



**HOUSE OF COMMONS
CANADA**

AN ANALYSIS AND COMPARISON OF SELECTED CANADA – UNITED STATES FARM INPUT COSTS

Report of the Standing Committee on Agriculture and Agri-Food

**James Bezan, M.P.
Chair**

JUNE 2008

39th PARLIAMENT, 2nd SESSION

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**Report of the Standing Committee on
Agriculture and Agri-Food**

**James Bezan, M.P.
Chair**

JUNE 2008

39th PARLIAMENT, 2nd SESSION

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THE STANDING COMMITTEE ON AGRICULTURE AND AGRI-FOOD

has the honour to present its

8TH REPORT

Pursuant to its mandate under Standing Order 108(2), the Committee has studied An Analysis and Comparison of Selected Canada – United-States Farm Input Costs, and has agreed to report the following:

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AN ANALYSIS AND COMPARISON OF SELECTED CANADA - UNITED STATES INPUT COSTS

INTRODUCTION

Although much has been written about the spectacular increases in grain prices that have occurred in recent months, comparatively little has been written on the substantial increases in certain farm input costs that have rendered the bottom line of many farming operations less rewarding than might have been expected. Global factors linked to the normal interaction of supply and demand on world markets could certainly explain, at least in part, this rise in input prices. However, domestic factors related specifically to the Canadian market pose a challenge to the smooth operation of competitive markets and may also have played a role. In this report, the Standing Committee will present the background to the increase in input prices on Canadian farms, examine global and domestic factors that may account for this phenomenon, and make recommendations on mitigating the effects of increased input prices for Canadian farmers. Finally, in order to better assess if the lack of competition in Canada could be a contributing factor, the Standing Committee commissioned a study on Canada – U.S. farm input prices differences from the Thomsen Corporation. The Thomsen Corporation study is attached to this report.

Background

Table 1 shows average annual increases in various input prices from 2002 to 2006. The overall Farm Input Price Index (FIPI), as compiled by Statistics Canada, increased on average by 2% per year during that period. This rate was in line with concurrent increases in the consumer price index, which stood at 2.2% annually. However, because some productions are more sensitive to certain cost elements than to others, the increase in the overall farm input price index from 2002 to 2006 should be interpreted cautiously; that is to say, it is prudent to examine price increases with respect to the various components of the index. A glance at the evolution of the FIPI components between 2002 and 2006 reveals two notable elements that have increased more than the overall FIPI: fuel and fertilizer (see underlined cost components in Table 1).

Table 1 — Average Annual Increase between 2002 and 2006 in FIPI Components

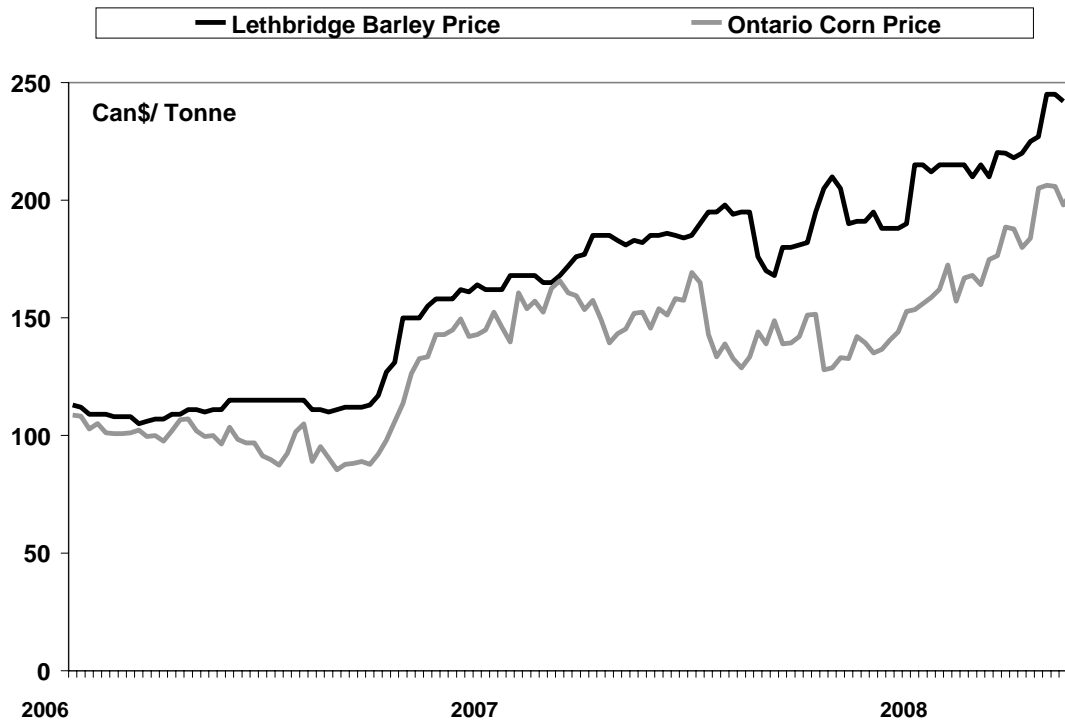
FIPI Components	Average Annual Increase, 2002-2006
FIPI - Overall	+2.0%
Machinery	+4.1%
<u>Fuel</u>	<u>+13.9%</u>
Maintenance	+1.4%
Seeds	-0.1%
<u>Fertilizer</u>	<u>+7.6%</u>
Pesticides	+2.9%
Herbicides	+2.6%
Artificial Insemination	+1.3%
Veterinary Services	+4.3%
Supplies and Services	+2.1%
Electricity	+3.6%
Telephone	+0.1%
Custom Work	+1.6%
<u>Heating Fuel</u>	<u>+16.6%</u>
Hired Farm Labours	+2.7%
Property Taxes	+2.2%
Interest	+1.1%

Source: Statistics Canada

Given the rate of increase in oil and fertilizer prices in the very recent past, FIPI data for 2007, once available, will likely show that the trend toward higher input prices was even stronger in 2007.

Paralleling the increase in oil and fertilizer prices was the spectacular increase in grain prices over the last two years. Figure 2 illustrates the increase in corn and barley prices in 2007. These two crops are widely used as production inputs in Canada in the raising of hogs and cattle.

Figure 1 — Grain Boom: the Case of Corn and Barley



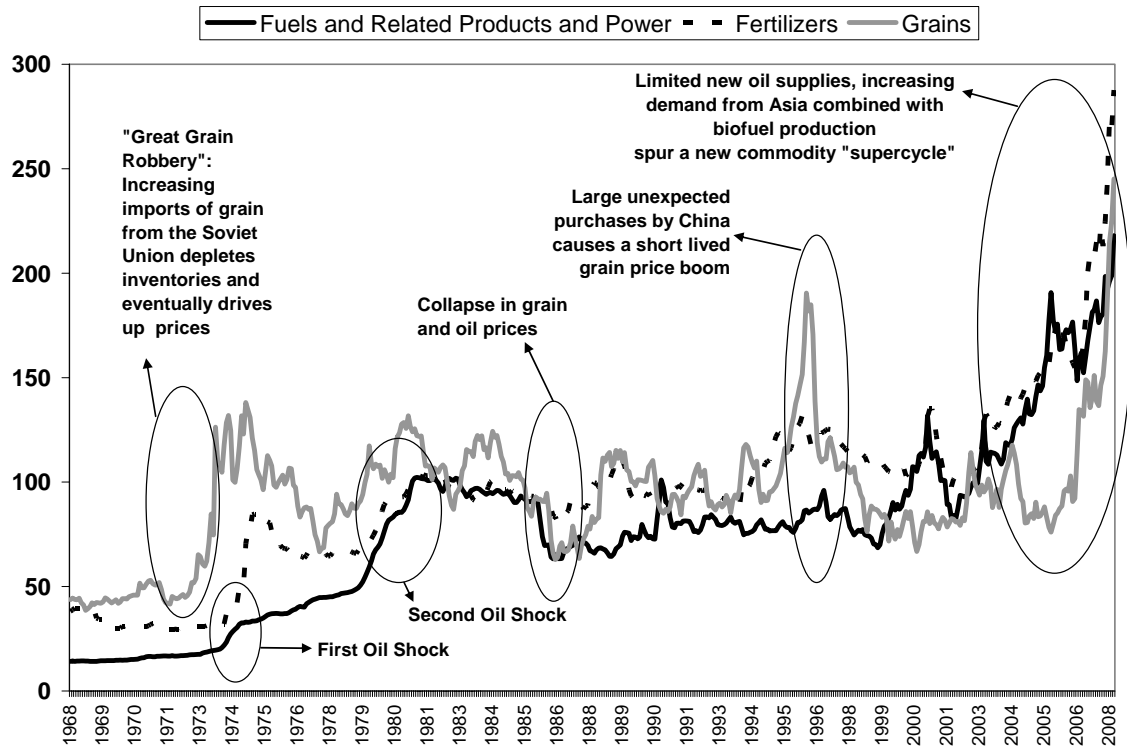
Source: CANFAX

Although global factors are certainly propelling the boom in fuel, fertilizers and grain prices, certain domestic factors may also have played a role, as the following sections will demonstrate.

A) Increase in Input Prices: Global Factors

The term “global factors” refers to influences that shape the movement in supply and demand on world markets. Perhaps the best way to identify the global factors behind the increase in input prices is to take a historical perspective. Figure 2 provides an annotated representation of the evolution of monthly prices for grains, fertilizers and energy (termed “fuel and related products and power” in the graph) in the United States from 1968 to 2008. The evolution of US prices (represented in the figure in US dollars to avoid the exchange-rate effect) is used as a proxy for world prices. As Figure 2 shows, the synchronous movement of grains, fertilizers and energy prices is not a new phenomenon. Although the correlation is by no means perfect, there has been a tendency over the years for these three cost elements to move in the same direction for a period of time. This can be explained by the interaction of supply and demand.

Figure 2: Evolution of Energy, Fertilizers and Grain Prices



1. Supply Side: The Domino Effect of Energy Costs

The grains and fertilizer industries are strongly influenced by energy prices. First, the production of fertilizer — nitrogen in particular — is a highly energy-intensive process. The cost of natural gas is usually believed to account for 70% to 90% of the production cost of ammonia, and anhydrous ammonia is the source of nearly all nitrogen fertilizer.

I know there are demand and cost increase factors, but the factor that has probably caused a sudden increase in input costs is undoubtedly the cost of a barrel of oil or the cost of energy, which has resulted in an increase in the cost of other inputs, be they fertilizers, agricultural fuel and pesticides, because their production entails a very high energy cost.

Gilbert Lavoie, Economist, Research and Agricultural Policy Branch, Union des producteurs agricoles, Standing Committee on Agriculture and Agri-Food, Evidence, No. 12 –9:20, 2nd Session, 39th Parliament, Ottawa, 5 February 2008.

Potash and phosphate are extracted through mining operations that typically consume significant quantities of energy. Therefore, the price of fertilizer has historically been heavily influenced by energy prices. Similarly, as a proportion of their operating cost, energy costs are the highest for grain producers. For example, fuel, fertilizer and electricity account for approximately 50% of the operating costs of wheat and corn growers. The cost of pesticides also has an important energy component. Grain growers would typically be the first to feel the

pinch of high energy and fertilizer prices. Therefore, runaway energy and fertilizer prices, without a corresponding increase in grain prices, could significantly damage the bottom line of grain farmers. Through a supply response from farmers eventually cutting back on production, grain prices could inflate as a result of higher energy prices.

2. Demand side: Improving Global Economic Conditions and the Impact of Biofuels

Increasing demand for energy is often accompanied by an increasing demand for grains. One simple reason for this is that increasing global demand for energy is often the symptom of a global improvement in economic conditions. This increase in economic wealth in turn also puts upward pressure on global demand for protein (from grains in particular). These demand-side factors, which have been particularly evident in some developing countries in Asia in the recent past, are certainly an important aspect of the increase in energy and grain prices in the last few years.

For years, on the food side, we've had burdensome supplies in the EU and the U.S., and I think as we look around now there has been--for many, many years people have talked about this--how many days the food supply is inching down, down, down. It doesn't take much in the increase in demand and suddenly these food supplies, the stocks, reserves, are gone, and as a result of that demand we're seeing grain prices going up.

With the grain prices going up, you see people wanting to increase production, as for example, in the U.S. where corn acres have gone up about 10 million acres in the last couple of years. Fertilizer-intensive...there's a huge demand for fertilizer down there. Here are some rough numbers for you. From India we've seen increases of imports of urea fertilizer from one million to six million tonnes, just in the last three years. We see Brazil, estimated at another 25% increase in the coming years. China is increasing imports.

Mr. Richard Phillips, Executive Director, Grain Growers of Canada. Standing Committee on Agriculture and Agri-Food, Evidence, No. 12 –9:10, 2nd Session, 39th Parliament, Ottawa, 5 February 2008.

Still on the demand side, the development of biofuel production may have made the link between grain and energy prices more direct. An increase in energy prices would typically put upward pressure on the price of ethanol (which, typically, is strongly correlated with energy prices in general), thereby increasing the profitability of ethanol production. This increase in profitability encourages ethanol plants to expand production, which ultimately pushes up demand for grains and puts upward pressure on grain prices.

There are three major drivers for the surge in world fertilizer demand. First, India, China and Brazil are leading as the largest contributors to growth. Ninety per cent of the growth in global nutrient demand is from developing countries. Other factors are world cereal production and consumption on the rise and corn-based ethanol production in the U.S.

Mr. Roger Larson, President, Canadian Fertilizer Institute. Standing Committee on Agriculture and Agri-Food, Evidence, No. 21 –9:15, 2nd Session, 39th Parliament, Ottawa, 11 March 2008.

This increasing demand for grains eventually generates a correspondingly strong demand for fertilizer world wide. Not surprisingly, global consumption of the three main categories of fertilizer has shown important increases since 2001. Again, although data are not yet available, we might reasonably expect the percentages shown in Table 2 to be even higher for 2007.

Table 2 — Increases in apparent global consumption of fertilizers, 2001 to 2006

Fertilizers category	% increase from 2001 to 2006
Ammonia	+17.2%
Phosphate rock	+15.2%
Potasch	+14.1%

3. Discussions and Recommendations on Global Factors

The Committee notes the fundamental role played by energy in driving up input prices. Trying to predict the future direction of energy prices is no small matter. A collapse in global energy prices would likely be the result of a collapse in demand for oil, natural gas, or other energy sources, or a significant increase in supply, or both. A collapse in energy demand would likely be the result of a severe economic recession, which would likely imply a collapse in global demand for commodities, including grains and fertilizers. This would obviously have far-reaching implications, not only for grain prices, but also for the Canadian economy. A collapse in energy demand would therefore likely reflect a situation in which the cure is worse than the disease for Canadian farmers.

An increase in energy supply in the context of steady economic growth would be the preferred situation for farmers, if such an increase succeeded in curbing energy prices. However, such a scenario could have unintended consequences on grain demand and prices through its effect on biofuel prices. A collapse in energy prices would likely imply a decrease in ethanol prices. Such a scenario, if grain prices remained high, would spell very difficult times for ethanol producers. This could ultimately lead them to cut back on production, which would decrease demand for grains. The outcome on grain prices of this scenario would therefore be uncertain.

Of particular note is the fact that some countries have decided to tackle global market fundamentals head-on by imposing a tax on certain of their exports. The goal of an export tax is to discourage exports, thereby creating an artificial excess production on the domestic market and driving down domestic prices. The best-known example is perhaps China, which signalled its intention in December 2007 to levy an export tax on grain in order to rein in surging domestic prices. Since Canada is an important exporter of fertilizers, it would be difficult for the Canadian government to impose an export tax to slow surging domestic fertilizer prices. Such an intervention could jeopardize Canada's reputation as a reliable commodity supplier and, moreover, could deprive the Canadian economy of significant export revenues, creating a situation that could be even more detrimental than high fertilizer prices.

Numerous witnesses who testified before the Committee indicated that timing the purchase of certain inputs could save significant amounts of money for farmers. Fertilizers in particular are subject to a markedly seasonal demand pattern that can cause drastic price swings within a year. Timing the purchase of fertilizers to coincide with the period in the year when prices are bottoming could be of significant benefit to farmers. This raises the question of whether modifications to current programs, such as the Cash Advance Program, are required to permit the timely purchase of fertilizers. Therefore:

There's a further complication in fertilizer prices. I think everybody knows that grains and oilseed farmers have a little more cash from 2007, but they had a deep hole and paid a lot of bills in fall 2007. So if a farmer couldn't afford to buy his fertilizer in the fall because he paid other bills, he will have to wait until the last possible moment in the spring before he buys fertilizer.

Mr. Bob Friesen, President, Canadian Federation of Agriculture , Standing Committee on Agriculture and Agri-Food, Evidence, No. 12 –10:00, 2nd Session, 39th Parliament, Ottawa, 5 February 2008.

I need to underline to this committee that at that time of year it is difficult to buy next year's inputs, because you haven't even paid the current year's inputs. So how the heck do you think we're so cash rich that we can actually buy two years of inputs at the same time?

Mr. Leo Meyer, Director, Grain Growers of Canada, Standing Committee on Agriculture and Agri-Food, Evidence, No. 12 –10:40, 2nd Session, 39th Parliament, Ottawa, 5 February 2008.

Recommendation 1

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada review the current functioning of agricultural programs to see how they can be used, or modified, to better allow farmers to time the purchase of their most important needs when prices are most attractive.

Recommendation 2

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada communicate with farmers the outcome of this review by providing concrete examples of how current programs could be used in order to better time the purchase of their production inputs.

B) Increase in Input Prices: Domestic Factors

Domestic factors refer to all the elements potentially related to the increase in farm input prices that arise from the Canadian context and are therefore not necessarily linked to supply and demand conditions on world markets. Witnesses who appeared before the Committee emphasized two broad categories of domestic factors: the level of competition in farm supplies industries, and regulatory issues. The following sections will, accordingly, deal with both aspects.

1. Domestic Factors: Level of Competition in Farm Supplies Industries

Questions surrounding the level of competition in a given industry relate to the level of concentration, the lack of new entrants, and the impact these factors have on prices. With respect to farm supply industries, these elements have been an issue for farmers for quite some time. They were made more acute after the publication of data by Agriculture and Agri-Food Canada (AAFC), among others, indicating that a significant price difference has existed for fertilizers and fuel between Canada and the United States in the last two years. Table 3 and 4 show the data published by AAFC for 2007 in two border regions.

Table 3 — Comparison of Selected Average Fertilizer and Fuel Prices between Manitoba and Minnesota/North Dakota, summer 2007

	Manitoba	Minnesota/North Dakota	Difference
Nitrogen (Can \$/Tonnes)			
Anhydrous Ammonia (82-0-0)	864.92	624.52	38.5%
Urea (46-0-0)	590.11	525.65	12.3%
Phosphate (Can\$/Tonne)			
MAP (11-52-0)	616.06	504.55	22.1%
Potash (Can \$/tonne)			
Potasch (0-0-60)	313.87	302.35	3.8%
Fuel (Can ¢ /litre)			
Diesel	76.06	75.34	1.0%
Gasoline (regular unleaded)	91.13	75.3	21.0%

Source: Farm Income, Financial Conditions and Government Assistance, Data Book, September 2007, p. 26.

Table 4 — Comparison of Selected Average Fertilizer and Fuel Prices Between Ontario and Michigan/Ohio/Indiana, June 2007

	Ontario	Michigan/Ohio/Indiana	Difference
Nitrogen (Can /Tonnes)			
Anhydrous Ammonia (82-0-0)	749.2	689.33	8.7%
Urea (46-0-0)	523.09	550.21	-4.9%
Nitrogen Solution (UAN, 28%)	350.1	359	-2.5%
Ammonium Nitrate	455.76	476.92	-4.4%
Phosphate (Can\$/Tonne)			
MAP (11-52-0)	518.26	537.01	-3.5%
DAP (18-46-0)	515.65	557.15	-7.4%
Triple Super (0-46-0)	505.43	482.72	4.7%
Potash (Can \$/tonne)			
Potasch (0-0-60)	384.48	318.59	20.7%
Fuel (Can ¢ /litre)			
Diesel	82	72	13.9%
Gasoline (regular unleaded)	99	86	15.1%

Source: Farm Income, Financial Conditions and Government Assistance, Data Book, September 2007, p. 26.

Since the North American fertilizer market is fully integrated, one would expect the price difference between Canada and the United States to be small, reflecting mainly the cost of transportation. Given the price differences reflected in Tables 3 and 4, however, some witnesses expressed their view that these differences could be a symptom of a high level of concentration together with a lack of new competitors — and, therefore, a lack of competition in the fertilizer industry in Canada.

Today's reality is not that small operators can enter the field. What we let happen in the past few years is very simple: a dramatic concentration process. If people were sleeping through that process, welcome to today's reality. The fact is that the concentration process has now brought us here where jurisdictional and regional governments are not able to make much of an impact any more on some of those things.

Mr. Leo Meyer, Director, Grain Growers of Canada, Standing Committee on Agriculture and Agri-Food, Evidence, No. 12 –10:00, 2nd Session, 39th Parliament, Ottawa, 5 February 2008.

A related issue echoed by some witnesses is that lower prices in Canada triggered by a strengthening of the Canadian dollar is not a determinant of farm output prices only, but also of farm input costs. This observation also puts

into question the prevailing level of competition in farm input supplies industries in Canada. The lack of a healthy level of competition does not necessarily mean that there is blatant collusion between industry players. Rather, it could mean, as one witness phrased it, that “innocent collusion” is taking place. This phenomenon stems not from the willing behaviour of industry players, but simply from the structure of the industry.

The Standing Committee notes that differences in taxation, particularly for diesel and gasoline, could explain — at least in part — price differences between Canada and the United States. The Standing Committee also notes the criticism formulated by some witnesses on the type of study shown in Table 3 and 4 as a “one point in time” snapshot of fertilizer prices. These witnesses pointed to another publication by AAFC, dated March 30,

Over the years, many of my colleagues have publicly stated that if farmers are required to sell their commodities at world prices, then they must have the right to purchase their inputs at world prices as well.

Mr. Ray Orb, Member of the Board, Saskatchewan Association of Rural Municipalities, Standing Committee on Agriculture and Agri-Food, Evidence, No. 20 –9:15, 2nd Session, 39th Parliament, Ottawa, 6 March 2008.

2007, which indicates that “Statistical Analysis has confirmed that average fertilizer prices in Canada and the U.S. border area were not statistically different for urea, mono-ammonium phosphate and muriate of potash over the 1993-2006 period”¹. A March 2008 update of this publication did not contain a comparative analysis of Canadian and U.S. fertilizer prices. With respect to the impact of the Canadian dollar on input prices, one witness

One thing that has made farmers angry is reports that fertilizer prices are higher in western Canada than they are in neighbouring U.S. states. Those reports are often based on anecdotal evidence or small samples taken just before spring seeding, when supply/demand conditions can be frankly chaotic.

Mr. Roger Larson, President, Canadian Fertilizer Institute, Standing Committee on Agriculture and Agri-Food, Evidence, No. 21 –9:10, 2nd Session, 39th Parliament, Ottawa, 11 March 2008.

¹ *Canada: Farm Fuel and Fertilizer Expenses*, Bi-weekly Bulletin, Agriculture and Agri-Food Canada, March 30, 2007.

noted that a lag in input price adjustment could be justified by the fact that inventories were purchased before the rise in the exchange rate occurred.

Based on the above, the Standing Committee endeavoured to pursue the Canada-U.S. price difference analysis in order to bring further evidence as to whether the lack of competition in farm supplies industries in Canada could be a determining factor. The Standing Committee hence commissioned a study on Canada – U.S. farm input prices differences from the Thomsen Corporation. The Thomsen Corporation study is attached to this report.

A strong consensus existed among witnesses that better information on input prices could be of significant benefit to Canadian farmers and could in itself help bring competitive

This is the kind of data that we shouldn't have to commission farm organizations to get. This kind of data, if it was collected and published by Stats Canada and the government, would really help us as farmers to bargain with those Canadian companies.

**Mr. Darrin Qualman, Director of Research,
National Farmers Union, Standing Committee
on Agriculture and Agri-Food, Evidence, No. 20
–9:55, 2nd Session, 39th Parliament, Ottawa, 6
March 2008.**

pressure on market players in farm input supplies industries. The Committee therefore sees as highly useful the fertilizer and fuel price comparisons published by the AAFC in its Data Book “Farm Income, Financial Conditions and Government Assistance” and would encourage the AAFC to expand this type of input price comparisons between Canada and the United States. Therefore:

Recommendation 3

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada expand the input price comparisons coverage included in its Data Book “Farm Income, Financial Conditions and Government Assistance” by considering increasing the frequency of the price comparison and the number of border regions under analysis, as well as publishing results in a timely fashion on the AAFC website.

