nevertheless, much as for domestic consumers, demand is not the issue in these markets - availability, supply consistency, limited selection and access are by far the largest barriers to increasing consumption. Price and/or organic certification are not problematic with the exception of the larger exploration companies. Increased production will be sold.

As these customers expect to deal through professional market relationships, primarily the grocery stores, applying the approaches recommended to expand service of the domestic market would also serve these sectors well, if product were delivered via wholesale channels.

Approaches to expanding service of the domestic market will also capture commercial markets

7. EXPORT FEASIBILITY

It was suggested that export from the well-recognized high grade growing conditions of the Klondike to the Fireweed Market in Whitehorse may provide the necessary critical mass of demand to make a large farming operation viable and thereby also better serve it's own region.

Fireweed Market, Whitehorse

The market operates every Thursday from mid-May through mid-September. Vendors must be selling locally produced products and are required to purchase a membership (\$15) and volunteer fee (\$25) and pay market fees (\$19 daily, \$190 season). It is open to new vendors.

Demand and Competition

- A brief market site visit was conducted on July 21 and very little produce was observed for sale, mostly kale and other leafy greens. Demand is reportedly high, and increasing, with popular items such as eggs and goat cheese selling out within an hour of market opening.
- The coordinator of the market believes there is no sense of competition amongst producers - rather it is about developing relationships between producers and customers. There is room for more producers and variety of products.
- There are a couple of CSAs operating out of Fireweed Market. One is a vegetable CSA with about seven members. The customers have paid ahead, and pick up their box at the market. One is an egg CSA, which involves a few egg producers - they are the recipients of the revenues, while Fireweed Market handles the distribution. The Market also holds beef in their freezer on behalf of a market member/producer. Beef was identified as a particularly difficult item to sell, considering the challenges of certification and a limited ability to distribute the product (only one small grocery store will buy).
- Producers at the market operate on varying scales and have multiple profiles including:
 - Full time farmers
 - One member of a couple farms full time while the other has another fulltime job
 - Hobby farmers
 - Sellers of bumper crops or specific seasonal crops such as pumpkins.
- Most producers in the Whitehorse region are approaching retirement

Freight

Freight is a critical factor. Good packaging is vital to minimize spoilage in transit but at least some will be lost on all loads, wherever the responsibility lies. This will entail an administrative burden. Many products must be refrigerated in transit and storage:

| Refrigeration | | | No Refrigeration | | |
|---------------|-------------|-------------|------------------|----------|----------|
| Broccoli | Green onion | Swiss chard | Beets | Leeks | Rhubarb |
| Cauliflower | Kale | Tomatoes | Cabbage | Peppers | Turnips |
| Herbs | Lettuce | | Carrots | Potatoes | Zucchini |
| Green beans | Spinach | | Cucumber | Radishes | |

Refrigeration trucks do currently run to Whitehorse on a Wednesday, picking up by noon, and can deliver directly to the Fireweed Market on market day by 10am. For 300-600 lbs., freight charges are currently 20-22c/lb. including fuel surcharges, irrespective of refrigeration needs. This is between 7% (tomatoes) and 15% (cabbage) of current Klondike local produce pricing.

It should also be noted that the market stalls have quite limited space and would not enable sale of the volumes required for the lowest freight rates.

Price

There is a very large price differential between the Whitehorse and Klondike grocery stores at this time in the summer market – see Table 8. Fireweed Market retail customers would need to be persuaded to pay a hefty premium to Whitehorse store prices for Klondike producers to accrue similar revenues to their local market place. Carrots appear to be an exception and may therefore hold the greatest potential for export to Whitehorse.

Table 8 – Comparison of Selected Whitehorse and Klondike Produce Prices¹⁰

| Product | July 16, 2011 | | |
|----------------------------|---------------|----------|-------------|
| | Whitehorse | Klondike | Premium |
| Carrots/5lb | \$6.19 | \$6.95 | 12% |
| Field Cucumber/ea. | \$0.69 | \$1.79 | 159% |
| Head Lettuce/bag | \$1.68 | \$2.46 | 46% |
| Romaine Lettuce/lb. | \$1.48 | \$3.19 | 116% |
| Peppers/lb. | \$1.98 | \$5.20 | 163% |
| Tomatoes/lb. | \$0.98 (s) | \$3.24 | 231% |
| Potatoes/lb. | \$0.54 | \$1.49 | 176% |
| Overall | | | 129% |

Total Export Costs

In addition to freight and market charges, a minimum of one person would be required to handle and sell the product, a minimum of \$200 per day in costs. A 5% allowance for spoilage and unsold product (this is minimal and dependent upon a large proportion of pre-sales) would be reasonable. Packaging, whether returnable or not, would be a further cost.

