What's the future of the prairie grain industry?

Wednesday Evening Special Session
Crop Production Week 2006
Ballroom B, Saskatoon Inn

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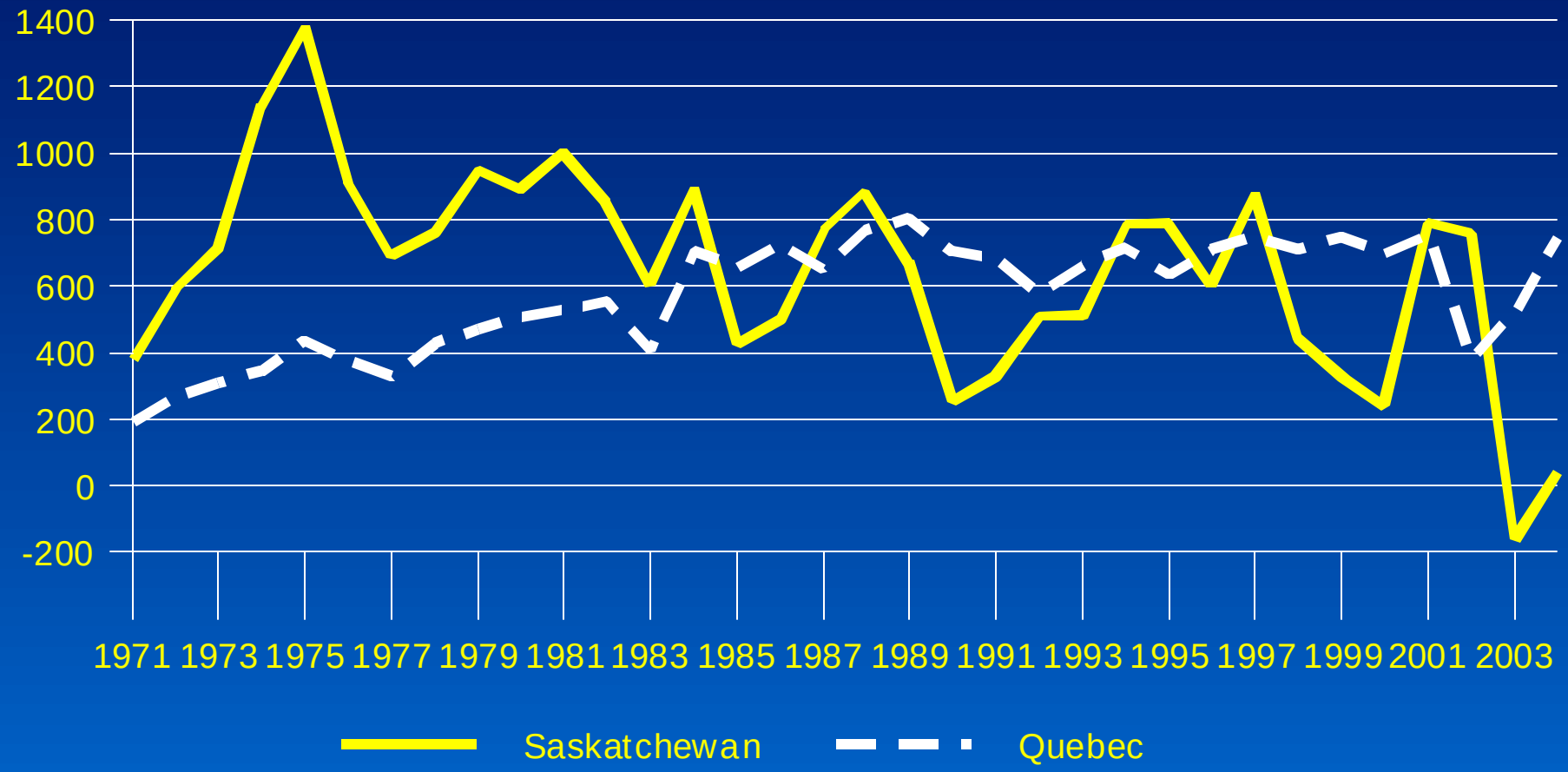
There has been an "Economic Earthquake"