The Standing Committee commends the professionalism and quality of the work embodied in the AAFC Bulletin on farm fuel and fertilizer expenses. However, the Standing Committee thinks it would be valuable for the annual comparative analysis of fertilizer prices between Canada and the United States to become an ongoing part of this study, particularly in these times when the issue is taking centre stage. Therefore:

Recommendation 4

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada includes, as a recurring theme, the comparative analysis of fertilizers prices between Canada and the U.S. in its bulletin “Canada: Farm Fuel and Fertilizer Expenses”.

2. Domestic Factors: Regulatory Issues

Paralleling the question of whether competitive conditions, or the lack thereof, could explain price differences between Canada and the United States, is the question of whether the regulatory regime related to farm inputs could put Canadian farmers and other agri-food industry stakeholders at a competitive disadvantage. The Standing Committee notes that this is a recurring theme in many different areas. For example, a November 2007 motion from the Standing Committee already called for a full review of all inspection fees charged by the Canadian Food Inspection Agency². Furthermore, the last report of the

Overall, the regulatory regime for the manufacture of feed is out of date. This regime does not allow the feed industry to respond quickly to crises situations, such as the current high ingredient costs. There are a number of low cost ingredients that could, in theory, be imported from the U.S., but they are either not approved or would get held up at the border.

Mr. Paul Wideman (Executive Director, Animal Nutrition Association of Canada), Standing Committee on Agriculture and Agri-Food, Evidence, No. 20 –9:30, 2nd Session, 39th Parliament, Ottawa, 6 March 2008.

Standing Committee recommended that the Minister of Agriculture and Agri-Food conduct a complete review of regulatory measures susceptible of putting the Canadian meat industry at a competitive disadvantage³. This type of concern is shared by all agri-food industry stakeholders. With specific regard to farm input supplies industries, these concerns range from a regulatory regime for the manufacture of feed that is out of

² Motion carried by the Standing Committee on Agriculture and Agri-Food, *Minutes* No. 2, 39th Parliament, 2nd Session, Ottawa, 19 November 2007.

³ See Recommendation 5 in *Report on the Beef and Pork Sector Income Crisis*, Standing Committee on Agriculture and Agri-Food, Chair, December 2007, 39th Parliament, 2nd Session.

date, the slow and costly process for registering new pesticides and animal nutrition products, and the prohibitive costs associated with site security and safety regulations for agri-retailers. Therefore:

Recommendation 5

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada (AAFC) expand its review of regulatory measures susceptible of putting the Canadian meat industry at a competitive disadvantage to include all farm input related industries, such as feed products and pesticides manufacturers, as well as agri-retailers. AAFC should also report back within six months to the Committee on the results of this comprehensive review.

Furthermore, the Standing Committee recommends that any additional costs resulting from these regulatory measures should be covered by the appropriate Departments, and not only by Agriculture and Agri-Food Canada.

The Standing Committee is of the belief that these higher regulatory compliance costs, whether officially assigned to farm input manufacturers or to agri-retailers, are ultimately passed on to farmers through higher input prices. In this regard, the Standing Committee is particularly sensitive to the argument put forth by growers as to the potential decreasing effect on input costs of allowing the Own Use Import (OUI) Program to run at the same time as the Grower Requested Own Use (GROU) program. A motion already passed by the Standing Committee on December 12, 2006 on this issue is aimed at maintaining

What we're talking about is allowing fair competition, actual competition, on inputs as much as our farmers are required to compete on their outputs.

Glenn Caleval Vice-President, Farmers of North America Inc., Standing Committee on Agriculture and Agri-Food, Evidence, No. 12 –9:30, 2nd Session, 39th Parliament, Ottawa, 5 February 2008.

the OUI program for two more crop years⁴. The Standing Committee notes that the Pest Management Regulatory Agency (PMRA) also considers this an option: it states on its website that “PMRA will re-open the OUI process if pesticide manufacturers are not willing to provide the information necessary to process GROU applications.”⁵ The Committee wishes to build on its previous motion by expanding its scope. Therefore:

Recommendation 6

The Standing Committee on Agriculture and Agri-food recommends that the Own Use Import Program continue in its existing form so as to ensure that farmers have the opportunity to access these products in a price competitive manner in order to enhance competitiveness of the Canadian agri-food sector.

⁴ “That the Minister of Health responsible for the Pest Management Regulation Agency maintain the existing own use program for the next two crop years while working toward the implementation of a better and more producer-friendly Grower Requested Own Use Program”. Minutes of Proceedings, Meeting No. 33, Tuesday, December 12, 2006.

⁵ Source: <http://www.pmra-arla.gc.ca/english/appregis/grou/grou-e.html>

LIST OF RECOMMENDATIONS

Recommendation 1

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada review the current functioning of agricultural programs to see how they can be used, or modified, to better allow farmers to time the purchase of their most important needs when prices are most attractive.

Recommendation 2

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada communicate with farmers the outcome of this review by providing concrete examples of how current programs could be used in order to better time the purchase of their production inputs.

Recommendation 3

The Standing Committee on Agriculture and Agri-Food recommends that Agriculture and Agri-Food Canada expand the input price comparisons coverage included in its Data Book “Farm Income, Financial Conditions and Government Assistance” by considering increasing the frequency of the price comparison and the number of border regions under analysis, as well as publishing results in a timely fashion on the AAFC website.

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APPENDIX A LIST OF WITNESSES

Organizations and Individuals	Date	Meeting
Canadian Federation of Agriculture Bob Friesen, President	2008/05/02	12
Farmers of North America Inc. Glenn Caleval, Vice-President James Mann, President		
Grain Growers of Canada Leo Meyer, Director Richard Phillips, Executive Director		
Union des producteurs agricoles Gilbert Lavoie, Economist, Research and Agricultural Policy Branch Pierre Lemieux, First Vice-President		
Animal Nutrition Association of Canada Paul Wideman, Executive Director		
CropLife Canada Peter MacLeod, Vice-President, Crop Protection Chemistry Jill Maase, vice-President	2008/06/03	20
National Farmers Union Darrin Qualman, Director of Research		
Saskatchewan Association of Rural Municipalities Ray Orb, Member of the Board		
AgroCentre Belcan inc. Greg Haney, Manager	2008/11/03	21
Canadian Association of Agri-Retailers David MacKay, Executive Director		
Canadian Fertilizer Institute Clyde Graham, Vice-President, Strategy and Alliances Roger Larson, President		

APPENDIX B LIST OF BRIEFS

Organizations and Individuals

Animal Nutrition Association of Canada

Canadian Fertilizer Institute

CropLife Canada

Union des producteurs agricoles

APPENDIX C

REPORT OF A "STUDY ON FARM INPUT COSTS" TO THE LIBRARY OF PARLIAMENT ON BEHALF OF THE STANDING COMMITTEE ON AGRICULTURE AND AGRI-FOOD

Summary

This report compares current and recent prices of a selection of farm inputs in Canada and the United States. The inputs include major commercial fertilizers, glyphosate herbicide, and ivermectin and similar anti-parasite treatments for livestock. Farm input prices are reported for all major regions and provinces from the Atlantic maritimes through to Alberta, and bordering U.S. locations.

Data to this report was obtained from survey and administrative sources. Survey data includes price data collected by survey conducted specifically for this report, as well as from other regional surveys that are conducted as a matter of course. Administrative data includes customs, or export and import value and quantity information reported by Statistics Canada.

Surveys were conducted on a provincial and state basis (northern regions of states bordering Canada). From east to west geographically, fertilizer and herbicide price surveys were conducted for Prince Edward Island, and New Brunswick and Maine; New York and Vermont; Manitoba, North Dakota and Minnesota; and Saskatchewan and Montana. Data was assembled from existing surveys in Quebec, Ontario, Michigan, Indiana and Ohio, and Alberta. Ivermectin price data was collected by survey on an east-west basis and did not include Atlantic provinces and states.

Provincial and state surveys were conducted in standardized fashion taking into consideration local cropping and business practices and weather conditions. Prices were collected from farm supply dealers using a standard survey instrument in-person and by written and telephone correspondence. The sample size, or number of dealers surveyed, varied according to regional population. Prices representative of commercial farm purchases were collected and are reported basis FOB the dealers' outlet or plant and do not include delivery, service, or other charges for cash-to-30-day payable terms. Prices were collected by survey between late April-to-early May in the east, through to mid-to-late May in Ontario and points west. Province-state pairs were surveyed on the same dates.

Administrative or customs data was used to examine recent trends in the value and quantity of exports and imports of major fertilizer products in total and on a unit basis. Unit

import and export values were graphically assessed to identify any current patterns and trends.

Six major observations based on comparison and analysis of survey data and supporting information to this report are highlighted as follows.

- 1. Fertilizer and glyphosate herbicide prices rose dramatically on both sides of the border between 2007 and spring 2008.**
- 2. U.S. price increases exceed Canadian price increases for all products.**
 - Phosphate fertilizer prices increased by the greatest amount, followed by potash, and then nitrogen fertilizer products.
 - Canadian phosphate prices increased 55-113 percent and 96-145 percent in the U.S.
 - Canadian potash prices rose by 54-72 percent compared to 115-122 percent in the U.S.
 - Canadian nitrogen fertilizer prices rose 10-38 percent, compared to 14-47 percent in U.S.
 - Glyphosate herbicide prices rose 1-7 percent in Canada and 44 percent in the eastern U.S.
- 3. Increases in the price of nitrogen fertilizer products were greatest in the east (Ontario), and the Prairies experienced relatively larger increases in the price of phosphate and potash fertilizer and glyphosate herbicide.**
 - MAP prices rose by 102-113 percent on the Prairies compared to 76 percent in Ontario.
 - Potash prices were up 72 percent in Manitoba compared to 54 percent in Ontario.
 - Nitrogen prices rose by 26-38 percent in Ontario and 10-18 percent on the Prairies.
 - The average survey price of the most-widely quoted or popular glyphosate herbicide was relatively unchanged in Ontario compared to a 6-7 percent increase on the Prairies.
- 4. As of spring 2008, a majority of fertilizer and glyphosate products are significantly lower price in Canada, or exhibit little or no price difference between Canada and U.S. border locations.**

- 50 percent of product prices are lower in Alberta than in Montana, and the remaining 50 percent exhibit no statistically significant price difference.
 - 50 percent of prices are lower in Saskatchewan relative to Montana; 10 percent are lower in Montana; and 40 percent of prices are not different between the two regions.
 - 62 percent of prices are lower in Manitoba while 23 percent of prices are lower in North Dakota and Minnesota, and the balance or 15 percent of prices do not differ.
 - Insufficient detail is available to provide a statistical test of Ontario and Michigan, Indiana, and Ohio (MIO) price differences, but the following pattern is highlighted:
 - the price of 30 percent of products is 20 percent or higher in MIO;
 - the price of another 30 percent of products is 10-20 percent higher in MIO;
 - the price of a further 30 percent of products is 5-10 percent higher in MIO; and
 - the price of the balance or 10 percent of products is higher in Ontario.
 - 50 percent of product prices are lower in Quebec than in adjoining regions of New York and Vermont, and the remaining 50 percent exhibit no statistically significant difference.
 - 82 percent of product prices are lower in New Brunswick than in Maine, and 18 percent exhibit no statistically significant difference.
- 5. As concerns ivermectin**, original brand name product (Ivomec) is distinguished from one category of other brand product in Canada, and from two categories of other brand and generic product in the U.S. In the U.S., generic and other brands are available at very low prices, and other brands are available at higher prices that approach those of the original product. **Little significant Canada-U.S. price difference is observed with the exception of the following two items:**
- The price of ivermectin in pour-on format sold in large volume (5 litre) containers is significantly lower for low cost generic products in the U.S. than for generic and brand products in Canada.

- For injectable product, small container Ivomec is higher price in Canada, and large container Ivomec is lower price in Canada.

6. For Fertilizer in 2008, Timing is Everything.

- For farm supply dealers and producers alike, timing is everything when it comes to the price (cost) of fertilizer for 2008. For those dealers and producers who purchased or who were otherwise able to confirm supply and “lock-in” prices before late 2007, the cost of fertilizer is moderately higher but comparable to the 2007 crop year. For producers and farm supply dealers purchasing fertilizer since late 2007-to-early 2008, prices have increased markedly and continue to increase.

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Introduction

This report looks at current and recent prices of a selection of farm inputs in Canada and the United States. The inputs include major commercial fertilizers, glyphosate herbicide, and ivermectin and similar anti-parasite treatments for livestock. Farm input prices are reported for all major regions and provinces from the Maritimes through to Alberta, and bordering U.S. locations. Section two of this report introduces the price data, its sources, and comparative analysis methods used. Section three reports the price data and analytical results.

Data and Methods

Price and value data was obtained from two major sources including survey and administrative sources. Survey data includes data collected by survey conducted specifically for this report, as well as from other surveys that are conducted as a matter of course. Rather than duplicate survey efforts and response burden in those jurisdictions where regular farm input price surveys are conducted, existing survey results were assembled and are incorporated herein. Administrative data includes customs (export and import) information assembled and reported by Statistics Canada.

The Surveys

As indicated, fertilizer and herbicide price data was collected by survey specifically conducted for the purpose and from other existing provincial surveys. In Canada, surveys were conducted on a provincial basis. U.S. surveys generally focused on agricultural areas of selected states bordering on Canada. All ivermectin data was collected by survey.

Surveys Conducted for this Report

From east to west geographically, fertilizer and herbicide price surveys were conducted for Prince Edward Island, New Brunswick, and Maine; New York and Vermont; Manitoba, North Dakota and Minnesota; and Saskatchewan and Montana. Data was assembled from existing surveys in Quebec, Ontario, Michigan, Indiana and Ohio, and Alberta. Ivermectin price data was collected by survey on an east-west basis comprising all of these regions as well as more southerly U.S. locations and with the exception of the Atlantic provinces and states.

Provincial and state surveys were conducted in standardized fashion taking into consideration local cropping and business practices and weather conditions, and the availability of cooperating farm input supply dealers. The following summarizes the

standard survey approach. This is followed by a brief description of each provincial and state survey including any notables to the standard.

Price data was collected directly from farm input supply dealers (or retailers). Prices were collected in-person wherever and to the maximum extent possible. Where in-person interviews and price collection was not feasible, a combination of telephone and written correspondence (electronic mail and fax) was used. The sample size, or number of dealers surveyed, varied according to regional populations and the availability of co-operating dealers.

Prices were collected using a standard survey instrument or form adjusted for regional product differences. A copy of the standard form is included in Appendix B.

Prices were collected for standard commercial terms taking into consideration regional business practices and some variation for specific products (notably herbicide). Prices were collected basis FOB (Free On Board) the dealers' outlet or plant and do not include delivery, service, or other charges. In other words, the data collected and reported herein is the price of product at the retail location. Price does not include delivery, mixing, service or other charge. In some individual cases, dealer practice or convention differed from this standard e.g. some dealers include delivery within a specified distance. In these cases, prices were adjusted to the FOB standard.

Prices reflect general practice in that they are based on payment terms of 30 days or cash. The practice of a majority of retailers cooperating in the survey and therefore the basis of the majority of prices reported is payment within 30 days of delivery. For some dealers and in some regions, payment upon purchase (cash) was the preferred if not the only available terms. Given this mix of terms (where 30 days payable predominates), prices are reported on a cash-to-30-day basis. Standardizing adjustments have been made as necessary e.g. reported cash discounts typically range from two-to-three percent. Other regional exceptions are noted in the survey descriptions below.

Prices are for representative commercial farm purchases but do not include large volume discounts. In other words, they are not prices for small or irregular lots, but they also do not include large volume or other discounts. Reported volume discounts typically range from two-to-five percent, but can be higher.

All efforts were made to conduct the survey according to standard timing taking into consideration regional cropping practice, weather conditions, and other local factors. Ideally, this would entail conducting the survey at the same time in all regions. However, practical consideration mitigated this to some extent. Principal amongst these is the timing of existing surveys, and the availability of co-operating farm supply retailers. The timing of regional surveys conducted specifically for this report was selected to approximately coincide with the timing of existing surveys. Ultimately, the availability of co-operating retailers and the timing of their response also influenced the timing of price data collected. A voluntary and co-operative approach was taken in soliciting price data from retailers.

While a majority of data was collected on the predetermined dates, some retailers responded after the designated period. Timing details are elaborated in the descriptions below.

Maritime Provinces and Maine.

Prices were collected by telephone survey in the last week of April and first week of May from three retail dealers in Prince Edward Island (PEI), and five retail centres in the Saint John Valley of New Brunswick (NB). Maine prices were collected in May 2008 from three retail dealers in the northern part of the state that borders the New Brunswick survey area. While data for Maine was sought at the same time as New Brunswick, the availability and response of Maine dealers extended to the third week of May. PEI and NB terms for fertilizer are generally the earliest of 30 days or June 30; and a minority of retailers offered pesticide payable by October 31. (The Canadian and U.S. maritime survey regions are characterized by three major farm input supply organizations).

New York and Vermont:

New York and Vermont prices were collected in the second week of May 2008 from a sample of six retail centres in northern parts of the two states that border Quebec. A majority of retailers were surveyed by telephone. (The northern regions of the two states bordering Quebec are generally not large agricultural areas, and the number and variety of farm input suppliers is limited).

Manitoba, North Dakota, and Minnesota (NDMN):

Prices were collected by in-person survey in the last week of April and first week of May 2008. The Manitoba sample includes 21 retail centres in a region bordered by the Trans Canada Highway in the north, the eastern edge of the Red River Valley, and the Brandon-Killarney corridor in the west. The North Dakota and Minnesota sample includes 12 retail centres in northern parts of the two states that border the Manitoba survey region. (Notable consolidation of the farm supply sector in the NDMN survey region occurred between 2007 and 2008. In 2007, the region's survey sample comprised 20 independent retail outlets which have consolidated to 12 as of spring 2008).

(A survey of the Manitoba and NDMN region is regularly conducted for Agriculture and AgriFood Canada (AAFC) in the spring, summer, and fall seasons. The region was surveyed earlier than it would otherwise be as part of the AAFC survey so results would be available for this report. Price data reported herein will be incorporated and reported to AAFC on a split-timing basis.)

Saskatchewan and Montana:

Saskatchewan and Montana prices were collected by in-person and telephone survey in the second and third weeks of May 2008. Saskatchewan prices were collected from a sample of nine retail centres located throughout the province. (A smaller and informal sample of five producers was also included where producers provided information as to the price of fertilizer and pesticide paid “last fall” [September-to-December]). Montana prices were collected from a sample of 11 retail centres in northern Montana bordering Alberta and Saskatchewan.

Other Surveys and Price Data

As introduced above, rather than duplicate survey efforts in regions where farm input price surveys are already conducted, existing survey results were assembled and incorporated as part of the price data to this report. The following describes the major surveys.

Quebec:

Quebec price data was obtained from a survey of retail centres located throughout the province conducted by the Centre de reference en agriculture et agroalimentaire du Quebec (CRAAQ) in February and March 2008. CRAAQ survey prices for fertilizer include an estimated \$20/tonne for delivery plus \$20/tonne for spreader rental and service. Accordingly, prices included in this report were reduced by \$40/tonne to obtain estimated FOB prices.

Given that the CRAAQ survey was conducted earlier in the year (February-March 2008), the CRAAQ report and survey prices were reviewed with a sampling of five retail outlets principally located in the south-Montreal and New York border region. Farm supply dealers so interviewed confirmed that the CRAAQ prices were representative for the immediate spring or seeding season, but that prices were expected to increase thereafter.

Ontario, and Michigan, Indiana, and Ohio (MIO):

Ontario and MIO data was obtained from a survey regularly conducted by the University of Guelph, Ridgetown Campus. (The survey is conducted as part of AAFC's Canada-U.S. price monitoring program which also includes the Manitoba, North Dakota, and Minnesota survey). The “Ridgetown” survey collects prices for 44 farm inputs from ten centres in Ontario, four in Michigan, one in Ohio and one in Indiana. Enumerators obtain current pricing from a minimum of three retail outlets in each centre using a pre-designed survey form. Prices collected are for cash (and carry) purchases. U.S. prices are reported by Ridgetown in Canadian and Canadian dollar (CAD) units.

Alberta Agriculture and Rural Development (AARD):

Since 1976, the Statistics and Data Development Unit of Alberta Agriculture and Food has carried out a monthly survey of prices for selected Alberta farm inputs. The prices are collected by Wild Rose Agricultural Producers in partnership with the Statistics and Data Development Unit. The survey covers 53 farm inputs surveyed from 25 centres located across Alberta. The most recent AARD price survey data available extends to April 2008.

Other surveys and price data:

Other sources of price data were also consulted and used to informally compare with survey data specific to this report. Principal amongst these is Pike & Fischer's "Greenmarkets" report which provides a review of major fertilizer and ingredient prices at key port and other locations across North America and the world.

Ivermectin

The price of ivermectin products was collected by telephone and some in-person survey for western and eastern Canada and the U.S. Western Canadian prices were collected from farm supply retail outlets and veterinarians in 24 locations throughout the Prairie provinces with a majority located in Alberta and Saskatchewan. U.S. prices were collected from 12 locations in Montana and North Dakota abutting the Alberta-to-Manitoba border. In the east, prices were collected from 12 supply and veterinarian outlets in Ontario and Quebec, and from ten U.S. outlets spanning Michigan, Ohio, and New York states. U.S. prices were also obtained three world wide web based suppliers. The emphasis of the survey was on ivermectin product for use in cattle.

Administrative Data

Administrative data includes the (total) value and quantity of Canadian exports and imports of major fertilizer ingredients and products reported by Statistics Canada. Individual products and product categories are as defined and provided by the Harmonized System (HS). Appendix A lists the HS codes and descriptions for the principal products and product categories for which administrative data is available.

Administrative data is available for a range of time and geographic detail. The most detailed geographic basis available includes province of origin and port of clearing for exports, and port and province of entry for imports. Note that the port of clearing is typically or often but not always located within the province of origin of exports; and that the port of entry of imports is not always located in the province in which the import is ultimately consumed. Monthly is the most detailed (smallest) time period for which data is available.

Administrative data concerning total value and quantity can be used to estimate the “reported unit value” (or “unit value”) of exports and imports respectively i.e. where

unit value = total value / total quantity (value divided by quantity)

Accordingly unit values expressed as \$/tonne for fertilizer products can be estimated for each HS category, province, and month. It is critical to emphasize that while unit values are based on prices as declared for individual shipments for international trade purposes, they are not market prices per se. At the most detailed level for which administrative data is available, “unit values” are the average value of the total quantity of imports or exports by province for a given HS product category in any one month. To the extent that declared import and export values accurately incorporate market prices, unit values reflect market prices. As such, unit values can be considered as indicators of market prices on a monthly basis. More precisely, they can be used as indicators of the general level and direction of price but are not prices in and of themselves.

The following discussion summarizes Statistics Canada’s description and qualification of customs data (Statistics Canada 2000, and Statistics Canada undated).

The International Trade Division (ITD) of Statistics Canada uses administrative sources to compile trade data. Customs documents are used to establish these statistics. Importers, exporters, or their agents are responsible for properly completing forms by declaring, among other things, the destination, the value of the merchandise, the origin (province or territory) of goods, and the method of transportation used. Considering that customs agents are more vigilant about merchandise entering the country, the customs basis is more accurate for assessing imports than exports.

Exports include products cultivated, extracted or manufactured in Canada (including products of foreign origin that are processed in Canada). Exports to countries other than the United States are assessed based on the value declared in export documents. In accordance with the Memorandum of Understanding on the Exchange of Imports Data signed in July 1987 and implemented in January 1990, exports to the United States are based on United States imports from Canada, collected by the United States Customs Service. Replacing Canadian export statistics with more dependable U.S. import figures increases the reliability of trade data.

Trade data coverage by ITD is not complete. Low value transactions (defined as less than \$2,000) are excluded from exports data at the commodity detail. In practice, this applies to U.S. destinations. To non-U.S. destinations, transactions with values less than \$10,000 are excluded from exports at the commodity detail. All low value transactions are aggregated into a separate total rather than allocated to their respective commodities. As a result, the value of exports for some commodities may be understated by varying, but usually relatively small, amounts. Low value transactions account for less than one percent of total exports.

Incomplete coverage of trade data can also result from omissions or errors in the completion of customs documents. At times documents for exports are not filed and for the ones that are, errors can occur in the documentation process. The principal cause of this deterioration in coverage is a lack of awareness or misunderstanding on the part of Canadian exporters of Canada Customs reporting procedures.

Exports include the value of the commodity and the costs of domestic or internal freight charges but net of taxes, discounts, allowances, and rebates. The value of exports represent actual sale prices or transfer prices that have been adopted by the companies for accounting purposes. These prices include inland freight to the port of export.

