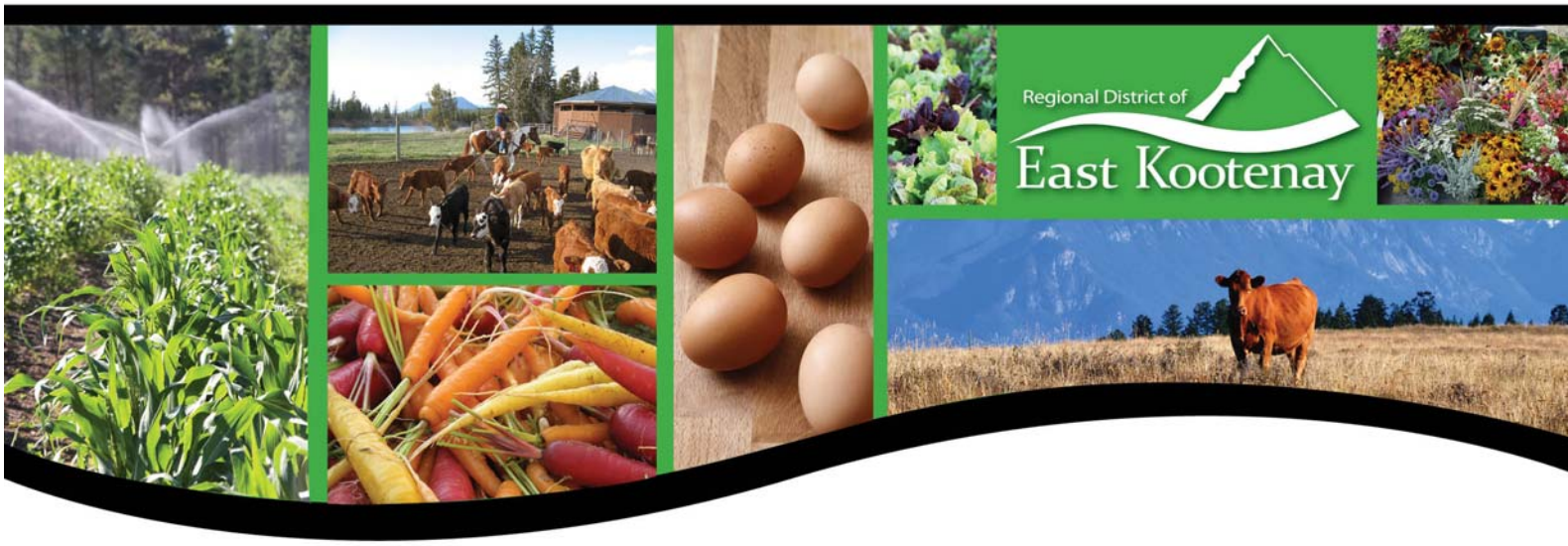

RDEK Agricultural Plan

Background Report

August 2013

Submitted By:
VAST Resource Solutions Inc.

With Funding From:

Canada

Investment Agriculture Foundation of British Columbia

BRITISH COLUMBIA

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The East Kootenay Agricultural Plan is being developed as a collaborative process involving consultation with local residents, government agencies and local stakeholders. The East Kootenay Agriculture Plan Steering Committee (APSC), comprised of residents of the agricultural community from various Electoral Areas in the region, work in conjunction with the agricultural consultant to provide direction to the planning process. We wish to thank the following participants for their contribution and commitment, which has been instrumental to the development of this report.

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Agriculture and Agri-Food Canada, the BC Ministry of Agriculture and the Investment Agriculture Foundation of BC, are pleased to participate in the delivery of this project. We are committed to working with our industry partners to address issues of importance to the agriculture and agri-food industry in British Columbia. Opinions expressed in this report are those of the authors and not necessarily those of the Investment Agriculture Foundation, the BC Ministry of Agriculture or Agriculture and Agri-Food Canada.

EXECUTIVE SUMMARY

The East Kootenay Agricultural Plan Background Report is the initial deliverable in a collaborative process that will result in an Agricultural Plan for the Regional District of East Kootenay (RDEK). This report presents the results of the agricultural land use inventory (ALUI) and census data research, community consultation and issue identification stages of the planning process. The Background Report provides the context for the development of policy initiatives and actions that can be undertaken by the RDEK to enhance, promote and sustain a viable agricultural sector in the region.

Agriculture has been an integral part of the East Kootenay way of life since initial settlement of the region more than 100 years ago. During the first half of the 20th century the region supported predominantly small scale farm operations producing a diversity of agricultural products including tree and bush fruits, vegetables, potatoes, poultry, eggs, milk and other dairy products, cereal grains, hay and Christmas trees, as well as beef cattle and sheep. Over the past 50 years, beef cattle ranching and forage production have become the dominant agricultural enterprise in the region.

Approximately 9.6% (265,910 ha) of the total RDEK land base, primarily along the valley bottoms of the Columbia, Kootenay, and Elk River drainages, is considered agricultural land and designated to the Agricultural Land Reserve (ALR). Approximately one-third of the ALR land is privately owned, while the remainder is Crown owned and managed for multiple uses (i.e. grazing, wildlife, forestry, mining, etc.) rather than exclusively for agriculture. In terms of land use, approximately 8.8% (23,361 ha) of the ALR is associated with farming activity, with cultivated lands for field crop and tame forage production (10,757 ha) and livestock grazing on land with soil and/or topography limitations (11,823 ha) representing the major land uses. An additional 21.79% of the ALR (57,940 ha) is available and has potential for agriculture but is not presently being used, while another 15,890 ha (5.98%) with limitations for cultivated use is potentially available for livestock grazing. A large portion (157,008 ha) of the ALR was not inventoried due to access issues and other land uses. A majority of this land is Crown owned; most of this is likely associated with grazing leases.

While the total number of farms in the region has remained relatively static at approximately 395 farm units, the number of cattle ranching operations declined by 48% between 2001 and 2011. During this same time “other crop farming” operations, which primarily represents commercial hay production, has more than doubled. These changes reflect the impact of the 2003 Bovine spongiform encephalopathy (BSE) crisis on cattle prices, the resulting changes to the red meat inspection system and the general economic instability of the beef cattle sector during this period. Hog and sheep production has declined since 2001, while poultry and egg production has remained stable. Other animal production, primarily horses for pleasure/recreational use, has increased almost 62%. The vegetable and greenhouse/nursery sectors exhibited steady growth between 2001 and 2011, but still represent only a very small percentage of the total agriculture in the region.

According to census data, total gross farm receipts have remained relatively stagnant in the RDEK over the past 20 years, averaging approximately $14,624,000. During the same time period, gross farm receipts at the provincial level have experienced substantial growth (222%) and the provincial average gross receipts per farm is four times that of the East Kootenay region. Total farm business operating expenses in the RDEK have exceeded gross farm receipts in the past four census years (1996 through 2011), while the average ratio of operating expenses to farm receipts is 0.90 provincially, indicating overall industry profitability. The disparity between the RDEK and provincial performance reflects the soil and climatic limitations of the East Kootenay region. Almost 70% of the ALR in the region is comprised of agricultural capability class 5 and 6 lands, which are only suitable for perennial forage or natural grazing. This has resulted in an agricultural industry focused primarily on range beef cattle production with very limited crop or livestock diversification or value-added processing and marketing.

The consultation and engagement process utilized to gather and record information and input from agricultural producers and residents across the region identified eight broad themes:

- Agricultural extension, networking and support
- Producer/Consumer relationships
- Economic viability
- Marketing/Branding (developing a local/regional agri-food economy)
- Government policies and regulations
- Diversification and value-added opportunities
- Farm demographics and succession
- Land access, value and utilization

These themes will form the basis of the agricultural plan.

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ACRONYMS

AAC	Agricultural Advisory Commission
ALC	Agricultural Land Commission
ALR	Agricultural Land Reserve
ALUI	Agricultural Land Use Inventory
APC	Advisory Planning Commission
APSC	Agricultural Plan Steering Committee
CLI	Canada Land Inventory
RDEK	Regional District of East Kootenay

DEFINITIONS

Animal Unit Equivalent - A standard measurement used to compare forage consumption of different livestock types. One animal unit is approximately equal to one adult beef cow with or without an unweaned calf.

Crown owned – Crown owned includes parcels which are owned by municipal, provincial or federal governments.

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 (e.g. greenhouses). 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. 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.

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.

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.

1. INTRODUCTION

The development of an Agricultural Plan is an important opportunity for the Regional District of East Kootenay (RDEK) and the agricultural sector. Current and long range planning by the RDEK has worked to mitigate the impact of development on the agricultural land base; however, the need for long range planning for agriculture is recognized. The Agricultural Plan process will provide a unique opportunity to propose recommendations for regulations, plans and policies to support agricultural producers and the land base on which agriculture occurs.

The East Kootenay Agricultural Plan was initiated in the spring of 2011. The planning process is being led by the RDEK and an Agricultural Plan Steering Committee (APSC) comprised of members of the farm community, including local ranchers, producers, farmers and business owners. The steering committee provides technical advice and input to the planning process in addition to liaising with the agricultural community. An outline of the process is provided in Figure 1. The Background Report presents the results of the agricultural land use inventory (ALUI) and census data research, community consultation and issue identification stages. A final report, the Agricultural Plan, will provide policy strategies and recommendations to address relevant issues and opportunities.

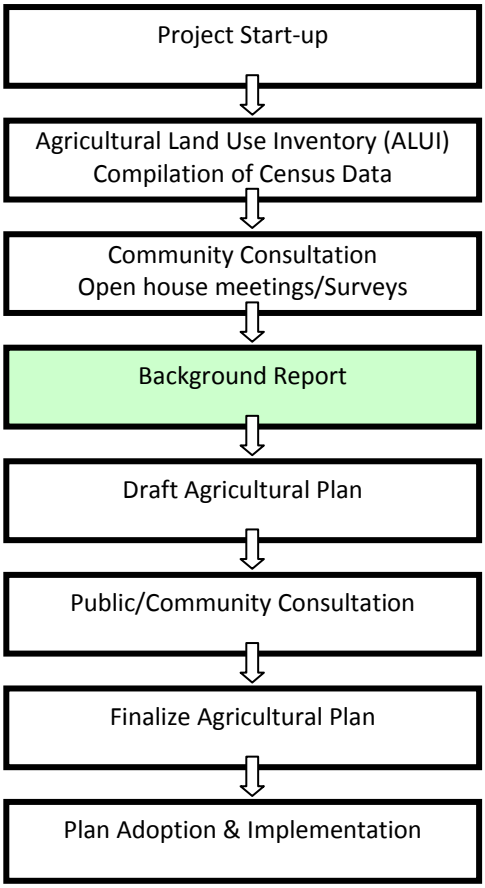

Figure 1. East Kootenay Agricultural Plan development process

1.1 Purpose

The Agricultural Plan will explore the opportunities available to the RDEK and the agricultural community to foster, adapt and sustain agriculture within each of the three sub-regions of the RDEK (Figure 2).

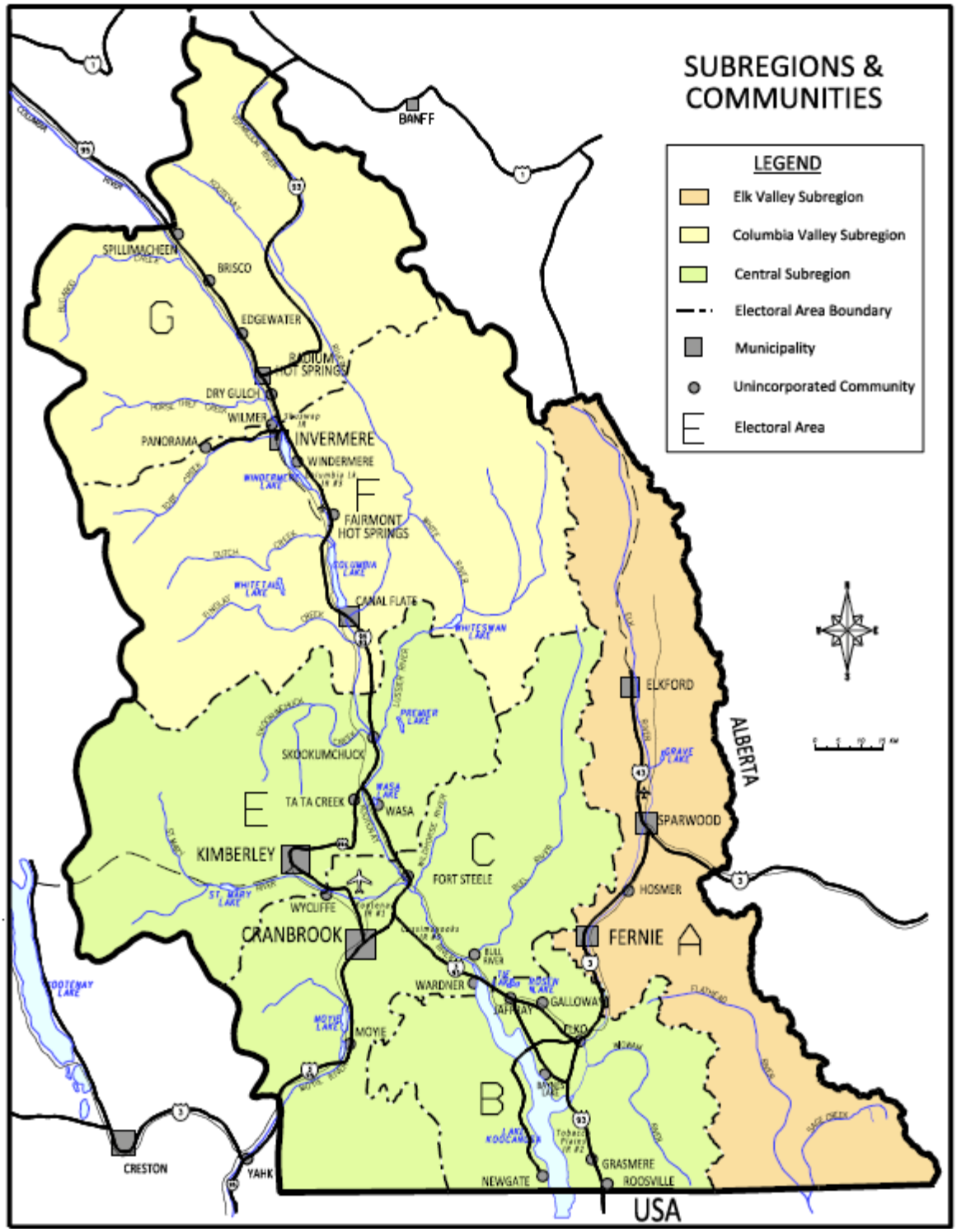

Figure 2. Regional District of East Kootenay Sub-regions and Communities

1.2 Goals and Objectives

The specific objectives for the Agricultural Plan as outlined in the Terms of Reference for the project are as follows:

- Identify a clear vision for the future of agriculture within the East Kootenay region;
- Identify actions and short and long term indicators that can be undertaken by the RDEK and/or the agricultural sector to enhance, promote and protect agriculture;
- Provide recommendations to amend RDEK bylaws, plans, policies to reflect the goals of the Agricultural Plan;
- Provide recommendations to changes in Provincial legislation, regulations and policies to reflect the goals of the Agricultural Plan;
- Recognize the strengths and weaknesses of the agricultural resources in the region and focus on potentially viable, sustainable and diversified agricultural endeavours; and
- Provide a recommendation to the RDEK Board on the future composition and role of the RDEK Agricultural Advisory Commission (AAC).

1.3 Priorities

A range of issues drive the need to have an Agricultural Plan in the region. The four priority issues below introduce the preliminary themes identified by the APSC, and their context.

The People

A successful agricultural sector requires informed, educated and engaged producers and consumers. Successful producers are essential for agriculture to be maintained as a viable industry. In order for current and future producers to succeed, consumers need to have a greater awareness of agriculture and a broader understanding of the societal benefits associated with a viable and sustainable agricultural sector.

The Place

The geography and culture of the East Kootenay region has defined the agricultural sector. The protection and preservation of the land base is essential to sustaining agriculture in the region. Land under private and public ownership must be accessible and productive for future generations. A balance must be sought between the use of land for agriculture and other resource values that influence the viability of agriculture activities. The connectivity between resources, including recreation, water, and wildlife is a key component in maintaining an agricultural sector. The management of Crown resources must recognize the overarching impact of decisions on the viability of agriculture. For example, the potential for the disruption of the natural forest cycle through forest management practices and the resulting change in ground cover and water resources. Opportunities for utilization of land in a manner that recognizes the importance of integrated and inclusive resource management planning to ensure the maintenance of healthy and sustainable ecosystems is imperative.

The Pressures

The agricultural land and producers within the region are subject to a range of pressures. Lands that are most suitable for agriculture are also the most desired for development. The continuing demand for residential and non-residential uses, frequent ALR applications for non-farm use, subdivision and exclusion and rising land values are placing pressure on agricultural land resources. Seasonal populations provide a greater market for produce and value-added agricultural products; however, new residential development may remove arable land from the agricultural land base.

