



VANCOUVER
URBAN FARMING
CENSUS
2014 *to* 2016

ACKNOWLEDGMENTS



The Vancouver Urban Farming Census 2014-2016 is a project of the Vancouver Urban Farming Society (VUFS).

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DEDICATION

For the Musqueam, Squamish and Tsleil-Waututh Nations who stewarded this land for centuries, for the Chinese market gardeners who provided food for Vancouver in its early days, and for the backyard gardeners and growers who do so today. We acknowledge and thank all those who tend and have tended this land with such care.

LAND ACKNOWLEDGMENT

We want to acknowledge that urban farming and this research takes place on traditional, ancestral and unceded territory of the Coast Salish peoples, including the territories of the x^wməθkwəy^əm (Musqueam), Skwxwú7mesh (Squamish), Stó:lō and Səl'ílwətaʔ/Selilwitulh (Tsleil-Waututh) Nations.

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EXECUTIVE SUMMARY

Since the first urban farming Census, first established in 2010, we have seen growth and change in the urban farming sector. Urban farms provide opportunities for neighbours, youth, and people with barriers to employment to grow, learn, and celebrate healthy food. However, finding a financially viable path is still a challenge. Urban farming in Vancouver is a story of individuals and communities who despite the challenges,

work hard to establish social enterprises, non-profits and businesses that provide benefits to the residents of Vancouver through access to healthy food, a connection to food lands, opportunities for social connection, education and employment. Urban farmers remain dedicated to growing in the city because they see the positive impact of their work. Many continue working off-farm jobs or working with volunteers in order to grow healthy food in a city with acute affordability and access changes for land and housing.

Supporting food friendly neighbourhoods

Thirteen self-described urban farms grow on roughly seven acres. There are three new farms as of the 2016 Urban Farming Census. The amount of land under cultivation remains largely the same since 2013. Land tenure remains a challenge for urban farmers; a lack of long term leasing is an obstacle to building important infrastructure that can help farms grow throughout the year. Currently, one urban farmer is struggling to find adequate warehouse space for their operations.



Improving access to healthy, affordable, culturally diverse food for all residents

These farms grow! From 2010 to 2016 the sales value from urban farms grew more than five-fold from \$129,000 in annual sales to \$746,000. Sales to restaurants have been the leading growth area with sales increasing from \$13,400 in 2010 to \$390,400 in 2016. In 2013, high sales volumes corresponded with greater land under production. In 2016, two of the top three farms were indoor operations with a footprint of 4,000 sq ft or less. These smaller indoor farms have tentative leases on commercially zoned land. Of the remaining farms that reported income from food sales, five reported sales ranging from \$15,000 to \$40,000 and four reported under \$5,000 in sales for 2016.

Making food a centrepiece of Vancouver's green economy

In 2013, seven farms employed 25 Full Time Equivalents (FTEs). By 2016, employment grew to ten farms employing 34.7 FTEs for food production and related activities. These wages, however, are not all supported through food sales, but also through grants and fundraising. For those farms that do pay staff, wages range drastically. In 2016, urban farms accounted for approximately \$680,000 in wages, nearly double the wages

paid out in 2012. Four of the thirteen farms surveyed did not pay out any wages, the farm owners/operators worked on the farm with volunteer labour. While some farms are successfully able to pay employees, many farms struggle to use food sales alone to support both farm owners, as well as employees. In agriculture the margins are often low.

Farmers are looking for larger plots of land or are leaving the City of Vancouver for more agriculturally friendly areas. In order for more successful urban farming, policy must help farmers negotiate the high costs of Vancouver coupled with low margins of food production.

Empowering residents to take action

Over 9,000 volunteer hours, from roughly 300 volunteers supported urban farming in the City in recent years. On just four farms who kept such data, 15,000 youth, adults, and neighbours came through the farm to engage in field trips, programs, and outdoor activities on the farms. This is an important impact of urban farming on our City – to provide opportunities for people to engage with and eat healthy, fresh food. The City's largest landowners (the City itself, Parks Board, School Board and hospitals), are exploring how to host urban farming programs on their sites to increase the beneficial impact to the community.

understanding Urban Farms

It's easy to think of all farms being the same — after all, they are all growing food. However, the data from 2010 to 2016 has allowed the identification of five types of urban farm enterprises operating in Vancouver.

1 Charitable urban farms are operated by charitable organizations and can be supported through grants and charitable donations. These organizations use the commercial sale of food products to meet their charitable goals such as employing people with barriers to employment, increasing food literacy, providing experiential learning opportunities, addressing community food security and improving social cohesion. Charitable Urban Farms are among the largest and most successful urban farms in Vancouver in terms of land under production, employment, sales, and community impact.

2 Indoor, intensive farm businesses focusing on high value crops (micro greens and salad mixes) for restaurant, retail and direct-to-consumer sales are another model for urban farming that has met with success in Vancouver. The growth in sales and employment in the urban farming sector seen from 2013 to 2016 is largely attributed to the rise of a small number of indoor,

intensive farms growing these high-value food products. These organizations consistently struggle to find adequate space in Vancouver where high rent and changing zoning reduces affordable space.

3 Yard-sharing residential farms operating in backyards or other small plots of land were captured in the 2010 Census and have had a continued presence in Vancouver. Some of these farms are for-profit businesses, others are non-profit organizations. Farmers operating on residential lands often have multiple, relatively small sites under production to make up one farm enterprise. The land under production for residential farms did not increase from 2013 to 2016 and the financial sustainability of this farming model is a challenge. Residential farms often rely on volunteer labour and annual sales are often low, some below \$15,000. When operator income is calculated per hour it is well below minimum wage.

4 High-tech, capital-intensive farm businesses have yet to be a success story in Vancouver. In the 2010-2013 Census, a planned downtown, rooftop farm went through the hands of multiple investors and declared bankruptcy before any production began. In 2016, another high-tech farm began operation near the downtown core, but by late 2016 the company had already been forced to close due to financial reasons caused by inconsistent production that their customers could not rely on. While much excitement and press has covered various high-tech, urban food production systems, to date this urban farm model has not made a substantial contribution to Vancouver's urban food sector.

5 Rural-scale, diversified farms operating within the City limits describes one unique farm, which operates on 3.5 acres of Agricultural Land Reserve land. They produce diverse agricultural products, including livestock, and offer educational and other programming

Charitable Urban Farms are among the largest and most successful urban farms in Vancouver in terms of land under production, employment, sales, and community impact.

opportunities to Vancouver residents. The UBC Farm, located on University of British Columbia land, would also fit this category. However, since the UBC Farm is outside the City of Vancouver boundaries, it is not included in this Census.

Ultimately, the story of urban farming is threefold:

1. Urban farms face significant challenges to their operations including insecure land tenure, low economic returns, challenging regulations and permitting and lack of financial incentives.
2. Despite those challenges, farmers and farms are an important and robust part of the community and social fabric of the City of Vancouver. With 750,000 in food sales, Urban Farms contribute 1.9 Million in economic benefits.
3. This is because the social and communal impacts of urban farms are currently far more significant than their economic footprint. These social impacts are the sweetest fruit of urban farms.

BACKGROUND



URBAN FARMING IN VANCOUVER

Throughout this report the term urban farming refers to growing fruits and vegetables in the city specifically for sale. Currently, there are approximately 13 self-declared urban farm businesses operating in Vancouver. Over the past seven years, since the first urban farm Census data was collected, we have seen the growth of urban farming and changes to the sector. There are numerous small farm operations (<\$10,000 of sales a year), larger charitable organizations that use farming as part of their charitable mission, and a number of urban farm businesses that generated over \$70,000 per year in food sales. Many of Vancouver's urban farms operate from the premise of a social enterprise. All of the farms surveyed are following organic or ecological practices, with one farm being certified organic.

In March 2016, City Council passed zoning and development, and license bylaw changes to recognize urban farming in the city. The Council's recommendation allowed urban farming in all-zones, pending size,

operating, and permitting requirements. A new Urban Farming business license category was also created. Pilot Urban Farming Guidelines were passed with the intention to increase the recognition of urban farming as a legitimate business activity (both by residents as well as other businesses) and to formalize oversight of the sector. The goal of the guidelines was to institutionalize urban farming as part of the economic and social enterprises that exist in Vancouver and ensure it has a place in current and future developments.

The Urban Farming Guidelines are a pilot for two growing seasons. Staff and a multi-stakeholder working group are monitoring the effectiveness of the by-law. City staff are expected to report to City Council by November 2017 with recommendations for any necessary changes. The Urban Farming Census, comprising data from 2014-2016, and amalgamated with previous results (2010-2013) provides important insights into how the character and structure of urban farming is changing in Vancouver and how City policy and regulation can best support further growth.

RESEARCH QUESTIONS & METHODOLOGY

The 2014-2016 Vancouver Urban Farming Census builds on economic and social data of urban farming opera-

tions collected during the 2010-2013 growing seasons. Data for the current Census was collected during the winter of 2016-2017; farm operators were requested to provide three years of information (2014-2016) at one time. The survey questions were designed to provide findings that could be compared with previous data to give both a snapshot into the current impact of urban farming and provide trend data showing how the sector is developing over time.

