A Farming Project

By: Mikail, Ishaan, Harrison, Carlos

Introduction

Close your eyes, and imagine a farm. What do you see? A field with crops growing? A barn, with livestock? Charlotte's web? I see none of the above. I see progress. I see development. I see it as the fundamental building block of all of mankind's endeavors. I see a basic, yet crucial industry. I see it as the reason that we are here today, standing in this room.

It is therefore essential that we are responsible for our farms. We must ensure that farms are environmentally friendly. We must ensure that we can successfully adapt with new farming technologies. Only then will we have a sustainable future.

Brief History and Development

The history of farming in Canada can be broken down into 3 parts.
The 17th century, the Industrial Revolution, and the Green Revolution.

Current Sustainability

- It is crucial for farmers to be environmentally friendly
- Farmers put fences around water to prevent livestock from making it dirty
- Some farmers use soil steaming as an alternative to pesticides
- Farmers prevent soil erosion by No-Till Farming
- Farmers also prevent soil erosion by adding organic matter

Technological Advancements

GPS Technologies

Drones

Future Farming And Sustainability

Issues

The 3 Issues being focused on are:
- Habitat Loss
- Unsustainable Water Use
- Pollution

Types of Farming

- There are 3 common types of farming in Canada
- Arable, Pastoral, and Mixed Farming

Extraction Methods

Minimizing Effects

Habitat Loss
- Minimizing land use by prior planning
- Fisheries can isolate farms from the main habitat my maintaining secure systems

Water Use
- Maintenance of Systems
- Making machines that evenly distribute required water
- Growing crops in the environment they naturally grow in

Pollution
- Minimize or Stop use of pesticides
- Make farms isolated from other habitats

Conclusion

Researchers at University of Toronto are in the midst of developing a system that mixes the abilities of drones and GPS Technology in order to collect data. Through high quality imagery, they plan to learn about the formation of lands in Canada. Alongside that, the researchers hope to collect data about Thermodynamic processes occurring within the atmosphere, and on land. The highly delicate technology is seen to be an alternative to the weather balloons released by the University up north in CFS Alert.

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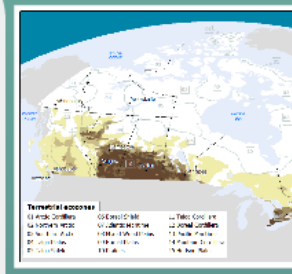

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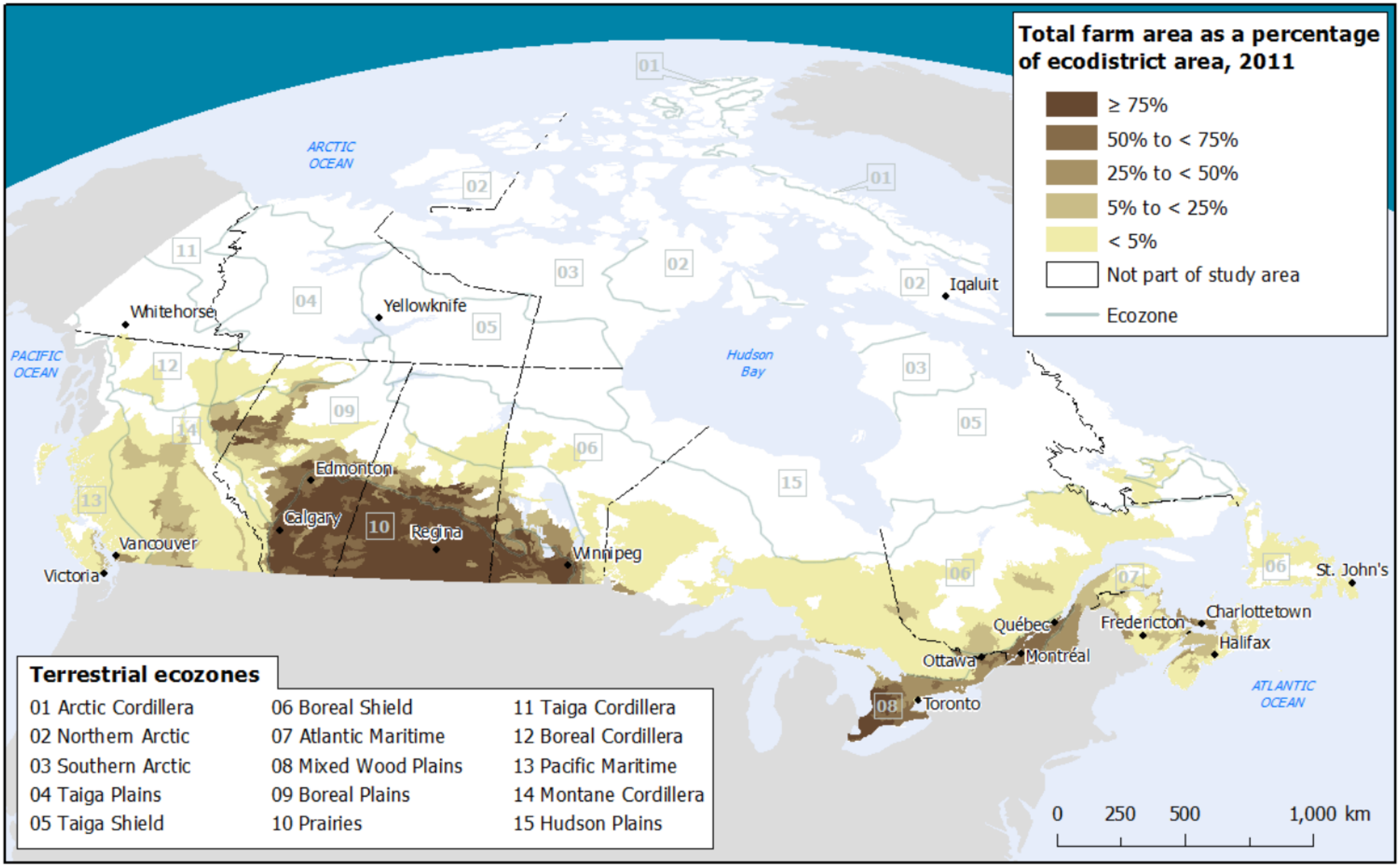
Total farm area as a percentage of ecodistrict area, 2011
≥ 75%
50% to < 75%
25% to < 50%
5% to < 25%
< 5%
Not part of study area
Ecozone
ARCTIC OCEAN
PACIFIC OCEAN
Hudson Bay
ATLANTIC OCEAN
Whitehorse
Yellowknife
Iqaluit
Edmonton
Calgary
Regina
Winnipeg
Vancouver
Victoria
Québec
Ottawa
Montréal
Toronto
Fredericton
Charlottetown
Halifax
St. John's
Terrestrial ecozones
01 Arctic Cordillera
02 Northern Arctic
03 Southern Arctic
04 Taiga Plains
05 Taiga Shield
06 Boreal Shield
07 Atlantic Maritime
08 Mixed Wood Plains
09 Boreal Plains
10 Prairies
11 Taiga Cordillera
12 Boreal Cordillera
13 Pacific Maritime
14 Montane Cordillera
15 Hudson Plains
0 250 500 1,000 km