The economics of agriculture in the East Kootenay region is placing pressure on producers. Low commodity prices, high input and transportation costs, and a limited local independent market have resulted in marginal economic viability. When combined with changes in regulations over recent years the impact has been significant. The commercialization of meat processing and centralization of the food distribution system are two such examples of regulatory changes. The Agricultural Plan provides an opportunity to examine the pressures being experienced within the agricultural sector. Emphasis will be given to recommending changes that would facilitate the agricultural sector adapting and diversifying in a timely manner.

The Possibilities

The Agricultural Plan will proactively explore the possibilities that exist to enhance the economic viability of the agricultural sector in the East Kootenay region. The intent is to identify where the agricultural sector can capitalize on consumer awareness, market trends and opportunities. In order to be successful, there must be flexibility and adaptability in the regulations that govern the agricultural sector at the provincial and local government levels. The Plan is an opportunity to bridge the divide between producers and consumers, generations of producers and between producers within the region. The Agricultural Plan will also be an opportunity to foster dialogue and a shared understanding between the RDEK and the agricultural sector. Connectivity within the region must be cultivated in order to capitalize on opportunities to create a sense of agricultural identity in the East Kootenay through branding and marketing.

2. AGRICULTURE IN THE EAST KOOTENAY

Agriculture is an integral part of the East Kootenay way of life. Prior to European settlement, local First Nations people utilized the land. In the late 1800s land was marketed to the original European settlers as agricultural property under the Pre-emption Act and they undertook subsistence farming activities. Over time, cultivated agriculture expanded to include mixed production and utilization of Crown range land to meet local needs for agricultural goods. During the first half of the 20th century the region supported predominantly small scale farm operations producing a diversity of agricultural products including tree and bush fruits, vegetables, potatoes, poultry, eggs, milk and other dairy products, cereal grains, hay and Christmas trees, as well as beef cattle and sheep. Over the past 50 years, beef cattle ranching and forage production have become the dominant agricultural enterprise in the region.

Agriculture throughout the RDEK has adapted to the topography in recognition of the constraints of soil capability and climate. Agricultural land is primarily along the bottom of the Rocky Mountain Trench. Mountains rise sharply on either side in the Columbia and Elk valleys and development and agricultural activities are restricted to a ribbon of land along the length of the valleys. The Trench is much broader in the central region extending south to the United States border, facilitating wider spread agricultural activity.

Agriculture is an important economic activity throughout the RDEK. Recent trends have focused on the importance of locally grown or produced food. However, the impact of wildlife on crops and livestock, current economic trends, development pressure on agricultural land, the emergence of global vertically integrated commercial food distribution system, consumer habits and government regulations continue to challenge the local agricultural sector.

2.1 History

Historical accounts of agriculture in the East Kootenay are documented in the various community history books that have been published throughout the region. A few highlights are summarized below:

Brisco and Spillimacheen

- As early as 1893, potato yields of 20,000 pounds per acre, wheat yields of 40 bushels per acre and timothy hay yields of two to three tons per acre were reported.
- In 1902 the Fortress Ranch sold 300 dozen eggs between January 1 and September 5, using 70 dozen more on the ranch.
- Water rights for agricultural irrigation were initially registered on Brisco Creek in 1892.
- A Farmer's Institute, the Brisco Branch of the United Farmers Association of BC, was formed in April, 1919 with 12 members.
- Most farmers kept some dairy cattle and regular shipments of cream were made to the Invermere Creamery (built in 1920) and the Golden Creamery (built in 1915).
- Beef, eggs, dairy products, vegetables and fruits were sold to the construction camps of the Big Bend Highway project in the 1930s.

Windermere Valley

- Small mixed farms were established by miners, prospectors, storekeepers and blacksmiths in the late 1800s and early 1900s, primarily to meet their own food needs.
- The Columbia Valley Irrigated Fruitlands Limited (CVI) was established in 1908, and by 1911, 15,000 acres of the area were irrigated for crop and orchard production via a flume system, some of which is still operational.
- A Dominion of Canada Experimental Farm, one of only three in BC, operated in the Windermere valley from 1911 until the late 1930s. By 1915, 73 apple varieties, eight pears, 14 plums, 24 varieties of white, red and black currants, 40 varieties of potatoes and numerous other fruits and vegetables were planted at the experimental farm. The farm was also home to various breeds of chickens, turkeys and geese.
- The Windermere District Farmers' Institute was established in July of 1914 and is still in operation today.

Marysville

- Marysville Dairy, established in 1911 with the purchase of two dairy cow calves, gradually built up a milking herd and in 1925 was purchased by the Consolidated Mining and Smelting Company (Cominco). The company expanded the business, importing Ayrshire cattle and building barns, a silo, a dairy plant, a residence for their manager and a bunk house and cook house for employees. In 1943, when the government insisted that all milk be pasteurized, City Milk Distributors was built in Kimberley and all milk from the surrounding area, including the Marysville Dairy, Mountain View Dairy, Cherry Creek Dairy and Houle's Dairy was processed at this plant. By 1951, Marysville Dairy included 125 cows. In August, 1957, the complete operation was destroyed by fire. City Milk Distributors eventually sold to a firm in Creston, BC, bringing an end to an industry that operated in the area for 45 consecutive years.

Cranbrook and District

- *From the Herald Press, 1907*
  - Hay, oats, barley, rye, wheat, corn, potatoes, carrots, turnips, beets, cabbages, in fact all grain and roots flourish.
  - In the immediate vicinity of Cranbrook are bottom creek lands unsurpassed for market gardening and bush fruit culture and at a slightly lower altitude grapes have come to maturity.
  - Fruits of all kinds mature in the district, apples and plums in particular doing exceedingly well. Strawberries grow of a size and flavour not to be excelled.
  - Large areas of lightly timbered, park-like land, almost entirely free of underbrush, exist and are available for grazing of cattle, horses and sheep.

- The cutting of Christmas trees began in the region in 1932 when the BC Forest Service made annual permit lots of two to three thousand trees available to farmers. Between the 1930s and 1950s many local women found seasonal employment in Christmas tree yards, sorting, grading and baling trees. According to Agriculture Canada records, approximately

4,543,000 Christmas trees, valued at $1,492,880 were shipped from the East Kootenay region between 1946 and 1954. In 1955, 143 boxcars of trees were shipped from Cranbrook with each carload made up of approximately 1,000 bales of 24 trees graded according to size. Tree farms in the East Kootenay account for nearly ¾ of BC's annual production and have made the region a major export producer in Canada.

Jaffray, Galloway, Sand Creek

- Potatoes were a staple crop and yields of 20 tons per acre were reported in the early 1900s.
- Local dairies (Barr Dairy, Sand Creek Dairy) shipped cream to the Invermere Creamery.
- The Waldo Stockbreeders Livestock Association was formed in 1939 to address the issue of wild horses damaging Crown range. The association was instrumental in obtaining range tenure for ranchers in the area, developing a strong Christmas tree industry, bringing electric power to the local area, and the formation of the South Country 4-H club. Waldo Stockbreeders built the Elko cattle auction sales yard in 1942 and held sales until 1953. The association is still active today.

South Country

- The area was noted for prize-winning seed potato production.
- Newgate Farmers Institute, 1915 – 1949. Responsible for bringing phone service, improved roads, animal range control, irrigation control, veterinary assistance, improved mail service and a youth calf club to the South Country
- Christmas tree harvest played a major role in the agricultural economy. Starting in the 1930s and peaking in the 1960s, farmers and ranchers relied on this source of revenue to augment their income while building up their cattle herds and modernizing their equipment.

2.2 Agricultural Resources

2.2.1 Climate

Climate constitutes the basic limitation for agricultural land uses regardless of soil conditions. Thus, it forms the basis for agricultural capability ratings. The East Kootenay area, due to its mountainous terrain, includes a wide variety of climates, categorized into climate capability for agriculture classes on the basis of freeze free period, number of growing degree days above $5^{o}C$, climatic moisture deficit (or surplus) and typical crop ranges. The classification system utilizes a numeric system with Class 1 having the highest climatic capability and Class 7 having the lowest (Table 1). Fairly extensive areas of Class 2 occur on the floor of both the Rocky Mountain Trench and the Elk Valley below Sparwood. Raspberries, strawberries and warm season vegetables such as lettuce, carrots, beets, radishes and turnips can be successfully grown in these areas. Class 3 climates also occur on valley floors, but further into the mountains and at slightly higher elevations. Typical crops that can be grown include cool season vegetables such as potatoes, lettuce, peas, spinach, cauliflower and cabbage. The shorter freeze free period of Class 4 permits only the cultivation of hardy varieties of cool season vegetables and forage crops. Only forage crops can be produced in a Class 5 climate. At higher elevations, only native forages suitable for grazing can be grown. Table 2 indicates the climatic capability for agriculture classes for selected atmospheric environment stations in the RDEK with long-term climatological data.

Table 1. Climatic Capability Classification System for BC.

Climatic Capability Class	FFP Freeze Free Period (days)	GDD Growing Degree Days above 5°C	CMD Climatic Moisture Deficit (mm)	Range of Suitable Crops
1a	120 – 150	1505 – 1779		Apples, strawberries, raspberries, beans, asparagus, tomatoes, lettuce, potatoes, corn, carrots, beets, radish, peas, onions, leeks, spinach, cauliflower, cabbage, broccoli, turnips, Brussel sprouts, Swiss chard, cucumbers, kohlrabi, parsnips, pumpkin, rhubarb, squash, cereal grains and forage crops
1	90 – 119	1310 – 1504	< 40	Tree fruits, strawberries, raspberries, beans, asparagus, tomatoes, lettuce, potatoes, corn, carrots, beets, radish, peas, onions, leeks, spinach, cauliflower, cabbage, broccoli, turnips, Brussel sprouts, Swiss chard, bulbs, filberts, cucumbers, kohlrabi, parsnips, pumpkin, rhubarb, squash cereal grains and forage crops
2	75 – 89	1170 – 1309	40 - 115	strawberries, raspberries, asparagus, lettuce, potatoes, carrots, beets, radish, peas, leeks, spinach, cauliflower, cabbage, broccoli, turnips, Brussel sprouts, Swiss chard, cereal grains and forage crops
3	60 – 74	1030 – 1169	116 – 190	strawberries, raspberries, lettuce, potatoes, peas, spinach, cauliflower, cabbage, cereal grains, forage crops
4	50 – 59	1030 – 1169	191 – 265	Hardy varieties of cool season vegetables (lettuce, peas, spinach, cabbage), forage crops and periodic production of cereal crops
5	30 – 49	780 – 1029	266 – 340	Forage crops
6	< 30	670 – 779	341 – 415	Browse/grazing of native species
7	< 30	< 670	> 415	No potential for agricultural crops

Source: Climatic Capability Classification for Agriculture in British Columbia.

Table 2. Climatic parameters and capability classification for selected weather stations.

Weather Station Location	Climatic Parameters					Climatic capability classification	
	GDD **Growing Degree Days above 5°C**	***FFP*** **Freeze Free Period (days)**	***P*** **Growing Season Precipitation (mm)[1]**	***PE*** **Potential Evapo-transpiration (mm)[1]**	***CMD*** **Climatic Moisture Deficit (mm)[2]**	**Thermal Class**	**Moisture Class[3]**
Aberfeldie	1687	132	229	470	- 241	1aF	4A
Cranbrook	1550	91	179	532	- 353	1F	6A
Elko	1709	131	261	461	- 200	1aGF	4A
Fernie	1336	98	304	432	- 128	1GF	3A
Golden	1572	103	178	537	- 359	1F	6A
Kimberley	1530	92	163	540	- 377	2F	6A
Sparwood	1268		302	589	- 287	-	-

Source: Environment Canada - National Climate Data and Information Archive; Climatic Capability Classification for Agriculture in BC

[1] May 1 to September 30

[2] CMD = P – PE

[3] Refer to Section 2.1.2 for CLI Class/Subclass definitions

Capability class limitations:

A: Drought or aridity occurring between May 1 and Sept 30 results in moisture deficits that will limit plant growth

F: Minimum temperature near freezing will adversely affect plant growth during the growing season

G: Insufficient heat units (GDD) during the growing season

1a: FFP = 120 – 150 days; GDD = 1505 to 1779; full capability can only be achieved if supplemental water is applied

Climatic class ratings for various locations in each RDEK subregion are provided in Table 3. Both dryland and irrigated ratings are provided, as well as the major reason (limitation) for downgrading climatic capability. Irrigated ratings improve the overall climatic rating by one class where droughtiness is a component of the climatic limitation (e.g. Upper Columbia Valley below 1000 metres), but not in locations where a short frost-free period is the primary limiting factor (e.g. Moyie River Valley). Soil limitations, discussed in section 2.1.2, are applied in conjunction with the climate rating to determine the overall agricultural capability.

Table 3. Climatic capability classification ratings for selected locations in the RDEK.

Location	Dryland	Irrigated	Limitation
Elk Valley subregion			
▪ Hosmer south	1	1	
▪ Hosmer – Sparwood	2C	2C	short frost-free period
▪ Sparwood – Fording Mtn	3C	3C	short frost-free period
▪ Fording Mtn north	5C	5C	short frost-free period
▪ Flathead Valley – 1500 m	5C	5C	short frost-free period
Central subregion			
▪ Moyie River Valley	3C	3C	short frost-free period
▪ St. Mary River Valley			
- West to White/Dewar Creeks	3C	3C	short frost-free period
- East of St. Mary Lake	2C	1	droughtiness
- All other areas	5C	5C	short frost-free period
▪ Kootenay Valley – below 1000 m	2C	1	droughtiness
▪ Whiteswan Lake	3C	3C	short frost-free period
▪ Upper Kootenay – above 1200 m	5C	5C	short frost-free period
Columbia Valley subregion			
▪ Upper Columbia Valley – below 1000 m	2C	1	droughtiness
▪ Frances Creek Valley	3C	3C	short frost-free period
▪ Horsethief/Toby Creek – 1375 m	3C	3C	short frost-free period
▪ Spillimacheen Valley – 1375 m	3C	3C	short frost-free period
▪ Beaverfoot Valley	5C	5C	short frost-free period

Source: Lands of the East Kootenay, 1969.

2.2.2 Potential Effects of Climate Change

The majority of climate scientists consider that climate change is a real phenomenon occurring due to many factors, including the impacts of greenhouse gas emissions and human activity on the environment. An appropriate strategic response is critical for agriculture in the East Kootenay. There are significant opportunities for agriculture to assist in the mitigation of effects through changes in practices and adoption of technologies. The threat is that changes to climate may trigger more volatility in growing conditions and create constraints on agricultural resource availability in the future. Many East Kootenay farming operations are dependent on

stream flows or stored water from glacier and snow melt runoff delivered to crops via irrigation during summer when precipitation and stream flow is lowest.
A project commissioned by the Water Initiatives Program of the Columbia Basin Trust, with the assistance of the Pacific Climate Change Impact Consortium and a number of other scientific researchers, identified preliminary climate change impact and adaptation strategies for a variety of economic sectors including agriculture.

Relevant likely Environmental Changes and Possible Impacts on Agriculture	Potential Adaptations
▪ Warmer temperatures and less summer precipitation may reduce soil moisture and increase evaporation, increasing irrigation needs at the same time of year that stream flows are expected to decline. ▪ Warmer temperatures will increase the length of the growing season, potentially increasing crop moisture needs, and requirements for irrigation ▪ Warmer temperatures may improve the potential for high value crops, but this will be realized only if sufficient water is available ▪ Extreme events and more intense precipitation increases the potential for soil erosion and crop damage ▪ Smoke from wildfires may damage crops ▪ Warmer temperatures may favour weeds, insects and plant diseases.	▪ More efficient irrigation (e.g. drip, scheduling, leak repair) ▪ Construct additional water storage facilities ▪ Crop diversification ▪ Grow higher value crops with low water needs ▪ Update erosion control practices ▪ Enhanced monitoring and refined practices to minimize damage from weeds, insects and diseases

Source: Climate Change in the Canadian Columbia Basin - Starting_the_Dialogue

2.2.3 Soils and Agricultural Capability

The ability of any area to produce agricultural crops is based on limitations of the soil and climate. In many cases, soils can be improved by management inputs such as drainage, irrigation, and fertilization; however climate will ultimately limit the range of suitable crops for a geographic region. Land capability for agriculture ratings are determined by climatic capability for agriculture in combination with soil characteristics that limit the range of regionally suited crops. Distance to markets, available transportation infrastructure (roads, rail, etc), location, size of farms, characteristics of land ownership, cultural patterns and the skill or resources of individual farmers are not criteria for determining agricultural capability.

The Canada Land Inventory (CLI) classification system groups the general suitability of soils for agricultural use into seven classes based on their relative degree of limitation or hazard. The intensity of the limitations or hazards becomes progressively greater from Class 1 to Class 7 as does the need for management practices to overcome the limitations. The classes, which indicate the relative capability of the land for agricultural use, include:

Class 1	no or only very slight limitations that restrict use for the production of common agricultural crops;
Class 2	minor limitations that require good ongoing management practices and/or slightly restrict the range of crops;
Class 3	limitations that require moderately intensive management practices and/or moderately restrict the range of crops;
Class 4	limitations that require special management practices and/or severely restrict the range of crops;
Class 5	limitations that restrict its capability to producing perennial forage crops and/or other specially adapted crops;
Class 6	non-arable but is capable of producing native and/or uncultivated perennial forage crops; and
Class 7	no capability for arable agriculture or sustained natural grazing.

