



*Turning Agri-Food Ideas
into Healthy Opportunities.*

Overview

- About Manitoba
- Making the Case
- ‘Let Food be Thy Medicine’... *circa* 2010
- Call to Action



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About Manitoba



About Manitoba



Population:

- 1.24 million

Capital City:

- Winnipeg

Land:

- 14.6 million hectares
- (26.6% arable)

GDP (real):

- \$52.7 billion (Oct 10)
- Up 2.6% over 09

Gateway to Global Opportunities



- Diversified Ag Base
- Value Added Focus
- R&D Climate
 - Tax Credits
 - Infrastructure
 - Skilled workforce
- Strategic transport links
- Clean energy

About MAHRN



Manitoba Agri-Health Research Network Inc (MAHRN)

- Testing and assessment of plant and animal-based bioactive compounds from
 - Production;
 - Clinical proof of safety and efficacy;
 - Product development;
 - Commercialization



Canadian Centre for Agri-Food Research in Health and Medicine (CCARM)



- Teaching Hospital
- “Bench to Bedside”
- Clinical trials

Food Development Centre (FDC)



- Producer, SME
- Product, Process Scale Up
- Registered Facility

Richardson Centre for Functional Foods and Nutraceuticals (RCFFN)

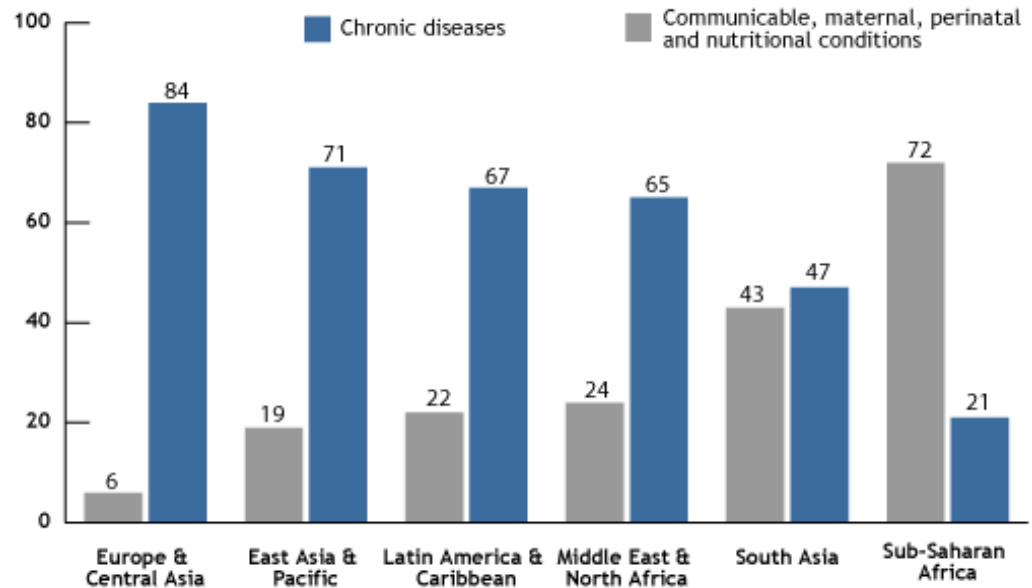


- U Manitoba
- Industry Focus
- “Farm Gate to Dinner Plate”

