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2009 ENVIRONMENTAL SCAN Kootenay Country Store Co-operative (KCSC)

Prepared by the Eco-Innovation Committee as part of the 2009 Strategic Plan

The following is a collection of key areas of focus throughout the meetings of the KCSC Eco-Innovation Committee between 2007-2009.

All issues outlined in this document have been raised as an extension of the role of the KCSC's Board of Directors to ensure that the mission statement of the KCSC is adhered to in principle and in practice.

This scan is focused around three key mission statement areas:

“Cultivating a Sustainable Way of Life”

“Encouraging a Healthy Local Economy”

“Maintaining the Financial Health of the Co-operative”

Global/National Economy

The global economy as we have known it since World War II is imploding in a manner few would ever have imagined possible. Mainstream economic thinking believed it to be axiomatic that the free market (as a self-regulating system) would have the capacity to move through cycles of recession and reboot itself. Lessons learned from the Great Depression were assumed to have generated the understanding and financial tools to avoid such future melt downs. Despite a few close calls, the global market place has navigated through a number of economic downturns as a result of government and central banking authorities implementing an array of tactics that focus substantially on controlling the flow of capital.

KCSC' Eco-Innovation Committee

1. We recognize that the scientific consensus around global warming, peak oil and climate change is that they are substantially caused by the burning of fossil fuels and other human interventions in the ecosystem, and may have catastrophic results for the planet and its inhabitants.

2. We recognize that the KCSC's continued dependence on the conventional food system, with its reliance on centralized supply, fossil fuels and inefficient technologies makes us economically vulnerable in the context of global warming, peak oil and climate change.

Desired Results of the Committee

We feel that the current environmental and economic crises provides both an opportunity and a responsibility to all governments, businesses, organizations, and individuals, including the Kootenay Co-op, to improve our operational and administrative practices and reduce our dependence on the conventional food system*.

*The “conventional food system” refers to the dominant model of food production and distribution that all grocery retailers are dependent upon. The conventional system is heavily reliant on fossil fuels, long-distance transportation, global economies of scale, energy-intensive agricultural and processing practices, genetic manipulation of organisms, uncertain social and human impacts, and questionable animal welfare practices.

The current 'crisis', however, none of the tried and tested means of intervention have had the presumed outcomes, sparking a vast array of speculation both in terms of diagnostics and remedies. Concurrently, leading financial figures have been left speechless saying only that 'we have never seen a situation like this before'. This of course begs the question as to what might be different now than the nearly six decades of unparalleled growth we have come to expect as being the norm. The likelihood is that a number of inter-related issues have coalesced to create a tipping point of considerable magnitude that would include:

Peak Oil: Until recently it was very easy to ignore the extent to which the entire edifice of the global economy was built on a platform of cheap and abundant energy. Millions of years of stored solar energy were compressed into a few centuries generating the capacity for an explosion of technology and development. Few ever imagined that the availability of energy had any limitations or that there would ever be an energy 'peak'.

Corporations: Over several decades, corporations have become increasingly 'transnational', scouring the globe for resources and cheap labor with little or no allegiance to any nation state and thus substantially free of regulation. With the support of western governments and the creation of GATT and the WTO, local economies could be disrupted and dismantled in the name of free trade (the law of comparative advantage) for the sole advantage of corporate profitability. This has had a substantial destabilizing effect worldwide and contributed to an ever widening gap between the rich and the poor. Presently, 1% of the world population owns 40% of the total wealth.

Global Economic Monoculture: In agriculture, it is well known that farms that focus on one or perhaps two crops do not have the same resiliency as a 'mixed' farm. Similarly, the globalization of local economies into one enormous economic monoculture has left every country vulnerable to any serious economic breakdowns anywhere in the system that might previously have remained localized.

Pyramid Scheme: It is not unreasonable to view the western (and now global) economic paradigm as a gigantic 'pyramid scheme'. Pyramid schemes are successful to the extent that they can continue to access new inputs (energy, resources, labor, capital, markets) and tend to collapse pretty quickly when that is no longer the case. This year saw the collapse of energy, capital, markets and a number of resources. The whole notion that such a model could be sustainable and that there are no limits to growth suggests a very short-term perspective and is inherently flawed.

Free Market Fundamentalism: With the fall of the Soviet Union, the 'free world' assumed that free market fundamentalism had proven itself once and for all to be the most efficacious way to generate wealth and prosperity for all. Increasingly, conservative governments in the western world granted ever-greater autonomy to the marketplace to regulate itself with a minimum of interference.

Exponential Growth and Tipping Points: Al Bartlet, one of the leading experts on population and exponential growth has shown the unexpected and sudden impact of steady growth that was presumed to be both necessary and a sign of a healthy economy. With China growing at a rate of more than 10% until recently, this would have meant a 'doubling' of their economy in 7 years, despite the spiraling problems and challenges already resulting from their rapid growth. In the eyes of global investors, China has been the poster child for an ever-expanding global economy, totally ignoring the blatant, damaging impact of such growth.