Capability subclasses are used to indicate lands with similar kinds but varying intensities of limitations and hazards. The BC Land Inventory system utilizes the following capability subclass limitations:

A	moisture deficiency (M in the CLI system)	P	stoniness
C	adverse climate	R	depth to consolidated bedrock
D	undesirable soil structure	S	combined limitations for A (or M), D, F and N
E	existing erosion damage	T	topography
F	low fertility	W	excess water
I	inundation by streams or lakes	X	cumulative minor adverse characteristics
N	salinity (soluble salts)	Z	permafrost

The generally mountainous topography of the East Kootenay region places a wide range of both climatic and soil limitations on the land capability for agriculture (Tables 4 and 5). Class 1 capability does not occur in the area, primarily because of marginal climate. Classes 2, 3 and 4 only occur on the floors of the Rocky Mountain trench and the Elk River Valley on stone-free, relatively fine to medium textured soils developed on fluvial fans, floodplains and glacio-lacustrine terraces with favourable topography. Class 5 soils occurs on the floors of larger valleys in the mountains (where climate is dominantly limiting), as well as in the Trench and Elk River Valley where soil limitations dominate. Class 6 and 7 soils occur throughout the mountainous areas, particularly on soils derived from colluvial deposits and on morainal materials (Lacelle, 1980; Wittneben, 1980). A sample CLI agricultural capability map for the Cranbrook – Kimberley – Fort Steele area is provided in Figure 3.

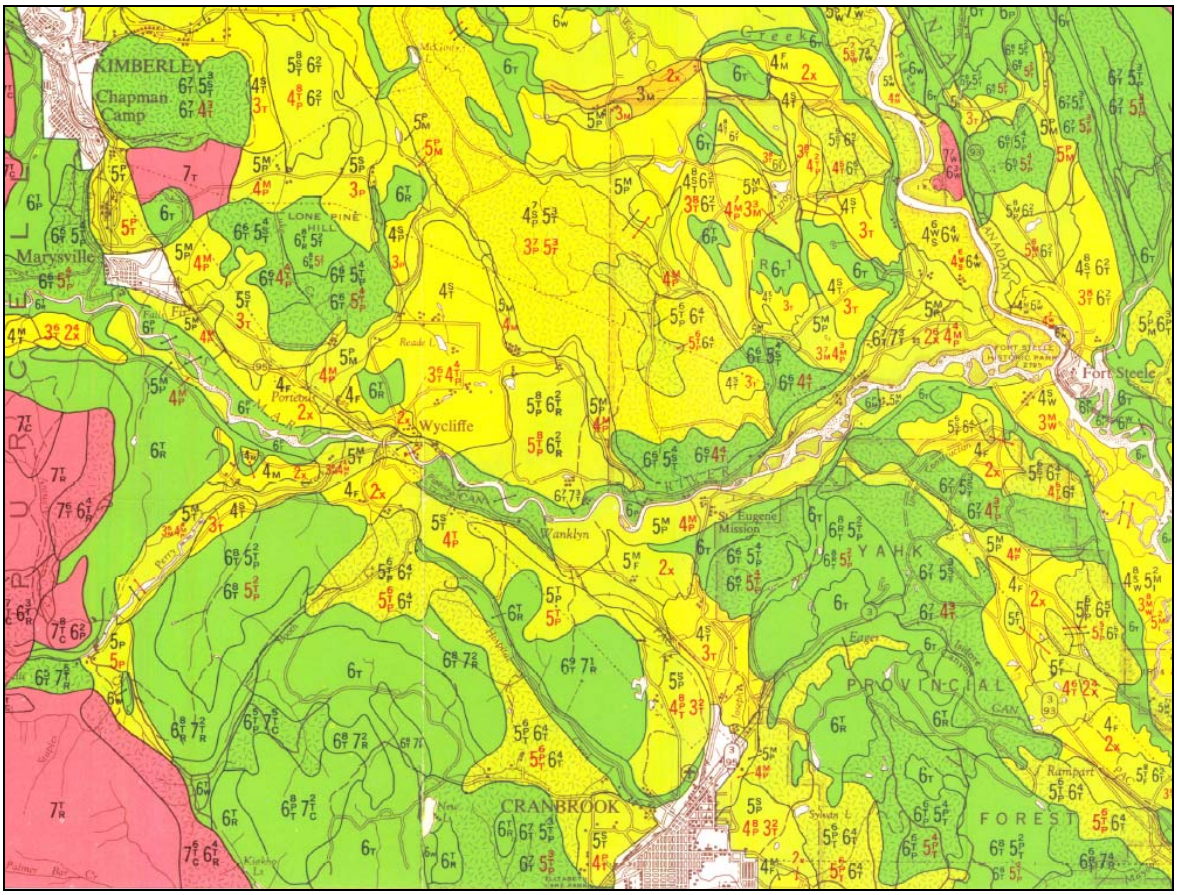

Figure 3. CLI map for the Cranbrook – Kimberley – Fort Steele area.

Table 4. Distribution of agricultural land capability classes (unimproved) in the RDEK.

	CLI Agricultural Capability Class (unimproved)							Water	Other	Total
	1	2	3	4	5	6	7			
RDEK[1] (ha)	0	798	8,623	68,787	221,051	554,091	1,808,774	17,665	135,974[3]	2,815,763
% of RDEK	0%	0.03%	0.31%	2.44%	7.85%	19.68%	64.24%	0.63%	4.83%	
ALR[2] (ha)	0	798	6,205	57,173	114,293	69,559	5,462		12,568[4]	266,058
% of ALR	0%	0.30%	2.33%	21.49%	42.96%	26.14%	2.05%		4.72%	

[1] *Source: Agricultural Land Capability in British Columbia, 1979.*
[2] *Source: BC Ministry of Agriculture, Canada Land Inventory 1:250,000 polygon mapping, 2011.*
[3] Other includes unclassified urban areas, national parks and unmapped portions of the district.
[4] Other includes unknown and/or unclassified areas.

Of the RDEK lands within the ALR, 24% are in CLI Classes 2 through 4 and considered capable of sustained production of common cultivates field crops. Class 5 lands, capable of use only for producing perennial forage crops or specially adapted crops, represent almost 43% of the land base in the ALR, while Class 6 lands capable of providing only sustained natural grazing for domestic livestock comprise 26% of the ALR. Class 7 lands, incapable of use for either arable culture or grazing, make up the remainder of ALR land in the RDEK.

Table 5. Area of agricultural land capability subclass limitations for ALR lands in the RDEK.

	CLI Agricultural Capability primary subclass limitation; ALR lands only*														
	A/M	**C**	**D**	**E**	**F**	**I**	**N**	**P**	**R**	**S**	**T**	**W**	**X**	**Other****	**Total**
ha	53,933	1,952	56		9,397	116	143	30,443	1,159	34,724	104,231	5,358	12,230	12,316	**266,058**
%	20.27%	0.73%	0.02%		3.53%	0.04%	0.05%	11.44%	0.44%	13.05%	39.18%	2.01%	4.60%	4.63%	
	Area with secondary subclass limitations*														
	A/M	**C**	**D**	**E**	**F**	**I**	**N**	**P**	**R**	**S**	**T**	**W**	**X**	**Other****	**Total**
ha		931		129	8,709	1,714	11,284	430	74,994	6,309	389	55,144	2,886		**162,918**
%		0.35%		0.05%	3.27%	0.64%	4.24%	0.16%	28.19%	2.37%	0.15%	20.73%	1.08%		**61.23%**

Source: .BC Ministry of Agriculture, Canada Land Inventory 1:250,000 polygon mapping, 2011.

* Subclass limitation definitions:
- A/M – moisture limitation (M is used in the CLI system)
- C - adverse climate
- D – undesirable soil structure
- E – erosion damage
- F - low fertility
- I - inundation by streams or lakes
- N – salinity (soluble salts)
- P - stoniness
- R – depth to consolidated bedrock
- S – soils with combined limitations for A (or M), D, F and N
- T - topography
- W - excess water
- X - cumulative minor adverse characteristics

** Other includes unknown and/or unclassified areas.

As summarized in Table 5, topography (T) is the predominant limitation to agricultural capability in the East Kootenay, impacting more than 39% of lands within the ALR. Other key limitations include soil moisture deficiency (A/M) and stoniness (P), which impact the capability of 20.2% and 11.4% of ALR land respectively. Approximately 61%, or 162,918 ha, of lands within the ALR also have secondary capability limitations; the most common (28%) being shallow depth of bedrock (R), followed by excess water (W), which affects 20.7% of the land.

2.2.4 Agricultural Land Base

A total of 272,510 ha of the RDEK were identified as "agriculture land" and designated to the ALR when the Agricultural Land Commission (ALC) Act was introduced (Table 6). Between 1974 and March 31, 2011 a total of 7,737 ha were excluded from the ALR by government, private and BC Cabinet appeal applications, while an additional 346 ha were included, resulting in a total ALR area of 265,119 ha as of March 31, 2011. When adjusted for conditionally approved applications that expired prior to approval conditions being met, the total area of the ALR in the East Kootenay was estimated at 266,058 ha as of April 1, 2011. Based on this data, the net reduction in the area of the ALR in the RDEK between 1974 and 2011 was approximately 2.4%.

Ancedotal information compiled by the regional Ministry of Agriculture Resource Stewardship Agrologist indicates that since October 2006, a total of 285 applications for exclusion, subdivision, non-farm use, aggregate extraction or fill placement have been submitted to the RDEK and/or ALC. Of these, only 25 (9%) were from individuals recognized as local agricultural producers, while the remainder (91%) were from individuals and developers not directly involved in agriculture. Of the 25 "agricultural" applications, 15 requested subdivision, four related to non-farm use, two were for exclusion, one for aggregate extraction, and the application category for the remaining three is unknown.

Table 6. Area Included and Excluded from the ALR in the RDEK, in hectares

ALR Area at Designation	Inclusions	Exclusions	ALR Area* at March 31, 2011	GIS ALR Area* at April 1, 2011
272,510	346	7,737	265,119	266,058

Source: ALC Annual Report 2009/10 & 2010/11

** The discrepancy between ALR Area at March 31/11 and GIS ALR Area at April 01/11 reflects conditionally approved applications that expired due to approval conditions not being met.*

In 2011, an agricultural land use inventory (ALUI) was conducted within the RDEK. This involved a "windshield survey" of each property and observation of land use, land cover, and agriculture activity. Where visibility of the property was limited, data was interpreted from aerial photography in combination with local knowledge. 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. 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 non-farm use with future farming activities.

According to ALUI data, the East Kootenay region has a total land and water area of 2,769,602 ha, of which 265,910 ha, approximately 9.6%, is Agricultural Land Reserve (Table 7). Approximately one-third of the ALR lands are privately owned, while the remaining 67% are Crown owned.

Table 7. Distribution of total land area and ALR area by RDEK subregion.

RDEK Subregion	Total Area (ha)*	ALR (ha)*	ALR as % of Total Area	% of ALR by Subregion
Central	1,180,919	178,066	15.08%	66.96%
Columbia Valley	1,091,639	73,083	6.69%	27.48%
Elk Valley	497,044	14,761	2.97%	5.56%
Total:	**2,769,602**	**265,910**	**9.60%**	**100%**

Source: BC Ministry of Agriculture. Land Use Inventory Reports 800.510-11.2013 (RDEK Columbia Valley), 800.510-12.2013 (RDEK Central Region), 800.510-77.2013 (RDEK Elk Valley).

** Total and ALR area discrepancies between this table and Tables 4, 5 and 6 are the result of minor RDEK and ALR boundary adjustments over time.*

Based on the ALUI data, the total actively farmed and available for farming area in the RDEK is about 107,672 ha, of which 97,190 ha (approximately 90%) is located within the ALR (Table 8). Approximately 8.8% (23,361 ha) of the ALR is associated with farming activity, with cultivated lands for field crop and tame forage production (10,757 ha) and livestock grazing on land with soil and/or topography limitations (11,823 ha) representing the major land uses. An additional 21.79% of the ALR (57,940 ha) is available and has potential for agriculture but is not presently being used, while another 15,890 ha (5.98%) with limitations for cultivated use is potentially available for livestock grazing. A large portion (157,008 ha) of the ALR was not inventoried due to access issues and other land uses. A majority of this land is Crown owned; the proportion that is currently utilized for livestock grazing under the Grazing Lease Program was not determined during the inventory.

Table 8. Agricultural Land Base of the Regional District of East Kootenay

Land Status for Agriculture	In ALR (ha)	% of Total ALR	Outside ALR (ha)	Total Area (ha)	% of Active and Available Area
A. Area actively farmed (not including pasture/rangeland)	**11,165**	**4.20%**	**469**	**11,634**	**10.80%**
Cultivated field crops (including tame forage)	10,757	4.05%	436	11,193	10.40%
Farm Infrastructure (barns, sheds, corrals, bins, etc.)	405	0.15%	32	437	0.41%
Greenhouses	3	0.00%	1	4	0.00%
B. Area supporting farming	**208**	**0.08%**	**7**	**215**	**0.20%**
Residential (main residence, yard, parking, driveways)	137	0.05%	4	141	0.13%
Transportation (roads, railways, etc.)	63	0.02%	3	67	0.06%
Other (built structures, artificial water bodies, etc.)	7	0.00%	< 1	8	0.00%
C. Area with limitations - actively used for grazing	**11,988**	**4.51%**	**2,169**	**14,157**	**13.15%**
Soils and/or topography	11,823	4.45%	2,033	13,857	12.87%
Flooding and/or drainage	133	0.05%	134	268	0.25%
Operational (size, shape, location, adjoining land use)	31	0.01%	1	33	0.03%
D. Total area actively used for agriculture (A+B+C):	**23,361**	**8.79%**	**2,645**	**26,006**	**24.15%**
E. Area available and with potential for farming	**57,940**	**21.79%**	**5,474**	**63,414**	**58.90%**
Managed vegetation (parks, golf courses, lawns, etc.)	255	0.10%	22	277	0.26%
Non Built, Bare, Wetlands, etc.	26	0.01%	4	30	0.02%
Natural & Semi-natural vegetation (forest/shrub cover)	20,894	7.86%	1,980	22,875	21.24%
Natural pasture or rangeland	36,327	13.66%	3,394	39,721	36.89%
Unmaintained field crops	111	0.04%	7	118	0.11%
Unused forage or pasture	326	0.12%	68	394	0.37%
F. Area available with limitations – grazing potential	**15,890**	**5.98%**	**2,363**	**18,252**	**16.95%**
Soils and/or topography	15,211	5.72%	2,278	17,489	16.24%
Flooding and/or drainage	246	0.09%	24	271	0.25%
Operational (size, shape, location, adjoining land use)	433	0.16%	60	493	0.46%
G. Total non-farmed area available (E+F):	**73,829**	**27.76%**	**7,837**	**81,666**	**75.85%**
H. Total Active and Available area (D+G):	**97,190**	**36.55%**	**10,482**	**107,672**	**100.00%**
I. Availability and potential for agriculture is unknown	**71**	**0.03%**	**45,067**	**45,138**	
J. Unavailable for agriculture - existing land use	**8,347**	**3.14%**	**2,301**	**10,578**	
K. Unavailable for agriculture - existing land cover	**3,364**	**1.27%**	**1,225**	**4,589**	
L. Total area unavailable for farming (J+K):	**11,711**	**4.40%**	**3,527**	**15,167**	
Total Area Inventoried (sum of A through L):	**108,973**	**40.98%**	**59,075**	**167,977**	
Total Area not Inventoried:	**157,008**	**59.05%**			
Indian reserves	15,584	5.86%			
Parcels - no access	134,526	50.59%			
Rights-of-way	2,810	1.06%			
Unsurveyed land	1,159	0.44%			
Water & foreshore	2,929	1.10%			
TOTAL Area of ALR:	**265,910**	**100.00%**			

Source: BC Ministry of Agriculture. Land Use Inventory Reports 800.510-11.2013 (RDEK Columbia Valley), 800.510-12.2013 (RDEK Central Region), 800.510-77.2013(RDEK Elk Valley).

2.2.5 Water Supply and Agricultural Irrigation

A majority of the East Kootenay region experiences a seasonal water deficit of 275 mm or more due to soil and climatic limitations (refer to Table 1). As a result, irrigation is necessary in order to optimize production of field crops. Farms and ranches rely primarily on surface water licenses for their irrigation needs (Table 9). A total of 1,045 water licenses are currently permitted for agricultural purposes with irrigation accounting for more than 99% of the total water volume on an annual basis. There are an additional 54 licenses in the RDEK for watering golf courses, parks and other landscaped areas, with a permitted volume of 6,393,715 m^3/year.

Table 9. Water licenses issued for agricultural purposes in the East Kootenay.

Purpose	# of licenses issued	Permitted volume	Units
Greenhouses	6	13.64	m^3/day
Irrigation	914	108,945,107	m^3/year
Stock Watering	125	807.38	m^3/day
Totals:	**1045**	**109,244,778**	**m^3/year**

Source: Province of BC Water Licenses Database

According to the RDEK Agricultural Land Use Inventory (ALUI) conducted in 2011, all the vegetables and plantation trees were irrigated as well as a majority of the cereal grains, oilseed crops, nursery stock, ornamentals and shrubs (Table 10). About half (52%) of the cultivated forage and pasture fields were irrigated. Approximately 79% of the irrigated cultivated land in the RDEK is in the Central subregion; the remaining 21% is in the Columbia Valley subregion. No irrigation of field crops was observed in the Elk Valley subregion during the inventory study.

