



# Eating local, utopia or reality?

Creating a city-region food needs assessment model

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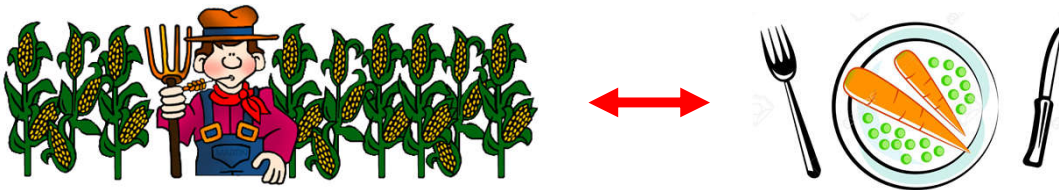
**Patrick Mundler**



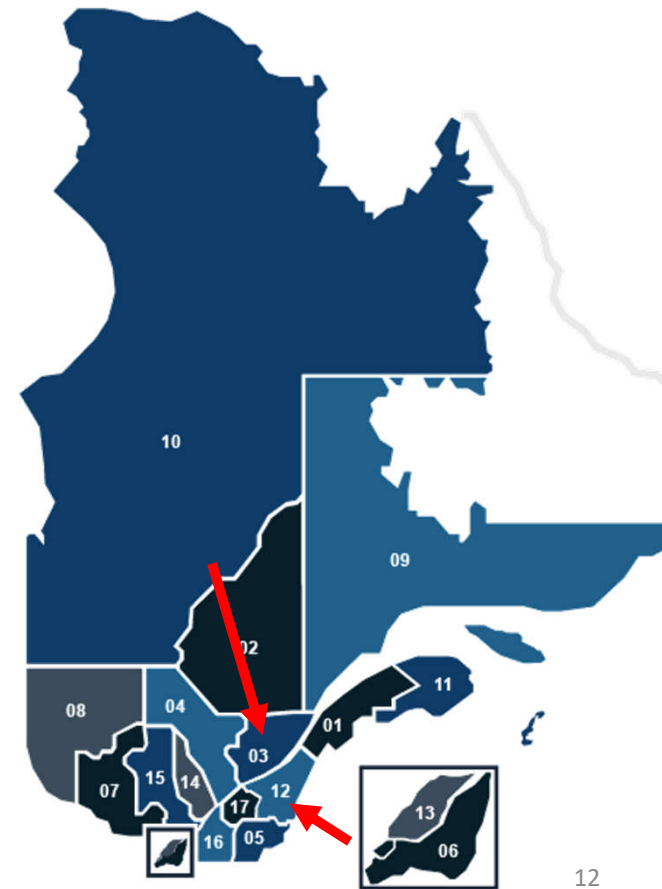


# Agricultural economics

- **Main objective:** Study the relationship between what is produced and consumed on the territory



- **Quantitative objective:** Evaluate the productive potential of the region and make the adequation with food needs