The use of Canada's import data to produce U.S. export data requires some adjustments to make the two comparable. U.S. exports are valued at the U.S. seaport, airport, or border port of export in the U.S. and include inland freight charges. Canadian imports are valued at the point of origin in the U.S. and do not include inland freight to the U.S. port of exit. To compensate, Canada adds an estimated 4.5 percent of the value to each transaction to cover inland freight (except for shipments where freight is not a consideration, e.g., large aircraft, vessels and drilling platforms.) Data users are cautioned that comparison of U.S. exports with corresponding Canadian import data at detailed commodity levels is not recommended as corrections, differences in classification interpretation and in editing and processing environments make these comparisons uncertain.

Analytical Methods

In addition to standardized survey methods, several methods were combined to assemble, integrate, and analyze survey and administrative data in order to provide insight into recent price movements, and compare price levels over time and between Canadian and U.S. locations.

Survey Data

U.S. price data was collected in U.S. units and dollars (USD) and converted to Canadian units and dollars (CAD) using the Bank of Canada's (BoC) cash exchange rate. For fertilizer, tons were converted to tonnes equivalent. U.S. pesticide prices were converted from U.S. gallons to litres. Ivermectin products are available in the same units on both sides of the border, including litres for product in pour-on format and millilitres for injectable product. Ivermectin is available in a range of container sizes, and Canada and U.S. prices were compared on a unit basis for common container sizes. The BoC's cash rate is equivalent to the noon rate plus four percent. The Ridgetown survey reports U.S. prices for MIO in Canadian units and dollars. The Canada-U.S. exchange rate used as the basis to convert data collected by U.S. survey specific to this report, and by the Ridgetown survey is reported in section 3.4.

As introduced in the previous data section, survey data is mixed in terms of its time coverage. For Atlantic Canada and U.S. locations, Quebec, New York, Vermont, and Montana, price data was collected for the current spring season only. For Ontario, MIO, Manitoba, NDMN, Saskatchewan, and Alberta, survey data is available for previous years and seasons, as well as the current 2008 spring season. For those locations where price data is available for multiple time periods, a simple percentage change was calculated to identify how product prices have changed over time. Reported temporal analysis is limited to spring and fall 2007, and spring 2008.

Statistical analysis of Canada-U.S. prices was conducted to identify (statistically) significant differences and similarities. The rigour of the statistical comparison varies regionally according to the amount of detailed survey data available. The Student's t-statistic was used to test the difference between sample means (survey averages). The formula for the Student's t-test requires the sample mean, number of observations n , and standard deviation as input. This detail is available and therefore a more rigorous test was generated for Manitoba-NDMN and Saskatchewan-Montana pairs. Less survey detail is available for all other Canada-US pairs (or bordering locations), and inputs to the t-test were approximated from pooled data with the result that t-test indicators are relatively less rigorous.

Simple Canada-US price comparisons (percent difference) were calculated and are reported in addition to statistical tests. It must be emphasized that of the two i.e. simple and statistical measures of Canada-U.S. price differences, only the statistical test is meaningful when comparing survey sample averages. In other words, while individual prices can be important from the perspective of an individual buyer, only statistical comparison based on representative sampling provides a meaningful measure of whether prices differ between two points or locations.

Administrative Data

The advantage of customs data is that it provides a more continuous indicator of market and price movement over time relative to single and limited time period survey data. The disadvantage of customs data is that it can at best be interpreted only as an indicator of the general level and direction of price, and not as a direct price per se. Accordingly, unit import and export values are not compared directly with survey prices on a numeric basis. Rather, unit customs values are simply reported graphically alongside survey data. This graphical comparison provides an indication of the timing of price movement.

Appendices C and D provide some context for the interpretation and use of customs data. Appendix C reports total imports and exports of major fertilizer products (defined by HS categories) in recent years for western and eastern Canada respectively. In broad terms, Canada is a net exporter of nitrogen and potash products, and a net importer of phosphate products. Western Canada imports very little nitrogen and essentially no potash, while imports of mono-ammonium phosphate (MAP) substantially exceeds exports. A

similar pattern is observed for Eastern Canada for anhydrous ammonia, potash, and phosphate, but the east is also a net importer of all other major nitrogen products. Given this distribution of imports and exports, a greater amount of customs data is available for exports of potash and nitrogen from western Canada; eastern Canadian imports of nitrogen products and ingredients other than anhydrous ammonia; and phosphate imports to all regions.

To recall, market price survey data is available for multiple years and seasons for Alberta, Manitoba, and Ontario. Comparison of survey prices for these regions with customs unit values provides insight to the quality of customs data as an indicator of market movement. Sections 3.4.1, 3.4.3 and 3.4.4 graphically present average survey prices alongside unit customs values. Unit customs value track survey prices in direction reasonably well for nitrogen products, but less so for potash and phosphate.

Given that potash prices have been relatively stable for the last several years prior to late 2007 and 2008, and given its export dominance, a comparison of market survey prices and customs value does not clearly establish the reliability and usefulness of customs data as a indicator of market price level and direction for potash.

For phosphate products, the usefulness and reliability of customs data as a market indicator varies geographically and by the U.S. state of origin of imports. Virtually all phosphate imported to Canada is brought in via the U.S. In western Canada, and especially Alberta, phosphate imports from Idaho predominate. Comparison of Canadian market prices for MAP and unit values for imports from Idaho indicate customs data track market prices reasonably well in direction and magnitude. Moving east, imports from Mississippi river states become more important, and a comparison of the unit customs value of imports from states such as Minnesota also track Canadian market prices for MAP reasonably well in direction and magnitude. Moving further east, North Carolina and Florida imports become more important with imports from Florida predominating. While unit custom values also track Canadian prices reasonably well for imports from North Carolina, they do not track well if at all for imports from Florida.

The observation that unit customs values do not track market prices for imports of phosphate originating in Florida is supported by comparison with prices reported by GreenmarketsTM. Unit customs values for Canadian imports originating in Florida are generally well below Florida market prices reported by Greenmarkets. The implication is that the basis of reporting Florida imports and/or Florida product differs from that of other states and origins. However, Customs and Statistics Canada officials and fertilizer industry representatives consulted as well as other research conducted into this phenomenon was unsuccessful in identifying likely causes or corrections. The upshot is that customs data cannot be used to reliably track market price movement for phosphate products originating or imported via Florida, which is a majority of Canadian imports.

Results and Analysis

Changes in the Price of Fertilizer and Glyphosate Herbicide 2007-2008

Table 3.1 presents measures of the change in fertilizer and glyphosate herbicide prices between 2007 and 2008 spring or seeding seasons using data from the various regional surveys that span multiple years. Column 1 identifies the locations including Alberta, Saskatchewan, Manitoba and Ontario in Canada, and NDMN and MIO in the U.S. Column 1 also specifies fertilizer and herbicide products. Columns 2 to 4 report average survey prices for spring 2007, fall 2007, and spring 2008 respectively. Column 5 presents the percent change in price between fall and spring 2007; column 6 reports percent price change between spring 2008 and spring 2007; and column 7 reports the percent change in the spring 2008 survey price relative to fall 2007.

Fertilizer and glyphosate prices rose dramatically on both sides of the border, with U.S. price increases exceeding Canadian price increase for all products. Phosphate fertilizer prices increased by the greatest amount, followed by potash, and then nitrogen fertilizer products. The following is observed based on price changes between spring 2008 and spring 2007:

- Canadian phosphate prices increased by 55-113 percent, compared to an increase of 96-145 percent in U.S. survey locations. Phosphate price increases were led by MAP which increased in range of 76-113 percent in Canada, and 121-145 percent in the U.S. Diammonium phosphate (DAP) prices rose by less, or 56 percent in Ontario and 96 percent in MIO.
- Canadian potash prices rose by 54-72 percent compared to 115-122 percent in the U.S.
- Canadian nitrogen fertilizer prices rose in a range of 10-38 percent, compared to 14-47 percent in U.S. border states and locations. Price increases on both sides of the border were led by anhydrous ammonia and ammonium sulphate. Prices for ammonium nitrate and liquid nitrogen also rose markedly. Urea prices rose by the least, or 12-15 percent in Canada compared to 14-28 percent in U.S. survey locations.
- The price of glyphosate (Roundup) herbicide rose in a relatively modest range of 1-7 percent in Canada, compared to 44 percent in eastern U.S. survey locations.

Within Canada, increases in the price of nitrogen fertilizer products were greatest in the east (Ontario), and the Prairies experienced relatively larger increases in the price of

phosphate and potash fertilizer and glyphosate herbicide. The following is noted concerning spring 2008 over spring 2007 prices:

- Phosphate (MAP) prices rose by 102-113 percent on the Prairies compared to 76 percent in Ontario.
- Potash prices were up by 72 percent in Manitoba compared to an average increase of 54 percent in Ontario.
- Nitrogen fertilizer product prices rose by a range of 26-38 percent in Ontario, compared to 10-18 percent on the Prairies.
- The average survey price of Roundup WeatherMax was relatively unchanged, increasing by one percent in Ontario compared to a 6-7 percent increase on the Prairies.

Table 3.1. Canadian and United States Price Changes 2007-2008, CAD per tonne, litre.						
1	2	3	4	5	6	7
Province, State Product	2007	2007	2008	Percent Change		
	Spring	Fall	Spring	Fall / Spring 2007	Spring 2008 / Spring 2007	Spring 2008 / Fall 2007
Canada						
Alberta	April	October	April			
Roundup WeatherMax	12.94	13.11	13.83	1	7	6
Anhydrous 82-0-0	840.61	818.93	978.50	-3	16	19
Urea 46-0-0	557.63	530.65	638.80	-5	15	20
MonoAmmonium Phosphate 11-51-0	557.95	601.47	1,129.67	8	102	88
Saskatchewan						
		Sept-Dec	May			
Anhydrous Ammonia 82-0-0		851.50	1,000.67			18
Muriate of Potash 0-0-60		363.50	428.00			18
Urea 46-0-0		502.50	640.00			27
Ammonium Sulphate 21-0-0-24		362.67	481.67			33
MonoAmmonium Phosphate 11-52-0		554.67	1,326.63			139
Manitoba						
	May	October	May			
Vantage Plus, Plus Max		9.03	9.87			9
Roundup Transorb		9.44	11.39			21
Roundup Weathermax	14.65		15.45		6	
Urea 46-0-0	590.11	488.57	661.53	-17	12	35
Nitrogen Solution (UAN) 28-0-0	360.77	310.75	424.97	-14	18	37
Anhydrous Ammonia 82-0-0	864.92	681.00	952.95	-21	10	40
Ammonium Sulphate 21-0-0-24	368.06	334.04	502.32	-9	36	50
Muriate of Potash 0-0-60	313.87	325.10	538.77	4	72	66
MonoAmmonium Phosphate 11-52-0	616.06	573.07	1,312.24	-7	113	129

Table 3.1. Canadian and United States Price Changes 2007-2008, CAD per tonne, litre.						
1	2	3	4	5	6	7
Province, State Product	2007	2007	2008	Percent Change		
	Spring	Fall	Spring	Fall / Spring 2007	Spring 2008 / Spring 2007	Spring 2008 / Fall 2007
Manitoba – In season		May 1-2, 2008	May 5-9, 2008			May 5-9 /May 1-2
Ammonium Sulphate 21-0-0-24		495.41	509.22			3
Urea 46%		646.46	676.60			5
11-52-0		1,280.13	1,352.38			6
Nitrogen Solution (UAN) 28%		412.04	446.50			8
Muriate of Potash 60%		507.94	569.60			12
Ontario						
	May	October	May			
Roundup Weather Max	14.00	14.14	14.11	1	1	0
Ammonium Nitrate 34-0-0	453.10	453.71	530.05	0	17	17
Urea 46-0-0	516.46	550.41	651.18	7	26	18
Nitrogen Solution (UAN) 28-0-0	339.24	354.97	437.3	5	29	23
Anhydrous Ammonia 82-0-0	749.20	771.38	1,033.40	3	38	34
Ammonium Phosphate 10-34-0	507.24	546.52	793.33	8	56	45
DiAmmonium Phosphate 18-46-0	516.00	539.21	799.57	4	55	48
MonoAmmonium Phosphate 11-52-0	512.37	607.96	902.25	19	76	48
Muriate of Potash 0-0-60	378.30	382.13	583.06	1	54	53
Triple Superphosphate 0-46-0	496.50	528.43	871.5	6	76	65
United States						
North Dakota and Minnesota						
	May	October	May			
Urea 46-0-0	562.90	464.08	641.80	-18	14	38
Anhydrous Ammonia 82-0-0	668.78	603.78	937.50	-10	40	55
MonoAmmonium Phosphate 11-52-0	540.30	513.71	1,323.62	-5	145	158
Muriate of Potash 0-0-60	323.78	329.53	696.85	2	115	111
Ammonium Sulphate 21-0-0-24	318.38		454.35		43	
Nitrogen Solution (UAN) 28-0-0	332.63		489.35		47	
Michigan, Indiana, and Ohio						
	May	October	May			
Urea 46-0-0	560.63	534.21	719.28	-5	28	35
Nitrogen Solution (UAN) 28-0-0	353.65	340.29	469.65	-4	33	38
Anhydrous Ammonia 82-0-0	710.71	658.80	969.17	-7	36	47
Roundup Weather Max	13.04	12.10	18.73	-7	44	55
Triple Superphosphate 0-46-0	483.22	494.98	973.95	2	102	97
DiAmmonium Phosphate 18-46-0	557.78	554.45	1,091.95	-1	96	97
Ammonium Nitrate 34-0-0	484.62	329.40	651.06	-32	34	98
Ammonium Phosphate 10-34-0	462.50	425.25	879.51	-8	90	107
Muriate of Potash 0-0-60	322.83	335.86	715.26	4	122	113
MonoAmmonium Phosphate 11-52-0	545.49	558.62	1,207.1	2	121	116

All prices collected by survey as described in section 2.1.

Canada – U.S. Price Comparison for Spring 2008

This section compares Canadian and U.S. prices as of spring 2008. Fertilizer and herbicide prices are reported in the first section. The second section compares ivermectin prices.

Fertilizer and Glyphosate Herbicide

Tables 3.2 to 3.7 compare spring 2008 Canadian and U.S. fertilizer and glyphosate herbicide prices for cross border province and state pairs including Alberta and Montana; Saskatchewan and Montana; Manitoba and North Dakota and Minnesota; Ontario and Michigan, Indiana, and Ohio (MIO); Quebec and New and Vermont; and New Brunswick and Maine including Prince Edward Island respectively.

As of spring 2008, a majority of the main fertilizer and glyphosate products are significantly lower price in Canada, or exhibit little or no price difference. The following is noted concerning the statistical significance of the difference between average survey prices between province-state pairs at a 95 percent level of confidence:

- ½ or 50 percent of product prices are lower in Alberta than in Montana, and the remaining 50 percent exhibit no statistically significant price difference.
- 50 percent of prices are lower in Saskatchewan relative to Montana; 10 percent are lower in Montana; and 40 percent of prices are not different between the two regions.
- 62 percent of prices are lower in Manitoba while 23 percent of prices are lower in North Dakota and Minnesota, and the balance or 15 percent of prices do not differ.
- Insufficient detail is available from the Ridgetown College survey to provide a statistical test of Canada-U.S. price differences, but the following pattern is highlighted: the price of 30 percent of products is 20 percent or higher in MIO; the price of another 30 percent of products is 10-20 percent higher in MIO; the price of a further 30 percent of products is 5-10 percent higher in MIO; and the price of the balance or 10 percent of products is higher in Ontario.
- 50 percent of product prices are lower in Quebec than in adjoining regions of New York and Vermont, and the remaining 50 percent exhibit no statistically significant difference.

- 82 percent of product prices are lower in New Brunswick than in Maine, and 18 percent exhibit no statistically significant difference.

Table 3.2. Canada – United States Price Comparison for Alberta and Montana			
Canadian / U. S. Product	Price (CAD)¹		Percent CAN-US Difference²
	Alberta	Montana	
Time Period:	April 2008	May 2008	April-May 2008
Fertilizer \$/tonne			
82-0-0 Anhydrous Ammonia	978.50	1,005.70	-2.7
46-0-0 Urea	638.80	696.74	-8.3 *
11-52-0 MonoAmmonium Phosphate	1,129.67	1,325.81	-14.8 *
Glyphosate Herbicide \$/litre			
Roundup Weathermax / RT3	13.83	13.09	5.6
Count, number of product prices where			
	Simple³	Significant⁴	
Canadian greater than U.S.	1	0	
Canadian less than U.S.	3	2	
No difference	0	2	
Total count	4	4	
¹ Prices are FOB retail outlet, and do not include service. AARD reports the price of anhydrous including service and applicator. An average \$40/tonne is deducted from AARD's prices to estimate an FOB price for anhydrous. ² Percent difference measured as Canada-US difference as a percent of U.S. price. ³ Simple is the simple count of price differences, and is distinct from the number of significant differences reported in the column to the right. See footnote 4. ⁴ Significant is the count of statistically significant differences measured using the Student's t-test. * Difference is statistically significant at a 95 percent confidence level All prices collected by survey as described in section 2.1.			

Table 3.3. Canada – United States Price Comparison for Saskatchewan and Montana			
Canadian / U. S. Product	Price (CAD)¹		Percent
	Saskatchewan	Montana	CAN-US Difference²
Time Period:	May 2008		
Fertilizer \$/tonne			
10-34-0 Ammonium Phosphate	881.67	632.74	39.3 *
11-52-0 MonoAmmonium Phosphate	1,326.63	1,325.81	0.1
82-0-0 Anhydrous Ammonia	1,000.67	1,005.70	-0.5
21-0-0-24 Ammonium Sulphate	481.67	510.51	-5.7
46-0-0 Urea	640.00	696.74	-8.1 *
28-0-0 Nitrogen Solution	417.71	495.04	-15.6 *
0-0-0-90 Sulfur	564.80	668.98	-15.6
0-0-60 Potash	428.00	555.50	-23.0 *
0-46-0 Triple Super Phosphate	500.00	668.98	-25.3 *
Glyphosate Herbicide \$/litre			
Roundup Transorb / RT3	10.80	13.09	-17.5
Count, number of product prices where			
	Simple³	Significant⁴	
Canadian greater than U.S.	1	1	
Canadian less than U.S.	8	4	
No difference	1	5	
Total count	10	10	
¹ Prices are FOB retail outlet, and do not include service. ² Percent difference measured as Canada-US difference as a percent of U.S. price. ³ Simple is the simple count of price differences, and is distinct from the number of significant differences reported in the column to the right. See footnote 4. ⁴ Significant is the count of statistically significant differences measured using the Student's t-test * Difference is statistically significant at a 95 percent confidence level All prices collected by survey as described in section 2.1.			

Table 3.4. Canada – United States Price Comparison for Manitoba, North Dakota and Minnesota

Canadian / U. S. Product	Price (CAD) ¹		Percent
	Manitoba	NDMN	CAN-US Difference ²
Time Period:	May 2008	May 2008	May 2008
Fertilizer \$/tonne			
21-0-0-24 Ammonium Sulphate	502.32	454.35	10.6 *
11-52-0 MonoAmmonium Phosphate	1,312.24	1,323.62	-0.9
82-0-0 Anhydrous Ammonia	952.95	937.50	1.6
46-0-0 Urea	661.53	641.80	3.1
10-34-0 Ammonium Phosphate	895.11	867.28	3.2
28-0-0 Nitrogen Solution	424.97	489.35	-13.2 *
0-0-60 Potash	538.77	696.85	-22.7 *
Glyphosate Herbicide \$/litre			
Roundup WeatherMax / PowerMax	15.45	12.40	24.6 *
Roundup WeatherMax / RT3	15.45	13.18	17.2
Vantage Plus Max / Cornerstone Plus	9.87	8.76	12.6
Maverick II / Cornerstone Plus	8.52	8.76	-2.8
RoundUp Transorb HC / PowerMax	11.39	12.40	-8.1 *
Roundup Transorb HC / RT3	11.39	13.18	-13.6
Count, number of product prices where			
	Simple³	Significant⁴	
Canadian greater than U.S.	7	2	
Canadian less than U.S.	6	3	
No difference	0	8	
Total count	13	13	
¹ Prices are FOB retail outlet, and do not include service. ² Percent difference measured as Canada-US difference as a percent of U.S. price. ³ Simple is the simple count of price differences, and is distinct from the number of significant differences reported in the column to the right. See footnote 4. ⁴ Significant is the count of statistically significant differences measured using the Student's t-test * Difference is statistically significant at a 95 percent confidence level All prices collected by survey as described in section 2.1.			

Table 3.5. Canada – United States Price Comparison for Ontario, Michigan, Ohio, and Indiana			
Canadian / U. S. Product	Price (CAD)¹		Percent CAN-US Difference²
	Ontario	Michigan, Ohio, and Indiana	
Time Period:	May 2008		
Fertilizer \$/tonne			
Anhydrous Ammonia 82-0-0	1,033.40	969.17	6.6
Nitrogen Solution (UAN) 28-0-0	437.30	469.65	-6.9
Urea 46-0-0	651.18	719.28	-9.5
Ammonium Phosphate 10-34-0	793.33	879.51	-9.8
Triple Superphosphate 0-46-0	871.5	973.95	-10.5
Muriate of Potash 0-0-60	583.06	715.26	-18.5
Ammonium Nitrate 34-0-0	530.05	651.06	-18.6
MonoAmmonium Phosphate 11-52-0	902.25	1,207.10	-25.3
DiAmmonium Phosphate 18-46-0	799.57	1,091.95	-26.8
Glyphosate Herbicide \$/litre			
Roundup Weather Max	14.11	18.73	-24.7
Count, number of product prices where			
	Simple³	Significant⁴	
Canadian greater than U.S.	1	n/a	
Canadian less than U.S.	9	n/a	
No difference	0	n/a	
Total count	10	n/a	
¹ Prices are cash and carry FOB retail outlet, and do not include service. ² Percent difference measured as Canada-US difference as a percent of U.S. price. ³ Simple is the simple count of price differences, and is distinct from the number of significant differences reported in the column to the right. See footnote 4. ⁴ Significant is the count of statistically significant differences measured using the Student's t-test All prices collected by survey as described in section 2.1.			

Table 3.6. Canada – United States Price Comparison for Quebec, New York and Vermont

Canadian / U. S. Product	Price (CAD) ¹		Percent
	Quebec	New York and Vermont	CAN-US Difference ²
Time Period:	Feb-Mar 2008	April-May 2008	April/Feb 2008
Fertilizer \$/tonne			
0-0-22 Sulpomag	528.00	524.04	0.8
27-0-0 Calcium Ammonium Nitrate	517.00	528.50	-2.2
46-0-0 Urea	679.00	696.30	-2.5
0-0-60 Potash	559.00	641.39	-12.8 *
11-52-0 MonoAmmonium Phosphate	784.00	957.76	-18.1 *
18-46-0 DiAmmonium Phosphate	784.00	1,124.27	-30.3 *
Glyphosate Herbicide \$/litre			
Credit Plus / Cornerstone Plus bulk	8.60	8.95	-4.0
Roundup Weathermax	15.24	21.97	-30.7 *
Touchdown IQ	15.23		
Touchdown Total		20.04	
Count, number of product prices where			
	Simple³	Significant⁴	
Canadian greater than U.S.	1	0	
Canadian less than U.S.	7	4	
No difference	0	4	
Total count	8	8	
¹ Prices are FOB retail outlet, and do not include service. ² Percent difference measured as Canada-US difference as a percent of U.S. price. ³ Simple is the simple count of price differences, and is distinct from the number of significant differences reported in the column to the right. See footnote 4. ⁴ Significant is the count of statistically significant differences measured using the Student's t-test * Difference is statistically significant at a 95 percent confidence level All prices collected by survey as described in section 2.1.			

Table 3.7. Canada – United States Price Comparison for Prince Edward Island, and New Brunswick and Maine				
Canadian / U. S. Product	Price (CAD)¹			Percent CAN-US Difference
	Prince Edward Island	New Brunswick	Maine	
Time Period:	April-May 2008		May 2008	April-May 2008
Fertilizer \$/tonne				
46-0-0 Urea	581.67	712.67		
0-46-0 Triple Super Phosphate	678.33	1,010.00	1,094.58	-7.7
34-0-0 Ammonium Nitrate	448.33	442.75	502.41	-11.9 *
0-0-0-90 Sulphur		815.33	985.13	-17.2 *
0-0-60 Potash	553.33	566.50	711.48	-20.4 *
27-0-0 Calcium Ammonium Nitrate	465.00	450.00	574.66	-21.7
21-0-0-24 Ammonium Sulphate	465.00	389.00	541.82	-28.2 *
15-15-15 Blended Fertilizer		501.00	710.38	-29.5 *
18-46-0 DiAmmonium Phosphate	671.67	682.75	985.13	-30.7 *
11-52-0 MonoAmmonium Phosphate	686.67	676.50	1,094.58	-38.2 *
Glyphosate Herbicide \$/litre				
Roundup WeatherMax	15.77	13.63	17.05	-20.1 *
Touchdown Total		13.50	16.79	-19.6 *
Touchdown 480	8.60			
Count, number of product prices where				
	Simple³		Significant⁴	
Canadian (NB) greater than U.S.	0		0	
Canadian (NB) less than U.S.	11		9	
No difference	0		2	
Total count	11		11	
¹ Prices are FOB retail outlet, and do not include service.				
² New Brunswick-Maine percent difference measured as Canada-US difference as a percent of U.S. price.				
³ Simple is the simple count of price differences, and is distinct from the number of significant differences reported in the column to the right. See footnote 4.				
⁴ Significant is the count of statistically significant differences measured using the Student's t-test				
* Difference is statistically significant at a 95 percent confidence level				
All prices collected by survey as described in section 2.1.				