Table 10. Cultivated field crop irrigation systems in use.

Field Crop	Sprinkler	Centre pivot	Giant gun	Landscape and Turf	Trickle	Total area irrigated (ha)	% of crop area irrigated	Total crop area (ha)
Forage, pasture	3,426	1,470	107	1	0	5,003	52.0%	9,628
Grains, oilseeds	212	157	66	0	0	435	91.3%	477
Nursery	6	0	11	0	1	18	87.4%	21
Cultivated land	2	12	0	0	0	13	33.3%	40
Vegetables	9	0	0	1	0	11	100.0%	11
Fallow land	0	0	0	0	0	0	0.0%	18
Berries	1	0	0	0	0	1	31.7%	4
Trees (plantation)	1	0	0	0	0	1	100.0%	1
Ornamentals/shrubs	6	0	11	0	0	18	84.5%	22
TOTAL AREA IRRIGATED	**3,663**	**1,639**	**195**	**2**	**1**	**5,501**	**53.9%**	**10,201**
Greenhouses	Mix of flood and trickle irrigation					4	100.0%	4

Source: BC Ministry of Agriculture. Land Use Inventory Reports 800.510-11.2013 (RDEK Columbia Valley), 800.510-12.2013 (RDEK Central Region), 800.510-77.2013(RDEK Elk Valley).

Hand-line and wheel-line sprinkler irrigation systems are the most widely used, occurring on 36% of the inventoried cultivated land in the region, followed by centre pivot systems at 16% and giant gun systems at 2% (Figure 4). Approximately 46% of the cultivated land in the RDEK is not currently irrigated.

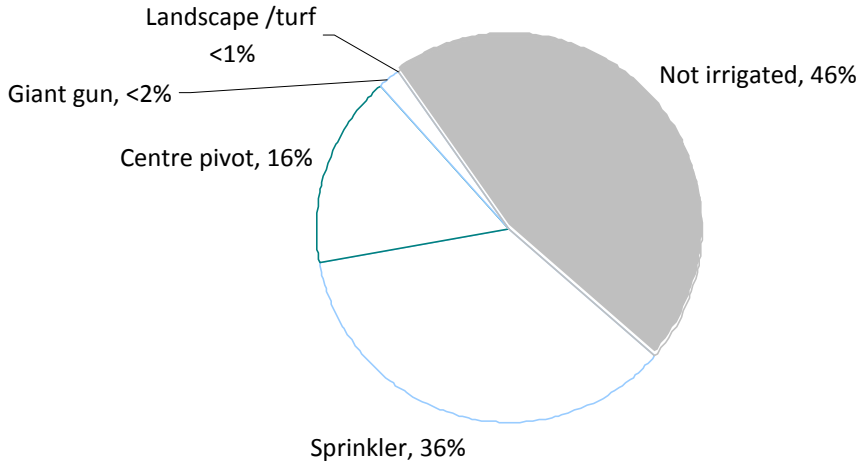

Figure 4. Irrigation systems in the RDEK by percent use on cultivated land.
Source: BC Ministry of Agriculture. Land Use Inventory Reports 800.510-11.2013 (RDEK Columbia Valley), 800.510-12.2013 (RDEK Central Region), 800.510-77.2013(RDEK Elk Valley).

2.3 Agricultural Industry Services

2.3.1 Infrastructure

In general, the East Kootenay region is well serviced by transportation infrastructure. Major highway corridors run east – west through the southern portion of the region (Hwy 3) and north-south through the Rocky Mountain Trench (Hwy 93/95), providing access to Alberta, the United States and the Interior and Coastal regions of BC. The Canadian Pacific Railway freight rail line services the Elk Valley, Central and Columbia Valley sub-regions. Air passenger, charter and freight services are available at the Canadian Rockies International Airport, and Columbia Valley and Invermere Airports.

There are no longer any local or regional stockyards or auction markets to facilitate local sales of livestock. As a result, most livestock are shipped to Alberta. Similarly, there is no infrastructure associated with grain (i.e. elevators, producer car load-out facilities), fruit, vegetable or forage production or processing.

2.3.2 Agricultural Input and Service Suppliers

The number of agricultural input suppliers located in the region has declined over time, with most of the farm inputs now being sourced in Alberta, the USA or on-line. Livestock feed, seed, fertilizer and petroleum and related products are available, as are custom seed/fertilizer application services. There are no commercial pesticide storage and distribution facilities or licensed custom application services for field crops.

One farm equipment sales, repair and parts business is located in the region. There are a number of general parts supply companies and repair shops that provide services to the agricultural sector. The livestock sector is generally well serviced by veterinarians located throughout the region.

2.3.3 Manufacturing and Processing

Food manufacturing is a very small sector with a focus on bakeries and small-scale food processors (e.g. honey, fruit and vegetable products).

The changes to the meat inspection regulations in 2004 have severely limited the slaughter options available to small scale producers (Figure 5). Currently, there is one Class B provincially licensed and inspected red meat slaughter facility and one mobile poultry slaughter facility in the region. A second Class B provincially licensed and inspected red meat slaughter facility was recently approved for development in the Columbia Valley sub-region. Class C licenses, issued as a temporary transitional measure to slaughter facilities that were upgrading to an A or B license, are being phased out and no Class C operations exist in the region. The remaining licenses, Class D and E, are issued directly to producers and are restricted to slaughter only; further processing such as cutting and wrapping is prohibited and meat produced under a Class D or E license can only be sold within the RDEK. At present, there are no Class D or E licenses in the RDEK. There are also a number of small custom butcher shops who process (cut and wrap) meat for producers who have slaughtered their own animal. These operations do not require a license. Refer to section 3.2.12 for further information on BC's meat inspection regulations.

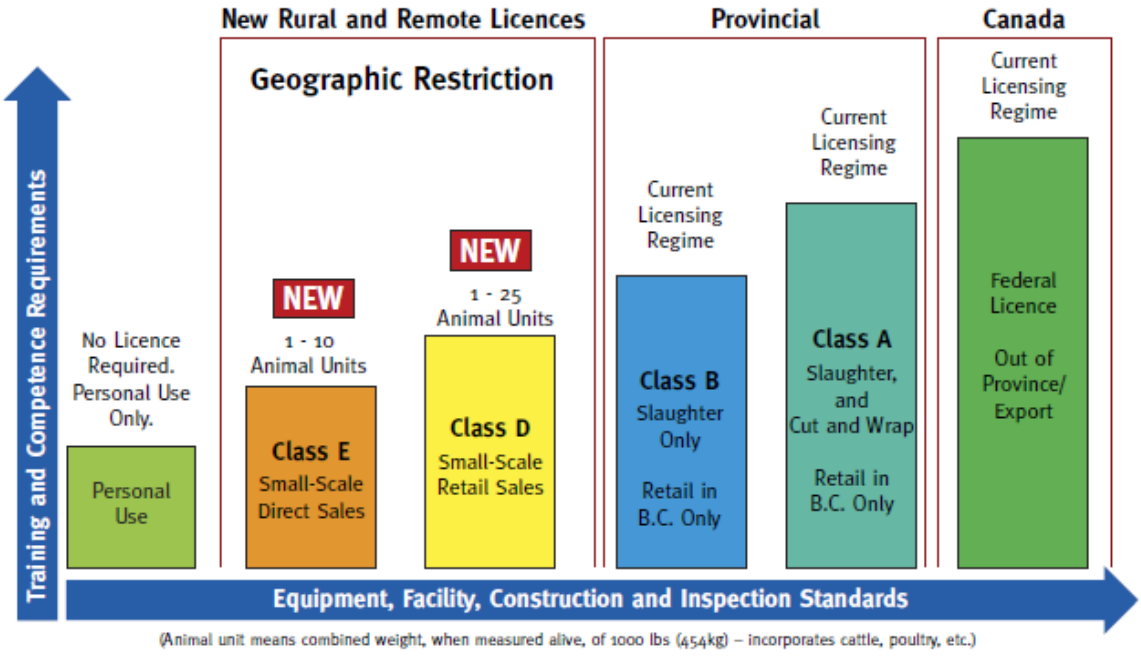

Figure 5. BC's Graduated Livestock Slaughter Licensing System.
Source: Producing Livestock for Meat in British Columbia – What Producers Need to Know.

2.3.4 Agricultural Associations

There are three agricultural producer associations in the East Kootenay, all having livestock and related issues as their primary focus:

- Kootenay Livestock Association (KLA)
- Waldo Stockbreeders Association
- Windermere District Farmer's Institute (WDFI)

2.3.5 Local Marketing and Distribution

Wholesale/Retail Markets

Five small-scale retail outlets offering locally and BC grown organic produce operate in Cranbrook, Kimberley and Invermere. There are also a small number of local restaurants that feature and promote locally grown farm products.

Direct to Consumer Markets

There are an increasing number of farms and ranches marketing farm products directly to the pubic from the farm gate, offering products ranging from breads and grains to herbs, spices, fruits, vegetables, preserves, honey, eggs and meat. The 2011 version of the East Kootenay Local Food Guide lists nine producers offering on-site sales in the Columbia Valley sub-region, 13 in the Central sub-region and six in the Elk Valley.

Community Supported Agriculture

There is one Community Supported Agriculture (CSA) initiative operating in the Columbia Valley. Community Supported Agriculture is an alternative, locally-based economic model of agriculture and food distribution. A CSA refers to a network or association of individuals who have pledged to support one or more local farms, with growers and consumers sharing the risks and benefits of food production. CSA members or subscribers pay at the onset of the growing season for a share of the anticipated harvest; once harvesting begins, they receive weekly shares of the produce. Many CSAs also include herbs, cut flowers, honey, eggs, dairy products and meat. Some CSAs provide for contributions of labor in lieu of a portion of the annual subscription costs.

Farmers' Markets

Seasonal farmers' markets offering local produce operate in a number of communities in the East Kootenay including Jaffray-Baynes Lake, Cranbrook, Edgewater, Fernie, and Invermere. Farmers' markets typically operate on weekends from mid-June to early September and feature seasonal agricultural produce as well as locally produced crafts and artwork.

3. FARM CHARACTERISTICS AND STATISTICS

Two primary sources of information have been used to characterize the agriculture industry and land use in the RDEK; Statistics Canada Agricultural Census data and the Agricultural Land Use Inventory data compiled in 2011.

3.1 Agricultural Land Use Inventory

An Agricultural Land Use Inventory (ALUI) was completed in 2011 for all three subregions within the RDEK. The inventory employs a "windshield" survey method designed to capture a snapshot in time of land use, land cover and agricultural activity. The primary focus of the ALUI is private and Crown lands within the ALR. A summary of key inventory data for each subregion is presented here. Detailed ALUI reports for each subregion are available on the East Kootenay Agricultural Plan website (www.rdek.bc.ca).

3.1.1 Central Subregion

The Central Subregion contains Electoral Areas B, C and E as well as the municipalities of Cranbrook and Kimberley, and has a population of 34,531; approximately 60% of the regional district's population. The region has a total area including land and water of 1,180,919 ha, with 178,066 ha in the ALR over 15% of the subregion is in the ALR.

Land cover and Farmed Area in the ALR

Only 4% (7,137 ha) of inventoried ALR land is used for the production of cultivated field crops, while 19% (34,071 ha) is native pasture or rangeland and an additional 12% (19,206 ha) is primarily forested cover. 113,095 ha (64%) of the area was excluded from the inventory due to air photo interpretation showing no signs of agriculture or other existing land uses such as Indian Reserves, water and foreshore areas and rights-of-way (Figure 6).

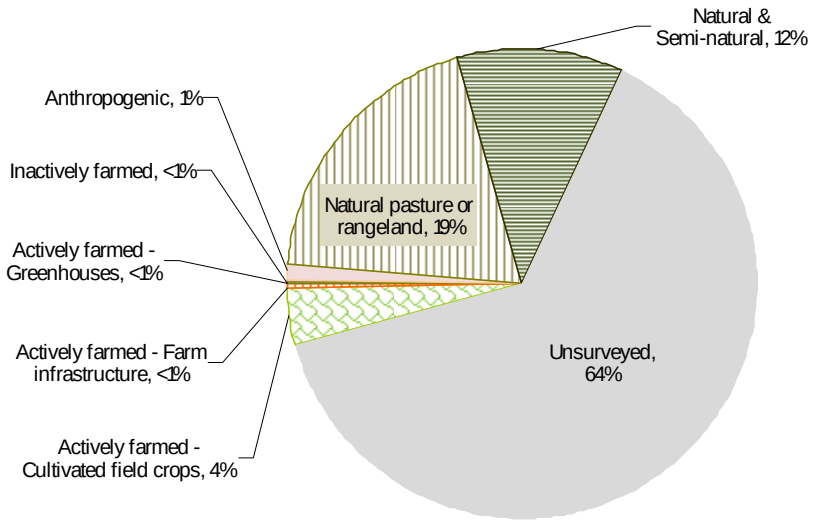

Figure 6. Land cover and farmed area in the ALR – Central subregion

Land Use and Farm Use

A total of 25% (44,863 ha) of ALR land (private and Crown) in the Central subregion is used for farming and grazing (Table 11). An additional 4,178 ha outside the ALR is also used for farming or grazing purposes. Many parcels "used for grazing" have other uses such as forest recreation sites, conservation areas, utilities, etc. Most Crown owned parcels that were not surveyed as part of this inventory, and much of the unsurveyed Crown land, is probably used for livestock grazing since Crown grazing leases cover much of the region.

Table 11. Land use and farming use, Private and Crown – Central subregion

Parcel land use		ALR			Outside ALR (ha)	Total area (ha)	% of area	% of inventory area in Crown ownership
		In ALR (ha)	% of ALR area	% of ALR in Crown ownership				
Used For Farming		16,150	9 %	<1 %	1,034	17,184	22 %	2 %
Used For Grazing		28,713	16 %	8 %	3,144	31,857	41 %	20 %
No Farming/Grazing		19,299	11 %	3 %	9,925	29,224	37 %	9 %
SUBTOTAL		**64,161**	**36 %**	**13 %**	**14,104**	**78,265**	**100 %**	**31 %**
Not surveyed	Parcels - no access	98,060	55 %					
	Indian reserves	11,831	7 %					
	Water & foreshore	1,928	1 %					
	Rights-of-way	1,622	<1 %					
	Unsurveyed land	464	<1 %					
	SUBTOTAL	113,905	64 %					
TOTAL		**178,066**	**100 %**					

Farming Activities

Forage and pasture is by far the most common type of cultivated field crop, accounting for 95% of all cultivated land and 4% of the ALR in the region. Cereals and oilseeds are a distant second, accounting for 4% of all cultivated land in the region (Table 12).

Table 12. Main field crop types by area – Central subregion

Field crop type	ALR			Outside ALR (ha)	Total area (ha)	% of cultivated land	% of cultivated land in Crown ownership
	In ALR (ha)	% of ALR	% of ALR in Crown ownership				
Forage, pasture	7,018	4%	< 1%	196	7,213	95%	10%
Grains, cereals, oilseeds	317	< 1%	< 1%	< 1	318	4%	< 1%
Cultivated land*	40	< 1%	< 1%	< 1	40	< 1%	< 1%
Nursery	21	< 1%	-	< 1	21	< 1%	-
Fallow land	17	< 1%	-	< 1	18	< 1%	-
Mixed vegetables	6	< 1%	-	< 1	6	< 1%	-
Berries	< 1	< 1%	-	-	< 1	< 1%	-
TOTAL	**7,419**	**4%**	**< 1%**	**197**	**7,617**	**100%**	**11%**

* Cultivated land refers to an area that has been prepared for planting but the crop is not yet visible

Natural pastures and rangelands are fenced areas with uncultivated (not sown) natural or semi-natural grasses, herbs or shrubs used for grazing domestic livestock such as cattle, sheep or equines. Natural pastures are smaller fenced areas usually occurring on private land while rangeland refers to larger blocks of land (extensive areas from hundreds to thousands of acres in size) with perimeter fencing that may encompass many parcels or district lots. Rangelands tend to be on provincial Crown land. Treed – closed (60% to 100% of crown cover is native trees) land cover is most commonly used for natural pasture and rangeland and represents the greatest proportion of natural cover in the inventoried areas (Table 13).

