KPU

Institute for Sustainable Food Systems

Growing Resilience

Capital Region Food and Agriculture Initiative Rountable Good Food Summit

November 21, 2019 Esquimalt and Songhess Nations Territory and Victoria, BC



Our food system is the foundation of our sustainable, resilient future



No sustainable food system, no sustainable humanity

Global-Industrial Food System

all our eggs are in one basket



and that basket is not sustainable socially, economically, or environmentally

Not socially equitable or morally just



Canadian/ BC Food Insecurity

9.2% Canadian households food insecure

50% in lowest income group

B.C. reports slightly higher rates

3 sub-populations predominate

Families headed by single women

Marginally housed and homeless

Indigenous peoples (particularly on reservations)

Ostrey, A. 2010 Food for Thought Provincial Health Services Authority

'Western disease' epidemic- rising health care costs

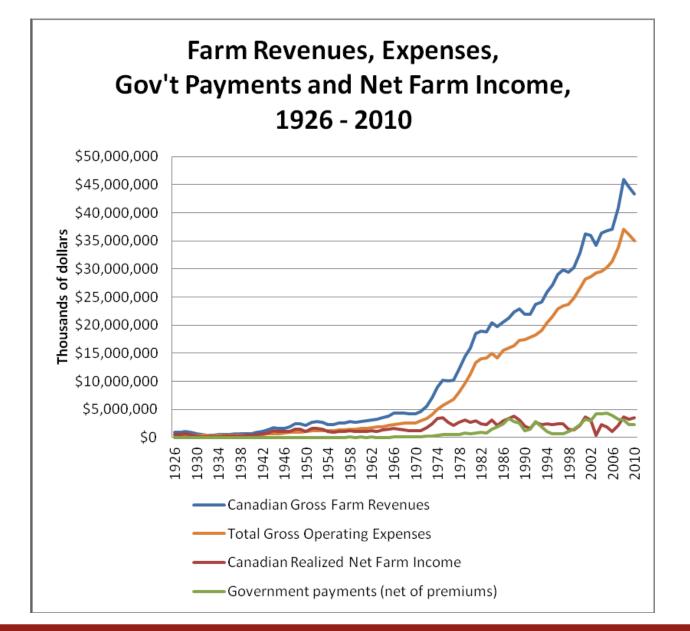
obesity, diabetes, childhood onset diabetes, high cholesterol, chronic heart disease

Our children may be the first generation with a life span shorter than their parents

Clancy, K. 2003 Union of Concerned Scientists

Not economically sustainable

Cost of production far exceeds revenue potential



National Farmers Union, 2012

BC Agriculture in the red

2010- B.C. agriculture grossed \$2.5 billion lost \$119 million

2014- B.C. agriculture lost \$63 million

Statistics Canada

"Cumulatively B.C. [farming] is not a healthy industry"

Garnet Etsell, Chair

B.C. Agriculture Council Vancouver Sun, June 11, 2011

"Faith in the paradigm of productivity has made most farmers not only poorer, but also exposed to more risk."





LIVESTOCK 4 Heifers 2 Steers 7 Spring Calves	1 Purebred Black Angus Bull, One Year Old 100 Young Chickens
1 Water Tank 1 4-Wheel Trailer Set of Blacksmith Tools 1 Engine Pump Jack 1 Grind Mill	1 Cook Stove 1 3-Burner Oil Stove 1 Large Kitchen Cabinet 2 Kitchen Tables 1 Heater 1 Bed Complete With
HOUSE HOLD GOODS 2 Dressers 1 Corner Altar	Spring and Mattress 2 Bedsteads 1 Mattress
1 Dining Room Table 1 Buffet	1 Sink Wash Stand 1 "Lacta" Cream Separator 1 Rug 9x12
1 "Airline" Radio 1 High Chair	1 Wheel Chair 1 Wardway Washing Mach- ine (New) Dishes, Cream Cans, Kit-
6 Chairs Articles Too Numerous to	chen Utensils
	4 Heifers 2 Steers 7 Spring Calves 1 Water Tank 1 4 Wheel Trailer Set of Blacksmith Tools 1 Grind Mill HOUSE HOLD GOODS 2 Dressers 1 Corner Altar 1 Daing Room Table 1 Buffet 1 Rocking Chair 1 "Airline" Radio 1 High Chair 1 Child's Bed 6 Chairs

