

Growing Knowledge



Ministry of
Agriculture

Land Use Inventory Report

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City of Pitt Meadows Summer 2011



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**Strengthening Farming Program
Ministry of Agriculture**

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Acronyms

AAC	Agricultural Advisory Committee
AAP	Agricultural Area Plan
AGRI	BC Ministry of Agriculture
ALC	Agricultural Land Commission
ALR	Agricultural Land Reserve
ALUI	Agricultural Land Use Inventory
GIS	Geographic Information Systems

Definitions

General

Agricultural Land Reserve (ALR) – A provincial zone in which agriculture is recognized as the priority use. Farming is encouraged and non-agricultural uses are controlled.

BC Assessment – The Crown corporation which produces annual, uniform property assessments that are used to calculate local and provincial taxation. The database purchased from BC Assessment contains information about property ownership, land use, and farm classification, which is useful for land use surveys.

Cadastral – The GIS layer containing parcel boundaries, i.e. legal lot lines.

Crown ownership – Crown ownership includes parcels which are owned by municipal, provincial or federal governments. Parcel ownership is determined by the Integrated Cadastral Fabric maintained by the Parcel Fabric Section of the BC Government.

Farm classification for tax assessment – Applies to parcels producing the minimum dollar amount to be classified as a farm by BC Assessment. Local governments apply a tax rate to farmland which is usually lower than for other land. To receive and maintain the farm classification, the land must generate annual income from agricultural production.

Farm Unit – An area of land used for a farm operation consisting of one or more contiguous or non-contiguous parcels, that may be owned, rented or leased, which form and are managed as a single farm.

Land Cover

Anthropogenic – The term *anthropogenic* describes an effect or object resulting from human activity. In this report, the term anthropogenic refers to land cover originating and maintained by human actions but excludes farmed land cover; cultivated field crops, farm infrastructure, and crop cover structures.

Anthropogenic – Built up - Other – Lands covered by various unused or unmaintained built objects (structures) and associated yards that are not directly used for farming.

Anthropogenic – Managed vegetation – Lands seeded or planted for landscaping, dust or soil control but not cultivated for harvest or pasture. Includes parklands, golf courses, landscaping, lawns, vegetated enclosures, remediation areas.

Anthropogenic – Non Built or Bare – Human created bare areas such as extraction or disposal sites. Includes piles, pits, fill dumps, dirt parking or storage areas.

Anthropogenic – Residential – Lands covered by built objects (structures) and their associated auxiliary buildings, yards, roads, and parking. Includes single and multifamily dwellings, and mobile homes.

Anthropogenic – Residential footprint – Includes the main residence plus its associated yard, driveway, parking and any auxiliary buildings or structures. When two residences are on a property, areas associated to both (such as shared driveways, parking or yard), are assigned to the closest residence.

Anthropogenic – Settlement – Lands covered by built objects (structures) and their associated yards, roads, and parking. Includes institutional, commercial, industrial, sports / recreation, military, non linear utility areas and storage / parking.

Anthropogenic – Transportation – Lands covered by built objects (structures). Includes roads, railways, and airports and associated buffers and yards.

Anthropogenic – Utilities – Lands covered by built objects (structures). Includes linear features such as pipelines or transmission lines.

Anthropogenic Waterbodies – Areas covered by water, snow or ice due to human construction. Includes reservoirs, canals, ditches, and artificial lakes - with or without non cultivated vegetation.

Crop cover structures – Land covered with built objects including permanent enclosed glass or poly structures (**greenhouses**) with or without climate control facilities for growing plants and vegetation under controlled environments, and barns used for growing crops such as mushrooms. Excludes non permanent structures such as hoop or tunnel covers.

Cultivated field crops - Land under cultivation for harvest or pasture. Includes crop land, fallow farmland, unused forage or pasture, un-housed container crops and crops under temporary covers. Excludes natural pasture, rangeland, greenhouses, mushroom barns and other crop houses.

Farm infrastructure – Land covered by farm related built objects (structures) and their associated yards, roads, parking. Includes barns, storage structures, paddocks, corrals, riding rings, farm equipment storage, and specialized farm buildings such as hatcheries. Excludes greenhouses, mushroom barns and other crop houses.

Natural and Semi-natural – Land cover which has not originated from human activities or is not being maintained by human actions. Includes regenerating lands, and old farm fields.

Natural and Semi-natural – Grassland – Land cover dominated by herbaceous plants with long, narrow leaves characterized by linear venation; including grasses, sedges, rushes, and other related species.

Natural and Semi-natural – Herbaceous – Land cover dominated by low, non woody plants such as ferns, grasses, horsetails, closers and dwarf woody plants. If greater than 50% cover is grass, the land is categorized as grassland.

Natural and Semi-natural – Natural bare areas – Includes bare rock areas, sands and deserts.

Natural and Semi-natural – Natural pasture – Smaller fenced areas usually on private land with uncultivated (not sown) natural or semi-natural grasses, herbs or shrubs used for grazing domestic livestock.

Natural and Semi-natural – Rangeland – Larger fenced areas usually on crown land with uncultivated (not sown) natural or semi-natural grasses, herbs or shrubs used for grazing domestic livestock.

Natural and Semi-natural – Shrubland – Land where less than 10% crown cover is native trees and at least 20% crown cover is multi-stemmed woody perennial plants, both evergreen and deciduous.

Natural and Semi-natural – Treed - closed – Land where between 60 and 100% of crown cover is native trees.

Natural and Semi-natural – Treed - open – Land where between 10 and 60% of crown cover is native trees.

Natural pasture or rangeland – Land with uncultivated (not sown) natural or semi-natural grasses, herbs or shrubs used for grazing domestic livestock. This land cover is considered “Used for grazing” and “Not used for farming” although usually these areas are extensions of more intensive farming areas.

Unmaintained field crops – Land under cultivation for field crops which has not been maintained for several years and probably would not warrant harvest.

Unmaintained forage or pasture – Land under cultivation for forage or pasture which has not been cut or grazed during the current growing season and has not been maintained for several years.

Unused forage or pasture – Land under cultivation for forage or pasture which has not been cut or grazed during the current growing season.

Livestock

Animal Unit Equivalent – A standard measurement used to compare different livestock types. One animal unit equivalent is approximately equal to one adult cow or horse.

Intensive livestock – Intensive livestock have specialized structures such as barns, feedlots, or stockyards designed for confined feeding at high stocking densities.

Non intensive livestock – Non intensive livestock have the ability to graze on pasture and often utilize non intensive barns and corrals/paddocks.

Scale of livestock operations – The scale system used in this report to describe livestock operations includes 4 levels:

- **“Very Small** Approximately 1 cow or horse or bison, 3 hogs, 5 goats or deer, 10 sheep, 50 turkeys, 100 chickens (1 animal unit equivalent)
- **“Small”** LESS THAN 25 cows or horses or bison, 75 hogs, 125 goats or deer, 250 sheep, 1250 turkeys, 2500 chickens (2 - 25 animal unit equivalents)
- **“Medium”** LESS THAN 100 cows or horses or bison, 300 hogs, 500 goats or deer, 1000 sheep, 5,000 turkeys, 10,000 chickens (25 - 100 animal unit equivalents)
- **“Large”** MORE THAN 100 cows or horses or bison, 300 hogs, 500 goats or deer, 1000 sheep, 5,000 turkeys, 10,000 chickens (over 100 animal unit equivalents)

Land Cover and Farming

Actively farmed – Land cover considered **Farmed** but excludes unused / unmaintained field crops, and unmaintained greenhouses. Does not include natural pasture or rangeland.

Farmed – Land cover directly contributing to agricultural production (both actively farmed and inactively farmed). Includes land in **Cultivated field crops, Farm infrastructure** and **Crop cover structures** (see individual definitions). Does not include natural pasture or rangeland.

Inactively farmed. Land cover considered “Farmed” but is currently inactive. Includes unused / unmaintained forage and pasture, unmaintained field crops, and unmaintained greenhouses or crop barns. Does not include natural pasture or rangeland.

Potential for farming – Land without significant topographical, physical or operational constraints to farming such as steep terrain, land under water, or built structures. For example, land with little slope, sufficient soils and exhibiting a natural treed land cover would be considered as having potential for farming.

Land Use

No apparent use – Parcel with no apparent human use; natural areas, long term fallow land, cleared land not in production, abandoned or neglected land, abandoned or unused structures.

Water management – Areas used to actively or inactively manage water; reservoirs, dikes, ditches, managed wetland.

Land Use and Farming

Used for farming – Parcels where the majority of the parcel area is farmed OR parcels which exhibit significant intensity of farming are considered “Used for farming”. Specifically, parcels that meet at least one of the following criteria:

- medium or large scale livestock, apiculture or aquaculture operations
- at least 45% parcel area in cultivated field crops (excluding unused forage or pasture)
- at least 50% parcel area built up with farm infrastructure
- at least 25% parcel area built up with crop cover structures (excluding unmaintained structures)
- at least 40% parcel area in cultivated field crops (excluding unused forage or pasture) or farm infrastructure and small scale livestock, apiculture or aquaculture operations
- at least 33% parcel area in cultivated field crops (excluding unused forage or pasture) and at least 55% parcel area in cultivated field crops (excluding unused forage or pasture) or farm infrastructure
- at least 10% parcel area in crop cover structures (excluding unmaintained structures) and at least 40% parcel area in cultivated field crops (excluding unused forage or pasture) or farm infrastructure
- at least 20% parcel area and at least 20 ha in cultivated field crops (excluding unused forage or pasture)
- at least 25% parcel area and at least 10 ha in cultivated field crops (excluding unused forage or pasture)
- at least 30% parcel area and at least 5 ha in cultivated field crops (excluding unused forage or pasture)
- at least 10% parcel area and at least 2 ha built up with crop cover structures (excluding unmaintained structures)
- at least 20% parcel area and at least 1 ha built up with crop cover structures (excluding unmaintained structures)

Not used for farming – Parcels that do not meet the “Used for farming” criteria presented above.

Used for grazing – Parcels “Not used for farming” with a significant portion of their area in natural pasture or rangeland and evidence of active grazing domestic livestock.

Unavailable for farming – “Not used for farming” parcels where future agricultural development is improbable because of a conflicting land use that utilizes the majority of the parcel area. For example, most residential parcels are considered not available for farming if the parcel size is less than 0.4 hectares (approximately 1 acre) since most of the parcel is covered by built structures, pavement and landscaping.

Available for farming – Parcels that can be used for agricultural purposes without displacing a current use. Includes all parcels that do not meet the “Unavailable for farming” criteria.

Not used for farming but available – Parcels that do not meet the “Used for farming” criteria but can be used for agricultural purposes without displacing a current use

Executive Summary

In the summer of 2011, the BC Ministry of Agriculture (AGRI) conducted an Agricultural Land Use Inventory (ALUI) in the City of Pitt Meadows. The ALUI was funded in part by Metro Vancouver.

ALUIs can be used to understand which agricultural activities are occurring in the surveyed area. The data can be used to determine the capacity for agricultural expansion, as well as to quantify the amount of land within the Agricultural Land Reserve (ALR) that is unavailable for agriculture. The data can also be used to estimate agricultural water demand with the use an irrigation water demand model.

The ALUI for Pitt Meadows was conducted using a drive-by inventory that recorded land cover and land use on a per-parcel basis, as a “snapshot in time.” Included in the inventory were i) all parcels completely or partially in the ALR; ii) all parcels within Metro Vancouver’s Regional Growth Strategy “Agriculture” designation; iii) all parcels within Metro Vancouver’s Regional Growth Strategy “Rural” designation and greater than one acre; and iv) all parcels assessed as a farm by BC Assessment.

The ALR in Pitt Meadows consists of 6,868 ha. Ninety-three percent (93%) of this or 6,384 ha was surveyed as part of this inventory. The remaining 7% or 484 ha of ALR was not surveyed as it was in designated road rights of ways, water & foreshore, or parcels less than 100 square meters in size. An additional 972 ha of land outside the ALR was surveyed, bringing the total survey area to 7,356 ha on 821 parcels.

The data on each parcel was collected in two ways: land cover (the biophysical material at the surface of the earth) and land use (how people utilize the land). A parcel could have numerous land covers and was assigned up to two land uses. These two types of data allow for different forms of analysis.

In the ALR by land cover, a total area of 3,669 ha (53%) was farmed (both actively and inactive), 1,280 ha (19%) was anthropogenically modified, and 1,435 ha (21%) was in a natural or semi-natural state. The remaining 484 ha (7%) was not surveyed, and was not available for farming. An additional 30 ha of land outside the ALR was farmed. See Table 1 and Map B1 for details.

In terms of land use, the entire parcel was examined, and a “Used for farming” definition was applied, based on the percentage and/or scale of the parcel in cultivated crops, farm infrastructure, and/or certain scales of livestock production. For a detailed definition of “Used for farming”, refer to the Definitions section. In the ALR by land use, 4,148 ha (60%) was defined as “Used for farming,” and 2,236 ha (33%) was defined as “Not used for farming”. In this analysis, farm residential uses and farm roads, were included in the “Used for farming” subtotal. The remaining 484 ha (7%) was not surveyed, and was not considered to be available for farming. See Table 2 and Maps B3 and B4 for details.

The inventory provided insight into ALR land available and with potential for farming by looking at land cover, land use, and physical site limitations. Of the 6,868 ha of ALR land in Pitt Meadows, 3,664 ha (53%) is actively farmed. Another 124 ha (2%) supports farming (e.g. houses, farm roads, farm buildings, etc). There are 1,876 ha (27%) of the ALR unavailable for farming due to existing land use (e.g. it was in protected areas, parks, golf courses) or land cover (e.g. it was in wetlands, waterbodies, non-farm residential uses, etc.). There are 137 ha (2%) with limited potential for agriculture due to physical site limitations (e.g. topography, soils, flooding, small size). Seven percent or 484 ha of the ALR was not surveyed and was not considered to be available for farming. That leaves 583 ha (9%) of the ALR that is available and has potential to be farmed. The majority of the land that is available and

has potential for farming (467 ha) is currently in anthropogenic managed vegetation (e.g. landscaping and lawns surround residential uses). See Table 4, Figure 6, and Maps B5-B6 for details.

In total, there were 3,576 ha of cultivated field crops (3,546 ha in the ALR and 29 ha outside the ALR). The top crops were berries with 2,481 ha or 69% of all cultivated land, forage & pasture with 814 ha or 23%, and nursery & tree plantations with 207 ha or 6%. In the berries category, blueberries followed by cranberries were the top crops in terms of area. In the forage & pasture category, managed forage grass was the top crop in terms of area. In the nursery & tree plantation category, ornamentals & shrubs was the top crop in terms of area. In addition to the cultivated field crops, there were 33 greenhouses comprising 37 ha of land. See Tables 7-12 and Maps B7 to B11 for more information.

Irrigation use was captured by crop type and irrigation system type, to aid in developing a water demand model for agriculture. Trickle systems were the most commonly used (1,346 ha) and were found primarily on blueberry crops. Sprinkler systems were the next most common (1,027 ha) and were used primarily on cranberries. Giant gun systems were third (23 ha) and were found primarily on forage crops. Over two-thirds (67%) of all cultivated field crops were irrigated. See Table 13 and Map B12 for more information.

Livestock activities were also recorded, but are very difficult to measure using a windshield survey method. Livestock may be in barns, may be mobile, and may utilize more than one land parcel. The inventory data does not identify animal movement between parcels that make up a farm unit, but reports livestock at the parcel where the animals or related structures are observed. In Pitt Meadows, equines were the most common type of livestock activity with 36 out of 71 activities, followed by dairy with 8 out of 71 activities. All equine activities were “non-intensive” while all eight dairy activities were “intensive”. There was also one “intensive” beef operation. No actual livestock numbers were obtainable through the survey, so the results were reported as a range in terms of animal unit equivalents for each parcel. See Table 15 and Map B13 for more information.

Further analysis of ALR lands was conducted on 732 parcels with 6,339 ha or 92% of the ALR land in Pitt Meadows. Of the 732 parcels in the ALR, 428 (58%) were “Used for farming” and 304 parcels (42%) are “Not used for farming”. Of the 304 parcels “Not used for farming”, 41% are less than 1 ha and over three-quarters (78%) are less than 4 ha in size. Although parcels of all sizes are “Used for farming”, small parcels are less likely to be farmed.

Summary

This report provides the necessary background to understand the current status of agriculture on the land base and help make informed decision on how to best manage the agricultural land base in order to support and strengthen farming in the future.

Agrologist Comments

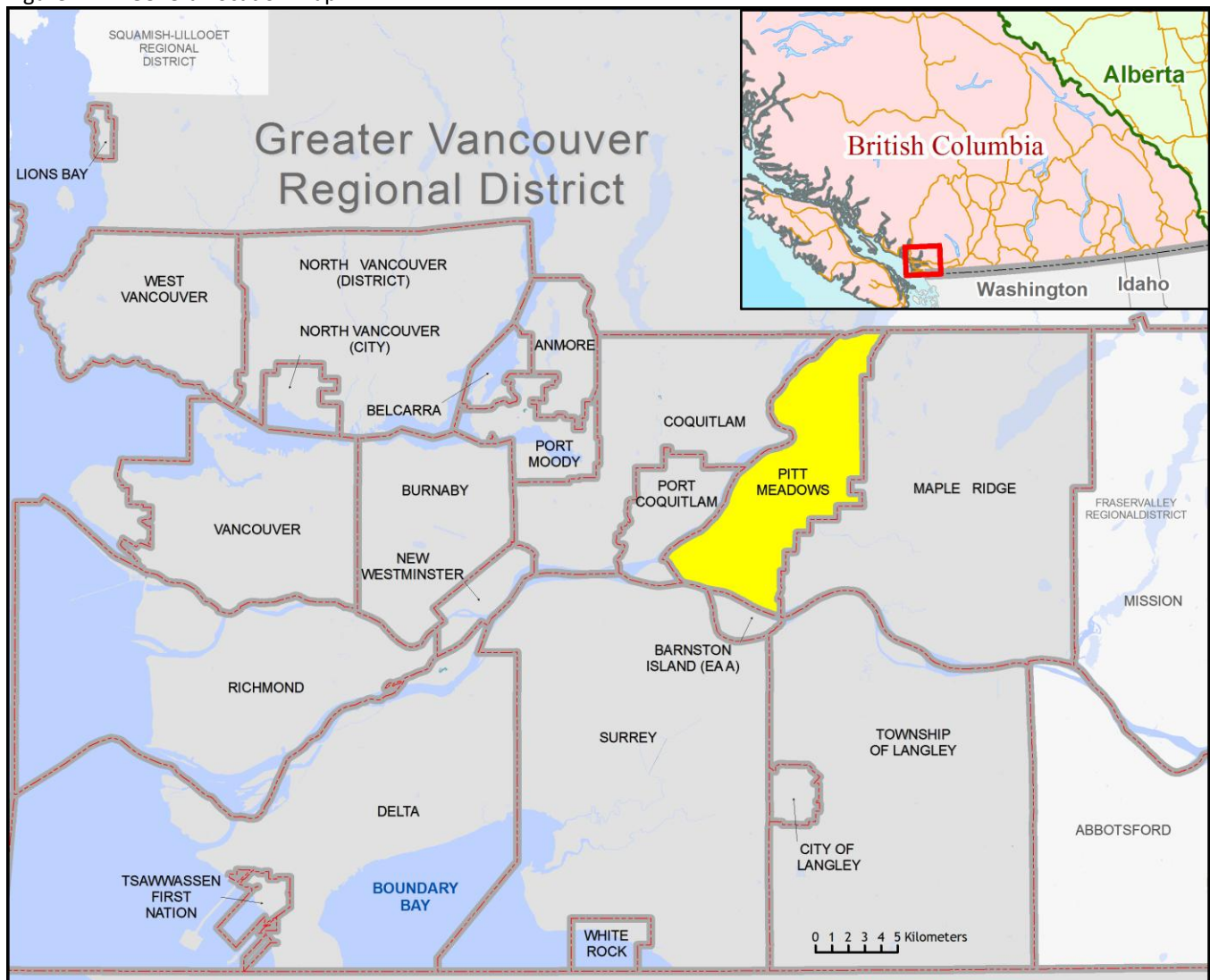
Agriculture is a crucial economic sector in Pitt Meadows. Extensive dyking and drainage systems within the community have contributed to a large proportion of the Pitt Meadows land base being in productive agricultural land. Over 85% of the land base is within the ALR. With the exception of ALR areas unavailable for farming, such as the Pitt Addington Marsh, most of the agricultural land is being actively farmed. While dairies and other forage-based operations are still important within Pitt Meadows, there has been an ongoing conversion to blueberry and cranberry production over the past years. Nursery and greenhouse production are also significant in the community.

Pitt Meadows has retained a majority of its agricultural area in larger parcels. This has provided increased options for farm businesses and an average farm size larger than that in Metro Vancouver as a whole. The value of planning to support the long-term viability of agriculture is reflected in the Pitt Meadows Agricultural Plan. Pitt Meadows has also had an Agricultural Advisory Committee since 2000 to assist Council by providing advice on local matters affecting agriculture.

General Community Information

The City of Pitt Meadows is located 35 km east of Vancouver in southwestern British Columbia. Pitt Meadows is situated on a lowland flood plain and is largely characterized by flat terrain and fertile soils. The City is bordered by Maple Ridge to the east, the Fraser River to the south, and the Pitt River to the west. Easily accessible communities include Surrey and Langley to the south, Coquitlam and Port Coquitlam to the west, and Maple Ridge to the east. Pitt Meadows is part of Greater Vancouver Regional District and has a total area including water of 8,825 hectares¹.

