Introduction

The problem

- Fossil fuel prices have increased a great deal
- How will this impact agriculture
Objectives

• To review some of the long run trends

• To review recent events and the current short term outlook

• To describe some of the potential for biofuels and discuss the impact on agriculture
Prices

• productivity improvement has outstripped demand growth—lower prices balance the equation

• real grain prices have continued to decline
Short Term outlook

• Rapid increase in oil and natural gas prices
• N fertilizer prices will follow
Price Relationship: Nitrogen Fertilizer vs Natural Gas

- Fertilizer, 46-0-0, Tonne, Bulk
- Fertilizer, 82-0-0, Tonne, Bulk (applicator Inc.)
- Nat Gas (Henry Hub)

4 month lag from Dec peak
4 month lag from Feb peak

$13.42

$8.95

$7.78
(with tax deducted)

- Oct-03: 37.5¢/l
- Oct-04: 51.8¢/l
- Oct-05: 73.6¢/l
Net Farm income

Even with livestock income and govt support!
Regulation/ support

- Ag is becoming another industry- has lost political clout
- It is increasingly seen as a sector with a limited future
- Climate change and sequestration seen as important
- Will there be support for innovation and productivity improvement?
Other future paths

- Productivity growth
- Energy demand
Simulated Impact of Research Investment

Realized Net Income with $200M Producer Funded Research Since 1980
(IRR 18% per year)
Grain as a Heat Source

Pelpro Wood Pellet Shop Heaters

Pelpro Shop Heater 120
A perfect addition to your workshop, the Shop Heater 120 comes with a 120 lb hopper and heat to spare. Double-row heat exchange tubes are standard in our shop appliances, giving you the heat you need for almost any size shop or home.

- 120 lb capacity hopper
- 265 CFM circulation fan
- Engineered auger system
- Large capacity ash bin
- Built-in air wash
- Super Grate Technology
- AcuTron Control Board
- 300 watt auto-igniter
- Double-row heat exchanger

Width: 26 inches
Depth: 24 inches
Height: 31.5 inches
Weight: 225 pounds
Fuel Capacity: 120 lb hopper
Burn Time: 22 to 60 hours
BTU/Hours: 15000 to 50000

Shop for more options
Grains as a natural gas replacement

- Wheat is 15 to 25% the cost of natural gas per BTU of heat
- Price of natural gas higher than oil so why look at just liquid fuels
- Not a low priced marginal demand-hedge
- Grain does not require processing or elaborate storage/handling
- We need better grain burning technology
  - Furnaces, Commercial boilers, Co-generation
Some of the technology exists

- Sawdust pellet stove industry is very well established 500,000 thousand in use. Manufactured everywhere except western Canada
- Some corn and wheat is burned in “grain stoves” a few dealers here - waiting list
- Lots of room for improvement in cleaning requirements and automation
- New crops - protein is not required! etc.
We need to be leaders in the development of this technology.

- Competition with corn based ethanol in liquid fuels will be a challenge.
- Saskatchewan is very good at mechanical innovation and manufacturing.
- We need a research/testing/information institute to develop the technology - with a focus on heating.
- We can be world leaders, lower our costs, increase employment, and create another high value market for our grains.
Questions??