Table 13. Natural pasture and rangeland vegetation types – Central subregion

Natural pasture and rangeland		ALR			Outside ALR (ha)	Total area (ha)	% of surveyed area	% of inventory area in Crown ownership	% of natural pasture and rangeland
		In ALR (ha)	% of ALR	% of ALR in Crown ownership					
Rangeland (natural)	Treed - closed	18,029	10%	6%	1,637	19,666	25%	14%	54%
	Treed - open	3,920	2%	1%	35	3,955	5%	2%	11%
	Herbaceous	2,619	1%	< 1%	35	2,654	3%	< 1%	7%
	Shrubland	977	< 1%	< 1%	3	980	1%	< 1%	3%
	Grassland	112	< 1%	< 1%	< 1	112	< 1%	< 1%	< 1%
Subtotal		**25,657**	**14%**	**7%**	**1,710**	**27,367**	**35%**	**18%**	**75%**
Pasture (natural)	Treed - closed	3,963	2%	< 1%	218	4,180	5%	< 1%	11%
	Herbaceous	2,579	1%	< 1%	105	2,684	3%	< 1%	7%
	Treed - open	1,062	< 1%	< 1%	145	1,207	2%	< 1%	3%
	Shrubland	755	< 1%	< 1%	120	875	1%	< 1%	2%
	Grassland	54	< 1%	-	-	54	< 1%	-	< 1%
Subtotal		**8,413**	**5%**	**< 1%**	**588**	**9,001**	**12%**	**2%**	**25%**
TOTAL		**34,071**	**19%**	**8%**	**2,298**	**36,368**	**46%**	**20%**	**100%**

Livestock activities are very difficult to measure using a windshield survey method. Livestock are often confined to structures or out on Crown range making it difficult for the surveyor to see the animals. Local knowledge, Crown grazing licenses, 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 or be out on the range. 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 livestock home site is observed or identified through Crown range grazing plans.

Equine is the most common type of livestock activity in the Central subregion, accounting for 354 of 499 or 71% of all livestock activities. Beef cattle is the second most common with 92 activities or 18% of the total (Table 14).

Table 14. Livestock activities – Central subregion

Livestock group	Scale of activity				Total activities
	Very small scale	Small scale	Medium scale	Large scale	
Beef	-	41	25	26	92
Poultry	16	-	-	-	16
Swine	-	1	-	-	1
Sheep / lamb / goat	9	4	1	-	14
Llama / alpaca	3	9	-	-	12
Specialty livestock	1	1	1	-	3
Other livestock	1	-	-	-	1
Unknown livestock	-	3	2	-	5
Inactive operation	-	1	-	-	1
Equine	43	307	4	-	354
TOTAL	**73**	**367**	**33**	**26**	**499**

"Very small" scale represents 1 animal unit equivalent*
"Small" scale represents about 2-25 animal unit equivalents
"Medium" scale represents 25-100 animal unit equivalents
"Large" scale represents > 100 animal unit equivalents
*Animal Unit Equivalent is a standard measurement used to compare forage consumption by different livestock types; One animal unit is equal to one adult beef cow with or without an unweaned calf.

Parcel size and farming in the ALR

Of the 2,413 privately owned parcels in the ALR, 938 parcels (39%) are less than 2 ha in size, 40% are larger than 4 ha and only 18% are larger than 32 ha (Figure 7). There are 32,394 ha associated with parcels larger than 32 ha, which represents 50% of surveyed ALR area. 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.

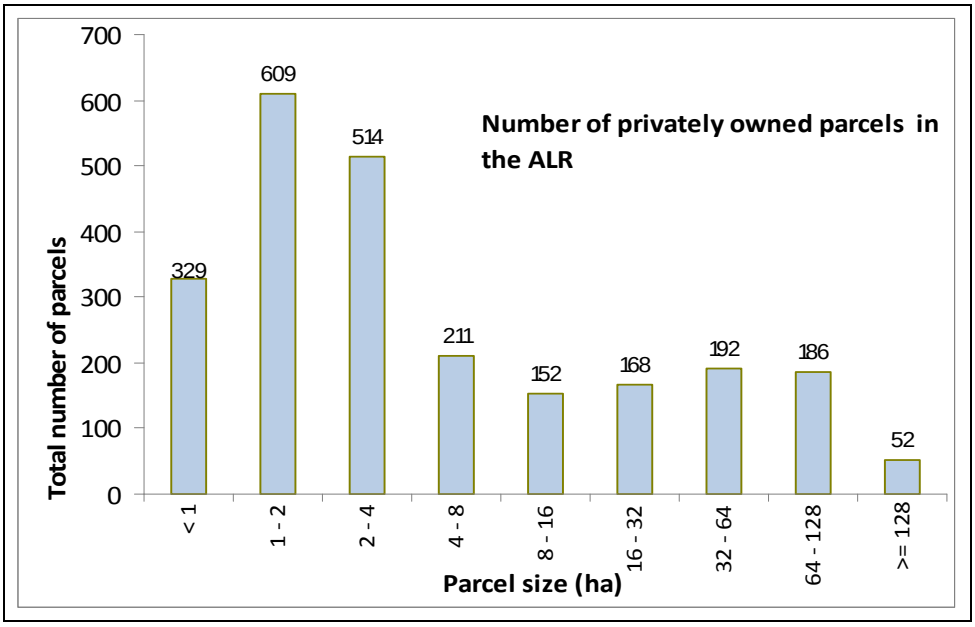

Figure 7. Privately owned parcels in the ALR by parcel size – Central subregion

3.1.2 Columbia Valley Subregion

The Columbia Valley subregion contains Electoral Areas F and G as well as the municipalities of Invermere, Radium Hot Springs, and Canal Flats, and has a population of 9,261.The valley has a total area including land and water of 1,091,639 ha. With 73,083 ha of ALR land, almost 7% of the Columbia Valley is in the ALR.

Land cover and Farmed Area in the ALR

Only 3% (2,295 ha) of inventoried ALR land is used for the production of cultivated field crops, while 21% (15,580 ha) is native pasture or rangeland and an additional 17% (12,237 ha) is primarily forested cover. 40,866 ha (56%) of the area was excluded from the inventory due to air photo interpretation showing no signs of agriculture or other existing land uses such as Indian Reserves, water and foreshore areas and rights-of-way (Figure 8).

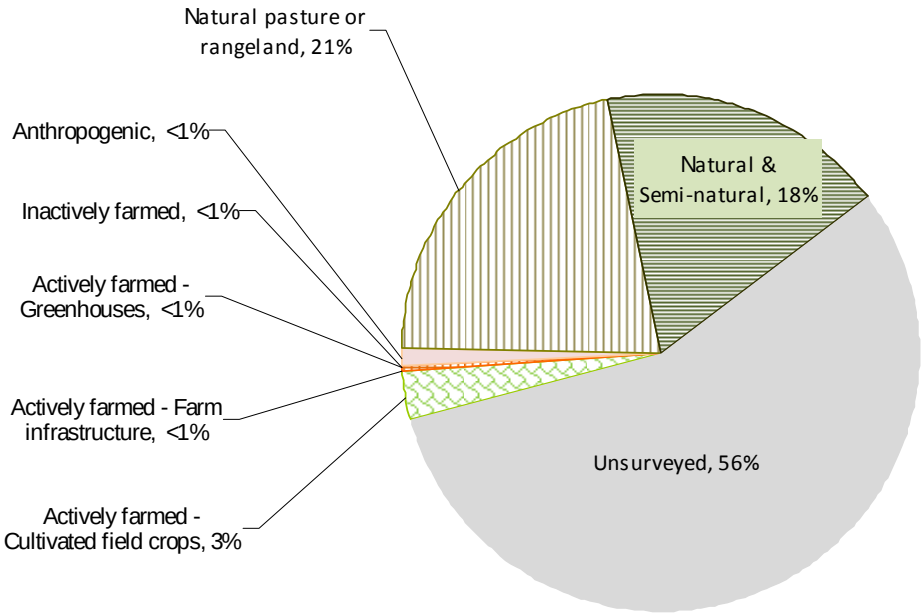

Figure 8. Land cover and farmed area in the ALR – Columbia Valley subregion

Land Use and Farm Use

A total of 27% (20,336 ha) of ALR land (private and Crown) in the Columbia Valley subregion is used for farming and grazing (Table 15). An additional 6,853 ha outside the ALR is also used for farming or grazing purposes. Many parcels "used for grazing" have other uses such as forest recreation sites, conservation areas, utilities, etc. Most Crown owned parcels that were not surveyed as part of this inventory, and much of the unsurveyed Crown land is probably used for livestock grazing since Crown grazing leases cover much of the region.

Table 15. Land use and farming use, Private and Crown – Columbia Valley subregion

Parcel land use		ALR			Outside ALR (ha)	Total area (ha)	% of inventory area	% of inventory area in Crown owner-ship
		In ALR (ha)	% of ALR area	% of ALR in Crown owner-ship				
Used For Farming		5,445	7 %	<1 %	878	6,323	14 %	<1 %
Used For Grazing		14,891	20 %	9 %	5,975	20,866	47 %	19 %
No Farming/Grazing		11,881	16 %	4 %	5,040	16,921	38 %	11 %
SUBTOTAL		**32,217**	**44 %**	**12 %**	**11,893**	**44,110**	**100 %**	**30 %**
Not surveyed	Parcels - no access	35,524	49 %					
	Indian reserves	3,753	5 %					
	Water & foreshore	643	<1 %					
	Rights-of-way	683	<1 %					
	Unsurveyed land	263	<1 %					
	SUBTOTAL	40,866	56 %					
TOTAL		**73,083**	**100 %**					

Farming Activities

Forage and pasture is the most common type of cultivated field crop, accounting for 93% of cultivated land and 3% of the ALR in the region. Cereals and oilseeds account for 6% of all cultivated land in the region (Table 16).

Table 16. Main field crop types by area – Columbia Valley subregion

Type	ALR			Outside ALR (ha)	Total area (ha)	% of cultivated land	% of cultivated land in Crown ownership
	In ALR (ha)	% of ALR	% of ALR in Crown ownership				
Forage, pasture	2,228	3%	< 1%	187	2,415	93%	< 1%
Grains, cereals, oilseeds	154	< 1%	-	5	160	6%	-
Vegetables	3	< 1%	-	1	4	< 1%	-
Berries	3	< 1%	-	-	3	< 1%	-
Ornamentals and shrubs	< 1	< 1%	-	< 1	< 1	< 1%	-
Trees (plantation)	< 1	< 1%	-	-	< 1	< 1%	-
Fallow land	-	-	-	< 1	< 1	< 1%	-
TOTAL	**2,390**	**3%**	**< 1%**	**194**	**2,584**	**100%**	**< 1%**

Treed – closed (60% to 100% of crown cover is native trees) land cover is most commonly used for natural pasture and rangeland and represents the greatest proportion of natural cover in the inventoried areas (Table 17).

Table 17. Natural pasture and rangeland vegetation types – Columbia Valley subregion

Natural pasture and rangeland		ALR			Outside ALR (ha)	Total area (ha)	% of inventory area	% of inventory area in Crown ownership	% of natural pasture and rangeland
		In ALR (ha)	% of ALR	% of ALR in Crown ownership					
Rangeland (natural)	Treed - closed	11,937	16%	6%	2,807	14,744	33%	10%	78%
	Treed - open	1,301	2%	2%	131	1,432	3%	3%	8%
	Herbaceous	592	< 1%	< 1%	43	635	1%	< 1%	3%
	Shrubland	101	< 1%	< 1%	1	102	< 1%	< 1%	< 1%
Subtotal		**13,931**	**19%**	**8%**	**2,982**	**16,913**	**38%**	**14%**	**90%**
Pasture (natural)	Treed - closed	1,040	1%	< 1%	249	1,288	3%	< 1%	7%
	Herbaceous	440	< 1%	< 1%	24	464	1%	< 1%	2%
	Shrubland	90	< 1%	< 1%	6	96	< 1%	< 1%	< 1%
	Treed - open	80	< 1%	< 1%	2	81	< 1%	< 1%	< 1%
Subtotal		**1,648**	**2%**	**< 1%**	**281**	**1,929**	**4%**	**< 1%**	**10%**
Total		**15,580**	**21%**	**8%**	**3,263**	**18,843**	**43%**	**14%**	**100%**

Equine is the most common type of livestock activity in the Columbia Valley subregion, representing 73 of 103 or 71% of all livestock activities. Beef cattle is the second most common with 20 activities or 19% of the total (Table 18).

Table 18. Livestock activities – Columbia Valley subregion

Livestock group	Scale of activity				Total activities
	Very small scale	Small scale	Medium scale	Large scale	
Beef	-	9	5	6	20
Poultry	3	-	-	-	3
Sheep / lamb / goat	3	1	-	-	4
Llama / alpaca	1	1	-	-	2
Unknown livestock	1	-	-	-	1
Equine	4	69	-	-	73
TOTAL	**12**	**80**	**5**	**6**	**103**

"Very small" scale represents 1 animal unit equivalent
"Small" scale represents about 2-25 animal unit equivalents
"Medium" scale represents 25-100 animal unit equivalents
"Large" scale represents > 100 animal unit equivalents

Parcel size and farming in the ALR

Of the 823 privately owned parcels in the ALR, 280 parcels (34%) are less than 2 ha in size, 52% are larger than 4 ha and 22% are larger than 32 ha (Figure 9). There are 20,015 ha associated with parcels larger than 32 ha, which represents 62% of surveyed ALR area so a majority of the ALR area is in larger parcels, which usually allow farmers greater flexibility to expand or change their type of operation as the economy and markets change.

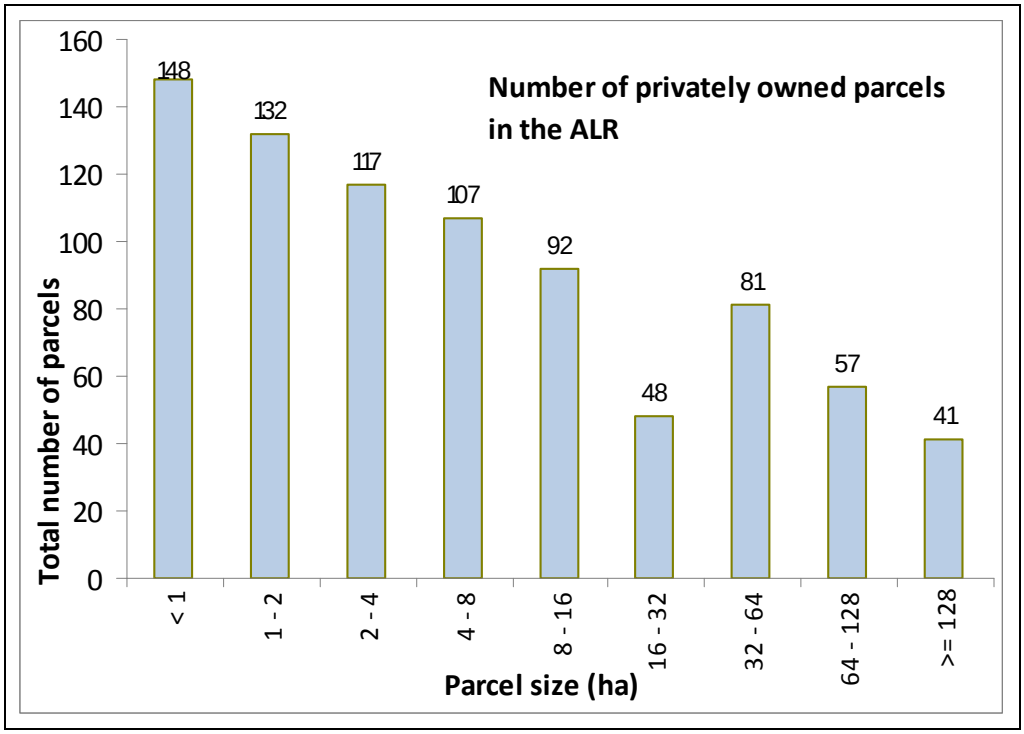

Figure 9. Privately owned parcels in the ALR by parcel size – Columbia Valley subregion

3.1.3 Elk Valley Subregion

The Elk Valley subregion contains Electoral Area A as well as the municipalities of Fernie, Sparwood and Elkford, and has a population of 12,171, approximately 22% of the regional district's population. The region has a total area including land and water of 497,044 ha. With 14,761 ha of ALR land, 3% of the Elk Valley is in the ALR.

Land cover and Farmed Area in the ALR

Nine percent (1,325 ha) of inventoried ALR land is used for the production of cultivated field crops, while only 2% (346 ha) is native pasture or rangeland and an additional 70% (10,395 ha) is primarily forested cover. 2,237 ha (15%) of the area was excluded from the inventory due to air photo interpretation showing no signs of agriculture or other existing land uses such as Indian Reserves, water and foreshore areas and rights-of-way (Figure 10).