Table 9 – Estimated Freight and Handling Costs for Export to Fireweed Market

| Export Load | Freight/lb. | Handling/lb. | Total/lb. |
|-------------|-------------|--------------|-----------|
| 500 lbs. | \$0.20 | \$0.60 | \$0.80 |
| 1000 lbs. | \$0.19 | \$0.40 | \$0.60 |
| 5000 lbs. | \$0.15 | \$0.25 | \$0.45 |
| 10000 lbs. | \$0.10 | \$0.20 | \$0.30 |

Even in large amounts, the costs to ship and sell at market are extremely high relative to the much lower produce prices observed in Whitehorse.

¹⁰Prices sampled from Extra Foods, Whitehorse and average of two Dawson grocery stores, week of July 16

CONCLUSIONS

Unless Fireweed Market prices can be raised significantly higher than Whitehorse stores, it is unlikely that export to this market is commercially feasible. A well delivered local quality branding and marketing strategy including CSA pre-sales could have some potential to achieve this.

However, a Klondike exporter would always remain vulnerable to competition from better-positioned Whitehorse producers with none of the high cost and logistical barriers. With local Klondike demand seen as vastly in excess of supply, producers would be better directed at meeting this local higher-revenue, lower cost market.

Export to Fireweed Market is not a viable strategy in the short-term

8. LOCAL DOMESTIC CONSUMER DEMAND

Table 1 shows estimates of the Klondike food market size by segment, based on the domestic consumer survey data. Annual Statistics Canada data for average Canadian food consumption¹¹ can be applied to estimate a further breakdown into specific product markets as shown in Table 10.

Table 10 – Local Fresh Vegetable Market Breakdown Estimates

| | Consumption (lb./person) | % Consumption (Weight) | Total Klondike Consumption (lb.) | Market Value (Retail) |
|--------------------|-------------------------------------|-----------------------------------|---|----------------------------------|
| Potatoes | 61.3 | 40.6% | 115,249 | \$171,721 |
| Tomatoes | 10.5 | 6.9% | 19,698 | \$63,821 |
| Lettuce | 12.6 | 8.4% | 23,712 | \$61,767 |
| Peppers | 5.6 | 3.8% | 10,512 | \$54,640 |
| Onions | 11.1 | 7.4% | 20,898 | \$41,587 |
| Carrots | 9.9 | 6.6% | 18,622 | \$25,812 |
| Cucumbers | 5.4 | 3.6% | 10,098 | \$22,820 |
| Cabbage | 6.4 | 4.2% | 12,124 | \$19,228 |
| Broccoli | 2.7 | 1.8% | 5,131 | \$13,119 |
| Green Beans | 1.3 | 0.8% | 2,400 | \$9,601 |
| Cauliflower | 1.6 | 1.0% | 2,938 | \$8,589 |
| Asparagus | 0.6 | 0.4% | 1,076 | \$4,293 |
| Radishes | 0.9 | 0.6% | 1,655 | \$4,236 |
| Spinach | 0.7 | 0.5% | 1,366 | \$3,495 |
| Leeks | 0.3 | 0.2% | 579 | \$2,739 |
| Others | 19.2 | 12.7% | 36,085 | \$92,342 |
| Total | 150.9 | 100% | 283,798 | \$603,103 |

Canadians typically eat approximately another 46% of vegetables in processed form, mostly canned or frozen. Local processing capacity, either commercial or domestic, would increase the available market size. Table 11 shows the potential processed vegetable market.

With processing capacity, the total vegetable market is estimated to be \$952,680 at retail prices. Across Canada, fruit and vegetable consumption is approximately equal by value¹², which implies a total market size for this segment of \$1.91 million. This is larger than, yet broadly consistent with, the results of the domestic consumer survey demand estimates.

Fruit production is challenging in the Klondike although considerable research into apples has been done. Berries likely hold the greatest potential and market sizes are estimated in Table 12 based on average Canadian consumption patterns. The berry market estimate is \$113,892.

¹¹Food Statistics 2009, Statistics Canada, 2009

¹²Food Expenditure in Canada, Statistics Canada, 2003

Table 11 – Local Processed Vegetable Market Breakdown Estimates

| | Consumption (lb./person) | % Consumption (Weight) | Total Klondike Consumption (lb.) | Market Value (Retail) |
|--------------------|--------------------------|------------------------|----------------------------------|-----------------------|
| Tomatoes | 26.0 | 31.7% | 48,906 | \$158,206 |
| Carrots | 5.1 | 7.2% | 9,593 | \$15,433 |
| Broccoli | 2.6 | 3.7% | 4,890 | \$5,778 |
| Green Beans | 5.1 | 7.2% | 9,593 | \$12,712 |
| Cauliflower | 0.4 | 0.6% | 752 | \$2,416 |
| Asparagus | 1.3 | 1.9% | 2,445 | \$9,902 |
| Spinach | 0.7 | 0.9% | 1,317 | \$3,177 |
| Others | 29.5 | 41.7% | 64,900 | \$141,953 |
| Total | 32.1 | 100% | 142,396 | \$349,577 |