TERMS-Cash or Negotiable Paper

RAY SCHNELL, Auctioneer

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Pearson and Nasby University, 2008

Food costs outpacing inflation

Canadian inflation 2008

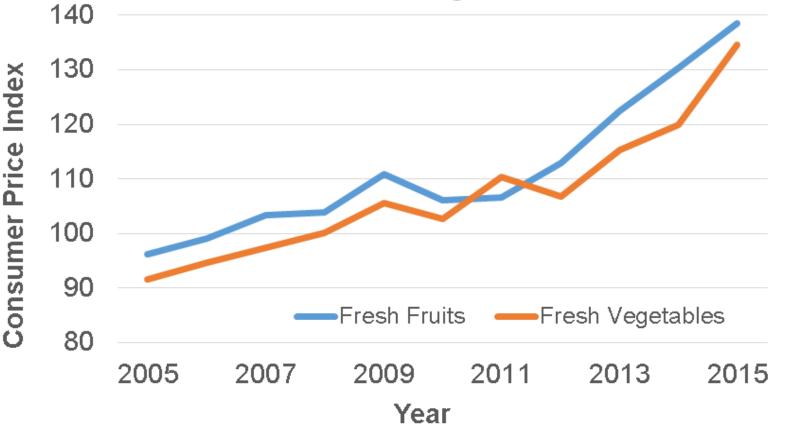


Overall-	1.2 %
Food overall-	7.3 %
Cereal products-	12.4 %
Fruits/ vegetables-	26.9 %

Canadian Broadcasting Corporation News, 2009



B.C. Consumer Price Index for Fresh Fruits and Vegetables



Source: Statistics Canada 2016 (CANSIM, table 326-0021 and Catalogue nos. 62-001-X and 62-010-X)

Food system oligopolies, no 'free market'

4 corporations- 80% of North American beef packing

3 corporations- 75% of North American pork packing

4 corporations- 62% Canadian flour milling

4 corporations- 62% Canadian food retail

1 corporation- 90% of Canadian dairy processing

5 corporations- 80% of world crop seed

National Farmers Union, 1999 Office of Consumer Affairs, Canada, 2013 Vancouver Sun, 2008 Heffernan W., 2003

Corporate hegemony

" We now have a global food system that is impervious to true consumer interests. Food is produced, processed and distributed almost entirely to meet the short-term business interests of the global food firms."

> Kirshenmann, F., Leopold Center for Sustainable Agriculture Iowa Sate University, In Mullinix ed., 2005

Not environmentally sustainable

- Habitat/ biodiversity destruction
- Pesticide and fertilizer contamination
- Soil erosion/ salinization/ desertification
- Noxious waste/ pollution of air, water, soil
- Aquifer and ground water depletion
- Genetically Modified Organisms
- Greenhouse gas emissions

Sustainability Gorillas in the Room

Resources exhausted



Agriculture uses 70% of the worlds fresh waterwe're tapped out

The world is farming all the land there is to farmcan't create more

> Brown, L., 2012 Full Planet, Empty Plates

Utter dependence on fossil fuel

With a negative energy return on energy invested (EROEI)

1:5 on average1:50 for your hamburger

formerly (1940) agriculture afforded a positive EROEI; 2.5:1

Climate Change

the "common assumption that a warming climate will be a boon for agriculture production in northern climates is now recognized as false"



The global-industrial system didn't just happen

Intentional government, industry, university complicity

An alternate resilient food system won't just happen either

it will take the same kind of purposeful collaboration

We need a shared food system vision

A description of what we'd like our food system to be, look like, in ten or twenty years

With well delineated:

- Objectives
- Components
- Configuration
- Ways of operating

From a food system vision we can develop short and long-term objectives, strategy, and action plans

