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## Thoughts on Regional Food Security & Self-Reliance

*by George Penfold*

A recently published [report on BC's food self-reliance](#) shows that in spite of our large productive agricultural areas in the Lower Mainland and the Okanagan, BC is only 48% self-reliant in food. Our only food surplus in BC is in fruit. On the other hand, Canada continues to be a net exporter of agricultural and related food products to the tune of [\\$6 Billion in 2007](#).

Given that Canada produces more agriculture and agri food value than we consume, what does "food security " mean in the discussion about local food?

I prefer the term food [self-sufficiency](#) to describe what we are trying to achieve. Food security is a term that has been traditionally used to deal with the issues of lack of food, hunger and starvation. That is not what most local food initiatives in BC or across Canada are about. They are focused more on increasing local/regional food self-reliance and expanding that part of the regional economy. By labeling this as food security, the fact that there are hungry people in our communities and around the world can be overlooked, and that would be an unfortunate outcome of the local food movement.

### **Food is Energy**

The drive for local food seems to hinge on concerns about higher energy costs. But, higher energy costs don't necessarily mean we won't have food. We will still probably be able to get most of what we want, but higher energy costs mean we will have to pay more for it. The implicit assumption that increasing local/regional food supply is an insurance plan against higher costs needs a second look, especially in the Kootenay region.

Transportation costs and the energy related concern about "food miles " can be misleading if looked at only on a distance basis. Yes, trucks do travel 3,500 km or more from California, but they carry 20 or more tonnes, about 6 kg of food per km travelled. Those trucks usually go back with other goods on board. If a local farmer travels 100 km from Grand Forks to the Castlegar farmers market, his or her truck – even using half as much fuel per km – would need to carry 300 kg of food product to use the same amount of energy for kg of food delivered as the truck from California. If the farmer goes back empty and consumers make a separate trip to go to the farmers market, the amount carried would have to be even greater.

Food is energy, and regardless of where it is grown, it will still take lots of energy to grow food in the future, if we rely on anything resembling current technologies. Our regional energy sources include hydro electricity, wood, and coal. None of these are easily adaptable to the oil based production systems we currently rely on. Converting to steam may be possible, but the GHGs (green house gas emissions) trade off isn't great unless much better steam technologies are developed. Going back to manual labour or horses is a romantic idea, but one that would be very unlikely to produce the amount of food needed to support regional demand.

## **The "Grain-Gap"**

If we want to be more self-sufficient regionally, we need a clearer focus on what we need to be growing. Most images of local food initiatives show fresh fruit and vegetables. The average Canadian consumes about 45 kg of fresh, frozen, and processed fruits and vegetables annually. But the core component of the current Canadian diet is grain, both eaten directly (cereals, bread, etc) and processed through poultry and livestock for eggs, milk, and related products and meat.

The [self-sufficiency report](#) noted above estimates that the average person consumes approximately 80 kg of grain directly (mostly wheat), and another 395 kg of feed grain consumed indirectly in the form of meat, eggs, milk etc. For the approximately 170,000 folks who live in the [Columbia Basin](#) and [Boundary](#) regions, that means we would need about 80 thousand tonnes of grain, or at 2.5 tonnes per hectare yield, approximately 32,000 hectares of grain to be self sufficient. In 2006, we grew less than 4,000 ha including all grains, beans, flax, and canola – just over 12% of our theoretical demand, significantly less than overall provincial self-sufficiency of 14% in food grain and 43% in feed grain.

Why aren't we producing more? Lack of land doesn't seem to be the major issue. We have approximately 375,000 hectares in the ALR in the three [Kootenay](#) Regional Districts, and about half of that is in "farms " as defined by Census Canada.

## **Do the Math**

The main issue is that we simply don't pay enough for food to make growing it pay.

In 2006 there were 1,394 census farms in the three Kootenay Regional Districts, with only 40 of those producing [certified organic](#) products. The average capital value (land, livestock, equipment) of farms ranged from \$1,325,360 in RD East Kootenay to \$746,165 in RD Kootenay Boundary, and \$682,663 in RD Central Kootenay. Average farm receipts were \$39,420, \$59,801, and \$53,388 respectively. After gross expenses, however, net income was \$133, \$1680, and \$5422 respectively.

That math is pretty clear. From significant capital investment, the average farmer makes very little or loses money. We will have to pay a lot more for food even at current energy prices if there was any realistic opportunity to reach regional self-sufficiency based on the premise of regional farmers producing more. The diversified "family farm" local food model we seem to want, one that generally existed 40 years ago, was based on spending almost 20% of average household income on food. We now spend less than 10%.

## **A Complex Situation**

There are lots of other issues to consider in trying to reach regional self-sufficiency. Who will our "farmers" be? Where will the farm labour come from? Where will the nutrients come from - not just oil based nitrogen, but phosphate and potash, the water to irrigate? And how do we rebuild regional storage, processing, and distribution systems, among others?

There is no question that local food awareness, direct farms sales, farmers markets, and community and private gardens all help farmers and regional self-sufficiency, but that focus is mainly on fruits and vegetables. The "grain gap," however, is huge. Unless we are willing to

make some significant changes – such as changing our consumption patterns, shifting to a grass based meat production system and paying more for local food – regional food self-sufficiency is probably not a realistic expectation.