

Background Report

City of Pitt Meadows Agricultural Plan Update



June 2023



In association with



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List of Acronyms

| | |
|------|----------------------------------|
| AF | Ministry of Agriculture and Food |
| ALC | Agricultural Land Commission |
| ALUI | Agricultural Land Use Inventory |
| ALR | Agricultural Land Reserve |
| BC | British Columbia |
| CRA | Canada Revenue Agency |
| CSD | Census Sub-Division |
| FOR | Ministry of Forests |

1.0 Introduction

Agriculture and farming have a long history in Pitt Meadows and continue to be a vital part of the economic and social fabric of the community. The local agriculture sector is mainly characterized by cranberry and blueberry production with a variety of other agriculture activities, including: greenhouse and nursery production, dairy and an emerging vertical farming scene.

It has been 23 years since the creation of the “District of Pitt Meadows Agricultural Plan.” Due to the evolving nature of the agriculture, food sector, and the regulations surrounding land-use planning policies, the City of Pitt Meadows has embarked on a project to update the 2000 document. This planning process is taking place from May to December 2023 and will culminate in an updated *City of Pitt Meadows Agricultural Plan*. The primary objective of the project is to produce a comprehensive agricultural planning document that focuses on Pitt Meadows’ local jurisdiction and provides guidance in identifying opportunities to strengthen the local agricultural sector and contribute to its long-term sustainability. The final Plan will propose recommended actions that anticipate future changes and challenges specific to Pitt Meadows to support municipal planning efforts.

There are several key elements in the planning process that are used to achieve the objectives of the Plan. These include:

- A background report (this document) to provide an update on the current trends in the agricultural sector since the 2000 Plan was completed;
- A review of progress made since the creation of the 2000 Plan, including completed and ongoing objectives;
- An analysis of current policies and regulations relating to the agriculture sector in Pitt Meadows;
- Engagement with agricultural producers and the public (including interviews, surveys and Open Houses) to identify the strengths, weaknesses, opportunities, and threats affecting the agriculture sector and land base; and
- The creation of an implementation strategy to facilitate a community-based approach to strengthening agriculture, along with a monitoring and evaluation framework to track implementation progress.

This *Background Report and Agriculture Profile* provides the foundational knowledge about the agricultural sector in Pitt Meadows to help inform the development of the Plan.

2.0 Agriculture Profile

Agriculture is a cornerstone of the community of Pitt Meadows and an important economic driver for the City. The following section provides an overview of the agriculture sector within Pitt Meadows. A variety of data sources were used to compile the information and trends over time, and these are described wherever possible.

2.1 Agricultural Profile Methodology

This agricultural profile was compiled using existing reports and data sets. The main sources of data regarding agricultural activities were the 2011 Pitt Meadows ALUI, 2016 Metro Vancouver Agricultural Land Use Inventories (ALUI), and the Census of Agriculture (2011, 2016, 2021) data sets. There are some clear differences in the way that these data sets are compiled, which can lead to discrepancies when some indicators are compared. Whenever possible, these differences are explained. For example, if five acres of

blueberry bushes are noted on the parcel during the ALUI then this contributes to the acreage listed as blueberry production, even if the blueberries may not be sold and/or otherwise be brought into the local food system. By contrast, the Census of Agriculture includes data on farms that are self-reported by individuals, specifically those from commercial operations. This is one example of how the data sets can lead to differences in results.

Agricultural Land Use Inventory

In 2016, BC Ministry of Agriculture and Food (AF) completed an ALUI of Metro Vancouver, including Pitt Meadows. Each parcel was examined using AF's standard AgFocus system for ALUI. The ALUI data is helpful in answering the following questions:

- What is the current extent, type, location, and scale of agricultural activities in the area?
- What proportion of the Agricultural Land Reserve (ALR) is available for farming?

Census of Agriculture

The Census of Agriculture collects information from self-reporting individuals every five years as part of the larger Statistics Canada census collection and the completion is mandatory under the Federal *Statistics Act*. The Census of Agriculture is a federal data collection initiative and, as such, the geographic resolution is coarser than that of the ALUI. This is another reason for some discrepancies found in the datasets. The latest available Census of Agriculture uses 2021 data from Statistics Canada for Census Subdivision (CSD) Pitt Meadows (Figure 1).¹

In the 2011 and 2016 Census, a farm was defined as any “agricultural operation” that grows or produces agricultural products with the intent to sell these products. This means that farms with no to very low farm revenues were included, as long as the agricultural products produced were intended for sale. In the 2021 Census, the definition of a farm changed to: a “farm” or an “agricultural holding” (i.e., the [census farm](#)) unit that produces agricultural products and reports revenues or expenses for tax purposes to the Canada Revenue Agency (CRA). The new definition removes ambiguity in the definition of a farm, focusing on business-oriented agricultural operations. This change affects the comparability of farm counts and related statistical data from previous census years and many communities have seen a drop off in overall farm numbers, particularly small holdings and/or those earning under \$10,000 per year.²

¹ Statistics Canada. 2021. Census of Agriculture

² Statistics Canada. [Key changes to the 2021 Census of Agriculture](#). April 2022.