Like the previous Census, this research seeks to answer the question of what is the contribution of urban farms to the goals in the Vancouver Food Strategy. This research uses the five dimensions of the Food Strategy to evaluate the contribution of urban farming.

The 5 Dimensions of the Vancouver Food Strategy:

- 1. Support food friendly neighbourhoods**
- 2. Empower residents to take action**
- 3. Improve access to healthy, affordable, culturally diverse food for all residents**
- 4. Make food a centrepiece of Vancouver's green economy**
- 5. Advocate for a just and sustainable food system with partners and at all levels of government**

THE 5 DIMENSIONS OF THE VANCOUVER FOOD STRATEGY

- 1 Support **food friendly neighbourhoods**
- 2 Empower residents to **take action**
- 3 Improve access to **healthy, affordable, culturally diverse food** for all residents
- 4 Make food a centrepiece of **Vancouver's green economy**
- 5 Advocate for a **just and sustainable food system** with partners and at all levels of government

The Vancouver Urban Farming Society distributed the questionnaire online as well as in paper format during events and meetings to reach urban farmers. Farmers who had participated in the Census in previous years were contacted to inform them of the opportunity to participate in the current Census. Participants were encouraged to share the survey with their farmer contacts to gather more responses. Data was aggregated in order to ensure confidentiality. Farmers who participated in the survey received \$50 in recognition of their contribution.

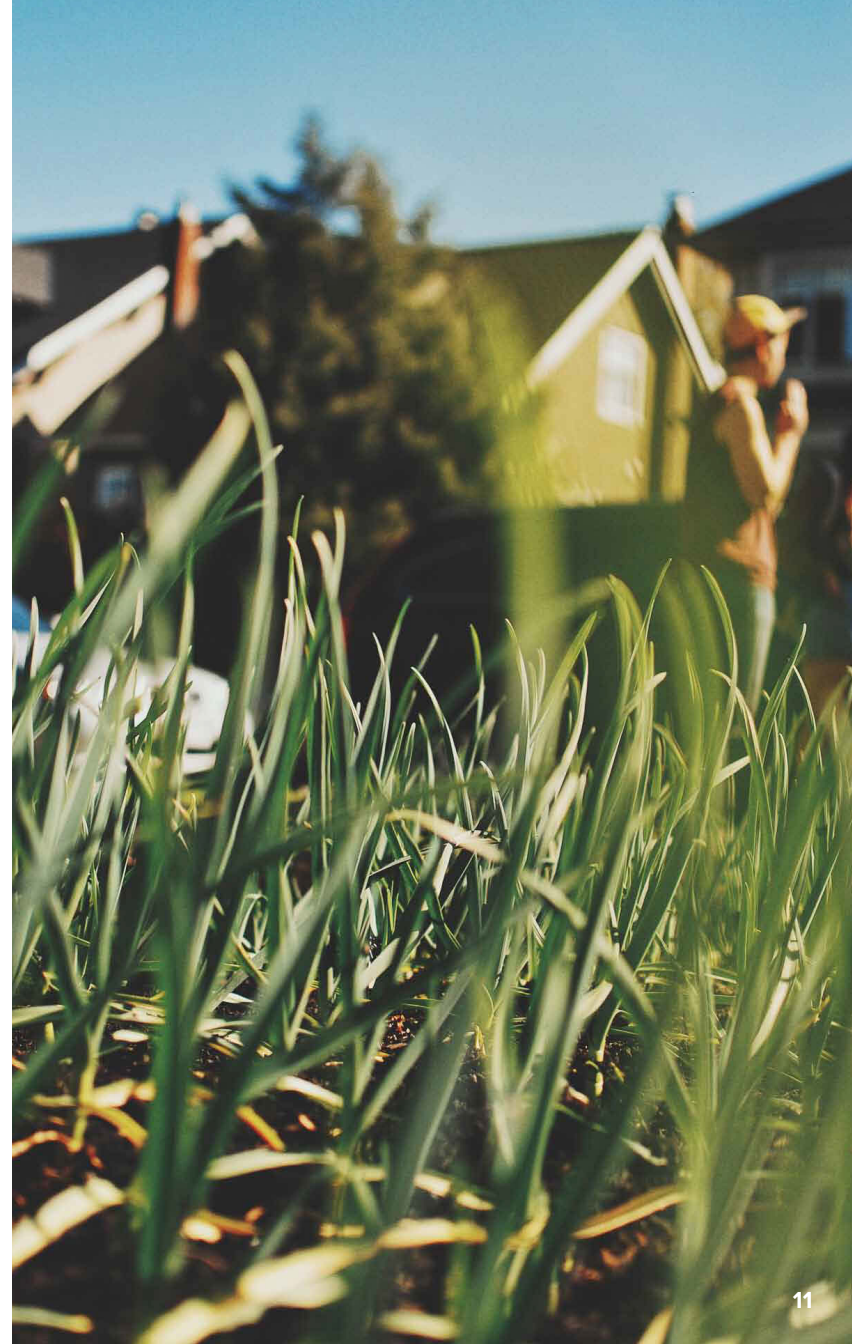
The Vancouver Urban Farming Society identified 13 urban farms in 2016; all 13 farms participated in the Census.

While there is evidence of significant urban gardening taking place by non-English speaking residents, it is unclear how common commercial sale of urban food products is. In future, a simplified survey, translation support and relationship building with key contacts in Vancouver's diverse ethnocultural communities would enable an assessment of the contribution non-English speaking communities are making to commercial urban food production.

DATA LIMITATIONS

The Vancouver Food Strategy focuses on how urban farming benefits neighbourhoods and residents. This research seeks to understand these contributions, but is limited to urban farmers' perspectives and experiences. Further study of customers, landowners, neighbours and other citizens is necessary to have a more full understanding of the social benefits of urban farming.

In addition there are inherent limitations to the quality of self-reported data. Some of the data is two years old, held by farmers until reported to the Census. Some farmers keep rigorous records, others do not. While this data represents one of the best pictures of urban farming in the City of Vancouver, it is important to recognize that it is self-reported data. However, self-reported data is the same method utilized by the National Census of Agriculture and this type of data provides us with the best picture we have of Canadian agriculture practices and trends.



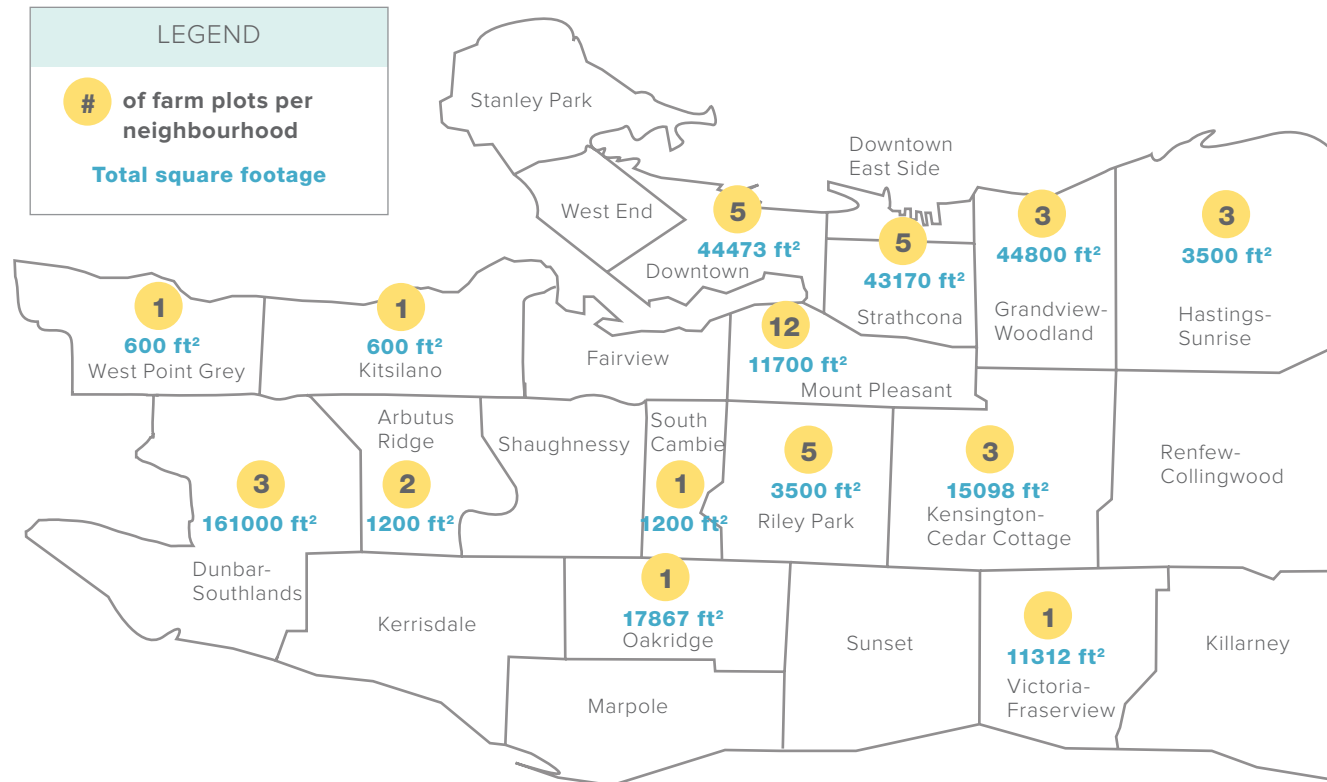
CONTRIBUTIONS TO VANCOUVER FOOD STRATEGY GOALS



The five dimensions of the Vancouver Food Strategy provide the lens for evaluating the Census results. The results below represent the responses from the 13 urban farms who completed the survey (n=13). In some cases respondents did not complete all of the survey questions; for this reason, some results may reflect responses from less than 13 farms. In addition, the 2014-2016 Census questionnaire included questions related to the City of Vancouver's pilot Urban Farming Guidelines. Responses on this topic comprise a sixth section of the analysis.