- World events
- Environmental concerns and Kyoto
- Canadian Policy Choices
- Incomes have declined, farm debt is increasing and equity is eroding
- Current crop planning budgets produce red ink

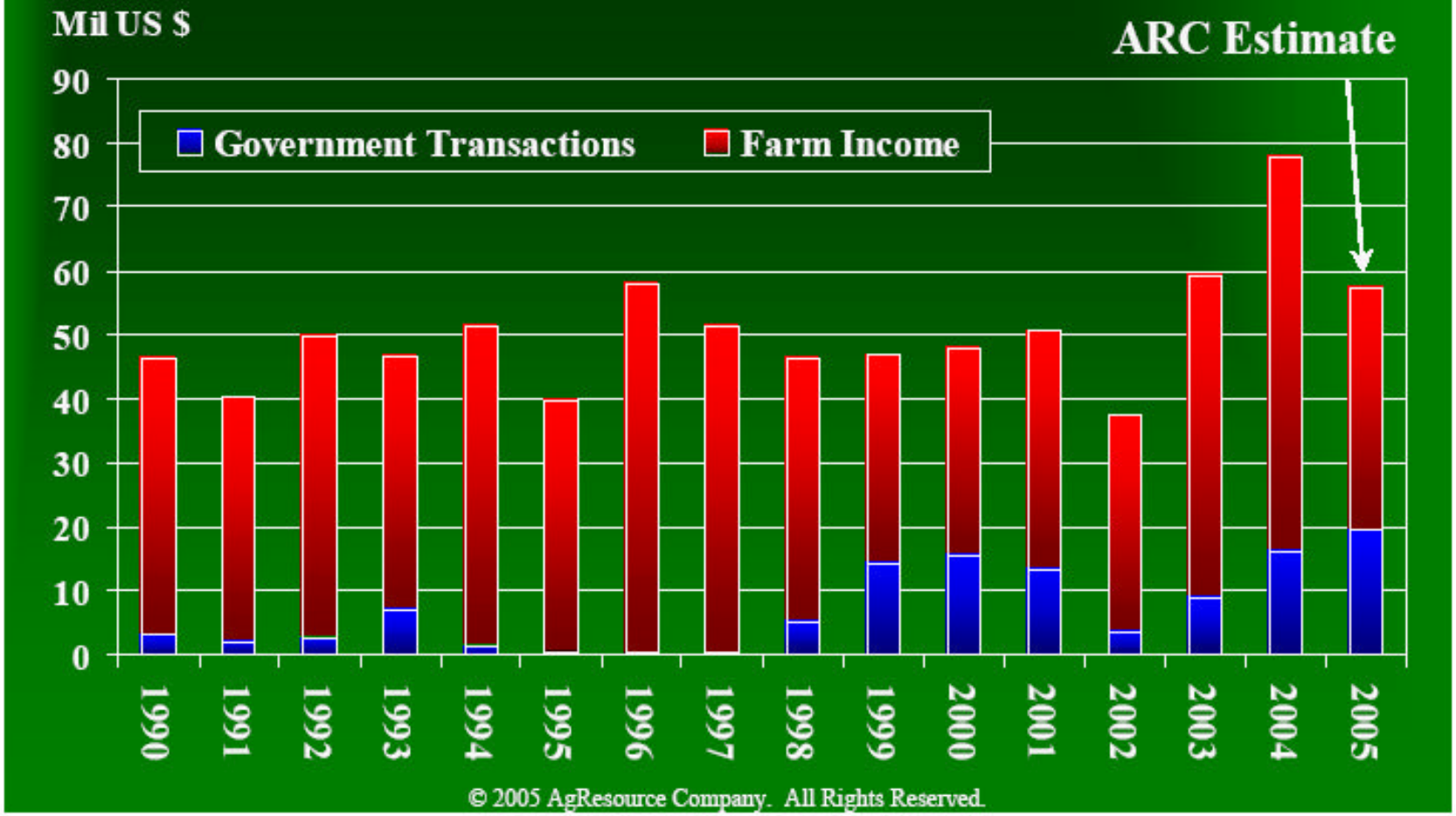
Saskatchewan - Quebec

Comparisons of Realized Net Farm Income 1971 - 2004
Millions of Dollars

Source: Statistics Canada The Daily and SAFRR Ag Stats Handbook 2002 (Nov./2005)