Table 12 – Local Fruit Market Breakdown Estimates

| | Fresh Consumption (lb./person) | Processed Consumption (lb./person) | % Consumption (Weight) | Total Klondike Consumption (lb.) | Market Value (Retail) |
|---------------------|--------------------------------|------------------------------------|------------------------|----------------------------------|-----------------------|
| Apples | 17.2 | 3.1 | 17.0% | 38,071 | |
| Raspberries | 1.1 | 1.1 | 1.9% | 4,138 | \$33,849 |
| Blueberries | 1.8 | 2.6 | 3.8% | 8,276 | \$22,535 |
| Cranberries | 2.0 | 0.0 | 1.7% | 3,725 | |
| Strawberries | 4.8 | 2.0 | 5.7% | 12,828 | \$57,598 |
| Total | 26.9 | 8.8 | 30.1% | 67,038 | \$113,982 |

This market demand analysis is based solely on the needs of the permanent population, currently 1881, and not the transient summer and visitor population. While an important source of demand for farmers, these segments fall outside of the scope of the long-term food security goals of the community at this time.

Table 13 – Klondike Food Demand Summary: Resident Needs

| | |
|-------------------------|---------------------|
| Fresh Vegetables | 283,798 lbs. |
| Processed Vegetables | 142,396 lbs. |
| Total Vegetables | 426,194 lbs. |
| Fresh Fruit | 162,797 lbs. |
| Processed Fruit | 61,576 lbs. |
| Total Fruit | 224,373 lbs. |
| Grand Total | 650,567 lbs. |

9. LOCAL PRODUCER NEEDS

The founding hypothesis of this project relied upon an understanding that existing farmers were in a position to, and motivated to, produce and/or sell more local food. Two local producers were interviewed to understand their needs for an expanded market.

Needs

Both have evolved successful business models over considerable periods of time (over twenty years each) and produce to supply assured customers in independent and profitable market niches. One delivers primarily through wholesale channels (restaurant and grocery store) and the other mostly by retail, both from the farm-gate and the Farmers Market. Changes to the distribution models would be considerable business risks. The projected benefits are seen as unpredictable and irrelevant to such established ventures. Existing farmers are not interested in alternate distribution mechanisms or CSA programs.

The interviews determined that local producers have a limited need for, or desire to supply, an expanded market. There is no interest in scaling up production, greater product specialization, mono cropping or committing to contracts for certain products or quantities.

The original hypothesis has failed.

Succession

Both anticipate still operating over the five-year period although production levels are likely to fall and continuing over the ten-year timeframe is unlikely. There are no known business succession plans but one did express both a wish that the farm could continue in some format and an interest in assisting future growers as time allowed once full-time production has ceased.

Special Risks and Obstacles

Klondike farming risks are dominated by two factors. Firstly, the human resources, in terms of the character, work ethic, lifestyle outlook and extraordinary range of skills required from the actual growing to construction, small-engine repair, marketing, customer service and finance to run a successful farm. Secondly, the access to good quality land and in particular, access to land with an adequate supply of water. Irrigation needs and frost protection strategies in the region typically require water sources of a capacity and temperature that can only be met by the principal rivers, the Klondike and the Yukon and not by wells or delivery from off-farm.

Both operations consider bedding plants to be a key part of business viability in the Klondike. These provide strong cash flow early in the season when it is needed most.

*Existing producers will not expand supply – the original hypothesis has failed
Highly motivated and skilled new producers will be required to meet food security goals
Successful long-term business models for Klondike farming have been proven and continue*

10. COMMUNITY SUPPORTED AGRICULTURE MODELS

For the uninitiated, in a CSA model, consumers and farmers work together. While the farmer is tending the land on behalf of others, consumers share the costs of supporting the farm and the risks inherent in farming such as the variable harvests. Membership in the CSA is based on shares of the harvest. In a good season, consumers receive more produce, in a challenging year, less. Members purchase a subscription to purchase part or all of the harvest in advance, underwriting it prior to the growing season. Each project handles this in its own fashion, as every farm is different in length of season, crops grown, level of social activities and the price set for shares.