1 Support Food Friendly Neighbourhoods

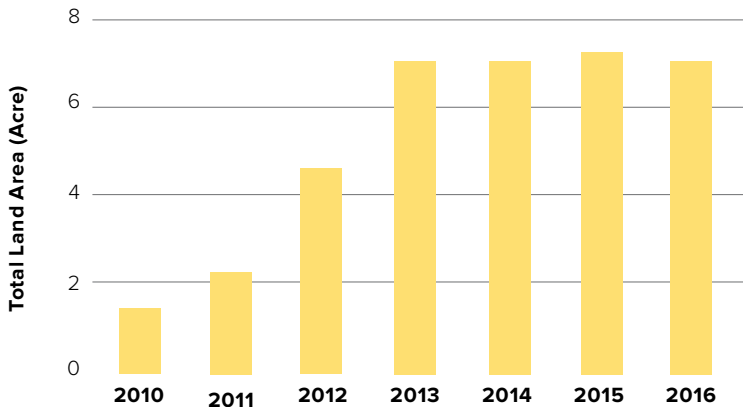
Vancouver's urban farms build infrastructure for the growth and sale of local food production. These farms are distributed throughout the City providing opportunities to access fresh food and education about food production to a range of Vancouver residents.



LAND IN PRODUCTION

The land under production reported by urban farms in the Census grew significantly from 2010 to 2013 when a number of new urban farm sites were built. From 2013 to 2016, urban farming land area did not grow substantially. However, one-third of the total 2014-2016 urban farming land area was attributed to the addition of one farm in Southlands that did not participate in the Census in 2012-2013. As a result, significant loss of land has occurred since 2013.

Figure 1: Change in urban farming land area (acres)



In 2016, urban farms ranged in size from 150,000 sq ft (3.5 acres) to 170 sq ft. The median total farm size, which may include multiple plots, was 4,000 sq ft in 2016.



LAND IN PRODUCTION (CONTINUED)

The number of known active farms decreased slightly from 2013 to 2016, from 15 to 13. However, the number of farms participating in the survey increased from ten in 2013 to 13 in 2016. In 2013, there were 50 urban farm plots included in the Census, with an average size of 6,255 sq ft and a median size of 1,000 sq ft. In 2016, the number of urban farm plots decreased to 44 plots with an average size of 8,182 sq ft and a median size of 1,083 sq ft. The change in average plot size was largely due to the inclusion of one farm with a 150,000 sq ft. plot; however, more small plots were lost, indicating that urban farmers are seeking larger plot sizes for farm production.

Table 1: Change in plot numbers and farm sizes, 2013-2016

Square Foot Range	2013		2016	
	# of Plots	# of Farms	# of Plots	# of Farms
0 – 1,000	28	1	18	2
1,001 – 2,500	12	1	14	2
2,501 – 5,000	2	2	2	3
5,001 – 15,000	2	3	4	2
15,001 – 25,000	2	1	3	1
25,001 – 50,000	3	1	2	1
50,001 – 150,000	1	1	1	2
TOTAL	50	10	44	13

LAND IN PRODUCTION (CONTINUED)

When urban farm land area is analyzed by land classification type, over half of total production is taking place on private residential land (58%). However, when the largest farm (accounting for 3.5 acres or 49% of Vancouver's total urban farm land) is removed, just over 30,000 sq ft of residential land is under farm production. Removing the largest farm from the data set, 66% of urban farm production by total area is taking place on institutional land, 19% on private residential land and 15% on private commercial land. Institutional land where urban farming takes place includes school yards and City-owned land in commercial areas.

Table 2: Change in number of farms by land classification, 2013-2016

LAND CLASSIFICATION	# OF FARMS, 2013	# OF FARMS, 2016	TOTAL PRODUCTION AREA FT ² , 2016
Private Residential Land	5	7	181,523
- <i>Single Largest Farm</i>	0	1	- 151,000
Institutional / City-Owned Land	3	4	107,277
Private Commercial Land	2	4	24,200
TOTAL	10	14*	313,000

*One farm is operating on both institutional (leased City land) and private commercial land.

LAND TENURE

Only one of Vancouver's urban farms in 2016 was operating exclusively on land owned by the farmer; the remaining farms secure land tenure through written contracts (eight farms), oral agreements (two farms) or a combination of strategies (two farms). Of those farms with contracts, lease lengths vary from a fixed term of less than a year, to year-to-year renewals, to an unspecified termination date. For urban farmers, like farmers elsewhere, the security of land tenure is an important concern. Urban farmers describe their lack of secure tenure as a "critical" issue that is a barrier to investing in long-term capital investments or business planning that would improve the productivity of the land and their ability to create employment on their farms. Some farms have developed farming models to compensate for insecure tenure: portable growing media, long-term leases, and crops that do not require the use of in-situ land (i.e. sprouts). But even a number of these farms with adapted farming models describe how the lack of long-term land tenure is having a negative impact on their current or future operations.

COMPENSATION

Over two-thirds of the urban farmers operating on leased spaces provide compensation to the landowners. The types of compensation include provid-

ing produce (five farms) — with contributions valued in the hundreds of dollars, property tax reductions (two farms) and paying rent (two farms).

ORGANIZATIONAL STRUCTURE

The organizational structure and business model of Vancouver's urban farms follows two predominant types—one-third are operated by non-profits or charities and two-thirds are businesses owned and operated by the farmers. Of the farm businesses, multiple ownership models exist, including sole proprietors, partnerships, incorporated businesses and a farm cooperative owned by its principal employees. One of the charities is operating an incorporated farm business. Another incorporates urban farming into their charitable mission.

The type of incorporation may impact the success and social impact of the farm. Non-profits and charities are often able to apply for grant funding, helping support wages and the charitable goals of urban farms. In addition, a non-profit or charitable organization may be able to farm on public or institutional land due to positive public perception. These organizations do not farm primarily to grow and sell food, but to meet their charitable objectives, including: education, employment, training opportunities, addressing food security and increasing food access.

2 Empower Residents to Take Action

Many urban farms operate in the public sphere — producing food on institutional, residential or commercial land in close proximity to urban residents. This proximity to urban activities provides opportunities for urban residents to see agriculture up close and engage in growing food in many different ways.

Urban farms provide spaces for observing, educating, volunteering and hosting events; acting as a hub for empowering neighbours to engage with food production, civic life, and the natural environment.

“I go out into the farm to find calm and peace in the city.

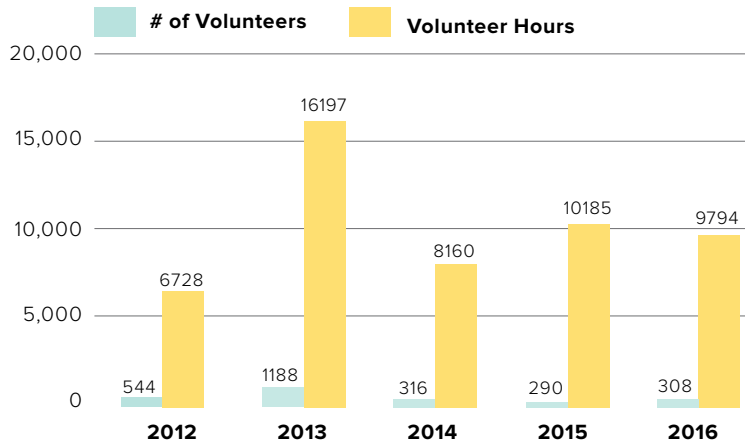
These are the statements that residents make when spending time with their neighbourhood urban farm. Positive feedback from customers and community members is an important part of the social and educational contribution urban farms make.

“Our customers tell us that being a part of our CSA has totally changed the way they interact with their food. ...they feel like they are part of a community, they love coming to the pick up and interacting with other members, and they love being able to get to know their farmers and ask them questions about the food. They appreciate knowing what is going on for us, the neighbourhood the food is grown in, and to feel like they are directly contributing and supporting their local food system. Many of them tell us that [pick up day] is their favourite day.

VOLUNTEERING

Volunteering is an important way that Vancouver residents interact with urban farms. In 2016, over 300 individuals volunteered on urban farms. In 2013, higher numbers of volunteers were reported due to the construction of two of the largest farms in Vancouver. Volunteers often engage in multiple ways: assisting with food production, supporting educational programs, enjoying the food grown, and participating in workshops or social activities. Annually residents contributed an average of **over 9,000 hours** of volunteer labour each year from 2014 to 2016.