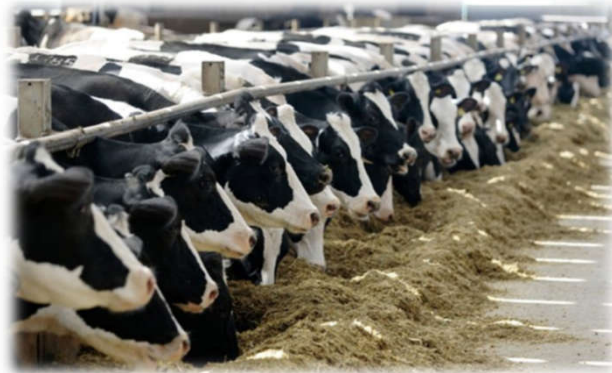
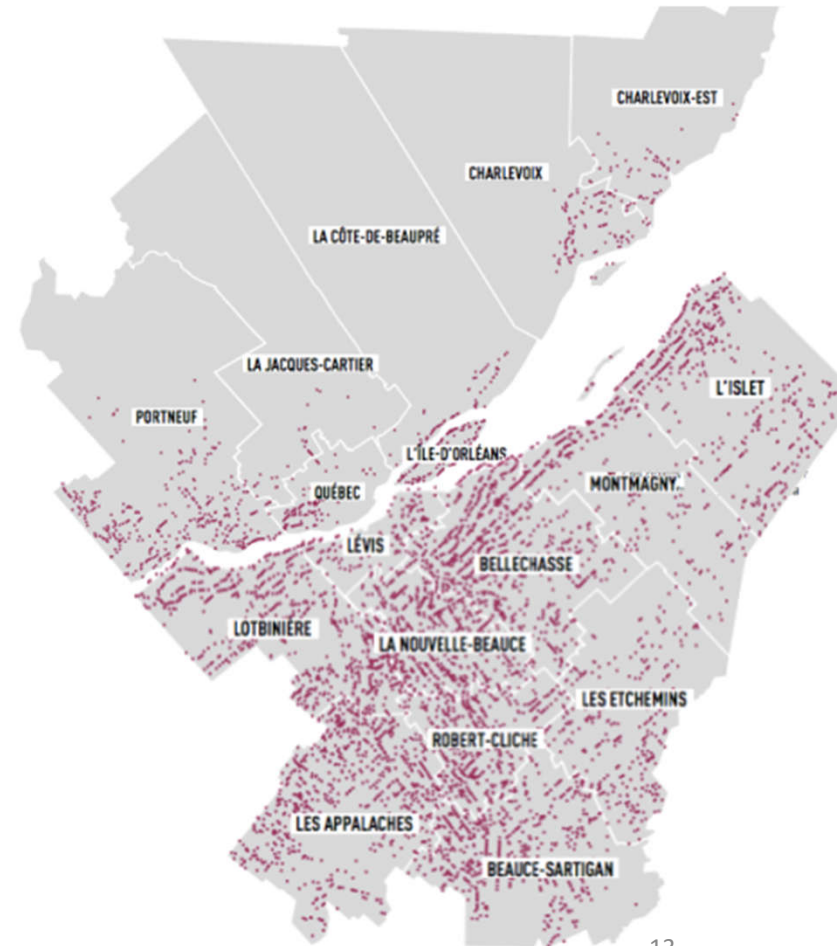


# Territory under study

**Population:** 1 158 332 inhabitants (14%)

**Cultivated area:** 305 156 ha

**Number of farms:** 6333 (5360 on south shore)





# Indicators to mobilize

- What is the adequacy between what is produced locally and what is consumed locally?
- How to measure the coverage potential of local needs by local production?

✓ Kilogram

✓ Calorie



# Methodology

## Step 1: Adequacy in KG for every food



Stat. **Production kg** vs Stat. **Consumption kg**  
 $(\text{Production}/\text{Consumption}) \times 100 = \% \text{ adequacy}$

# Step 1: Results



Food	Regional adequacy	Provincial adequacy
Wheat	26%	29%
Potatoes	209%	119%
Asparagus	11%	17%
Beets	32%	274%
Broccoli, cauliflower	2%	70%
Carrots	22%	147%
Celery	4%	93%
Cabbage	23%	204%
Squash	91%	65%
Cucumber	40%	107%
Onions, scallions	18%	150%
Spinach	1%	13%
Beans	66%	141%
Lettuce	10%	85%
Sweet corn	48%	134%
Peppers	6%	65%
Green peas	1%	168%
Turnips, radish	8%	207%
Tomatoes	11%	15%

Food	Regional adequacy	Provincial adequacy
Strawberries	125%	49%
Cranberries	73%	514%
Raspberries	74%	46%
Blueberries	47%	159%
Apples	66%	150%
Maple syrup	4164%	1415%
Beef	58%	34%
Veal	421%	248%
Lamb	27%	40%
Pork	980%	358%
Chicken	137%	102%
Turkey	182%	107%
Milk	348%	205%
Eggs	119%	75%
Honey	23%	27%

- Region is deficient in vegetables but high in meat
- Important seasonality factor
- All is not consumed here