Figure 1. General location map



¹ Government of British Columbia; Ministry of Community, Sport & Cultural Development, Local Government Statistics
http://www.cscd.gov.bc.ca/lgd/infra/library/regional_stats11_summary.pdf

AGRICULTURAL LAND RESERVE

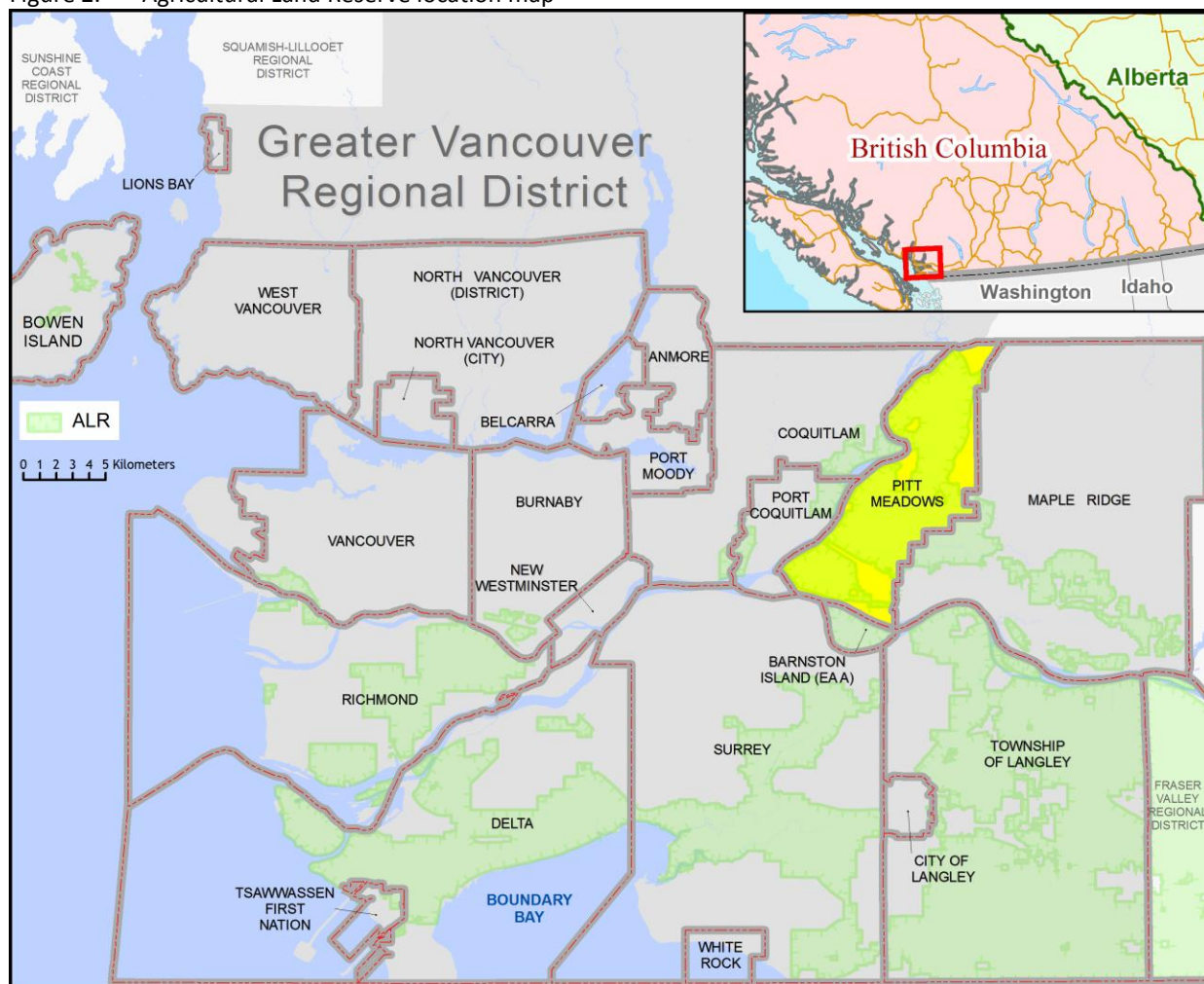
The Agricultural Land Reserve (ALR) is a provincial land use zone that was designated in 1973 in which agriculture is recognized as the priority use. Within the ALR, farming is encouraged and non-agricultural uses are controlled.

There are 60,554 hectares² of ALR land within the Greater Vancouver Regional District (shown in Figure 2); 6,868 hectares³ or over 11% is within Pitt Meadows.

The land area of Pitt Meadows is 7,904 hectares⁴. With 6,868 hectares³ in the ALR, 87% of the total land area of Pitt Meadows is in the ALR. This area includes:

- 6,384 hectares in surveyed parcels
- 484 hectares outside surveyed parcels
 - 295 hectares of designated rights-of-way
 - 188 hectares of water and foreshore
 - 1 hectare of parcels less than 100 square meters

Figure 2. Agricultural Land Reserve location map



² Provincial Agricultural Land Commission (ALC) Annual Report 2009/10 & 2010/11 Pg 39. http://www.alc.gov.bc.ca/publications/Annual_Report_2009-10_and_2010-11.pdf.

³ Agricultural Land Commission, ALR mapping, Land and Resource Data Warehouse, 2010-01-31 (area calculated in GIS).

⁴ Calculated in GIS.

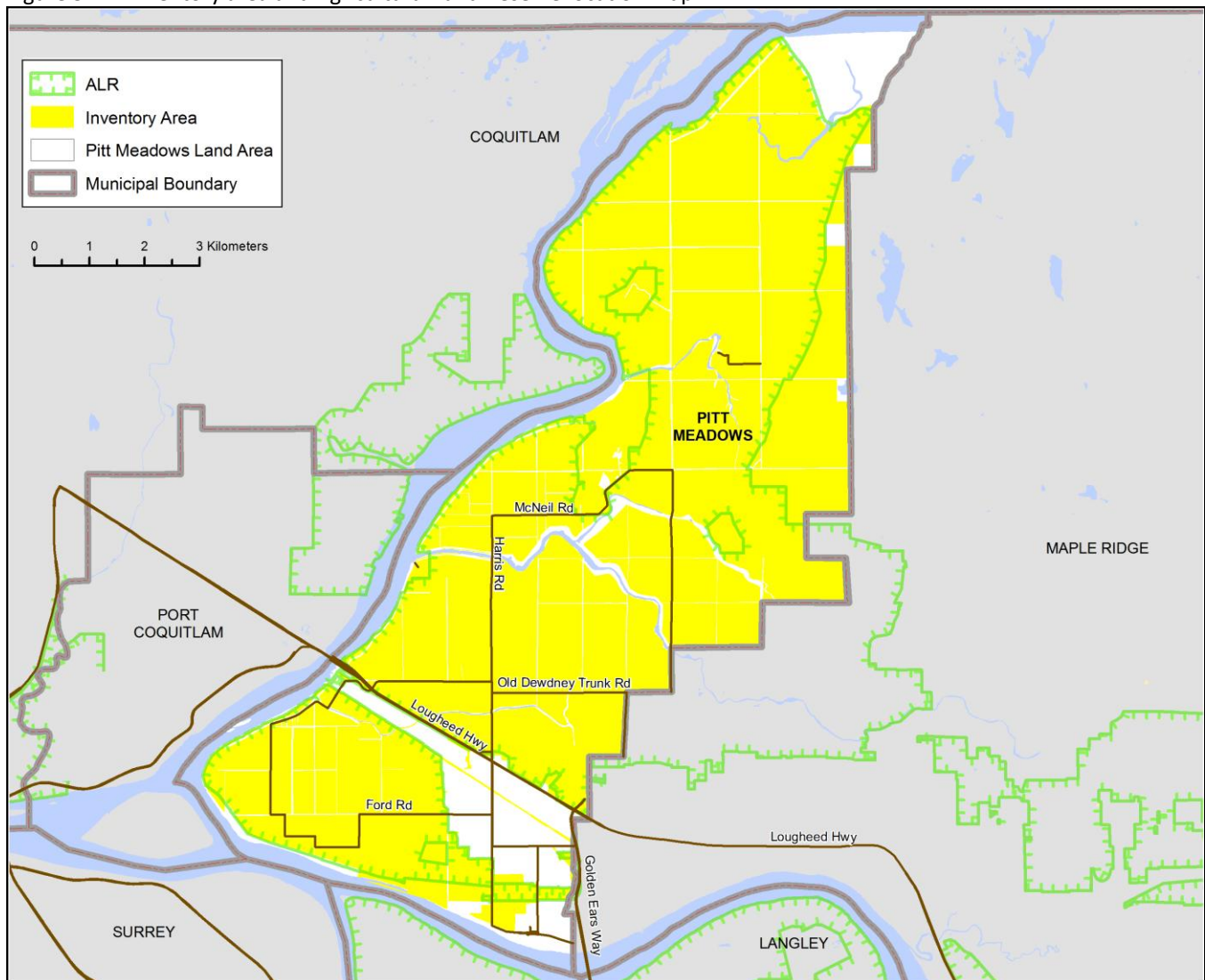
INVENTORY AREA

The total inventory area encompasses 821 parcels with a combined area of 7,356 hectares, or nearly 93% of the land area in Pitt Meadows. Included are all parcels:

- completely or partially within the Agricultural Land Reserve
- within Metro Vancouver's Regional Growth Strategy "Agriculture" designation
- within Metro Vancouver's Regional Growth Strategy "Rural" designation & greater than 1 acre⁵
- classified by BC Assessment as having "Farm" status for property tax assessment

The amount of ALR land included in the inventory area is 6,384 hectares located on 764 parcels. This area is 93% of the ALR within Pitt Meadows. The remaining 7% of the ALR was excluded from the inventory as it is in parcels less than 100 square metres, or outside surveyed land parcels in designated rights-of-way or water and foreshore.

Figure 3. Inventory area and Agricultural Land Reserve location map



⁵ One acre is approximately 0.404 hectares.

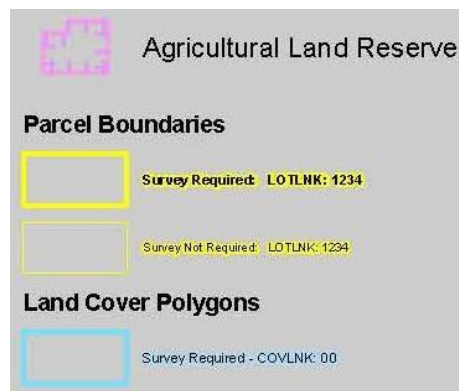
Agricultural Land Use Inventory

INVENTORY METHODOLOGY

AgFocus is an Agricultural Land Use Inventory System developed by BC Ministry of Agriculture's Strengthening Farming Program. AgFocus employs a "windshield" survey method designed to capture a snapshot in time of land use and land cover on legal parcels. For more information on AgFocus, please refer to these documents available from the Strengthening Farming Program:

- AgFocus – A Surveyor's Guide to Conducting an Agricultural Land Use Inventory
- AgFocus – Field Guide to Conducting an Agricultural Land Use Inventory
- AgFocus – A GIS Analyst's Guide to Agricultural Land Use Inventory Data

The Pitt Meadows land use inventory was conducted in the summer of 2011 by a BC Ministry of Agriculture agrologist assisted by a GIS technician and a driver. The survey crew visited each property and observed land use, land cover, and agriculture activity from the road. Where visibility was limited, data was interpreted from aerial photography in combination with local knowledge. The technician entered the survey data into a database on a laptop computer.



Field survey maps provided the basis for the survey and included:

- The legal parcel boundaries (cadastre)⁶
- Unique identifier for each legal parcel
- The preliminary land cover polygon boundaries (digitized prior to field survey using aerial photography)
- Unique identifier for each preliminary land cover polygon
- The boundary of the Agricultural Land Reserve (ALR)
- Base features such as streets, street names, watercourses and contours
- Aerial photography



⁶ Cadastre mapping (2010) was provided by the City of Pitt Meadows through the Integrated Cadastral Information Society and compiled by Metro Vancouver Regional District staff.

DESCRIPTION OF THE DATA

For each property in the study area, data was collected on general land use and land cover. For properties with agriculture present, data was collected on agricultural practices, irrigation, crop production methods, livestock, agricultural support (storage, compost, waste), and activities which add value to raw agricultural products.

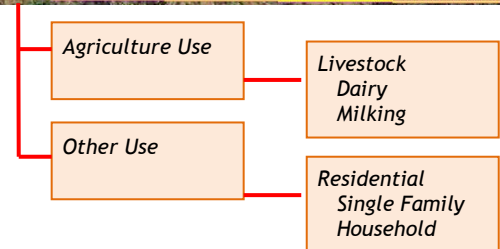
Once acquired through the survey, the data was brought into a Geographic Information System (GIS) to facilitate analysis and mapping. Digital data, in the form of a tabular database and GIS spatial layers (for maps), may be available with certain restrictions through a terms of use agreement.

General land use:

Up to two general land uses (e.g. residential, commercial) were recorded for each property based on an assessment of overall economic importance, the property's tax status, and/or the extent of the land use. The survey for general land use focuses solely on human use and considers:

- The actual human use of land and related structures and modifications to the landscape
- Use-related land cover (where land cover implies a use or is important to interpreting patterns of use)
- Declared interests in the land (which may limit use) such as parks

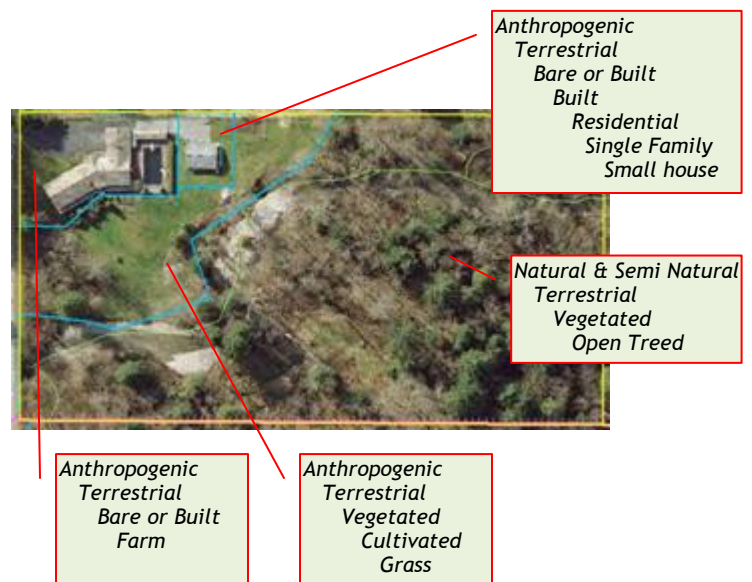
In addition, the availability of non-farm use properties for future farming was assessed based on the amount of potential land for farming on the property and the compatibility of existing uses with future farming activities.



Land cover:

Land cover refers to the biophysical features of the land (e.g. crops, buildings, forested areas, woodlots, streams). Land cover was surveyed by separating the parcel into homogeneous components and assigning each a description. Prior to field survey, polygons were delineated in the office using orthophotography. Further delineation occurred during the field survey until one of the following was achieved:

- Minimum polygon size (500 sq m ~5400 sq ft) or minimum polygon width (10 m ~33 ft)
- Polygon is homogeneous in physical cover and homogeneous in irrigation method
- Maximum level of detail required was reached



In most cases, more than one land cover was recorded for each parcel surveyed.

Agricultural practices: Surveyors recorded agricultural practices associated with crops or livestock activities. For example, if a forage crop was being harvested for hay, it was recorded. Irrigation was also recorded, including the type of system used.

Agricultural crop production: Crop production and crop protection methods observed on the parcel were recorded such as wildlife scare devices, temperature or light control, or organic production. Organic production is not always visible and may have been recorded based on local knowledge or farmer interviews.

Livestock: Livestock operations and confinement methods along with the scale of the activity were estimated and recorded. Livestock not visible at the time of survey may have been inferred based on grazed pastures, manure storage, size of barn and other evidence.

Agricultural support: Ancillary agricultural activities, such as storage, compost or waste, supporting the production of a raw commodity on a farm unit were recorded.

Agricultural value added: Activities that add value to a raw commodity where at least 50% of the raw commodity is produced on the farm unit were recorded. This value-added activity included processing, direct sales and agri-tourism activities.

PRESENTATION OF THE DATA

The data is presented in the form of summarized tables and charts. Absolute data values are preserved throughout the summarization process to maintain precision. In the final formatting of the summarized tables and charts, data values are rounded to the nearest whole number. As a result, data presented in the summarized tables and charts may not appear to add up correctly.

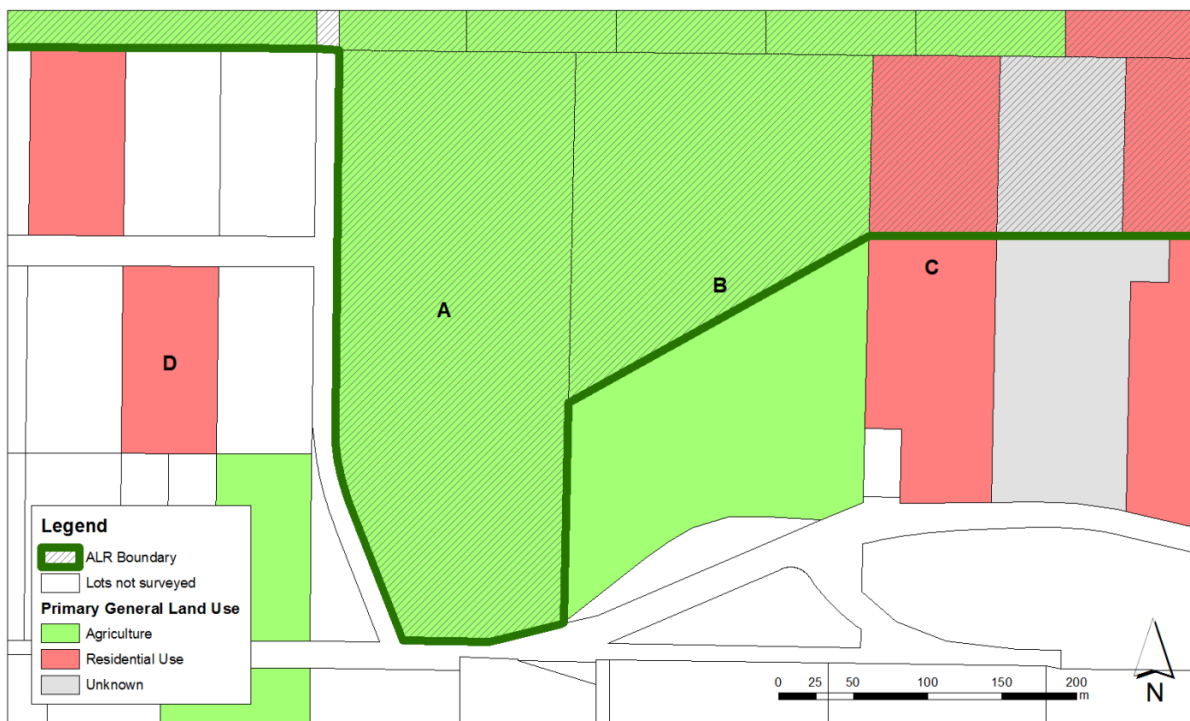
DETERMINATION OF PARCELS WITHIN THE ALR

Since much of the following analysis is parcel based, it is important to note that the ALR boundaries are not always coincident with parcel boundaries. As a result, many parcels have only a portion of their area in the ALR.

Figure 4 illustrates the frequent misalignment between parcel boundaries and the ALR boundary. Given that the dark green line represents the ALR boundary, Lot A is completely in the ALR and Lots B and C have a portion of their area in the ALR. Lot D is completely outside the ALR.

Many of the results presented in this report include 3 separate totals: the total parcel area, the portion of the parcel inside the ALR, and the portion of the parcel outside the ALR.

Figure 4. Parcel inclusion in the ALR



1. Land Cover and Farmed Area

Land cover describes the biophysical material at the surface of the earth and is distinct from land use which describes how people utilize the land.

Land use is surveyed by assigning the parcel up to two land uses. Some examples of land use are residential, commercial, and industrial. Refer to Section 2 of this report for more information on land use.

Land cover is surveyed by separating the parcel into homogeneous components and assigning each a description such as landscape lawn, natural open treed, anthropogenic wetland, blueberries, road, or small single family house. Most surveyed parcels have numerous different land cover types with each describing a different area of the parcel. Land cover more closely approximates the actual area of land in agricultural production or “Farmed” than land use.

Four land cover types are considered “Farmed”:

- Cultivated field crops: vegetation under cultivation for harvest or pasture including land temporarily set aside from farming and perennial crops that were not harvested or grazed in the current growing season
- Farm infrastructure: built structures associated with farming such as barns, stables, corrals, riding rings, and their associated yards
- Greenhouses: permanent enclosed glass or poly structures with or without climate control facilities for growing plants and vegetation under controlled environments
- Crop barns: permanent enclosed structures with non-translucent walls for growing crops such as mushrooms or bean sprouts

Forage and pasture field crops which have not been cut or grazed during the current growing season (unused), unmaintained field crops, and unmaintained greenhouses are considered “Farmed” land covers but are considered inactive.

Natural pasture and rangeland are fenced areas with uncultivated (not sown) natural or semi-natural grasses, herbs or shrubs used for grazing domestic livestock. These areas are considered “Grazed” and not “Farmed” although usually these areas are extensions of more intensive farming areas.

Land cover types which may support farming, such as farm residences, vegetative buffers and farm road access, are not considered “Farmed”.

Table 1. Land cover and farmed area

Land cover*		ALR		Outside ALR (ha)	Total area (ha)	% of inventory area
		In ALR (ha)	% of ALR			
Actively farmed	Cultivated field crops	3,543	52%	29	3,572	49%
	Farm infrastructure	86	1%	<1	87	1%
	Greenhouses	36	< 1%	-	36	< 1%
Inactively farmed	Unmaintained field crops	4	< 1%	-	4	< 1%
	Unmaintained greenhouses	<1	< 1%	-	<1	< 1%
FARMED SUBTOTAL		3,669	53%	30	3,699	50%
Anthropogenic (not farmed)	Managed vegetation	842	12%	77	919	12%
	Non Built or Bare	80	1%	85	165	2%
	Residential footprint	43	< 1%	8	52	< 1%
	Settlement	23	< 1%	6	29	< 1%
	Transportation	56	< 1%	34	90	1%
	Utilities	165	2%	23	188	3%
	Built up - Other	5	< 1%	-	5	< 1%
	Waterbodies	65	< 1%	2	66	< 1%
SUBTOTAL		1,280	19%	235	1,515	21%
Natural and Semi-natural	Vegetated	177	3%	674	850	12%
	Wetlands	1,154	17%	19	1,172	16%
	Waterbodies	105	2%	14	119	2%
SUBTOTAL		1,435	21%	707	2,142	29%
TOTAL		6,384	93%	972	7,356	100%
Not surveyed	Rights-of-way	295	4%			
	Water & foreshore	188	3%			
	Parcels < 100 m ²	1	< 1%			
SUBTOTAL		484	7%			
TOTAL		6,868	100%			

* See "Land Cover" in the Definitions section for terms used in this table.

Table 1 shows the extent of different land cover types across the entire inventory area.

In Pitt Meadows, 3,699 hectares of land is in "Farmed" land cover although 4 of those hectares are "Inactively farmed" in unmaintained field crops and unmaintained greenhouses.

Refer to Maps B1 and B2 in Appendix B for more information.

Figure 5. Land cover and farmed area in the ALR

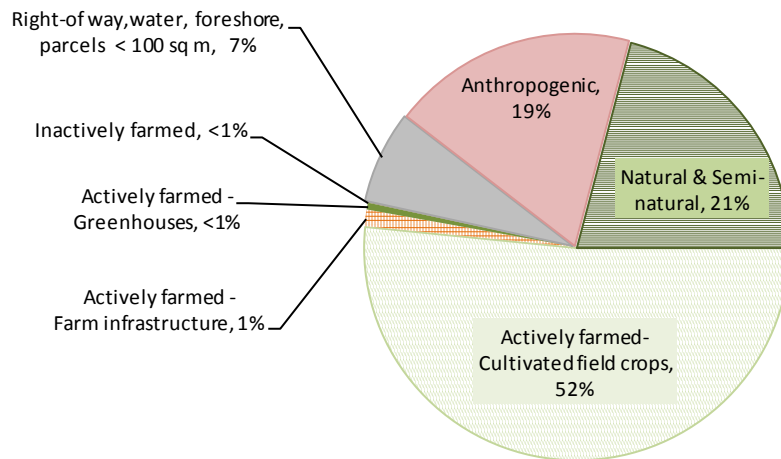


Figure 5 shows the proportions of the different land cover types across the ALR in Pitt Meadows

Of the ALR land in Pitt Meadows, 52% is "Actively Farmed" while <1% is in unmaintained field crops and unmaintained greenhouses ("Inactively Farmed").

