Fostering Productivity on Both Sides of the Farm Gate

The Sixth Annual Daryl F. Kraft Lecture

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Development of the Wheat Economy

- Homestead policy – treaties, land survey, school sections etc.
- Built the CPR – first big public–private partnership - Granted $, land, and 20 year monopoly
- Additional policies
  - Experimental Farm Act 1886
  - Crow Nest Pass Agreement 1897
  - Canada Grain Act – 1905
Saskatchewan Average Farm Price of CWRS Wheat ($2014)

$/tonne

Mt

My View of Future Grain Prices

Saskatchewan Average Farm Price of CWRS Wheat ($2014)
Questions I’ll try to address today

- Is the Canadian grain sector in a position to compete in the decades ahead?
- Inside the farm gate?
- Beyond the farm gate? – Terms of Trade
- What can be done we improve our ability compete in the challenging years ahead?
Inside the farm gate
Amazing technical change on the farm (post 1940)

- Horses to tractors
- Chemical fertilizers/pesticides
- Combine Harvesters
- New crops
- 100s of Higher yielding better varieties
- Zero tillage equipment /cropping systems
- GPS guidance
Prairie Crops: TFP, Output and Input Indexes, 1940-2012

Index (1940=1.0)

- Outputs
- Inputs

Source: Awada and Gray 2014
Annual MFP Growth in SK Crops 1993-2013

Source: Huang and Gray 2014
Prairie Crops: Output/Input Growth 1940-2012

Source: Awada and Gray 2014
Prairie Crops: TFP Growth 1940-2012 (Average 1.7%/yr)

Source: Awada and Gray 2014
Saskatchewan Average Farm Price of CWRS Wheat ($2014)
Terms of Trade at the Farm Gate

- Farm income also critically depends on the Terms of Trade:
  - prices received & market access for output
  - prices paid & market access for inputs
- ability to compete internationally depends on Canadian Terms of Trade versus Terms of Trade Elsewhere
Outside the Farm Gate: Input Access

- Input access is outstanding (shortages are rare)
  - Fertilizer, fuel, pesticide and seed logistics work very well
  - Latest machinery is available - some is developed here
    - parts and service access is more limited in remote areas
- Plant genetics
  - Good public, private, and producer breeding programs
Outside the Farm Gate: Input Prices

- Input pricing
  - Generally close to competitor levels
  - Labour costs are high – resource boom
  - Hybrids /GM seeds perform well but in some cases are priced above international levels eg. Soybean seed North vs. South America
  - Access to cheap natural gas for N fertilizer is not translating into lower prices
Outside the Farm Gate: Grain Markets

- Market Access
  - We have legal trade access to most markets
    - still face some tariffs in many markets
    - phytosanitary/GM issue occasionally disrupt trade
  - Limited capacity and access to rail movement
  - Limited capacity and access to West Coast port terminals
Outside the Farmgate: Grain Markets

• Prices received
  • When there is enough grain handling and transportation to move the grain in a season the price received by producers approximates importer price minus rail, grain handling and ocean freight costs
  • Typical west coast basis farm to f.o.b is made up of:
    • $30-$44/t rail – Revenue Cap
    • $20-$30/t elevation and handling
    • Average (2002 -2012) basis $72.5/t
Outside the Farmgate: Grain Markets

• After the record 2013 Canadian crop of 96Mt there was insufficient grain handling and transportation capacity to move the crop in 12 months

• Grain firms decreased farm offer prices to deter delivery to a full system --basis levels and crushing margins increased a great deal

• This situation reduced the Terms of Trade for Western Canadian Farmers
Portland – Sask. CWRS 13.5% Wheat Basis - March 24, 2014

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<th>Portland</th>
<th>Avg. Sask Bid</th>
<th>Basis to Portland</th>
<th>2002-2012 Average</th>
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<td>NWTL Bid</td>
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### Vancouver–Sask. CWRS 13.5% Wheat Basis Oct 24, 2014

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<th>Vancouver 13.5% fob AAFC</th>
<th>NWTL Unity Sask Bid</th>
<th>Basis to Vancouver</th>
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INCOME LOSSES FROM LIMITED SUPPLY OF HANDLING AND TRANSPORTATION IN 2014/15 OCTOBER 24 VANCOUVER BASIS

Producers Demand Curve for Handling and Transport

Sask. to Port Basis

$2 Billion Basis Rents

$150 Million Economic loss

46Mt54Mt

$116

$43

$73
The large basis reduces the Terms of Trade for Western Farmers

- This will become more important as global prices decrease
- Low farm incomes will trigger government support
- Lower prices will reduce farm investment and productivity growth
How do we fix the basis issue?

1. Adequate rail regulation to ensure competitive pricing and adequate levels of service

   • Deregulation is not the solution just look at the US - much high rail rates and very poor performance

   • Should be additional incentives for winter rail movement in the Revenue Cap formula

   • Open running rights is the only market based solution but this is a pretty bold move
Canadian Grain Exports-Licensed Facilities 2003/04 - 2012/13 (CGC)
Estimated Rail and Water Basis to Asian Markets – Go West!

- Rail and water transport costs vary significantly with distance from Vancouver.
- The graph shows a comparison between West Coast Savings to Asia and East Coast Basis.
- At 800 $million, the West Coast Basis is significantly lower than the East Coast Basis.
- The graph suggests that moving goods to Asian markets via the West Coast is more cost-effective, especially at larger distances.
Monetary Benefit of Increased West Coast capacity

- This needs more study but simple calculations suggest:
  - $800M per year in transport savings
  - $1-2 Billion per year in increased producer income from lower basis
  - Increased economic growth for Western Canada
How do we fix the basis issue?

2. Adequate west capacity to meet the growing demand for westward grain exports
   - Public incentives for new investments
   - New public/private partnerships
   - Container backhaul systems
   - Prince Rupert could be expanded
How do we fix the basis issue?

3. A supply chain view of logistics and marketing
   - a willingness to explore new coordinating market and non-market mechanisms e.g.
     - West Coast based futures market
     - Third party coordination
     - Improved market information, crop forecasts, basis levels in future months etc.
Conclusions

- We are headed into a low price period for grains
Conclusions

- A well functioning innovation system has created high rates of productivity growth
  - High rates of farm productivity growth have allowed farmers to continue to grow more with less inputs
  - Continued growth requires coordinated public, private and producer investment and reasonable Terms of Trade
Conclusions

- Outside the farm gate input markets are generally performing well
Conclusions

Outside the farm gate the lack of export capacity and high basis levels are costly for the economy

- Increased rail movement is needed
- More west coast capacity is needed
- New mechanisms for competitive pricing and coordination are needed
Let’s Get it Right

- Focus on productivity on both sides of the farm gate
- A whole supply chain perspective is required
- Innovation in technology and institutions are both required to maximize the growth potential of the sector
Thank you