# Methodology

## Step 2: Production vs consumption in CALORIES

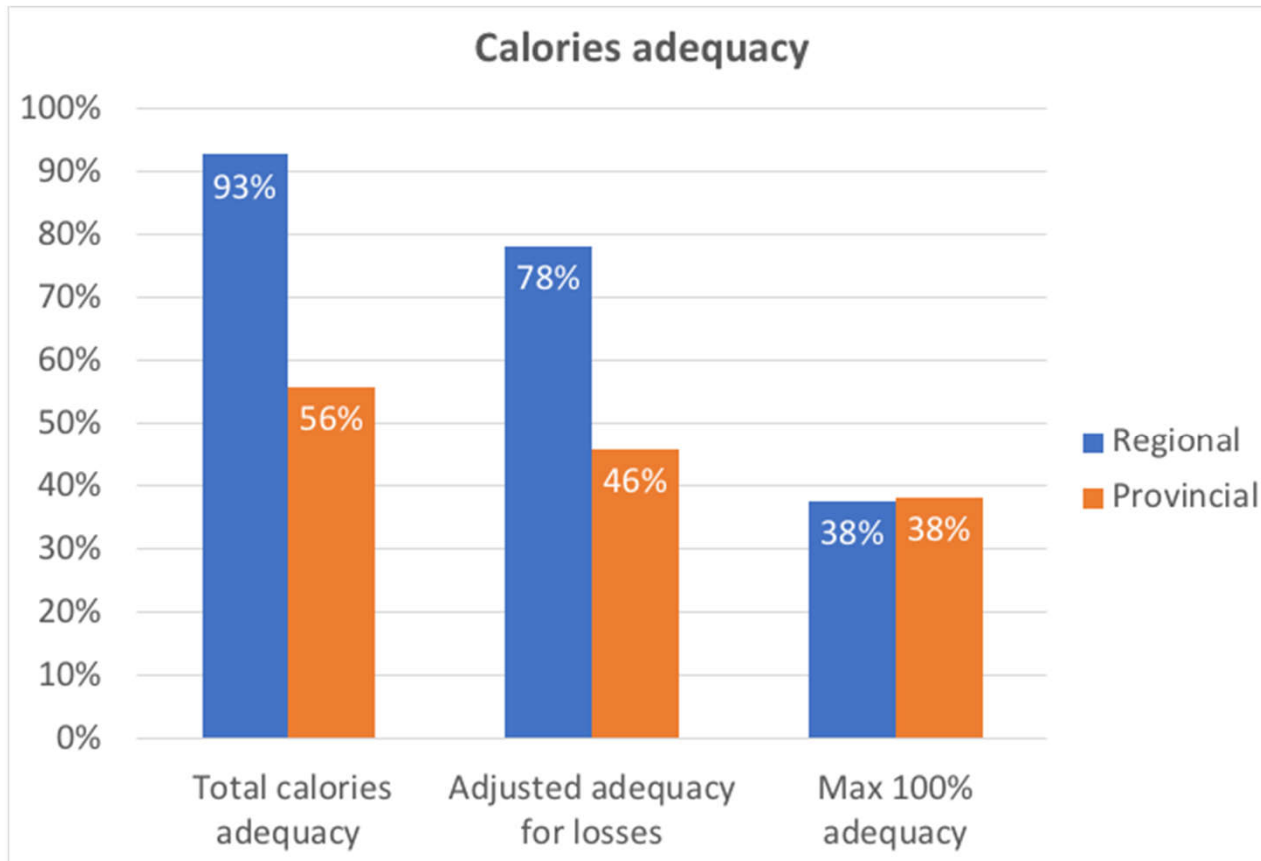


### Production vs consumption in CALORIES

- ✧ Pork production in calories
  - ✧ Milk production in calories
  - ✧ Tomato production in calories
- }  $\Sigma$  calories vs  
Population x  
caloric needs



## Step 2: Results



→ At the regional level, a lot of very caloric products (meat, maple)