US Net Farm Income - A Record



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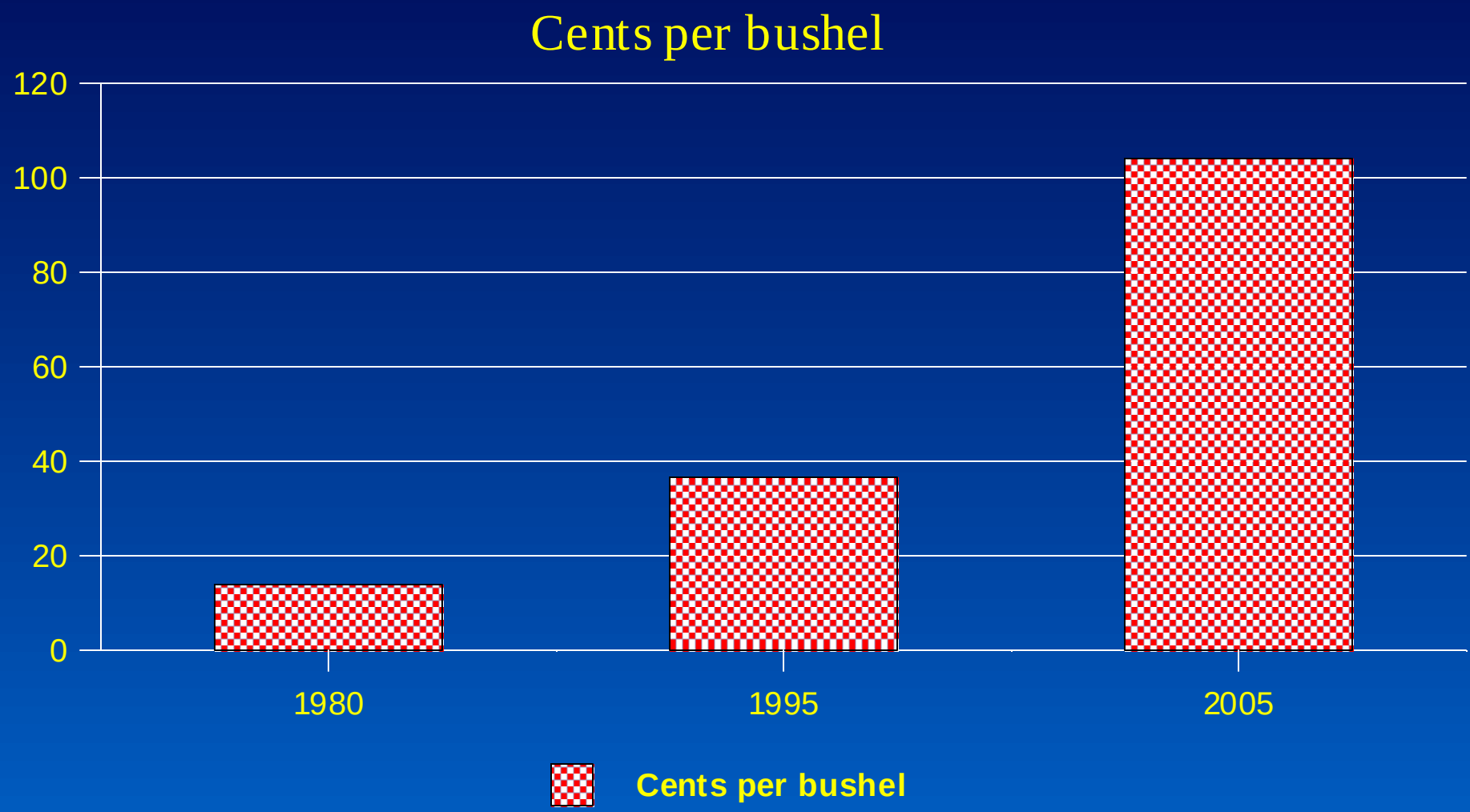