Benefits to the Farm

- Access to capital to operate and grow, crossing a critical barrier for small farms
- Operating capital at the beginning of the season when it is needed most to purchase essential items such as seed, feed, chicks and to hire labour
- Guaranteed sale of a portion or all of the farm's produce
- Opportunity to know the customers on a personal level
- Pride in contributing to the community in a real and meaningful way

Benefits to the Customer

- Contribute directly to developing and growing a farm to its market potential
- First-hand understanding of how food is grown, what affects its growth, the cycles of nature and the gift of harvest through blogs, emails, newsletters, and "farm days"
- Closer relationship with the food, knowing where it comes from and who grows it
- Trust in the quality and safety of the food
- A regular supply of fresh and healthy food

Benefits to Society

- Builds community and grows high quality locally secure food
- Demonstrates the inherent risks of farming and growing food
- Supports the local economy
- Minimizes the carbon footprint of food and contributes to climate change adaptation

KLONDIKE CSA NEEDS

The survey research into the Klondike food market clearly indicated that the demand for local produce exceeds the volumes current growers are able to supply. This being the case, the first challenge for the community is to encourage additional production.

However, existing farmers are not interested in alternate distribution mechanisms or CSA programs. Being well established with assured customers and without need for financing, the principal benefits of a typical CSA are irrelevant. The tasks of a Klondike CSA should be to focus first on enabling new farmers to access land, and secondly to take responsibility for supporting their financing, sales and other community engagement efforts.

CSA PART ONE – COOPERATIVE ACCESS TO LAND

A report¹³ from British Columbia analyzed best practices for working together in community farms as a key element of building a local food system. It recognized the importance of involving community members in farm management and developing an effective governance structure. The structure must reflect both shared values such as farming as a viable career and be able to negotiate the more divergent stakeholder interests in land, food production, conservation management, education, and housing.

Land Cooperatives

When local communities invest financially in their food system, farmland can be secured for future production needs, with accompanying social, economic, environmental, and agricultural benefits. In a community farm cooperative model, individual shareholders purchase a stake in a working farm. The shareholders in the resulting land cooperative participate in management and long-term planning for the farm, and have the right of first access to purchase produce from the farm. They are also involved in decisions about agreements with individual and groups of farmers who lease sections of the land for farming businesses.

Case Studies

Horse Lake Community Farm Co-Op, Lone Butte, British Columbia is a group of farmers, concerned citizens, and consumers that incorporated and purchased shares in the Horse Lake Community Farm Co-operative in 2006, with the objectives of protecting the agricultural and ecological integrity of a vital lakeshore acreage, developing local farming capacity and agricultural resources, and cultivating an ethical and high quality food supply. Before the Horse Lake Co-op existed, the property was being rented to farmers, but went up for sale when the owner retired. There was concern in the community about the loss of this unique gem, because of its history, natural areas, and most importantly, its agricultural productivity. The owner was willing to work with the farmers, community members and the TLC, to make the co-operative happen. There was, and still is, a lot of community support for this project.

A board of directors runs the co-op, and the property is leased to member farmers. The land is currently farmed by a society that has over 30 years of experience in cooperative agriculture, and whose friends and supporters are the 'seeds' of the Co-operative. The Land Conservancy of BC (TLC), a non-profit, charitable Land Trust, was instrumental in setting up the co-op and is a major shareholder with a seat on the board. The TLC has been working with BC's agriculture and conservation communities since 1997, preserving farm and ranch land for its environmental, economic, and social benefits.

A co-operative model was chosen because it satisfied the needs of farmers for secure access to land, it facilitated the purchase of a viable size of property, and finally, this model promoted a vision of community land ownership and usage. While monetary profit is necessary to the survival of the farm, it is not the main goal of the co-op.

¹³*Community Farms in BC: Building Local Food Systems for Sustainable Communities, FarmFolk/CityFolk, 2009*

Glen Valley Organic Farm, Abbotsford, BC is another good example of a land cooperative in which community shareholders purchased a 50-acre working farm in 1998. The shareholders rent out the majority of the land and some housing located on the land to three farmers in two farm businesses. Community activities take place in common areas of the farm.

Fraser Common Farm Cooperative, Aldergrove, BC (a 20-acre land cooperative held by 40 shareholders) leases six acres of land to a worker cooperative called Glorious Organics Cooperative, comprised of six worker co-operative members. The remaining land contains orchards, pasture, and housing and community space used by land and worker cooperative members. The land cooperative makes decisions about overall land use, while specific decisions about production are made within the worker cooperative.

Providence Farm, Duncan, BC is a good example of a community farm on land managed by a society. It is a 400-acre farm owned by the Sisters of St. Ann, a religious organization on Vancouver Island. The land is leased to Providence Society, which has a 12-member Board of Directors with ties to the surrounding community. The Society manages specific land uses on the farm, including renting out areas for a therapeutic equestrian centre and to other farmers for pasturing and hay harvesting. The Society hires a market garden coordinator to lead a field and greenhouse operation that produces vegetables for several regional farmers markets, local restaurants, and for the food programs run by Providence Society. The market garden also provides a community space for rehabilitation and therapeutic horticulture.