Diminishing Regulations and Esoteric 'Financial Instruments': What catalyzed the global economic meltdown in the Fall of 2008 is generally attributed to sub-prime mortgages and other poorly collateralized US loans that were bundled in such a way that they could be sold to investors throughout the world as secure investments. Financial instruments had emerged out of complex computer

programming that very few seemed to understand. Banks and other lending institutions were often leveraged as much as 30 to 1, meaning that for every \$30 that had been loaned, they had \$1 of equity. This worked only to the extent that the value of these loans (primarily for housing) were increasing. The slightest downturn left the lending institutions extraordinarily vulnerable as we have come to see.

Housing and Domestic Consumption: Heading into the 21st century, the US found that nearly 40% of its gross national product was tied to the ever-expanding housing market. Concurrently domestic consumption became the secondary underpinning of the American economy while the previous broad base of 'genuine' and diverse production and services had been steadily eroded.

Deficits, Debt and Balance of Trade: As the world's largest economy, the United States' ever-increasing balance of trade deficit, domestic budget deficit (almost \$2 trillion for 2009), and soaring national debt, puts huge strains on the entire global economy. Other countries must fund the US debt while at the same time it puts huge pressure on the American currency.

So what might we conclude from all of this given the degree of inconclusiveness from those who have been steering the ship? The unraveling of the global economy is really no less a consequence of our collective behavior than the emergence of climate change, habitat destruction or species extinction. There are obviously some fundamental flaws in the paradigm that have triggered a 'tipping point' inviting serious and immediate remediation. We are clearly entering a period of considerable uncertainty. The 'stimulus packages' being thrown at the crisis by the leading economic powers is symptomatic of how desperate they are. The administration of Barack Obama was quick to suggest how quickly the US economy had bounced back after the Great Depression. However, in the early 1930's, there was abundant oil, natural gas and other resources; there was a strong manufacturing infrastructure in place and a workforce that knew how to operate it; there were tens of thousands of family farms still intact; there was a railway system that was the envy of the world; there was no climate change; there were only 2 billion people on the planet; and then of course came WWII that certainly stimulated the economy and ended the recession but at a serious cost.

“We are clearly entering a period of considerable uncertainty.”

In Canada, we are somewhat better off than our American counterparts. Our banking system was recently rated the best in the world and Canadian banks are reporting profits. The federal government has been running surpluses for quite some years, so the national debt has been decreasing. Nonetheless, Canada is America's largest trading partner and will be seriously impacted. We are heavily dependant upon resource extraction—our forestry sector has been substantially tied to the US housing market and our oil industry (particularly the tar sands) has been hit hard by the decrease in oil prices. Like most western nations, Canada has initiated its own 'stimulus package' to the tune of \$80 billion so we are moving back into serious budget deficits. Whether or not the stimulus packages (here or elsewhere) have the intended consequences is hard to gauge. Many fear that the short term 'shot in the arm' is merely an attempt to prop up an inherently flawed system.

Regional/Local Economy

With the global economy in a severe state of uncertainty at the time of this Strategic Plan being authored, one important indicator of economic resilience for regional/local economies can be found in the 2006 *British Columbia Local Economic Dependencies* report compiled by BC Stats.

British Columbia has had a longstanding interest in resource extraction as a focus for economic development. The housing boom in the United States has driven much of the B.C. economy in years past, and following the collapse of the boom, local B.C. economies have been left in precarious positions.

Though a community with one dominant industry may be better off when the economy is healthy, it is clear that a diversified economic base provides more community stability in volatile economic times.

To address this issue and quantify it for application in British Columbia, the report looked at local area economic dependencies to construct a diversity index (DI).

The diversity index would be zero if the area were entirely dependent on one sector. At the other extreme, the diversity index would be 100 if a local area were equally dependent on each of the defined sectors.

B.C. communities tend to lie between 50-80 on the DI scale.

Nelson's Diversity Index is 71.

The regional range throughout Kootenay-Boundary is 69-72 (including Creston, Grand Forks, Trail, Castlegar)

Sectors of Note

Forestry

British Columbia is particularly dependent on the forest sector as a driver of local economies. With the collapse of the U.S. housing market and the slumping newspaper market, B.C.'s forestry sector has been dealt severe setbacks.

Tourism

Room revenues derived through accommodations (hotels, motels, etc.), are often used as an indicator of tourism health. Between November 2007-2008, Nelson's room revenues decreased by 15%.

High-Tech

While High Tech appears as a growth sector, most of the employment figures for Nelson in this sector are for jobs at *Pacific Insight* – a business that is heavily dependent on the slumping North American automotive sector. In January 2009, the company laid off 18 of its 300 workers. While the company is comparatively healthy in economic terms, they expect sales to decline as the year continues.

Notable Trends

Co-operatives

The Kootenay region has been referred to as housing the greatest concentration of co-operatives in Canada. In 2008, The Upper Columbia Co-operative Council was formed as a body to oversee and promote the many co-operatives operating in the region. As the KCSC has proven in practice, co-operatives, as an alternative business model, is a resilient and viable model of local and democratic ownership.

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Buy Local

In the wake of economic policies and models that promote centralized control, less-urban economies have suffered throughout the province. Sourcing our needs and wants locally is increasingly being regarded and recognized as an effective tool to increase the resilience of local economies.

Energy

Fossil Fuels

The globalized and industrial food system, of which the Kootenay Country Store Co-operative is very much a part, is heavily dependent on non-renewable fossil fuels.