Figure 2: Volunteer engagement on Vancouver urban farms, 2010-2016



EDUCATION AND ENGAGEMENT

Education and engagement are a cornerstone for many urban farms — it is part of the rationale for why to locate a farm in an urban area rather than a rural location. Nearly all of Vancouver’s urban farms host events, even small operations. Most on-farm events focus on education, from workshops to hosting school groups to open-house tours. One farm had the ability to host larger scale events such as pumpkin patches, summer camps and weddings. The farm spaces offer formal and informal opportunities for residents to connect with one another and learn about food production from experts.

14,943

of city residents who *connect with programming* on 4 urban farms

Four farms contributed data on the number of people who engaged with their farms in 2016. 14,943 people came to these four farms throughout 2016 for field trips, summer camps, celebration programs, workshops and other public events. These numbers showcase the engagement that residents have with urban agriculture in the City of Vancouver. This number does not include

all farms and, perhaps more significantly, it does not include the many passers-by, neighbours, children and elderly who walk by the farms or sit in the farms to enjoy those spaces.

“**There is a daycare group that goes on a daily walk and passes by many of the farms, and the kids love to look at what is growing. ...they ask us questions about the vegetables and what we are doing.**”

When asked about the impacts of their urban farms, survey respondents shared a tremendous amount of positive feedback. Rarely, if ever, did they receive negative feedback.

Positive contributions identified by urban farmers:

Ecological benefits

- Operating by bike to create less vehicle traffic than most businesses
- Increasing production of locally grown food and flowers
- Providing habitat to pollinators and other urban wildlife
- Donating soil to local organizations

Supporting food security and food access

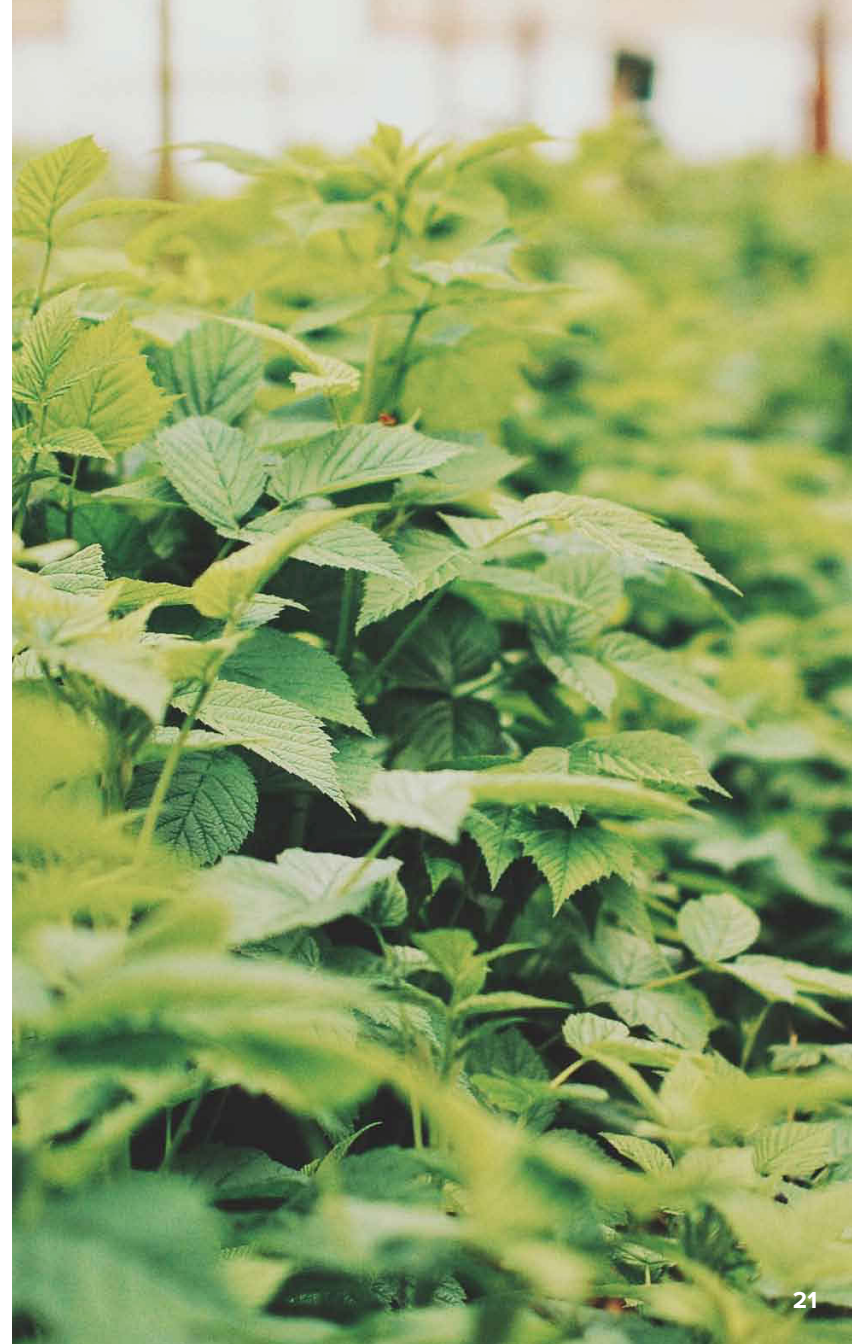
- Making regular donations to Quest Food Exchange, the food bank and other charities
- Providing amazing opportunities for volunteers to learn how to grow and harvest fresh, nutritious food
- Providing healthy food for school cafeterias

Community building

- Animation of an outdoor space that used to be lawn
- Providing a community gathering place where people have chance encounters with neighbours
- Exchanging local knowledge and building a sense of community
- Providing an opportunity for urban residents, including children and the elderly, to have casual interactions and educational opportunities by discussing food and farming

Improving social and economic outcomes of residents

- Employing people from the surrounding neighbourhood
- Educating and enhancing well-being and mental health
- Employing those with barriers to employment
- Employing at-risk youth



EDUCATION AND ENGAGEMENT (CONT.)

Creating positive relationships with the public, in the form of customers, volunteers, neighbours, or landowners, is highlighted by most Vancouver urban farmers as an important strategy for a successful farm enterprise. This focus on engagement lays a foundation for resident empowerment. The stories below provide a glimpse into some of the many ways that urban farms positively impact and empower Vancouverites.

Creating positive relationships with the public, in the form of customers, volunteers, neighbours, or landowners, is highlighted by most Vancouver urban farmers as an important strategy for a successful farm enterprise.

“We have worked with organizations who help people in the DTES and provided a venue for them to come and work with their hands and get dirty

“We have supported new community, school and workplace gardens

“Our volunteer built a home garden, putting the food growing skills she acquired while working with us to use. ...this will have a lasting impact on her family’s food security

“Many volunteers are referred through the WE Mental Health Team, or self-identify as having struggles with mental health. One such volunteer began with us this season and has commented that she feels the program provides structure to her week, sending her into the weekend feeling good.

“Summer camp is a chance for us to inspire hundreds of kids every year to value an outdoor life working the land. Since we started our programs in 2008 we have had four families move to farms because of their experiences with us.

“There are many seniors, often who speak English as a second, third, or fourth language, who stop and chat and laugh and befriend us. We give many vegetables away and receive tips, coffees, the occasional beer and much encouragement in return. Mostly we serve as a positive connection point. We are trying to make our food system more sustainable and our community more closely knit, people seem to see that.

“During the summer one of our team, an autistic youth, worked at our market stand, engaging with customers and telling them about the different dressings that he had made. By the end of the season he overcame his challenges with social interaction, feeling comfortable speaking to strangers and showcasing his work. He helped customers make financial transactions: counting change and feeling comfortable with money.