Ivermectin

Table 3.8 compares the price of ivermectin livestock treatments between Canada and the U.S. for eastern and western regions. Ivomec™ is the trade name of the original product for livestock containing ivermectin. In recent years, a number of other manufacturers and distributors have entered the market with their own brands or generic

formulas where ivermectin and variations thereof is the principal active ingredient. Prices are compared between Canada and the U.S. for the Ivomec™ brand as well as for other “non-Ivomec” brands and generic formulas. Based on the number of quotations collected by survey, Noromectin™ appears to be the most popular non-Ivomec brand in Canada.

A further distinction and categorization is made for U.S. generic and non-Ivomec brands based on price observed by survey. Two categories of non-Ivomec product are identifiable including very “low cost non-Ivomec” and “higher cost non-Ivomec” products where the latter approaches but is generally less than the price of Ivomec.

Prices were collected and are compared for the product in pour-on and injectable format. Based on the number of price quotations collected by survey as well as comments by farm suppliers interviewed, the pour-on format is most popular for cattle while injectable is the standard for hogs. As a consequence, while many of the suppliers surveyed carried the injectable format their inventory was often very small and the range of available container sizes limited and diverse. The makers of Ivomec also produce a premium brand Eprinex™ with a lower withdrawal period for dairy animals. While the survey identified and obtained price quotations for Eprinex, the number obtained was insufficient to provide a meaningful Canada-U.S. comparison.

Ivermectin product prices vary by format and container size – generally the larger the container the lower the unit price. Table 3.8 compares prices according to container size and on a unit basis. For pour-on product prices are compared on a \$/litre basis, and on a \$/millilitre basis for injectable product. The first column of Table 3.8 identifies the region and product; column 2 specifies the container size; columns 3 and 4 report the average survey price on a CAD per unit basis for Canada and the U.S. locations respectively; and column 5 provides a Canada-U.S. price comparison in percentage terms.

The following is noted:

- In the west, a Canada-U.S. price difference for large container non-Ivomec brands is observed. For Ivomec and “higher cost non-Ivomec” brands in all container sizes and for smaller (or 2.5 litre) containers of non-Ivomec product, Canadian and U.S. prices are not significantly different. However, for larger containers (5 litres) low cost U.S. non-Ivomec brands are significantly lower price than Canadian generic and non-Ivomec product.
- Also in the west, injectable product exhibits little difference in price between Canada and the U.S. with the exception of small containers (200 ml) of Ivomec the price of which is significantly higher in Canada; and larger (500 ml) containers of Ivomec which are significantly lower price in Canada.

- For pour-on product in the east, a comparable pattern for large volume container non-Ivomec product is observed. The Canadian price of non-Ivomec product is significantly lower than the U.S. “high cost” non-Ivomec product for all container sizes; but the U.S. price of “low cost” large volume container (5 litre) brands is significantly lower than the Canadian price of generic product.
- For injectable product in the east, the price of smaller or 500 ml Ivomec is significantly higher in Canada; but the price of larger volume 1000 ml non-Ivomec is significantly lower in Canada.

Table 3.8. Ivermectin. Canada–United States Price Comparison, East and West. CAD per unit.				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Region Product Format Canada / US Product Name	Container Size	Price (CAD)		Percent CAN-US Difference²
		Canada	US	
Western Canada and U.S.				
Pour-On	litres	\$/litre		percent
All non-Ivomec brands	2.5	52.53	71.04	-26.0
Noromectin / Ivermectin	5.0	35.12	13.32	163.7 *
All non-Ivomec / lower cost non-Ivomec	5.0	35.25	14.55	142.3 *
Ivomec	5.0	41.59	54.90	-24.2
Ivomec / higher cost non-Ivomec	5.0	41.59	67.16	-38.1
Injectable				
	ml	\$/ml		percent
Ivomec	200	0.707	0.552	28.1
Ivomec / Ivomec Plus	200	0.707	0.550	28.6
Ivomec / All non-Ivomec brands	200	0.707	0.409	73.1 *
Ivomec	500	0.300	0.305	-1.6
Ivomec / Ivomec Plus	500	0.300	0.386	-22.3 *
Ivomec / All non-Ivomec brands	500	0.300	0.281	6.9
Noromectin	500	0.238	0.281	-15.2
Eastern Canada and U.S.				
Pour-On	litres	\$/litre		percent
All non-Ivomec / lower cost non-Ivomec	1.0	50.83	39.56	28.5
All non-Ivomec / higher cost non-Ivomec	1.0	50.83	102.49	-50.4 *

Table 3.8. Ivermectin. Canada–United States Price Comparison, East and West. CAD per unit.				
All non-Ivomec / higher cost non-Ivomec	2.5	58.60	85.52	-31.5 *
All non-Ivomec / lower cost non-Ivomec	5.0	28.73	19.79	45.1 *
All non-Ivomec / higher cost non-Ivomec	5.0	28.73	65.37	-56.1 *
Injectable	ml	\$/ml		percent
Ivomec	500	0.38	0.30	23.2 *
Ivomec / Ivomec Plus	500	0.38	0.39	-2.7
All non-Ivomec brands	500	0.25	0.28	-9.6
Noromectin / All non-Ivomec brands	500	0.25	0.28	-12.2
Ivomec / Ivomec Plus	1,000	0.34	0.35	-2.6
Noromectin / All non-Ivomec brands	1,000	0.21	0.35	-40.9 *
* Difference is statistically significant at a 95 percent confidence level				

For Fertilizer in 2008, Timing is Everything!

The next subsections 3.3.1 to 3.3.6 graphically present survey price and unit value customs data for Alberta through to the Atlantic provinces respectively. For each province, single graphs are presented for each major nitrogen product and potash. For MAP (and DAP in Ontario), three graphs are presented in an effort to highlight the issue concerning the general unreliability of unit customs value of imports of phosphate from Florida as an indicator of market price movement as discussed in section 2.3.2 herein.

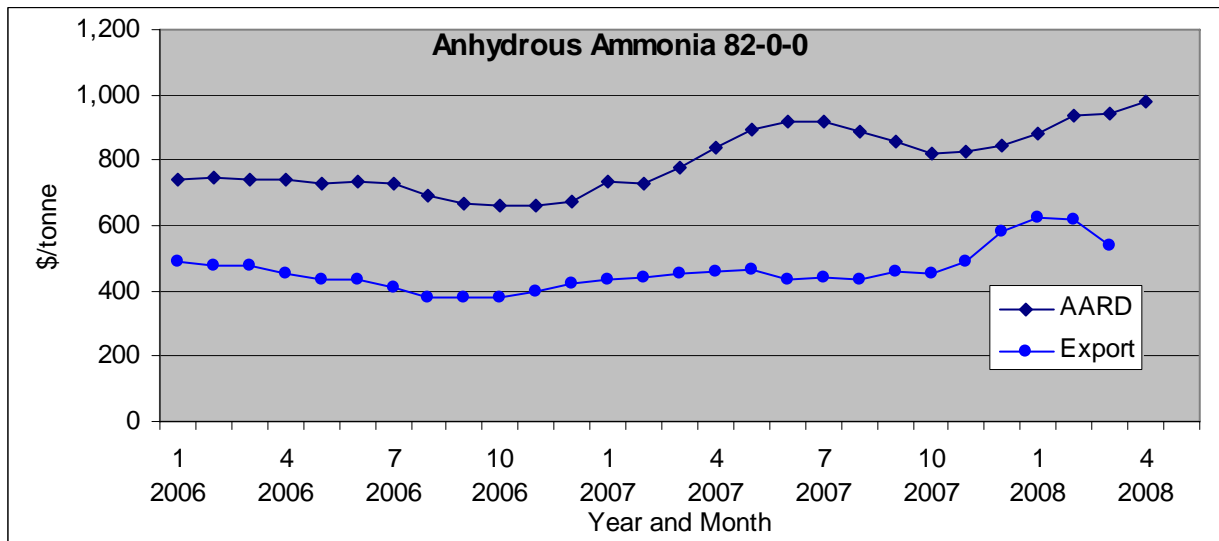
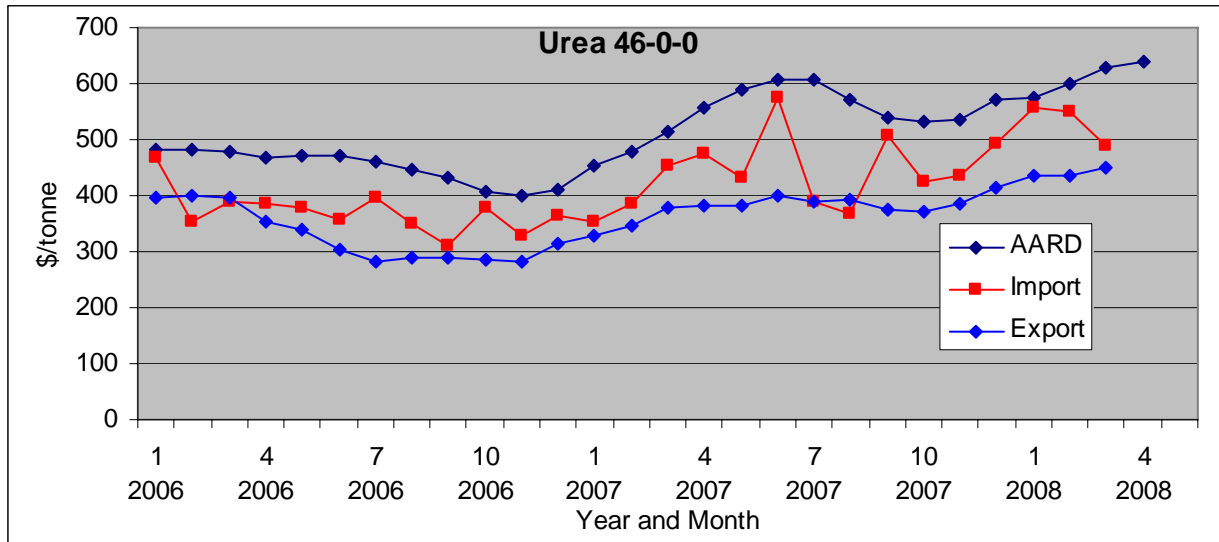
For MAP, the first graph presents the unit customs value of imports from the major states supplying each province as well as for U.S. imports in total. The second graph presents data in column and line format where the column reports the total quantity of imports from the U.S. (left axis); and the lines report the percent of imports by state (right hand axis) over time. This second graph is presented to provide context to the unit import values by state i.e. the relative size or importance of shipments from each state. The third graph is comparable to the first in that it reports the unit customs value of imports from the major supplying states, as well as average survey prices. In other words, the third graph identifies whether unit customs value track survey market prices.

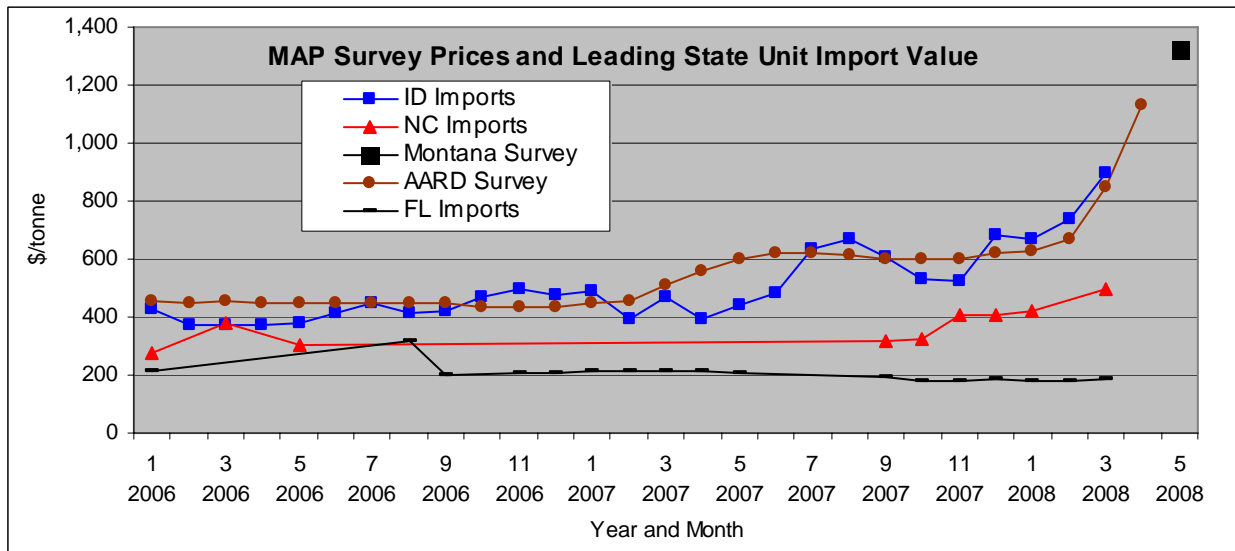
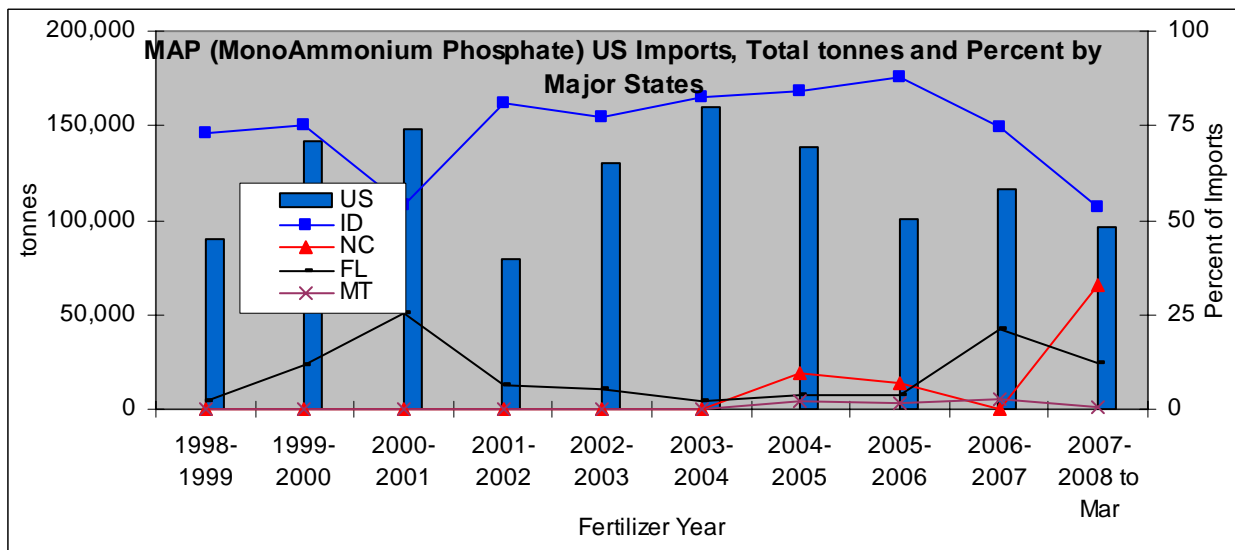
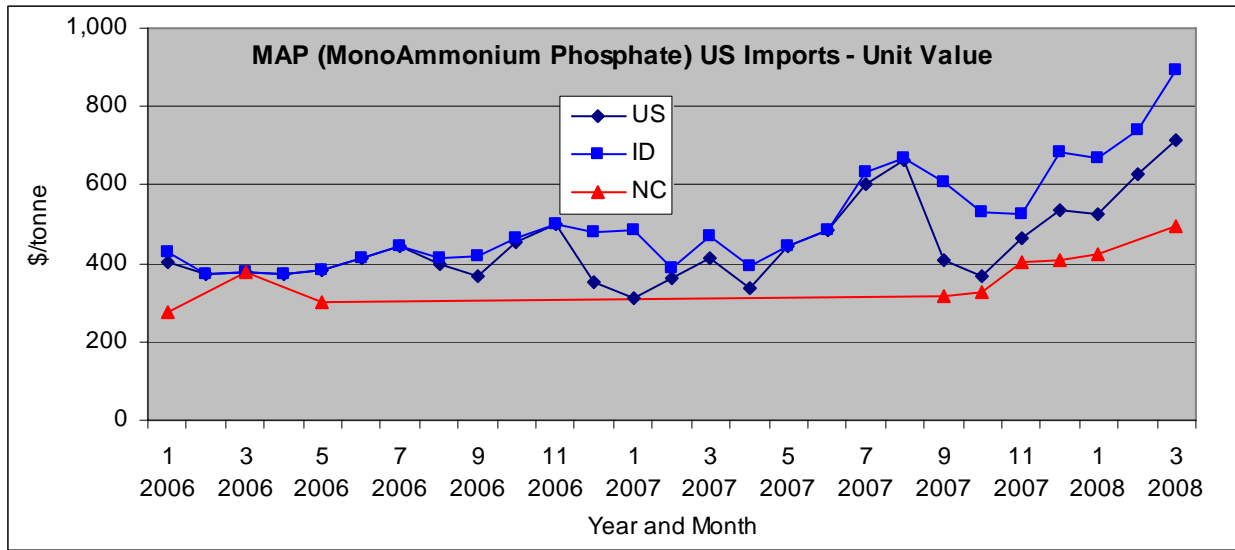
Section 3.1 of this report and the graphs of sections 3.3.1 to 3.3.6 highlight how fertilizer prices have been increasing regularly since approximately late 2007. This presentation highlights how, for farm supply dealers and producers alike, timing is everything when it comes to the price (cost) of fertilizer for 2008. For those dealers and producers who purchased or who were otherwise able to confirm supply and “lock-in” prices before late 2007, the cost of fertilizer is moderately higher but comparable to the 2007 crop year. For producers and farm supply dealers purchasing fertilizer since late 2007-to-early 2008, prices have increased markedly and continue to increase.

The survey and customs data reported herein identifies how prices have been increasingly regularly for the most recent 6+/- months. However, given that available customs data extends only to March 2008 and survey data to May 2008, the available information does not fully capture the extent of the continuing price increase. Commentary and anecdotal information received from fertilizer and farm supply dealers co-operating in the survey to this report indicate that prices continue to increase regularly, and that considerable uncertainty exists as to whether adequate supply can be obtained (regardless of price).

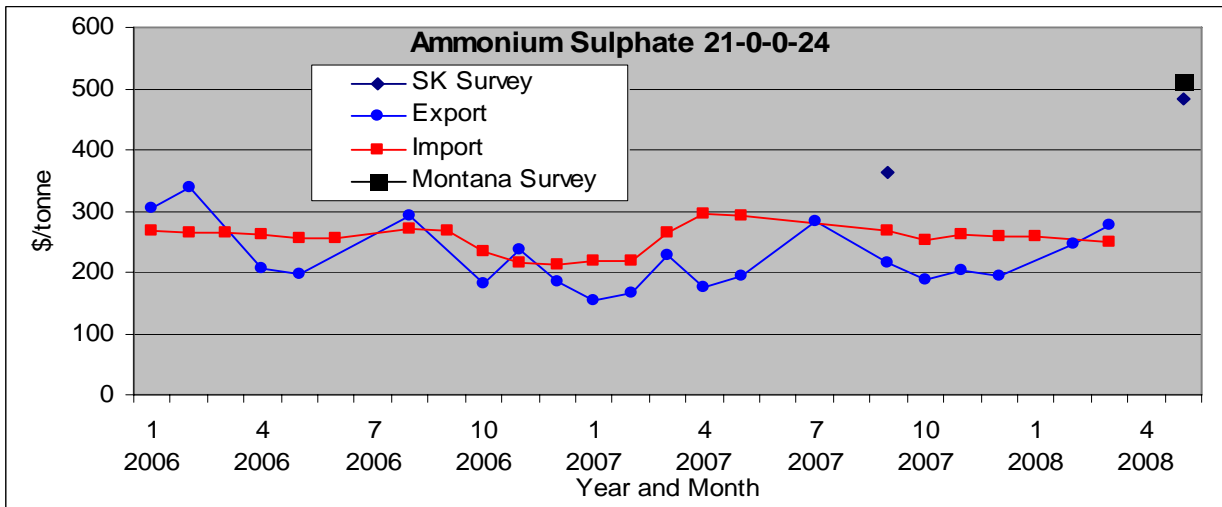
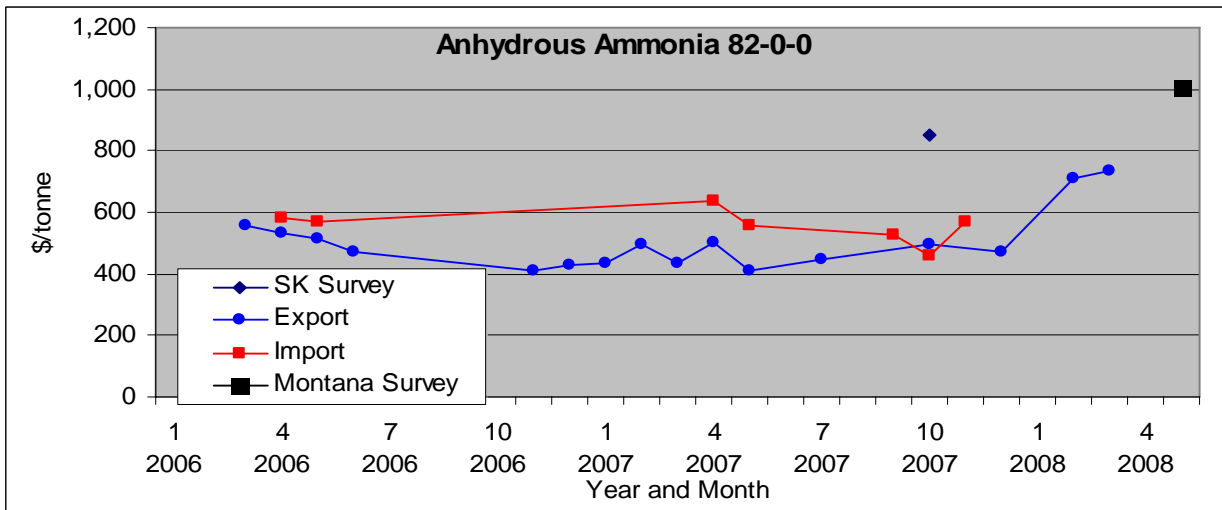
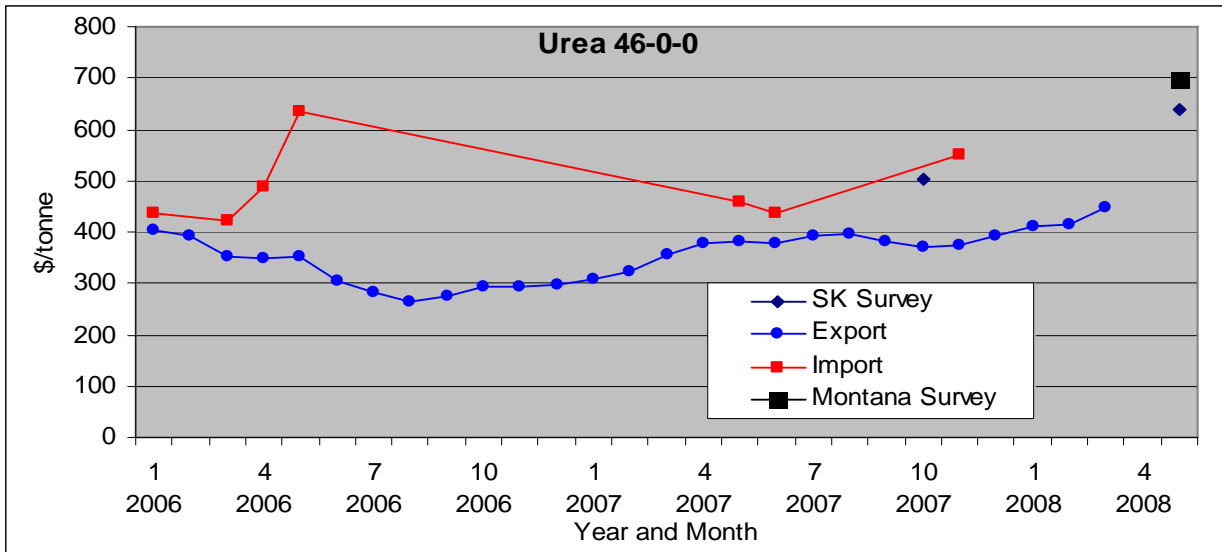
Fertilizer prices in the Maritime provinces and Quebec are especially notable. Prices in these regions are generally lower than other provinces as well as relative to neighboring U.S. states. Several aspects and considerations are highlighted. Firstly, prices were surveyed earlier in the season relative to other regions. This is especially the case for Quebec where the CRAAQ survey was conducted in February-March 2008. A selection of farm supply dealers were contacted later in May (third week) to informally obtain a price update. Indications are that fertilizer prices have increased since the time of the survey, but not yet to the levels observed in other parts of Canada and neighboring U.S. states (suggested increases range from \$15-25/tonne). Farm supply dealers in the Atlantic provinces and Quebec indicate that prices will be held at the level indicated by survey to slightly higher for the immediate seeding season, but that they will increase markedly thereafter.