Klondike Pointers

- 1) A co-operative or non-profit organization would be able to access funding for a feasibility study, development of a business model and land use planning and a farm/CSA program development position if necessary.
- 2) A co-operative or non-profit organization made up of consumers and farmers working together would have the ability to negotiate with levels of government the transfer of land title or lease of suitable land to be kept in trust for the purpose of a community supported farm.
- 3) Once land has been secured and appropriate planning is in place, a co-operative or non-profit entity could accept proposals from potential food producers who wish to farm segments of the land. Farmers would pay a reasonable annual fee for use of the land, and perhaps an additional one-time capital investment "share" that would secure their access to that land for an extended period of time, so long as the land was in agricultural production.
- 4) Housing, for the farmers and/or workers, could be an important part of the structure and farm revenues although restricting this to seasonal use is a possibility to ensure lessees and tenants are motivated by agricultural production and not residency.
- 5) Challenges would include project management capacity; land use planning and clear designation of the responsibilities for land trust organization, farmers and shareholders/consumers.

CSA PART TWO – FARMER SUPPORT

A strong CSA includes a core group of effective organizers that supports the farmers by making sure that the food is being distributed. This core group is best comprised of both farmers and consumers but there is no interference from non-farmers about how actual farming work is done.

Case Studies

Greens, Eggs & Ham, Leduc, Alberta operates on a pre-payment plan model whereby consumers commit to a purchase amount, and then pre-order weekly vegetables, eggs, and pork products for delivery to a drop site. Participant payments are good until they have purchased enough products to equal the prepayment value. Prepayment provides the operating capital for purchasing essential items such as chicks, feed, seed, and labor.

| | |
|------------------------------------|--|
| \$250.00 | Half share |
| \$500.00 | Full share |
| \$1,000.00 (Value \$1,050.00) | Receive 5.0% free product |
| \$5,000.00 (Value \$5,375.00) | Receive 7.5% free product |
| \$10,000.00 (Value \$11,000.00) | Receive 10.0% free product |
| Work for product | \$12.00 of product for every hour worked |

Higher-level shares are appropriate for restaurants or other commercial customers.

North Creek Community Farm, Prairie Farm, Wisconsin operates on a vegetable share model, offering a weekly program. It also hosts events and festivals on the farm for participants that encourage farm involvement such as planting day, a garlic festival and a harvest festival. Participants visit one of the designated drop sites to pick up their bags of produce. Bags must be returned the next week. A full share (\$550) provides 15-35 pounds of produce picked fresh from the fields, and is enough to feed a typical family of four. A variety of vegetables are delivered each week. In addition to the produce, participants also receive decorative flowers, a weekly newsletter with updates and recipes, and festival announcements. Shares can be halved (\$280) and a deposit (\$150) is due at sign-up with final payment mid-season.

Klondike Pointers

- 1) A CSA model for food distribution in which produce shares are sold to domestic and commercial consumers ahead of the summer would relieve some of the initial financial burden of season startup for the new farmers.
- 2) Produce not sold in the CSA program could be sold at the Farmers Market or wholesale to grocery stores. A pre-sale system could work for vegetables, herbs, berries and eggs or even poultry or any other product that is grown in sufficient quantity to match demand.
- 3) A core group of organizers to take responsibility for collecting payments, paying the farmers, dealing with legal issues, organizing festivals, and finding more consumers as required would be advantageous.

11. LAND POTENTIAL

Access to suitable land is clearly critical to the agricultural production and food security of a region. The supply potential of the land must be capable of meeting demand, both currently and under long-term population and socio-economic projections.

Current Local Food Supply

The survey results clearly indicated that demand for local food is greater than supply in both the domestic and commercial sectors. Assuming, as indicated by producers, that effectively all the current production is sold, the current available supply is equal to the 8.4% of the total food consumption that is locally produced. As there is no known significant commercial production of meat, eggs or dairy it is assumed that 100% of the locally produced amounts in these segments is from self-production or non-cash exchange/gift.

In effect, commercial supply of local food in Klondike is limited to vegetables and estimated as \$92,000 in value, or 36,000 lbs. in weight, at average retail prices. This is assuming half of the locally produced supply is commercial and half is self-produced in the absence of any data. The assumption is broadly consistent with the demand estimate in Table 13 in that it places commercial supply at 6.15% and therefore total consumption at 584,000 lbs.