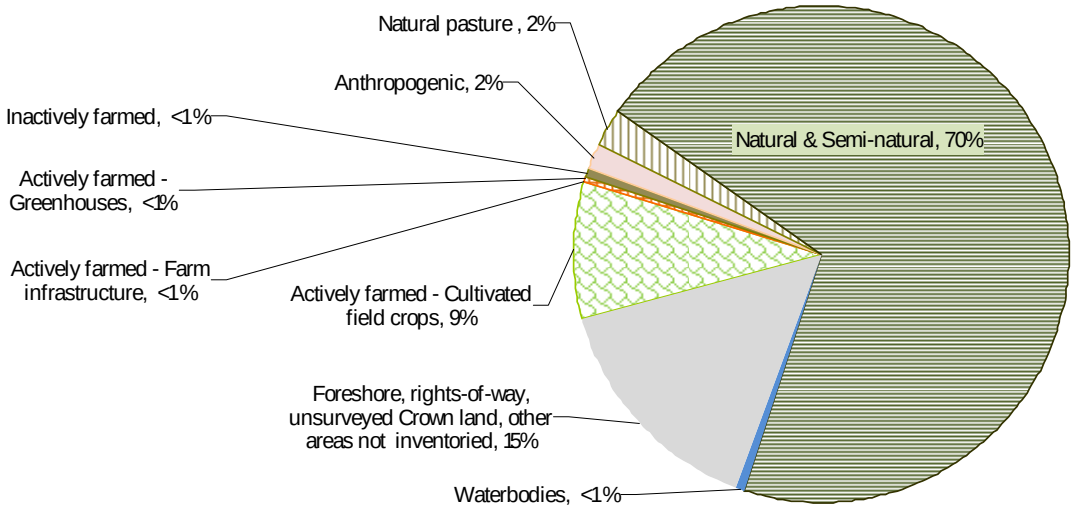

Figure 10. Land cover and farmed area in the ALR – Elk Valley subregion

Land Use and Farm Use

A total of 19% (2,665 ha) of ALR land (private and Crown) in the Elk Valley subregion is used for farming and grazing (Table 19). An additional 270 ha outside the ALR is also used for farming or grazing purposes. Many parcels "used for grazing" have other uses such as forest recreation sites, conservation areas, utilities, etc. Most Crown owned parcels that were not surveyed as part of this inventory, and much of the unsurveyed Crown land is probably used for livestock grazing since Crown grazing leases cover much of the region.

Table 19. Land use and farming use, Private and Crown – Elk Valley subregion

Parcel land use		ALR			Outside ALR (ha)	Total area (ha)	% of inventory area	% of inventory area in Crown ownership
		In ALR (ha)	% of ALR area	% of ALR in Crown ownership				
Used For Farming		2,441	17 %	-	269	2,710	6 %	-
Used For Grazing		224	2 %	-	< 1	224	<1 %	-
No Farming/Grazing		9,860	67 %	11 %	32,807	42,666	94 %	5 %
SUBTOTAL		**12,525**	**85 %**	**11 %**	**33,076**	**45,600**	**100 %**	**5 %**
Not inventoried	Parcels - no access	942	6 %					
	Indian reserves	-	-					
	Water & foreshore	358	2 %					
	Rights-of-way	505	3 %					
	Unsurveyed land	432	3 %					
	SUBTOTAL	2,237	15 %					
TOTAL		**14,761**	**100 %**					

Farming Activities

Forage and pasture accounts for 99% of all cultivated land and 9% of the ALR in the subregion (Table 20).

Table 20. Main field crop types by area – Elk Valley subregion

Type	ALR			Outside ALR (ha)	Total area (ha)	% of cultivated land	% of cultivated land in Crown ownership
	In ALR (ha)	% of ALR	% of ALR in Crown ownership				
Forage, pasture	1,381	9%	< 1%	125	1,506	99%	< 1%
Oats	6	< 1%	-	-	6	< 1%	-
Trees (plantation)	2	< 1%	-	-	2	< 1%	-
Crop transition	< 1	< 1%	-	-	< 1	< 1%	-
TOTAL	**1,390**	**9%**	**< 1%**	**125**	**1,515**	**100%**	**< 1%**

Treed – open (10% to 60% of crown cover is native trees) and herbaceous land cover are most commonly used for natural pasture and rangeland and represents the greatest proportion (79%) of natural cover in the inventoried areas (Table 21). The remaining natural pasture and rangeland is Treed – closed.

Table 21. Natural pasture and rangeland vegetation types – Elk Valley Subregion

Natural pasture and rangeland		ALR			Outside ALR (ha)	Total area (ha)	% of surveyed area	% of inventory area in Crown ownership	% of natural pasture and rangeland
		In ALR (ha)	% of ALR	% of ALR in Crown ownership					
Pasture (natural)	Treed - open	141	< 1%	-	< 1	142	< 1%	-	41%
	Herbaceous	133	< 1%	-	< 1	134	< 1%	-	38%
	Treed - closed	71	< 1%	-	< 1	71	< 1%	-	21%
Total		346	2%	-	1	347	< 1%		100%

Equine is the most common type of livestock activity in the Elk Valley subregion, representing 49 of 75, or 65% of all livestock activities. Beef cattle are the second most common with 21 activities or 28% of the total (Table 22).

Table 22. Livestock activities – Elk Valley subregion

Livestock group	Scale of activity				Total activities
	Very small scale	Small scale	Medium scale	Large scale	
Beef	1	11	7	2	21
Poultry	1	-	-	-	1
Sheep / lamb / goat	-	1	-	-	1
Llama / alpaca	-	1	-	-	1
Unknown livestock	2	-	-	-	2
Equine	15	34	-	-	49
TOTAL	**19**	**47**	**7**	**2**	**75**

"Very small" scale represents 1 animal unit equivalent
"Small" scale represents about 2-25 animal unit equivalents
"Medium" scale represents 25-100 animal unit equivalents
"Large" scale represents > 100 animal unit equivalents

Parcel size and farming in the ALR

Of the 513 privately owned parcels in the ALR, 150 parcels (29%) are less than 2 ha in size, 40% are larger than 4 ha and 13% are larger than 32 ha (Figure 11). There are 8,556 ha associated with parcels larger than 32 ha, which represents 68% of surveyed ALR area so a majority of the ALR area is in larger parcels, which usually allow farmers greater flexibility to expand or change their type of operation as the economy and markets change.

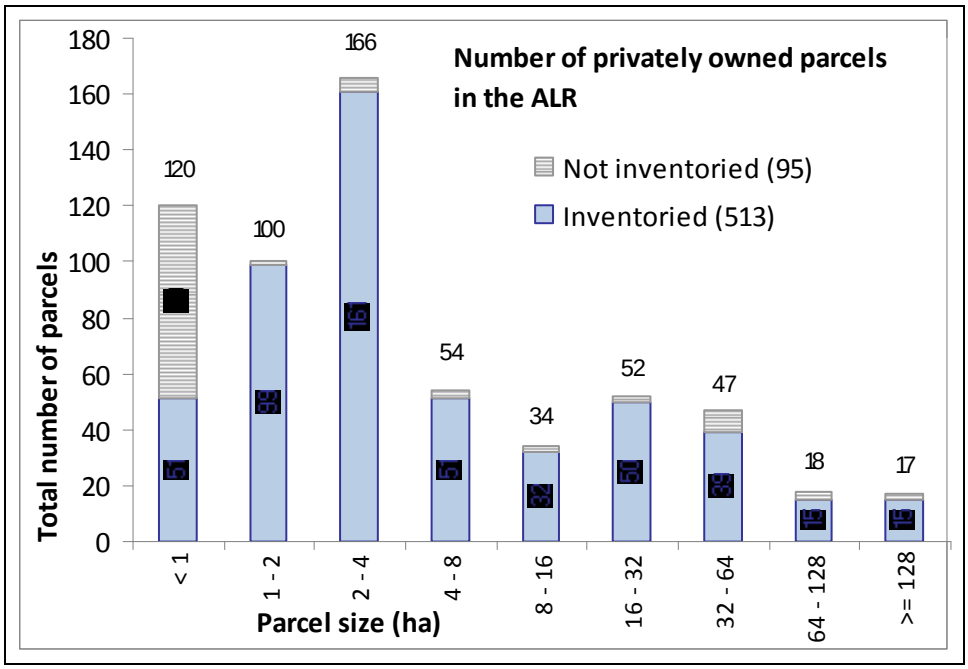

Figure 11. Privately owned parcels in the ALR by parcel size –Elk Valley subregion

3.2 Census of Agriculture

A Census of Agriculture was conducted by Statistics Canada in 2011, providing current information to complement the ALUI data.

Number of Farms and Farm Size

The total number of farms and farm size distribution remains relatively unchanged from 2006 (Table 23). Average farm size in the RDEK in 2011 was 202 ha compared to 247 ha in 2006. The decline is primarily related to a reduction in the area of leased land.

Table 23. Number of farms and farm size in the RDEK.

Farm Size	1991		1996		2001		2006		2011	
	Farms	%	Farms	%	Farms	%	Farms	%	Farms	%
<4 ha (10 acres)	35	9%	70	15%	58	14%	55	14%	61	15%
4 to 52 ha (10 to 129 acres)	152	39%	159	34%	145	35%	142	36%	142	36%
52 to 161 ha (130 to 399 acres)	99	25%	130	27%	111	27%	90	23%	95	24%
>161 ha (400 acres & greater)	105	27%	115	24%	104	25%	108	27%	98	25%
Total	**391**		**474**		**418**		**395**		**396**	

Farm Tenure

The area of owned farmland has been in decline since 1996, dropping another 4.5% between 2006 and 2011. The substantial change in leased farmland area between 2006 and 2011 includes a reduction of 8,120 ha in government leases and 7,849 ha in leases from other land owners (Table 24). The reduction can be attributed to the decline in beef cattle numbers, which had reduced the demand for grazing leases.

Table 24. Farm Tenure in the RDEK

Farm Tenure	1991		1996		2001		2006		2011	
	ha	% of Total	ha	% of Total	ha	% of Total	ha	% of Total	ha	% of Total
Farmland Owned	39,191	57%	40,737	51%	34,883	35%	33,927	34%	32,434	40%
Farmland Leased	29,146	43%	39,789	49%	64,351	65%	64,972	66%	47,638	60%
Total	**68,337**		**80,526**		**99,234**		**98,899**		**80,072**	

** includes leases, rentals, crop share, etc. from government and other land owners*

Farmland Use

Forage and range continue to be the dominant uses of farmland in the RDEK (Table 25). As stated earlier, the decline in unmanaged pasture use can be attributed to the decline in beef cattle numbers and the lower demand for grazing, particularly on Crown range.

Table 25. Farmland use in the RDEK

Farmland Use	Area (ha)			
	1996	2001	2006	2011
Field crops	10,223	10,789	10,118	9,817
Summerfallow	173	127	54	55
Pasture (managed)	6,700	8,787	5,887	5,415
Pasture (unmanaged)	45,231	63,227	64,286	48,831
Other*	18,199	16,303	17,316	15,954
Total	**80,526**	**99,233**	**97,661**	**80,072**

** Other includes unimproved land and woodland used primarily for livestock grazing.*

Main Types of Agriculture

The number of cattle ranching operations in the regional district has declined by 48% over the ten year period between 2001 and 2011 (Table 26). During the same time period the number of "other crop farming" operations, which primarily represents commercial hay production, has more than doubled. These changes reflect the impact of the 2003 BSE crisis on cattle prices, the resulting changes to the red meat inspection system and the general economic instability of the beef cattle sector during this period. Hog and sheep production has declined since 2001, while poultry and egg production has remained stable. Other animal production, primarily horses for pleasure/recreational use, has increased almost 62%.

The vegetable and greenhouse/nursery sectors exhibited steady growth between 2001 and 2011, while fruit and tree nut farming declined.

Table 26. Farms in the RDEK classified by industry group

Farm Type	2001	2006	2011
Cattle ranching and farming	151	138	78
Hog and pig farming	4	1	1
Poultry and egg production	9	10	9
Sheep and goat farming	10	8	5
Other animal production (i.e. horses)	81	124	131
Oilseed and grain farming		2	1
Vegetable and melon farming	3	7	9
Fruit and tree nut farming	10	8	4
Greenhouse, nursery and floriculture production	39	42	48
Other crop farming	51	55	110
Totals	**358**	**395**	**396**

Livestock on Farms

All major classes of livestock have exhibited decline in the number of farms reporting and the number of animals on farms (Table 27).

Table 27. Livestock on farms in the RDEK.

Livestock	2001		2006		2011	
	Farms Reporting	Number	Farms Reporting	Number	Farms Reporting	Number
Total cattle and calves	214	26,187	193	23360	148	17320
Total sheep and lambs	34	1,194	25	758	19	375
Total Pigs	36	553	13	77	14	54
Goats	22	426	14	92	15	187
Llamas and alpacas	21	103	19	105	14	75
Total hens and chickens	113	10,061	72	4600	65	3725

Gross Farm Receipts and Operating Expenses

Total gross farm receipts have remained relatively stagnant in the RDEK over the past 20 years, averaging approximately $14,624,000 (Table 28). During the same time period, gross farm receipts at the provincial level have experienced substantial growth (222%) and the provincial average gross receipts per farm is four times that of the East Kootenay region. Total farm business operating expenses in the RDEK have exceeded gross farm receipts in the past four census years, while the average ratio of operating expenses to farm receipts is 0.90 provincially, indicating overall industry profitability. The disparity between the RDEK and provincial performance reflects the soil and climatic limitations of the East Kootenay region, which have resulted in an agricultural industry focused primarily on range beef cattle production with very limited crop or livestock diversification or value-added processing and marketing.

Table 28. Gross Farm Receipts and Operating Expenses – RDEK and BC

Gross Farm Receipts	1991	1996	2001	2006	2011
Total gross farm receipts in current dollars (excluding forest products sold)					
Total (RDEK)	$14,153,780	$13,872,676	$14,899,563	$15,570,846	$14,504,239
Average/farm (RDEK)	$36,199	$29,267	$35,645	$39,420	$36,627
Total (BC)	$1,321,200,000	$1,839,217,000	$2,307,697,000	$2,651,963,000	$2,935,906,000
Average/farm (BC)	$68,723	$84,233	$113,736	$133,641	$148,586
Total farm business operating expenses in current dollars					
Total (RDEK)	$11,831,484	$14,576,830	$15,019,802	$15,623,467	$15,040,762
Average/farm (RDEK)	$30,259	$30,753	$35,933	$39,553	$37,982
Ratio of operating expenses to receipts	0.836	1.050	1.008	1.003	1.037

4. LEGISLATION AND POLICY INFLUENCING AGRICULTURE

The agricultural sector in the East Kootenay is regulated and influenced by a broad range of regional, provincial, and federal legislation and policies. Awareness of jurisdictional responsibilities can be helpful in determining the nature of efforts that can be made by local government in enhancing agricultural conditions.

4.1 Regional District of East Kootenay

Management of agriculture at the local government level is principally through regional growth strategies, official community plans, and land use and zoning bylaws.

4.1.1 Regional Growth Strategy

The Regional District has adopted a Regional Growth Strategy (RGS) policy. The RGS establishes principles for evaluating land use changes and developing community plans throughout the Regional District. The RGS contains two types of policy: those that apply to the whole Regional District and policies that reflect sub-regional planning objectives. The RGS identifies the protection of good farm land and recognition of the importance of the agriculture industry to the regional economy as region wide interests.

4.1.2 Official Community Plans

Each municipality in the RDEK has adopted an Official Community Plan (OCP). An OCP is a general statement of the broad objectives and policies of the local government with respect to the form and character of existing and proposed land use and servicing requirements.

In the unincorporated areas of the RDEK (areas outside municipal boundaries), land use is also regulated through official plans and zoning bylaws. Agricultural land use objectives and policies vary between the different OCP and bylaw documents based on area-specific land use issues and planning priorities. In general, the OCPs and bylaws reinforce the following planning strategies:

- Support for agricultural activity and the protection of agricultural land;
- Identification of areas for potential future development and the conditions under which development of lands in the Agricultural Land Reserve (ALR) may be supported;
- Identification of permitting land uses, activities and development;
- Establishment of minimum parcel sizes; and
- Minimizing conflict between agriculture and other potentially incompatible land uses on adjacent land through buffering (fencing), zoning setbacks and other measures.

The RDEK has adopted OCPs for most of the populated areas. These include:

- Panorama Mountain Village (1999)
- Fairmont Hot Springs Area (2004)
- Steamboat - Jubilee Mountain (2006)
- Kimberley Rural (2008)
- Lake Windermere (2008)
- Island Lake (2009)
- Rockyview (2010)
- Baynes Lake (2011)
- Fernie Alpine Resort (2012)
- Lake Koocanusa (2013)

4.1.3 Land Use Strategies

The Regional District has three Land Use Strategies. These documents are similar to OCPs but are adopted as policy documents rather than bylaws. Areas covered by land use strategies include the Elk Valley (1986), Toby Benches (1998) and the Fernie area (2006).

4.1.4 Zoning Bylaws

Each municipality also has a zoning bylaw, which sets out regulations for the use of land and the siting of buildings. Zoning bylaws are also in place for most of the Regional District. The zoning bylaws are:

- Elk Valley, Area A (1990)
- Upper Columbia Valley, Areas F and G (1992)
- Cranbrook Rural (2001)
- Kimberley Rural (2005)
- Sweetwater (2009)
- Wycliffe (2010)
- South Country (2011)

4.1.5 Land Use Bylaws

Land Use Bylaws are in place in areas with small population and where there is not a great diversity of land uses. These bylaws combine land use policies with zoning bylaws. The Land Use Bylaws in the Regional District include:

- Jaffray, Tie Lake & Rosen Lake (1999)
- Wasa, Ta Ta Creek, Skookumchuck & Sheep Creek (2002)
- Fort Steele / Bull River (2005)
- Moyie and Area (2008)

4.1.6 Delegated Decision Making Authority in the ALR

The RDEK has entered into Delegation Agreements with the Agricultural Land Commission (ALC) for certain types of ALR non-farm uses and subdivisions in areas covered by the Wasa – Ta Ta Creek – Skookumchuck - Sheep Creek Land Use Bylaw and Elk Valley Zoning Bylaw. Unlike the standard ALR application process, under which the RDEK Board makes a recommendation and the final decision making authority rests with the ALC, applications considered under a Delegation Agreement are not forwarded to the ALC, unless otherwise required under the terms of the Delegation Agreement and the decision of the RDEK is final. The Elk Valley Delegation Agreement also makes provision for an exemption for the referral of specific non-farm use application to the RDEK Advisory Planning Commission (APC). When making decisions under a Delegation Agreement the RDEK adopts the role of the ALC and must consider the impact of the proposed application on agriculture. The application must also be carefully considered against the applicable RDEK policy documents that have been endorsed by the ALC.

