Current Trends in North American Supply Chain Management: Agriculture

The Case of Beef and Pork

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Overview

- Trends in North American Agricultural Trade
- The Growing Integration of the North American Beef and Pork Industries
- Factors Impacting the North American Beef and Pork Supply Chains
- Summary and Implications
Trends in North American Agricultural Trade

- Implementation of CUSTA (‘89) and NAFTA (‘94) Decreased Border Restrictions and Encouraged Integration
- U.S.-Canada and U.S.-Mexico Trade Began to Grow Significantly following CUSTA/NAFTA
- Canada-Mexico Trade Growing but Restricted by Geography and Large U.S. Market
- 30% of U.S. Ag Exports Now Go to N.A. (12.5% in 1989)
- 35% of U.S. Ag Imports Now Come from N.A. (24% in 1989)
U.S. Agricultural Exports

Billion Dollars

Source: Foreign Agricultural Trade of the United States, Calendar Year, USDA/ERS
U.S. Agricultural Imports

Billion Dollars

1989 $21.9  1994 $22.9  1999 $36.9  2004 $54.0
1990 $22.9  1995 $24.8  2000 $36.1  2005 $47.3
1991 $25.2  1996 $27.0  2001 $39.0  2006 $41.9
1992 $30.2  1997 $33.5  2002 $39.4  2007 $47.3
1993 $36.1  1998 $36.9  2003 $37.7  2008 $54.0

Source: Foreign Agricultural Trade of the United States, Calendar Year, USDA/ERS
The Evolving North American Beef and Pork Supply Chain

- CUSTA and NAFTA Have Led to Greater N.A. Trade in Beef, Pork and Live Animals
- Greater Integration of Other Resources (Capital, Technology, Grains) Has Also Occurred
- A North American Beef and Pork Complex Has Resulted
- The BSE Outbreaks Changed the Nature of N.A. Beef Supply Chain
- N.A. Pork Supply Chain Has Stabilized
U.S. Beef and Pork Exports, 1989 - 2004

1,000 Metric Tons

Source: PS&D Online, www.fas.usda.gov/psd
U.S. Beef Exports, 2003 & 2004

2003 Total: 820.6 TMT

- Korea: 25.1%
- Mexico: 23.3%
- Canada: 7.7%
- Other: 7.8%
- Japan: 36.1%

2004 Total: 135.6 TMT

- Mexico: 78.5%
- Other: 12.9%
- Canada: 8.6%

U.S. Pork Exports, 2003 & 2004

2003 Total: 494.5 TMT

- Japan: 51.0%
- Mexico: 17.7%
- Canada: 9.6%
- Korea: 5.1%
- Taiwan: 4.0%
- Other: 12.5%

2004 Total: 651.1 TMT

- Japan: 45.3%
- Mexico: 24.1%
- Canada: 9.2%
- Taiwan: 4.9%
- China: 3.5%
- Russia: 3.4%
- Korea: 3.2%
- Other: 6.5%

U.S. Imports of Beef and Pork

U.S. Beef Imports, 2002 & 2004


2002 Total: 987.0 TMT
- Canada: 38.7%
- New Zealand: 20.3%
- Australia: 38.3%
- United States: 2.3%
- Other: 0.4%

2004 Total: 1,104.2 TMT
- Canada: 32.1%
- New Zealand: 19.2%
- Australia: 33.7%
- Uruguay: 11.6%
- C.I. America: 2.8%
- Other: 0.5%
U.S. Cattle Imports, 1989 - 2004

Source: Foreign Agricultural Trade of the United States, Calendar Year, USDA/ERS
Composition of U.S. Beef Imports by Source, 2004

Source: USDA/FAS. Note 3 refers to beef entering under the TRQ, Other Frozen Boneless indicates over-quota beef.
Canadian Beef Exports