The Business Case For Health Care Innovation



Chronic Disease*: A Global Epidemic



* CVD, diabetes, cancer

WHO, 2002

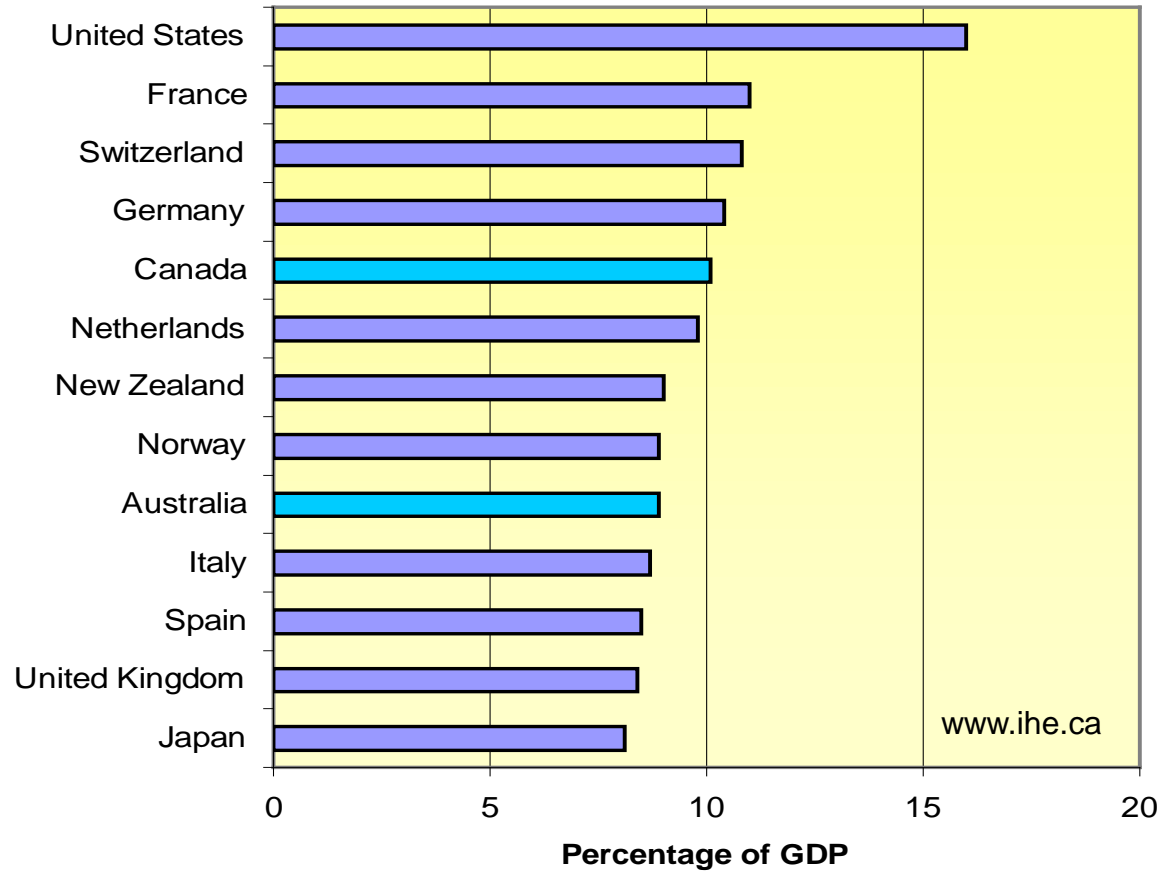
The Burden of Chronic Disease

- Social
 - Loss of:
 - Employment
 - Quality of Life
- Economic
 - Direct:
 - Cost to health care systems
 - Indirect:
 - Loss of workers in their prime
 - Caregivers loss of wages- mainly family



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Health Expenditures % GDP (2007)