Land used in support of farming such as farm residences, vegetative buffers or roadways is not included as "Farmed".

2. Land Use and Farm Use

Land use focuses solely on human use and describes the economic function or type of establishment using the parcel. A parcel can have a variety of activities on the land, yet serve a single use. For example, two parcels are said to be “Used for farming”, even if one is a dairy farm and the other is in blueberries. If one parcel is a hotel and the other is a retail store, they are both considered as “Commercial” land use.

Up to two general land uses (e.g. residential, commercial) are recorded for each parcel with each considered an equally important function of the parcel. Evaluation of land uses are based on overall economic importance, the property’s tax status, and/or the extent of the land use.

Parcels where the majority of the parcel area is utilized for farming or parcels which exhibit significant evidence of intensive farming are considered “Used for farming”. For a complete definition of “Used for farming”, refer to the Definitions section of this report.

Many parcels “Used for farming” or “Used for grazing” are also used for other purposes such as “Residential” or “Industrial”. This report does not attempt to determine which use is primary.

Table 2. Land use and farming use by parcel

Parcel land use*		ALR		Outside ALR (ha)	Total area (ha)	% of inventory area	Number of parcels	% of parcels	Average parcel size (ha)
		In ALR (ha)	% of ALR area						
Used only for farming - no other use		1,419	21 %	27	1,446	20 %	133	16 %	11
Used for farming - Mixed use	Residential	2,281	33 %	25	2,306	31 %	289	35 %	8
	Transportation	164	2 %	< 1	164	2 %	2	<1 %	82
	Utilities	128	2 %	17	145	2 %	1	<1 %	145
	Water management	103	2 %	< 1	103	1 %	2	<1 %	52
	Commercial & service	21	<1 %	-	21	<1 %	1	<1 %	21
	Land in transition	17	<1 %	< 1	17	<1 %	2	<1 %	8
	Industrial	15	<1 %	-	15	<1 %	1	<1 %	15
USED FOR FARMING SUBTOTAL		4,148	60 %	69	4,217	57 %	431	52 %	
Not used for farming	Protected area / park / reserve	1,183	17 %	49	1,231	17 %	24	3 %	51
	Recreation & leisure - golf	369	5 %	90	459	6 %	12	1 %	38
	Residential	287	4 %	51	338	5 %	182	22 %	2
	No apparent use	113	2 %	264	377	5 %	58	7 %	6
	Recreation & leisure	72	1 %	28	101	1 %	24	3 %	4
	Water management	59	<1 %	5	65	<1 %	41	5 %	2
	Land in transition	42	<1 %	7	49	<1 %	10	1 %	5
	Transportation	37	<1 %	83	120	2 %	19	2 %	6
	Dumps & deposits	35	<1 %	< 1	35	<1 %	1	<1 %	35
	Commercial & service	18	<1 %	5	23	<1 %	6	<1 %	4
	Industrial	12	<1 %	30	41	<1 %	4	<1 %	10
	Utilities	6	<1 %	203	208	3 %	7	<1 %	30
	Institutional & community	2	<1 %	-	2	<1 %	1	<1 %	2
	Gravel extraction	< 1	<1 %	89	89	1 %	1	<1 %	89
NOT USED FOR FARMING SUBTOTAL		2,236	33 %	903	3,139	43 %	390	48 %	
TOTAL		6,384	93 %	972	7,356	100 %	821	100 %	
Not surveyed	Rights-of-way	295	4 %						
	Water & foreshore	188	3 %						
	Parcels < 100 m ²	1	<1 %						
SUBTOTAL		484	7 %						
TOTAL		6,868	100 %						

* See "Land Use" in the Definitions section for terms in this table.

Table 2 shows that 4,148 hectares or 60% of the ALR in Pitt Meadows is on parcels "Used for farming".

Most "Used for Farming" parcels are also used for other purposes with only 133 parcels or 21% of the ALR area exclusively "Used for farming."

One parcel associated with Piroche Plants Inc. is "Used for farming" and "Commercial & service".

Refer to Maps B3 and B4 in Appendix B for more information.

Table 3. Parcel use and land cover in the ALR

Parcel Land Use		Land Cover Category						Total	
		Farmed *		Anthropogenic (not farmed)		Natural & Semi - natural			
		In ALR (ha)	% of ALR area	In ALR (ha)	% of ALR area	In ALR (ha)	% of ALR area	In ALR (ha)	% of ALR area
Used only for farming - no other use		1,317	19 %	75	1 %	27	<1 %	1,419	21 %
Used for farming - mixed use	Residential	1,998	29 %	232	3 %	51	<1 %	2,281	33 %
	Transportation	80	1 %	84	1 %	-	-	164	2 %
	Utilities	124	2 %	4	<1 %	-	-	128	2 %
	Water management	74	1 %	1	<1 %	27	<1 %	103	2 %
	Commercial & service	16	<1 %	< 1	<1 %	4	<1 %	21	<1 %
	Land in transition	12	<1 %	4	<1 %	< 1	<1 %	17	<1 %
Industrial		15	<1 %	< 1	<1 %	-	-	15	<1 %
SUBTOTAL		3,636	53 %	403	6 %	109	2 %	4,148	60 %
Not used for farming		33	<1 %	877	13 %	1,326	19 %	2,236	33 %
SUBTOTAL		3,669	53 %	1,280	19	1,435	21 %	6,384	93 %
Not surveyed	Rights-of-way							295	4 %
	Water & foreshore							188	3 %
	Parcels < 100 m²							1	<1 %
	SUBTOTAL							484	7 %
TOTAL ALR								6,868	100 %

* Some parcels that are "Not used for farming" have "Farmed" land cover, however, the extent or intensity is insufficient for the parcel to be considered "Used for farming". For a complete definition of "Used for farming" refer to the Definitions section of this report.

Table 3 combines land use and land cover on ALR land in Pitt Meadows. For example, parcels with the mixed use "Used for farming" and "Residential" have a total of 1,998 hectares in "Farmed" land cover, 232 hectares in "Anthropogenic" (not farmed) land cover, and 51 hectares in "Natural & Semi-natural" land cover.

Although 4,148 hectares or 60% of Pitt Meadow's ALR is on parcels "Used for farming" (refer to Table 2), only 3,669 hectares or 53% of the ALR is actually in "Farmed" land cover as many "Used for farming" parcels are also used for other purposes. In fact, the majority of the "Farmed" land cover in the ALR (29%) is on parcels also used for "Residential" purposes.

3. Availability of Land for Farming

The demand for locally grown agricultural products is anticipated to grow as the population grows ⁷. This demand along with a number of other factors, such as commodity types and farm management requirements (nutrient management, bio-security), will influence agricultural land needs in the future. Lands suitable for agricultural development may not be available and agricultural sectors that require large land bases, such as dairy or berry, may find it difficult to access sufficient land. Future agriculture growth may come from new commodity types and intensifying land use rather than finding new land for development.

The analysis of the availability of land for farming examines how much land is available for farming, has the potential to be farmed, and the characteristics of this land.

Properties currently “Used for farming” or with some agriculture present are considered available for farming regardless of any existing non-farm use. In addition, properties with an existing use compatible with agriculture, such as residential, are considered available for farming since the existing land use can be maintained.

Properties not currently farmed with an established non-farm use that is incompatible with agriculture are considered unavailable for farming. These properties tend to have very high land values making it unrealistic for a farmer to acquire and convert this land to farmland.

In Pitt Meadows properties in the ALR and “Used for farming” have an average assessed value of \$23,555 per hectare, while properties in the ALR but unavailable for farming have an average assessed value of \$559,406 per hectare.

(Calculated using 2011 BC Assessment database – total property value)

Land is further assessed for its farming potential based on physical and environmental characteristics. Only areas in natural and semi-natural vegetation, areas in managed vegetation (managed for landscaping, dust or soil control), and non-built or bare areas are considered to have potential for farming. Areas covered with built structures, steep slopes or rocky soils and areas with operational constraints such as a very small size, are considered not to have potential for farming. For this analysis, it is assumed that removing built structures and fill piles, filling in water bodies or remediating slopes to create land with potential for farming would likely not occur.

⁷ In BC, the regulated marketing system requires that over 95% of our milk, eggs, chicken and turkey be produced in BC. The need to produce these products increases in direct proportion to the population growth.

Table 4. Status of the land base with respect to farming

Land status		ALR		Outside ALR (ha)	Total area (ha)	% inventory area
		In ALR (ha)	% ALR Area			
Actively farmed	Cultivated field crops	3,543	52 %	29	3,572	49 %
	Farm infrastructure	86	1 %	< 1	87	1 %
	Greenhouses	36	<1 %	-	36	<1 %
ACTIVELY FARMED		3,664	53 %	30	3,694	50 %
Anthropogenic areas supporting farming	Built up - Other	65	<1 %	< 1	65	<1 %
	Residential footprint	29	<1 %	< 1	29	<1 %
	Artificial Waterbodies	21	<1 %	-	21	<1 %
	Transportation	12	<1 %	< 1	13	<1 %
SUPPORTING FARMING		127	2 %	1	129	2 %
Unavailable for farming due to existing land use	Protected area / park / reserve	1,176	17 %	48	1,224	17 %
	Recreation & leisure - golf	369	5 %	90	459	6 %
	Water management	54	<1 %	5	59	<1 %
	Recreation & leisure	34	<1 %	19	53	<1 %
	Transportation	28	<1 %	48	76	1 %
	Residential	11	<1 %	13	24	<1 %
	Land in transition	11	<1 %	7	18	<1 %
	No apparent use	5	<1 %	< 1	5	<1 %
	Institutional & community	2	<1 %	-	2	<1 %
	Commercial & service	2	<1 %	-	2	<1 %
	Industrial	2	<1 %	30	31	<1 %
	Utilities	1	<1 %	< 1	1	<1 %
	Gravel extraction	< 1	<1 %	89	89	1 %
Unavailable for farming due to existing land cover	Wetlands	54	<1 %	2	57	<1 %
	Waterbodies	54	<1 %	5	59	<1 %
	Transportation	23	<1 %	5	28	<1 %
	Utilities	20	<1 %	20	40	<1 %
	Built up - Other	16	<1 %	3	19	<1 %
	Residential footprint	11	<1 %	1	12	<1 %
UNAVAILABLE FOR FARMING		1,872	27 %	386	2,258	31 %
Site limitations	Operational	61	<1 %	6	67	<1 %
	Topography &/or soils	51	<1 %	503	554	8 %
	Flooding	25	<1 %	< 1	25	<1 %
LIMITED POTENTIAL FOR FARMING		137	2 %	510	647	9 %
Available & with potential for farming	Anthropogenic - Managed vegetation	467	7 %	36	504	7 %
	Anthropogenic - Non Built or Bare	66	<1 %	< 1	67	<1 %
	Natural & Semi-natural - Vegetation	44	<1 %	8	52	<1 %
	Unmaintained field crops	4	<1 %	-	4	<1 %
	Unmaintained greenhouses	< 1	<1 %	-	< 1	<1 %
AVAILABLE & WITH POTENTIAL FOR FARMING		583	9 %	45	628	9 %
TOTAL		6,384	93 %	972	7,356	100 %
Not surveyed	Rights-of-way	295	4 %			
	Water & foreshore	188	3 %			
	Parcel areas < 100 sq m	1	<1 %			
SUBTOTAL		484	7 %			
TOTAL		6,868	100 %			

Table 4 shows that 3,664 hectares or 53% of the ALR is actively used for farming; 2% is used in support of farming (farm residences, roads, etc); 27% is unavailable for farming; 2% has limited potential for farming; and 9% is available and has potential for farming.

Refer to Map B5 in Appendix B for more information.

Figure 6. Availability and potential of ALR lands for farming

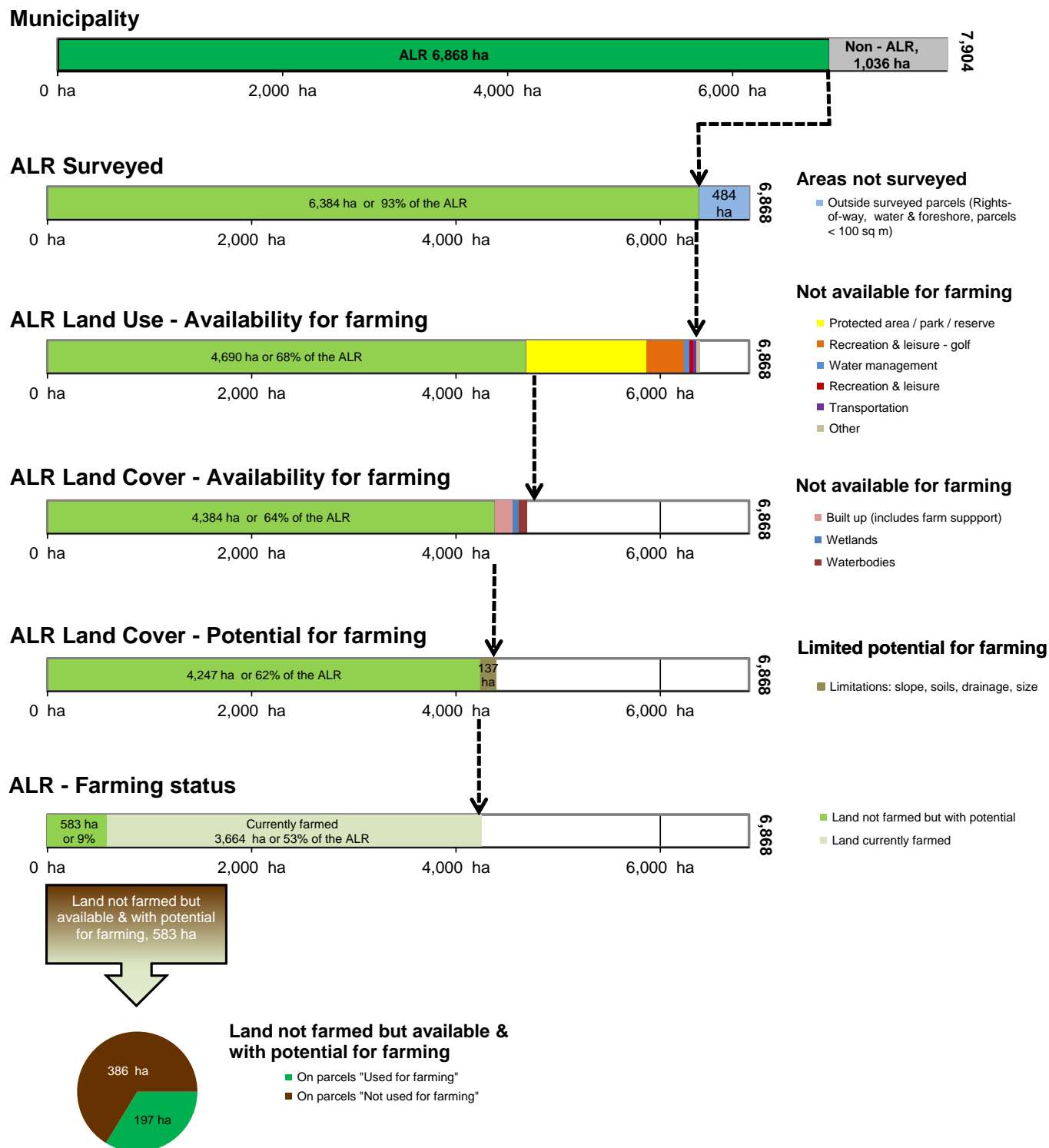


Figure 6 demonstrates that 4,247 hectares, or 62%, of Pitt Meadows's ALR is currently available for farming once road rights-of-way, protected areas, parks, golf courses, and other land uses, land covers, and site limitations incompatible with agriculture are taken into account. Of those 4,247 hectares, 3,664 hectares are actively farmed and 583 hectares are available and have potential for farming.

Refer to Map B6 in Appendix B for more information.

CHARACTERISTICS OF NOT FARMED BUT AVAILABLE LANDS

The potential for future agriculture expansion is affected by the size of the area available. Small areas can effectively be used for some intensive agricultural operations such as mushrooms, floriculture, greenhouses, poultry, and container nurseries. Small areas are also suitable for start-up farmers, horse enthusiasts, farmers testing new technologies, or established farmers wanting to expand through leases. Despite these opportunities, small areas provide fewer farming choices than large lots. They specifically exclude dairy, hogs, and vegetable greenhouses. For example, a dairy cow produces sufficient manure per year to fertilize 0.4 hectares of forage production which means a dairy operation consisting of 50 cows would require access to 20 hectares of land. Without sufficient land area to utilize the manure as a fertilizer, the dairy operation would have to find other, more expensive, methods to handle the manure produced on the farm.

On Parcels “Used for Farming”

Table 5. Land use and cover on parcels “Used for farming” with land available for farming but not farmed

Mixed land use on “Used for farming” parcels	Number of parcels	Land not farmed but with potential for farming			Land currently farmed			% potential increase to total ALR farmed area
		In ALR (ha)	Outside ALR (ha)	Total area (ha)	In ALR (ha)	Outside ALR (ha)	Total area (ha)	
Residential	213	149	1	150	1,380	18	1,398	4 %
Used for farming only	30	22	13	35	293	< 1	293	<1 %
Transportation	2	22	-	22	80	-	80	<1 %
Land in transition	1	4	-	4	4	< 1	4	<1 %
TOTAL	246	197	14	211	1,757	18	1,776	5 %

Table 5 demonstrates that the largest potential increase in farmed land on parcels that are already “Used for farming” could come from properties that currently have “Residential” use.

Figure 7. Land cover available for farming but not farmed on ALR parcels “Used for farming”

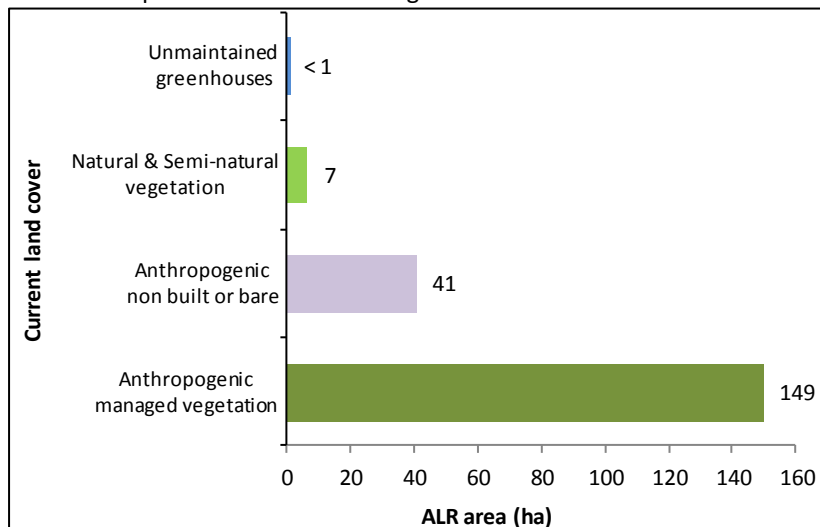


Figure 7 indicates that removing “Anthropogenic managed vegetation” would provide the greatest gains in farmed land on parcels that are already “Used for farming”.

“Anthropogenic managed vegetation” consists mainly of landscaping and lawns surrounding residential uses. Converting this to agricultural use may not be supported by the landowners.

On Parcels “Not Used for Farming”

Table 6. Land use and cover on parcels “Not used for farming” with land available for farming

Parcel Land use		Number of parcels	Land not farmed but with potential for farming			% potential increase to total ALR farmed area
			In ALR (ha)	Outside ALR (ha)	Total area (ha)	
Not used for farming	Residential	116	229	10	238	6 %
	No apparent use	12	42	7	49	1 %
	Dumps & deposits	1	34	< 1	34	<1 %
	Land in transition	3	31	-	31	<1 %
	Recreation & leisure	4	30	2	32	<1 %
	Industrial	1	8	< 1	8	<1 %
	Commercial & service	2	7	5	11	<1 %
	Utilities	1	3	-	3	<1 %
	Water management	1	3	< 1	3	<1 %
	Transportation	2	< 1	7	8	<1 %
TOTAL		143	386	31	417	11 %

Table 6 illustrates that for parcels currently “Not used for farming”, the greatest potential for increasing actively farmed land would come from parcels with “Residential” use.

Figure 8. Land cover available for farming but not farmed on ALR parcels “Not used for farming”

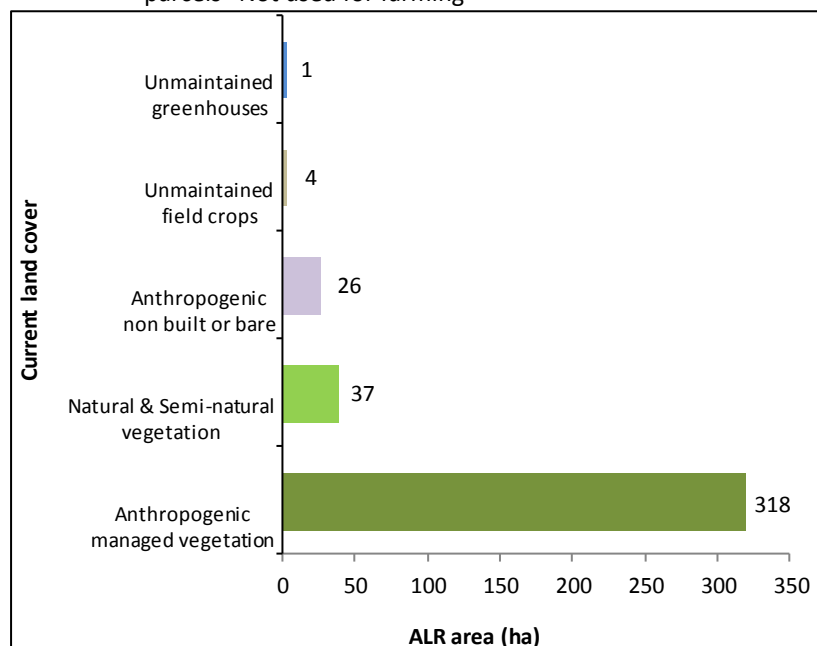


Figure 8 indicates that removing “Anthropogenic managed vegetation” would provide the greatest gains in farmed land on parcels “Not used for farming”.