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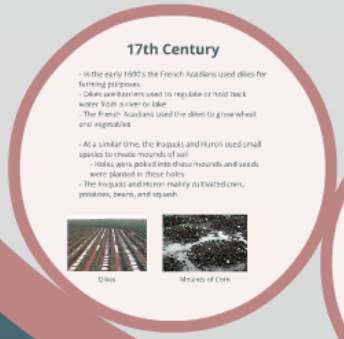
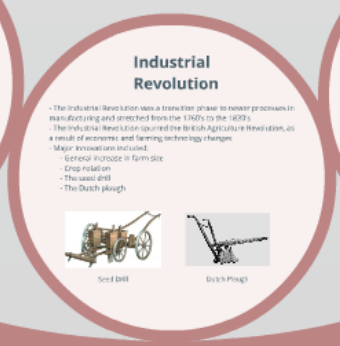




17th Century

- In the early 1600's the French Acadians used dikes for farming purposes
- Dikes are barriers used to regulate or hold back water from a river or lake
- The French Acadians used the dikes to grow wheat and vegetables

- At a similar time, the Iroquois and Huron used small spades to create mounds of soil
    - Holes were poked into these mounds and seeds were planted in these holes
- The Iroquois and Huron mainly cultivated corn, potatoes, beans, and squash

Dikes

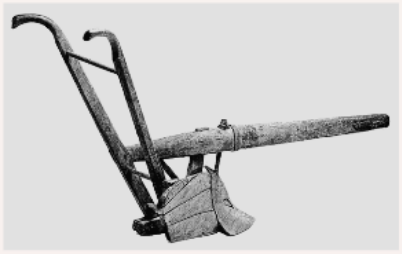
Mounds of Corn

- The Indus
manufactu
- The Indus
a result of
- Major inn
    - Gener
    - Crop r
    - The se
    - The D

Industrial Revolution

- The Industrial Revolution was a transition phase to newer processes in manufacturing and stretched from the 1760's to the 1830's
- The Industrial Revolution spurred the British Agriculture Revolution, as a result of economic and farming technology changes
- Major innovations included:
    - General increase in farm size
    - Crop rotation
    - The seed drill
    - The Dutch plough

Seed Drill



Dutch Plough

The Green Revolution

- The Green Revolution was a set of development and research tasks that occurred during the 1930's to the 1960's
- The Green Revolution increased agricultural production on a global scale
- As a result of this, new technologies and innovations were created such as:
    - Pesticides
    - Chemical fertilizers
    - Improved crop varieties
    - Controlled water supplies
    - Mechanizing cultivation methods

Pesticides

Chemical Fertilizer