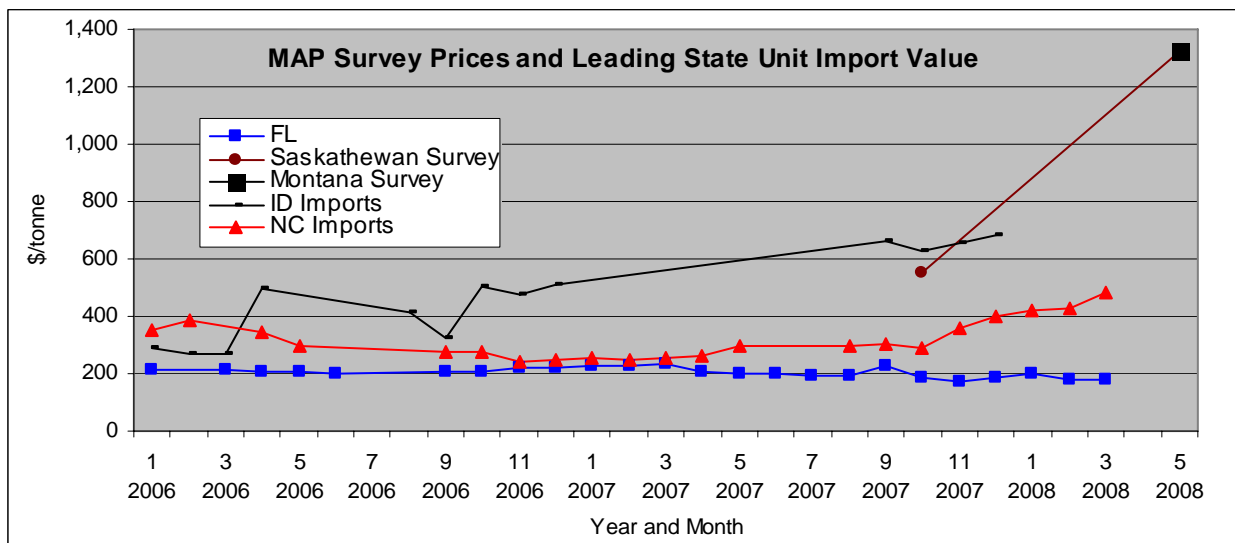
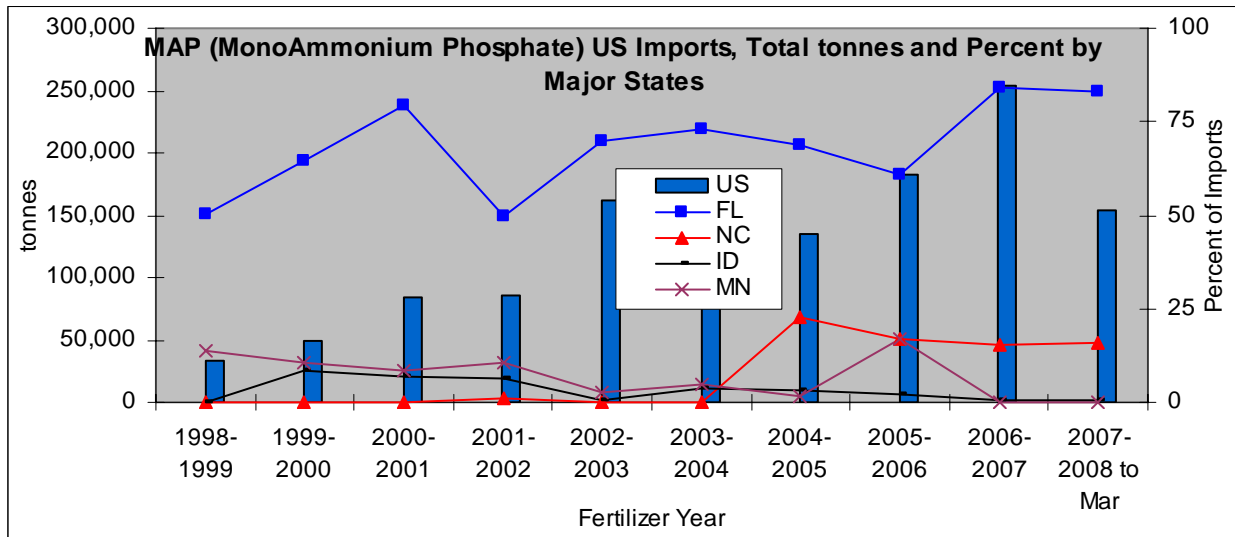
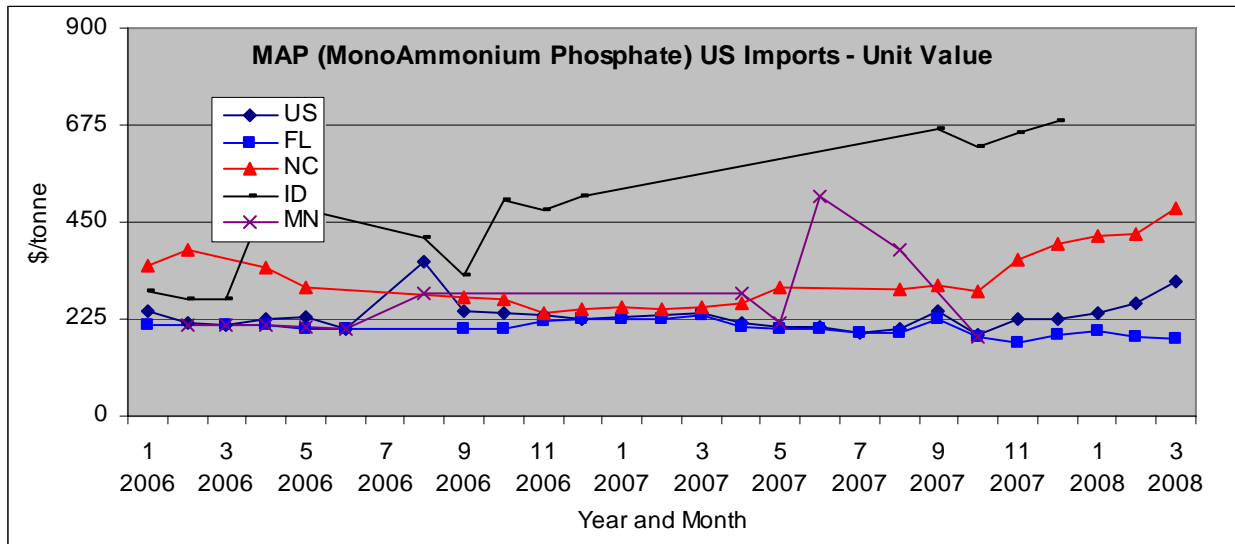
Alberta

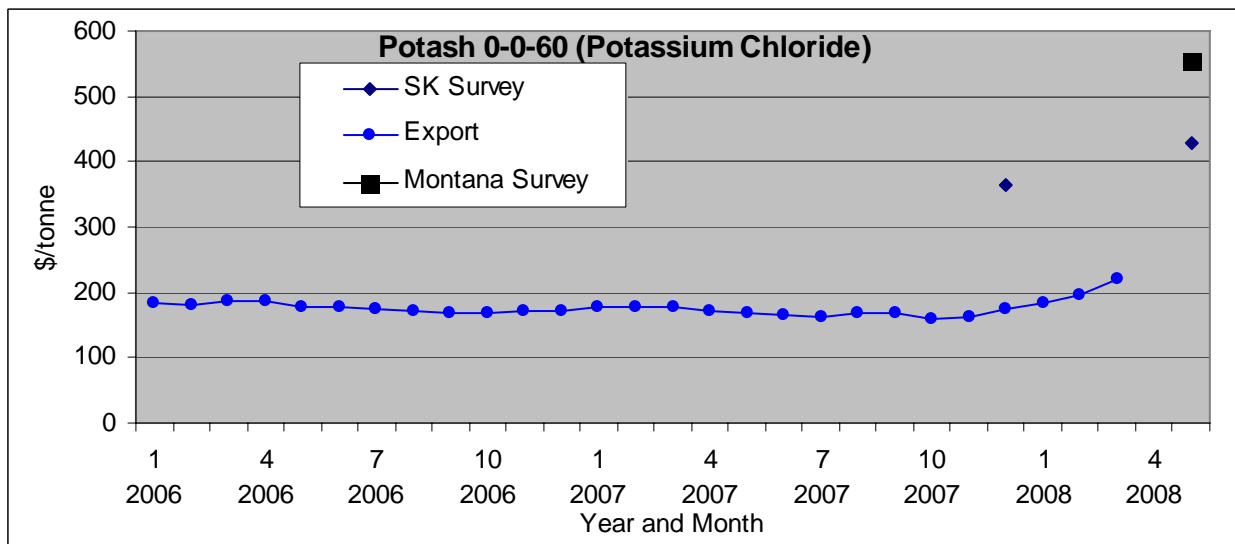
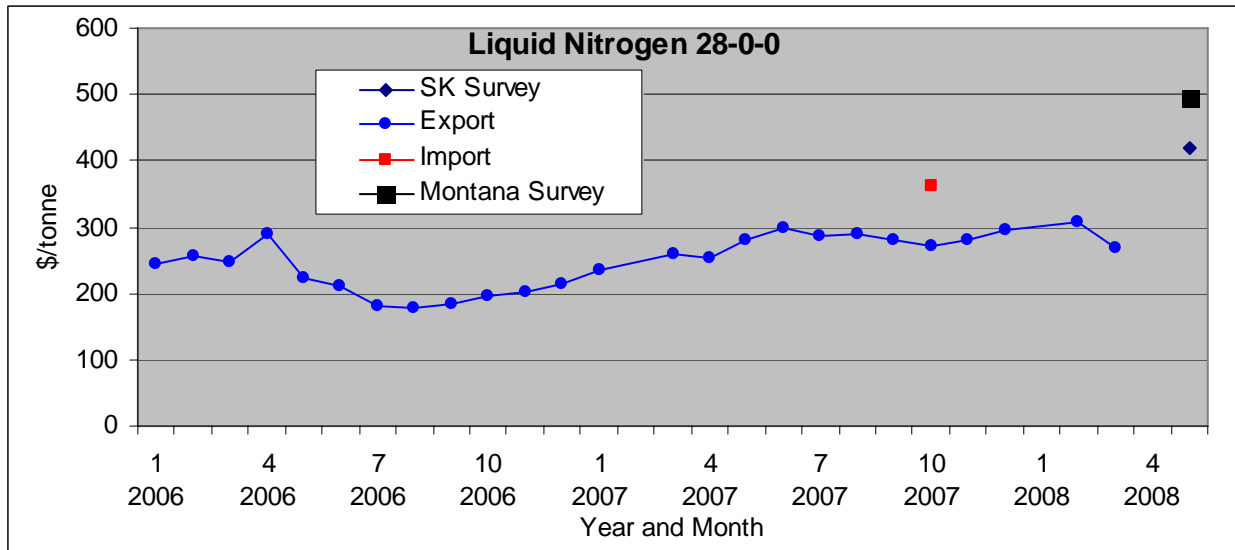




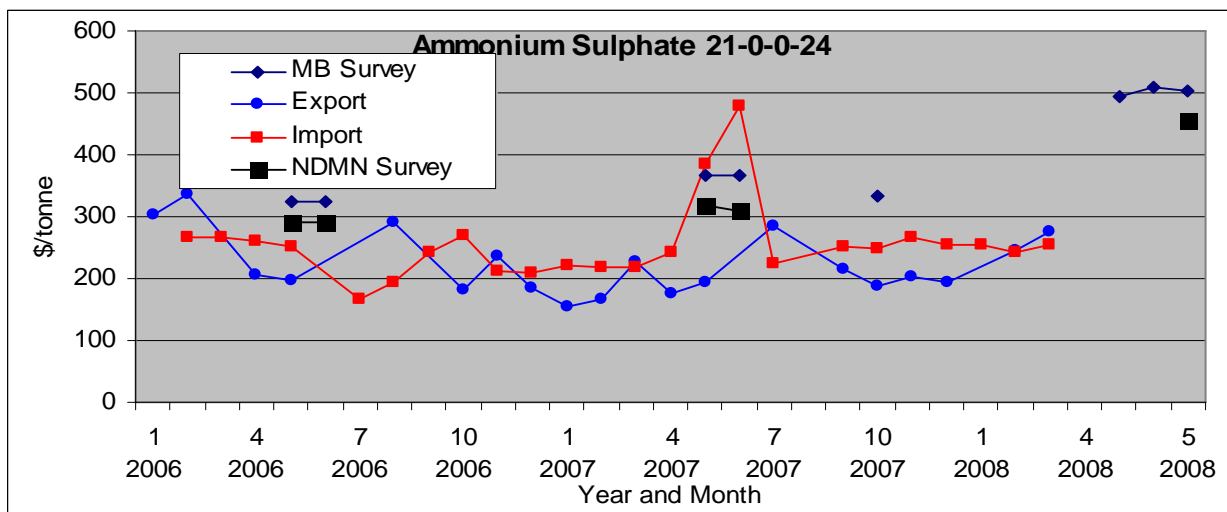
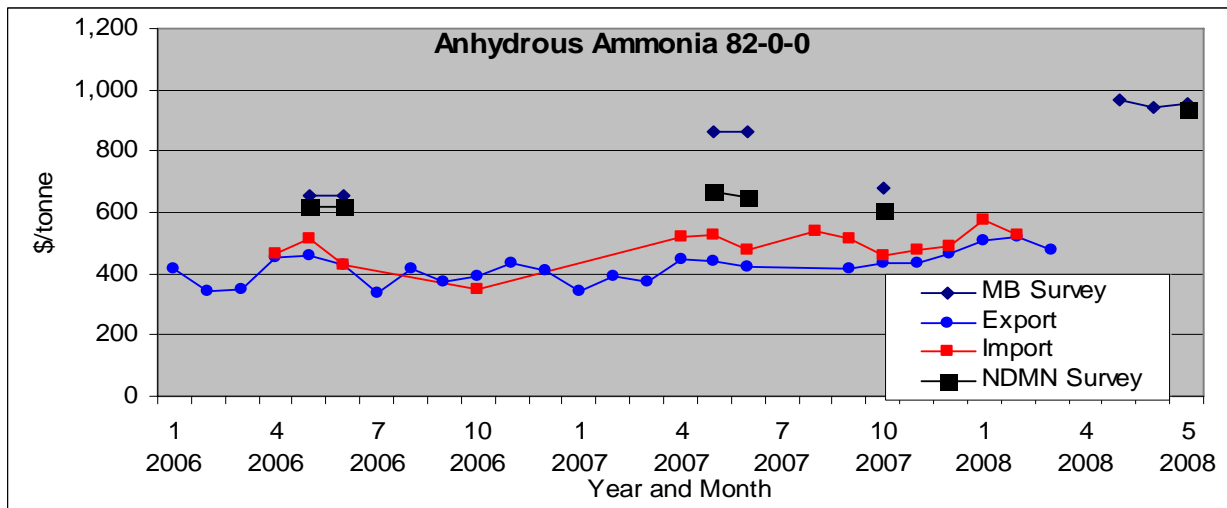
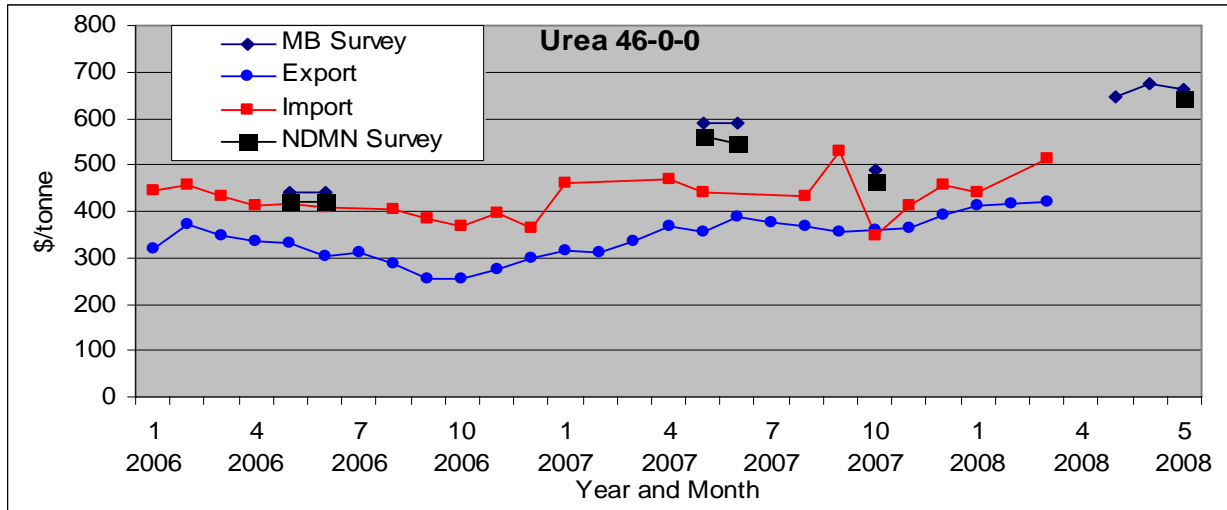
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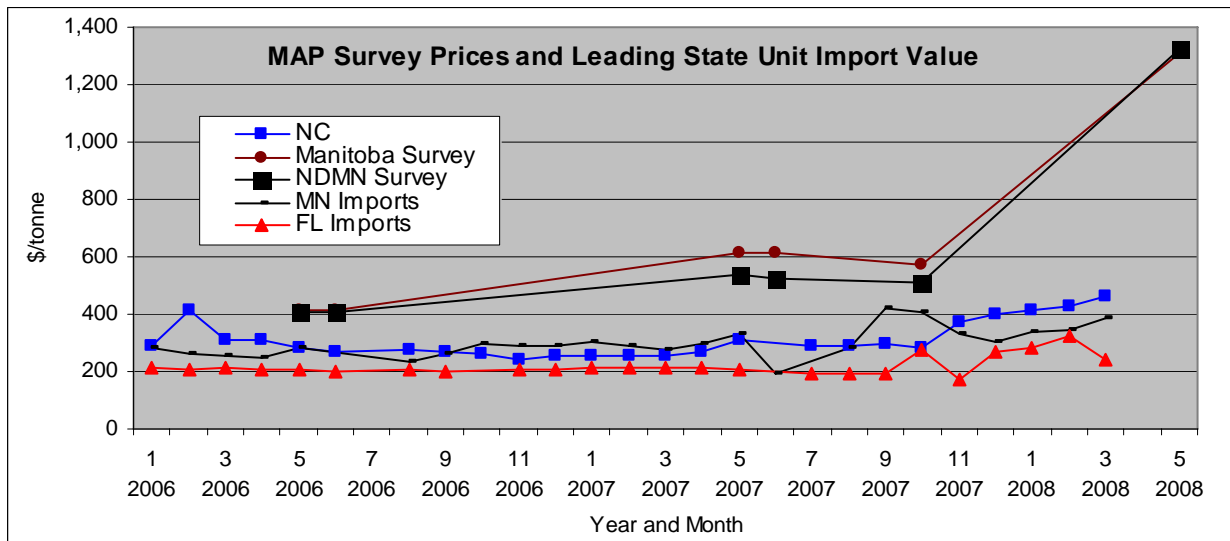
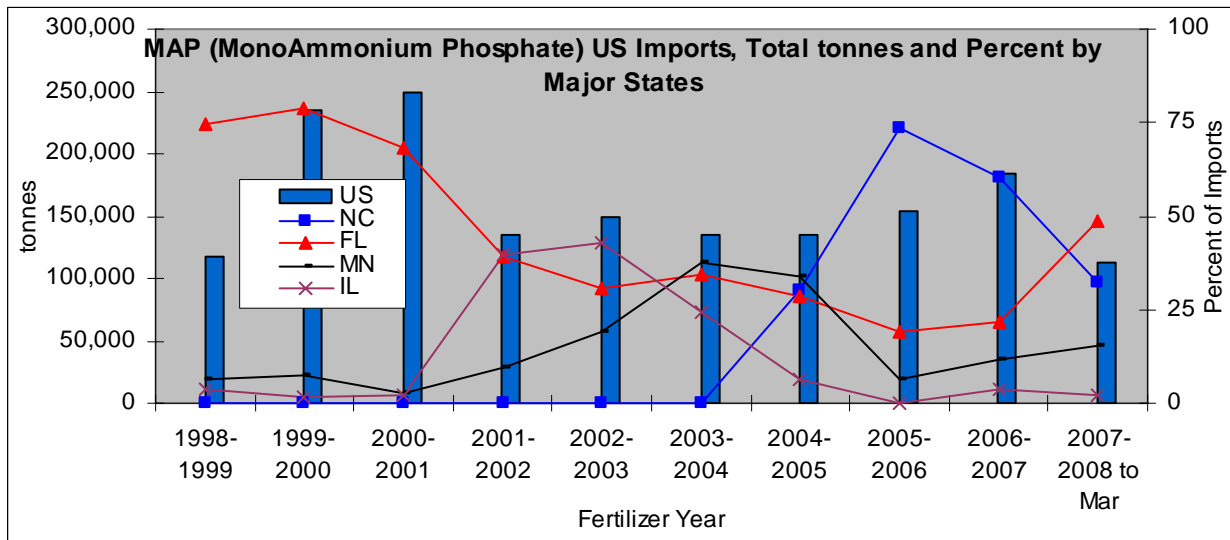
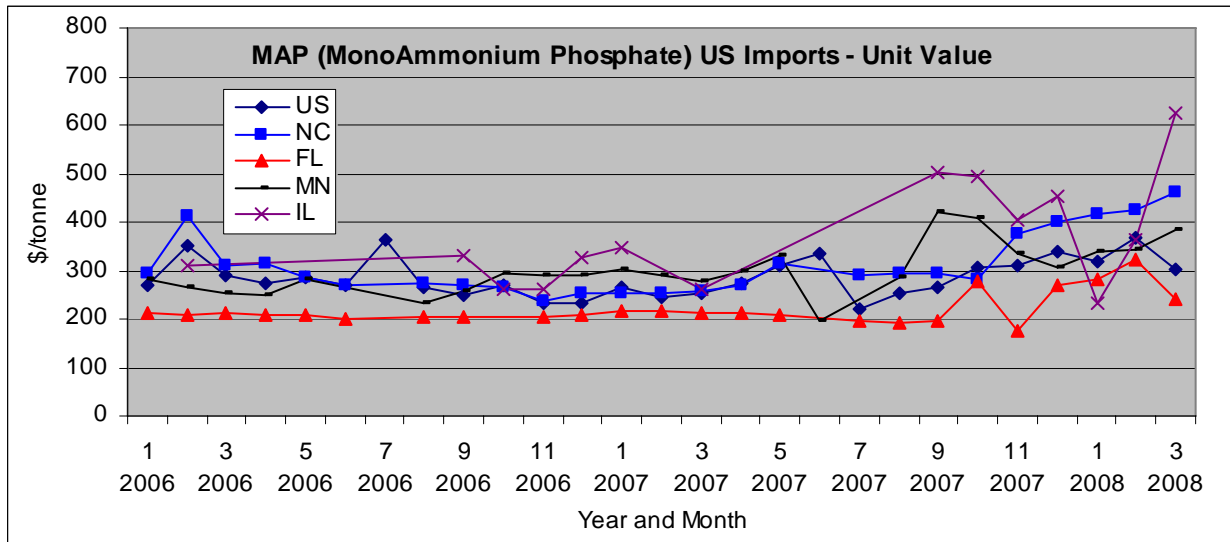