Fossil fuels (oil, natural gas and coal) are a unique endowment of stored solar energy created under very unique conditions millions of years ago. The concentrated energy in these fuels has allowed us to create an artificial carrying capacity on planet earth—artificial because it cannot be sustained. This has all happened in the past two hundred years allowing the global population to soar from less than one billion in 1800 to 6.6 billion and growing (we add over 200,000 people per day). The benefits of modernity that we so easily take for granted are all built on a platform of cheap and abundant fossil fuels—particularly oil. Nothing matches oil for power, versatility, relative safety, transportability and ease of storage. Further, it has been well documented that no combination of alternative sources of energy can quickly compensate for fossil fuel depletion, not to mention that most alternative energy sources are themselves built on a platform of cheap and abundant oil and natural gas.

The abundance of food we have relied upon (and taken for granted) since the end of the Second World War is primarily the result of cheap and abundant fossil fuels-- oil and natural gas. Oil is the energy source for planting, irrigation, cultivation, harvesting, processing, pesticides and herbicides; natural gas is the feed stock for 95% of all nitrogen fertilizers –the single most important farm input that supported the so called ‘green revolution’ that witnessed food production soar in all parts of the world. Further, oil is responsible for 95% of all transportation—transportation that has been cheap enough to allow the average food item in our pantry to have traveled in excess of 1500 miles and concurrently undermining local food production.

In recent years many of the worlds leading geophysicists have agreed that we have now reached what is referred to as ‘peak oil’—the point at which half of the worlds oil reserves have been extracted.....the half that was the best quality, the easiest to access and situated in countries that were favourable towards the West. This was certainly the sentiment at the 2008 Association for the Study of Peak Oil (ASPO) annual conference in Houston Texas. The reality of ‘peak oil’ and its subsequent steady decline was also the conclusion of the ‘Hirsch Report’ commissioned by the US Department of Energy three years ago. Even the traditionally, ultra conservative International Energy Agency’s 2008 report pronounced, “the era of peak oil is imminent”.

Currently there is a serious decline in production from a number of the world’s major oil fields. The Cantarell field in Mexico, which generates 60% of their output, is declining at a staggering rate, which will leave Mexico unable to supply the United States (Mexico is their # 3 supplier). Similar conclusions documented by oil expert and investment banker Matt Simmons have been suggested for Saudi Arabia’s ‘Gadafar’ field—the world’s largest. In the meantime, natural gas in North America peaked in 2001. And whether we have reached ‘peak oil’ today or it is a few years off makes little difference.

In the past year we have seen oil prices soar to nearly \$150 a barrel (summer 2008) and fall as low as \$35 a barrel in early 2009. These wild fluctuations are in themselves symptomatic of oil’s ‘peaking’. We have now reached a see-saw whereby expensive oil creates economic decline resulting in decreased demand and declining oil prices which leads in turn to something of a stimulus to reboot the economy... a rather vicious cycle. At the same time, the fall in oil prices exacts a brutal toll on the economics of developing alternative energy sources.

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Even with the substantial decline in oil prices, the consumption of gasoline in the US is forecast to decline by a mere 1% this year. In the meantime, despite the increasing acknowledgement of ‘peak oil’ as a reality,

economists still forecast a 50% increase in demand by 2030. Inevitably, oil prices will head higher as global demand outstrips supply, with no assortment of 'renewable' energy sources being able to fill the gap. Our current industrial agriculture and food production system will face enormous challenges in the face of these declining fossil fuel resources.

As the price of oil increases and supplies decrease and become more difficult to access, the economic viability of local food systems will increase. This may push local/regional food systems towards becoming more economically viable than long-distance transportation and industrial methods of agriculture and food production.

What is clear, is that regardless of supply predictions, oil is a non-renewable resource that our current food system will be unable to rely upon at some point in the near or distant future.

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Localized Case Studies

Roy Lawrence (Lawrence Farms, Creston, B.C.) Roy is a third-generation farmer farming in the Creston Valley of British Columbia. In 2007, Roy recognized that the costs incurred for transporting his harvested barley was set to increase to a level that would have left the financial viability of his businesses in a vulnerable position. In that same year the Kootenay Grain CSA (Community Supported Agriculture) project was formed, helping to all but eliminate transportation costs for Roy while returning a substantially higher return on his grain.

Tipiland Farm (Argenta, B.C.) Tipiland is one of many local suppliers of fresh produce to the KCSC. Following the rapid increase in fuel costs in 2008, Tipiland was required to charge a fuel surcharge on deliveries to the KCSC.

Biofuels

First-generation biofuels, which are more appropriately named “agrofuels”, have increasingly become recognized as an irresponsible substitute for fossil fuels. Studies are revealing that in most cases, the total lifecycle costs of biofuel production does greater harm than good.

A study by The Nature Conservancy found that “the clearance of grassland (for biofuel crops) releases 93 times the amount of greenhouse gas that would be saved by the fuel made annually on that land.” Other studies have demonstrated that “the production of most biofuel crops resulted, directly or indirectly in new lands being cleared, either for food or fuel.” This is compromising the remaining undisturbed ecosystems on the planet. Due to a poorly structured distribution of food and irresponsible agricultural practices, the demand for biofuels is now in direct competition for food globally. Of equal concern, the same corporations seem to be invested in multiple sectors of oil, biofuel and agricultural inputs & trade, creating easily-manipulated markets among some of the most fundamental resources driving people and economies.

