MAKING CONNECTIONS:

The Canada Cuba Farmer to Farmer Project

Wendy R. Holm, P.Ag.



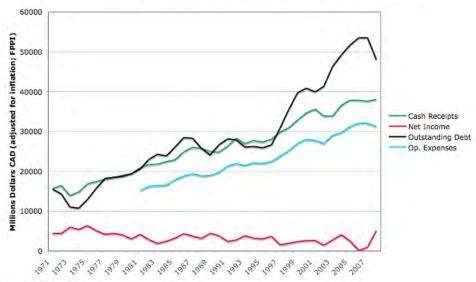


IMPETUS? Concerns as an Agrologist...

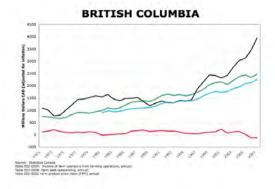
- Lack of policy respect for agriculture in Canada
- Globalization
- -Economic concentration pre/post farm gate
- Lack of farm "voice"

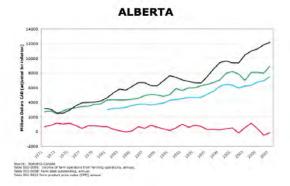
JAWS OF THE CROCODILE...

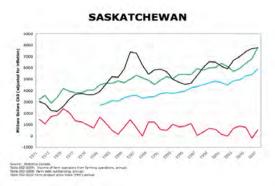
FARM RECEIPTS, EXPENSES, NET INCOME AND DEBT, CANADA, 1971 - 2008 (millions of dollars, adjusted for inflation by Farm Product Price Index)

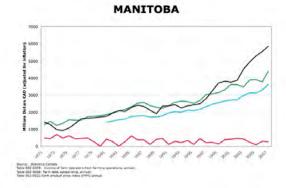


Source: Statistics Canada.
Table 002-0009: Income of farm operators from farming operations, annual;
Table 002-0008: Farm debt outstanding, annual;
Table 002-0022 Farm product price index (FPPI) annual

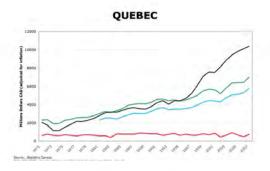


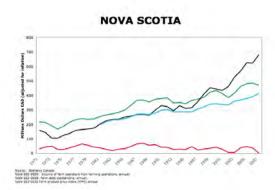


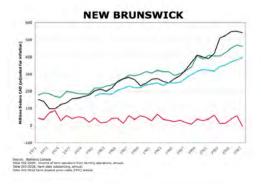


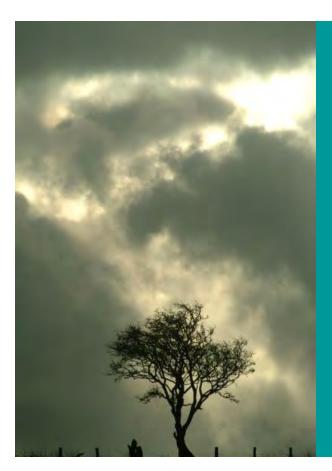












NOT SUSTAINABLE

WHY CUBA?

- •89-91 Collapse of former Soviet Union
- Cuba's economy thrown into darkness
- •high input monoculture to world leadership in sustainable agriculture "overnight"
- Six Factors
 - 1. Soils, water, climate
 - 2. Literate farmers
 - 3. Scientific capacity
 - 4. Agric extension
 - 5. Farm cooperatives
 - 6. ANAP







WHY CUBA?

Cutting edge practices:

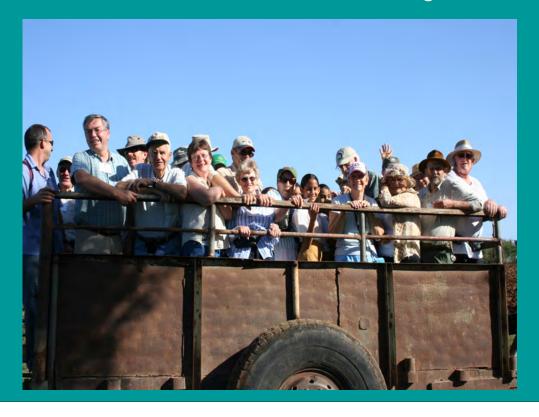
Only nation to achieve sustainability based on ecological footprint and social development index (WWF)

World leader in organic agriculture (1999 Right Livelihood Award Sweden)