Figure 9. Size of areas available for farming but not farmed on parcels “Not used for farming”

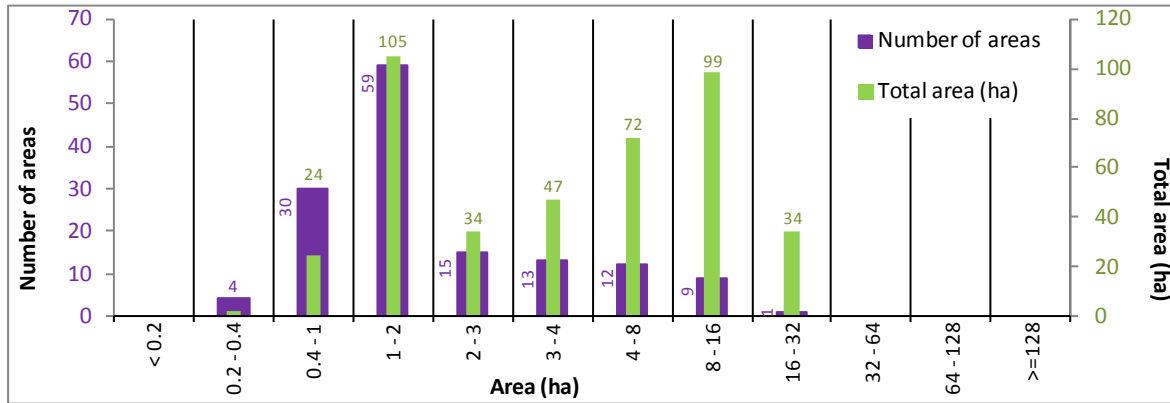


Figure 9 demonstrates that the majority of areas available for farming (93 of 143 or 65%) are less than 2 hectares in size. Fewer options are available to efficiently farm small parcels. In general, areas should be 4 hectares or more to provide the widest range of farming options.

There are 22 areas greater than 4 hectares and available for farming but not farmed in Pitt Meadows. These areas have a total of 205 hectares, or 49% of the 417 hectares available (refer to Table 6).

4. Farming Activities

CULTIVATED FIELD CROPS

Cultivated field crops are captured in a geographical information system (GIS) at the field or land cover polygon level by crop type (vegetables, forage or pasture, berries, etc.). Each crop type is then summarized to total land area and evaluated for field size characteristics.

Included with cultivated field crops is fallow farmland, inactively farmed land (i.e. forage or pasture crops which have not been harvested or grazed this season) and land temporarily set aside for wildlife or other purposes. Also included is bare cultivated land or land under preparation for planting as it is assumed these lands will be planted during the survey season. Excluded are crops grown in crop cover structures such as greenhouses or mushroom barns.

Cultivated field crops in Pitt Meadows are described by eight crop groupings:

- **Berries:** blueberries, cranberries, raspberries, strawberries
- **Forage & pasture:** grass, legumes, forage corn
- **Nursery & tree plantations:** Nursery (ornamentals & shrubs, cedar hedging, forestry stock, mixed), Christmas trees
- **Other:** bare cultivated land (land that is tilled or plowed, but with no visible crop), fallow land (cultivated land that has not been seeded or planted for one or more growing seasons)
- **Turf**
- **Nut trees:** hazelnut/filbert
- **Floriculture**
- **Vegetables:** mixed vegetables

Table 7. Main field crop types by area

Type	ALR		Outside ALR (ha)	Total area (ha)	% of cultivated land
	In ALR (ha)	% of ALR			
Berries	2,476	36%	4	2,481	69%
Forage & pasture	790	11%	25	814	23%
Nursery & tree plantations	207	3%	< 1	207	6%
Other*	53	< 1%	-	53	1%
Turf	10	< 1%	-	10	< 1%
Nut trees	6	< 1%	-	6	< 1%
Floriculture	2	< 1%	-	2	< 1%
Vegetables	1	< 1%	-	1	< 1%
TOTAL	3,546	52%	29	3,576	100%

* Other. Includes bare cultivated land (land that is tilled or plowed, but with no visible crop), fallow land (cultivated land that has not been seeded or planted for one or more growing season), and land in crop transition.

Table 7 shows the 8 main field crop types produced on the 3,576 hectares of cultivated land in Pitt Meadows.

“Berries” are the most common type of cultivated field crop accounting for 69% of all cultivated land and 36% of Pitt Meadow’s ALR.

Forage & pasture is the second most common type of cultivated crop accounting for 23% of all cultivated land and 11% of the ALR.

Refer to Map B7 in Appendix B for more information.

Figure 10. Main field crop types by percentage

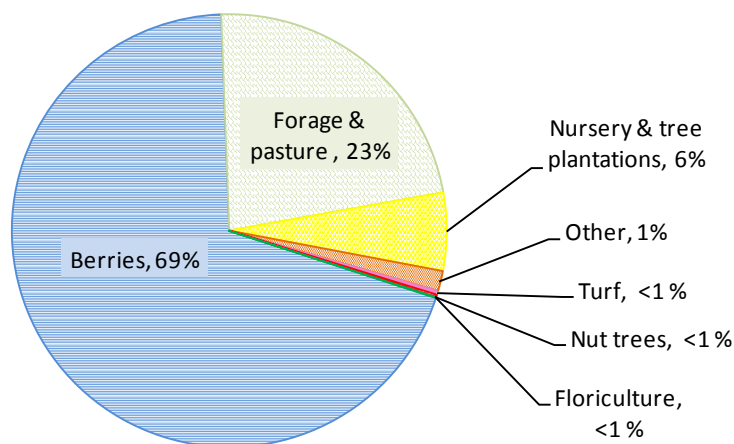


Figure 10 shows the proportion of main field crop types across Pitt Meadows' cultivated land. "Berries" combined "Forage & pasture" combined with "Nursery & tree plantations" comprise 98% of all cultivated land in Pitt Meadows.

Figure 11. All field crops by size

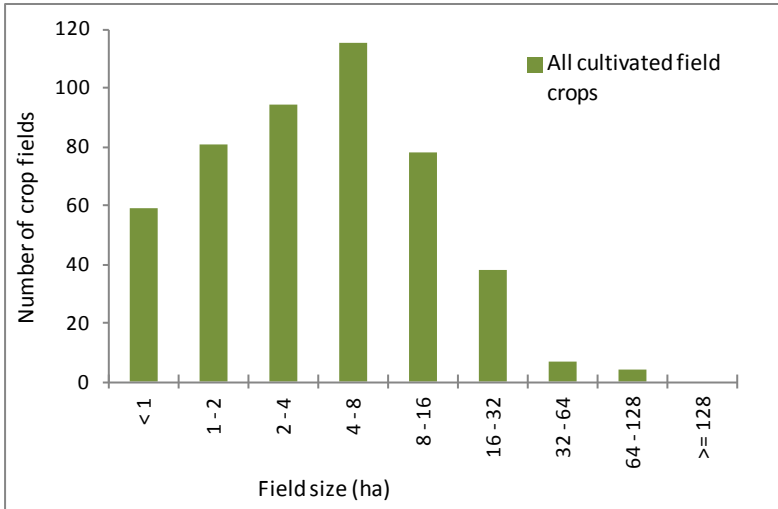


Figure 11 illustrates the number and size distribution of fields used for cultivated field crops. In Pitt Meadows, cultivated fields are most likely to be 4-8 hectares in size. There are 476 individual crop fields with an average area of 8 hectares and median area of 4 hectares. The average size of parcels where field crops occur is 10 hectares. Refer to Table A1 in Appendix A for more information.

Figure 12. Berry, forage & pasture, and nursery & tree plantation fields by size

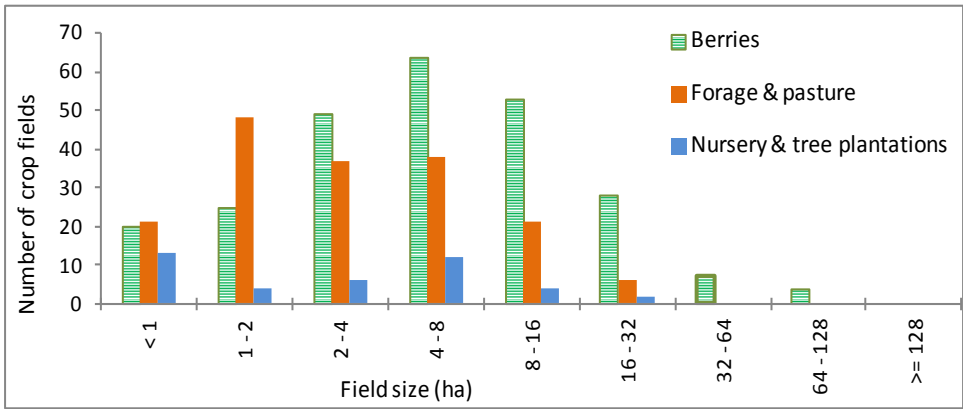


Figure 12 compares the top three main crop types by field sizes. "Berry", "Forage & pasture" and "Nursery & tree plantation" fields occur on a variety of field sizes. "Berries" are the only crop type with crop fields greater than 32 hectares. Refer to Table A1 in Appendix

Berry crops

Berry crops are primarily perennials. Perennial berry crops do not change frequently as they require several years to mature and some crop types require extensive land preparation. Strawberries are a perennial plant which is usually rotated or grown on different land each year to minimize build-up of crop-specific pest and disease problems. Since this inventory is a snapshot in time, the strawberry crops seen during the survey year may not be present in the same location the following year.

Two plant age categories are described:

- **Young:** Plants are young and have not reached peak production
- **Mature:** Plants are mature and are capable of reaching peak production

Table 8. Berry crops by area

Berry crops		ALR		Outside ALR (ha)	Total area (ha)	% of cultivated land
		In ALR (ha)	% of ALR			
Blueberries	Mature	1,316	19%	4	1,320	37%
	Young	206	3%	-	206	6%
	Subtotal	1,522	22%	4	1,526	43%
Cranberries	Young	649	9%	-	649	18%
	Mature	299	4%	< 1	299	8%
	Subtotal	948	14%	< 1	948	27%
Raspberries	Mature	4	< 1%	-	4	< 1%
	Subtotal	4	< 1%	-	4	< 1%
Strawberries	Mature	2	< 1%	-	2	< 1%
	Young	< 1	< 1%	-	< 1	< 1%
	Subtotal	2	< 1%	-	2	< 1%
TOTAL		2,476	36%	4	2,481	69%

Table 8 shows that Pitt Meadows has 2,481 hectares in berry crops. Blueberries are the most significant berry type with 1,526 hectares followed by cranberries with 948 hectares.

Refer to Map B8 in Appendix B for more information.

Figure 13. Berry fields by size

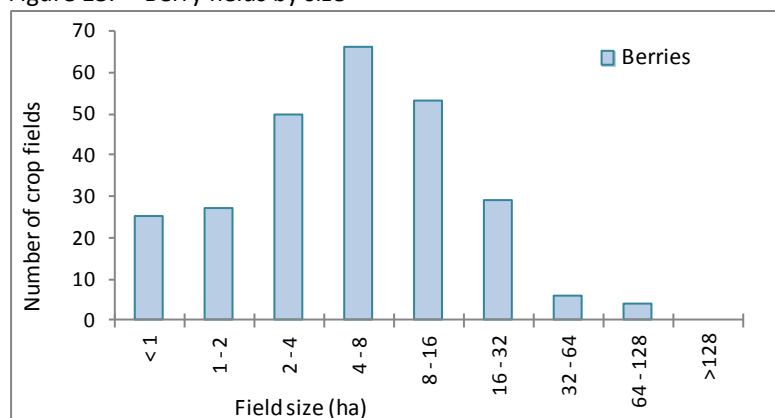


Figure 13 shows that most berry fields are 4-8 hectares in size.

In Pitt Meadows, there are 260 individual berry fields with an average area of 10 hectares and a median area of 6 hectares.

The average parcel size where berry crops occur is 12 hectares.

Refer to Table A2 in Appendix A for more information.

Figure 14. Blueberry and cranberry fields by size

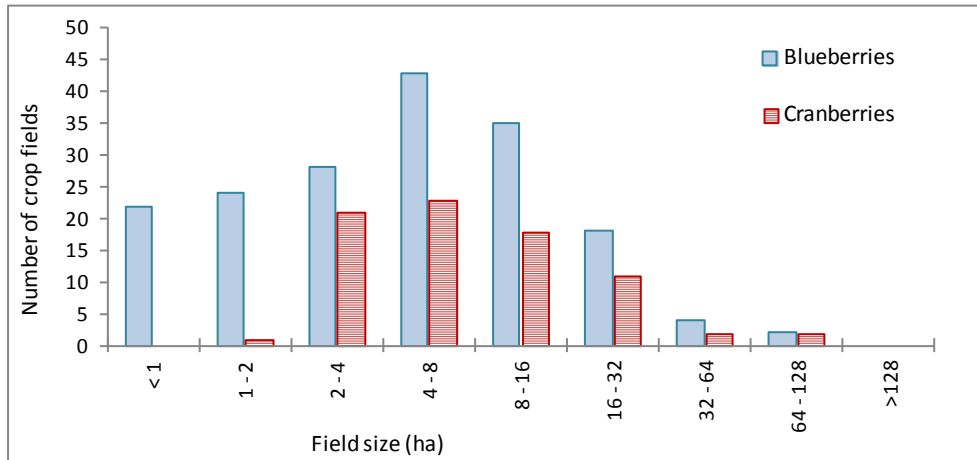


Figure 14 shows there are more blueberry than cranberry fields in Pitt Meadows.

There are 176 blueberry fields with an average crop area of 9 hectares, median area of 6 hectares, and average parcel size of 11 hectares.

In comparison, there are 78 cranberry fields with an average crop area of 12 hectares, a median area of 6 hectares and average parcel size of 15 hectares.

Refer to Table A2 in Appendix A for more information.

Forage & pasture crops

Forage is a cultivated crop that is cut and made into silage or hay for cattle feed. Three levels of forage management are described:

- **Forage (intensively managed):** Management includes weed control & fertilizer / manure applications and crop is cut 4-8 times per year. Often there is no fencing and crop growth is vigorous, even and thick.
- **Forage (managed):** Management includes weed control & fertilizer / manure applications and crop is cut several times per year. Often there is no fencing and crop growth is generally healthy and even.
- **Forage (unmanaged):** Weed management & fertilizer / manure applications are minimal. Crop is cut only once per year. Crop growth is uneven with weeds.

Pasture is a cultivated crop that is used for grazing only and is not cut. Two levels of management are described:

- **Pasture (managed):** Management includes weed control & fertilizer / manure applications. Usually fields are large to accommodate equipment. Fencing is in good condition and crop growth is vigorous with few weeds.
- **Pasture (unmanaged):** Weed management & fertilizer / manure applications are minimal. Fencing is in good condition. Crop is varied (some weeds) and growth is uneven with signs of animal dung.

Some areas are used for both forage & pasture:

- **Forage & pasture (managed):** Crop is cut 1 to 3 times per year and made into silage or haylage. Also used for grazing for 1 to 3 months per season. Fencing is in good condition and crop growth is reasonably even with few weeds. Usually associated with dairy operations.

Areas previously used for forage or pasture are considered inactively farmed:

- **Unused** refers to forage or pasture which has not been cut or grazed during the current growing season.
- **Unmaintained** refers to forage or pasture which has not been cut or grazed during the current growing season, has not been maintained for several years, and probably would not warrant harvest.

Table 9. Forage & pasture crops by area

Forage & pasture crops		ALR		Outside ALR (ha)	Total area (ha)	% of cultivated land
		In ALR (ha)	% of ALR			
Forage (managed)	Grass	574	8%	23	597	17%
Forage (managed)	Forage corn	37	< 1%	-	37	1%
Forage (unmanaged)	Grass	23	< 1%	-	23	< 1%
Forage (intensively managed)	Grass	2	< 1%	-	2	< 1%
Subtotal		637	9%	23	660	18%
Pasture (unmanaged)	Grass	127	2%	2	128	4%
Pasture (managed)	Grass	26	< 1%	< 1	26	< 1%
Pasture (unmanaged)	Legume	< 1	< 1%	-	< 1	< 1%
Subtotal		153	2%	2	155	4%
TOTAL		790	11%	25	814	23%

Table 9 shows there is significantly more forage than pasture in Pitt Meadows. Grass is the main forage & pasture crop type. Refer to Map B9 in Appendix B for more information.

Figure 15. Forage & pasture fields by size

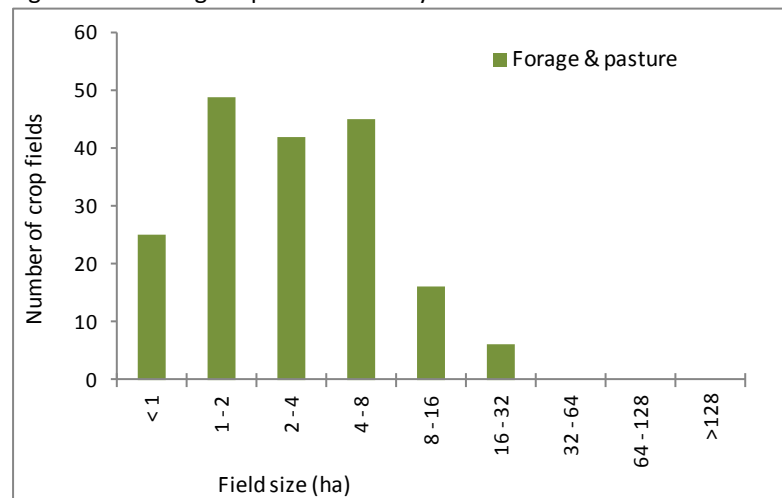


Figure 15 shows that “Forage & pasture” fields occur on a variety of field sizes, including fields less than 1 hectare.

In Pitt Meadows, there are 183 individual “Forage & pasture” fields with an average area of 4 hectares and median area of 3 hectares.

The average parcel size where “Forage & pasture” occurs is 7 hectares.

Refer to Table A3 in Appendix A for more information.

Figure 16. Forage & pasture fields by size and type

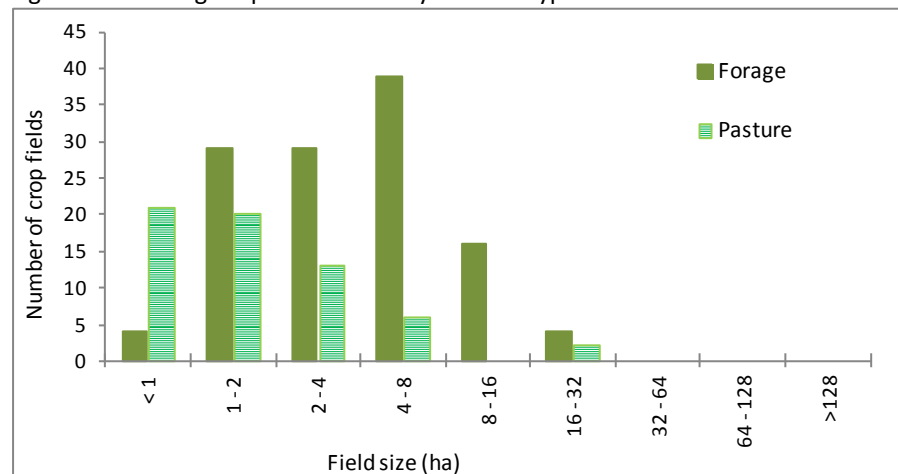


Figure 16 illustrates that there are more forage than pasture fields in Pitt Meadows.

There are 121 forage fields with an average area of 5 hectares, median area of 4 hectares, and an average parcel size of 8 hectares.

By comparison, there are 62 pasture fields with an average area of 2 hectares, median area of 2 hectares, and an average parcel size of 5 hectares.

Forage fields are generally larger than pastures mainly due to harvesting equipment requirements and fencing costs.

Refer to Table A3 in Appendix A for more information.

Nursery & tree plantations

Table 10. Nursery & tree plantations by area

Nursery & tree plantations		ALR		Outside ALR (ha)	Total area (ha)	% of cultivated land
		In ALR (ha)	% of ALR			
Nursery	Ornamentals and shrubs	196	3%	< 1	196	5%
	Cedar hedging	4	< 1%	-	4	< 1%
	Forestry stock	3	< 1%	-	3	< 1%
	Nursery - mixed	< 1	< 1%	-	< 1	< 1%
Nursery total		202	3	< 1	202	6
Tree plantation	Tree plantation - unmaintained	4	< 1%	-	4	< 1%
	Christmas trees	< 1	< 1%	-	< 1	< 1%
Tree plantation total		4	< 1	-	4	< 1
TOTAL		207	3	< 1	207	6

Table 10 shows that Pitt Meadows has a total of 207 hectares in nursery & tree plantations.

Ornamentals and shrubs comprise the majority of all nursery & tree plantation activities.

Refer to Map B10 in Appendix B for more information.

Figure 17. Nursery & tree plantations by size

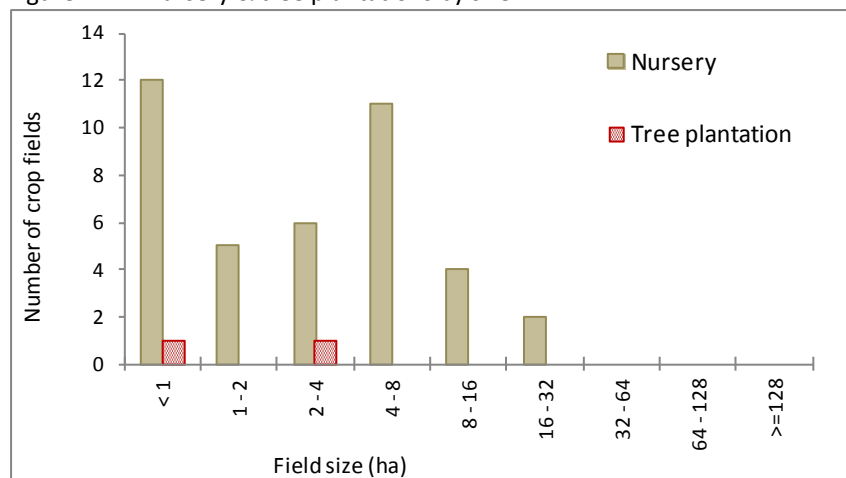


Figure 17 shows that nursery & tree plantations occur on a range of field sizes.

There are 42 individual nursery & tree plantations with an average area of 5 hectares and a median area of 3 hectares.

The average parcel size where nursery & tree plantations occur is 11 hectares.

Refer to Table A4 in Appendix A for more information.

Individual Crops

Table 11. Individual crop types by area

Cultivated field crop	ALR		Outside ALR (ha)	Total area (ha)	% of cultivated land
	In ALR (ha)	% of ALR			
Blueberries	1,522	22%	4	1,526	43%
Cranberries	948	14%	< 1	948	27%
Forage (managed)	611	9%	23	634	18%
Ornamentals and shrubs	196	3%	< 1	196	5%
Pasture (unmanaged)	127	2%	2	129	4%
Cultivated land	52	< 1%	-	52	1%
Pasture (managed)	26	< 1%	< 1	26	< 1%
Forage (unmanaged)	23	< 1%	-	23	< 1%
Turf	10	< 1%	-	10	< 1%
Hazelnut / filbert	6	< 1%	-	6	< 1%
Cedar hedging	4	< 1%	-	4	< 1%
Raspberries	4	< 1%	-	4	< 1%
Tree plantation (unmaintained)	4	< 1%	-	4	< 1%
Forestry stock	3	< 1%	-	3	< 1%
Strawberries	2	< 1%	-	2	< 1%
Forage (intensively managed)	2	< 1%	-	2	< 1%
Fallow land	2	< 1%	-	2	< 1%
Mixed vegetables	1	< 1%	-	1	< 1%
Bedding plants	1	< 1%	-	1	< 1%
Cut flowers	< 1	< 1%	-	< 1	< 1%
Christmas trees	< 1	< 1%	-	< 1	< 1%
Nursery (mixed)	< 1	< 1%	-	< 1	< 1%
TOTAL	3,546	52%	29	3,574	100%

Table 11 shows the 22 individual crops that account for all of the cultivated land in Pitt Meadows.