Otherwise I fear our disparate efforts will not be sufficiently successful

Our vision must take challenges and opportunities in account

Opportunity:

- Good food producing lands, ALR
- Proximity to communities/markets
- Awareness/ local food movement
- \$17 billion spent on food annually
- New generation wants to farm
- Awareness of Indigenous sovereignty
- Strong Indigenous leadership

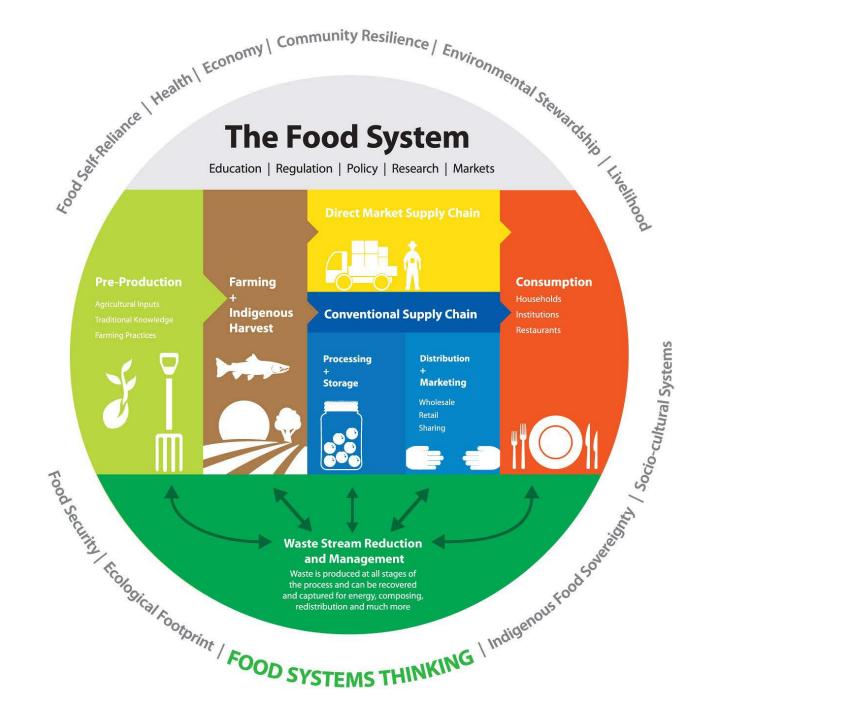
Challenges:

- Climate change
- Environmental degradation
- Fossil fuel dependence
- High price of farmland
- Export focused policy regime
- Little processing & distribution
- Aging farmers

Food system attributes we might envision



to confer resiliency, sustainability



Our Touchstone

Nurturing Mother Earth, and reciprocally human physical and spiritual well being.

The sta

Scale and focus



PLACE-BASED

Bioregions

Areas that share similar topography, plant and animal life, and human culture



Bioregional Food Systems

Operating per the environmental capacity of the bioregion, for local communities and local economies, and in balance with an appropriate national and trans-national system



Diversity of smaller scale farms and businesses Low input, human intensive **Environmentally sound** Alternate market channels Community centered Local economy focused

Unprecedented scale of planning and development

will require cross-jurisdictional cooperation

Food lands are accessible

de-commodify, regulate who can use food land and how it can be used

Our food system must be a powerful instrument for reconciliation, Indigenous Nation sovereignty

Regional processing and distribution capacity must accommodate production and markets



Co-operatives will play a critical role

- For all food system aspects- supply, production, post-production, finance
- To gain economies of scale, economic clout, retain decision making
- Can embrace the triple bottom line of sustainability
- Retain wealth created within our communities



Formal and informal agriculture education programming



- KPU BASc- Sustainable Agriculture
- KPU Tsawassen First Nation and Richmond Farm Schools
- KPU Graduate Certificate-Sustainable Food Systems and Security
- Sandown Farm et al.