In their 2008 report titled “The State of Food and Agriculture”, the United Nations’ Food and Agriculture Organization (FAO) announced that; “Biofuel policies and subsidies should be urgently reviewed in order to

preserve the goal of world food security, protect poor farmers, promote broad-based rural development and ensure environmental sustainability.”

While second and third-generation technologies under development might be touted as more socially and environmentally responsible, just as first-generation fuels used today are genetically engineered (canola, corn), so too are many of the technologies being proposed. The KCSC has long opposed the genetic engineering of lifeforms.

Not all biofuels are equal, and the bulk of current concerns surrounding their production concern ‘agrofuels’. Localized biofuel production on the other hand - that integrates cultivation/production with food and other needs, are options that might hold a promise for providing energy.

Climate Change

Climate Change is the result of many factors including the dynamic processes of nature, and more recently and rapidly, by human activities (anthropogenic). The most significant anthropogenic factors are fossil fuels, land use and livestock.

In his release of the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report, the Chairman of the IPCC said, “Climate Change is a serious threat to development everywhere. Slowing or even reversing the existing trends of global warming is the defining challenge of our ages.”

The fourth IPCC report states:

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level. Many impacts can be reduced, delayed or avoided by mitigation. Mitigation efforts and investments over the next two or three decades will have a large impact on opportunities to achieve lower stabilization levels. Delayed emission reductions significantly constrain the opportunities to achieve lower stabilization levels and increase the risk of more severe climate change impacts

The report projected that the Arctic late-summer sea ice could disappear almost completely by the end of the 21st century. Since the IPCC report was released there has been a dramatic compression in the forecast timeline. A recent report by the Public Interest Research Centre (PIRC) states that climate scientists are now predicting that the late-summer sea ice could be gone within three to seven years. Underneath that ice, in the permafrost, there’s twice as much carbon as the entire global atmosphere. If that carbon is released, climate change could spiral out of control very quickly. The release of methane from the arctic is also a major concern. Methane is known to be 20 times more potent than CO₂ as a greenhouse gas. Many scientists fear that its release could accelerate global warming where more atmospheric methane causes higher temperatures, leading to further permafrost melting and the release of yet more methane.

The conclusion is that we might have a very small window of opportunity to get off of fossil fuels, change our land use patterns, and drastically change our agricultural and food systems. This window is predicted to be as little as 10 years with inaction possibly leading to a chaotic climate, submerged coastal communities, frequent and intense violent storms, mass species extinction, rapidly expanding deserts, chronic water and food shortages, crippled economies, and the end of the prosperous and benign living conditions as we’ve known them.

“The conclusion is that we might have a very small window of opportunity to get off of fossil fuels, change our land use patterns, and drastically change our agricultural and food systems..”

Carbon Dioxide

Carbon dioxide levels are substantially higher now than at any time in the last 750,000 years. Beginning with the industrial revolution in the 19th Century and accelerating since, the human consumption of fossil fuels has elevated CO₂ levels from a concentration of approximately 280ppm in pre-industrial times to around 387ppm today. The concentrations are increasing at a rate of about 2-3ppm/year. If current rates of emission continue, these increasing concentrations are projected to reach a range of between 535 to 983ppm by the end of the 21st century.

Land use

As The David Suzuki Foundation highlights; "The natural greenhouse effect is being intensified as humans alter the global carbon cycle. Forests, soil, oceans, the atmosphere, and fossil fuels, are important stores of carbon. Carbon is constantly moving between these different stores, that act as either "sinks" or "sources." A sink absorbs more carbon than it gives off, while a source emits more than it absorbs.

Living forests absorb carbon dioxide and, through photosynthesis, convert it to biomass. Forest soils also store large amounts of carbon in their organic layer. Deforestation alters the carbon cycle by eliminating trees and disturbing forest soils, releasing the carbon stored in both to the atmosphere. Forest fires and decomposing wood waste and wood products also add significant amounts of carbon dioxide to the atmosphere.

Soil organic matter is created by the cycling of organic compounds in plants, animals, and microorganisms into the soil. Well-decomposed organic matter forms humus, a dark brown, porous, spongy material that provides a carbon and energy source for soil microbes and plants. When soils are disturbed, organic matter previously protected from microbial action is decomposed rapidly because of changes in water, air, and temperature conditions, and the breakdown of soil aggregates accelerates erosion.

Until the 1980s, Canadian forests were a sink, according to the Canadian Forest Service. Through increased fires, insect infestation and harvesting, they have now become a net source.

Modern farming practices also disrupt soils and the carbon cycle. Soils, which contain about 75 per cent of carbon found on land, are excellent sinks. Once cultivated, the amount of organic matter that soils contain drops by 20-50 per cent."

Livestock

Livestock as an anthropogenic factor in climate change is also related to land use. Livestock's land use includes grazing land and cropland dedicated to the production of feed-crops and fodder. According to the United Nations' Food and Agriculture Organization (FAO), the rearing of livestock represents the largest use of land of any anthropogenic land uses. The total land for feed crop cultivation worldwide accounts for 33% of arable land.