3 Improve Access to **Healthy, Affordable, Culturally Diverse Food** for All Residents

\$750,000

in urban farm *food sales* in 2016

FOOD SALES

In 2016, Vancouver's urban farms sold more food than ever before, reaching more than \$750,000 in annual food sales¹. From 2010 to 2016, the sales value from urban farms grew more than five-fold from \$129,000 in annual sales to \$746,000. Sales to restaurants have been the leading growth area with sales increasing from \$13,400 in 2010 to \$390,400 in 2016. With many of Vancouver's top restaurants focused on local, fresh food it is not surprising that urban farmers have found

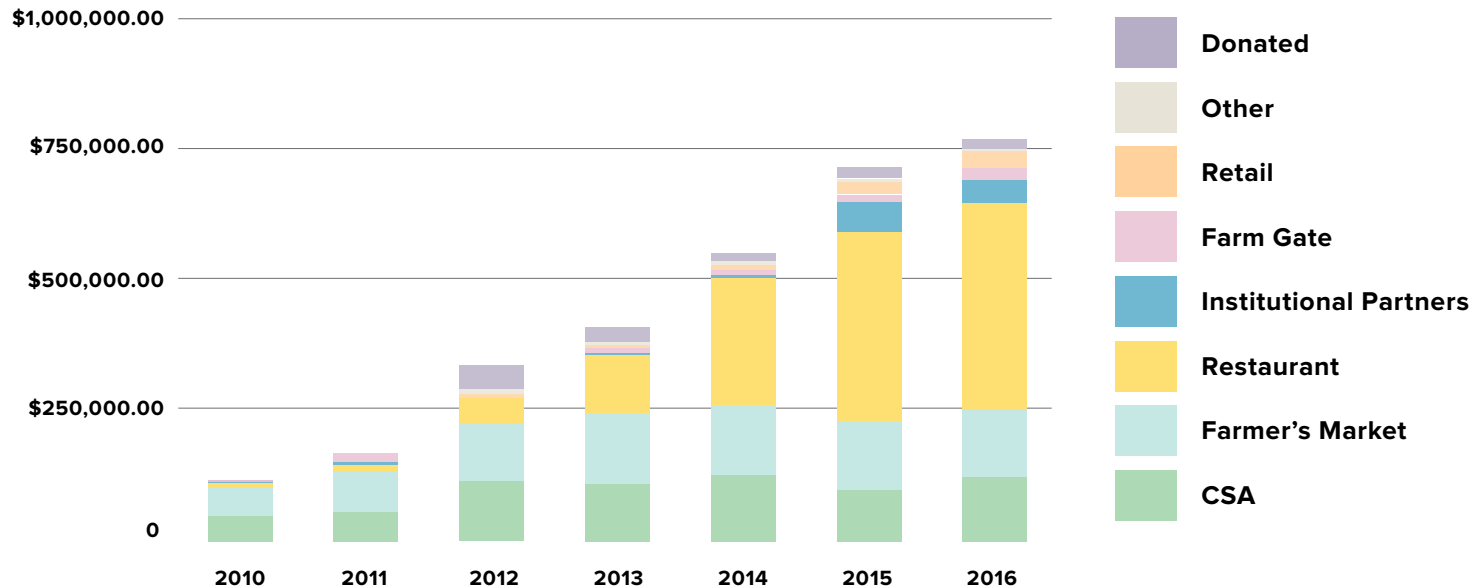
a niche catering to this market. Urban farms are able to meet the demand from chefs for the freshest, highest quality ingredients delivered multiple times per week. The ability of urban farms to successfully build relationships with local chefs and provide the consistent supply restaurants require is a testament to the level of professionalism and efficiency that the City's urban farms have attained.

The number of CSA shares fulfilled by urban farms dropped from a high of 280 in 2014 to 245 in 2016. Farmers' market sales remained fairly stable over the last several years, ranging from a peak in 2013 of \$133,000 to \$128,000 in 2016. The amount of donated food peaked in 2012, with a value of \$50,000. In 2016, \$18,000 of food was reported as donated. The decrease in donations could be attributed to the greater ability of urban farms to find markets for their produce or changes in

¹ Food sales includes food donated: <3%.

operating models. In conversations with farmers, it is clear that the value of donations is difficult to track. Many volunteers take produce home, as do organizations and food security partners who participate in programs.

Figure 3: Growth in urban farm sales (by \$ value)



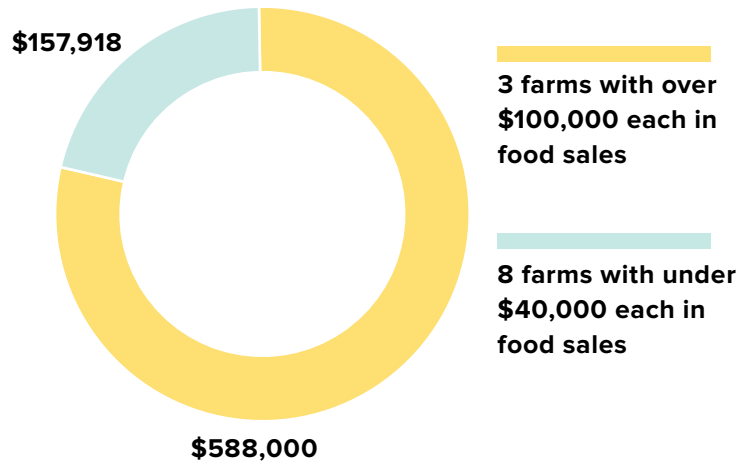
While the food sales figure of nearly \$750,000 in 2016 is impressive, the total economic impact of these sales is even more significant. Numerous studies show the powerful potential economic multiplier effect of buying local food. Though highly dependent on the locale and commodity in question, the baseline established in peer-reviewed research for buying local food suggests each purchase in Canada and the US has a multiplier effect of 1.4-2.6 throughout the wider local economy. Food products produced on small-scale farms, like those in Vancouver, create the highest multiplier effect (Meter, 2008²). Using these numbers as a guide, the **total economic benefit** of Vancouver urban farm food sales was **an estimated \$1.9 million** in 2016.

² Meter, K. 2008. "Local Food as Economic Development." Minneapolis, Minnesota. (Crossroads Resource Center).

FOOD SALES BY FARM

The share of food sales by farm has become more equally distributed between farms than in 2013. The 2013 Census showed one farm accounting for 58% of total food sales. In 2016, three urban farms shared roughly two-thirds of total sales. In 2013, high sales volumes corresponded with greater land under production. In 2016, two of the top three farms were indoor operations with a footprint of 4,000 sq ft or less. Of the remaining farms that reported income from food sales, five reported sales ranging from \$40,000 to \$15,000 and four reported under \$5,000 in sales for 2016.

Figure 4: Combined food sales reported in 2016; over \$100,000 and under \$40,000 categories



4 Make Food a Centrepiece of Vancouver's Green Economy

Along with the social and environmental benefits of urban farms, economically sustainable farm operations have the potential to be centrepieces of a green economy. However, the wide spectrum of revenue, production types and enterprise models means employment opportunities vary by revenue generated and enterprise type.

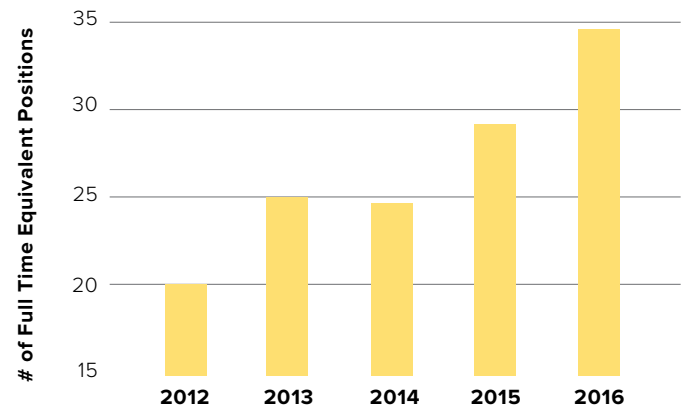
EMPLOYMENT

In 2013, seven farms employed 25 FTEs. By 2016, employment grew to ten farms employing 34.7 FTEs for food production and related activities. Three farms had no paid positions and reported zero FTEs for their farm businesses. Of the ten farms with paid labour, the operation with the most farm-related employees reported 10 FTEs, the second highest was six FTEs. Four farms reported from three to five FTEs and four farms reported from one to 1.2 FTEs.

The growth in urban farm employment from 2013 to 2016 was accompanied by a growth in employment opportunities across farms. In 2013, just two farms accounted for 72% of employment; in 2016, 74% of FTEs reported were spread over four farms, only one of which

was operated by a charity. Unfortunately, one of those top employers did not provide wage data in the Census responses, creating a discrepancy in how many FTEs were provided by business-focused urban farms and their contribution to wages (described below).

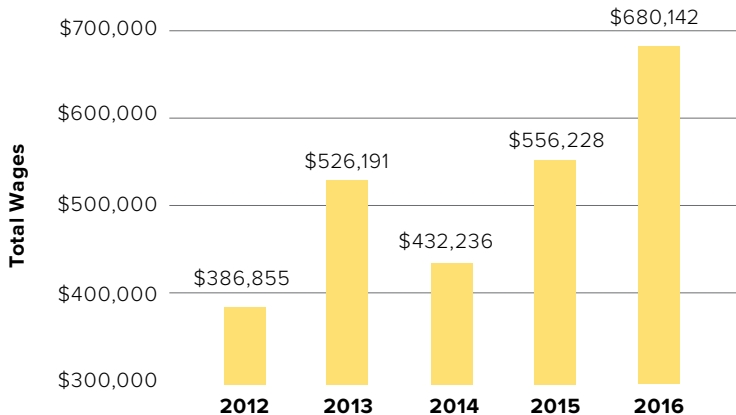
Figure 5: Growth in urban farm employment in Vancouver



EMPLOYMENT (CONTINUED)

Employment growth is only part of the job creation picture. An analysis of wages is essential to understanding what type of livelihoods and job opportunities are available. In 2016, urban farms accounted for \$680,000 in wages, nearly double the wages paid out in 2012. Four of the thirteen farms surveyed did not pay out any wages; the farm owners/operators worked on the farm with volunteer labour. These operations had total food sale revenues under \$4,000 per year, which means earnings, even for the operators, were very low.