Figure 18. Individual crop types by area

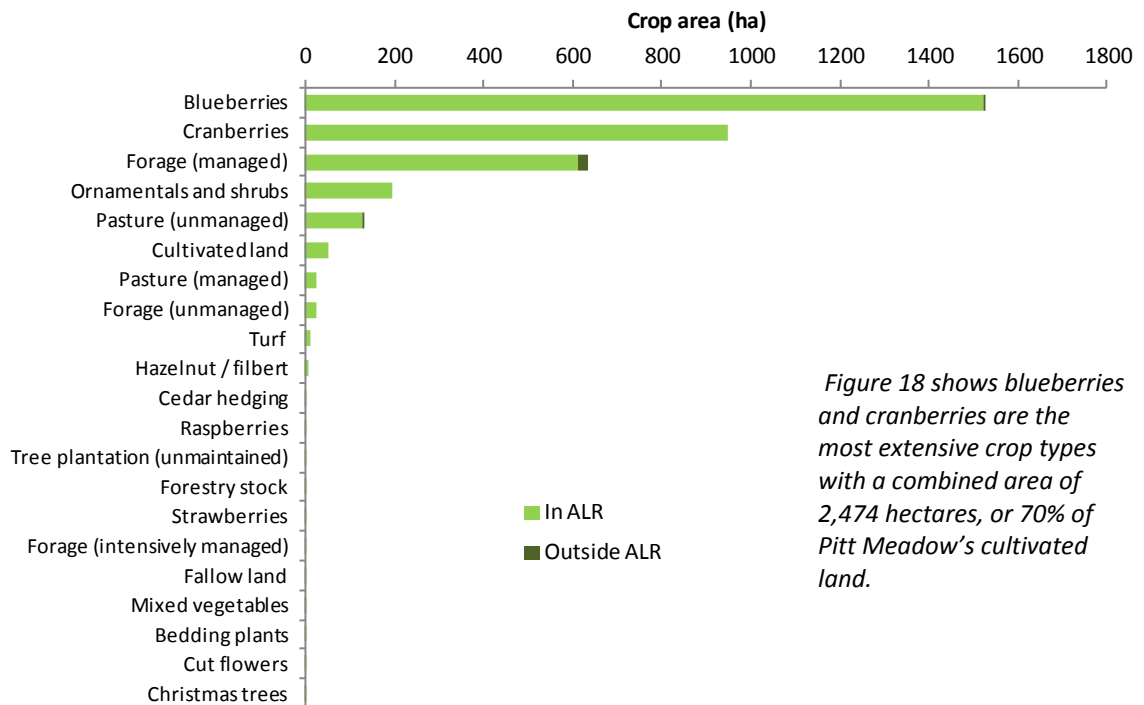


Figure 18 shows blueberries and cranberries are the most extensive crop types with a combined area of 2,474 hectares, or 70% of Pitt Meadows' cultivated land.

GREENHOUSES & CROPS BARNs

Greenhouses are structures covered with translucent material and of sufficient size for a person to work inside⁸. They are permanent enclosed glass or polyethylene (poly) structures with or without climate control facilities for growing plants under controlled environments. Non permanent structures such as hoop covers are considered an agricultural practice and are not included here.

Crop barns are permanent structures with non-translucent walls that are used for growing crops such as mushrooms.

Table 12. Greenhouses by area⁹

Greenhouses		ALR		Outside ALR (ha)	Total area (ha)	% of greenhouse area
		In ALR (ha)	% of ALR			
Glass greenhouse	Vegetables	10	< 1%	-	10	28%
	Floriculture	9	< 1%	-	9	24%
	Nursery	5	< 1%	-	5	13%
	Unknown	1	< 1%	-	1	3%
	Unmaintained	< 1	< 1%	-	< 1	2%
Subtotal		26	< 1%	-	26	71%
Poly greenhouse	Nursery	8	< 1%	-	8	22%
	Unknown	1	< 1%	-	1	3%
	Mixed	< 1	< 1%	-	< 1	3%
	Floriculture	< 1	< 1%	-	< 1	1%
	Nursery - Unmaintained	< 1	< 1%	-	< 1	< 1%
Subtotal		11	< 1%	-	11	29%
TOTAL		37	< 1%	-	37	100%

Table 12 shows that 37 hectares of ALR land is covered by greenhouses.

Glass greenhouses make up 26 hectares of ALR land while poly greenhouses make up 11 hectares.

No crop barns were recorded in Pitt Meadows.

Refer to Map B11 in Appendix B for more information.

Figure 19. Distribution of greenhouses by building type

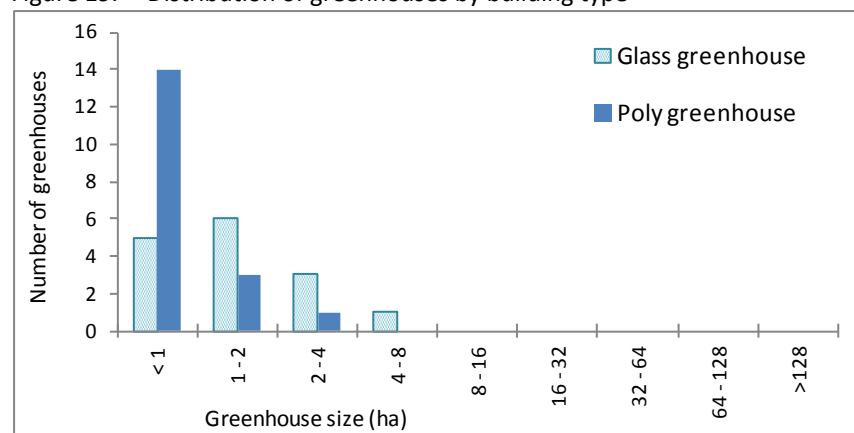


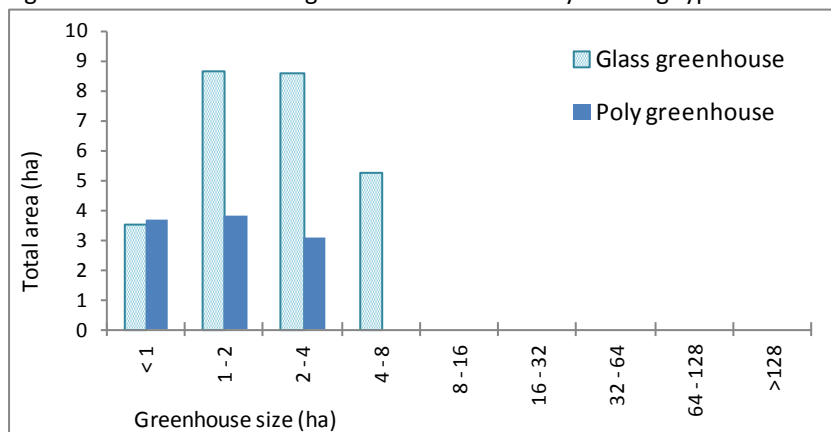
Figure 19 shows that there 18 poly and 15 glass greenhouses in Pitt Meadows. Most poly greenhouses are less than 1 hectare.

Refer to Table A5 in Appendix A for more information.

⁸ Source: *Guide for Bylaw Development*, 1998 Issue (Working Copy) by Ministry of Agriculture and Food.

⁹ The areas reported in this table exclude external yards, parking, warehouses and other infrastructure related to the greenhouse or crop barn operation. Poly refers to polyethylene.

Figure 20. Distribution of greenhouse total area by building type



There are 14 poly greenhouses and 5 glass greenhouses less than 1 hectare in Pitt Meadows (see Figure 19).

Figure 20 shows that poly and glass greenhouses < 1 hectare have similar total areas.

Refer to Table A5 in Appendix A

Figure 21. Distribution of greenhouses by crop type

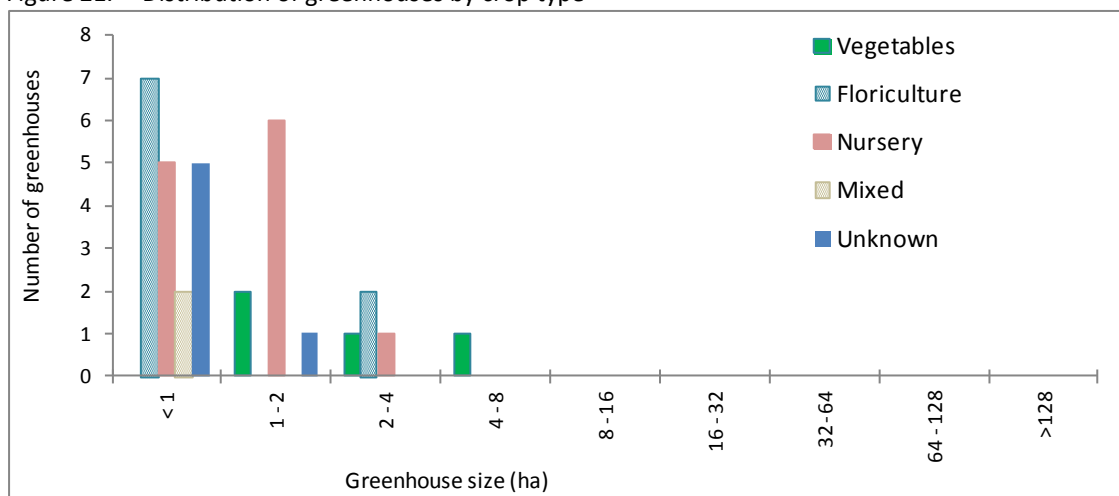


Figure 21 shows all greenhouses in Pitt Meadows are less than 8 hectares and greenhouses are most frequently less than 1 hectare in size.

Nursery and floriculture are the most common greenhouse crop types.

Refer to Table A6 in Appendix A for more

IRRIGATION

Irrigation is the artificial application of water to the land or soil and may be used to assist in the growing of agricultural crops, maintenance of managed vegetation, and control of soil erosion or dust. The potential to irrigate is often limited by the quality and quantity of available irrigation water. High salinity or microbial contamination renders water unsuitable for irrigation. Insufficient water sources or water delivery infrastructure limits the potential to increase agricultural production through irrigation.

Irrigation is captured at the field or land cover level by system type (sub-surface, sprinkler, giant gun, trickle) and then summarized by crop type to the total land area under irrigation. Irrigated land includes all irrigated field crops and may also include irrigated fallow farmland, land set temporarily set aside for wildlife or other purposes, and land under preparation for planting. Also included are crops grown in greenhouses and crop barns. In addition, individual cultivated field crops are evaluated for percent of crop area under irrigation.

Table 13. Main crop types and irrigation

Cultivated field crop	Irrigation system in use (ha)			Total area irrigated (ha)	% of crop area irrigated
	Sprinkler	Giant gun	Trickle		
Berries	948	4	1,345	2,297	93%
Nursery & tree plantations	66	-	-	66	32%
Forage & pasture	-	19	-	19	2%
Turf	10	-	-	10	100%
Floriculture	< 1	-	1	2	100%
Vegetables	1	-	-	1	100%
Other*	< 1	-	-	< 1	< 1%
TOTAL FIELD CROP AREA IRRIGATED	1,027	23	1,346	2,397	67%
Greenhouses (maintained)	Flood and trickle irrigation			36	100%

* Other. Includes bare cultivated land (land that is tilled or plowed, but with no visible crop), fallow land (cultivated land that has not been seeded or planted for one or more growing season), and land in crop transition.

Table 13 illustrates that 67% of all cultivated field crops are irrigated. The majority of all berry crops (93%) and all turf, floriculture, and vegetable crops are irrigated.

Trickle systems were found almost exclusively on berries, while sprinkler systems were found on a wider variety of crops.

Refer to Map B12 in Appendix B for more information.

Figure 22. Irrigation systems by percentage of cultivated land

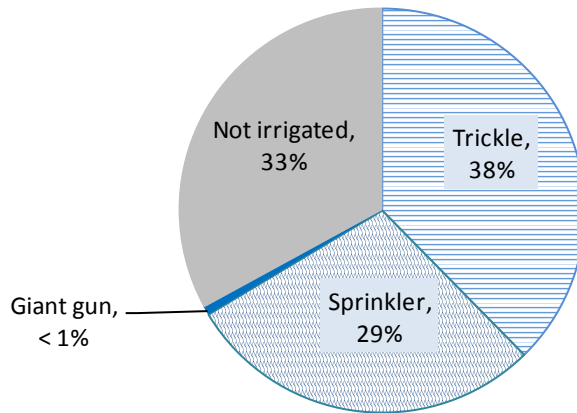


Figure 22 shows over two-thirds (67%) of the cultivated land in Pitt Meadows is irrigated. Trickle irrigation is the most widely used system found on 38% of all cultivated land followed by sprinkler systems on 29% of cultivated land.

Table 14. All field crop types and irrigation

Cultivated field crop	Irrigation system in use (ha)			Total area irrigated (ha)	% crop area irrigated
	Sprinkler	Giant gun	Trickle		
Blueberries	15	2	1,326	1,343	88%
Cranberries	933	-	15	948	100%
Forage (managed)	-	19	-	19	3%
Ornamentals and shrubs	63	-	-	63	32%
Pasture (unmanaged)	-	-	-	-	-
Cultivated land	< 1	-	-	< 1	< 1%
Pasture (managed)	-	-	-	-	-
Forage (unmanaged)	-	-	-	-	-
Turf	10	-	-	10	100%
Hazelnut / filbert	-	-	-	-	-
Cedar hedging	-	-	-	-	-
Raspberries	-	-	4	4	95%
Tree plantation (unmaintained)	-	-	-	-	-
Forestry stock	3	-	-	3	100%
Strawberries	-	2	< 1	2	95%
Forage (intensively managed)	-	-	-	-	-
Fallow land	-	-	-	-	-
Mixed vegetables	1	-	-	1	100%
Bedding plants	-	-	1	1	100%
Cut flowers	< 1	-	-	< 1	100%
Christmas trees	-	-	-	-	-
Nursery	< 1	-	-	< 1	100%
TOTAL	1,027	23	1,347	2,397	

Table 14 outlines the type of irrigation systems used on the 22 individual field crops in Pitt Meadows. Trickle systems are primarily used on blueberries, sprinkler systems are predominantly used on cranberries, and giant gun systems are mostly used on forage (managed).

LIVESTOCK

Livestock activities are very difficult to measure using a windshield survey method. Livestock are often confined to structures making it difficult for the surveyor to see the animals. Local knowledge and other indicators such as animal confinement type (barn type), feeder system type, manure handling system type, and other visible elements may be used to infer the type of livestock and scale of activity that exist on a parcel. In addition, livestock are mobile and may utilize more than one land parcel. Livestock visible on a certain parcel one day may be visible on a different parcel the next day. This inventory does not attempt to identify animal movement between parcels that make up a farm unit but reports livestock at the parcel where the animals or related structures were observed.

"Main Type" and **"Secondary Type"** of livestock are determined by comparing the scale of different livestock activities on the parcel. The "Main Type" of livestock does not represent the primary agricultural activity, but only the main type of livestock activity.

"Intensive" livestock activities utilize specialized structures such as barns, feedlots and stockyards designed for confined feeding at higher stocking densities.

"Non Intensive" livestock activities allow animals to graze on a pasture and often utilize non intensive barns and corrals/paddocks.

"Unknown livestock" refers to activities where non specialized livestock related structures were present but the livestock were not visible and therefore the specific type of livestock could not be determined.

The scale system used to describe livestock operations relies on animal unit equivalents which is a standard measure used to compare different livestock types. One animal unit equivalent is approximately equal to one adult cow or horse. The scale system includes 4 levels:

- **"Very Small"** Approximately 1 cow or horse or bison, 3 hogs, 5 goats or deer, 10 sheep, 50 turkeys, 100 chickens (1 animal unit equivalent)
- **"Small"** LESS THAN 25 cows or horses or bison, 75 hogs, 125 goats or deer, 250 sheep, 1250 turkeys, 2500 chickens (2 - 25 animal unit equivalents)
- **"Medium"** LESS THAN 100 cows or horses or bison, 300 hogs, 500 goats or deer, 1000 sheep, 5000 turkeys, 10,000 chickens (25 - 100 animal unit equivalents)
- **"Large"** MORE THAN 100 cows or horses or bison, 300 hogs, 500 goats or deer, 1000 sheep, 5000 turkeys, 10,000 chickens (over 100 animal unit equivalents).

Table 15. Livestock activities

Livestock group	Livestock detail *	By parcel		Total activities	By activity type	
		Main type	Secondary type		Intensive	Non Intensive
Beef	Beef total	6	-	6	1	5
Dairy	Dairy total	8	-	8	8	-
Poultry	Chicken	3	1	4	-	4
	Chicken (Swine)	1	-	1	-	1
	Goose	1	-	1	-	1
	Poultry total	5	1	6	-	6
Sheep / lamb / goat	Sheep / lamb	1	-	1	-	1
	Sheep / lamb (Beef)	1	-	1	-	1
	Goat	1	-	1	-	1
	Sheep / lamb / goat total	3	-	3	-	3
Unknown livestock	Unknown livestock total	10	-	10	-	10
Inactive	Inactive total	2	-	2	2	-
Equine	Horse	30	1	31	-	31
	Miniature horse	2	-	2	-	2
	Mixed equine	2	-	2	-	2
	Equine - unknown type	1	-	1	-	1
	Equine total	35	1	36	-	36
TOTAL		69	2	71	11	60

* When livestock type appears in parentheses (), it indicates the livestock activity is a mixed herd or flock.

Table 15 shows equine is the most common type of livestock activity in Pitt Meadows accounting for 36 of 71 or 51% of all livestock activities. Dairy is the second most common known livestock type with 8 activities or 11%.

The 8 parcels with dairy activities are associated to 7 dairy operations. A farm unit may have livestock and livestock structures on more than one parcel.

All dairy activities in Pitt Meadows are intensive. There is also one intensive beef activity associated with Meadowview Feedlot. Two inactive sites were recorded. Both were former intensive dairy operations.

Refer to Map B13 in Appendix B for more information.

Figure 23. Livestock activities (excluding equine) by scale and type

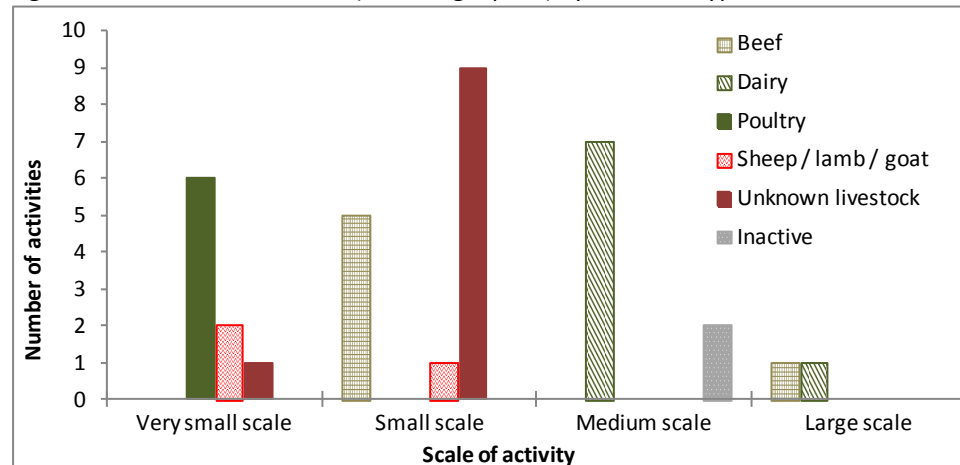


Figure 23 illustrates the scale of livestock activities (excluding equine) in Pitt Meadows

There are 10 Unknown livestock activities, all of which are “small” or “very small” scale.

There are two “large” scale activities in Pitt Meadows; one beef and one dairy. Both are intensive activities.

Dairy is a supply managed industry.

Refer to Tables A8 and A10 in Appendix A for more information.

Figure 24. Livestock and equine activities by scale

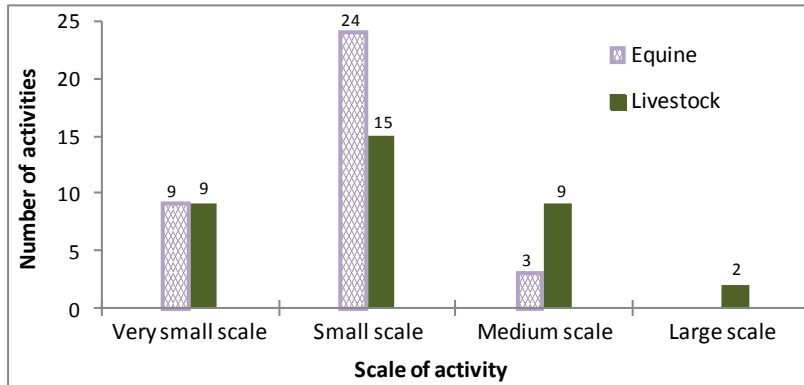


Figure 24 compares the scale of livestock and equine activities.

Even though 36 of the 71 livestock activities are equine, most are “small” or “very small” scale. There are two “large” scale livestock activities, while there are no “large” scale equine activities.

Refer to Tables A8, A10, and A12, in Appendix A for more information.

Figure 25. Livestock activities (excluding equine) by parcel size and scale

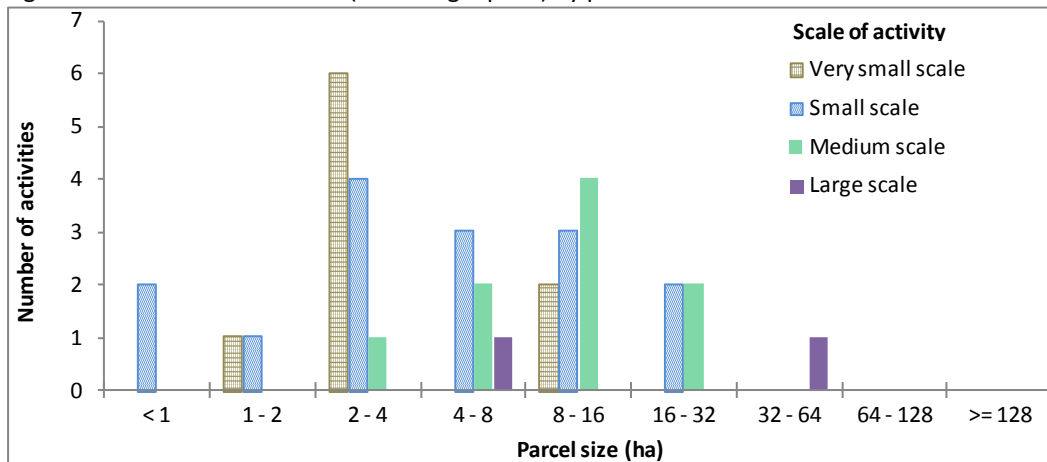


Figure 25 illustrates the distribution of livestock activities (excluding equine) by scale across parcel size categories.