→ In Quebec, we report that on average, we produce 35% of what we consume





# Methodology

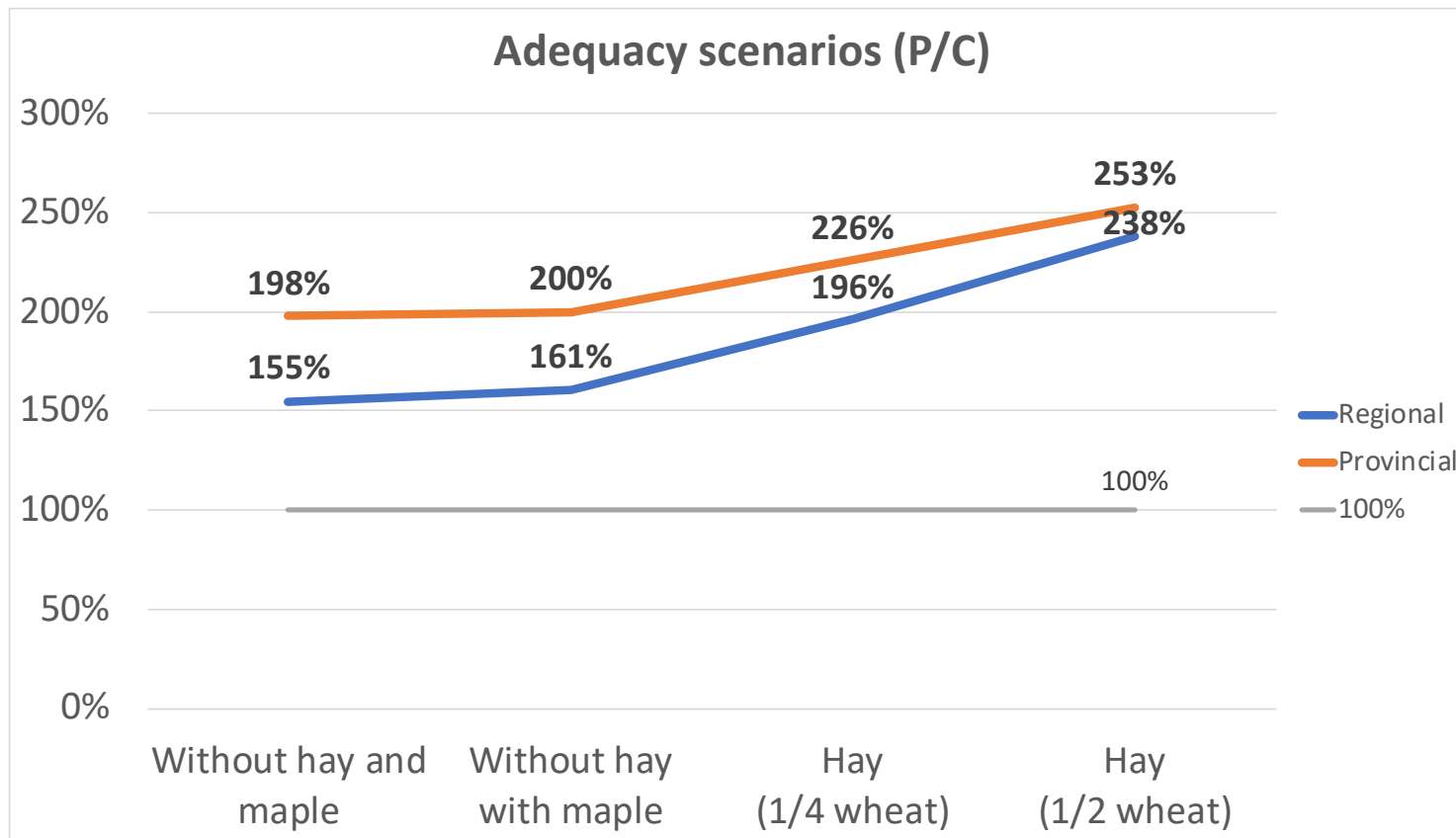
**Step 3: Productive potential vs consumption in CALORIES**



Production of all lands vs consumption in **CALORIES**



## Step 3: Results



→ In the regions, we produce **6 times more** calories for animals than for humans  
→ A **decrease in meat consumption** increases the calories potentially available to humans



# Limits of this research

- Adequacy at 38% does not include sugar and oil, two very caloric elements
- Does not take into account imported products (rice, tropical fruits, etc.)
- Several preferred methods for this type of research



Photo credit: Josyane Proteau



# Eating local, utopia or reality?

- Utopia:
  - We will stop eating meat
  - Eat 100% local
- Reality:
  - Improve the supply and the place of local products
  - Price is a function of quality
  - Raise awareness among consumers
  - Complementarity of food systems



Photo credit : S. Laughrea

Thank you for your attention  
Questions?

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