Source: Agriculture and Food Canada, USDA/FAS

1,000 MT

U.S.  Japan  Korea  Mexico  Others

Source: Agriculture and Food Canada, USDA/FAS
Mexico Beef Imports

Source: FAS/USDA attache reports

1,000 MT

U.S.  Canada  Others


Source: FAS/USDA attache reports
Monthly U.S. Corn Exports to Canada, January 01 - July 05

Integration in the North American Cattle and Beef Industry, 1989

- $377 Million, 584,732 Head of Beef Cattle
- $185 Million, 87,106 Metric Tons of Beef
- $11 Million, 23,650 Head of Beef Cattle
- $119 Million, 31,406 Metric Tons of Beef
- $72 Million, 124,937 Head of Beef Cattle
- $76 Million, 29,606 Metric Tons of Beef
- $284 Million, 873,550 Head of Beef Cattle
- $176,000, 70 Metric Tons of Beef

Integration in the North American Cattle and Beef Industry, 2002

- $1.1 Billion, 1.7 Million Head of Beef Cattle
- $1.1 Billion, 392,000 Metric Tons of Beef
- $50 Million, 134,000 Head of Beef Cattle
- $218 Million, 67,000 Metric Tons of Beef
- $75 Million, 105,000 Head of Beef Cattle
- $592 Million, 206,000 Metric Tons of Beef
- $301 Million, 816,000 Head of Beef Cattle
- $23 Million, 6,000 Metric Tons of Beef
The North American Beef Supply Chain: Comments

- BSE Reduced and Altered the N.A. Beef Industry Integration, Especially Among Canada and the U.S.

- While Unable to Export Fed Steers to the U.S., Canada Increased Feeding, Slaughter Capacity, and Beef Exports to U.S.

- U.S. Firms (Tyson/IBP, Cargill) Have Increased Investment in Canadian Processing Plants

- Will Resumption of Canadian Cattle Exports to U.S. Spark Return to 2002 Scenario – Maybe but Doubtful
Intra-NAFTA and ROW Pork Trade

Source: USDA/FAS and CanFax

 Thousand Metric Tons

<table>
<thead>
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<th>Year</th>
<th>NAFTA (Thousand Metric Tons)</th>
<th>ROW (Thousand Metric Tons)</th>
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<tr>
<td>1993</td>
<td>225.6</td>
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<td>2002</td>
<td>600.2</td>
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<tr>
<td>2004</td>
<td>747.1</td>
<td>1,769.3</td>
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</tbody>
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Source: USDA/FAS and CanFax
U.S. Swine Imports from Canada
1989 - 2004

Million Head

1989: 1.1 (Feeder Pigs) 0.9 (Slaughter Hogs)
1994: 1.1 (Feeder Pigs) 0.7 (Slaughter Hogs)
1999: 2.8 (Feeder Pigs) 3.2 (Slaughter Hogs)
2004: 5.3 (Feeder Pigs) 5.7 (Slaughter Hogs)

Source: Foreign Agricultural Trade of the United States, Calendar Year, USDA/ERS
U.S. Pork Imports, 2003 & 2004

2003 Total: 400.9 TMT

- Canada: 87.2%
- Denmark: 11.4%
- Other: 1.4%

2004 Total: 376.3 TMT

- Canada: 85.1%
- Denmark: 12.4%
- Other: 2.5%

Canadian Pork Exports

Source: Agriculture and Food Canada, USDA/FAS

U.S. Japan Mexico Korea Other

Source: Agriculture and Food Canada, USDA/FAS
Mexico Pork Imports

Source: FAS/USDA attache reports

U.S. | Canada | Other
---|---|---
1995 | 49 | 54 | 63
1996 | 91 | 114
1997 | 166
1998 | 181
1999 | 235
2000 | 269
2001 | 257
2002 | 300
2003 | 257
2004 | 257

Source: FAS/USDA attache reports
Integration in the North American Swine and Pork Industry, 1989

$101 Million, 1.1 Million Head of Swine
$310 Million, 186,000 Metric Tons of Pork