Livestock are also responsible for gaseous emissions and climate change. According to the FAO, livestock contribute 9% of all CO₂ emissions, 37% in methane emissions and 65% in nitrous oxide emissions*.

*including feed crops

Government Policies / Regulations

Free Trade / World Trade Agreements

While the KCSC has indeed benefited from the free flow of goods across borders, free trade agreements have also contributed to declines in food production in British Columbia (in some cases, dramatic declines). As a result of a free market where all commodities compete with each other across borders, and where in many cases it's cheaper to produce and transport foods from long distances, many staple commodities of the western diet are

no longer produced in sufficient quantities to satisfy local demands. It can be expected that the access to and affordability of most foods will thereby be compromised in light of rising fuel prices and vulnerable supplies of energy resources and food.

While the West Kootenay region of the province was once a leading producer of many staple foods, such as fruits, dairy and grains, it is no longer, due in part to an inability to compete with other regions/countries producing similar staples.

In order to strengthen free trade ideals, there is an ongoing interest among the private sector to harmonize Canadian, Mexican and American food and agriculture standards/regulations. Up until August 2009, these efforts were being carried out through the *Security and Prosperity Partnership (SPP)*. While the SPP is no longer an active initiative, the motives do not appear to have shifted among the three countries and President Obama has not fulfilled his campaign promise to open up renegotiations of NAFTA. Such a direction might further limit the local sovereignty necessary to govern a local and/or regional food supply.

Supply Management

One of the most effective models to protect Canadian producers from the threats of free trade has been Supply Management (SM). SM has helped protect the price paid to dairy, egg and poultry producers by ensuring them a fair price and limiting the import of goods that would undermine the competitiveness of those sectors.

SM does, however, create some barriers to the enhancement and creation of local food systems and farmers and food security advocates often suggest that the system is in need of some reforms to permit new farmers to enter those sectors of the food system.

Food Safety

There is a growing frequency of food safety concerns originating from the industrial food system and has effectively compromised some of the public's trust in food originating from such industrial models. Concurrently, various levels of government, particularly provincial and federal, suggest that food safety concerns can be minimized by adjusting regulations and harmonizing them within agri-food sectors and across borders. While such moves are generally geared towards large-scale production, these changes often create barriers for small-scale producers to economically adapt and/or enter the market, and this in spite of many consumers placing more of their trust in small-scale local production

As an example, in October 2007, new laws came into affect that now require all almonds produced in California to be pasteurized following outbreaks of salmonella from large-scale industrial operations. This change eliminates the accessibility to unpasteurized almonds for consumers who do *not* support mandatory pasteurization. California produces approximately 80% of the world's almonds.

There is ample reason to believe that as the food system continues to be globalized, food safety concerns will increase and further push all sectors of the food system, large and small, into similar regulatory frameworks.

The KCSC has been at both ends of the food safety spectrum. In January 2009, KCSC was required to pull a number of peanut products off of store shelves, whereas in September 2006 following the E.coli outbreak of bagged spinach, KCSC was a unique example of a Canadian grocery store that was *not* required to pull any bagged salads or spinach off of the shelves. KCSC was spared the effort because all spinach was locally grown.

Policies / Positions

(with a focus on support for local/regional food systems)

Local

Municipal and regional governments in the West Kootenay are showing an increasing interest in supporting local food systems. The Village of Kaslo adopted a Food Charter in 2008 and passed a genetically engineered (GE)-free resolution in 2009. The City of Nelson revised their Official Community Plan to reflect a more appropriate definition of food security and passed the GE-free resolution in 2008.

Provincial

The Province of British Columbia supports a handful of food initiatives that encourage the consumption of local foods; the School Fruit and Vegetable Snack Program, ActNow BC and Eat BC!

The Province has also encouraged policies and regulations that limit the ability for sectors of a local food system to exist in some regions within the province, such as the Kootenay region.

According to former Nelson-Creston MLA Corky Evans “provincial regulations are stunting the local food movement and threatening the production and availability of local food”. It is worth noting, however, that the Food Safety Act, under which are pieces of legislation such as the Meat Inspection Regulation, does allow the Lieutenant Governor in Council to “make different regulations for different geographical areas in British Columbia” (section 23,4 b).

In October 2007, new meat inspection regulations came into effect requiring all meat processors in the province to be provincially or federally inspected. Many of those involved in trying to respond to the regulations changes in the Kootenay region have been unable to align financial resources and satisfy community concerns to construct an abattoir (slaughterhouse) in the region. There is a fixed plant for processing red meat located in Creston and a mobile abattoir based in Cranbrook that can travel and legally slaughter in the West Kootenays. However, neither of these options provide the ease of access to mostly farm-based slaughter services that existed prior to the new regulation nor could they meet the local processing needs if we were to try to supply all of our meat needs locally.

According to Corky Evans, B.C. spends the least of any province on the agri-food sector as a percentage of agri-food and agriculture GDPs. While the national average among provincial expenditures as a percentage of agri-food GDP has fallen from just over 25% to just under 15% in the 20 years leading up to 2006, British Columbia’s agri-food expenditures have fallen from roughly 17% to below 5% in that same period.