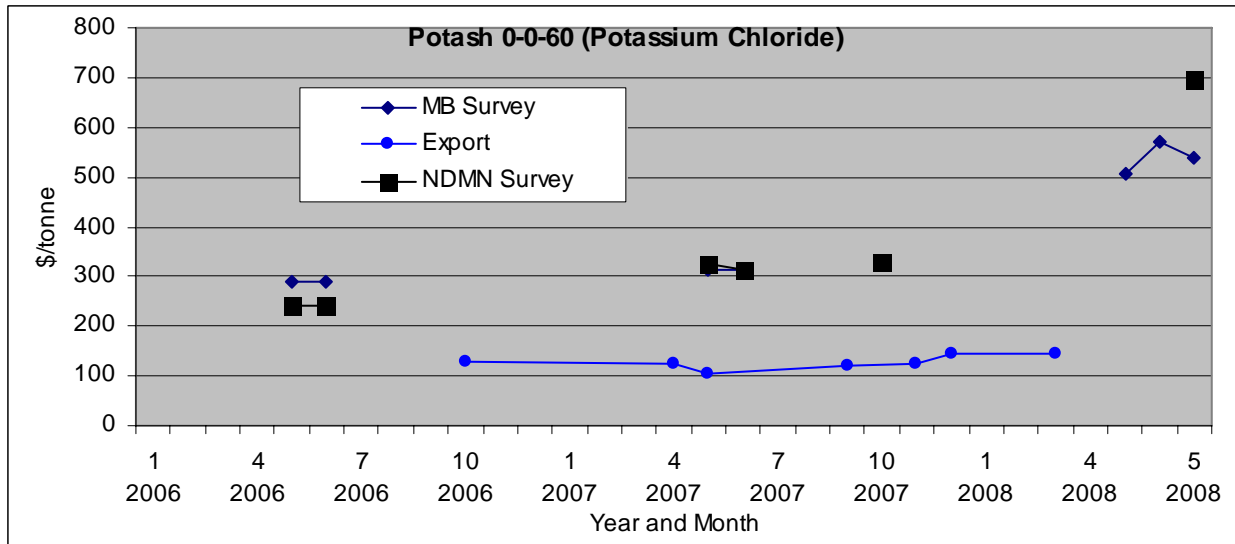
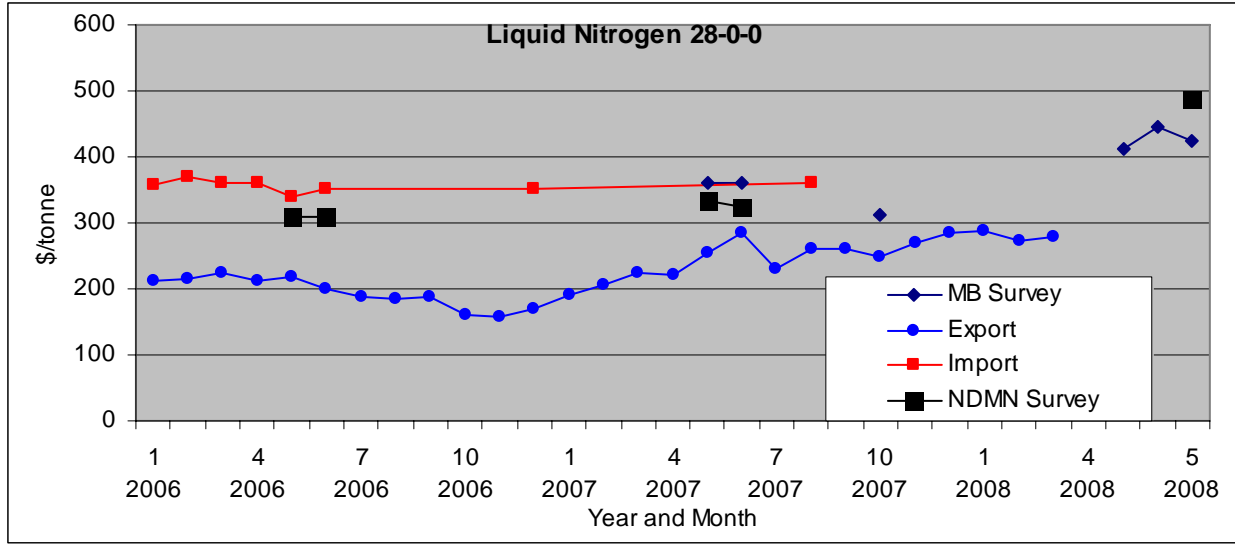




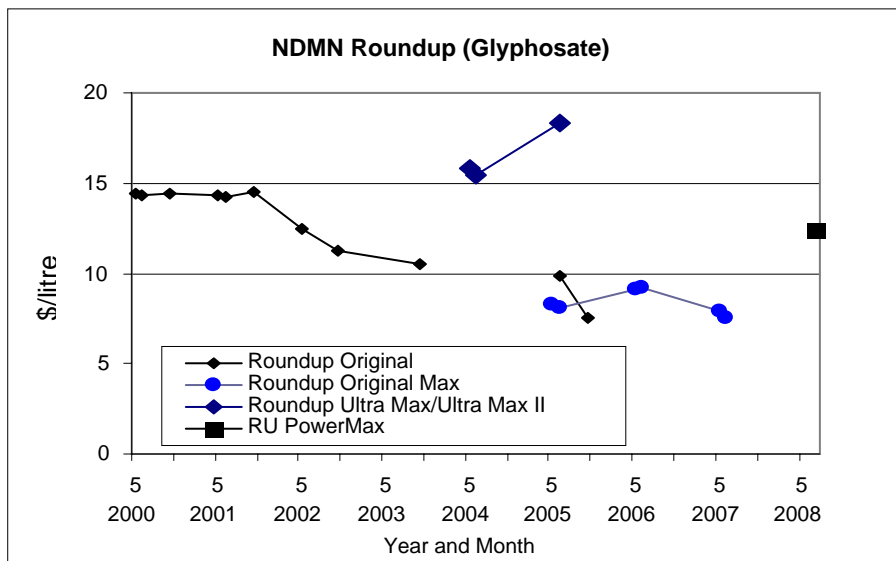
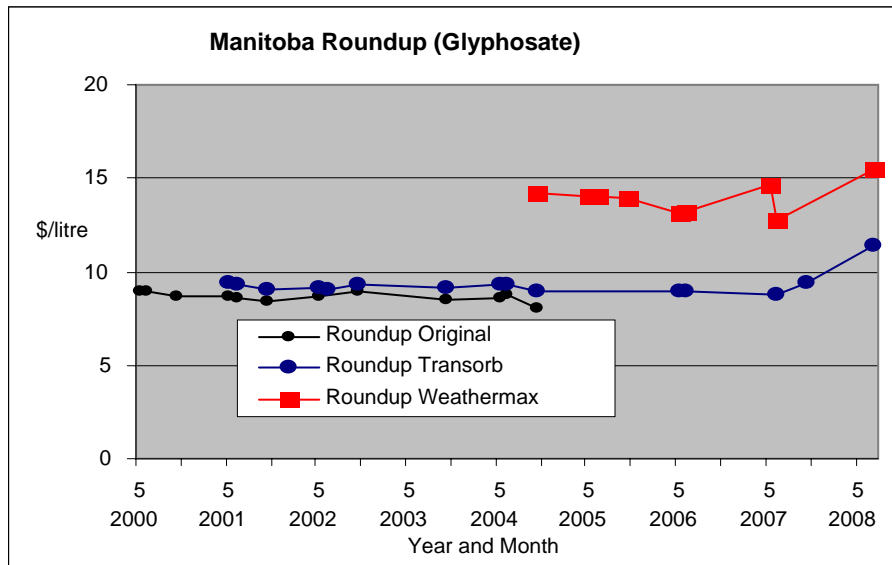
Manitoba

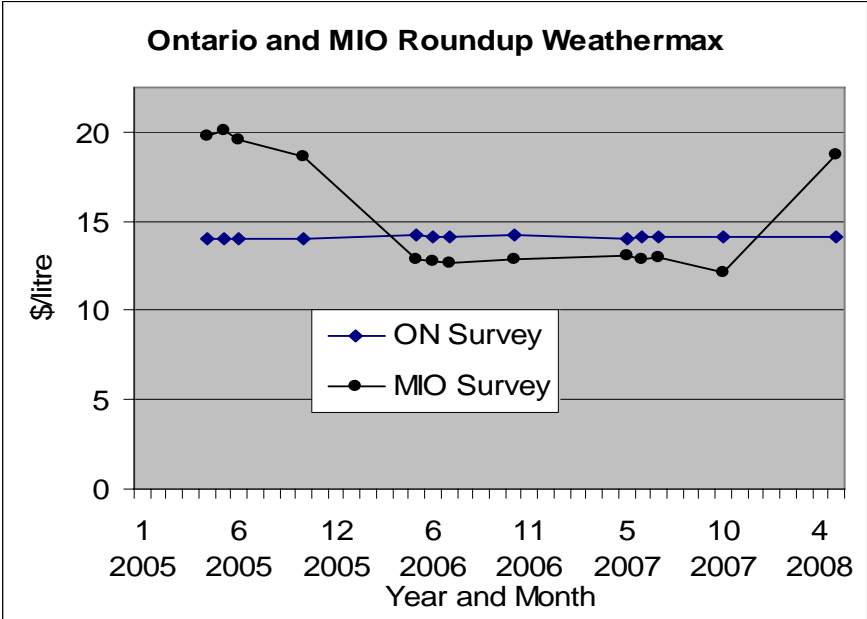




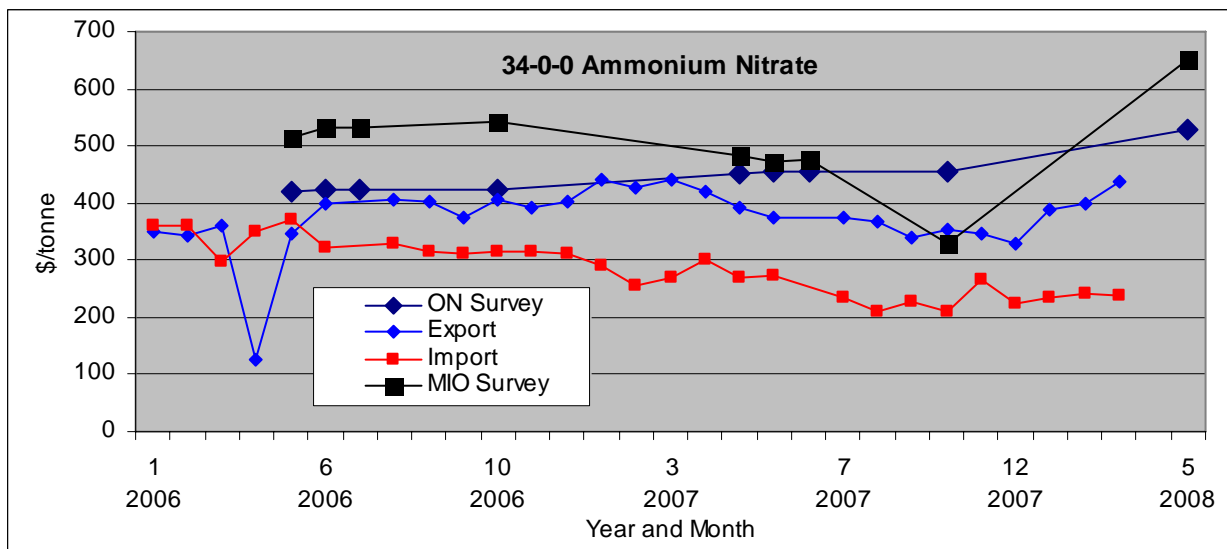
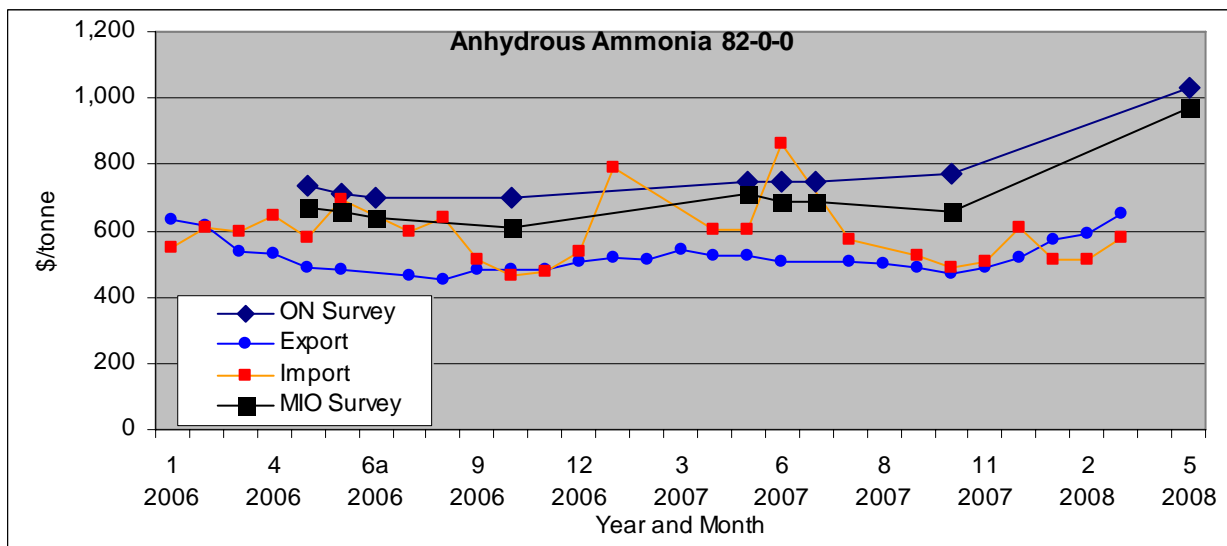
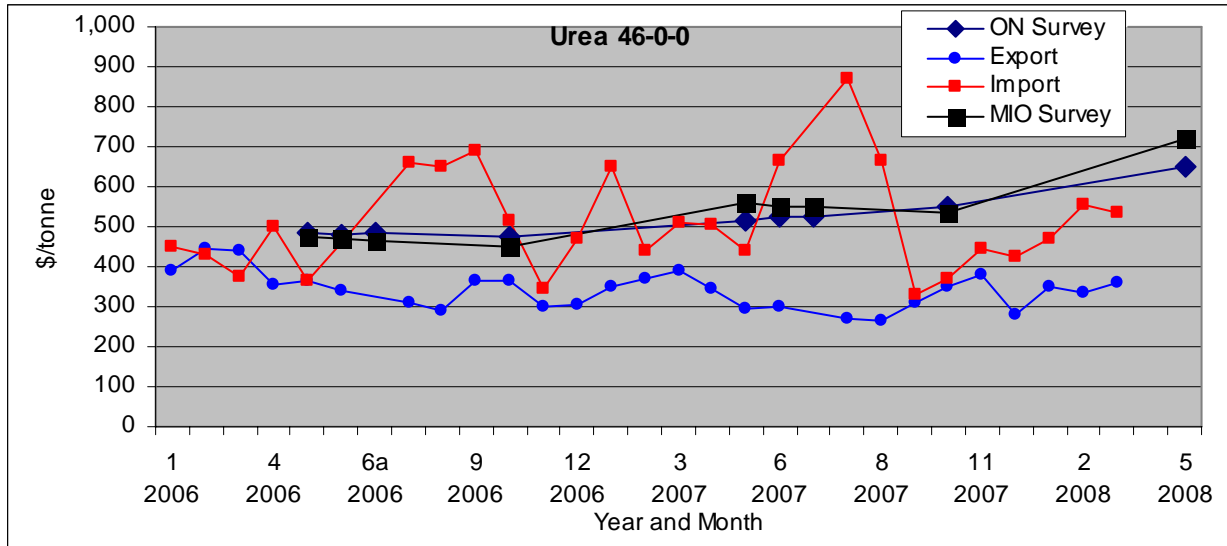


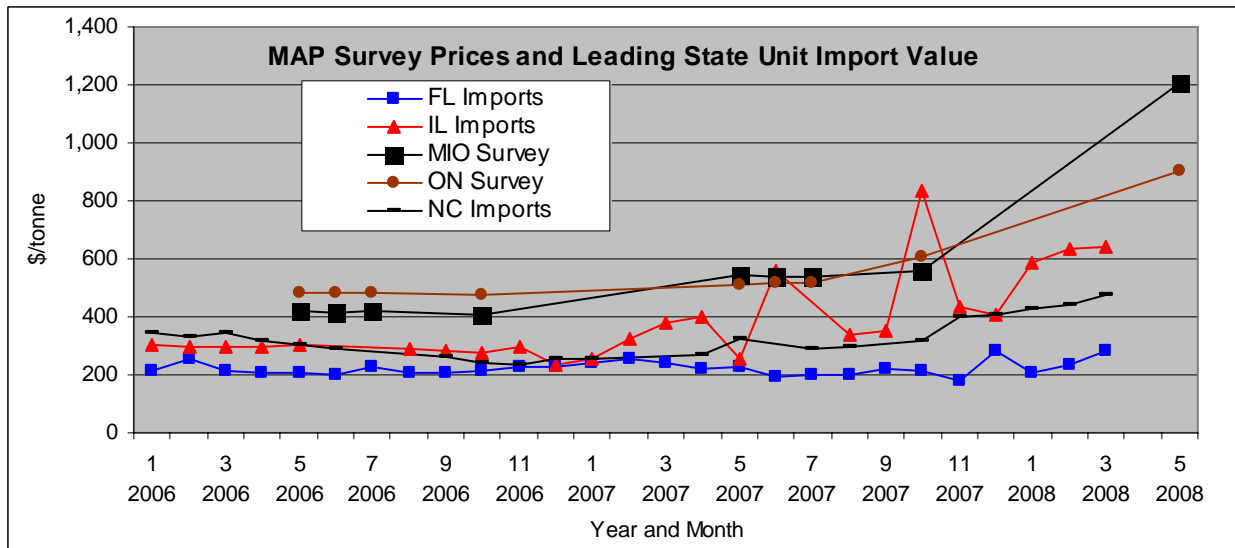
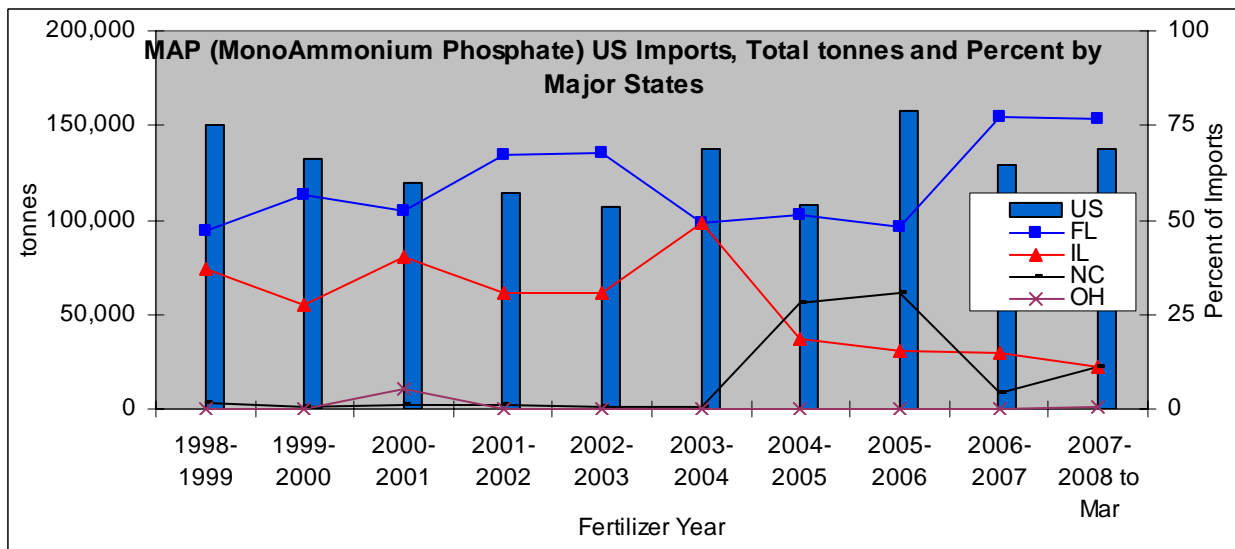
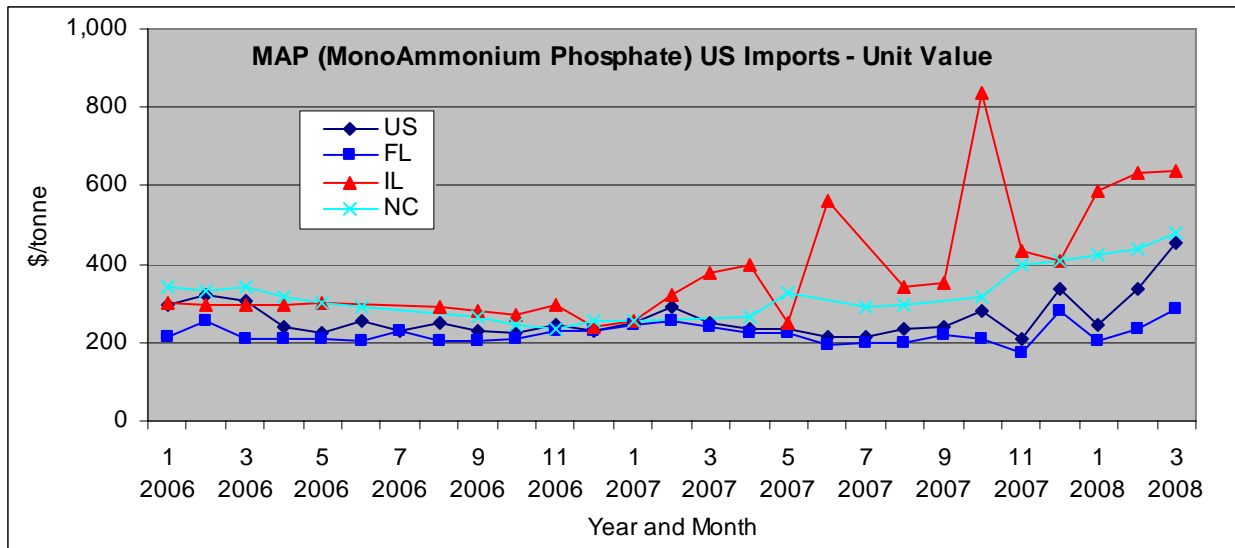
Glyphosate Herbicide in Manitoba, Ontario, and Bordering States