50 million farmers

needed in Canada and U.S. for post peak-oil agriculture

20% of our population

Heinberg, R., 2006 Post Carbon Institute Will have sustainable food system leaders and builders of all stripes

Teachers

Business persons

Planners/ municipal and First Nation govt. staff

Researchers/ professors/extension agents

Spiritual leaders

Elected officials

Community leaders

NGO staff

Bureaucrats

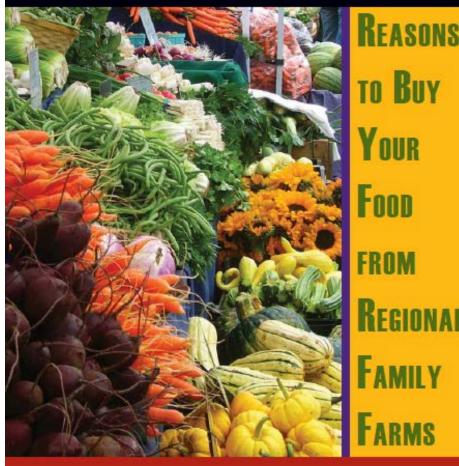
Knowledgeable, supportive citizenry

Extensive and sustained, citizen targeted, food system awareness/ education programming

To pull regional foods through the marketplace (as opposed to pushing)



Help change the world, one fork at a time.



Applied research capacity

- Focus- sustainable agriculture, regional food systems, community development, environmental stewardship
- Address challenges and opportunities, knowledge gaps
- For knowledge, method, tool creation

Reform food system research/ development funding environment in BC

Alternate food system activists, organizations all competing for the same, limited resources

Established, Cohesive Extension Service

For purposeful knowledge transfer and adoption, to affect systemic change/ improvement

- Provide direct sector support to farmers and other food system actors
- Focus on any aspect of agriculture/ food system
- Inextricably linked to applied research

Effective Applied Research and Extension predicated on relationships

Genuine, mutually respectful, durable, roll-up the sleeves, get things done, partnerships

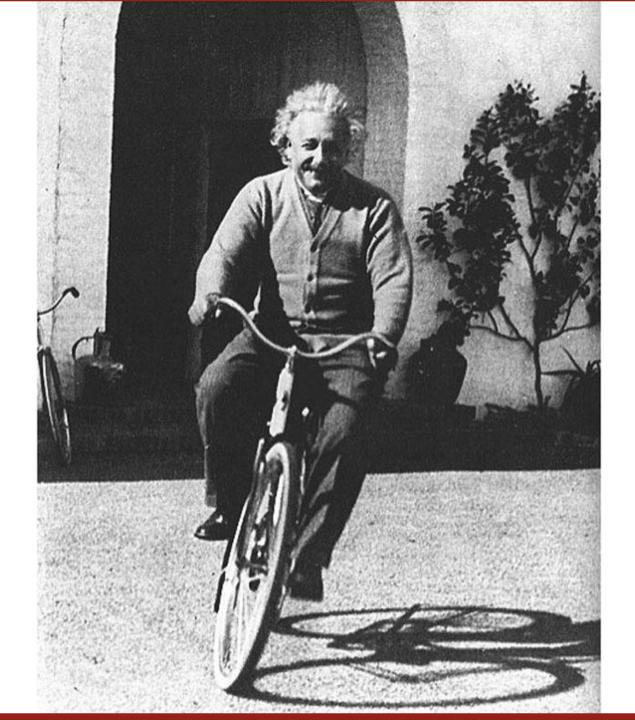
Enabling policy environment

i.e. a combination of directives, incentives and regulations that advance a resilient food system

- Comprehensive, coherent policy between levels of government
- Comprehensive, coherent policy within a bioregion
- Coherence between types of policy (e.g. high level vs. enabling)

Policy is what makes things happen, or not

Concluding thoughts



"The significant problems we face cannot be solved at the same level of thinking we were at when we created them."

Albert Einstein

Don't fight, rather let's eclipse, the global-industrial food system Our food system is a clear and primal manifestation of our worldview,



and way of being human

Our food, our food system, our economy, and our children's, children's future

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Burning question

How can we effectively go about developing a 'resilient food system' vision for BC?