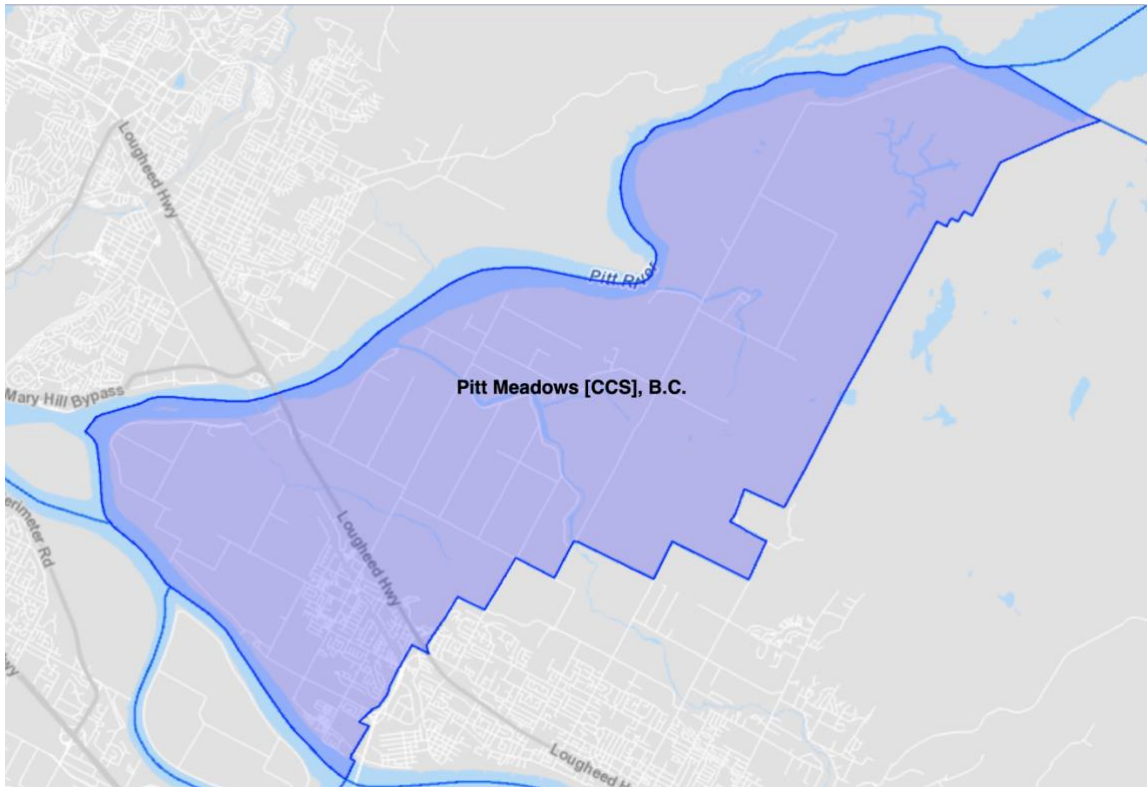


Figure 1. Pitt Meadows Census Subdivision Boundaries (Source: Statistics Canada)

2.2 Agricultural Land Base

Pitt Meadows has approximately 6,356 ha (15,705 acres) of land within the Agricultural Land Reserve (ALR), spread across 712 parcels. According to the 2016 Metro Vancouver ALUI, 3,697 ha (9,135 acres), or 58% of the ALR land base, was being farmed across 434 (61%) of the parcels. Of the remaining parcels, 114 (16%) were considered available for farming, and 164 (23%) are unavailable for farming (Table 1). Unavailable for farming usually relates to ALR that overlaps with wetlands, lakes, roads, railways, or other infrastructure. Figure 2 provides a map of the distribution of agricultural land, where yellow parcels are available for farming, blue parcels are unavailable for farming and green parcels are currently used for farming.

Table 1. Status of agricultural land in Pitt Meadows (Source: Metro Vancouver ALUI 2016)

| Agricultural Land | Parcel distribution | | Land distribution | | |
|-------------------|---------------------|--------------|-------------------|-----------------|-------------|
| | # of Parcels | % of Parcels | ha | acres | % of land |
| Available | 114 | 16% | 370.0 | 914.3 | 6% |
| Unavailable | 164 | 23% | 1,790.5 | 4,424.3 | 28% |
| In Use | 434 | 61% | 4,195.5 | 10,366.9 | 66% |
| Total | 712 | 100% | 6,356.0 | 15,705.5 | 100% |

