

Farmer Response

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Impact of Climate Change in Manitoba

1. Temperature and precipitation changes may be positive for Manitoba but detrimental for large parts of the world????
2. Long term implications of security and environmental refugees.

What are we doing today?

1. Development of an integrated farm

- greater self sufficiency
- increased local and regional processing
- grain, feedmill, hog production, ethanol production, oilseed processing
- grain farm tendencies
 - Reduced tillage
 - Annual and perennial legumes
 - Examination of benefits of green manures/biological farming techniques

How are we adapting?

1. The best buffer to climate change is improved soil organic matter.
 - Examining our tillage and cropping systems
 - Increasing and understanding the use of soil biology to increase soil organic matter
2. Be ready to adopt new crops and varieties
 - wheat vs corn
 - canola vs soybeans
 - peas vs lentils

3. Breed for varieties best suited to the new climate

-Western Feed Grain Development Co-op
(wfgd.ca)

-Canamaize Seeds Ltd. (canamaize.com)

Simultaneous Challenges

1. Increasing cost of energy

Choices

- NH₃ dependent on CH₃
- CH₃ dependent on electrolysis, wind and water
- Biological systems which build organic matter and reduce nitrogen requirements
- Legume based rotations (root disease limitations)

More choices...motive energy/rationalization of transportation

- Petroleum
- Local energy

2. Input ownership

-Example: seed, option for farmers/governments to own some of the germplasm

3. Insurance and risk systems

-flexibility to ensure farmers seek out new options

4. Continued and increased need for publicly funded ag production research and plant breeding

Future Policies

- Myth: Well being of the world is dependent on the ability to import cheap US corn or cheap Cdn wheat.
- Myth: Countries should import cheap food and not be self reliant.
- Fact: Canada spends \$4-5 billion to support agriculture
- Fact: Climate change will displace many people in the world.

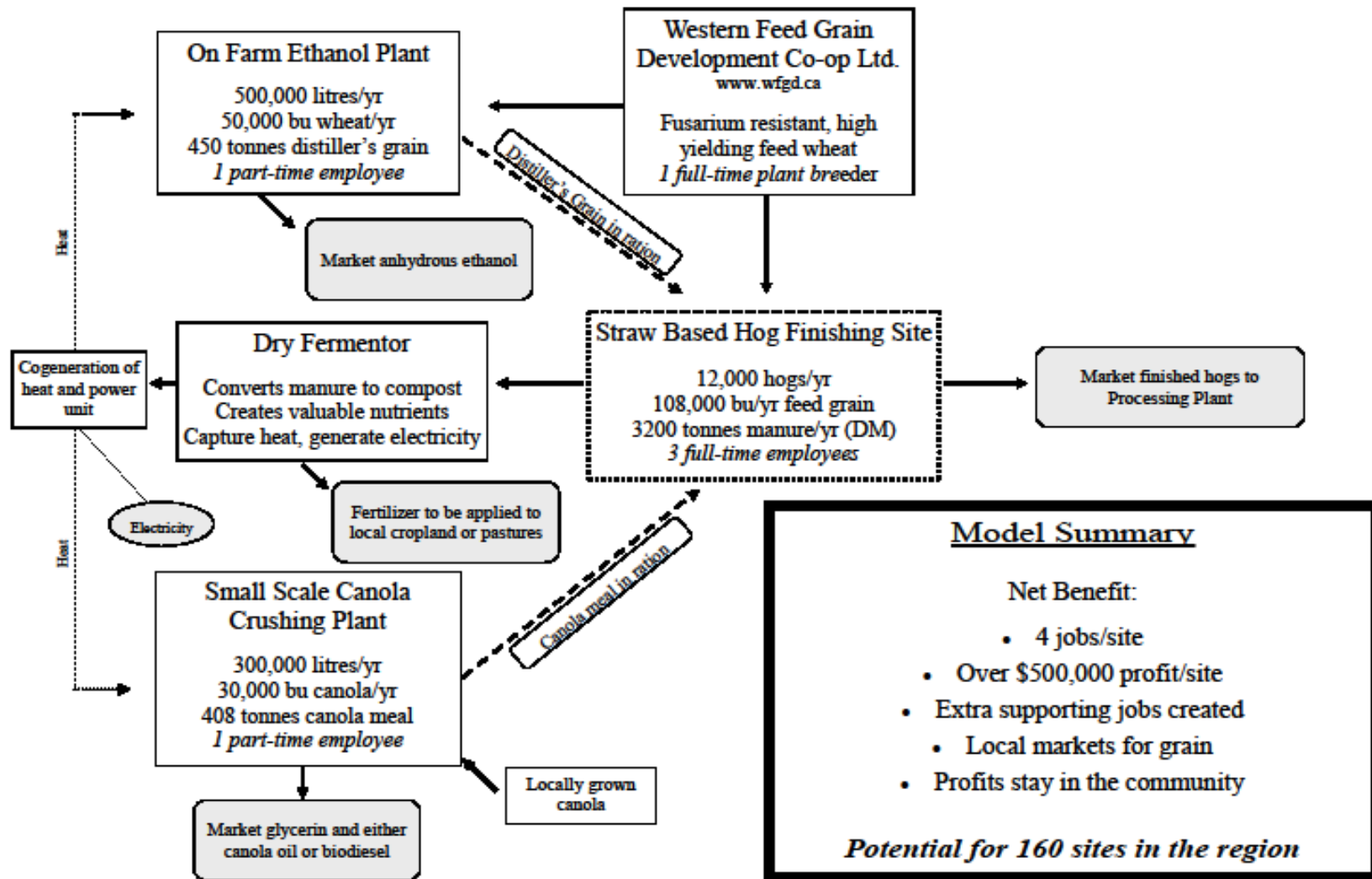
- Question: How do we use our agriculture resource and public dollars to put us in the best possible position in the long term?
- Question: How can we use our resources domestically to build our country rather than subsidizing our farmers to export water, nutrients and labour?

- Question:
- Can we build a Canadian agriculture that is more resilient and profitable?
 - Less vulnerable to technology breakdowns
 - Keeping more dollars in the Canadian economy

Solutions?

1. Pro-active environmental refugee program
 - Increased domestic food consumptions
 - Better recycling of nutrients
 - Better use of world transportation energy
2. Focus ag exports on bio-industrial products
3. Continued discussion of the possibilities

The New Local Economy Model



Model Summary

Net Benefit:

- 4 jobs/site
- Over \$500,000 profit/site
- Extra supporting jobs created
- Local markets for grain
- Profits stay in the community

Potential for 160 sites in the region