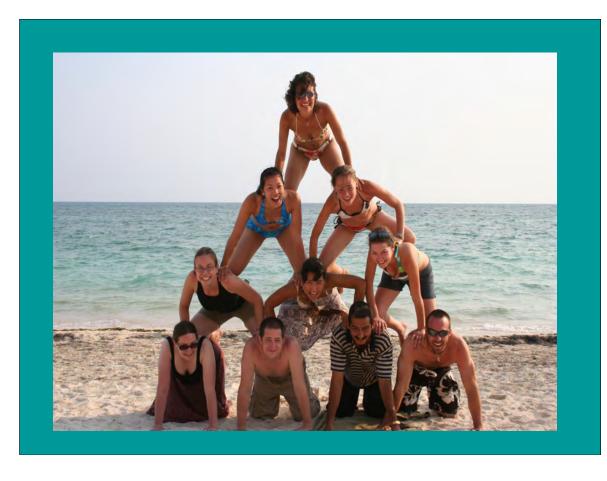
Strong relations with Canada (1946)



SINCE 1998: 550 Canadian farmers in 28 Delegations







International Co-operative Project:

Enhancing
Sustainable
Dairy
Production
Capacity in
Cuba



Canadian Partners:



Ciudades Sostenibles

Vancouver, BC, Canada www.icsc.ca



Canadian International Development Agency

Cuban Partner:



WHY DAIRY?

When FSU collapsed, milk production dropped by 46%

Cuba imports half its milk (\$70 million in skim milk powder) and much of its feed protein to meet nutritional needs of population

High environmental and economic cost...

OBJECTIVE:

Sustainable Self Sufficient Dairy Production Model

ALLIGNED WITH CUBA'S SUSTAINABILITY PRIORITIES

1. Self-sufficiency in milk production
eliminate economically and environmentally costly reliance on imports of skim milk powder

- 2. Self-sufficiency in production of dairy feed protein eliminate economically and environmentally costly reliance on imports of corn gluten (mainly US ethanol)
- 3. Domestic energy efficiency
 eliminate transport of these commodities to farms across Cuba
 Use of renewable energy (solar) in dairy production units
- 4. Use of best soil management practices
 Rotational grazing







COMPONENTS:

- 1. International Farmer-to Farmer Collaboration
- 2. Rotational grazing
- 3. Solar Energy
- 4. On Farm Feed Production
- 5. Best Farm and Herd Management Practices





BENEFITS OF ROTATIONAL GRAZING:

- Fresh food each day
- Greater nutritional uptake
- Cow's energy goes to milk production not foraging
- Reduced soil compaction
- Organic matter deposited where it is taken up

TWO ROTATIONAL SYSTEMS

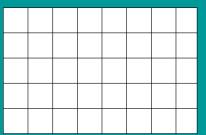
PEDESTALS

Legume and hi-protein grasses for cows in first 130 days of lactation (highest production period)



GRASS MICRO-PASTURES

High protein grass pastures for cows over 130 days lactation, 12-15 per quarter hectare per day, 40 day rotation



LOS PEDESTALES 52 micro-pastures per hectare, 52 day rotation 5-6 high lactating cows per micro-pasture legumes add protein Cattle graze to wire, do not disturb roots Legumes and grasses replenish themselves



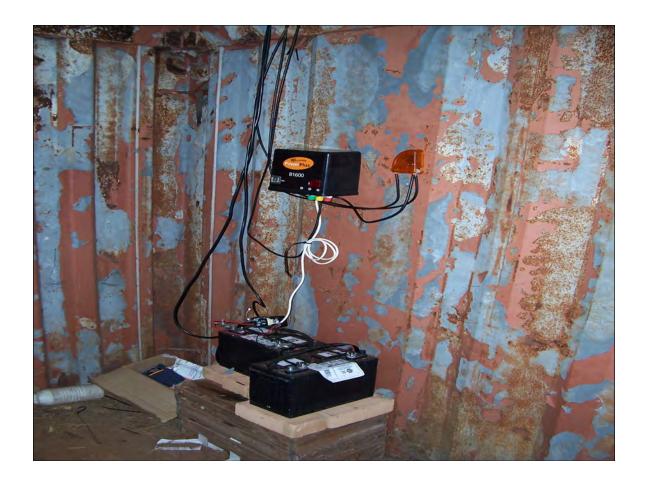
SOLAR POWERED ELECTRIC FENCING

- energy efficient (solar panels)
- effective and inexpensive
- flexible (easily reconfigured)
- sustainable (long lasting)