Another issue of concern to BC farmers is maintaining farm status for tax purposes. The Province is currently supporting a review process that is expected to be complete by July 31, 2009 for consideration for the 2010 Assessment Roll. Corky Evans believes that threshold levels will not be adequate to support small and hobby farmers to allow them to qualify as a farm. As a result, they risk losing farm tax exemptions and paying higher rates. If this happens on a large enough scale, Evans says it will “erode support for the Agriculture Land Reserve”. *(While the management of the ALR is often criticized, the model is the envy of jurisdiction throughout North America).*

Despite the criticisms of the Province’s approach to agriculture, they did recently release a report titled, “The B.C. Agriculture Plan - Growing a Healthy Future for B.C. Families”. The report outlines a number of strategies, which, among them, include many to support the growth of local food systems. It is unfortunate that the provincial Ministry of Agriculture is so under-resourced and the Plan has minimal funding attached to any of its proposed programs; thus the full implementation of the Plan seems unlikely.

Federal

Canada does not currently have any policies to support local food systems. Instead, food-related policies are designed for a globalized food system.

There is, however, movement from both the NDP and Liberal parties to explore the creation of a national food policy. In January 2009, Liberal Party MP Carolyn Bennet and Liberal MP and Agriculture Critic Wayne Easter, hosted a national on-line summit to discuss the prospect of a food policy. In the summer of 2008, the NDP's Agriculture Critic Alex Atamanenko embarked on a national tour to hear from Canadians on how a national food policy could, among other intentions, help support local food systems.

In November 2008, the national organization Food Secure Canada launched the People's Food Policy Project. This project is modeled after the People's Food Commission of the 1970's which consulted Canadians throughout the country on national food and agricultural policy. The People's Food Policy Project will undertake the same consultation process with the goal of creating a platform of policy recommendations for national food sovereignty.

Current Agricultural Trends in British Columbia

In the 10 years between 1991-2001, the population of British Columbia increased from 3,339,935 to 4,055,229. That amounts to a population increase of 21%.

(Between 1998 and 2008 the population increased 9% and between 2008 and 2018, the population is expected to increase by 13%)

Despite the 21% population increase between '91-'01, vegetable production in that same period dropped 16% and total acreage planted declined by 12%. Field crops including Wheat, Oats, Barley, Mixed Grains, Corn for grain, Rye, Flaxseed, Canola, Corn for silage, Tame hay & other fodder, Potatoes, Dry Field Pea, Ginseng, and other, decreased in total acreage planted by 26%.

Tree fruit production increased by 12% but total tree fruits (including processed fruits) decreased by 11% (in other words, fruits grown for processing have declined). The area planted to tree fruits decreased by 32%*.

Berries and Nuts experienced growth in BC by 79% in that period and acreage increased by 62%. Greenhouse and mushroom production also increased dramatically by 270% and 166% respectively in 9 years*.

In a number of the conventional sectors, there is a trend towards consolidation of smaller operations.

Between 2004-2008, dairy production increased by 1.9% yet the number of farms decreased by 15.2% between 2001-2006.

Egg production was up 58% between 2004-2008 yet between 2001-2006, the number of farms was down 4.9% for egg-only operations and down 32% for poultry/egg combination operations.

Organic Trends

According to the 2006 census of agriculture there were 3,232 farms with organic production in British Columbia (16.3% of all farms in the province).

Of the 3,232 farms reporting organic products in British Columbia, 14.0% produced certified organic products, 2.3% were in transition to becoming certified and 85.6% produced organic products but were not certified by a Certifying Agency. Farms can indicate more than one organic status. The predominant group of organic products

grown in British Columbia was animal or animal products. They were reported on 56.2% of the province's organic farms.

**1993-2002 numbers only available*

Average Income and Off-Farm Employment

Over half (54.9%) of all farm operators in BC had an off-farm job or business in 2005, compared to 52.8% in 2000. The average on-farm income for BC farmers in 2004 was \$16,367. In 2004, 70% of income for BC crop farmers came from off-farm income and 72% for mixed animal and crop farmers.

Current Agricultural Trends / Issues in the interior of British Columbia

There is a very small population of farmers producing food for local consumption in the West Kootenay but many initiatives aimed at enhancing and increasing this production.

Food Security Groups – There are a number of community groups focused on food security work in the West Kootenay including the Kootenay Food Strategy Society (Castlegar/Regional), Community Food Matters (Nelson), Kaslo Food Security Project, and the Creston Valley Food Action Coalition.

Community Supported Agriculture (CSA) - A number of area farmers have found the model of Community Supported Agriculture to provide a greater and more secure return on their investments. This is a direct-marketing model for farmers and bypasses the retail sector. One exception to CSAs bypassing the retail sector is the Kootenay Grain CSA, which is exploring a model of Retail Supported Agriculture (RSA) by permitting businesses to purchase shares at a decreased cost. The grain CSA plans to grow each year and supply the growing demand for local grains.

Local agriculture societies – There are five principle societies of note who represent farmers in the region. The Kootenay Organic Growers Society, Kootenay Local Agricultural Society, and the Boundary Organic Producers Association are focused on adhering to small-scale organic principles and standards. Creston is home to the Creston Valley Agricultural Society, and Grand Forks is home to the Grand Forks and Boundary Regional Agriculture Society (GFBRAS), which are both made up of conventional and organic growers. GFBRAS is very supportive of the local food and sustainable ideals espoused by the KCSC. There is also the newly formed farmers group - Slocan River Valley Farmers Group, made up of small-scale farmers who support organic principles. The Creston Valley also has a number of sector-based agricultural organizations such as the Dairyman's Association, Beef Growers, Cherry Growers, Grain Growers and Field Crops, as well as active 4-H Clubs.