Figure 6: Total farm labour wages, 2012-2016

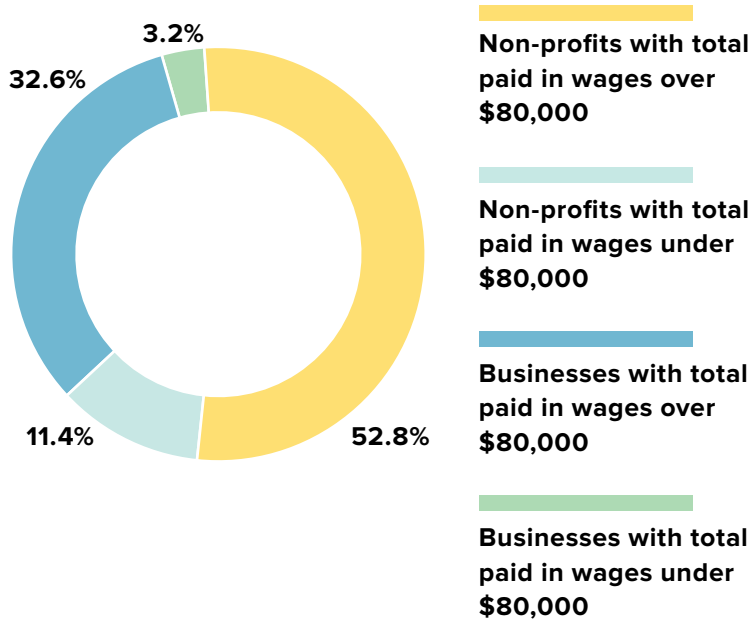


One farm did not report total wages paid to employees, even though they employed a number of staff. Five of the 13 farms had revenue from sources other than food sales, which included grants provided to non-profit organizations. Cost-recovery tours, programs, and events supported some urban farms.

Wage rates, among farms that paid labour, ranged from salaried positions to hourly rates of \$11-18 for farm work. A number of farms paid \$20-23 per hour for farm manager positions.

Analyzing total wages paid out by farm, urban farms can be categorized by operation type (non-profit or business) and the total amount they paid in wages (over or under \$80,000 in 2016). Non-profit (charitable) farm operations that paid over \$80,000 in wages in 2016 accounted for just over half of total wages paid in 2016. These wages are supported in part by charitable donations and grants. Urban farm businesses accounted for just under half of total wages. The business operations reporting over \$80,000 in wages for 2016 provided roughly one-third of the total wages; these farms generated revenue through the sale of food grown in the City of Vancouver only.

Figure 7: Share of total wages paid in 2016 by farm type; 9 farms reporting



While some farms are able to pay staff, many farms rely on volunteer labour — an estimated five more FTE. These volunteer positions are essential to the success of many farm operations. One farm works with four to ten volunteers three times per week; another works with 30 youth three days a week during the summer. Even with volunteers, farmers often work 50 to 60 hour weeks in the peak season.



5 Advocate for a **Just and Sustainable Food System** with Partners and at All Levels of Government

The City of Vancouver defines a just and sustainable food system as one in which food production, processing, distribution, consumption and waste management are integrated to enhance the environmental, economic, social and nutritional well-being of the city and its residents. While advocacy is not the focus for most of Vancouver's urban farms, many define their work as providing an important contribution to a just and sustainable food system. In their own words, here are some of the ways urban farmers are moving the food system towards justice and sustainability.

“We run an almost zero-waste operation and offer high quality organic produce to local residents.

“We bring food growing and the local food system into people's consciousness. We provide accessible learning opportunities.

“We use food to nourish our community, including the facilitation of intercultural exchange and dialogue, community capacity-building, and community development.

“We provide affordable meals, produce and programs for a wide range of populations, such as single mothers, seniors, young adults.

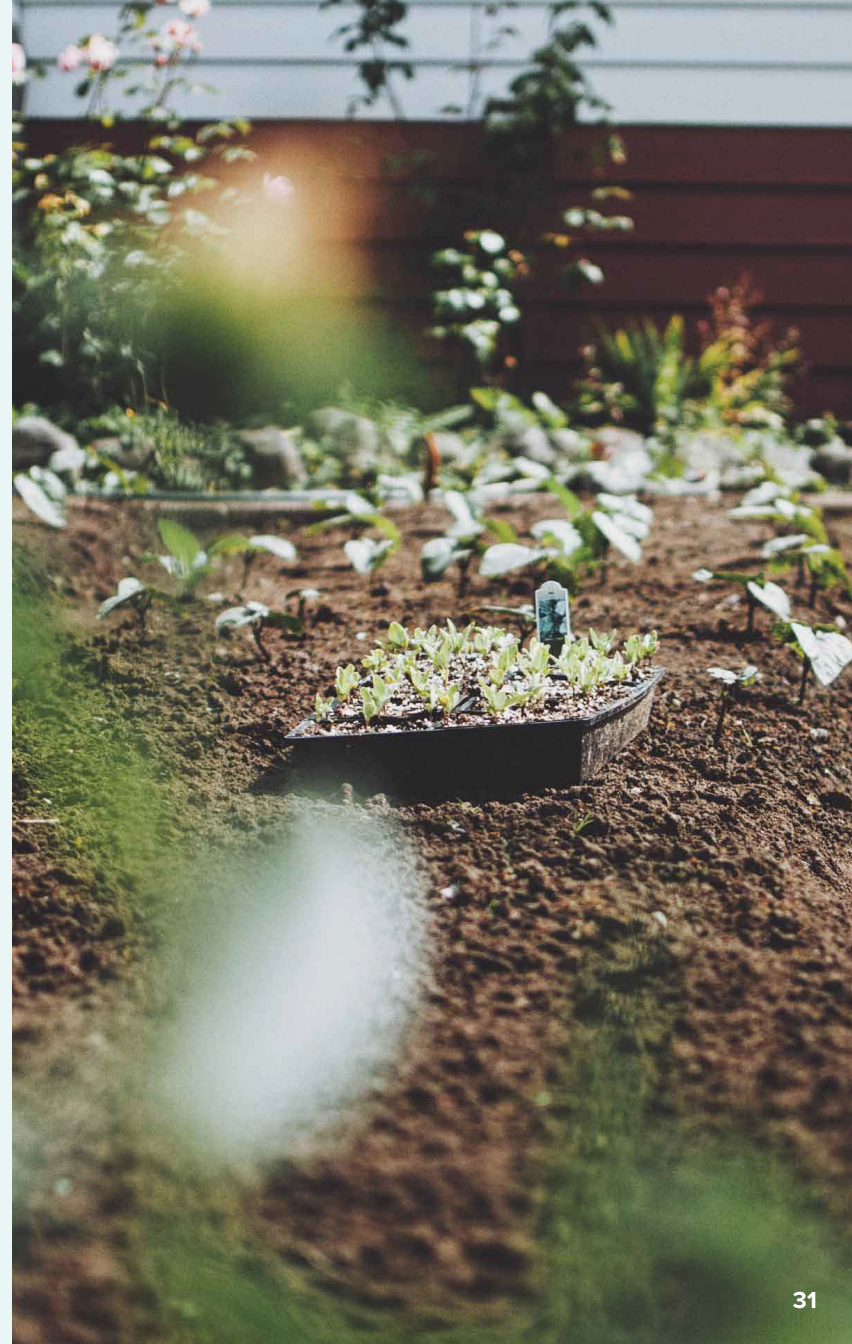
“ We bring healthy food into schools and their surrounding neighbourhoods. We help teachers use the gardens as outdoor classrooms so that youth see what it takes to grow healthy food.

“ We are the last working farm with a diversity of livestock in the city, we provide Vancouverites with a real connection to farms in the lower mainland.

“ We are growing low impact, no chemical, low food-mile food in gentle resistance to the industrial food system.

“ We are linking consumption and production within the same community thus targeting the “distancing” common with dominant food.

“ We are a locally-based, year-round organic food production business that delivers by bike — this unique model can serve as a template for other urban food producers interested in profitable urban food production with minimal ecological impact.



Regulatory Impacts: Perspectives on the **Urban Farming Guidelines Pilot**

In March 2016, City Council passed zoning and development, and license bylaw changes to recognize and regulate urban farming in the City of Vancouver. The result was a set of Urban Farming Guidelines to be piloted for two growing seasons. In the 2014-2016 Census questionnaire a special section was added to collect farmers' feedback on their awareness and experience of the pilot regulations.