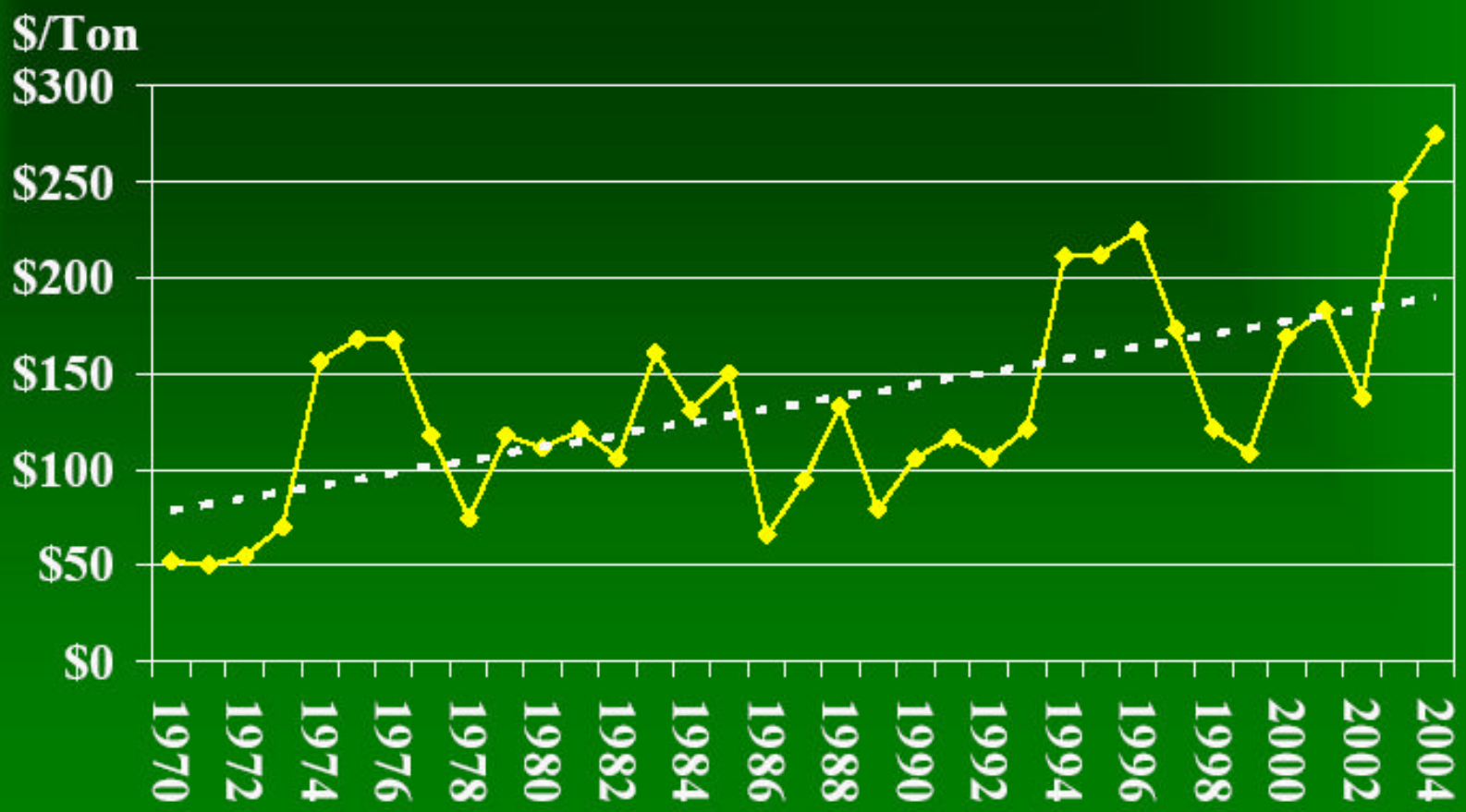
Rail Cost Paid By Farmers For Moving One bushel of Wheat From Saskatoon to Vancouver