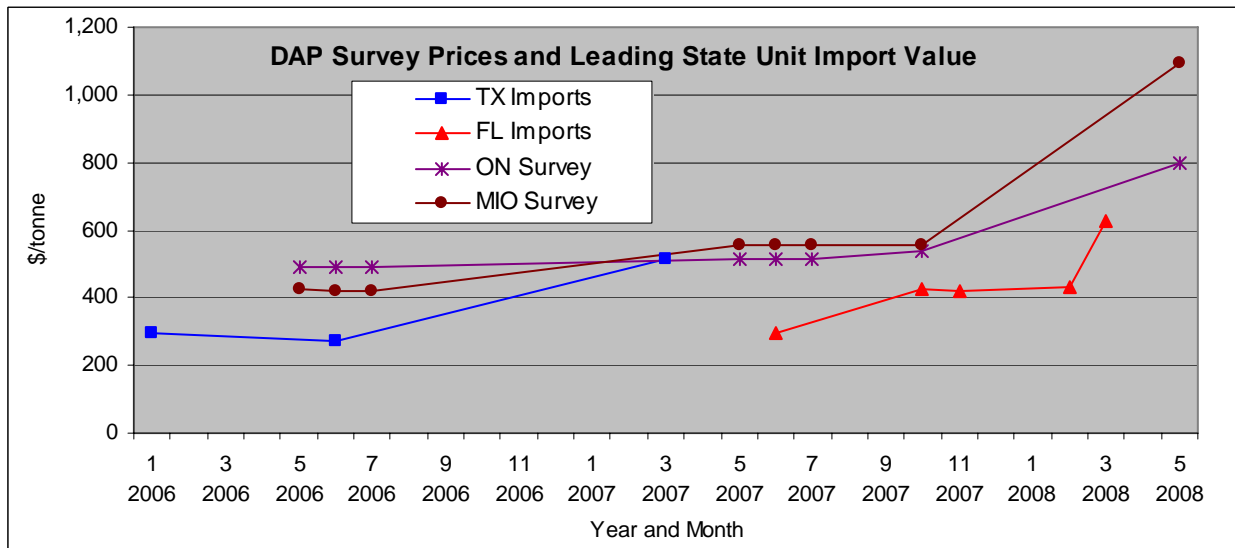
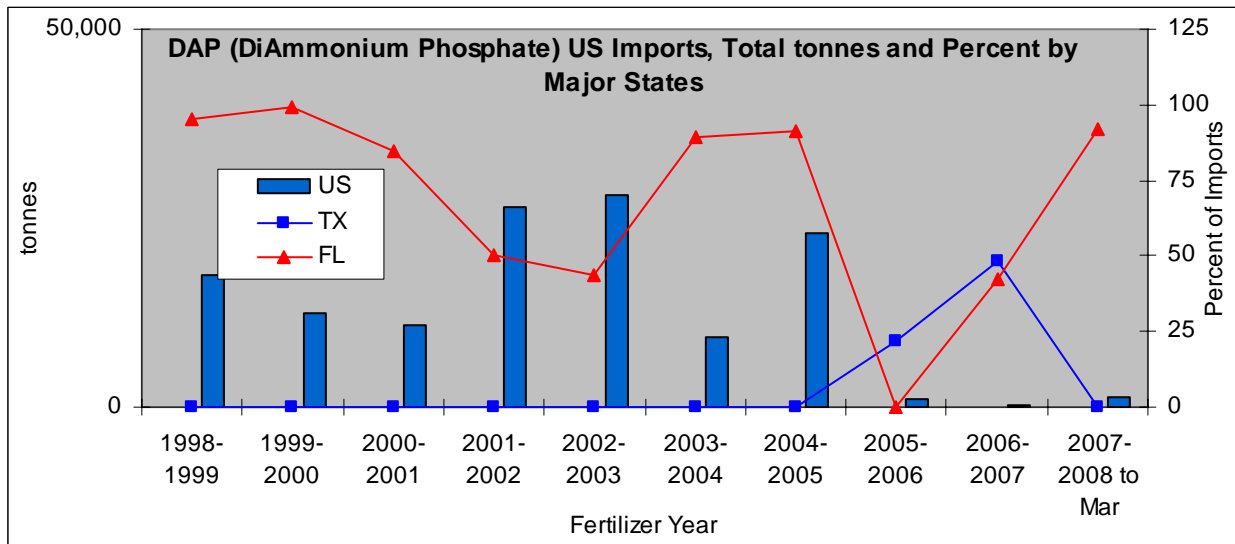
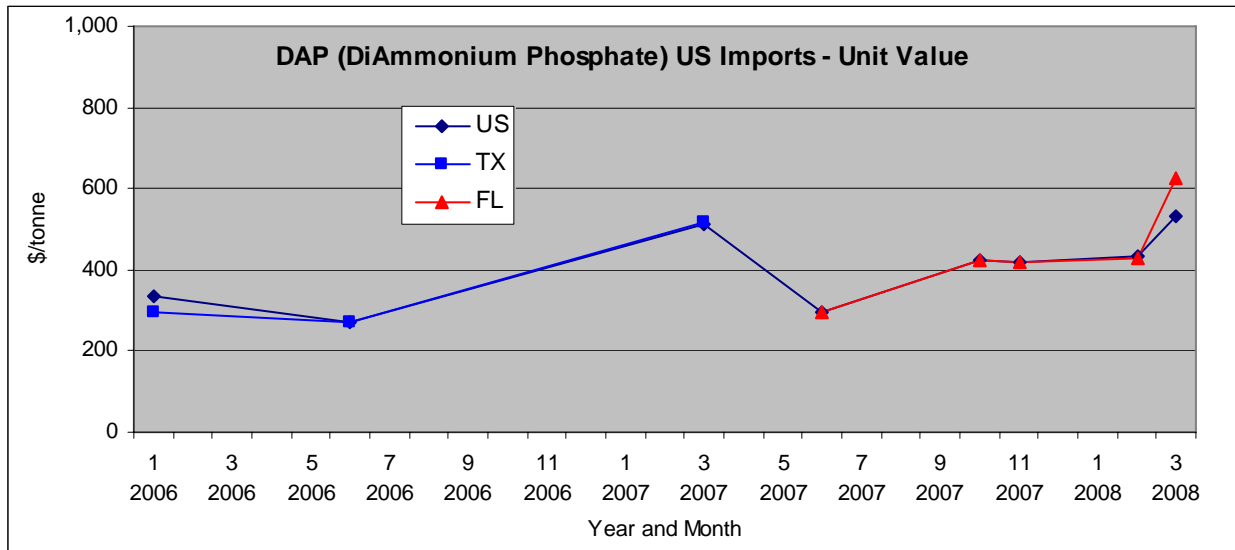


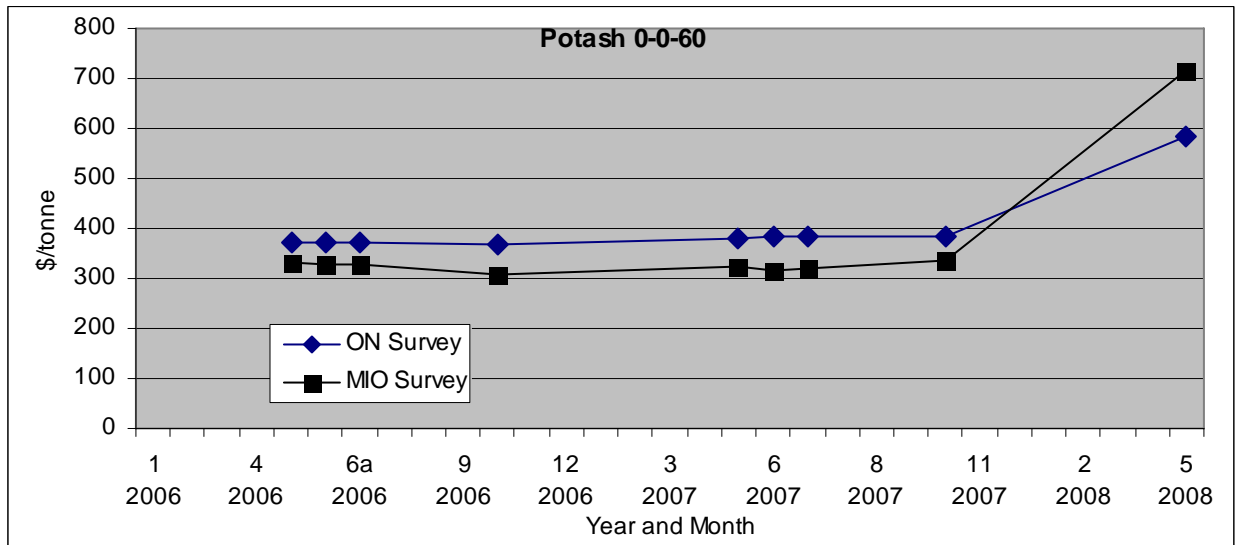
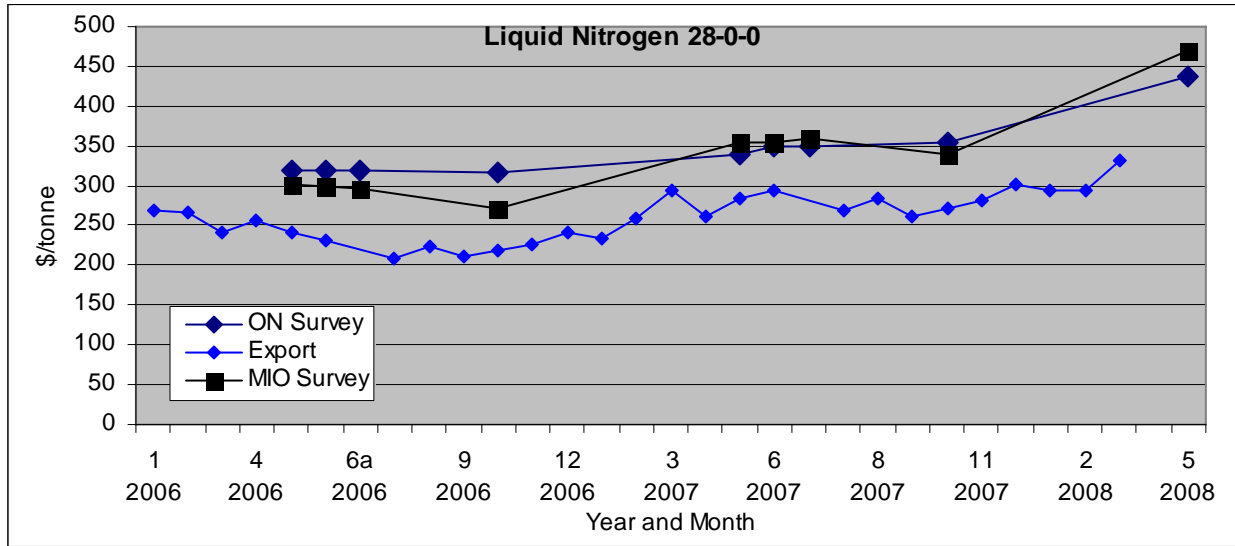


Ontario

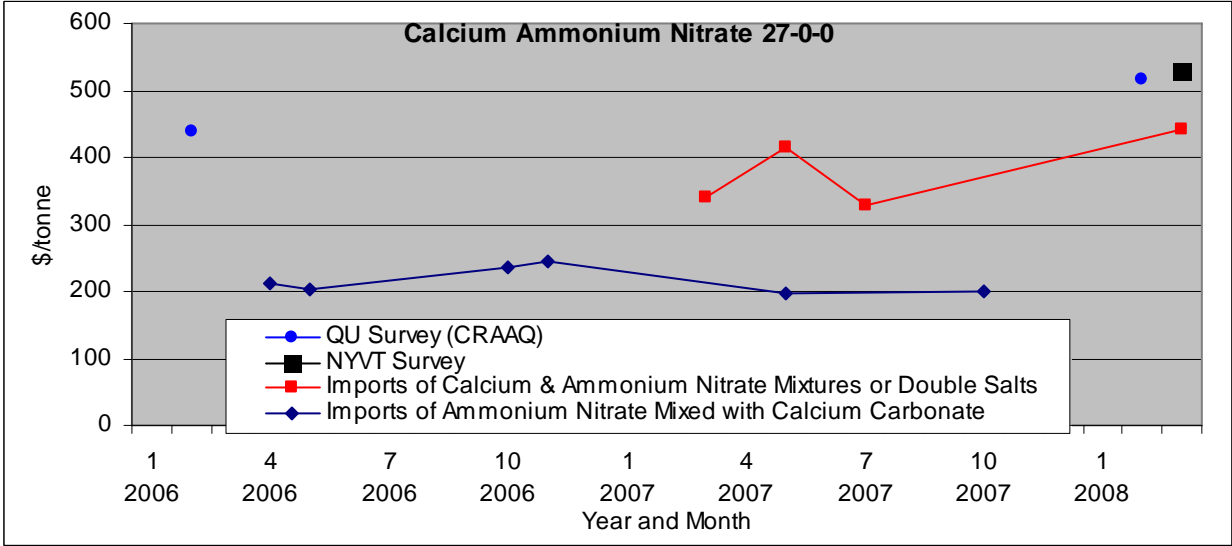
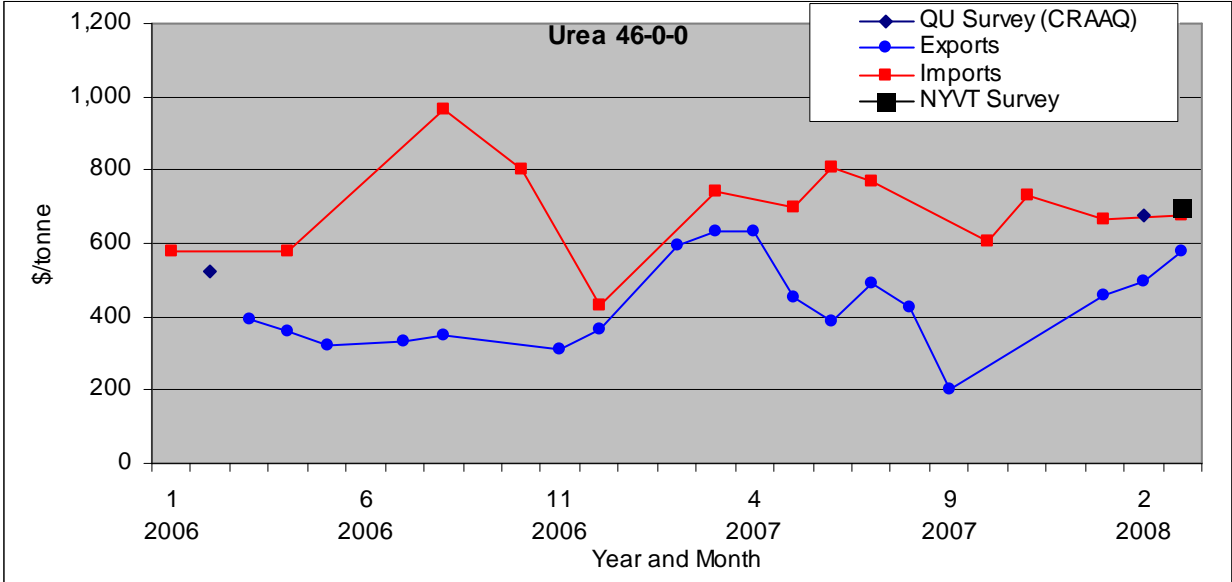


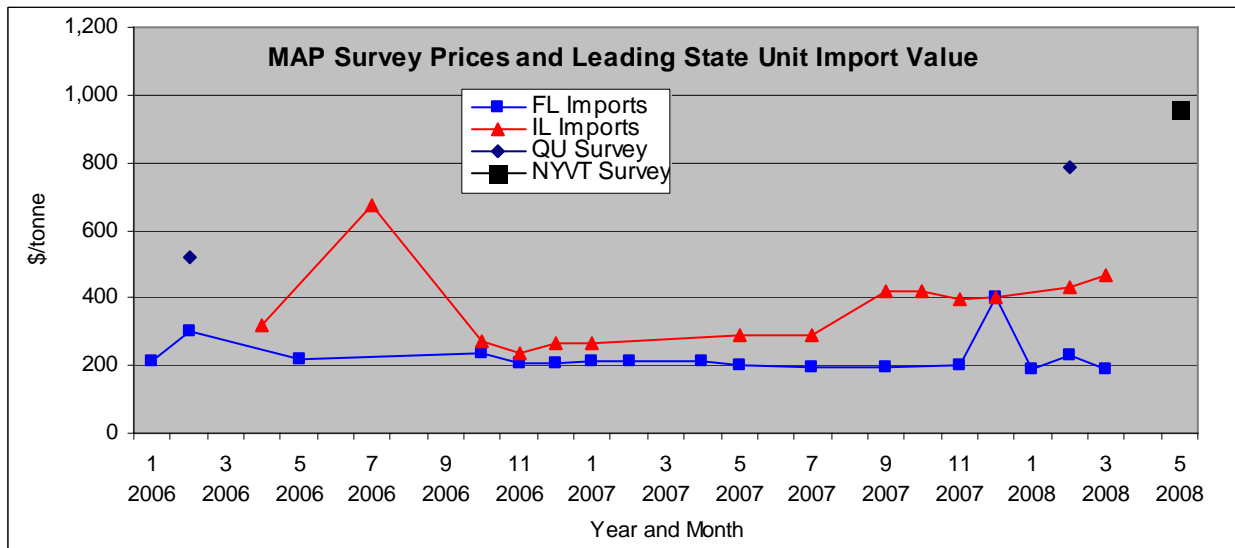
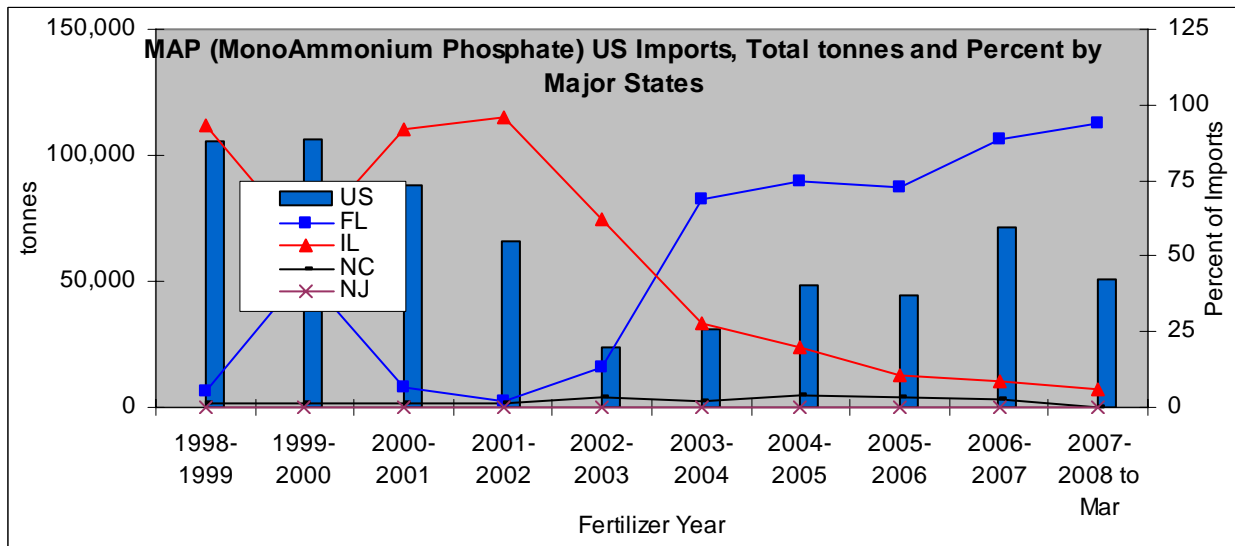
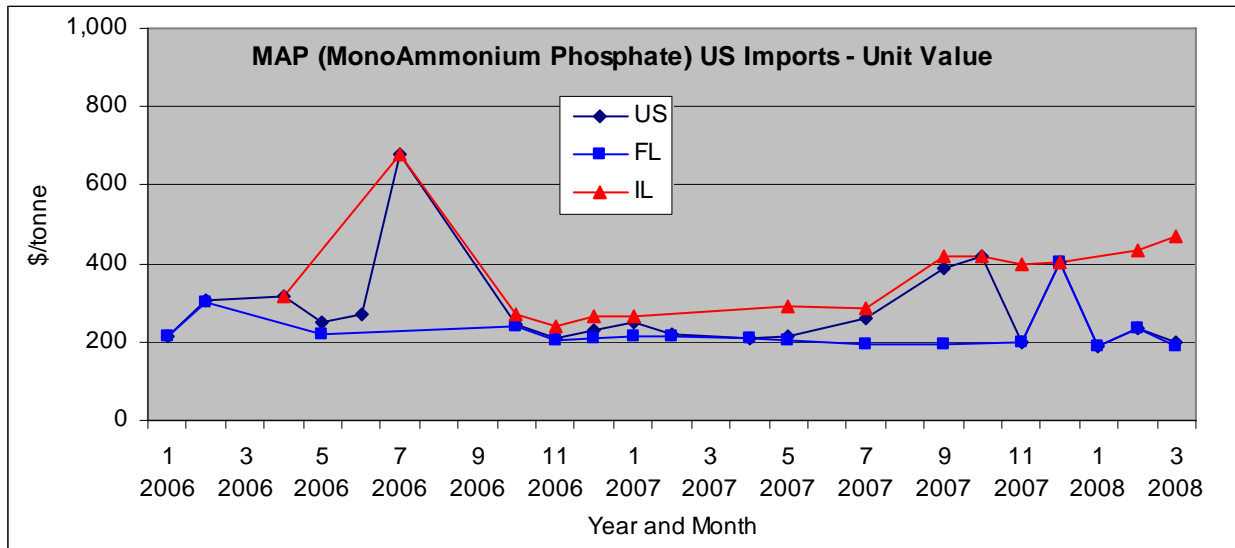


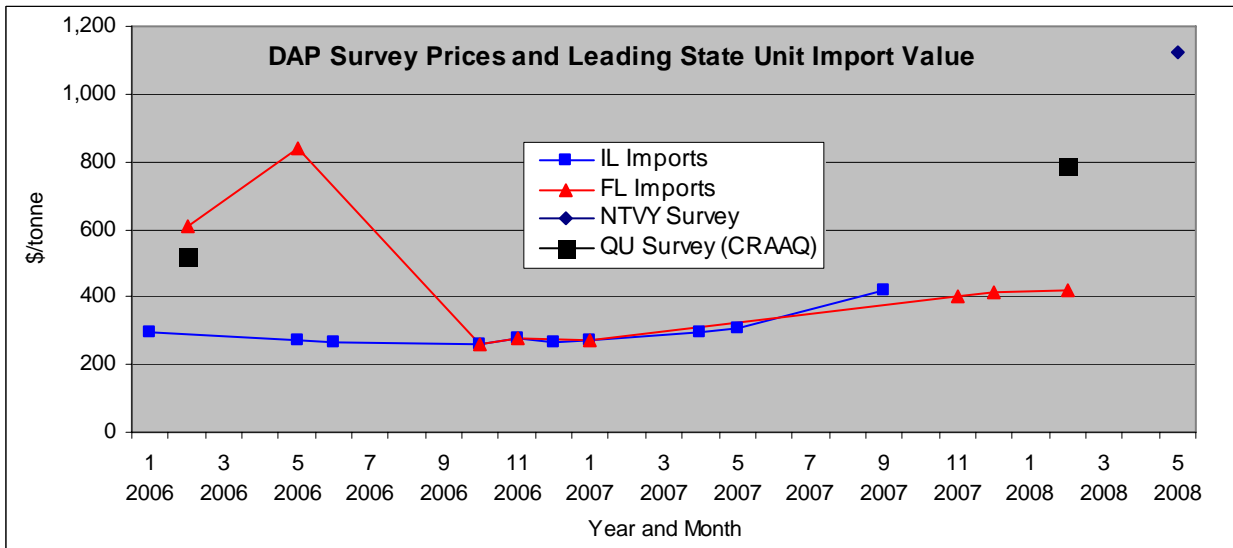
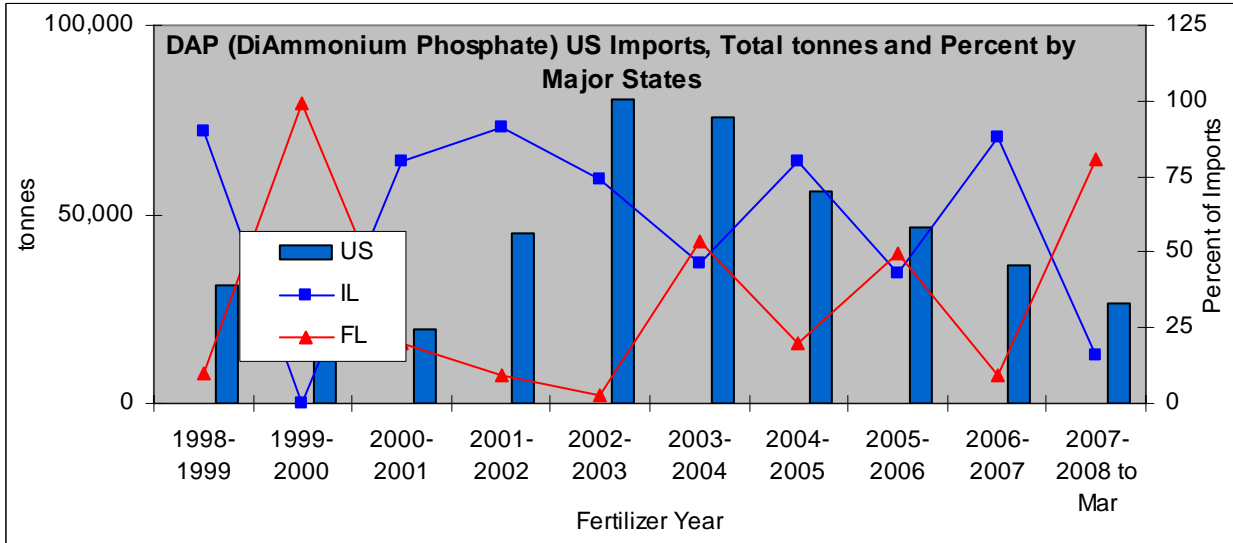
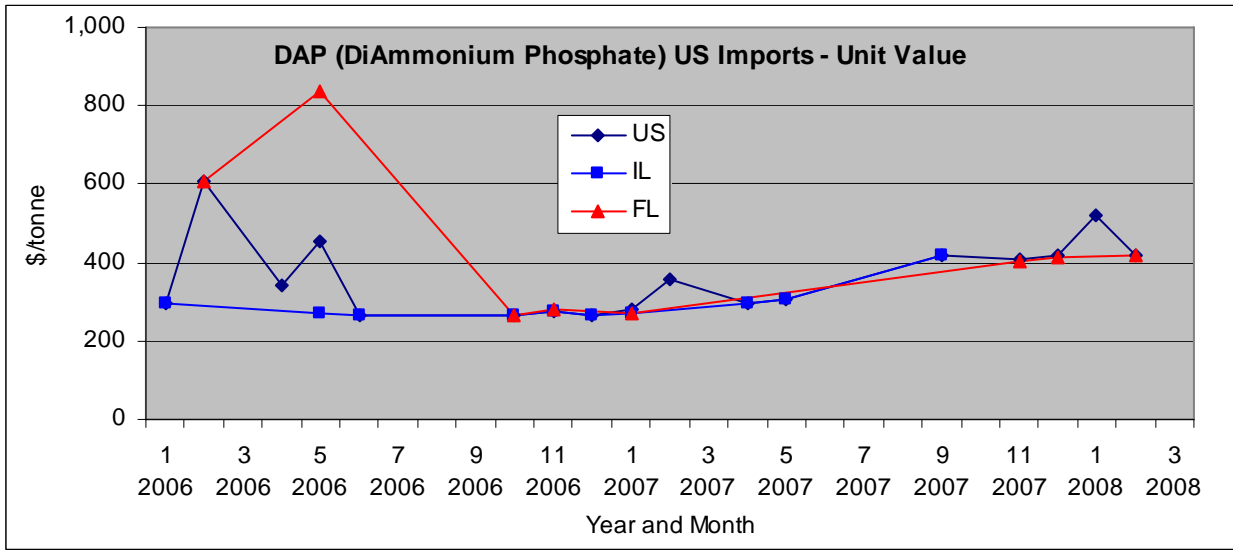