“Small” scale livestock operations occur on nearly all parcel sizes with livestock activities. Of the two “Large” scale livestock operation, one occurs on a parcel of 8 hectares and the other is on a parcel of 41 hectares.

Refer to Tables A8, A10, A12, and Figures A1, A3, and A5 in Appendix A for more information.

Figure 26. Livestock activities (excluding equines) by parcel size and type

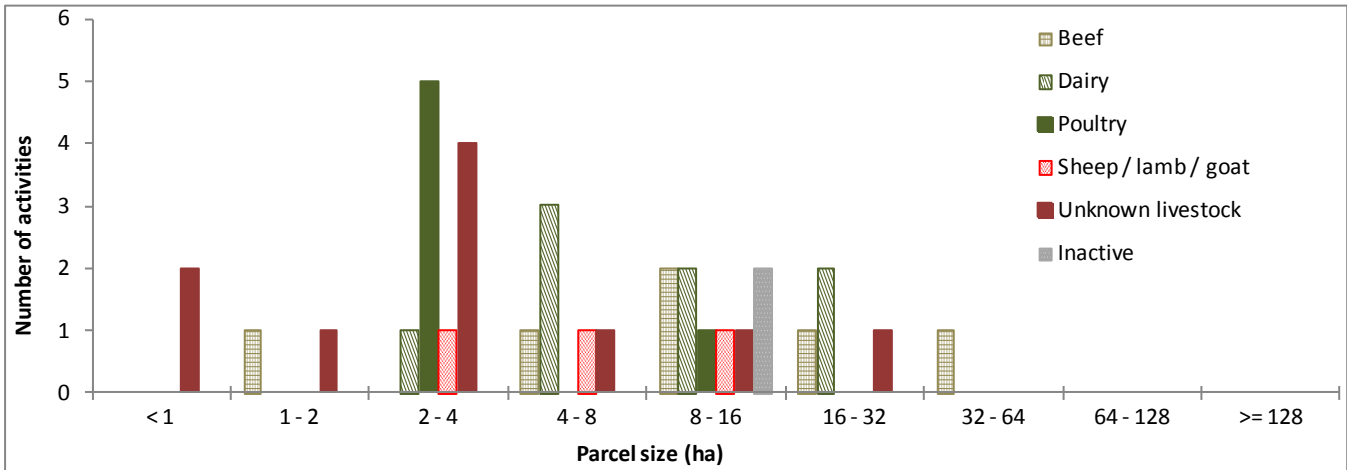


Figure 26 compares the distribution of different livestock types across parcel size categories. Unknown livestock activities occur across all parcel size categories with livestock. Beef activities occur on most parcels sizes, and dairy occurs on all parcel size categories greater than 2 hectares.

No livestock activities occur on parcels larger than 64 hectares.

Refer to Table A7 in Appendix A for more information.

Figure 27. Livestock and equine activities by parcel size

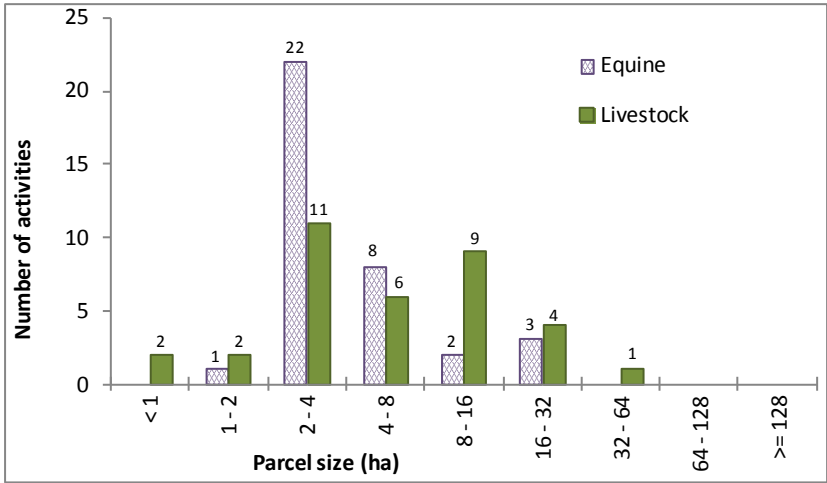


Figure 27 compares the distribution of equine and livestock activities across parcel size categories.

The majority of equine activities occur on parcels less than 4 hectares in Pitt Meadows.

Livestock activities occur across a range of parcel sizes including parcels less than 1 hectare.

Refer to Table A7 in Appendix A for more information.

Figure 28. Average area in forage, pasture, and farm infrastructure on parcels with livestock activities (excluding very small scale)

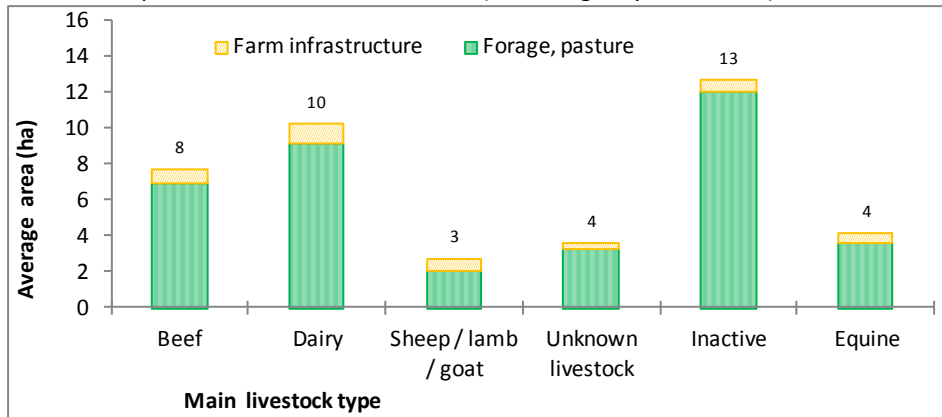
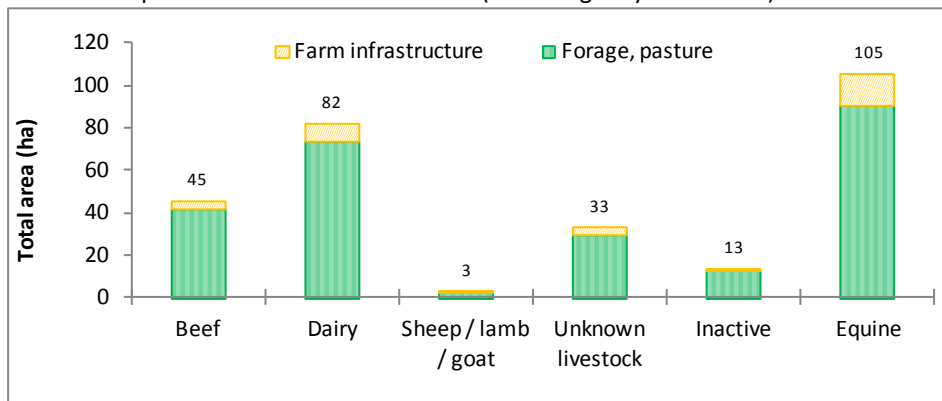


Figure 28 shows that on average a dairy activity is associated with 10 hectares of forage, pasture, and farm infrastructure, which is more than any other type of active livestock activity.

Figure 29. Total area in forage, pasture, and farm infrastructure on parcels with livestock activities (excluding very small scale)



Even though each dairy activity on average uses more forage or pasture than any other active livestock activity (see Figure 28 above), Figure 29 shows that equine activities use a greater total area.

The actual forage area for dairy is often underestimated as not all dairy forage fields are located on the same parcel as the livestock.

Refer to Figures A2, A4, and A6 Appendix A for more information.

Figure 30. Percent of parcel area utilized for forage, pasture, and farm infrastructure on parcels with livestock activities (excluding very small scale)

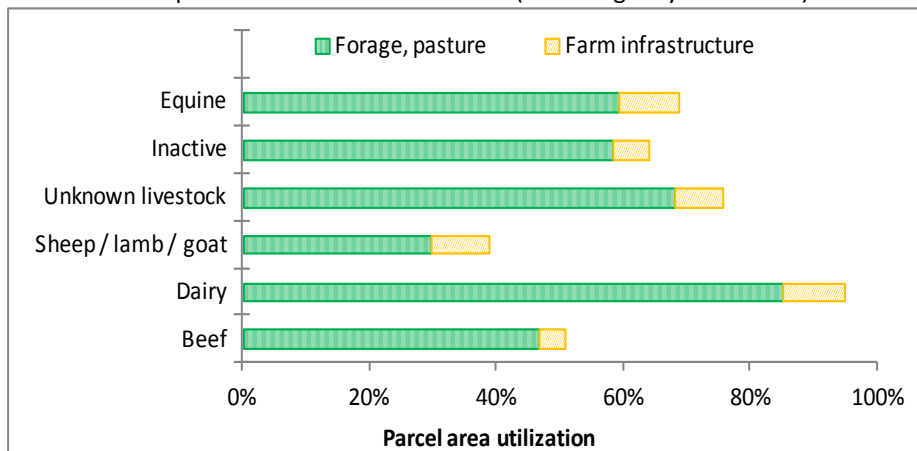
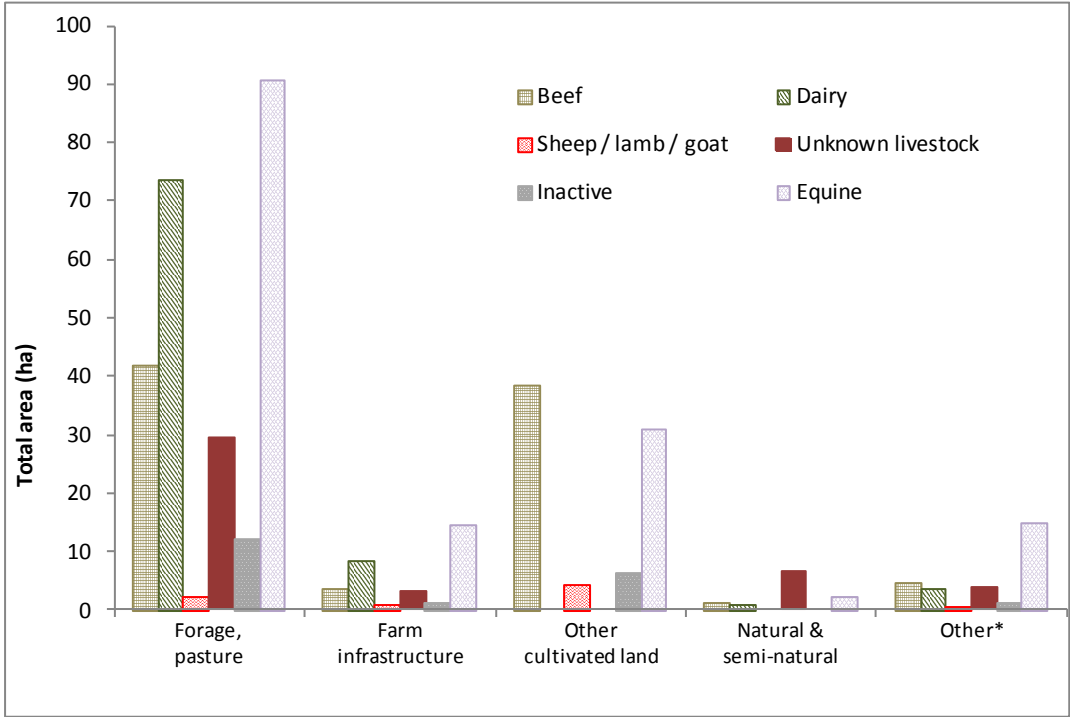


Figure 30 shows that on average, a dairy activity in Pitt Meadows utilizes 95% of its parcel area for forage, pasture and farm infrastructure while a sheep / lamb / goat activity utilizes only 39%.

Figure 31. Land cover on parcels with livestock activities (excluding very small scale)



* Other includes vegetated lands seeded or planted for landscaping, dust, or soil control but not cultivated for harvest or pasture, lands covered by built objects but not farm infrastructure, and bare areas such as piles, pits, fill dumps.

Figure 31 shows that dairy and equine activities have large amounts of forage & pasture associated with them. These operations are growing some of their own feed.

Refer to Figures A2, A4 and A6 in Appendix A for more information.

ON-FARM VALUE-ADDED

Activities which add value to raw commodities produced on the farm are reported in this section. At least 50% of the commodity utilized must be produced on farm¹⁰ or the activity is considered non-agricultural. In many cases, local knowledge in combination with the field survey is used to determine if an activity meets the criteria to be considered on-farm value-added. The three main categories of value-added are: processing, direct sales, and agri-tourism.

Processing is an activity that maintains or raises the quality or alters the physical or chemical characteristics of a raw farm commodity, or adds value to it in any way. Processing includes grain mill or oilseed crushing, meat processing, wine or cider, kitchen / bakery, and canning. This category does not include crop washing and packaging.

Direct sales to the public occur through permanent stores, temporary stores such as fruit stands, U-pick, or restaurant / take out service located on the farm. Direct farm marketing sites are considered ambassadors of agriculture. Direct farm marketing engages the public's interest in food production and increases awareness of the benefits of local agriculture.

Agri-tourism promotes visits to the operation for the purpose of recreation, education or active involvement in the operation - a tourism experience. Agri-tourism must be in a farm setting and secondary to primary agricultural operation to be considered value-added. Included are corn mazes, petting zoos, bed & breakfasts, campsites, winery or orchard tours, guest ranches offering equestrian related activities, horse or donkey rental for trail riding / outfitting, and seasonal events such as farm festivals or pumpkin patches.

The scale system used to describe value-added activities reflects the human effort need to support the activity. The scale system includes 3 levels:

- “**Small**” scale represents a predominantly single household endeavour with management requiring less than one full time worker. Examples of small scale include a temporary roadside fruit stand, a small field u-pick, or egg sales from a backyard flock.
- “**Medium**” scale is sufficient to add value to on-farm products for sale to small local markets or serve a moderate number of people. Usually includes designated parking for customers and requires at least one full-time worker to manage. An example is 3-10 tourist accommodation spots.
- “**Large**” scale is intended to add value to large amounts of on-farm generated products or serve large numbers of people. Requires multiple workers to operate value-added components of the farm operation. An example is more than 10 tourist accommodation spots.

¹⁰ On-farm refers to the farm unit which includes all the property belonging to the farm and may incorporate more than one parcel.

Figure 32. Percentage of parcels “Used for farming” with value-added activities

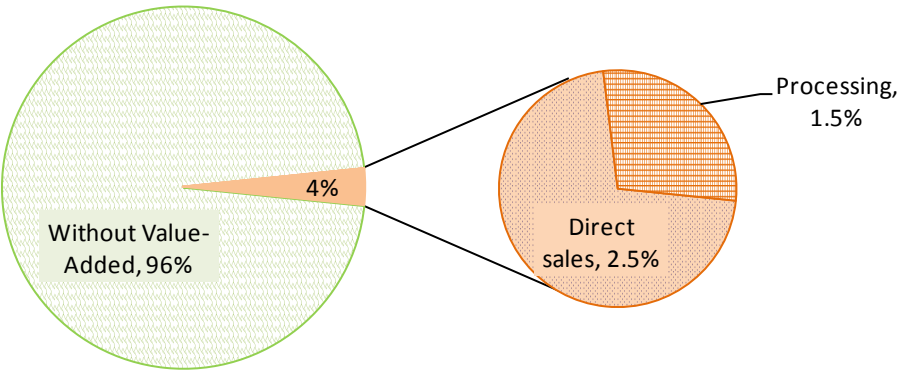
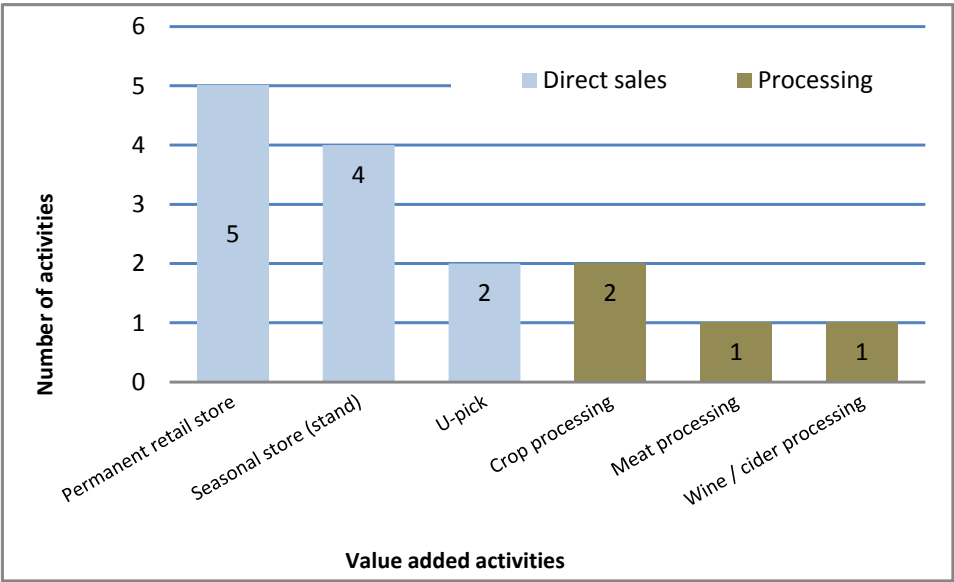


Figure 32. Only 14 or 3% of all parcels “Used for farming” are also being used for value-added activities. Given the close proximity to a large urban population, there are opportunities to increase activities such as agri-tourism, processing, and direct sales.

Figure 33. Number of parcels “Used for farming” with value-added activities



There are 15 value-added activities located on 14 parcels in Pitt Meadows.

Figure 33 shows that the majority of the value added activities are direct sales including permanent stores, seasonal stands and u-pick activities.

The Meat processing activity is associated with Country Meats Butcher Shop and the wine processing activity is associated Blue Heron Fruit Winery. Of the two crop processing activities, one is associated with Purewal Blueberry farms and the other with Pacific Canadian Fruit Packers.

Refer to Tables A14 through A17 in Appendix A for more information.

5. Condition of ALR Lands

This section presents a parcel based analysis of parcel size and residential uses in the ALR.

PARCEL INCLUSION IN THE ALR

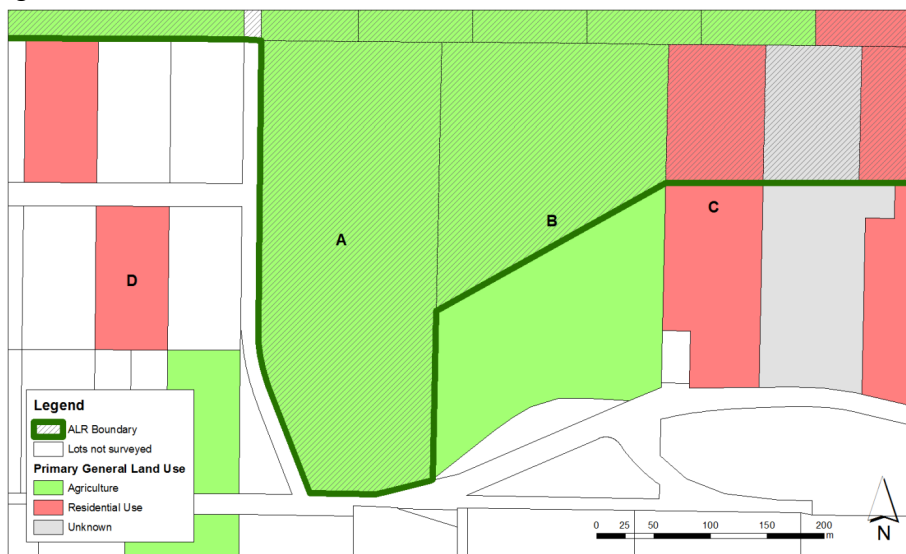
The inventory area included 6,384 hectares of ALR on 764 parcels which is 93% of the ALR within Pitt Meadows. The remaining 7% of the ALR was excluded from the inventory as it is in parcels less than 100 square metres in size or outside surveyed land parcels in designated rights-of-way or water and foreshore.

ALR boundaries are not always coincident with parcel boundaries which results in many parcels having only a portion of their area in the ALR. To achieve an accurate picture of the ALR land in Pitt Meadows, only parcels that meet the following criteria are included in this section of the report:

- parcels > 0.05 hectares in size with at least half their area ($\geq 50\%$) in the ALR, or
- parcels with at least 10 hectares (≥ 10 hectares) of ALR land.

In total, 732 parcels, with 6,339 hectares or 92% of Pitt Meadows's ALR land meets the above criteria and is included in the further analysis of the ALR. This includes 1 parcel that has less than 50% of its area in the ALR but contains 12 hectares of ALR land.

Figure 34. Parcel inclusion in the ALR

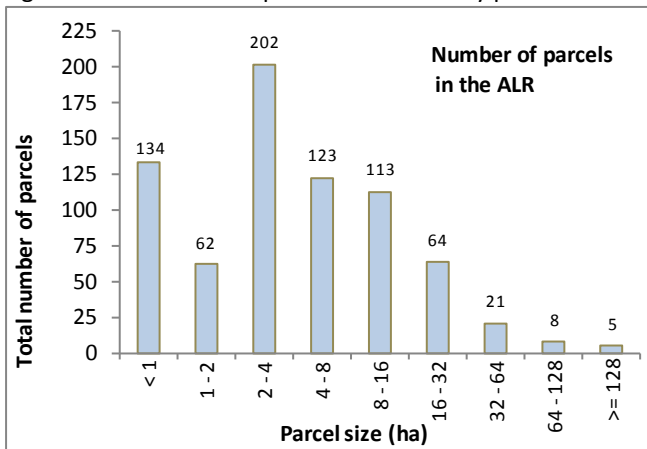


PARCEL SIZE & FARMING IN THE ALR

Parcel size must be considered when determining the agricultural potential of a land parcel. Larger parcels usually allow farmers greater flexibility to expand or change their type of operation as the economy and markets change. Although some types of agriculture can be successful on small parcels, (e.g. intensive market gardens, greenhouse operations, nurseries), generally the smaller the parcel is, the fewer viable options there are for farming.

A farming operation may utilize more than one parcel as a farm unit¹¹, however it is generally more efficient to run a farm on fewer larger parcels than many smaller parcels. Larger parcels accommodate equipment more efficiently and reduce the need to move farm equipment on public roads. Smaller parcels are more impacted by bylaws designed to reduce potential land use conflicts, such as setbacks from lot lines and road allowances, and may encourage alternative land uses such as residential.

Figure 35. Number of parcels in the ALR by parcel size



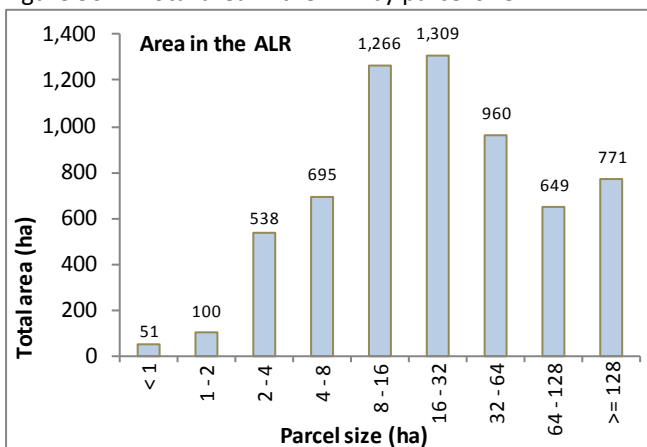
Of the ALR parcels in Pitt Meadows, 18% are less than one hectare. The average ALR parcel size is 8.6 hectares.