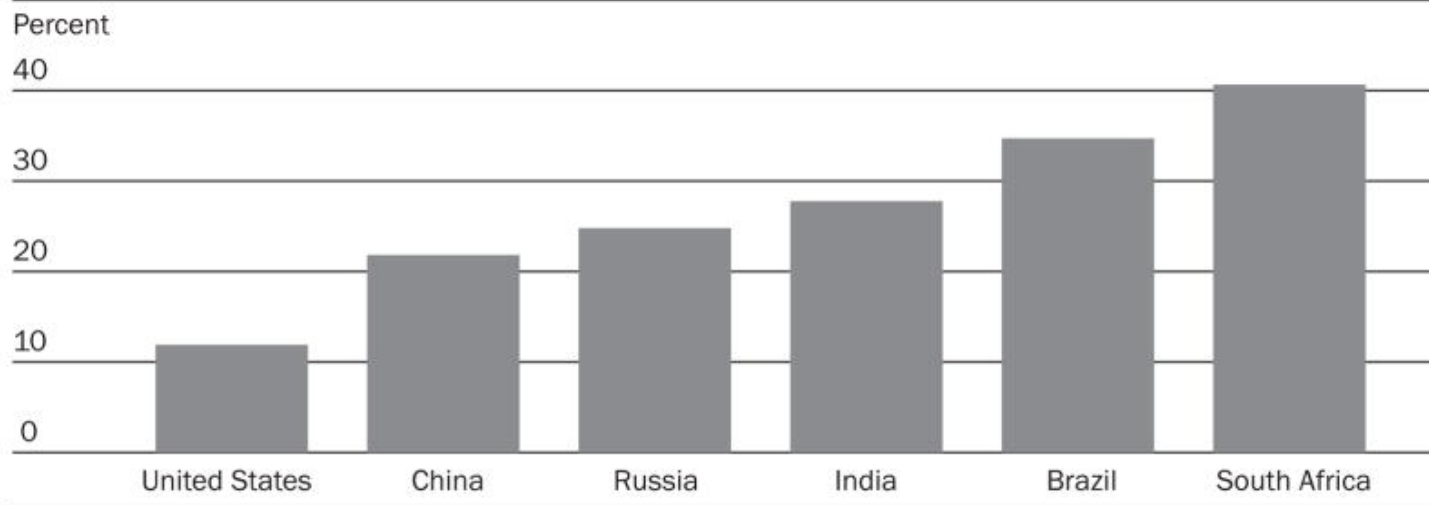
Chronic Disease: 1-6.8%; average 3%

Oxford Health Alliance, 2006



CVD: Targeting the Workforce

Proportion of deaths attributable to CVD
(Ages 35-64; 2000-2030)



SOURCE: S. Leeder et al., *A Race against Time: The Challenge of Cardiovascular Disease in Developing Countries* (New York: Trustees of Columbia University, 2004).



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Hippocrates Revisited





Which
Would
YOU
Prefer?



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 **Manitoba Agri-Health
Research Network**

Linking Ag and Health Through Food

“Benchmarking the Science” - in support of CAPI’s Canadian Climate Advantaged Diet (CCAD)

- Unique health and climate characteristics of Cdn-grown and processed:

Cereals

Flax

Canola

Potatoes

Pulses

Emerging crops including buckwheat, berries



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C\$20B in annual health care savings