Supply Gap and Land Needs

There are only two significant commercial producers. Between them, 2.5 acres are in production, which is also the sum of land in self-production based on our assumption. With 53% of households reporting self-production, the average active domestic household garden is 230 ft², or 15x15 ft., which is plausible. The commercial producers imply an average yield of 14,400 lbs. per acre. From this, and the demand estimates from Table 13, the supply gaps and land needs to fill these gaps can be calculated:

Table 14 – Klondike Vegetable Supply Gaps and Land Needs

| Target Market | Demand/lb. | Current Supply | Supply Gap | Land Need |
|-------------------------|----------------|----------------|----------------|-------------|
| Fresh Vegetables | 283,798 | 71,876 | 211,922 | 14.7 |
| Processed Vegetables | 142,396 | 0 | 142,396 | 9.9 |
| Total Vegetables | 426,194 | 71,876 | 354,318 | 24.6 |

Land Supply Potential

Putting the land needs into context, the 14.7 acres needed to close the entire supply gap for fresh vegetables is 640,000 ft², equivalent to 128 downtown City lots, or more than six blocks. Equally, it is only six common country residential properties. Clearly, the amount of land needed is well in excess of what domestic gardeners could access and work in the downtown core for self-production but also well within the reach of good community land planning.

The most likely model for a community-supported farm would be for a co-operative or non-profit organization (pre-existing or newly formed) to acquire lands to hold in trust for agricultural purposes. Possibilities identified include:

- For small plots, reclamation of un- or under-utilized land in the downtown area subject to partner agreements with institutional landowners such as Parks Canada, Yukon Government, Yukon Housing Corporation, Tr'ondëk Hwëch'in and City of Dawson
- Facilitating access to, and the use of, vacant and under-producing privately held agricultural lands, such as in Sunnydale, possibly through Yukon Agricultural Land Link or a similar local program
- Placing previously active but now fallow agricultural lands with known potential into production once again. Examples include:
 - Vacant Yukon lands in Sunnydale
 - Tr'ondëk Hwëch'in (R-27, S-99, R-69) lands in Sunnydale
 - Tr'ondëk Hwëch'in (C-07, also known as Strachan's Farm) lands in the Klondike Valley
 - Sisters Island
 - Vacant Yukon lands at Henderson Corner
 - Other vacant Yukon and Tr'ondëk Hwëch'in lands including Yukon River islands

Land use planning is almost complete in the West Dawson and Sunnydale area and draft plans propose large areas for agricultural use, noting that Sunnydale has some of the best growing conditions in the Yukon. This is likely an area to prioritize for consideration.

An alternative approach to land access would be to investigate ways to ease the critical issue of succession for current farmers who are close to retirement. This could be through facilitating connections and mutually beneficial relationships with either a co-operative or potential new farmers and involve training, internships and mentorships up to and including land and/or business acquisition.

Given ever-present capacity constraints, it may at some point be necessary to make a strategic decision between 'saving' current farms and their land potential in order to preserve and, over time, invest to expand their output, and building new operations from start-up.

Much more can be found on proven succession models in a recent research report¹⁴.

CONCLUSIONS

While there may be interests, policies and other barriers that make access to these and other suitable agricultural lands difficult, particularly for the poorly-financed individual farmer-entrepreneur, more than sufficient land potential does exist to achieve local food security.

Agricultural land supply in the Klondike should not be considered a barrier to food security

¹⁴*Strengthening Yukon Local Food*, Zapisocky and Lewis, 2010, pp.34-36 & 58-60

12. DISTRIBUTION

The founding hypothesis of this project was that new distribution models could potentially be employed in the Klondike in order to expand the local food market and that existing farmers would participate in those models and expand supply to meet that demand and the goal of increased food security. This relied upon an understanding that farmers were in a position to, and motivated to, produce and/or sell more local food.

As noted previously, this hypothesis has failed and preceding steps are required to encourage new farmers and increased production, possibly through a CSA cooperative community farm. It would be pre-emptive to try and determine the exact details of a distribution model that will meet the needs of these new farmers until they, and their products and needs are known.

Nevertheless, the general elements that will be required to support these farmers through an efficient CSA system of food distribution can be implied from the survey learning, existing Canadian examples and other research to date.

Fresh Seasonal Produce

Distribution can be flexible and include multiple pick-up locations or pick-ups at a market location or farm. The Farmers Market, the recreation centre, the school or even major workplaces at lunchtimes or evenings could be used. Dawson's compact size is advantageous for distribution in that there are a few key convenient locations with good parking that many residents pass every day without a need for special trips and extra fuel consumption.

If consumers are allowed to choose their weekly goods, this may be by:

- Submission of orders by a fixed mid-week deadline for a weekend pick-up
- Choosing the weekly value from a market stall
- Choose at the farm from the harvest and/or even pick-your-own

Packaging (bag or box) could be either the customer's responsibility or operate on a take-one leave-one basis. The survey indicated a strong preference for limited packaging, recycled where possible and this could be a strong local food branding and marketing opportunity.