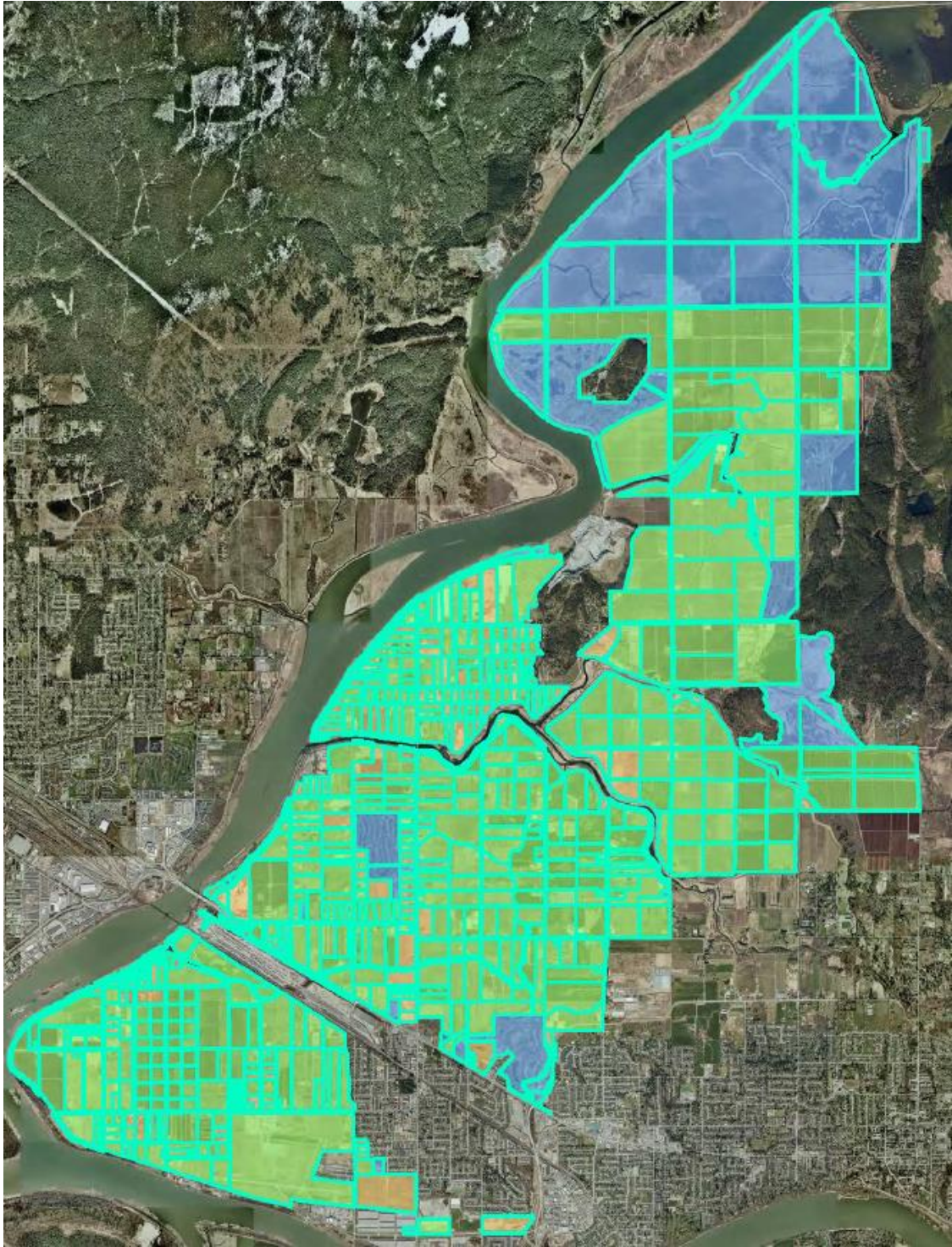


Figure 2. ALR parcels in Pitt Meadows (Source: 2016 Metro Vancouver ALUI)

Legend:

- Green: Currently used for farming
- Yellow: Available for farming
- Blue: Unavailable for farming

2.3 Farm Characteristics

2.3.1 Number of Farms and Farmed Parcels

According to the Census of Agriculture, the number of commercial farm operations decreased in Pitt Meadows from 163 in 2011 to 140 in 2021. This decrease may be influenced by the change in the census definition of “agricultural operation” as the 2021 definition only includes farms that produce agricultural products and report revenues or expenses for tax purposes to the CRA, narrowing the census scope to business-oriented agricultural operations.

2.3.2 Size and Types of Farms

The land in Pitt Meadows supports a wide diversity of farms ranging from under 10 acres to over 760 acres (Table 2). However, farms are on the small side in comparison to the rest of BC, nearly half (43%) of farms in Pitt Meadows are under 10 acres, compared to 32% of farms across BC sizing under 10 acres. Furthermore, 86% of farms in Pitt Meadows are under 70 acres, compared to 65% of farms across BC being under 70 acres. Only 14% of farms are over 70 acres in Pitt Meadows.

Table 2. Farms classified by total farm area in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| | 2011 | | 2016 | | 2021 | |
|------------------------------|------------|------------|------------|------------|------------|------------|
| | # of farms | % of farms | # of farms | % of farms | # of farms | % of farms |
| Total Number of Farms | 163 | 100% | 133 | 100% | 140 | 100% |
| Under 10 acres | 64 | 39.0% | 48 | 36.0% | 60 | 43.0% |
| 10 - 69 acres | 69 | 42.0% | 61 | 46.0% | 60 | 43.0% |
| 70 – 129 acres | 8 | 5.0% | 6 | 4.5% | 5 | 3.5% |
| 130 – 179 acres | 5 | 3.0% | 4 | 3.0% | 4 | 3.0% |
| 180 – 239 acres | 5 | 3.0% | 2 | 1.5% | 4 | 3.0% |
| 240 – 399 acres | 3 | 2.0% | 6 | 4.5% | 5 | 3.5% |
| 400 – 559 acres | 5 | 3.0% | 4 | 3.0% | 1 | <1% |
| 560 – 759 acres | 1 | 1.0% | 1 | <1% | 0 | <1% |
| 760 acres and over | 3 | 2.0% | 1 | <1% | 1 | <1% |

Census data indicates that the most common types of farm operations in the community are fruit and tree nut operations (73) (Table 3). Fruit production is followed by hay (16) and nursery tree operations (15). The City has few other types of farms, including dairy (7), horse and equine (6), and chicken egg production (3).

Table 3. Select farm types in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| | 2011 (163 Farms Total) | 2016 (133 Farms Total) | 2021 (140 Farms Total) |
|-------------------------------|---|---|---|
| Fruit and tree nut | 73 | 75 | 73 |
| Hay | 17 | 11 | 16 |
| Nursery tree | 15 | 10 | 15 |
| Dairy cattle | 8 | 6 | 7 |
| Horse and equine | 17 | 6 | 6 |
| Floriculture | 9 | 6 | 3 |
| Beef cattle ranching | 9 | 2 | 3 |
| Chicken egg production | 0 | 3 | 3 |
| Corn | 0 | 2 | 3 |
| Apiculture | 2 | 5 | 2 |
| Vegetable | 3 | 3 | 1 |

A closer look at livestock trends in Pitt Meadows between 2011 and 2021 (Table 4) shows that the number of farms reporting cattle and calves has reduced from 21 to 14, though the number of cattle in the City have increased by about 600 head over the decade, indicating an intensification of the livestock industry. Bee colonies and the number of farms keeping chickens and hens have remained steady (Table 4). The number of farms reporting horses have reduced from 21 to 10, and the number of horses have reduced by 50%. This is likely linked to the change in “agricultural operation” definition, as many horse and equine farms are hobby based and do not generate income.