4.1.7 RDEK Advisory Commissions

The RDEK has two types of citizen based commissions that are provided an opportunity to review and comment on development applications being considered by the RDEK Board.

Agricultural Advisory Commission

An Agricultural Advisory Commission (AAC) has been established for Electoral Areas B and C. Prior to the RDEK entering into the Delegation Decision-Making Agreement with the ALC for the Elk Valley region, Electoral Area A was also represented by the AAC. The AAC is currently comprised of six members who have been appointed by the RDEK Board for a three year term. The two Electoral Area Directors and local Ministry of Agriculture Resource Stewardship Agrologist serve as ex-officio members on the AAC. The AAC reviews and provides comment on development applications such as ALR applications or rezoning amendments prior to consideration by the RDEK Board. The AAC is tasked with reviewing applications in consideration of the potential impact on agriculture.

Advisory Planning Commission

Each Electoral Area within the RDEK is represented by an Advisory Planning Commission (APC). The APCs are comprised of residents of the applicable Electoral Area who are appointed by the RDEK Board for a one year term. The Electoral Area Directors also serve as ex-officio members. The APC provides community perspective on development applications such as development variance permits, ALR applications and rezoning amendments prior to their consideration by the RDEK Board.

4.2 Provincial

4.2.1 Strategic Initiatives

In 2008, the BC Ministry of Agriculture released a new Agriculture Plan for the province entitled *Growing a Healthy Future for BC Families*. The plan outlined 23 strategies to sustain and facilitate the growth and diversification of the agriculture industry while increasing public awareness, understanding and support for the people who produce our food. The strategies were coordinated under five broad themes:

1. Producing local food in a changing world;
2. Meeting environmental and climate challenges;
3. Building innovative and profitable family farm businesses;
4. Building First Nations agricultural capacity; and
5. Bridging the urban/agriculture divide.

The BC Jobs Plan Agrifoods Strategy, introduced in 2012, builds on the initiatives undertaken through the BC Agriculture Plan by setting priorities and actions to guide the growth of the agrifood sector for the next five years in three key areas:

1. Focus on high-quality, high-value products;
2. Expand domestic and international markets; and
3. Enhance the agrifood sector's competitiveness.

In August 2012, the government of British Columbia announced a $2 million investment in a Buy Local program to help BC producers and processors promote local foods. The funding assists local businesses and organizations to launch or expand their marketing campaigns, and allows BC's diverse food industry to use customized promotions specific to their market needs.

4.2.2 Agricultural Land Commission Act

The Agricultural Land Commission Act, enacted in 1973 and amended in 2002, established the Agricultural Land Commission (ALC) as an independent provincial agency with responsibility for administering the Agricultural Land Reserve (ALR), a provincial zone in which agriculture is the priority land use and non-agricultural uses are controlled. The purpose of the Commission is:

- to preserve agricultural land;
- to encourage farming in collaboration with other communities of interest; and
- to encourage local governments, First Nations, the government and its agents to enable and accommodate farm use of agricultural land and uses compatible with agriculture in their plans, bylaws and policies.

Revisions to the ALC Act in 2002 increased the types of permitted uses in the ALR in order to expand economic opportunities for farmers. The updated Act also allowed local governments to enter into delegation agreements to exercise some or all of the commission's power to decide applications for non-farm use or subdivision of lands in its jurisdiction. Local governments may also decide to refuse to refer applications for ALR exclusions or non-farm uses to the ALC. When an application is received by the ALC, it then makes the final decision on whether to permit the request based on accordance with the ALC Act.

The ALC Act takes precedence over, but does not replace, other legislation and bylaws that may apply to the land. Local and regional governments, as well as other provincial agencies, are expected to plan in accordance with the provincial policy of preserving agricultural land. Land in the ALR is subject to provincial regulation whether it is private or Crown.

4.2.3 Agricultural Land Reserve Use, Subdivision and Procedure Regulation

The Agricultural Land Reserve Use, Subdivision and Procedure Regulation, adopted in 2002, specifies permitted land uses within the ALR. This regulation identifies farm activities and other, non-farm uses permitted in the ALR (Appendix I), notification requirements for soil removal and placement of fill, procedures for submitting applications and identifies filing requirements.

4.2.4 Farm Practices Protection (Right to Farm) Act

The Farm Practices Protection (Right to Farm) Act applies to farmers who operate in the Agricultural Land Reserve or in other areas where farming is permitted by local zoning bylaws. When farmers operate using normal farm practices, defined as an activity *"…that is conducted by a farm business in a manner consistent with proper and accepted customs and standards as established and followed by similar farm businesses under similar circumstances.."*, the Act protects the farmer against nuisance actions, court injunctions, or specific nuisance bylaws related to the operation of the farm. To be eligible for protection, a farmer must be in compliance with the Health Act, Pesticide Control Act, Waste Management Act, the regulations under those Acts, and any land use regulation.

The Farm Practices Protection Act established the Farm Industry Review Board (FIRB) as the independent administrative tribunal that considers complaints from persons aggrieved by odour, noise, dust, or other disturbances resulting from farm operations, and encourages settlement of the complaints. The Board hears complaints and determines whether the disturbance in question results from normal farm practices.

4.2.5 Local Government Act

The Local Government Act provides the legislative framework for local governments to represent the interests and respond to the needs of their communities. Certain provisions address farming activities through community planning; zoning; nuisance regulations; removal and deposit of soil; weed and pest control; water use and drainage. Part 26 Division 8 - Regulation of Farm Businesses in Farming Areas provides for the creation of "farm bylaws" and allows for the establishing of agricultural standards for the guidance of local governments in the preparation of bylaws affecting agriculture.

4.2.6 Land Title Act

The Land Title Act gives Approving Officers the power to assess potential impacts of proposed subdivisions on farm land. Before subdivision approval is given, the Approving Officer may require adequate buffering of farmland from the subdivision or the removal of unnecessary roads directed to the Agricultural Land Reserve, to ensure no unreasonable interference with farm operations. Within the unincorporated (rural) portions of the RDEK, the Approving Officer

is the Provincial Approving Officer (PAO) with the Ministry of Transportation and Infrastructure. Each incorporated area or municipality has their own Approving Officer who is responsible all subdivision application within the municipal boundaries.

4.2.7 BC Assessment Act

Section 23 of the Assessment Act and BC Reg 411/95, the *Classification of Land as a Farm Regulation* (the "Farm Class Regulation"), set out the requirements that must be met for land to be classified as "Farm" for assessment and tax purposes. Land classified as Farm must be used all or in part for primary agricultural production. All farm structures are classified as residential, including the farmer's dwelling. Farm class status results in a farm assessment that reduces property, school and hospital taxes.

The Farm Class Regulation requires a producing farm to meet minimum gross income requirements, which vary with the size of the farm operation:

- $10,000, if the total area of the farm operation is less than 0.8 ha (1.98 acres);
- $2,500 if the total area of the farm operation is between 0.8 ha (1.98 acres) and 4 ha (10 acres); or
- $2,500 plus 5% of the actual value of the area in excess of 4 ha (10 acres) if the total area of the farm operation is greater than 4 ha (10 acres).

Farm class is granted on an annual basis. Once land has been classified as farm, the minimum income requirements required for the farm operation must be met in one of two relevant reporting periods and a sale of a qualifying agricultural product must be made in every reporting period.

4.2.8 Water Act

The Water Act is the principal water management legislation in BC and plays a key role in the sustainability of BC's water supply. The Act provides for the licensing of activities including use, diversion, and storage of water. The Act also addresses the nature of permitted changes to stream courses under application. Related water legislation in the Water Protection Act (RSBC) Chap. 484, provides the regulatory basis for the removal or transfer of water within and between jurisdictions. As part of its Living Water Smart vision, the Province of BC is currently engaged in a process to modernize the Water Act.

A water license is required from the Ministry of Environment for use of any surface water under the BC Water Act. Water licenses are given for "beneficial use" of the water, such as domestic uses or irrigation for agricultural purposes. A water license protects rights to continued use of the water for the specified conditions and is attached to the land or "appurtenant" and not the owner of the land or license. If the land is sold the water license remains with the property. Part or all of the license may be moved ("transfer of appurtenancy") as long as the water can be accessed and used beneficially on the new land.

4.2.9 Wildlife Act

The British Columbia Wildlife Act establishes regulations and guidelines for the conservation and management of wildlife populations and habitats, the issuance of licenses and permits for fishing, game hunting, and trapping, guidelines for safe angling and trapping and outfitting policies. The Provincial Agriculture Zone Wildlife Program (PAZWP) was developed in 2009 by the BC government, to accommodate the special objectives in agricultural zones throughout BC and provide special opportunities for hunters. PAZWP helps coordinate crop damage prevention, mitigation and compensation strategies for damage done by certain species of wildlife. PAZWP has helped increase hunting opportunities in lower elevation agriculture and ungulate winter range zones, and promotes healthy landowner – hunter relationships.

4.2.10 Livestock Act

The Livestock Act defines Livestock Districts (areas where livestock may be at large) and Pound Districts (areas where livestock at large are subject to capture) and the conditions of capture, liability and trespass.

4.2.11 Forest and Range Practices Act and Range Act

The Forest and Range Practices Act (FRPA)and its regulations govern the activities of forest and range licensees in BC. The statute sets the requirements for planning, road building, logging, reforestation, and grazing. The Range Act gives the right to use Crown land for grazing or hay cutting. However, it is the FRPA and its various regulations that give direction on how and when rangeland may be used. The Range Planning and Practices Regulation requires that those who use Crown lands for livestock grazing must submit either a Range Use Plan ("RUP") or Range Stewardship Plan ("RSP") for approval by the Ministry prior to using rangeland. The Minister must approve a plan if it meets all requirements set out in the Regulation.

4.2.12 Weed Control Act

The Weed Control Act and Weed Control Regulations address the duty and responsibilities for designated noxious weed control, and the provision for local governments to appoint Committees and Inspection personnel to administer the provisions of the Act.

4.2.13 Environmental Management Act

Under the Environmental Management Act, provisions are included to exempt the producer from obtaining permits if defined conditions are met. Nonetheless, two regulations are important for local farmers: the Agricultural Waste Control Regulation/Code of Practice (AWCR) and the Organic Matter Recycling Regulation (OMRR).

The AWCR prescribes the practices for using, storing and managing agricultural waste material in order to prevent pollution. The Regulation and the code of practice deal with waste storage and also with on-farm composting.

The OMRR prescribes how composting is conducted in commercial facilities, including feedstock allowed, size and technology, siting and procedures, and compost quality. While in most areas OMRR is within provincial jurisdiction, some municipalities and regional districts have taken over the administering of OMRR requirements.

4.2.14 BC Meat Inspection Regulations

The Meat Inspection Regulations (MIR) sets out the requirements for all provincially licensed slaughter facilities in British Columbia. The regulation came into force in 2004 in response to the discovery of BSE in Canada's cattle herd in 2003, and compliance became mandatory on September 30, 2007. The MIR ensures that animals are humanely handled and slaughtered; carcasses are processed hygienically; and that meat is stored and packaged in ways that reduce contamination risks. The MIR introduced a provincial outcome-based standard for the safety of meat processing in the province, with the following objectives:

- Ensure food safety;
- Strengthen the meat processing sector;
- Rebuild consumer and international confidence in BC; and
- Adopt an outcomes-based approach to regulation.

The new graduated licensing approach includes several levels of slaughter operation for provincially licensed facilities:

- Class A facilities include slaughter and 'cut and wrap' services;
- Class B facilities include slaughter only;
- Class C was temporarily introduced in 2007 to make it possible for many slaughter operators to become fully licensed. These licenses are now being phased out;
- Class D - Retail Sales – permits direct producer sales to local consumers and to retail establishments with geographic restrictions. Restricts production to between one and 25 animal units (approximately 11,350 kg live weight); and
- Class E - Direct Sales –permits direct producer sales to local consumers. Restricts production to between one and 10 animal units (approximately 4,540 kg live weight). Class E licenses are also limited to the designated geographic areas but may be available to other rural and remote areas of the province on a case-by-case basis.

Class A and B slaughter licenses became mandatory for all provincially licensed slaughter facilities under the Meat Inspection Regulations in 2004. Unlicensed slaughter for personal consumption has always existed in the province and will continue.

4.2.15 Natural Products Marketing Act (Commodity Marketing Boards)

The Natural Products Marketing Act provides for the promotion, control and regulation of the production, transportation, packing, storage and marketing of natural products in British Columbia. The Farm Industry Review Board (FIRB) is responsible for the general supervision of BC's agricultural commodity boards, acting as a signatory to some agreements (e.g. federal-provincial), and for hearing appeals from any person aggrieved or dissatisfied by an order, decision or determination of a marketing board or commission.

In BC, broiler hatching eggs, chicken, table eggs, cow milk, and turkey are regulated both provincially and federally under a system of supply management by the respective boards and commissions:

- BC Broiler Hatching Egg Commission
- BC Chicken Marketing Board
- BC Egg Marketing Board
- BC Milk Marketing Board
- BC Turkey Marketing Board

Cranberries, hogs and vegetables are regulated provincially by the respective commissions. These commodities are not subject to the same production, import and price controls as supply managed products.

- BC Cranberry Marketing Commission
- BC Hog Marketing Commission
- BC Vegetable Marketing Commission

In BC, boards and commissions, including those that are supply-managed, set exemptions for personal consumption, farm gate sales, and small-lot production.

4.2.16 BC Environmental Farm Plan Program

The Canada-BC Environmental Farm Plan Program is a voluntary program that assists farmers in developing an environmental action plan for their farm that enhances natural resources and reduces the possibility of accidental harm to soil, air, water and biodiversity values.

4.3 Federal

4.3.1 Strategic Initiatives

Growing Forward 2, the most recent national Agricultural Policy Framework agreement between the federal, provincial and territorial governments, is designed to help the agricultural industry position itself to respond to future opportunities and to realize its full potential as a significant contributor to the economy. *Growing Forward 2* will support BC's agrifood sector in three key areas:

- Innovation;
- Competitiveness and market development; and
- Adaptability and industry capacity.

In addition, Growing Forward 2 will continue to provide funding for a complete suite of Business Risk Management (BRM) programs to ensure farmers are protected against severe market volatility and disasters.

4.3.2 Canada Agricultural Products Act

The Canada Agricultural Products Act regulates the import, export and inter-provincial trade and marketing of agricultural products. The Canadian Food Inspection Agency (CFIA) administers many of the agricultural import and export activities. This Act standardizes agricultural grading and inspecting procedures across Canada.

4.3.3 Additional Federal Legislation Affecting Agriculture

Additional federal legislation that influences various aspects of the agriculture industry include:

- Canada Grain Act
- Canada Wildlife Act
- Consumer Packaging and Labelling Act
- Customs Act
- Excise Tax Act
- Excise and Import Permits Act
- Farm Debt Mediation Act
- Farm Income Protection Act
- Farm Products Agencies Act
- Feeds Act
- Fertilizers Act
- Fisheries Act
- Food and Drugs Act
- Health of Animals Act
- Migratory Birds Convention Act
- Pest Control Products Act
- Plant Protection Act
- Seeds Act
- Species at Risk Act
- Transportation of Dangerous Goods Act

5. COMMUNICATIONS, CONSULTATION AND ENGAGEMENT

5.1 Goals and Objectives

The specific goals associated with the consultation and engagement process include:

- To increase awareness about the Agricultural Plan by providing proactive, accurate and timely information about its development and implementation;
- To engage members of the agricultural community in an inclusive planning process where they are partners in the development of the Agricultural Plan;
- To gather and record information and input from residents across the region; and
- To enhance understanding of agriculture in the region and foster support for and ownership of the Agricultural Plan amongst residents.

5.2 Consultation Process and Outcomes

A variety of communications and consultation tools have been utilized to encourage participation and input into the agricultural planning process.

5.2.1 Agricultural Plan website

The Agricultural Plan website (www.ekag.ca) provides a convenient portal for people to find information on the planning process, review existing documents and reports, access other consultation tools such as the surveys, identify APSC contacts and provide input via email. The agricultural planning process was also promoted via the RDEK website and a link was provided to the East Kootenay Agricultural Plan website.

5.2.2 Newsletters

A total of four newsletters have been issued to date (March 2012, September 2012, October 2012 and February 2013), and a fifth issue is scheduled for July 2013. The newsletters are distributed by direct mail to all agricultural land and farm status property owners in the RDEK, as well as others who have expressed an interest in the Agricultural Plan. Each issue provided an update on the agricultural planning process, identified upcoming consultation opportunities such as open house events and surveys, summarized the next steps in the process and provided contact information for the APSC members and agricultural consultant.