Figure 35 illustrates that of the 732 parcels in the ALR:

- 18% (134 parcels) are less than 1 hectare.
- 54% (398 parcels) are less than 4 hectares.
- 17% (123 parcels) are between 4 and 8 hectares.
- 15% (113 parcels) are between 8 and 16 hectares.
- 13% (98 parcels) are greater than 16 hectares.

Refer to Map B14 in Appendix B for more information.

Figure 36. Total area in the ALR by parcel size



Even though Pitt Meadows has a large number of small parcels, most of its ALR is in larger parcels.

Figure 36 illustrates that of the 6,399 hectares in the ALR:

- <1% (51 hectares) is on parcels less than 1 hectare.
- 11% (689 hectares) is on parcels less than 4 hectares.
- 11% (695 hectares) is on parcels between 4 and 8 hectares.
- 20% (1,266 hectares) is on parcels between 8 and 16 hectares.
- 58% (3,689 hectares) is on parcels greater than 16 hectares.

¹¹ Farm Unit – An area of land used for a farm operation consisting of one or more contiguous or non-contiguous parcels, that may be owned, rented or leased, which form and are managed as a single farm.

Table 16. Number of farmed and not farmed parcels in the ALR

Parcel status with respect to farming	Number of parcels	% of parcels in the ALR
Used for farming	428	58 %
Not used for farming	304	42 %
TOTAL	732	100 %

Table 16 demonstrates that of the 732 parcels in the ALR, 428 or 58% are "Used for farming".

Figure 37. Number of farmed and not farmed parcels in the ALR by parcel size

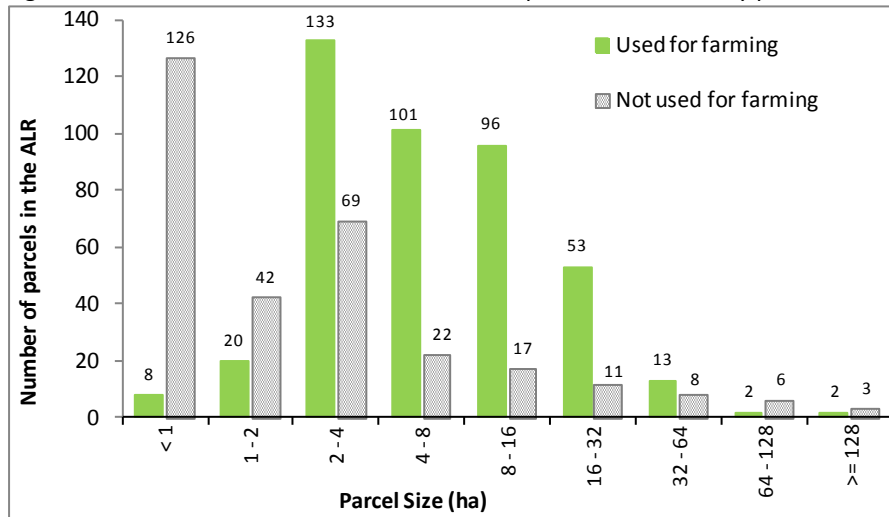


Figure 37 shows that of the 304 or 41% of parcels in the ALR "Not used for farming",

- 126 parcels or 41% are less than one hectare
- 168 parcels or 55% are less than 2 hectares

Small parcels are less likely to be farmed.

Figure 38. Number of farmed and not farmed parcels in the ALR by parcel size (line chart)

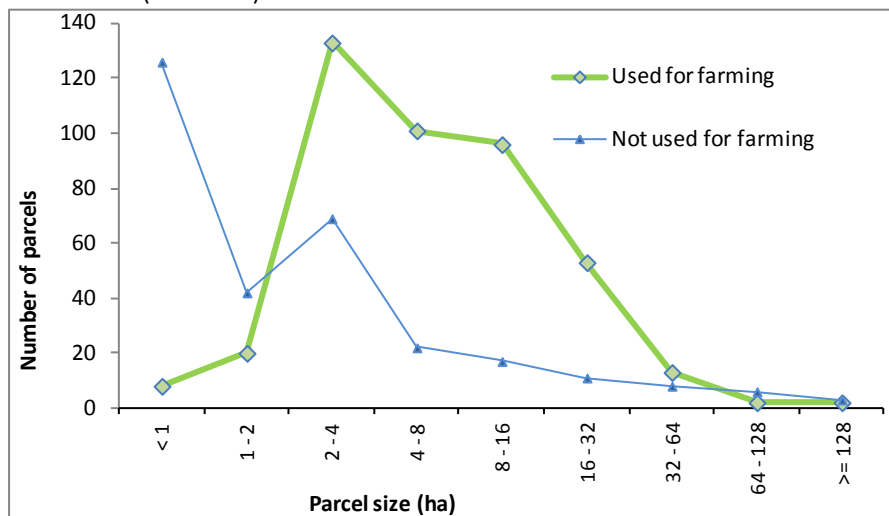


Figure 38 illustrates that although parcels of all sizes are "Used for farming", small parcels are less likely to be farmed.

Figure 39. Proportion of parcels farmed and not farmed by parcel size in the ALR

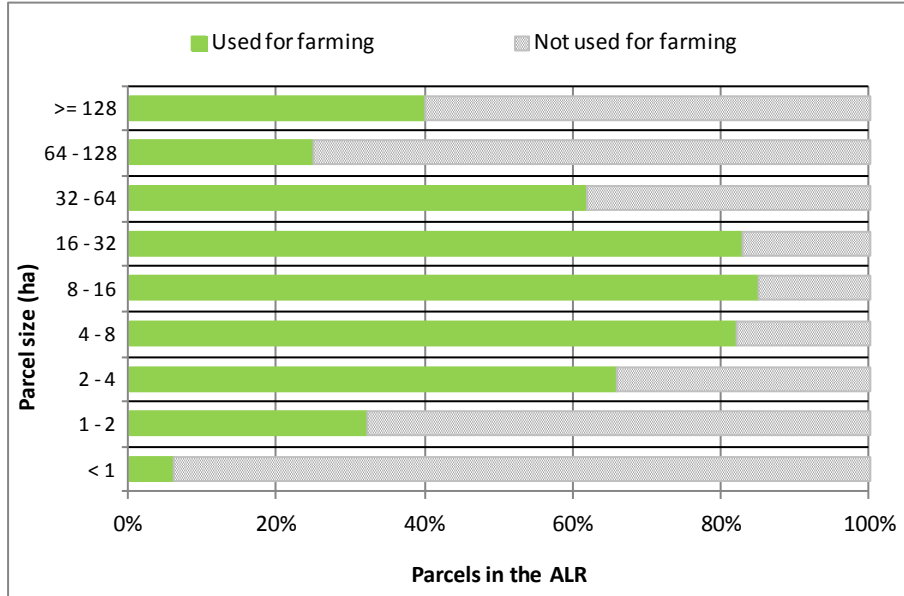
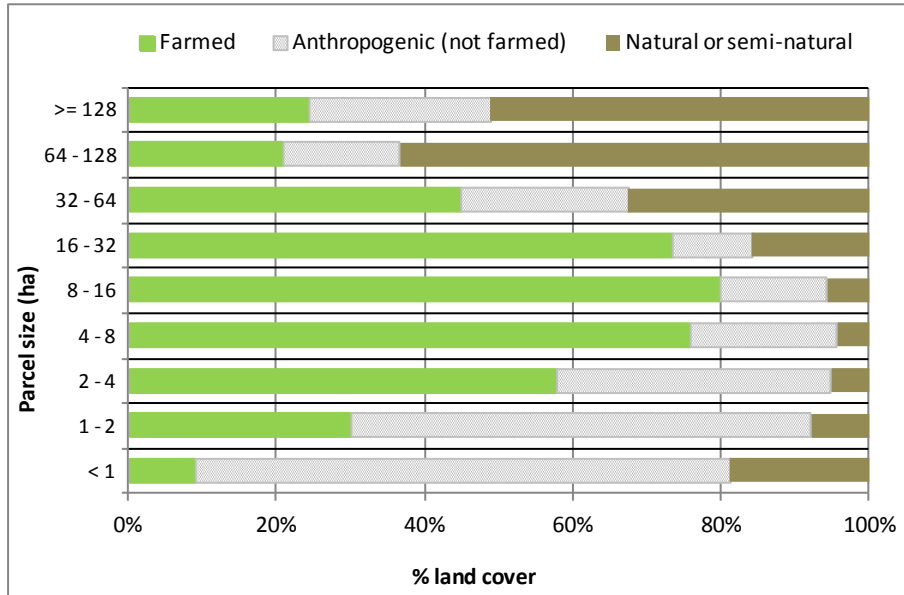


Figure 39 shows that in Pitt Meadows the proportion of parcels “Used for farming” generally increases as the parcel size increases.

Only 6% of parcels less than 1 hectare are “Used for farming”.

There are five parcels greater than 128 hectares in ALR. Two are “Used for farming” and are associated with Pitt Meadows Regional Airport. Three are “Not used for farming”; one of these parcels is associated with Golden Eagle Golf Club, and two are part of Grand Narrows Regional Park.

Figure 40. Proportion of land cover by parcel size in the ALR



Similar to Figure 39 above, Figure 40 shows that in Pitt Meadows, the proportion of farmed land cover generally increases as the parcel size increases.

Only 9% of the land cover is farmed on parcels that are less than 1 hectare.

RESIDENTIAL USE IN THE ALR

The ALR is a provincial zone in which agriculture is the priority use and some “Residential” use is considered a necessary accessory to the agricultural use of a property. However “Residential” use which is not an accessory to agriculture can effectively limit the ability of agriculture to grow, intensify and respond to market demands. When the primary motivation for ownership of ALR land is residential use, the residence is often placed to maximize privacy and views, with little consideration for agricultural opportunities on the parcel. Houses that are not adjacent to the frontage road alienate portions of land from future agriculture. If the occupants are non-farmers, they are more likely to be affected by noise or odour from neighbouring farm operations.

The size of the residence may be another factor to consider. Properties with larger residences have higher property values making it unrealistic for a farmer to acquire and convert this land to farmland in the future.

Average land improvement values of Pitt Meadows properties with residences in the ALR were as follows:

- estate single family house \$748,060
- large single family house \$385,302
- medium single family house \$230,930
- small single family house \$242,236
- single mobile home \$66,200

(Calculated using 2011 BC Assessment database - Last improvement value)

In the following analysis cabins/cottages, mobile homes, single-family houses, duplexes, townhouses, apartments, motels, dormitories, and institutional living buildings are included. Single-family houses are further described by estimated size of the building:

- Small single-family house <1,500 sq. ft.
- Medium single-family house 1,500 – 3,500 sq. ft.
- Large single-family house 3,500 – 5,000 sq. ft.
- Estate (very large) single-family house > 5,000 sq. ft.

Residential footprint includes the main residence plus its associated yard, driveway, parking and any auxiliary buildings or structures. When two residences are on a property, areas associated to both (such as shared driveways, parking or yard), are assigned to the closest residence.

Table 17. Farming and residences in the ALR

Parcel status	With residence		Without residence		Total number of parcels
	Number of parcels	% of parcels	Number of parcels	% of parcels	
Used for farming	289	39%	139	19%	428
Not used for farming but available	118	16%	43	6%	161
Not used for farming and unavailable	31	4%	112	15%	143
TOTAL	438	60%	294	40%	732

Table 17 shows that 438 parcels or 60% of ALR parcels have residences and that 149 of these parcels are “Not used for farming”.

Table 18. Farming and residence type in the ALR

Parcel status	Residences *						Total residences	Total number of parcels
	Single mobile home	Small house	Medium house	Large house	Estate house	Other**		
Used for farming	3 (1)	123 (93)	161 (137)	42 (41)	14 (14)	4 (3)	347	289
Not used for farming but available	-	45 (30)	70 (66)	15 (15)	7 (7)	-	137	118
Not used for farming and unavailable	1(1)	9 (8)	21 (19)	1 (1)	2 (2)	-	34	31
TOTAL RESIDENCES	4	177	252	58	23	4	518	
TOTAL PARCELS	2	131	222	57	23	3		438

* xx (yy) - xx indicates the number of residences and (yy) indicates the number of parcels where the residence type is the largest on that parcel.

** Other includes 3 dormitories and 1 cabin/cottage style residences

Table 18 demonstrates there are 438 parcels in the ALR with 518 residences (some parcels have more than one residence). Most residences are “small” or “medium” houses but there are at least 23 “estate” houses (>5000 sq. ft) in the ALR. Forty percent (40%) of all “estate” houses are on parcels “Not used for farming.”

Figure 41. Total area in residential footprint by parcel size

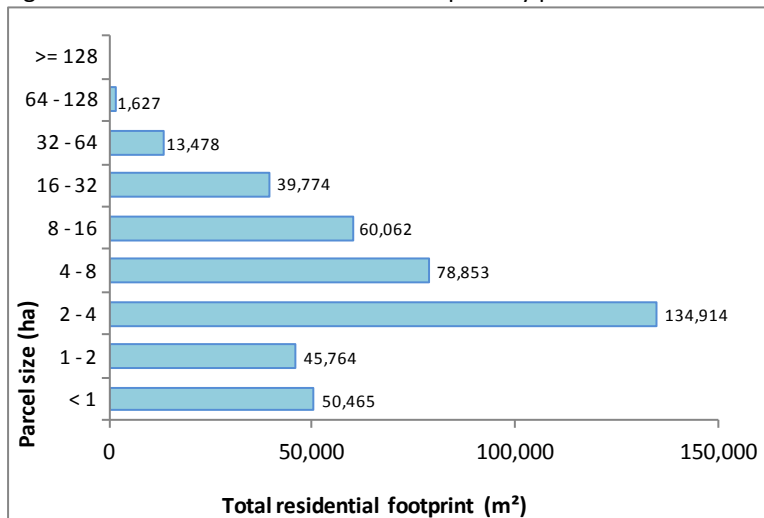


Figure 41 illustrates there are over 42 hectares (424,936 m²) of ALR land in residential footprints distributed across all parcel sizes less than 128 hectares.

Figure 42. Proportion of parcels with residences by parcel size

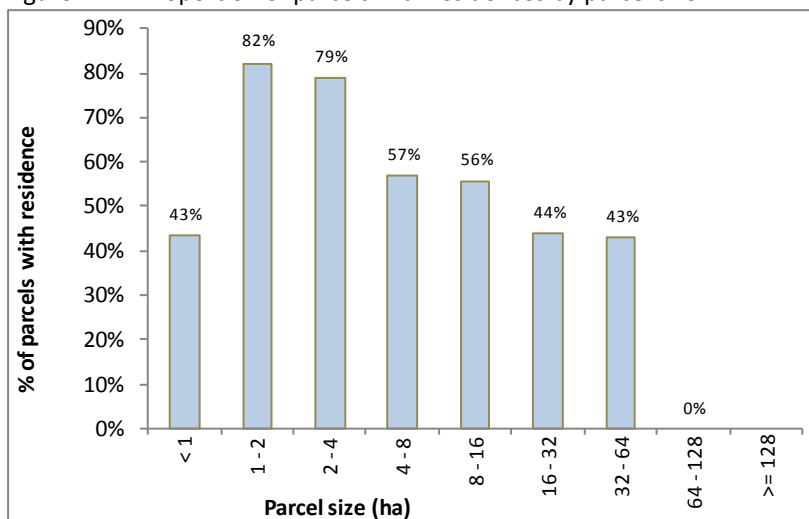


Figure 42 shows that parcels between 1 and 4 hectares are more likely than larger parcels to have a residence.

Figure 43. Average percent of parcel area in residential footprint by parcel size

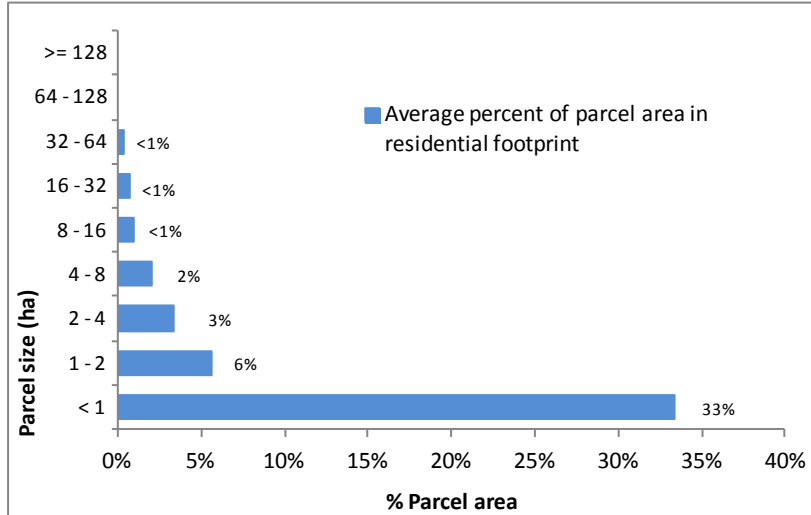


Figure 43 demonstrates that residential footprints on smaller parcels use a much greater proportion of the parcel area than those on larger parcels.

Figure 44. Average total area in residential footprint by parcel size

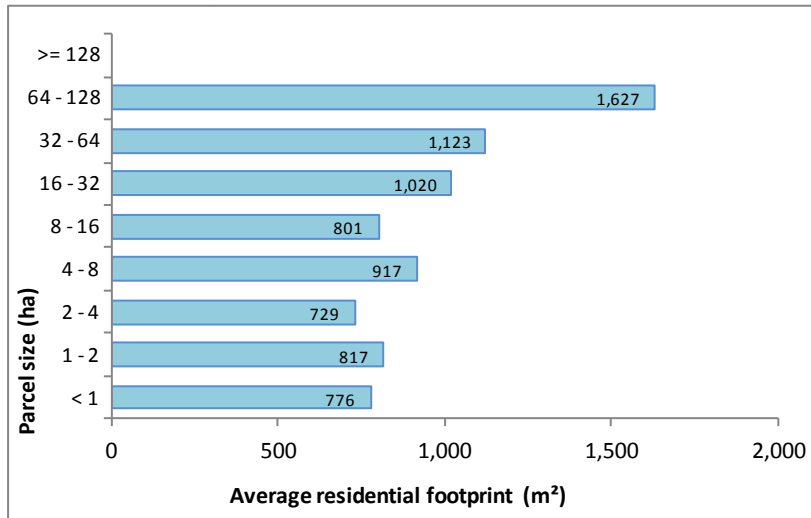
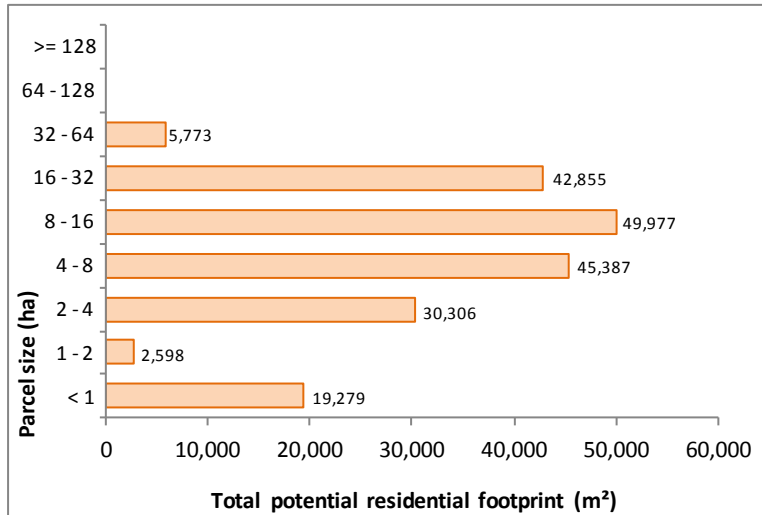


Figure 44 illustrates that even though residential footprints on small parcels use a greater proportion of the parcel area, the average size of the footprint is similar compared to the footprint on larger parcels.

Figure 45. Total and potential area in residential footprint by parcel size



There are 182 parcels in the ALR that are "Used for farming" or "Not used for farming but available" that do not yet have a residence (refer to Table 17).

If all 182 parcels built a residence, using the average percent of parcel area in residential footprint presented above, Figure 45 shows that an additional 20 hectares (196,175 m²) of ALR land would be permanently removed from potential production.

Table 19. Main agriculture activity and largest residence on parcels "Used for farming" in the ALR

Main agricultural activity	Largest residence on the parcel						Number of parcels
	Dormitory	Single mobile home	Small house	Medium house	Large house	Estate house	
Berries	2	1	46	48	20	5	122
Forage, pasture	-	-	20	37	8	4	69
Equine	-	-	6	13	7	3	29
Livestock	-	-	6	15	4	2	27
Nursery & Tree plantations	-	-	8	13	2	-	23
Glass greenhouse	1	-	3	4	-	-	8
Poly greenhouse	-	-	-	4	-	-	4
Turf	-	-	1	2	-	-	3
Other	-	-	1	-	-	-	1
Nut trees	-	-	-	1	-	-	1
Floriculture	-	-	1	-	-	-	1
Farm	-	-	1	-	-	-	1
TOTAL PARCELS	3	1	93	137	41	14	289

There are 289 parcels with residences that are "Used for farming" (refer to Table 18).

Table 19 shows that "large" or "estate" houses occur most frequently on parcels with berry production as the main agricultural activity.

Table 20. Main agriculture activity on "Used for farming" parcels with large or estate residences in the ALR

Main agricultural activity	Parcels with "Large" or "Estate" residences			
	Number of parcels	Crop area utilized (ha)	Average % of parcel area in crop	Average parcel area (ha)
Berries	25	216	87 %	10
Equine	10	57	69 %	7
Forage, pasture	12	45	79 %	5
Livestock	6	60	80 %	11
Nursery & Tree plantations	2	8	75 %	5
TOTAL	55	386		

There are 55 parcels with "large" or "estate" residences in the ALR that are "Used for farming" (see Table 19 above).

Table 20 illustrates the farmed area associated with these residences. There are 25 parcels that have a combined area of 216 hectares in berry production.