Table 4. Livestock Trends in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Types of Animals | 2011 | | | 2016 | | | 2021 | | |
|----------------------------|-------------------|---------------------|-------------------------|-------------------|---------------------|-------------------------|-------------------|---------------------|-------------------------|
| | # of farms | # of animals | Average per farm | # of farms | # of animals | Average per farm | # of farms | # of animals | Average per farm |
| Horses & Ponies | 28 | 256 | 9 | 12 | 211 | 18 | 10 | 102 | 10 |
| Cattle & calves | 21 | 2,184 | 104 | 11 | 2,125 | 193 | 14 | 2,728 | 195 |
| Hens & Chickens | 14 | 805 | 57 | 11 | 464 | 42 | 15 | x | x |
| Bee Colonies | 10 | 6,074 | 607 | 14 | 11,114 | 793 | 9 | 10,521 | 1,169 |

Note 1. x within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

Of the crops produced in the region, the fruits, berries and nuts category is the most common, with 2,210 ha (5,461 acres) spread over 83 farms (Table 5). The noted decrease in most crop categories is likely somewhat attributable to the change in Statistics Canada’s definition of an “agricultural operation” definition.

Table 5. Most common crops in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Crops produced | 2011 | | 2016 | | 2021 | |
|-----------------------------------|------------|------------------|------------|------------------|------------|------------------|
| | # of farms | ha (acres) | # of farms | ha (acres) | # of farms | ha (acres) |
| Tame hay & fodder | 37 | 816 (2,016) | 19 | 558 (1,379) | 27 | 556 (1,374) |
| Alfalfa | 3 | 25 (62) | 4 | 36 (89) | 3 | x |
| Field vegetables | 6 | 9 (22) | 7 | 20 (49) | 10 | x |
| Potatoes | 2 | x | 1 | x | 3 | x |
| Fruits, berries & nuts | 80 | 2,800 (6,919) | 80 | 2,572 (6,355) | 83 | 2,210 (5,461) |
| Corn | 7 | 100 (247) | 9 | 129 (319) | 9 | x |
| Nursery | 15 | 478 (1,181) | 6 | x | 9 | 121 (299) |
| Sod | 1 | x | 1 | x | 1 | 89 (220) |

Note 2. x within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

A deeper look at fruit production in Pitt Meadows reveals that a majority of production is happening in the blueberry (1,335 ha, 3,299 acres) and cranberry (861 ha, 2,128 acres) sectors (Table 6). Other fruits are produced in Pitt Meadows, such as fruit trees and grapes, however the number of producers and hectares in production are suppressed by Statistics Canada due to privacy protection.

Table 6. Fruit production in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Fruit Produced | 2011 | | 2016 | | 2021 | |
|---------------------------|------------|------------------|------------|------------------|------------|------------------|
| | # of farms | ha (acres) | # of farms | ha (acres) | # of farms | ha (acres) |
| Cranberries | 14 | x | 12 | 942 (2,328) | 8 | 861 (2,128) |
| Blueberries | 71 | 1,768 (4,369) | 68 | 1,612 (3,983) | 74 | 1,335 (3,299) |
| Pears | 1 | x | 0 | 0 | 5 | x |
| Apples | 1 | x | 0 | 0 | 6 | x |
| Raspberries | 1 | x | 2 | x | 2 | x |
| Grapes | 0 | 0 | 2 | x | 3 | x |
| Plums & prunes | 0 | 0 | 3 | 1 (2.5) | 4 | x |
| Cherries | 1 | x | 1 | x | 2 | x |

Note 3. x within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

Pitt Meadows also has 14 reported greenhouse operations, 10 of which produce flowers or potted plants, 7 produce vegetables, and 1 producing other crops (some greenhouses produce more than one crop) (Table 7). In 2021, the amount of greenhouses under production (m²) have been suppressed by Statistics Canada.

Table 7. Greenhouse production in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Greenhouse Production | 2011 | | 2016 | | 2021 | |
|-----------------------|------------|------------------------|------------|------------------------|------------|------------------------|
| | # of farms | m ² (acres) | # of farms | m ² (acres) | # of farms | m ² (acres) |
| Total | 17 | 284,368 (70) | 12 | 169,760 (42) | 14 | x |
| Flowers | 11 | 102,770 (25) | 7 | x | 10 | x |
| Vegetables | 7 | x | 4 | x | 7 | x |
| Other | 2 | x | 1 | x | 1 | x |

Note 4. 'x' within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

The Metro Vancouver 2016 ALUI data provides a slightly more in depth understanding of the crops being produced in Pitt Meadows as the ALUI is a visual survey of fields and does not rely on self-reporting, nor have restrictions on the definition of a farm. Table 8 provides the 2016 ALUI findings.

Table 8. Crop production in Pitt Meadows (Source: 2016 Metro Vancouver ALUI)

| Crop | Number of Parcels | ha (acres) |
|--------------------------------------|-------------------|-------------------|
| Berries | 312 | 2,584.6 (6,386.5) |
| Forage | 146 | 651.7 (1,610.3) |
| Nursery & Tree Plantation | 59 | 179.7 (444.0) |
| Pasture | 80 | 146.4 (361.7) |
| Glass Greenhouse | 24 | 32.0 (79.1) |
| Poly Greenhouse | 33 | 11.3 (27.9) |
| Turf | 4 | 10.7 (26.4) |
| Nut Trees | 2 | 5.9 (14.6) |
| Vegetables | 11 | 3.3 (8.2) |
| Floriculture | 9 | 1.7 (4.2) |
| Fruit Trees | 2 | 1.1 (2.7) |

2.3.3 Vertical Agriculture

Vertical agriculture is increasing in popularity across Canada, and within Pitt Meadows. Vertical agriculture is a means of producing food in a controlled, indoor environment which reduces the geographic footprint of agricultural fields and is less reliant on natural factors such as weather, soil conditions, climate and

daylight hours. Pitt Meadows, as the time of writing, is home to two vertical farming operations, Up Vertical Farms Ltd.³ is producing leafy greens and lettuce in an industrial-style warehouse. CubicFarms⁴, which opened in 2020, is a vertical farming operation that also sells growing chambers to other producers.