CPA 26 Julio

- •3 ha pedestals
- •36 ha rotational pastures
- •12 ha ration crops
- •5 ha grass forage trials
- •6.5 ha silvo-pasture
- •3 ha forestry





Women's Calf Brigade

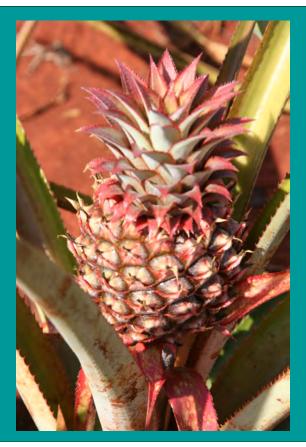
- Hand-rearing of calves
- Separate at birth, individual housing and pasture
- Early introduction of water, ration, wean at 6 weeks

New and important role for women in cattle raising





To recap:
rotational grazing
grass/legume
intensive pastures
solar energy
animal management
feed self-sufficiency





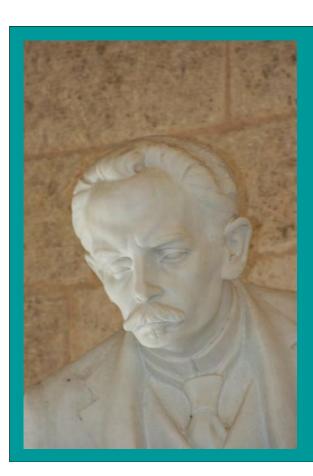












PROJECT FUNDING: \$202,037 CAD

\$75,000 CIDA

\$57,000 Foundations

\$30,010 Farmers

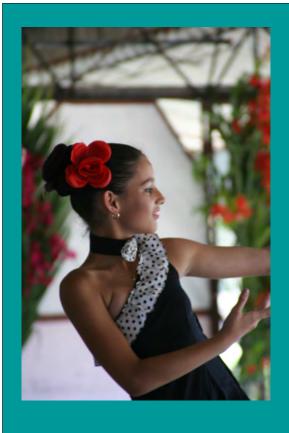
\$16,969 Agri-Food Sector

\$14,400 Cdn Embassy - Havana

\$ 6,670 Canadians

\$ 1,988 UBC

TO GO: \$20,000



RESULTS?

Tripled milk production

- from 3.5 to 7.5 to 10 litres/cow/day (anticipate 15-20)

Income from the sale of milk is now 70% of receipts

Herd mortality dropped from 50 per cent to zero

CPA profitable and a model

2007 AMEC Award for Sustainable Development of Natural Resources or Protection of the Environment

15th Annual Canadian Awards for International Cooperation

















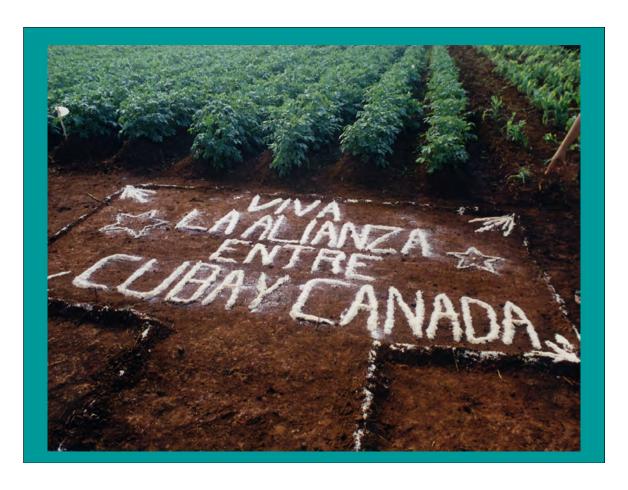












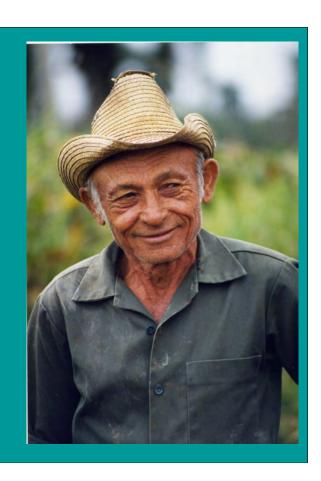


Esta humanidad tiene ansias de justica...

Fidel ...

To do is the best way of saying...

Marti











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