Local labels - The Kootenay Local Agricultural Society (KLAS) maintains a system of farmer-to-farmer certification of foods produced using sustainable principles and markets product under the Kootenay Mountain Grown label. The label signals to consumers that the product is grown locally and meets similar standards to organic certification. The Kootenay Organic Growers Society (KOGS) maintains the K.O.G.S. acronym on some of the BC Certified Organic labels found in the region, and that too signals the product was grown and/or processed in the region.

Farmers' Markets – Farmers' markets continue to increase in popularity with weekly markets in Castlegar, Winlaw and Nelson. There continues to be a struggle to find enough farmers to attend and the West Kootenay EcoSociety is exploring how to increase market presence and encourage more farmers. At the time of this scan, WKES was exploring the use of the parking lot at the Community Complex in Nelson. It must be noted that the Co-op experiences a decrease in produce sales as a result of the Farmers' Markets.

Meat – Following changes in the Province’s meat inspection regulations, a co-operative was formed in the Slocan Valley in order to explore the possibility of constructing an abattoir to service local producers. The project was met with many barriers and has not since advanced. Access to local meat is currently not available except for a facility in Creston that is most ideal for farmers in the Creston Valley. There is a move to create access in the Nelson/Castlegar area to a mobile poultry processing facility.

Knowledge/Skills – As the average age of farmers in Canada increases, the risk of losing farming knowledge and skills increases. However, there appears to be many young farmers in the region wishing to enter into farming. The trades and skills that support agriculture, such as veterinarians, are also suffering from a lack of young people entering the professions.

Infrastructure – Along with the decrease in the numbers of farmers and active farms, the region has also lost a significant portion of the infrastructure necessary to support local agriculture and food systems. Examples include the loss of Quality Produce, a longtime Nelson-based food distributor; and Sunset Seeds, a long-established feed and seed supplier in Creston.

Income – Even with increasing local support for farmers, the business of farming continues to be a very hard one to earn a living from. This is based primarily on the fact that farmers are generally unable to recoup the cost of production, never mind a living wage from their efforts. Farmer succession is best secured when the farm is economically viable.

Labour – Access to affordable on-farm labour is an ongoing challenge for many West Kootenay farmers since they are generally obligated to pay significantly more than their own hourly wage to farm labourers. In some parts of Canada, farmers use migrant labourers to gain access to more inexpensive labour. The labour program used for these purposes is the Seasonal Agricultural Workers Program (SAWP).

Land Access – As land prices increase, access to land for new and existing farmers is not feasible given current income levels that can be derived from farming. The Kaslo Food Security Project has spearheaded an initiative that offers unique models of linking up available land with interested farmers and bypassing the market-driven valuation of land. The Land Conservancy of B.C. (TLC) and FarmFolk/CityFolk are behind the model. The South Island Organic Producers Association pioneered the “Linking Land and Future Farmers” (LAFF) program more than a decade ago as an innovative program to get young farmers onto leased land that would otherwise remain fallow.

Education – There are currently no formal institutions offering agricultural programs in the West Kootenay. There are a handful of independently operated courses on farming models and techniques. Until recently, the College of the Rockies in Creston had some agricultural offerings and still has supportive faculty. Selkirk College’s Regional Innovation Chair in Rural Economic Development, George Penfold, has a background in agriculture and planning and is supportive of educational programs that address food systems issues.

Urban food – There is a growing interest in urban areas including Nelson to grow food at homes and in community gardens. Policy and program changes are necessary to enable backyard livestock, edible landscaping and the use of municipal resources, spaces and infrastructure to support urban food production, both communally and at the household level.

Retail – There are a number of retailers in Nelson and area offering local foods; Ellison's Market, Save-on-Foods, Evergreen Foods, Endless Harvest and the Kootenay Country Store Co-operative. Some of these retailers clearly prioritize and promote local product more effectively than others.

Consumer Awareness / Education

In harmony with the Cooperative Principle of Education, Training and Information, Kootenay Co-op has a long history of providing education and training for their members, staff and the greater community. Through classes, workshops, the support of community food events and on-line/in-store resources, we continue to be a leader in disseminating information about food issues.

Consumers have come to expect imported products such as bananas, avocados, and coffee to always be available on the shelves at their local grocer store. Transporting these products around the planet with the use of fossil fuels is unsustainable.

Trends

According to Agriculture and Agri-Food Canada, the Canadian population will continue to age with more seniors and fewer children in 2020 than there were in 2004. This will have an impact on the type and quantity of food demanded as well as where it will be consumed. With a tighter economic reality, retail food purchases will continue to dominate; less disposable income will be spent on food service.

Data from StatsCan indicates that the current recession is beginning to have an impact on the food industry. Expenditures on food and non-alcoholic beverages have begun to decline for the first time in the past ten years. Historically, even in recession, it is rare for food expenditures to decline.

Sales of organic food will continue to rise, however, at a much slower rate than we have experienced in the past decade.