Data Source: Crow Rate in 1980 at 22 cents per hundred pounds, Freight Rate Manager 2.1 for 1995 and SAF StatFact for 2005.

US Nitrogen/ Ammonia Prices



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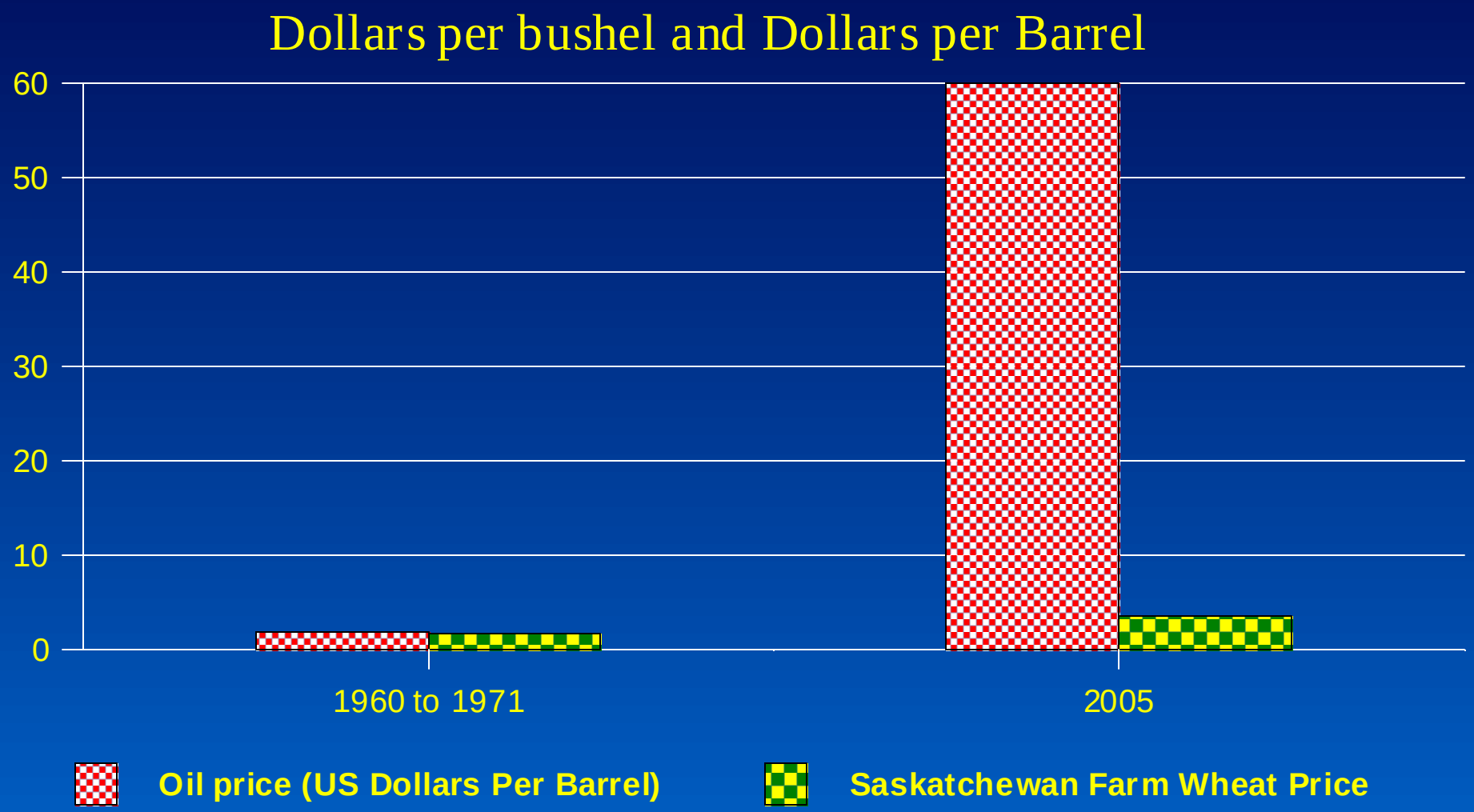
Saskatchewan Wheat Prices and World Oil Prices: Relative Prices Have Changed