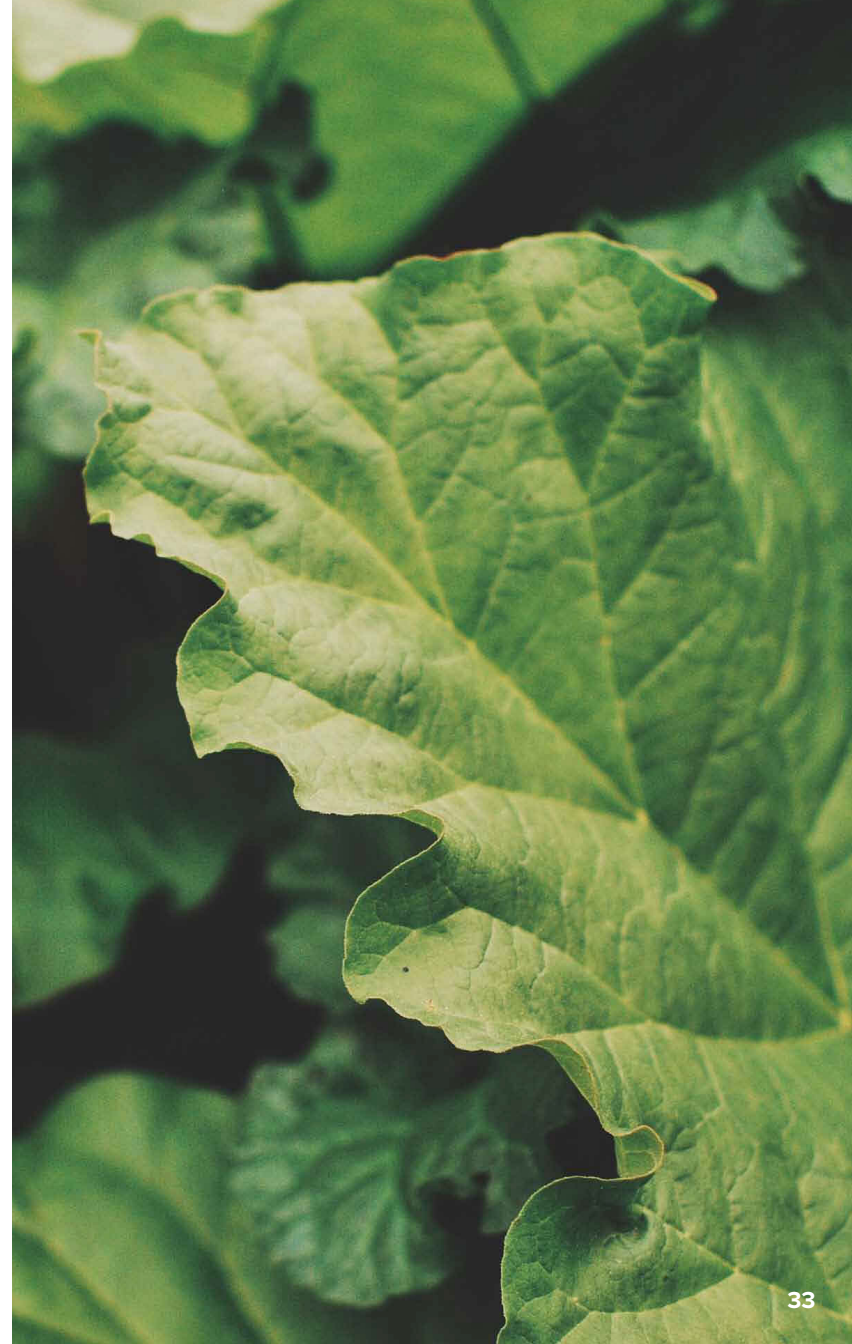
Ten farms were aware of the pilot regulation and three were not. Two farms had applied for and received business licenses and a third had an application in process. Three farms indicated they had ongoing involvement with the regulation development, either through consultation, the Vancouver Food Policy Council or the Vancouver Urban Farming Society. For those that had not applied for licenses, the reasons why varied from a lack of awareness, a lack of time and uncertainty about the

costs involved for permitting, upgrades and license fees. Typical concerns included:

- Uncertainty around development and building permit costs
- Not wanting to have to pay for the permit costs both years of the pilot program and again when the pilot program is over
- Time constraints

Of the three farms who had submitted applications each responded that they faced costs in addition to the license fees, primarily for staff time to complete the application (Class A farms) and for development permits (a Class B farm). One farm was also charged a late fee of \$80. Future work through the Vancouver Food Policy Council will help to bring more information about how to support urban farming through city by-laws and policy.

Future work through the Vancouver Food Policy Council will help to bring more information about how to support urban farming through city by-laws and policy. Suggestions provided by urban farmers through the census questionnaire include the use of Partial Zoning as an incentive to homeowners to offer more of their land for farming and making an effort to make the permitting process simpler and less expensive for current farm operation models, such as those operating on commercial land or shipping container based systems. For more information on the impact of the pilot Urban Farming Guidelines view the report **'Class B' Urban Farms: Guidelines and Impacts** initiated by the Vancouver Urban Farming Society.



CONCLUSION

The data captured in the urban farm Censuses from 2010 to 2016 provides insight into who Vancouver's urban farmers are and the business models they are following. Over the last seven years three dominant types of urban farm enterprises have rooted themselves in Vancouver: charitable farm operations, intensive indoor operations that produce high value crops year-round, and yard-sharing micro farms that operate across multiple sites in residential areas. It is rare to find an urban farm in Vancouver that just grows food. Most focus on growing food as a means to contribute to other social goods: from education to reducing our environmental footprint to low-barrier employment.

The commitment to sustainability in the broadest sense is evident in the qualitative Census responses. This makes urban farming different than many economic sectors, and makes the impact and value more chal-

lenging to measure. The City of Vancouver's rationale for supporting urban farming recognizes the multifunctional contributions urban farms make, as is indicated by the five dimensions of the Food Strategy. The City has been very supportive of urban farming in policy and practice, however, urban farms in Vancouver face challenges particular to operating in a city where land and living expenses are among the highest in the world.

There is also another component of urban farming that has not been well tracked in Vancouver: food production by ethnocultural farmers that are not yet part of the identified urban farmers documented in the Census. These urban growers may or may not be growing food for commercial sale, but more needs to be done to acknowledge and understand the ethnoculturally diverse farmers who are supporting food access in their communities.

SLOWED GROWTH OF LAND UNDER FOOD PRODUCTION

The Census results show that the growth of land being used for food production seen from 2010 to 2013 slowed substantially from 2014 to 2016 when the total area under production remained relatively unchanged. This may be due to three reasons, which may work in conjunction.

First, yard-sharing urban farms did not grow substantially in number or area under production. Financial data shows that yard-sharing farms have lower revenues than other farm types and are most likely to have no paid staff. The high cost of living in Vancouver may be dissuading would-be urban farmers from following the yard-sharing model. Second, part of the substantial revenue growth in the urban farming sector in recent years has come from indoor farms producing microgreens on a very small land area. Third, the lack of affordable and available land restricted the ability of existing urban farms to expand or for new urban farms to start. Continued growth and development in many areas of the city has reduced the land available for food production and no new land has become available.



ECONOMIC CHALLENGES

Many Canadian farmers, both urban and rural, face economic challenges. Wages across the Canadian agriculture sector are much lower than wages paid to workers in other sectors: in 2014 full-time farm workers' wages were one-third less than the Canadian average. The challenge of competing in a market with agricultural products produced with low wage labour is made even more difficult for urban farms, which cannot offer free housing or the low cost of living that rural farms may be able to. The economic challenge of operating an urban farm business that can support its owners and employees is even more difficult in Vancouver where affordability is a broad concern.

This is likely why we see farms run with the support of charitable organizations as the top employers in the Vancouver urban farm sector, these organizations have greater access to grants, donations and social capital than private businesses. While Vancouver's urban farms are striving to provide real-world examples of green economy jobs, many still require volunteers and additional in-kind donations to ensure the success of their operation. In conversations with farmers, few make enough revenue to cover their true costs (volunteers, full staff time, etc.). One urban farm has become a non-profit to acknowledge that reality.

Urban farm jobs are growing, but offering a living wage still continues to be a substantial obstacle limiting the growth of urban farming. The wage challenge makes support of urban farms through other means — access to infrastructure, secure land tenure or support for volunteer programs — all the more important.

FUTURE GROWTH

The City of Vancouver has seen significant growth in urban farming since 2010. Vancouver residents have warmly welcomed the opportunity to connect more closely with local food systems by supporting urban farms through food sales, volunteering and participating in many forms of community-building. Despite the challenges posed by sky-high land values and economic pressures, it is likely that urban farms will continue to persist in Vancouver and a small number will thrive.

The question more pertinent for guiding policy is, how much more would we like Vancouver's urban farming sector to grow? Is it feasible to imagine that a majority of Vancouver residents could procure a portion of their weekly food from urban farms? Could every school-aged child have at least one opportunity to grow food commercially during their thirteen-years attending Vancouver public schools? Could urban farms be integrated into our City's concept of necessary community amenities and

public space requirements?

Supporting local food production is an integral part of Vancouver's Greenest City goals; a target of increasing the number of urban farms to 35 by 2020 has already been set. Without further, tangible support of the urban farming sector from the City, it is unlikely that this goal will be met. The significant economic constraints facing Vancouver urban farmers make supportive policy and regulation an imperative for achieving the growth envisioned in the Greenest City goals. The Census results also demonstrate that urban farms are not just providing locally-grown food – they are important providers of educational opportunities, employment, environmental benefits and social connection. This suggests urban farming can be given special consideration as a sector contributing to the broader public good.



EPILOGUE

Since 2010, urban farms have become an important part of Vancouver’s cityscape — from food producing residential yards to transformed school land to farming enterprises in the heart of the city. The sales value of urban-grown food has risen substantially, reaching \$750,000 in combined sales and donations in 2016. Those sales could add as much as \$1.9 million in economic activity based on the multiplier effect established in peer-reviewed research on local food economies. Sales growth, and the ability of a number of urban farms to operate financially sustainable enterprises, has brought a growth in urban farm employment as well.