2.3.4 Farm Practices

From 2011 to 2021, there has been a slow but steady increase in farms with shelterbelts or windbreaks (Table 9). Other practices are suppressed in the 2021 data due to low numbers, however, the practice of winter cover cropping increased from 10 to 14 farms between 2011 and 2016, while rotational grazing and winter grazing decreased.

Table 9. Land practices in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Land Practice | Number of farms | | |
|----------------------------|-----------------|------|------|
| | 2011 | 2016 | 2021 |
| Rotational grazing | 17 | 6 | x |
| In-field winter grazing | 10 | 5 | x |
| Windbreaks or shelterbelts | 10 | 16 | 19 |
| Plowing down green crops | 9 | 6 | 8 |
| Winter cover crops | 10 | 14 | x |

Note 5. 'x' within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

The number of farms engaging in the use of inputs such as commercial fertilizers, herbicides and insecticides have remained fairly steady since 2011, though the areas involved for all three have decreased (Table 10).

Table 10. Agricultural inputs in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Inputs | 2011 | | 2016 | | 2021 | |
|--|------------|---------------|------------|---------------|------------|---------------|
| | # of farms | ha (acres) | # of farms | ha (acres) | # of farms | ha (acres) |
| Commercial fertilizer | 72 | 3,151 (7,786) | 66 | 3,257 (8,048) | 67 | 2,442 (6,034) |
| Manure or compost incorporated in soil | 19 | 60 (148) | 14 | 89 (220) | 19 | 312 (771) |
| Manure or compost not incorporated in soil | 16 | 92 (227) | 11 | x | 11 | x |
| Herbicides | 56 | 2,853 (7,050) | 61 | 2,673 (6,605) | 55 | 1,889 (4,668) |
| Insecticides | 48 | 2,042 (5,046) | 51 | 2,524 (6,237) | 45 | 1,934 (4,779) |

Note 6. 'x' within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

Farms in Pitt Meadows have adopted modest technology applications, such as slow-release fertilizers, soil sample testing and variable rate input application (Table 11). More expensive and specialized technologies

³ [Up Vertical Farms](#). Accessed 2023.

⁴ [Our Company](#). Cubic Farm. Accessed June 2023.

such as drones and some robotic equipment have slower rates of adoption, likely due to the level of investment required.

Table 11. On-farm technology adoption in Pitt Meadows (Source: Agriculture Census 2011, 2016, 2021)

| | 2021 |
|--|-------------------|
| Technology | # of farms |
| Variable rate input application | 23 |
| Drones | 4 |
| Soil sample tests | 43 |
| Slow-release fertilizers | 46 |
| Robotic greenhouse equipment | 2 |
| Fully robotic milkers | x |

Note 7. 'x' within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

2.3.5 Farm Labour and Succession

In terms of labour, in 2021, 35 farms in Pitt Meadows reported providing year-round full-time work, 17 reported year-round part-time work and 31 farms reported hiring part time seasonal/temporary basis. The total number of farming jobs provided between all three levels of employment decreased significantly from 1,638 in 2016 to 692 in 2021 (Table 12). It is possible that this shift in 2021 reflected temporary labour foreign worker restrictions that arose from the COVID-19 pandemic.

Table 12. Farm labour in Pitt Meadows (Source: Census of Agriculture 2016, 2021)

| Labour Types | 2016 | | 2021 | |
|-----------------------------|------------------------|------------------------|------------------------|------------------------|
| | Farms reporting | Total employees | Farms reporting | Total employees |
| Year-round full time | 31 | 301 | 35 | 238 |
| Year-round part time | 18 | 153 | 17 | 67 |
| Seasonal/ Temporary | 47 | 1,184 | 31 | 387 |
| Total | | 1,638 | | 692 |

There are 215 farm operators in Pitt Meadows, 72 of which are the sole operators on their farms. The sector is majority male (130) with only 80 female operators. The average age of farmers in Pitt Meadows has been steadily increasing since 2011, reported as 58.2 in 2021 (Table 13). Despite this, only 28 of 140 farms (20%) reported having a written succession plan in place.

Table 13. Farm demographics in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| | 2011 | 2016 | 2021 |
|---|-------------|-------------|-------------------|
| Total number of operators | 255 | 195 | 215 |
| Farms with one operator | 80 | 75 | 72 |
| Number of farm operators on farms with two or more operators | 185 | 120 | 145 (68 farms) |
| Male operators | 175 | 130 | 130 |
| Female operators | 85 | 65 | 80 |
| Average age | 54.7 | 57.4 | 58.2 |
| Farms with written succession plans | x | 17 | 28 |

Note 8. 'x' within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

2.3.6 Farmland Tenure

In Pitt Meadows, 85% of land being farmed is owned while only 15% is being leased from private owners. Though total farmed area has decreased by 2,286 ha since 2011, the ratio of owned to leased land has remained steady (Table 14). The decrease in farm area being reported is likely associated with the change in farm definition on the agriculture census.

Table 14. Land tenure in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| | 2011 | | 2016 | | 2021 | |
|-------------------------------------|-------|------|-------|------|-------|------|
| | ha | % | ha | % | ha | % |
| Total farm area reporting | 6,275 | 100% | 4,785 | 100% | 3,989 | 100% |
| Area owned | 5,214 | 83% | 3,995 | 84% | 3,390 | 85% |
| Rented or leased from others | 886 | 14% | 754 | 16% | 587 | 15% |
| Other | 188 | 3% | 0 | 0% | 0 | 0% |

2.4 Farm Profitability

Producers in the region must offset income with costs for land, labour, chemical and fertilizer inputs and fuel. Farmers in most of BC have difficulty producing sufficient income to offset losses due to climate-related disasters, wildlife-related crop impacts (e.g. migratory birds), trespassing, and invasive species. Furthermore, the cost of farm labour, equipment, and other farm inputs (seeds, feed, soil amendments, etc.) continue to rise. The situation in the Lower Mainland is no different. Most farmers need financial assistance (through loans or grants) in order to scale up their production and often one family member must work off the farm. Farm profitability is difficult to measure or to estimate. The following proxies can be used:

- Farm capital and assets
- Gross margin of farm operations
- Average farm receipts per farm
- Net revenue margin

2.4.1 Farm Capital and Assets

Total farm capital includes land and buildings, livestock and poultry, farm machinery, and farm equipment. While the total farm capital in Pitt Meadows decreased from 2011 to 2021, the average per farm has increased from \$5.7 million to \$6.1 million (Table 15). Furthermore, total capital and average capital per farm in livestock and poultry has risen from 2011 to 2021, indicating a rise in the number or value of farm animals.