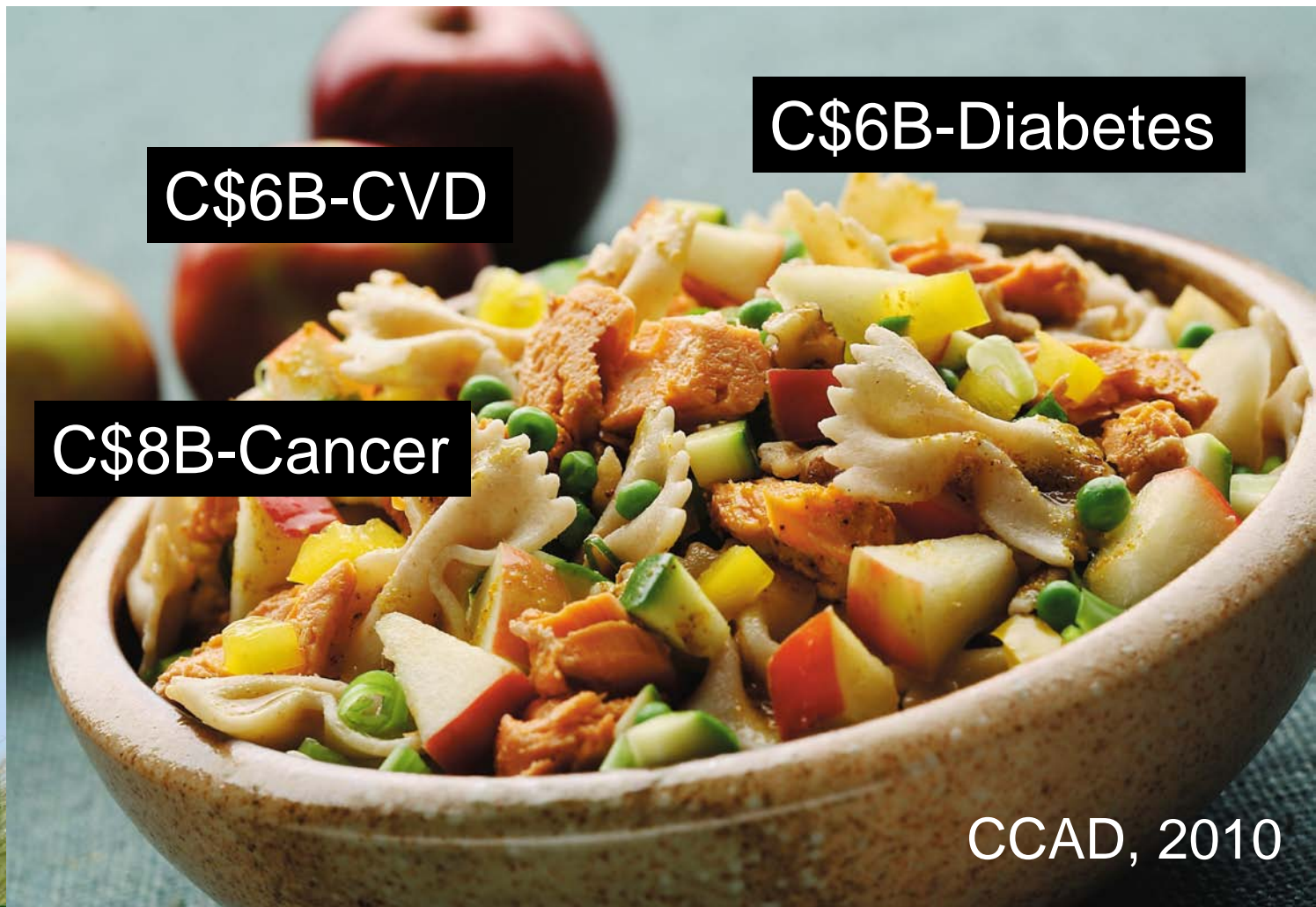
C\$6B-CVD

C\$6B-Diabetes

C\$8B-Cancer



CCAD, 2010



Clinical Evidence: A Necessary Step

- 2 year clinical trial on effect of ground flax on PAD patients
- 3 tbsp ground flax eaten daily vs placebo
- Primary endpoints focus (heart attack, stroke); risk factors like arrhythmias, BP
- Vascular surgeon, physiologist, dietician, food developers



Continuing to Build the Business Case

Product

- Barley†
- Buckwheat*
- Eggs‡
- Dairy*
- Flax*§
- Omega-3 oils‡
- Phytosterols*
- Pulses† ‡
- Wheat Bran‡

*ongoing

†completed

‡planned

§phase I/II
clinical trial

Target

- Atherosclerosis
- Cardiovascular disease
- PAD
- Obesity
- Type 2 diabetes



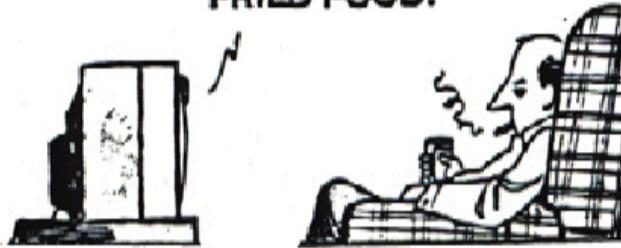
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A Path Forward

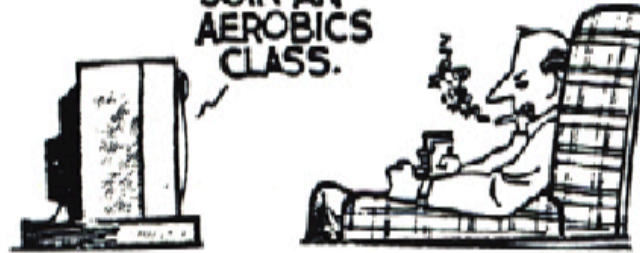


SKEELER ©1978 JIM DILLON
CARTOONISTS GUILD

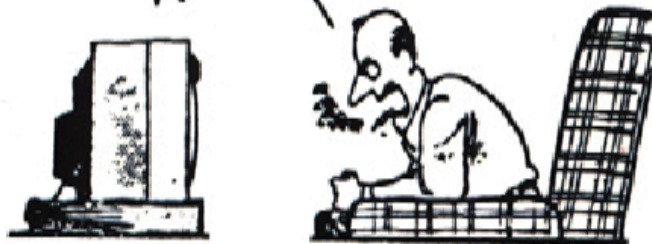
**QUIT SMOKING.
QUIT DRINKING.
AVOID RED MEAT,
SALT, SUGAR,
CAFFEINE, AND
FRIED FOOD.**



**LOSE WEIGHT.
GET OUT AND
EXERCISE.
JOG, RIDE
A BIKE,
JOIN AN
AEROBICS
CLASS.**



**HEY,
WHY DON'T YOU
HEALTH OFFICIALS
GET OFF OF OUR
*#@& BACKS?!**



**AND DON'T
GET ANGRY.
IT CAN LEAD
TO HEART
DISEASE.**



Putting it into Action

- “Pharma-tize” the language
 - Not it’s ‘good for you’, but “unmet need”
- Redefine value
 - Paying for bioactivity vs bushels?
- Be seen as the solution, not the root cause
 - Evidence, not anecdotes
- Multi-disciplinary is key
- Lead with the business case
 - Decision makers need numbers and evidence



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www.mahrn.ca