Existing not-for-profits can also help access consumers, letting small farmers be out in the field instead of standing at market stalls. Aggregating smaller producers this way can offer a broader diversity of products at a single sales point throughout the season.

Consumer Engagement

Distribution often also includes news, information, marketing and promotion. Actively involving the consumer in the farm and growing closer relationships with the food, how it is grown, what affects its growth and the cycles of nature is a vital part of a CSA strategy. It is a necessary part of the concept of risk sharing with the farmer.

CSA programs commonly include weekly e-newsletters to keep shareholders updated on the progress of the crops and the ups and downs of the season. Systems, techniques and challenges can be explained and recipes offered that correspond to the foods of the week. Many CSA farms will also encourage shareholders to work in the fields, help with office work and serve on a board of directors.

Storage and Extended Season

The most significant expansion of the market for locally produced food and impact on food security will arise from a big-picture interpretation of distribution, extending sales by facilitating the distribution of local produce into the off-seasons. The potential for the preparation and sale of canned or frozen vegetables should be investigated:

- There may be a small business opportunity for someone who could process the harvest by canning, freezing, cold storage etc.
- If this were not feasible, a certified community kitchen, freezers and cold storage would be valuable assets that could be added to and associated with the CSA organization.

Share Types

There are two other common types of share likely to be relevant to success in the Klondike:

- Work Share - working set hours a week on the farm in exchange for a full produce share
- Storage Share - storage crops to put away for the winter - carrots, potatoes, cabbage, onions etc. and even processed foods. Such a share model holds particular potential in the Klondike.

Current Distribution – Action Now

There are a number of consumption gaps and distribution challenges and opportunities that could be addressed through immediate improvements to the current relationships amongst actors in the local food chain, minimizing challenges and maximizing benefits:

- Some local food branding and marketing, even simple e-news, social media sites etc. would raise the perceived value of local produce and help match current intermittent excess supply with a demand for local produce that is not equaled by consumer dedication to attending the Farmers Market.
- Many local restaurants would like to have, but are currently not receiving, deliveries of local produce. This is a significant volume market ripe with opportunity and producers could be encouraged to re-connect with those they are not currently serving.
- Autumn "storage shares" could be used relatively simply to promote and sell bulk quantities of root vegetables and other surplus to families with an interest in preserving or cold storing.
- Sourcing refrigeration infrastructure for local produce at grocery stores
- Education and workshops for existing and aspiring commercial producers on common professional practices and expectations from players in the commercial food market
- Investigation of, and perhaps a pilot project for, significant egg production would be of value as the demand is high.

13. COMMUNITY PARTNERSHIPS

In a small community, maximizing potential partnerships is essential to the success of any initiative especially a local food distribution or production development program.

Dawson Community Garden

The mandate of the Dawson Community Garden is to bring community members together in a public space that will foster greater learning and understanding of Northern gardening techniques, increase environmental awareness and promote sustainable, locally grown alternatives and food security within the City of Dawson. By providing an environment that cultivates a positive, hands-on learning experience and actively engages Dawson residents, the garden also promotes a healthy way of life, the sharing of diverse knowledge, and a stronger sense of community and belonging within the Dawson area.

The Garden is managed by City of Dawson with a paid coordinator. Weekly workshops on techniques such as composting, mulching, harvesting and drying are held. It has over 20 beds, 24 ft² each, a browsing garden and a number of other features including a children's playground. Trinke Zoo daycare, Tr'ondëk Hwëch'in Health and Social Services, Robert Service School and other community agencies are strongly involved. Visiting Communities in Bloom judges recently commented that this was one of the best such gardens they had ever seen and it is well regarded by Yukon Agriculture Branch.

The Garden is successful in its role as a highly visible source of inspiration and education, encouraging residents to think about their food sources and assisting them in their efforts to increase their self-production. It has been recognized that, while not the sole solution, expanded self-production must be a part of any successful food security strategy and the Garden excels in promoting and facilitating this.

Dawson Community Greenhouse

This is a partnership between CKS and Tr'ondëk Hwëch'in (TH), who made a monetary contribution to the current Growing Forward work program and administers financial and labour matters. While the precise role of the greenhouse is still being formulated, the vision is increasingly likely to be education and learning opportunities for Tr'ondëk Hwëch'in citizens and growing food for festivals, events and meetings, focused through organizations and programs. Sourcing the necessary volunteer assistance has been difficult and hiring a skilled coordinator in the medium term will be required. The production capacity of the greenhouse itself is fairly limited.

Tr'ondëk Hwëch'in

The Lands and Resources Branch has direction from Chief and Council to move agriculture forward. However, it is understood that appropriate land use, citizen health and education and economic benefits are the predominant vision of this direction rather than solely out of concerns for community food security.