Table 15. Farm capital of in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| | 2011 (million \$) | | 2016 (million \$) | | 2021 (million \$) | |
|---|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|
| | Total | Average per farm | Total | Average per farm | Total | Average per farm |
| Total farm capital | 929.2 (163 farms) | 5.7 | 714.1 (133 farms) | 5.4 | 854.6 (140 farms) | 6.1 |
| Land & buildings (owned) | 764.9 (152 farms) | 5.0 | 564.6 (125 farms) | 4.5 | 627.4 (132 farms) | 4.7 |
| Machinery & equipment | 29.8 (163 farms) | 0.2 | 28.7 (133 farms) | 0.2 | 27.4 (124 farms) | 0.2 |
| Livestock & poultry | 4.7 (59 farms) | <0.1 | 8.7 (45 farms) | 0.2 | 9.3 (42 farms) | 0.2 |

2.4.2 Gross Margin of Farm Operations

From 2016 to 2021, gross margin of farm operations decreased from 16.2% to 11.7% (Table 16). This decrease was largely due to a significant increase in operating expenses within the same timeframe. A modest decrease in gross margin was a consistent trend across the province which saw gross margin on agricultural operations go from 15.3% in 2016 to 12.3% in 2021.⁵

Table 16. Gross Margin of Farm Operations in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Year | Gross farm receipts (\$) | Total operating expenses (\$) | Gross margin |
|-------------|--------------------------|-------------------------------|--------------|
| 2011 | 83,597,741 | 77,348,844 | 7.5 % |
| 2016 | 81,308,215 | 68,126,690 | 16.2 % |
| 2021 | 97,504,507 | 86,133,541 | 11.7% |

2.4.3 Farm Receipts and Net Revenue

Farm revenue can be calculated on an average per farm basis using Census of Agriculture data. The average farm revenue increased by \$85,121 from 2016 to 2021 (Table 17). Note that in 2021, 16 farms reported \$0 farm revenues. It is unclear why some farms were reporting no revenues but this could reflect challenges in income related to the COVID-19 pandemic.

Table 17. Gross Farm Receipts in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Year | # of farms | Gross farm receipts (\$) | Average per farm (\$) |
|-------------|------------|--------------------------|-----------------------|
| 2011 | 163 | 83,597,741 | 512,869 |
| 2016 | 133 | 81,308,215 | 611,339 |
| 2021 | 140 | 97,504,507 | 696,460 |

⁵ Census of Agriculture for British Columbia. 2016 & 2021.

2.4.4 Farm Revenue by Category

Only 28% of farms in Pitt Meadows generated above \$500,000 in operating revenue in 2021, while 72% of farms generate under \$500,000 (Table 18). Of the 22 farms which reported under \$10,000 in revenue, 16 reported \$0 in 2021. As noted above, it is unclear why some farms were reporting no revenue in 2021 but this could reflect challenges in income related to the COVID-19 pandemic.

Table 18. Total Operating Revenue in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| Operating Revenue by \$ Category | 2011 (163 farms) | 2016 (133 farms) | 2021 (140 farms) |
|----------------------------------|---------------------|---------------------|-----------------------------|
| Under \$10,000 | 52 | 30 | 22 (16/22 reporting \$0) |
| \$10,000 – \$24,999 | 19 | 20 | 25 |
| \$25,000 - \$49,999 | 19 | 13 | 14 |
| \$50,000 - \$99,000 | 16 | 17 | 18 |
| \$100,000 – \$249,999 | 18 | 18 | 14 |
| \$250,000 – \$499,999 | 12 | 10 | 8 |
| \$500,000 - \$999,999 | 8 | 4 | 6 |
| \$1,000,000 - \$1,999,999 | 8 | 10 | 7 |
| \$2,000,000 and over | 11 | 11 | 10 |

3.0 Agriculture and Water

3.1 Water and Climate Change

With rising median temperatures and changes in precipitation patterns, Pitt Meadows and the entire Metro Vancouver region can expect increased pressure on freshwater resources, creating a seasonal strain on crop and livestock water needs.

Despite the challenges of applying broad climate models, some general projections are anticipated in BC between now and 2050. For the Greater Vancouver area, climate projections from the Pacific Climate Impact Consortium⁶ suggest significant increases in median temperature as early as the 2050s, overall reduced snowfall in winters with increased precipitation as rain, and an extension of the productive season through increased growing degree days⁷ and frost-free days. Table 19 offers a more in-depth look at the current projections, which are likely to impact agricultural water demand.

Increasing median temperatures and changing hydrological systems, such as reduced rainfall in summer months and reduced snowpack through the winter, have a two-fold impact on agricultural system. Higher temperatures increase evapotranspiration in crops, leading to a need for increased irrigation at times when water is often in lowest supply. Changing hydrological systems means more precipitation falls as rain in the

⁶ Pacific Climate Impacts Consortium. [Plan2Adapt tool](#). Accessed June 2023.

⁷ [Growing Degree Days](#) (GDD) are used to estimate the growth and development of plants and insects during the growing season. The basic concept is that development will only occur if the temperature exceeds a minimum base temperature.

spring, which can lead to flooding and erosion, while times of drought are expected to increase through the summer and fall months.