Cost of Eating

The cost of food has been steadily increasing. Breads, bakery products, cereals and oils have seen the sharpest increase in the past year of over 12%. Canadian households spent \$46.5 billion on groceries in 2006; sales of organic foods account for less than one percent of that total. The Food Marketing Institute reports that the average family of four spends approximately \$135 per week on grocery expenses.

Co-op Trends

The Co-op has experienced strong and steady growth, increasing our store sales by 115% in the past eight years. Daily customer counts have increased 70% (935) and average baskets have grown by 40% (\$30.77) since 2000. The Co-op's sales per square foot of over \$1700 is three times the supermarket average.

Sales growth for the first quarter of 2009 has slowed, presumably as a result of the current economic recession.

Buy Local Trend and Eating Local

Across North America, there is an increasing demand for locally produced food and demand appears to now be outstripping supply.

The U.S. Department of Agriculture reported an 80 percent increase in the number of farmers' markets nationwide between 1994 and 2002. According to the book "Organic Inc. - Natural Foods and How They Grew", there were 3,706 U.S. farmers' markets in 2004, double the number there were a decade earlier.

The Robyn Van En Center at Pennsylvania's Wilson College determined that there are now 1,300 Community Supported Agriculture projects (CSA's) in the U.S. since the inception of the model in 1985.

The Kootenay Coop continues to expand its line of local products with sales steadily on the rise despite slowing of overall sales growth.

Organic Standards

On June 30, 2009, the new Canadian Organic Standards will come into effect. All organic products produced in Canada that are shipped across provincial borders will have to adhere to these standards. When calling a product organic, producers will be required to display a logo of the certification body and/or the new Canada Organic logo. In cases where certified organic products are not labelled, a certificate from the certifying body should be displayed at the point of sale. It will become mandatory that all "organic" producers in B.C. be certified by a Certified Organic Associations of B.C. (COABC) accredited certifying body. COABC adopted the Canadian standard on January 1, 2009.

This spells the end for any farmer/producer marketing their product as "organic" unless it's certified by an accredited body.

Kootenay Mountain Grown and K.O.G.S

In 2008, a number of certified organic producers in the region chose to abandon organic certification and move towards a farmer-to-farmer certification system that adheres to organic principles. The system is administered through the Kootenay Local Agricultural Society and marketed as "Kootenay Mountain Grown". The Kootenay Organic Growers Society (KOGS) continues to offer certification services to its members and is an accredited body of the Certified Organic Associations of British Columbia (COABC).

Food Processing / Storage Capacity

Fresh fruit and preserve production in the West Kootenay escalated through the first half of the 20th Century, serving as a major economic engine for the region during this period. As the neighbouring Okanagan region became the more favoured orchard belt and fruit crops failed in the West Kootenay, food processing and storage facilities became obsolete. Currently, food processing and storage is minimal in the region and is handled almost exclusively by small family farms and businesses. Farms throughout the region have developed innovative produce storage facilities. In the Creston Valley, some of the agricultural sectors have developed their own joint storage facilities from which they distribute their crops, such as apples and cherries.

Genetically-Modified or Engineered Foods

The KCSC has long opposed the presence of genetically engineered (GE) ingredients in the food system. With the increasing presence of GE ingredients within the global food supply, and without labelling initiatives that have adequately tested for GE ingredients, keeping GE off of store shelves has not been easy.

The KCSC recognizes GE plants, animals and trees as a threat to the environment, food sovereignty, human rights, and human health.

Canola & Corn

Because of the widespread contamination from GE varieties, there is now very little organic canola or corn grown in Canada. Other crops may face a similar fate.

Rice

GE rice varieties had not yet been approved, when, in 2005, global rice supplies were contaminated with an unapproved GE rice variety originating from a field trial in the United States. The recalling of plant DNA is next to impossible once contamination occurs, and the incident led to many import bans and lawsuits around the world.

While organic standards prohibit GE at any stage of food production, it is also clear that both organic and GE varieties cannot co-exist.

Most prevalent GE ingredients

Canola, soy, corn, cotton (oil), enzymes are the most common.

Other genetically engineered foods include rice, papaya, squash (limited), sugar (derived from sugar beets, 2008 first planted), milk products (limited)

on the horizon: alfalfa (feed only)

under development: most foods; in particular – salmon, pig, plum, palm, wheat, apple, banana, blueberry, carrot, cranberry, eggplant, grape, grapefruit, lettuce, onion, pea, pepper, persimmon, pineapple, potato, squash, strawberry, sweet potato, tomato, and watermelon.

Non-GMO Project

A new U.S. based initiative has introduced what is called “North America’s first independent, third party product verification program for GMOs, which assesses compliance with the Non-GMO Project Standard.” Verification with the program appears as a “Non-GMO Product Verified” label. Notable supporters of the Project include; Whole Foods, Lundberg, Nature’s Path, Eden, Organic Valley, The Big Carrot (Toronto grocery). Other “partners” and “friends” include many American grocery co-ops (Ashland, Moscow, and more).

GE Free Zones

The KCSC has supported the GE Free Kootenays campaign, which is working towards the creation of a Kootenay region that remains free of genetically engineered plants and trees. The initiative recognizes the immense difficulties required to address GE ingredients on store shelves and is seeking to protect the local environment as a first step to protect the local food system.