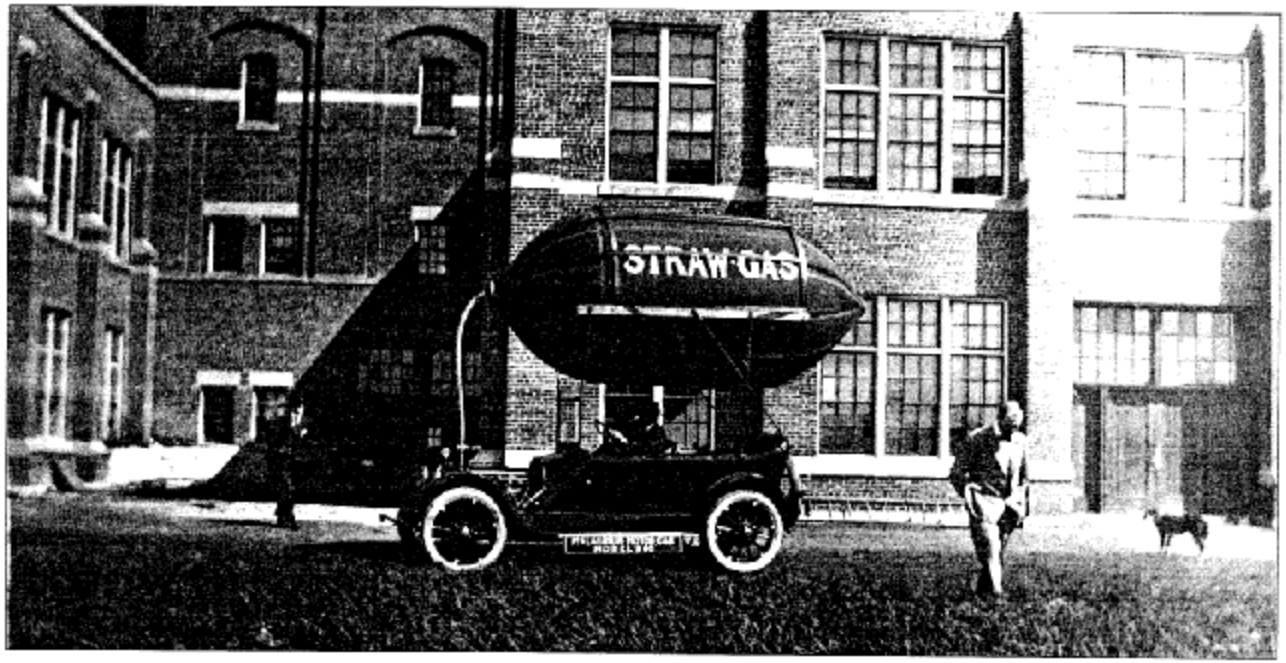


Data Source: A. Greenspan speech October 17, 2005 for 1960 to 1971 oil price data and recent price quotes for Oil, SAF Statistics Handbook for Saskatchewan Farm wheat Price (Rosaasen estimate for 2005)

Farm Land: Producing Food, Fuel and Fibre

- Food production
- Our grandfathers had oxen or horses (Oats)
- Used wool, hides or linen for clothing
- Sometimes even medicine!