Table 19. Climate Projections for Greater Vancouver Area, 2020, 2050 and 2080 (Source: Pacific Climate Impacts Consortium)

| | | 2020 change from 1961-1990 baseline | | 2050 change from 1961-1990 baseline | | 2080 change from 1961-1990 baseline | |
|---------------------|--------|-------------------------------------|------------------|-------------------------------------|------------------|-------------------------------------|-------------------|
| Characteristic | Season | Range | Median | Range | Median | Range | Median |
| Median Temperature | Annual | +1.2°C to +2.1°C | +1.6°C | +2.0°C to +4.2°C | +3.0°C | +3.5°C to +6.5°C | +4.8°C |
| Precipitation | Annual | -4.9% to +1.4.0% | -2.0% | -4.2% to +2.5% | +0.23% | -2.9% to +10% | +4.9% |
| | Summer | -30% to +0.38% | -12% | -40% to +0.95% | -15% | -56% to -4.5% | -25% |
| | Winter | -4.5% to +7.3% | +0.22% | -3.3% to +6.6% | +0.13% | +2.4% to +17% | +7.1% |
| Snowfall | Winter | -68% to -42% | -56% | -83% to -67% | -77% | -93% to -77% | -89% |
| | Spring | -63% to -13% | -36% | -87% to -29% | -69% | -97% to -49% | -87% |
| Growing Degree Days | Annual | +289 to +568 degree days | +436 degree days | +562 to +1180 degree days | +818 degree days | +954 to +1940 degree days | +1380 degree days |

3.2 Drainage and Irrigation

In Pitt Meadows, some producers are using the municipal water supply (treated potable water) for irrigation needs, while others draw from the internal ditch network. Some producers have obtained (or applied for) Provincial water licenses to permit this diversion, while others may still be operating without a licence. BC Ministry of Forests (FOR), which administers water licencing, indicates that there are a number of agricultural users within Pitt Meadows that do not currently hold water licences.

The 2011 Pitt Meadows ALUI is the most recent assessment of irrigation specific to Pitt Meadows and, while somewhat out of date, offers insight into water use. The 2011 ALUI documented all irrigation uses occurring within the ALR and on parcels of land with Farm Tax Status outside the ALR. Data regarding land use activities was then used to summarize water use for agriculture in Pitt Meadows. Table 20 outlines the findings regarding irrigation from the 2011 ALUI.

Table 20. Main crop types and irrigation systems in Pitt Meadows (Source: Pitt Meadows ALUI 2011)

| Cultivated Field Crop | Irrigation system in use (ha) | | | Total area irrigated ha (acres) | % of crop area irrigated |
|--|-------------------------------|-----------|---------|---------------------------------|--------------------------|
| | Sprinkler | Giant gun | Trickle | | |
| Berries | 948 | 4 | 1,345 | 2,297 (5,676) | 93% |
| Nursery tree and plantation | 66 | - | - | 66 (163) | 32% |
| Forage and pasture | - | 19 | - | 19 (47) | 2% |
| Turf | 10 | - | - | 10 (25) | 100% |
| Vegetables | <1 | - | 1 | 2 (5) | 100% |
| Other | <1 | - | - | <1 | <1% |
| Total field crop area irrigated | 1,027 | 23 | 1,346 | 2,397 (5,923) | 67% |
| Greenhouse | Flood and trickle irrigation | | | 36 (89) | 100% |

The 2011, the Pitt Meadows ALUI found that 67% of cultivated fields were irrigated, with trickle irrigation systems being the most widely used (38%) followed by sprinkler systems (29%) (Table 21).

Table 21. Irrigation types on cultivated fields in Pitt Meadows (Source: Pitt Meadows ALUI 2011)

| Irrigation type | Percent of cultivated fields |
|----------------------|------------------------------|
| Trickle | 38% |
| Sprinkler | 29% |
| Giant gun | <1% |
| Not irrigated | 33% |

There are some clear differences in the way that the Census data (Table 22, below) and the ALUI data (Tables 20 and 21) are compiled, which can lead to discrepancies when some indicators are compared. For example, the ALUI surveyor may see irrigation equipment on the field, and the farmer may not report the equipment as it is not being used at the time of the Census. According to the 2021 Census of Agriculture, only 42 farms reported using irrigation, to a total of 1,931 ha. The drop in area being irrigated and the dip in number of farms irrigating may be due to the change in definition of Census Farm or in the irrigation needs that shift from year to year.

Table 22. Number of farms irrigating in Pitt Meadows (Source: Census of Agriculture 2011, 2016, 2021)

| | # of Farms | Ha (acres) |
|-------------|------------|---------------|
| 2011 | 57 | 2,486 (6,143) |
| 2016 | 59 | 2,495 (6,165) |
| 2021 | 42 | 1,931 (4,771) |

4.0 Value-Add and Agricultural Support Services

The local agricultural system is connected through value-added opportunities such as processing, storage, distribution, and retail channels. Agricultural support services can also include farm equipment dealers, government extension officers, and industry associations, which can all assist in maximizing the ability for individual farming operations to succeed. These are summarized within the Pitt Meadows context below.

4.1 Meat Processing

Each link in the local meat supply chain is vital - a local abattoir allows farmers to get their animals processed in a timely manner and cut and wrap shops (butchers) allow farmers to sell their products in cuts and portions that are tailored to the appropriate market. While there may never be one simple solution for something as complex as the meat sector, some relatively small investments in local infrastructure can provide enhanced income streams for area farmers and employment opportunities for area residents.