High-potential TH settlement lands were chosen for agriculture and it is felt that they should be used in that fashion whenever possible. Such lands include sections in Sunnydale (R-27, S-99, and R-69) and Strachan's Farm (C-07) in the Klondike Valley. Land use planning is almost complete in the West Dawson and Sunnydale area and draft plans propose these lands for agricultural and agricultural/residential use, noting that Sunnydale has some of the best growing conditions in the Yukon. As a first step forward in this direction for Tr'ondëk Hwëch'in, these lands are likely to be the initial focus of a more detailed assessment of the potential of agricultural lands and their production possibilities.

There is no prohibition on the use of Tr'ondëk Hwëch'in lands for a possible community-farming venture but equally there is no clear path forward. The land disposition process has proven to be slow even for simple citizen requests and these needs would be prioritized.

Robert Service School

There is interest among teachers at the school in gardening, greenhouse construction and other subjects related to food production feeding into home economics classes and the farm-to-fork cycle playing a larger role in the curriculum.

Yukon College

Yukon College has expressed an interest in delivering educational programs related to farming.

CONCLUSIONS

The Community Garden (City of Dawson), its established communications tools and events, and user network could serve as an excellent portal to disseminate information and opportunities for potential farmers or distribution model participants to become involved during the start-up phase of the market expansion strategy.

In the medium to long-term, the best partnership roles the Community Garden, Robert Service School and Yukon College could play would be visible promotion, education and skills training within their existing mandates and resources, inspiring the next generation of farmer-entrepreneurs to move on to bigger things.

Given that there are also vacant Yukon lands adjacent to the Tr'ondëk Hwëch'in lands in Sunnydale, this may be the best area to consider for any potential community farming partnership including possible shared investments in infrastructure, expertise, sales and marketing, training and education programs.

Partnerships with landholders in Sunnydale should be pursued to coordinate the assessment of the potential of agricultural lands to host a co-operative community farm

RECOMMENDED STRATEGY

Expanding Self-Production

- 1) Permanently support existing strategies of successful programs such as Dawson Community Garden to build on the potential of a strong enthusiasm to increase self-production

Enhancing Existing Commercial Production

- 1) Use minimal packaging and promote this as a local branding strategy
- 2) Employ local food branding and marketing, even simple e-news or social media sites, to raise the perceived value of produce and match current intermittent excess supply with demand
- 3) Engage with City of Dawson on increasing the use and vitality of the Farmers Market
- 4) Re-connect with the many local restaurants that have unmet demand for local produce
- 5) Source refrigeration infrastructure for local produce at grocery stores

New Production and Distribution

Successful long-term business models for Klondike farming have been proven. Nevertheless, these models have significant barriers to entry.

Undertake a feasibility study and development of a business model for a local food cooperative community supported farm, focused on fruit, vegetables and eggs, including, but not limited to:

- 1) Identification of interested parties, stakeholders and time frames including:
 - Soliciting expressions of interest from highly motivated potential food producers who may wish to lease and work segments of the farm
 - Engaging with governments including Tr'ondëk Hwëch'in to assess potential high-quality agricultural lands to be accessed and kept in trust for the purpose of the farm
- 2) Opportunity description of the industry, market, target customers and competitors
- 3) High level risks including market entry and penetration issues and challenges
- 4) Type of operation - size and services including, but not limited to:
 - A CSA model for food distribution in which produce shares are sold to domestic and commercial consumers ahead of the summer including:
 - Box delivery and online shopping
 - Autumn storage shares of bulk quantities of root vegetables and other surplus
 - Season extending practices such as preserving and/or cold storing.
 - Regular training, education and workshops for the producers including common professional practices and expectations from players in the commercial food market
 - Housing for the farmers and/or workers
- 5) Financial requirements – set-up costs, capitalization and revenue and expense structure
- 6) Skills and capacity required and the benefits of cooperation including the necessary:
 - Designation of the responsibilities of cooperative, farmers and shareholders/consumers.
 - Management of collecting payments, paying the farmers, dealing with legal issues, organizing festivals, and finding required shareholders/consumers etc.
 - Land use planning
- 7) Other matters as determined to be necessary by the interested parties

NEXT STEP

Highly motivated prospective producers are the crucial prerequisite for local food security.

**Conservation Klondike Society seeks
individuals who are
interested in farming
commercially**



**To discuss and implement ways to
support cooperative &/or
community-based food production**

Conservation Klondike Society
993-6666

One prospective local producer has already progressed as far as completing a Farm Development Plan and an application to Yukon Government for agricultural land. Contacting this prospect to explore how the community could support them should be a priority.