From the University Archives



As part of his ill-fated research at the U of S nearly 90 years ago, Chemistry Head R.D. MacLaurin operated a McLaughlin car on gas derived from straw.
University Archives photo No. A-2525.

Fuel research led to 1919 crisis on campus

By Patrick Hayes
University Archives

Research for an alternative fuel in 1917 would lead to the "University Crisis of 1919" and the dismissal of four members of faculty.

Professor R.D. MacLaurin, Head of the Department of Chemistry, was interested in the production of gas from straw as a fuel for heating and for engines. Though he was not alone in the research field, MacLaurin was able to build a small extraction plant and operate a McLaughlin Motor Car using straw gas.

The research was promising but far from a breakthrough. The volume of gas produced was small and the mileage between fill-ups low.

The most significant aspect of the research was not scientific but financial. MacLaurin felt cheated when President W.C. Murray distributed Provincial research funds to several campus projects. Though he had the largest share of the grant, MacLaurin felt he deserved it all. He alleged Murray had misappropriated funds.

A battle ensued for the control of the University administration. The President was able to maintain the confidence of the Board of Governors and MacLaurin and three of his supporters – Extension Director Samuel Greenway, Law Professor Ira MacKay, and Physics Head John L. Hogg – were dismissed. Research into straw gas was discontinued.

BTU values: Wheat for Heat?

Source: AURI for Btu content of wheat burning

- Crude Oil @ $60 per barrel (US)
- Canadian Dollar at 86 cents US
- Approximately 14 bushels of wheat produce the same heat as a barrel of oil
- Wheat @ 5.00 per bushel can produce the equivalent heat (14 percent moisture) of a barrel of oil

Wheat for Heat?

Assume Heating Oil @ 88 cents per litre after GST

- 5.3 pounds of wheat has the equivalent BTUs
- Wheat is worth about 16.6 cents per pound to burn
- 60 * 16.6 cents per pound = $9.96 per bushel

The Energy Market is Large

- Unlike the canary seed, mustard, lentils, peas, flax, chick peas markets that Saskatchewan can satiate.... and we know what can happen to price
- The production of biofuels is near end users
- Biofuels are Kyoto friendly (Unlike fossil fuel)
- Instead of exporting commodities by rail, can ship out oil, natural gas or electricity that is replaced locally by biofuels

A Challenge: How Can These New Opportunities Be Captured By Farmers?

- Ensure gains from research go to producers
  - < New Pulse varieties via Pulse Board to farmers
- US government policy supports farmer investment with loans and guarantees in the infrastructure needed to move up the value chain
- Producer cooperation and investment can achieve some of these gains

Suggested Strategies:

- Reduce purchased Nitrogen? (Legumes)
- Grow crops for Food, Fuel and Fibre
- Develop a research focus around utilization of Bioproducts
  - Burning bioproducts
  - Ethanol and biodiesel
  - Fibre, medicine, other

Revise Government Policy to Be Consistent with Good Farm Management Practises (Three Year Program)

- Pay farmers to grow their own nitrogen (15 percent of land up to 300 acres) $100/acre. (Rod Flaman)
- Pay farmers to grow crops for fuel or industrial use (eg. canola for biodiesel, wheat for ethanol etc.) (15 percent of land up to 300 acres) $100/acre. (Barry Harris)
- Pay $30 per acre for chem fallow
- 10 million acres could be altered with 1 billion dollars!! It's green, and helps reduce energy costs for urban dwellers

Farm Land: Producing Food, Fuel and Fibre

- A solar collector with a positive energy balance
- The average Saskatchewan farm is about 1280 acres, or a 2 square mile solar collector!

Agriculture: A Base For Value Added

- A key link in the food chain
- Perhaps the fuel, fibre and medicine uses will become increasingly important in the future
- Oil supplies may dwindle, but agriculture, as a solar collector, will continue as an energy source