5.2.3 Newsprint advertising, press releases and articles

The RDEK's Communication Manager, working in conjunction with the APSC, issued press releases to create awareness of the agricultural planning process. This resulted in a number of newspaper articles and one radio interview. Specific consultation events such as the open house meetings were advertised in local papers to encourage participation.

5.2.4 Agricultural association meetings

The Agricultural Plan consultant attended meetings with the Kootenay Livestock Association and Windermere District Farmers' Institute to gather input and ideas for the Agricultural Plan. A similar meeting with the Waldo Stockbreeders Association is pending.

5.2.5 Presentations

Summary presentations on the Agricultural Plan process and the preliminary findings of consultation activities were provided for the Cranbrook City Council and the annual conference of the British Columbia Institute of Agrologists (BCIA).

5.2.6 Open House meetings

A series of seven open house meetings were conducted throughout the region in October and November 2012, gathering input from farmers and ranchers, community groups, associations, businesses and individuals. A total of 140 people participated. These meetings involved facilitated discussions where participants responded to the following strategic questions:

- *What is the current state of agriculture in the RDEK?*
- *What are the preferred/favourable conditions for agriculture in the future (economic, social, and ecological)?*
- *What specific actions are needed to create/achieve these conditions?*

More than 50 individuals participated in two follow-up meetings, held in Cranbrook (February 2012) and Invermere (April 2012), that explored these themes further and started to develop potential solutions and actions that will form the basis of the Agricultural Plan. Summaries of the seven open house meetings and two follow-up meetings are available on the Agricultural Plan website (www.rdek.bc.ca); printed copies can be provided upon request.

The open house meetings explored many issues, opportunities and strategies that should be considered as part of the agricultural planning process, and identified eight broad themes for further discussion and research:

Agriculture extension, networking and support

- The declining number of agricultural producers and the loss of agricultural infrastructure such as stockyards and auction facilities have resulted in fewer networking, information sharing and social opportunities for farmers and ranchers.
- The Ministry of Agriculture has changed the priorities for regional Agrologists and no longer provides individualized extension services to assist farmers and ranchers with production, marketing, business and financial planning information

Producer/Consumer relationships

There is a potential disconnect between producers and consumers as a greater percentage of the population moves to urban centres. Consumer surveys indicate public support for agriculture, farmland and local food production. However, many producers feel there is declining public support for agriculture and that consumers have lost their connection to the land and people that raise food.

Economic viability

Many East Kootenay farms and ranches are struggling financially due to high operating and investment costs, narrow profit margins, regulatory issues, etc. A majority appear to rely on off-farm income to sustain their agricultural operations.

Marketing/Branding (developing a local/regional agri-food economy)

Developing marketing and branding strategies are seen as opportunities to connect with consumers and increase demand for local agriculture and food products.

Government policies and regulations

Agriculture is influenced by a broad range of municipal, provincial and federal regulations and policies, some of which are viewed as having detrimental impacts on East Kootenay farms and ranches. Examples include the red meat inspection regulations re: farm-gate sales, supply management re: poultry (broiler and egg production limits), zoning and land use bylaws re: housing and business operation on farm land, the structure of farm assessment and taxation policies, and ALR regulations pertaining to permitted uses and subdivision for family housing.

Diversification and value-added opportunities

Diversification is seen as a possible solution to many of the issues facing the agricultural sector in the East Kootenay. Possible examples include agro-forestry and non-timber forest products, harvesting/processing of wild foods, alternative crops and livestock, and agri-tourism/culinary tourism.

Farm demographics and succession

The aging farm population and lack of young people entering the industry creates succession issues for the future management of agricultural land and concerns about the loss of local knowledge and social networking that has been an important aspect of the rural/farm lifestyle.

Land access, value and utilization

Difficulty accessing Crown land for agricultural use, cost of land ownership in relation to agricultural capability/productivity and under-utilization of privately owned land are barriers to expanding and diversifying our agricultural industry.

5.2.7 Surveys

Three separate surveys (producer, consumer and retailer/supplier) were developed and promoted via the Agricultural Plan website, newsletter articles, open house consultation meetings, direct contact with agricultural associations and using email distribution lists of meeting participants and interested individuals. An on-line survey tool (Survey Monkey) was utilized to collect and analyze responses. Printed copies of the surveys were available from APSC members, the two RDEK offices and the Agricultural Plan website.

The surveys were accessible between February and April 2013. A total of 210 survey responses were received; 50 producers, 156 consumers and 4 retailers/suppliers. Summary reports of the survey responses are available on the Agricultural Plan website.

Producer Survey Highlights

- 60% of respondents are members of an agricultural or commodity association.
- 53% reported that their farm is a secondary or supplemental source of income; only 29% consider farming their primary means of generating income. Farming accounts for less than 25% of gross annual income for 58% of survey respondents.
- 78% of respondents indicated that one or more farm owners/operators work off-farm.
- Only 53% of producers felt that their farm operation is economically viable, while 90% felt their operations were environmentally sustainable.
- Beef cattle and forages (pasture, hay and silage) are the most commonly produced agricultural products.
- Less than 25% of respondents engage in any form of value-added processing.
- Approximately 44% of respondents indicated they intend to expand their farming operation over the next five years; 41% intend to maintain the same size of operation; and nearly 10% intend to transfer ownership to a family member or sell their farms. Land costs and access to Crown land are seen as the major constraints to farm expansion.
- 38% of respondents indicated that the agriculture industry in the East Kootenay region will experience moderate decline over the next five years; 50% predict rapid decline; less than 5% feel any positive growth will be achieved.
- The top three benefits associated with farmland in the East Kootenay were local food production (food security), rural lifestyle and cultural heritage (retaining a connection to the land).
- The top three strengths/advantages of the agricultural industry in the region were reported to be consumer interest in locally grown food, access to land and water, and predictable climate. The top three challenges or issues include government regulation and bureaucracy, the impact of residential/recreational development pressure on land values, and access to markets.
- Most producers do not feel supported by any level of government, although more (26%) felt that local government supports them in comparison to the provincial (2%) or federal (2%) government.

Consumer Survey Highlights

- Almost equal proportions of respondents live in towns/cities (53%) and rural areas (47%). Nearly 80% of them have their own vegetable/produce garden.
- 85% of the consumers responding to the survey indicated a preference for locally grown food. Almost 90% are willing to pay a price premium to support local food production. Seasonal availability and cost were the primary barriers to purchasing local food.
- A high percentage of respondents were familiar with local farmers' markets (89%) and the 100 mile diet (95%).
- 29% of respondents indicated that the agriculture industry in the East Kootenay region will experience moderate decline over the next five years; 12% predict rapid decline; 26% feel positive growth will be achieved. 31% of respondents indicated they did not know or had no opinion.
- The top three benefits consumers associated with farmland in the East Kootenay were local food production (food security), economic diversification and cultural heritage (retaining a connection to the land).
- The top strengths/advantages of the agricultural industry in the region were reported to be consumer interest in locally grown food, the availability of land and favourable climatic conditions. The top three challenges or issues include bureaucratic red tape (regulations), limited growing season and pressure from residential development.

Retailer-Supply Survey Highlights

- Availability (product choices and seasonality) was the greatest barrier to purchasing food inputs locally, followed by reliability/consistency of supply and price.
- Retailers are willing to pay a premium (10 to 20%) for local produce.

6. NEXT STEPS

The Agricultural Plan Background Report is intended to:

- provide an overview of agricultural conditions in the East Kootenay;
- summarize the results of consultation and research conducted for the Agricultural Plan;
- provide preliminary comments on issues and opportunities in the plan area;
- stimulate discussion on issues or opportunities for improving conditions for agriculture as part of the overall planning process; and
- provide future direction to support development of the East Kootenay Agricultural Plan.

The East Kootenay Agricultural Plan will evolve from this research and the subsequent public consultation and review processes that will be undertaken as part of its development.

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Appendix I - ALR Use, Subdivision & Procedure Regulation – Permitted Uses

PART 2 — PERMITTED USES

Activities designated as farm use

2 (1) For the purposes of subsection (2) (b), **"ancillary use"** means any of the following activities carried on at a British Columbia licensed winery or cidery:

(a) processing, storage and retail sales;

(b) tours;

(c) a food and beverage service lounge, if the area does not exceed 125 m^2 indoors and 125 m^2 outdoors,

(2) The following activities are designated as farm use for the purposes of the Act and may be regulated but must not be prohibited by any local government bylaw except a bylaw under section 917 of the *Local Government Act* or, if the activity is undertaken on treaty settlement lands, by a law of the applicable treaty first nation government:

Amended [2004-Jul-22 Order in Council 822/2004] History

(a) farm retail sales if

(i) all of the farm product offered for sale is produced on the farm on which the retail sales are taking place, or

(ii) at least 50% of the retail sales area is limited to the sale of farm products produced on the farm on which the retail sales are taking place and the total area, both indoors and outdoors, used for the retail sales of all products does not exceed 300 m^2;

(b) a British Columbia licensed winery or cidery, and an ancillary use, if the wine or cider produced and offered for sale is made from farm product and

(i) at least 50% of that farm product is grown on the farm on which the winery or cidery is located, or

(ii) the farm that grows the farm products used to produce wine or cider is more than 2 ha in area, and, unless otherwise authorized by the commission, at least 50% of the total farm product for processing is provided under a minimum 3 year contract from a farm in British Columbia;

(c) storage, packing, product preparation or processing of farm products, if at least 50% of the farm product being stored, packed, prepared or processed is produced on the farm or is feed required for farm production purposes on the farm;

(d) land development works including clearing, levelling, draining, berming, irrigating and construction of reservoirs and ancillary works if the works are required for farm use of that farm;

(e) agri-tourism activities, other than accommodation, on land that is classified as a farm under the *Assessment Act*, if the use is temporary and seasonal, and promotes or markets farm products grown, raised or processed on the farm;

(f) timber production, harvesting, silviculture and forest protection;

(g) agroforestry, including botanical forest products production;

(h) horse riding, training and boarding, including a facility for horse riding, training and boarding, if

(i) the stables do not have more than 40 permanent stalls, and

(ii) the facility does not include a racetrack licensed by the British Columbia Racing Commission;

(i) the storage and application of fertilizers, mulches and soil conditioners;

(j) the application of soil amendments collected, stored and handled in compliance with the Agricultural Waste Control Regulation, B.C. Reg. 131/92;

(k) the production, storage and application of compost from agricultural wastes produced on the farm for farm purposes in compliance with the Agricultural Waste Control Regulation, B.C. Reg. 131/92;

(l) the application of compost and biosolids produced and applied in compliance with the Organic Matter Recycling Regulation, B.C. Reg. 18/2002;

(m) the production, storage and application of Class A compost in compliance with the Organic Matter Recycling Regulation, B.C. Reg. 18/2002, if all the compost produced is used on the farm;

(n) soil sampling and testing of soil from the farm;

(o) the construction, maintenance and operation of farm buildings including, but not limited to, any of the following:

(i) a greenhouse;

(ii) a farm building or structure for use in an intensive livestock operation or for mushroom production;

(iii) an aquaculture facility.

(3) Any activity designated as farm use includes the construction, maintenance and operation of a building, structure, driveway, ancillary service or utility necessary for that farm use.

(4) Unless permitted under the *Water Act* or the *Environmental Management Act*, any use specified in subsection (2) includes soil removal or placement of fill necessary for that use as long as it does not

(a) cause danger on or to adjacent land, structures or rights of way, or

(b) foul, obstruct or impede the flow of any waterway.

Amended [2004-Jul-8 *Environmental Management Act*, S.B.C. 2003 c. 53 (B.C. Reg. 317/2004)] History

(5) The removal of soil or placement of fill as part of a use designated in subsection (2) must be considered to be a designated farm use and does not require notification except under section 4.

Permitted uses for land in an agricultural land reserve

3 (1) The following land uses are permitted in an agricultural land reserve unless otherwise prohibited by a local government bylaw or, for lands located in an agricultural land reserve that are treaty settlement lands, by a law of the applicable first nation government:

(a) accommodation for agri-tourism on a farm if

(i) all or part of the parcel on which the accommodation is located is classified as a farm under the *Assessment Act*,

(ii) the accommodation is limited to 10 sleeping units in total of seasonal campsites, seasonal cabins or short term use of bedrooms including bed and breakfast bedrooms under paragraph (d), and

(iii) the total developed area for buildings, landscaping and access for the accommodation is less than 5% of the parcel;

(b) for each parcel,

(i) one secondary suite within a single family dwelling, and

(ii) one manufactured home, up to 9 m in width, for use by a member of the owner's immediate family;

(c) a home occupation use, that is accessory to a dwelling, of not more than 100 m^2 or such other area as specified in a local government bylaw, or treaty first nation government law, applicable to the area in which the parcel is located;

(d) bed and breakfast use of not more than 4 bedrooms for short term tourist accommodation or such other number of bedrooms as specified in a local government bylaw, or treaty first nation government law, applicable to the area in which the parcel is located;

(e) operation of a temporary sawmill if at least 50% of the volume of timber is harvested from the farm or parcel on which the sawmill is located;

(f) biodiversity conservation, passive recreation, heritage, wildlife and scenery viewing purposes, as long as the area occupied by any associated buildings and structures does not exceed 100 m^2 for each parcel;

(g) use of an open land park established by a local government or treaty first nation government for any of the purposes specified in paragraph (f);

Amended [2004-Jul-22 Order in Council 822/2004] History

(h) breeding pets or operating a kennel or boarding facility;

(i) education and research except schools under the *School Act*, respecting any use permitted under the Act and this regulation as long as the area occupied by any buildings or structures necessary for the education or research does not exceed 100 m^2 for each parcel;

(j) production and development of biological products used in integrated pest management programs as long as the area occupied by any buildings or structures necessary for the production or development does not exceed 300 m^2 for each parcel;

(k) aggregate extraction if the total volume of materials removed from the parcel is less than 500 m^3, as long as the cultivatable surface layer of soil is salvaged, stored on the parcel and available to reclaim the disturbed area;

(l) force mains, trunk sewers, gas pipelines and water lines within an existing dedicated right of way;

(m) telecommunications equipment, buildings and installations as long as the area occupied by the equipment, buildings and installations does not exceed 100 m^2 for each parcel;

(n) construction and maintenance, for the purpose of drainage or irrigation or to combat the threat of flooding, of

(i) dikes and related pumphouses, and

(ii) ancillary works including access roads and facilities;

(o) unpaved airstrip or helipad for use of aircraft flying non-scheduled flights;

(p)

the production, storage and application of Class A compost in compliance with the Organic Matter Recycling Regulation, B.C. Reg. 18/2002, if at least 50% of the compost measured by volume is used on the farm.

(2) Nothing in subsection (1) (a) is to be interpreted as permitting the conversion of a building into strata lots by an owner.

(3) If a use is permitted under subsection (1) (k) it is a condition of the use that once the extraction of aggregate is complete, the disturbed area must be rehabilitated in accordance with good agricultural practice.

(4) The following land uses are permitted in an agricultural land reserve:

(a) any

(i) ecological reserve established under the *Ecological Reserve Act* or by the *Protected Areas of British Columbia Act*,

(ii) park established under the *Park Act* or by the *Protected Areas of British Columbia Act*,

(iii) protected area established under the *Environment and Land Use Act*,

(iv) wildlife management area established under the *Wildlife Act*, or

(v) recreation reserve established under the *Land Act*;

(b) dedication or upgrading of an existing road with vehicular access and use declared to be a public highway under section 42 of the *Transportation Act*;

Amended [2004-Dec-31 *Transportation Act*, SBC2004, c. 44, s. 114 (B.C. Reg. 547/2004).]

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(c) road construction or upgrading within a dedicated right of way that has a constructed road bed for vehicular access and use;

(d) if the widening or works does not result in an overall right of way width of more than 24 m, widening of an existing constructed road right of way for

(i) safety or maintenance purposes, or

(ii) drainage or flood control works;

(d.1) widening an existing constructed road right of way to ease one curve;

Added [2004-Jul-22 Order in Council 822/2004]

(e) establishing as a forest service road

(i) an existing road under the *Forest Act*, or

(ii) a new road in a managed forest;

(f) increasing the right of way width of a forest service road by up to 4 m if the widening does not result in an overall right of way width of more than 24 m;

(g) railway construction, upgrading and operations on an existing railbed within a dedicated right of way, including widening of an existing railway right of way if the widening does not result in an overall right of way width of more than 30 m;

(h) surveying, exploring or prospecting for gravel or minerals if all cuts, trenches and similar alterations are restored to the natural ground level upon completion of the surveying, exploring or prospecting;

(i) surface water collection for farm use or domestic use, water well drillings, connection of water lines, access to water well sites and required rights of way or easements;

(j) soil research or testing as long as the soil removed or fill placed is only in an amount necessary for the research or testing.

(5) Any permitted use specified in subsection (1) or (4) includes the construction, maintenance and operation of buildings, structures, driveways, ancillary services and utilities necessary for that use.

(6) Unless permitted under the *Water Act* or the *Environmental Management Act*, any use specified in subsection (1) or (4) includes soil removal or placement of fill necessary for that use as long as the soil removal or placement of fill does not

(a) cause danger on or to adjacent land, structures or rights of way, or

(b) foul, obstruct or impede the flow of any waterway.

Amended [2004-Jul-8 *Environmental Management Act*, S.B.C. 2003 c. 53 (B.C. Reg. 317/2004)] History