In 2007, the province amended meat processing regulations such that licensing and certification was more stringent and involved additional administrative oversight. These changes, along with other challenges in the industry such as the Bovine Spongiform Encephalopathy (mad cow disease) crisis, resulted in more than 300 abattoirs closing throughout BC over the last 15 years. In 2021, the BC government updated the meat processing licensing system with new “Abattoir”, “Farmgate Plus” and “Farmgate” licenses. The “Abattoir” license allows for slaughtering of an unlimited number of animals (own and custom for other producers) with sales to retail or direct to customer. However additional restrictions related to the ALR may apply. “Farmgate Plus” allows for slaughter of one’s own animals and limited custom slaughter for other producers with sales to the retail market or direct-to-customer. The “Farmgate” licenses only allow for slaughter of one’s own animals and are restricted to direct-to-consumer sales. Further meat processing, including cut and wrap requires a Food Premises Permit obtained from a health authority for all levels of licensing. There are currently several Abattoir licenses in and around Pitt Meadows. The following is a list of those facilities at the time of publication within the region:

- Hopcott Farms Ltd, Pitt Meadows – *Cattle (and soon to take on sheep)*
- Meadow Valley Meats, Pitt Meadows – *Cattle*
- 0802981 B.C. Ltd, Langley – *Chicken (slaughter only)*
- Sumas Mountain Farm, Abbotsford – *Cattle, hog, chicken, duck, geese, sheep, turkey*
- AGM Beef Farm Ltd, Surrey - *Cattle, sheep/lamb/goat, llama/ alpaca*
- Fraser Valley Specialty Poultry, Chilliwack - *Chicken, duck, geese, turkey*
- Johnston Packers Ltd, Chilliwack – *Bison, cattle, hogs, llama/alpaca, water buffalo, sheep*
- Las Palomas Farms, Chilliwack - *Chicken duck, turkey (slaughter only)*
- Scott’s Meats, Agassiz - *Cattle*

4.2 Berry Processing

Aggregation, packing, and processing (such as freezing) of berries occurs both on farm and can be outsourced to larger systems off-farm. Some producers have their own processing out-buildings on their farms where they clean, sort and package products for the local market. Many blueberry producers send their freshly harvested crops to larger-scale operators, such as West Coast Blueberry Farms, who can also pack cranberries and other fruits as per customer request.⁸ Other major packing operators and processors

⁸ [About Us](#). West Coast Blueberry Farms. Accessed June 2023.

in Pitt Meadows include Pacific Canadian Fruit Packers (Robinson Brothers Food Group), Golden Eagles Farm (Aquilini Group), and TwinBerry.

Over 95% of cranberries produced in BC, including those produced in Pitt Meadows, leave the province and are shipped to the USA to be used in Ocean Spray products such as cranberry juice and Craisins. Ocean Spray is a grower-owned cooperative and includes cranberry growers from BC, with a major packhouse based in Delta, BC.⁹

4.3 Distribution and Sales

Pitt Meadows is uniquely positioned with easy access to local, national, and international distribution routes via rail and highway. The agri-food sector in Pitt Meadows relies on highways and secondary roads for connectivity to local, regional, and provincial sales markets. Highway 7 (Lougheed Highway) is the main transportation artery running through the City, which connects Pitt Meadows to Coquitlam and Vancouver to the west and communities north of the Fraser to the east. Highway 1 (Trans-Canada Highway) is accessible directly south of the Fraser River via Highway 7B (Mary Hill Bypass) and Golden Ears Way, providing access to Vancouver and the rest of the nation to the east. Furthermore, Pitt Meadows is only 30 km from the Canada-USA border, and 50 km from the west coast, offering access to shipping ports and international markets. This allows producers in Pitt Meadows to gain access to a variety of markets. With an increasing population, some of Pitt Meadows’ rural roads are experiencing a higher degree of wear and tear, detracting from their ability to perform their original function, as transportation networks for the agriculture sector.¹⁰

According to the 2021 Census of Agriculture, 32 (23%) farms in Pitt Meadows are selling direct to consumers through a variety of channels. These include unprocessed and value-added products, being sold via farm gate stands and farmers markets (Table 23). Additionally, the 2021 Census found that 13 farms reported that direct sales to consumers accounted for 100% of their operating revenues and 8 farms reported that direct sales accounted for 50-99% of their revenues, suggesting that although only 23% of farms in Pitt Meadows are selling direct to customers, those direct sales are significant for their gross income.

Table 23. Producers in Pitt Meadows selling direct to consumers (Source: Census of Agriculture 2016, 2021)

| Farms Selling Direct to Consumers | Number of Farms | |
|--|-----------------|------|
| | 2016 | 2021 |
| Sales of Unprocessed Agricultural Products | 36 | 32 |
| <i>Using Farm Gate, Stands, Kiosks, U-pick</i> | 34 | 28 |
| <i>Using Farmers' Markets</i> | 4 | x |
| Sales of Value-added Products | 2 | 4 |

Note 9. 'x' within the table indicates the number has been suppressed by Stats Canada for privacy reasons.

In 2022, the Pitt Meadows Farmers’ Market began, creating opportunity for producers to sell their products locally. At the time of writing, this market is attended mostly by producers outside of Pitt Meadows. In addition to the Pitt Meadows Farmers’ Market, there are several markets operating in adjacent communities, which may be accessible to local producers. Table 24 summarizes the farmers markets that operate in Pitt Meadows and directly neighbouring communities.

⁹ [FAQ](#). BC Cranberries. Accessed June 2023.

¹⁰ [Transportation Master Plan Summary Report](#). City of Pitt Meadows. 2014.

Table 24. Summary of farmers markets in and around Pitt Meadows (Source: Fraser North Farmers Market Society)

| Market | Location | Season | Days |
|-------------------------------------|-----------------|------------------|-------------------------|
| Pitt Meadows Farmers Market | Pitt Meadows | June - September | Tuesdays 15:00 – 19:00 |
| Coquitlam Farmers Market | Coquitlam | May – October | Sundays 9:00 – 13:00 |
| Port Coquitlam Farmers’ Market | Port Coquitlam | June - September | Thursdays 15:00 – 19:00 |
| Fort Langley Village Farmers Market | Fort Langley | April - December | Saturdays 9:00 – 15:00 |
| Haney Farmers Market | Maple Ridge | May - October | Saturdays 9:00 – 14:00 |