Appendix A

CULTIVATED FIELD CROPS

Table A1. Distribution of crop field sizes for all cultivated land¹

Crop Area (ha)	Number of crop fields								Total Number
	Berries	Forage & pasture	Nursery & tree plantations	Other*	Turf	Nut trees	Floriculture	Vegetables	
< 1	20	21	13	1	-	1	1	2	59
1 - 2	25	48	4	1	2	-	1	-	81
2 - 4	49	37	6	-	2	-	-	-	94
4 - 8	64	38	12	-	-	1	-	-	115
8 - 16	53	21	4	-	-	-	-	-	78
16 - 32	28	6	2	2	-	-	-	-	38
32 - 64	7	-	-	-	-	-	-	-	7
64 - 128	4	-	-	-	-	-	-	-	4
>= 128	-	-	-	-	-	-	-	-	-
TOTAL FIELD COUNT	250	171	41	4	4	2	2	2	476
AVERAGE CROP AREA (ha)	10 ha	5 ha	5 ha	13 ha	3 ha	3 ha	< 1 ha	< 1 ha	8 ha
MEDIAN CROP AREA (ha)	6 ha	3 ha	3 ha	13 ha	3 ha	3 ha	< 1 ha	< 1 ha	4 ha
AVERAGE PARCEL SIZE (ha)	12 ha	7 ha	11 ha	17 ha	5 ha	4 ha	2 ha	11 ha	10 ha

* Other. Includes bare cultivated land, fallow land (cultivated land that has not been seeded or planted for one or more growing season), land in crop transition, land planted in cover grass or under mulch to manage soil moisture/erosion associated with a cultivated crop.

Table A2. Distribution of berry fields

Field size (ha)	Number of berry fields				Total number
	Blueberries	Cranberries	Raspberries	Strawberries	
< 1	22	-	2	1	25
1 - 2	24	1	1	1	27
2 - 4	28	21	1	-	50
4 - 8	43	23	-	-	66
8 - 16	35	18	-	-	53
16 - 32	18	11	-	-	29
32 - 64	4	2	-	-	6
64 - 128	2	2	-	-	4
>128	-	-	-	-	-
TOTAL FIELD COUNT	176	78	4	2	260
AVERAGE CROP AREA (ha)	9 ha	12 ha	< 1 ha	1 ha	10 ha
MEDIAN CROP AREA (ha)	6 ha	6 ha	< 1 ha	1 ha	6 ha
AVERAGE PARCEL SIZE (ha)	11 ha	15 ha	15 ha	28 ha	12 ha

¹ Footnote: Each distinct crop type on one parcel is counted as one crop activity. Each crop activity will include at least one and perhaps more crop fields. A parcel may have more than one crop activity if there is more than one distinct type of crop on that parcel.

Table A3. Distribution of forage & pasture fields

Field size (ha)	Number of forage & pasture fields		Total number
	Forage	Pasture	
< 1	4	21	25
1 - 2	29	20	49
2 - 4	29	13	42
4 - 8	39	6	45
8 - 16	16	-	16
16 - 32	4	2	6
32 - 64	-	-	-
64 - 128	-	-	-
>128	-	-	-
TOTAL FIELD COUNT	121	62	183
AVERAGE CROP AREA (ha)	5 ha	2 ha	4 ha
MEDIAN CROP AREA (ha)	4 ha	2 ha	3 ha
AVERAGE PARCEL SIZE (ha)	8 ha	5 ha	7 ha

Table A4. Distribution of nursery & tree plantation fields

Field size (ha)	Nursery activities					Tree plantation activities			Total number
	Ornamentals and shrubs	Cedar hedging	Forestry stock	Nursery - mixed	Nursery total	Trees (plantation)	Christmas trees	Plantation total	
< 1	8	2	1	1	12	-	1	1	13
1 - 2	5	-	-	-	5	-	-	-	5
2 - 4	4	1	1	-	6	1	-	1	7
4 - 8	11	-	-	-	11	-	-	-	11
8 - 16	4	-	-	-	4	-	-	-	4
16 - 32	2	-	-	-	2	-	-	-	2
32 - 64	-	-	-	-	-	-	-	-	-
64 - 128	-	-	-	-	-	-	-	-	-
>=128	-	-	-	-	-	-	-	-	-
TOTAL FIELD COUNT	34	3	2	1	40	1	1	2	42
AVERAGE CROP AREA (ha)	6 ha	1 ha	1 ha	< 1 ha	5 ha	4 ha	< 1 ha	2 ha	5 ha
MEDIAN AREA (ha)	4 ha	< 1 ha	1 ha	< 1 ha	3 ha	4 ha	< 1 ha	2 ha	3 ha
AVERAGE PARCEL SIZE (ha)	13 ha	5 ha	7 ha	< 1 ha	12 ha	4 ha	2 ha	3 ha	11 ha

GREENHOUSES

Table A5. Distribution of greenhouses by building type²

Greenhouse size (ha)	Number of greenhouses		Total number
	Glass greenhouse	Poly greenhouse	
< 1	5	14	19
1 - 2	6	3	9
2 - 4	3	1	4
4 - 8	1	-	1
8 - 16	-	-	-
16 - 32	-	-	-
32 - 64	-	-	-
64 - 128	-	-	-
>128	-	-	-
TOTAL COUNT	15	18	33
AVERAGE AREA (ha)	2 ha	< 1 ha	1 ha
MEDIAN AREA (ha)	1 ha	< 1 ha	< 1 ha
AVERAGE PARCEL SIZE (ha)	5 ha	7 ha	5 ha

Table A6. Distribution of greenhouses by crop type³

Greenhouse size (ha)	Number of greenhouses					Total number
	Vegetables	Floriculture	Nursery	Mixed	Unknown	
< 1	-	7	5	2	5	19
1 - 2	2	-	6	-	1	9
2 - 4	1	2	1	-	-	4
4 - 8	1	-	-	-	-	1
8 - 16	-	-	-	-	-	-
16 - 32	-	-	-	-	-	-
32 - 64	-	-	-	-	-	-
64 - 128	-	-	-	-	-	-
>128	-	-	-	-	-	-
TOTAL COUNT	4	9	12	2	6	33
AVERAGE AREA (ha)	3 ha	1 ha	1 ha	< 1 ha	< 1 ha	1 ha
MEDIAN AREA (ha)	1 ha	2 ha	< 1 ha	< 1 ha	< 1 ha	< 1 ha
AVERAGE PARCEL SIZE (ha)	10 ha	5 ha	3 ha	5 ha	4 ha	6 ha

² The average area and median area reported in this table excludes external greenhouse yards, parking, warehouses and other infrastructure related to the greenhouse operation.

³ Each distinct greenhouse type on one parcel is counted as one greenhouse activity. Each greenhouse activity will include at least one and perhaps more greenhouse structures. A parcel may have more than one greenhouse activity if there is more than one distinct type of greenhouse on that parcel.

LIVESTOCK

Table A7. Distribution of livestock operations by type

Parcel size (ha)	Type of activity							Total number of activities
	Beef	Dairy	Poultry	Sheep / lamb / goat	Inactive	Unknown livestock	Equine	
< 1	-	-	-	-	-	2	-	2
1 - 2	1	-	-	-	-	1	1	3
2 - 4	-	1	5	1	-	4	22	33
4 - 8	1	3	-	1	-	1	8	14
8 - 16	2	2	1	1	2	1	2	11
16 - 32	1	2	-	-	-	1	3	7
32 - 64	1	-	-	-	-	-	-	1
64 - 128	-	-	-	-	-	-	-	-
>= 128	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ACTIVITIES	6	8	6	3	2	10	36	71
MEDIAN PARCEL SIZE (ha)	10 ha	10 ha	2 ha	7 ha	10 ha	3 ha	3 ha	4 ha
AVERAGE PARCEL SIZE (ha)	16 ha	11 ha	4 ha	8 ha	10 ha	5 ha	5 ha	7 ha

Table A8. Beef activities

Scale of beef activity	By parcel		Total number of activities	By activity type	
	Main type	Secondary type		Intensive	Non Intensive
Small scale (2 -25 cattle)	5	-	5	-	5
Large scale (>100 cattle) - Finishing	1	-	1	1	-
TOTAL	6	-	6	1	5

"Main Type" and "Secondary Type" of livestock are determined by comparing the scale of different livestock activities on the parcel and does not represent primary agricultural activity.

"Intensive" livestock activities utilize specialized structures such as barns, feedlots and stockyards designed for confined feeding at high stocking densities.

"Non Intensive" livestock activities allow animals to graze on a pasture and often utilize non intensive barns and corrals/paddocks.

Table A9. Distribution of beef activities by parcel size and scale

Parcel size (ha)	Scale of beef activities				Total number of activities
	Very small (1 cow)	Small (2-25 cattle)	Medium (25-100 cattle)	Large (> 100 cattle)	
< 1	-	-	-	-	-
1 - 2	-	1	-	-	1
2 - 4	-	-	-	-	-
4 - 8	-	1	-	-	1
8 - 16	-	2	-	-	2
16 - 32	-	1	-	-	1
32 - 64	-	-	-	1	1
64 - 128	-	-	-	-	-
>= 128	-	-	-	-	-
TOTAL NUMBER OF ACTIVITIES	-	5	-	1	6
AVERAGE PARCEL SIZE (ha)	11 ha	4 ha	-	41 ha	16 ha

Figure A1. Distribution of beef activities by parcel size and scale

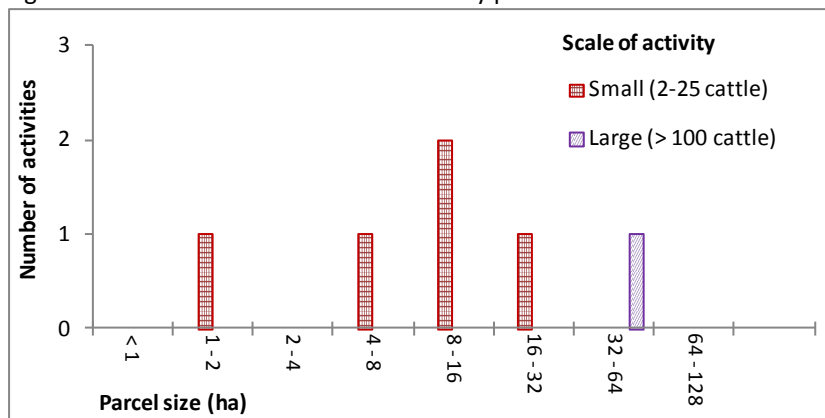
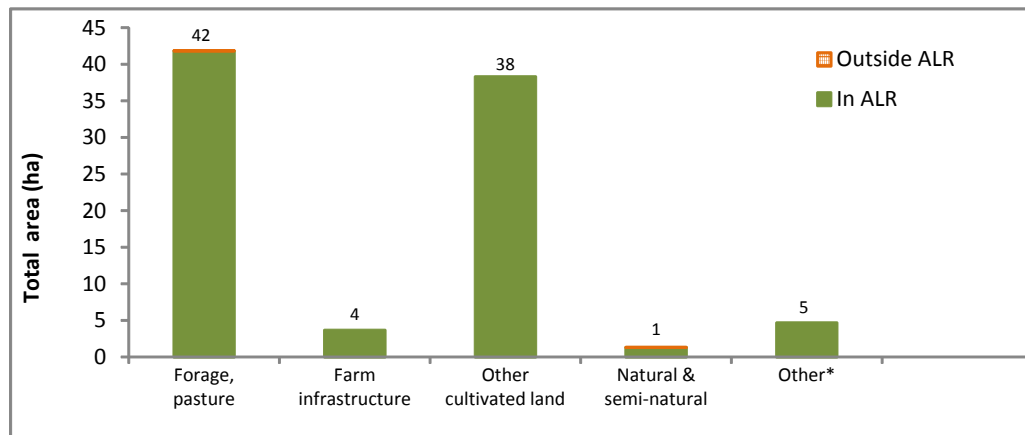


Figure A2. Land cover on parcels with beef activities



* Other includes vegetated lands seeded or planted for landscaping, dust, or soil control but not cultivated for harvest or pasture, lands covered by built objects but not farm infrastructure, and bare areas such as piles, pits, fill dumps.

Table A10. Dairy activities

Scale of dairy activity	By parcel		Total number of activities	By activity type	
	Main type	Secondary type		Intensive	Non intensive
Medium scale (25 -100 cattle)	7	-	7	7	-
Large scale (> 100 cattle)	1	-	1	1	-
TOTAL	8	-	8	8	-

"Main Type" and "Secondary Type" of livestock are determined by comparing the scale of different livestock activities on the parcel and does not represent primary agricultural activity.

"Intensive" livestock activities utilize specialized structures such as barns, feedlots and stockyards designed for confined feeding at high stocking densities.

"Non Intensive" livestock activities allow animals to graze on a pasture and often utilize non intensive barns and corrals/paddocks.

Table A11. Distribution of dairy activities by parcel size and scale

Parcel Size (ha)	Scale of dairy activities				Total number of activities
	Very small (1 cow)	Small (2-25 cattle)	Medium (25-100 cattle)	Large (> 100 cattle)	
< 1	-	-	-	-	-
1 - 2	-	-	-	-	-
2 - 4	-	-	1	-	1
4 - 8	-	-	2	1	3
8 - 16	-	-	2	-	2
16 - 32	-	-	2	-	2
32 - 64	-	-	-	-	-
64 - 128	-	-	-	-	-
>= 128	-	-	-	-	-
TOTAL NUMBER OF ACTIVITIES	-	-	7	1	8
AVERAGE PARCEL SIZE (ha)	-	-	11 ha	8 ha	11 ha

Figure A3. Distribution of dairy activities by parcel size and scale

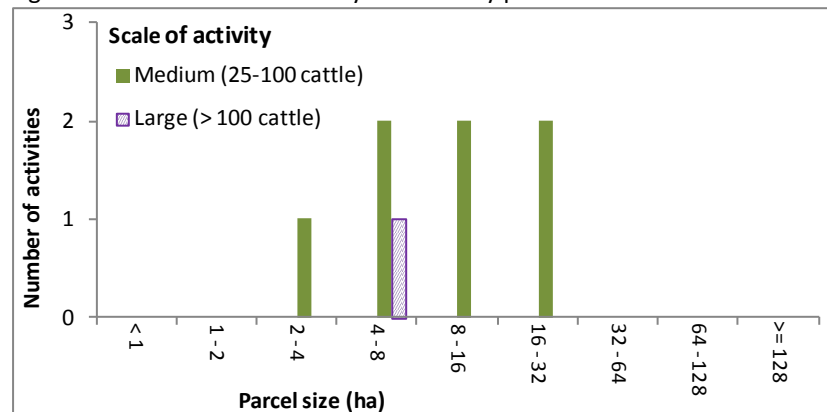


Figure A4. Land cover on parcels with dairy activities

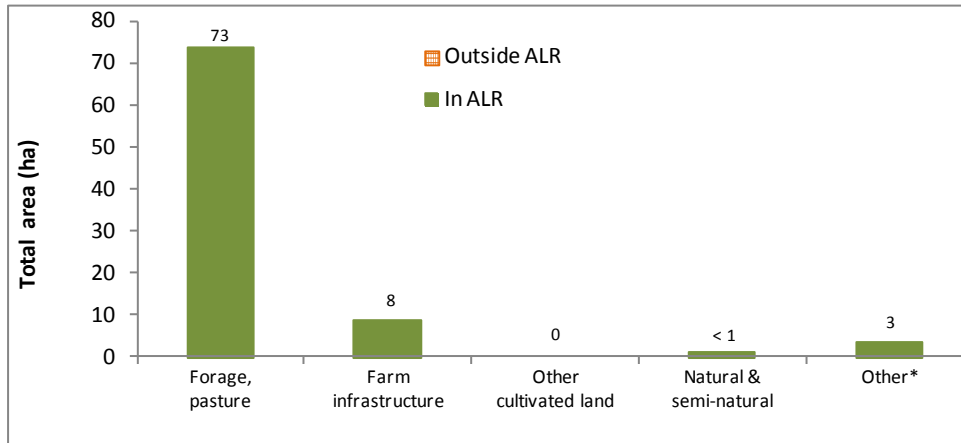


Table A12. Equine activities

Type of activity	Scale of equine activity	By parcel		Total number of activities	By activity type	
		Main Type	Secondary Type		Intensive	Non intensive
	Very small scale (1 horse)	5	1	6	-	6
Recreation	Very small scale (1 horse)	3	-	3	-	3
	Small scale (2-25 horses)	6	-	6	-	6
Recreation	Small scale (2-25 horses)	18	-	18	-	18
Recreation	Medium scale (25-100 horses)	2	-	2	-	2
Sporting / racing Boarding	Medium scale (25-100 horses)	1	-	1	-	1
TOTAL	TOTAL	35	1	36	-	36

"Main Type" and "Secondary Type" of livestock are determined by comparing the scale of different livestock activities on the parcel and does not represent primary agricultural activity.

"Intensive" livestock activities utilize specialized structures such as barns, feedlots and stockyards designed for confined feeding at high stocking densities.

"Non Intensive" livestock activities allow animals to graze on a pasture and often utilize non intensive barns and corrals/paddocks.

Table A13. Distribution of equine activities by parcel size and scale

Parcel size (ha)	Scale of equine activities				Total number of activities
	Very small (1 - 2 equine)	Small (2 - 25 equine)	Medium (25 - 100 equine)	Large (> 100 equine)	
< 1	-	-	-	-	-
1 - 2	1	-	-	-	1
2 - 4	4	17	1	-	22
4 - 8	4	4	-	-	8
8 - 16	-	2	-	-	2
16 - 32	-	1	2	-	3
32 - 64	-	-	-	-	-
64 - 128	-	-	-	-	-
>= 128	-	-	-	-	-
TOTAL NUMBER OF ACTIVITIES	9	24	3	-	36
AVERAGE PARCEL SIZE (ha)	4 ha	5 ha	15 ha	-	5 ha

Figure A5. Distribution of equine activities by parcel size and scale

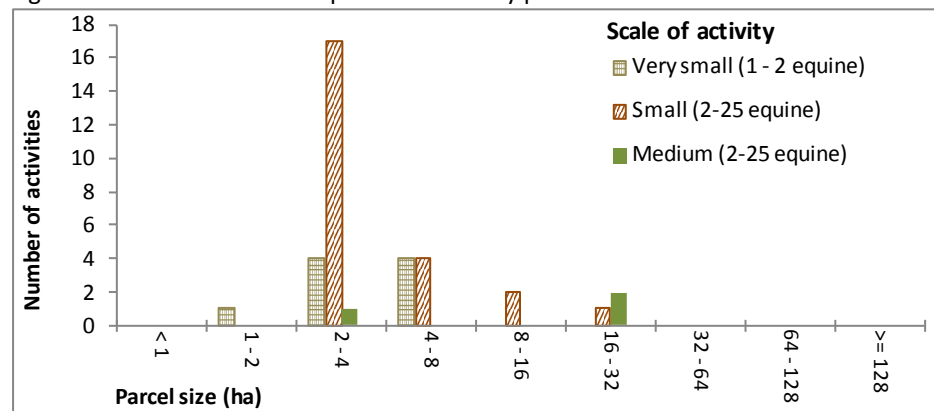
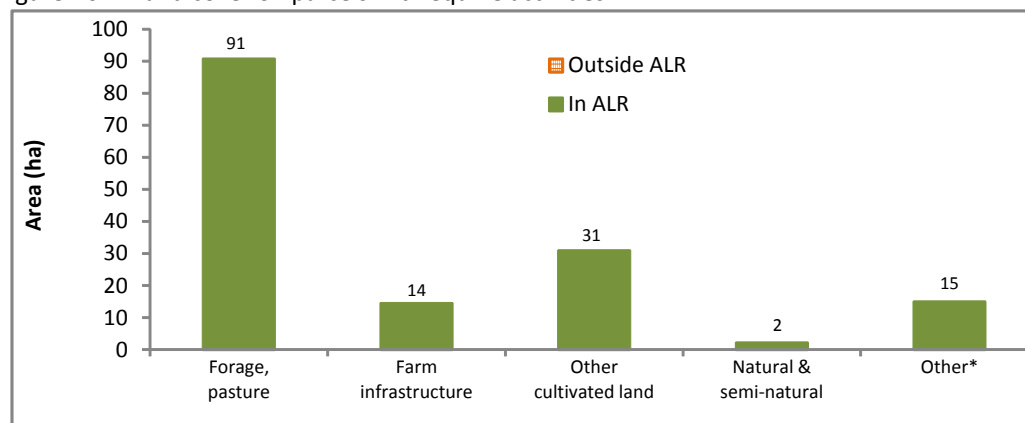


Figure A6. Land cover on parcels with equine activities



* Other includes vegetated lands seeded or planted for landscaping, dust, or soil control but not cultivated for harvest or pasture, lands covered by built objects but not farm infrastructure, and bare areas such as piles, pits, fill dumps.

VALUE ADDED

Table A14. Value added activities

Value added	Description	Scale of activity			Total number of activities	Average parcel size (ha)
		Small scale	Medium scale	Large scale		
Direct sales	Permanent retail store	-	3	2	5	12
Direct sales	Seasonal store (stand)	1	3	-	4	7
Direct sales	U-pick	-	1	1	2	12
Processing	Crop processing	-	-	2	2	13
Processing	Meat processing	-	1	-	1	15
Processing	Wine / cider processing	-	1	-	1	8
TOTAL NUMBER OF ACTIVITIES		1	9	5	15	

Table A15. Distribution of value added activities by parcel size

Parcel size (ha)	Direct Sales			Processing			Total number of activities
	Permanent retail store	Seasonal store (stand)	U-pick	Crop processing	Meat processing	Wine / cider processing	
< 1	-	-	-	-	-	-	-
1 - 2	-	-	-	-	-	-	-
2 - 4	2	1	-	-	-	-	3
4 - 8	1	-	-	-	-	1	2
8 - 16	1	3	2	2	1	-	9
16 - 32	-	-	-	-	-	-	-
32 - 64	1	-	-	-	-	-	1
64 - 128	-	-	-	-	-	-	-
>= 128	-	-	-	-	-	-	-
TOTAL NUMBER OF ACTIVITIES	5	4	2	2	1	1	15
AVERAGE PARCEL SIZE (ha)	12 ha	7 ha	12 ha	15 ha	15 ha	8 ha	12 ha

Table A16. Distribution of direct sales by parcel size and scale

Parcel size (ha)	Permanent retail store		Seasonal store (stand)		U-pick		Total number of activities
	Medium scale	Large scale	Small scale	Medium scale	Medium scale	Large scale	
< 1	-	-	-	-	-	-	-
1 - 2	-	-	-	-	-	-	-
2 - 4	1	1	1	-	-	-	3
4 - 8	1	-	-	-	-	-	1
8 - 16	1	-	-	3	1	1	6
16 - 32	-	1	-	-	-	-	1
32 - 64	-	-	-	-	-	-	-
64 - 128	-	-	-	-	-	-	-
>= 128	-	-	-	-	-	-	-
TOTAL NUMBER OF ACTIVITIES	3	2	1	3	1	1	11
AVERAGE PARCEL SIZE (ha)	6 ha	22 ha	3 ha	9 ha	9 ha	15 ha	10 ha

Table A17. Distribution of processing by parcel size and scale

Parcel size (ha)	Crop processing	Meat processing	Wine / cider processing	Total number of activities
	Large scale	Medium scale	Medium scale	
< 1	-	-	-	-
1 - 2	-	-	-	-
2 - 4	-	-	-	-
4 - 8	-	-	1	1
8 - 16	2	1	-	3
16 - 32	-	-	-	-
32 - 64	-	-	-	-
64 - 128	-	-	-	-
>= 128	-	-	-	-
TOTAL NUMBER OF ACTIVITIES	2	1	1	4
AVERAGE PARCEL SIZE (ha)	13 ha	15 ha	8 ha	12 ha

Appendix B - Maps