$101,000, 285 Head of Swine
$8.4 Million, 2,610 Metric Tons of Pork

$7.9 Million, 78,112 Head of Swine
$48.4 Million, 19,275 Metric Tons of Pork

Integration in the North American Swine and Pork Industry, 2004

$530 Million, 8.5 Million Head of Swine
$761 Million, 320,300 Metric Tons of Pork

$57 Million, 60,300 Metric Tons of Pork

$1,06 Million, 5,900 Head of Swine
$182 Million, 60,200 Metric Tons of Pork

$25 Million, 138,800 Head of Swine
$302.6 Million, 156,900 Metric Tons of Pork
The North American Pork Supply Chain: Comments

- Decrease in Canadian Grain Transportation Subsidies Helped to Spur Local Animal Feeding
- Canadian Hog Slaughter Capacity Has Decreased, and While U.S. Capacity Has Decreased, U.S. Hog Production Has Decreased Even More
- U.S. Hog Producers Have Gone from Many Small, Farrow to Finish Operators to Fewer, More Specialized Operators
- Canadian Pig Production More Efficient than U.S., and Exchange Rate Favored Importing Canadian Hogs from ’96 – ‘02
Potential Disruptions to N.A. Beef and Pork Supply Chain

- Diseases Such as BSE, FMD Have Already Caused Disruptions
- Domestic Legislation, such as MCOOL and the Bioterrorism Act, Have Potential to Cause Disruptions
- Anti-Dumping/Countervailing Duty Cases Filed by All Three N.A. Countries Against Each Other Strain Relations and Could Disrupt Trade Flows
- Fluctuations in Exchange Rates Often Result in Temporary Changes in Advantages for Either U.S. or Canada/Mexico – and This Will Continue
Integration in the North American Cattle and Beef Industry, 2003

- $396 Million, 512,000 Head of Beef Cattle
- $850 Million, 256,000 Metric Tons of Beef
- $70 Million, 20,000 Metric Tons of Beef
- $30 Million, 68,000 Head of Beef Cattle
- $321 Million, 81,000 Metric Tons of Beef
- $23 Million, 24,000 Head of Beef Cattle
- $606 Million, 193,000 Metric Tons of Beef
- $470 Million, 1.2 Million Head of Beef Cattle
- $34 Million, 6,700 Metric Tons of Beef

Integration in the North American Cattle and Beef Industry, 2004

- $55,000, 135 Head of Beef Cattle
- $1.2 Billion, 354,000 Metric Tons of Beef
- $213 Million, 87,700 Metric Tons of Beef
- $2.4 Million, 14,000 Head of Beef Cattle
- $321 Million, 81,000 Metric Tons of Beef
- $2.4 Million, 14,000 Head of Beef Cattle
- $671,000, 1,400 Head of Beef Cattle
- $371,000, 106,500 Metric Tons of Beef
- $543 Million, 1.4 Million Head of Beef Cattle
- $33 Million, 5,900 Metric Tons of Beef
Alberta Direct Sale Steer Prices, Weekly Average, Jan 01 - Sep 05

Source: Alberta Agriculture, Food and Rural Development, www.agric.gov.ab.ca
2001 are monthly averages, source CANFAX, calculated by LMIC
Summary

- North American Beef and Pork Industries are Integrated - Almost One Supply Chain
- Markets React Immediately to ‘News,’ But in U.S. has Recovered Quickly While Pain Lingered in Canada
- Unique Market Conditions Likely to Change
- U.S. Increased Cattle Imports from Mexico and Beef Imports from Canada (and Uruguay) to Help Meet Demand
- U.S. Pork Exports Have Gained As Beef & Poultry Exports Have Declined
Implications

- Degree of Trade Dependence Likely Continue Though Product Mix May Change
- Disruptions will Continue to Occur, But N.A. Supply Chain Too Entrenched to Change Much
- Maintaining Consumer Confidence is Crucial on Animal Health/Food Safety Issues
- Protectionist Response to Increase Trade to Continue
- Support for VCOOL Growing & Animal Identification May Be Necessary to Export
- Canada & Mexico May Seek Marketing Alternatives
Primary References


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