The economic impact of urban farms is just a small part of the story, though. Improving food access, providing educational opportunities, reducing the ecological impact of food production and building community social cohesion are all benefits that are being provided by Vancouver urban farms. The City of Vancouver has been supportive of urban farming in policy and in practice for many years. Continued commitment to growing the urban farming sector via the Greenest City Action Plan can help maintain the growth trajectory of urban farming and its many benefits to Vancouver residents.

APPENDIX

The Census Questionnaire

EDIBLE VANCOUVER: AN URBAN FARMING CENSUS

This questionnaire aims to better understand the impacts of urban farming in Vancouver. The impacts of providing local food, connecting with residents and providing green jobs are not well understood — which is why we are conducting this census. This census, used in conjunction with other reports and studies, aims to gather that data and make it available for current urban farmers to learn from their peers, for city officials to have a better idea about the kinds of activities currently in practice by urban farmers, and for customers to learn more about how the local food system operates.

This survey focuses on the past three years — those years not covered by Marc Schutzbank's past work with the urban farming census. Please answer these questions in relation to your entire urban farming organization using any records or data you have available.

Introduction

1. What is the name of your farm?
2. What is your:
 - name
 - phone number
 - email
 - mailing address
3. What is your title within your organization?
4. How do you secure your land? Check.
 - Written agreement with Landowner
 - Development Permit
 - Oral Agreement
 - Other: _____
5. Type of land. Check.
 - Private Residential
 - Private Commercial
 - Institution
 - Other: _____

Introduction (Continued)

6. How long is your lease?

7. Does the landowner receive compensation for your use of the land?

YES NO

8. If yes, how much for one year?

Please select the method and indicate annual value.

Rent (annual value) _____

Food (estimated annual value) _____

Water or other utilities _____

Property Tax Savings _____

(type or estimated annual)

Other: _____

9. What effect does your land tenure status have on your organization / business?

10. What effect does your land tenure status have on your farming practices?

11. Does the landowner limit any farming practices?

12. Please briefly describe your growing practices (e.g. using organic principles, soil amendments, fertilizers, etc.)

13. How is your organization structured?

Sole proprietorship Partnership

Non-profit society Charity

Corporation Co-op

Other: _____

Engaging the Community

14. How many volunteers do you estimate were involved in your farm:

in 2014? _____ in 2015? _____ in 2016? _____

15. How many volunteer hours do you estimate were logged on your urban farm:

in 2014? _____ in 2015? _____ in 2016? _____

16. Does your urban farm host events (e.g. tours, classes, weddings, markets, events, volunteer days?)

Check

YES NO

17. Please describe your events:

Type of events / Number of events annually / Average number of attendees / Private? (Y/N) / Estimated Fee

18. What are the benefits of your urban farm on the surrounding neighbourhood?

Engaging the Community (Continued)

19. Are there negative impacts of your farm on the surrounding neighbourhood?

20. What have you learned about successfully farming in urban neighbourhoods?

21. What methods, tools, activities (or other) do you engage with Vancouver's diverse age groups and ethno-cultural communities (e.g. signs in other languages, types of food, etc.)?

22. Can you describe one or two stories of impact that the farm has had for you, your customers, your neighbourhood or community?

Improving Access to Local Food

23. How much food did you sell through the following market channels. *If you have lbs., please indicate that information.*

	2014		2015		2016	
	\$	lbs.	\$	lbs.	\$	lbs.
CSA						
Farmer's Markets						
At your farm site (farm stand)						
Restaurants						
Institutional Partners (e.g.cafeterias)						
Estimated value of food grown, but not sold?						
Donated						
Other						

Improving Access to Local Food (Continued)

24. If you had a CSA, how many shares did you have in:

in 2014? # of shares: _____ # of weeks: _____ box value/wk: _____

in 2015? # of shares: _____ # of weeks: _____ box value/wk: _____

in 2016? # of shares: _____ # of weeks: _____ box value/wk: _____

25. If you sold at farmer's markets, which ones did you attend:

2014: _____ 2015: _____ 2016: _____

26. If your organization donated food, where did you donate it?

In 2014? _____ In 2015? _____ In 2016? _____

27. What was your total labour cost:

In 2014? _____ In 2015? _____ In 2016? _____

28. What jobs (job titles) did you have available in 2014-2016? And what were their wages (hourly)? (e.g. Farm Manager, farmer, \$10.25/hour).

2014		2015		2016	
Job Title	Wage	Job Title	Wage	Job Title	Wage

Improving Access to Local Food (Continued)

29. How many contractors / employees did you have in:

	# of Full Time year round	# of Full Time seasonal	# of Part Time year round	# of Part Time seasonal
2014				
2015				
2016				

30. Do you have revenue other than food sales?

In 2014? YES NO

In 2015? YES NO

In 2016? YES NO

31. What is the total revenue of your organization?

In 2014? _____ In 2015? _____ In 2016? _____

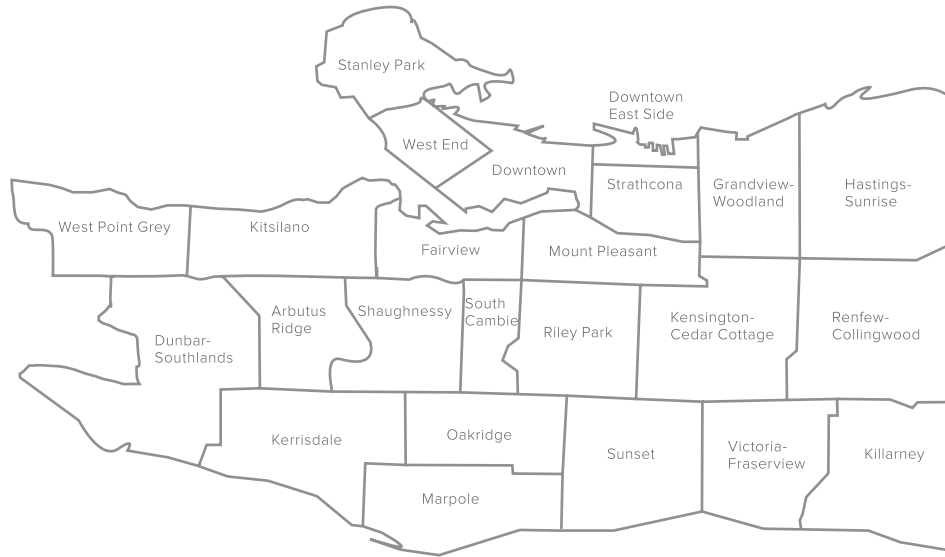
32. Please describe your other revenue? (eg. grants, donations, other food sales, fee-for-service?)

Urban Farming Food Assets

In the table below, please list the cross streets or neighbourhood (also below), as well as the size (in sq. ft.) of your farm sites in 2014-2016. *You can use this website to calculate the area of your gardens using Google Maps:*

<http://www.daftlogic.com/projects-google-maps-area-calculator-tool.htm>

Urban Farming Food Assets (Continued)



2014		2015		2016	
Cross streets / Neighbourhood	Size (sq. ft.)	Cross streets / Neighbourhood	Size (sq. ft.)	Cross streets / Neighbourhood	Size (sq. ft.)

Advocate for a Just and Sustainable Food System with Partners and at All Levels of Government

33. Are you aware that as part of a 2-year pilot project, the city of Vancouver now requires urban farms, **growing food for sale**, whether in a social enterprise, non-profit or profit model, to apply for an annual business licence? Check one:

YES NO

34. If YES, how did you hear about this pilot project?

35. Have you applied for your annual business licence this year (2016)?

YES NO

36. Why or why not?

37. If you answered YES to question 35, which of the following best applies to you?

- I have been approved for a business licence
- I have submitted my application, but have not been approved
- I have submitted my application and it is being processed

38. Check the class of business licence you applied for:

- Class A Urban Farm
- Class B Urban Farm
- Other

39. Were there any additional costs associated with applying for your annual business licence, in addition to the application fee? (e.g. Consultant fees, development permit, etc.).

YES NO

If YES, please detail below (type and amount).

40. The city is looking for feedback regarding the development permit and business licence process for urban farms. Please provide your feedback regarding the business licence.

41. What changes, if any, do you anticipate to your farming operation in the next two years (e.g. expansion to new location, changing growing techniques, new business model, etc.)?

42. What is driving that change?

Advocate for a Just and Sustainable Food System with Partners and at All Levels of Government (Continued)

42. How do you see your organization contributing to a just and sustainable food system in the city? The region? And/or the province? *The City of Vancouver defines a just and sustainable food system as one in which food production, processing, distribution, consumption, and waste management are integrated to enhance the environmental, economic, social, and nutritional well-being of our city and its residents.*

Please use this space for any additional comments, questions, or thoughts:

ABOUT VUFS



Aiming to grow urban farming as a viable, thriving, and vibrant sector in Vancouver and beyond, Vancouver Urban Farming Society is a convening organization that strengthens the growth of the urban farming sector through education, advocacy, networking, and business support. Find us at urbanfarmers.ca.



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