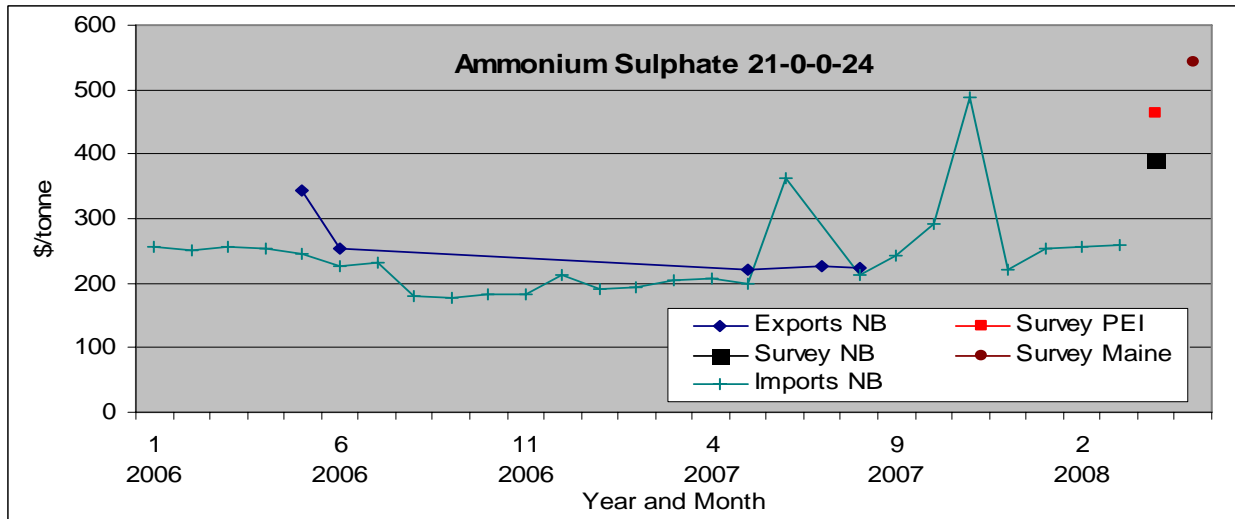
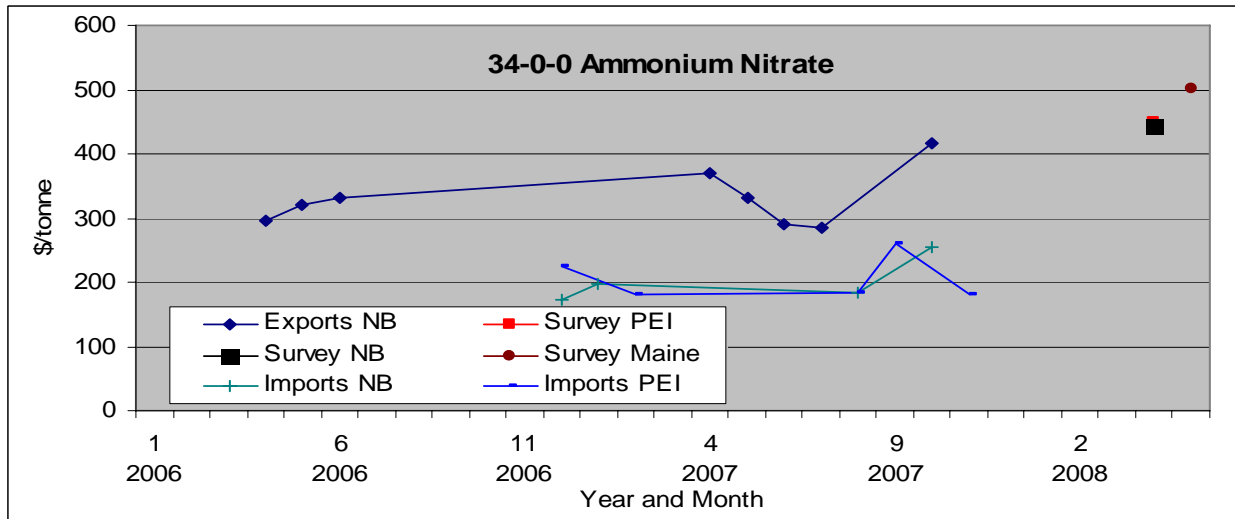
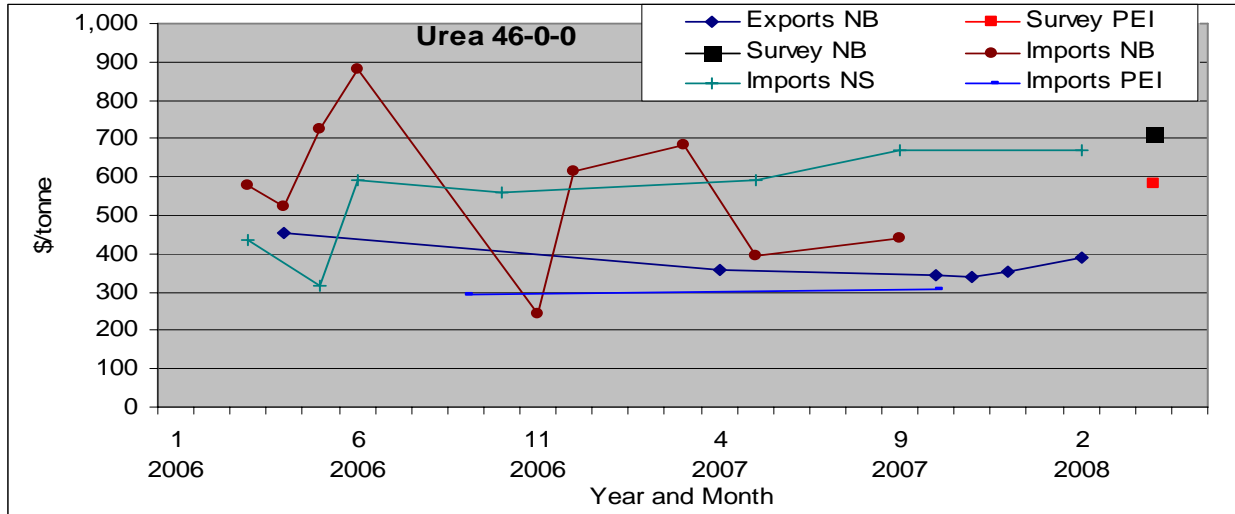
Quebec

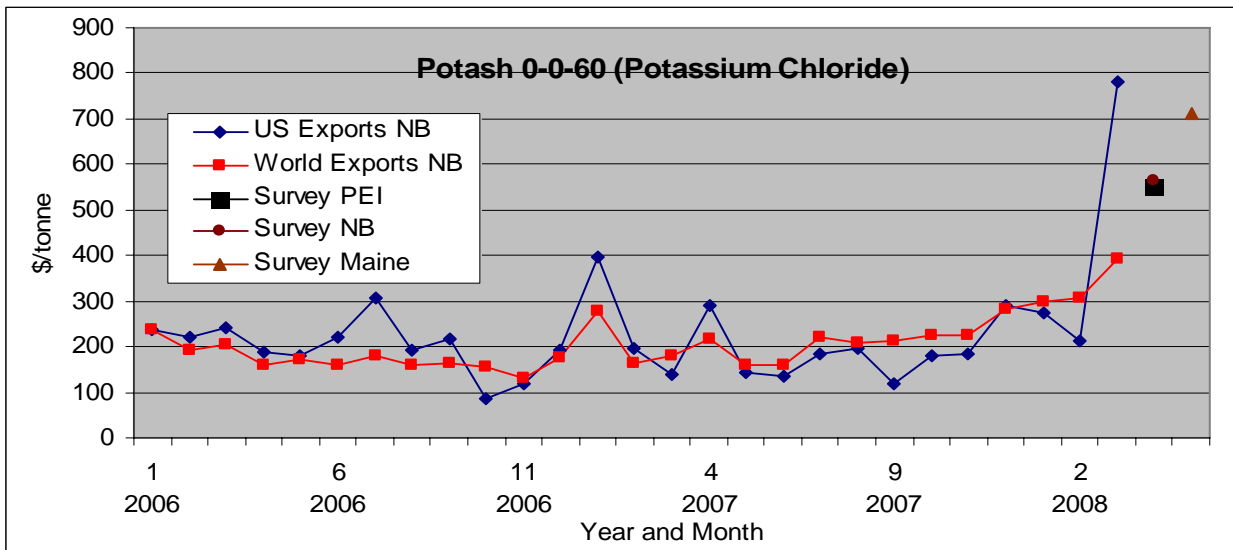
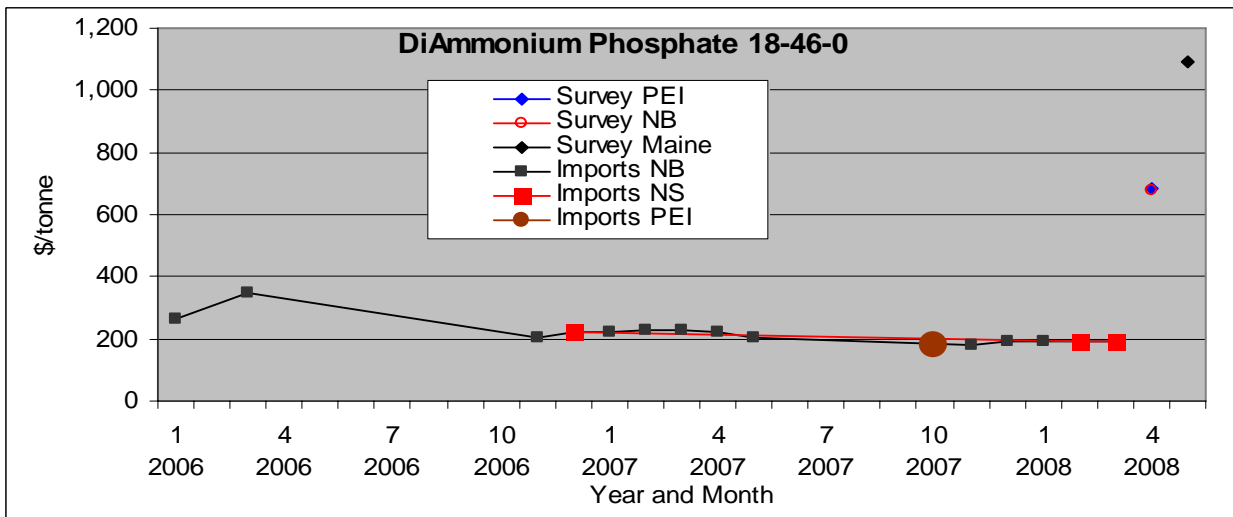
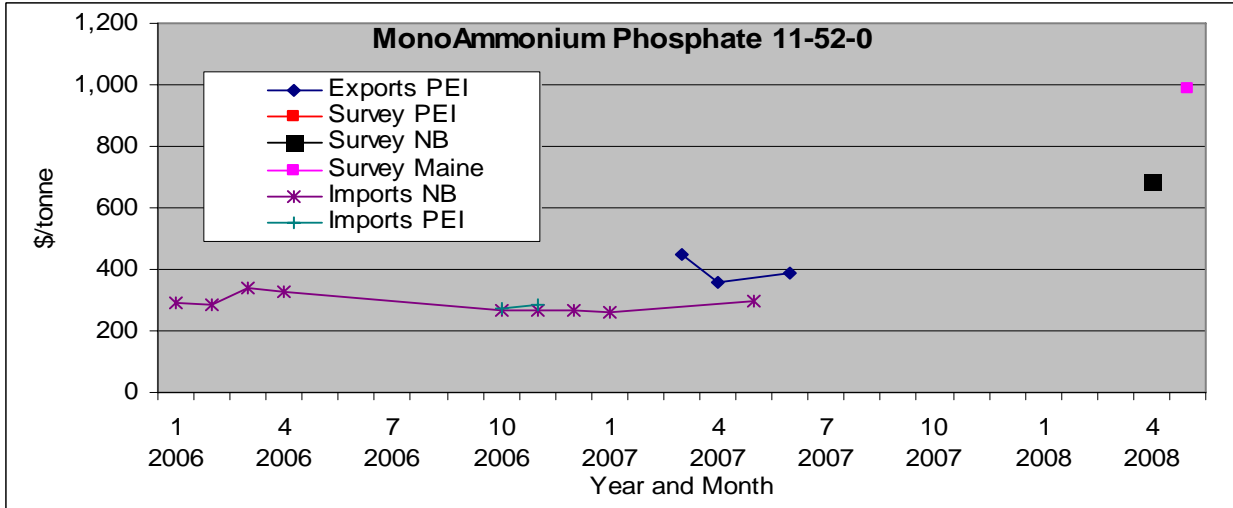




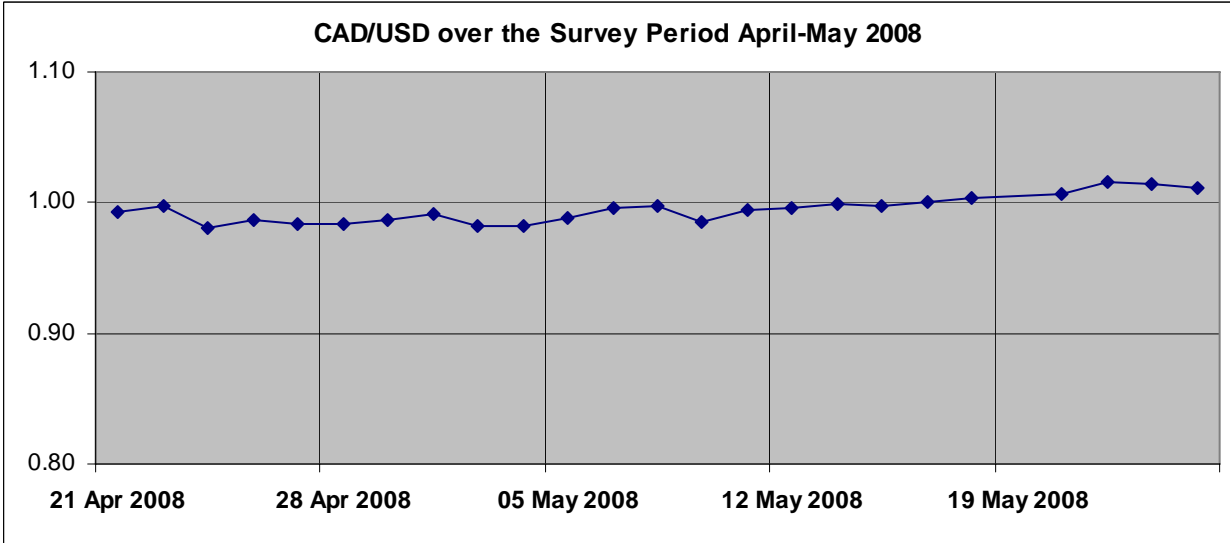
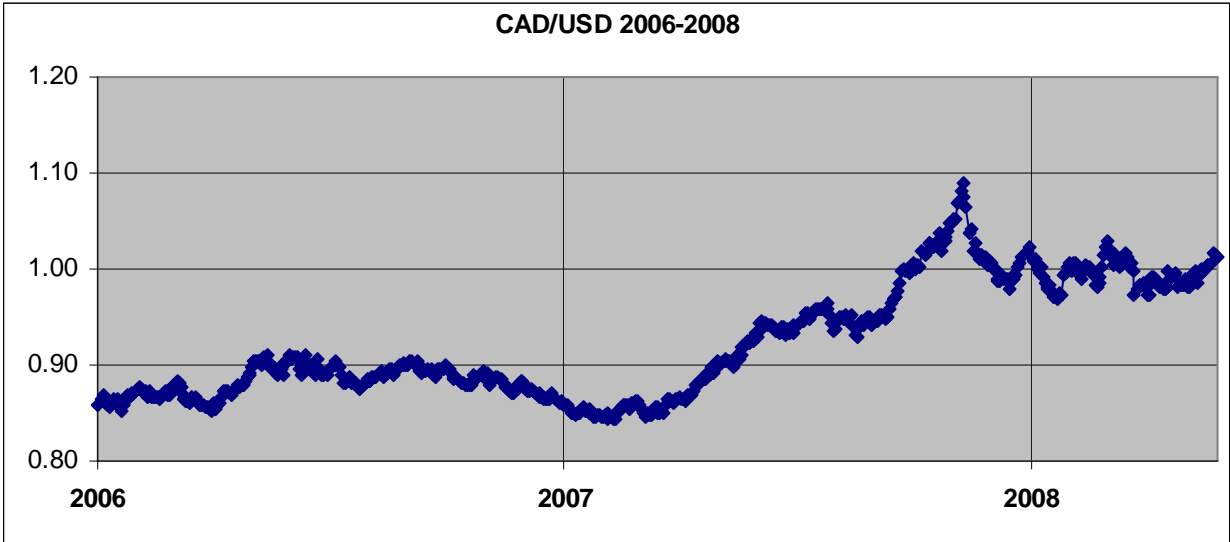


New Brunswick, Nova Scotia, and Prince Edward Island





Canada – United States Exchange Rate 2006-2008 (Noon Rate)



References

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Statistics Canada undated, "Trade Data Online (TDO). Explanatory Notes-Canada-U.S. Data Interchange," last accessed at http://www.ic.gc.ca/epic/site/tdo-dcd.nsf/en/h_00055e.html.

Harmonized System Codes and Descriptions of Fertilizer Products

Code	Description
2814100000	Anhydrous ammonia
2814200000	Ammonia in aqueous solution
3102100000	Urea, whether or not in aqueous solution in packages weighing more than 10kg
3102210000	Ammonium sulphate, in packages weighing more than 10kg
3102290000	Ammonium sulphate/nitrate mixtures or double salts in pack weighing >10kg
3102300000	Ammonium nitrate, whether or not in aqueous sol in pack weighing >10kg
3102400000	Ammonium nitrate mixed with cal carb or o non-fert subs in pack wt >10kg
3102500000	Sodium nitrate, in packages weighing more than 10 kg
3102600000	Calcium nitrate & ammonium nitrate mx or double salts in pack >10kg
3102700000	Calcium cyanamide in packages weighing more than 10kg
3102800000	Urea and ammonium nitrate mx in aqueous or ammoniacal sol in pack > 10kg
3102900000	Mineral or chem fertilizers, nitrogenous, nes, in pack weighing >10kg
3102900000	Mineral or chemical fertilizers, nitrogenous, nes, in pack weighing > 10 kg
3103100010	Superphosphates, normal & enri, cntg by wt <40% phosphorus pentoxide, pack >10 kg
3103100020	Superphosphates, concentrated cntg by wt>=40% phosphorus pentoxide, pack >10 kg
3103200000	Basic slag
3103900000	Mineral or chemical fertilizers, phosphatic, nes, in packages weighing > 10 kg
3103900000	Mineral or chemical fertilizers, phosphatic, nes, in packages weighing >10kg
3104200000	Potassium chloride, in packages weighing more than 10kg
3104300000	Potassium sulphate, in packages weighing more than 10kg
3104900010	Magnesium potassium sulphate, in packages weighing more than 10kg
3104900090	Mineral or chemical fertilizers, potassic, nes, in packages weighing > 10 kg
3104900090	Mineral or chemical fertilizers, potassic, nes, in packages weighing >10kg
3105100000	Fertilizers in tablets or similar forms or in packages not exceeding 10kg
3105200000	Fertilizers cntg nitrogen, phosphorus & potassium in packages weighing >10kg
3105300000	Diammonium phosphate, in packages weighing >10kg
3105400000	Monoammonium phosphates & mx thereof with diammonium phosphate, in pack >10kg

3105510000	Fertilizers containing nitrates and phosphates, nes, in pack weighing >10kg
3105590000	Fertilizers containing nitrogen and phosphorus, nes, in pack weighing >10kg
3105600000	Fertilizers containing phosphorus & potassium, in packages weighing >10kg
3105900000	Fertilizers, nes, in packages weighing >10 kg

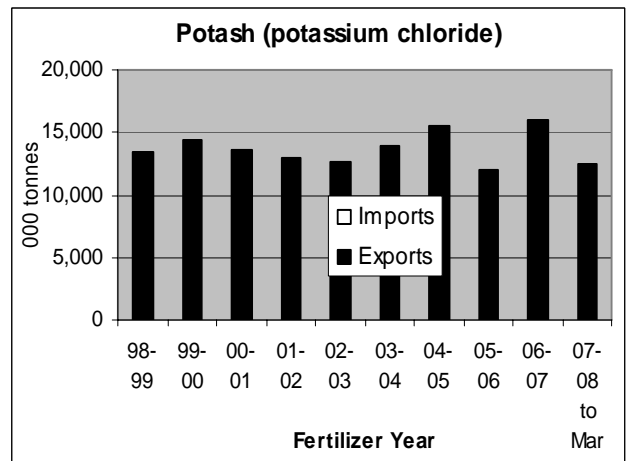
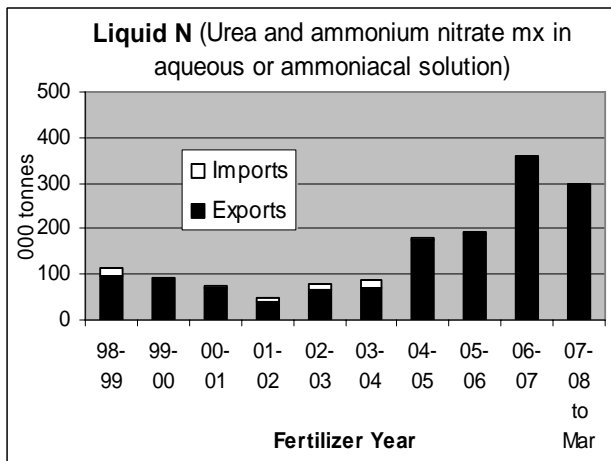
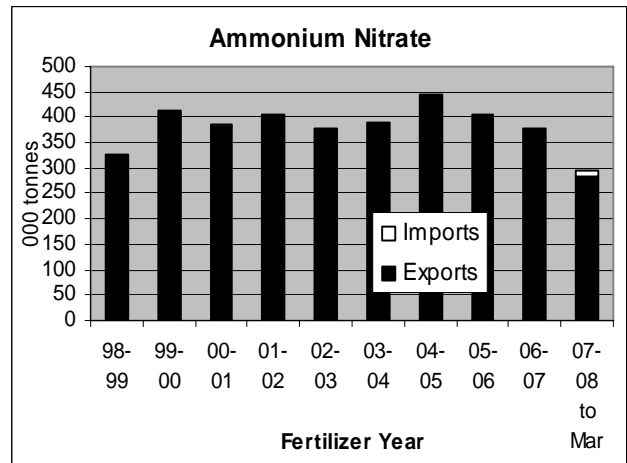
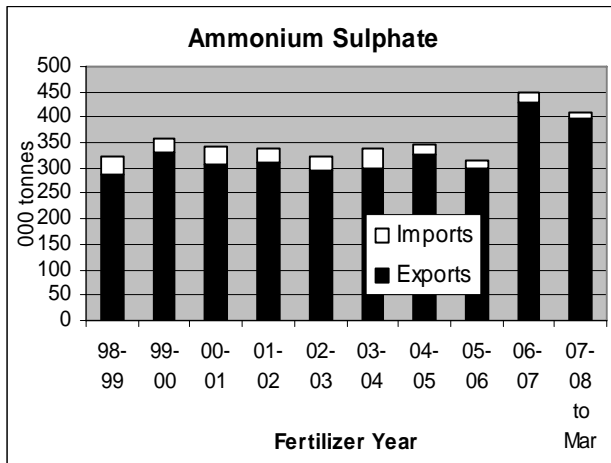
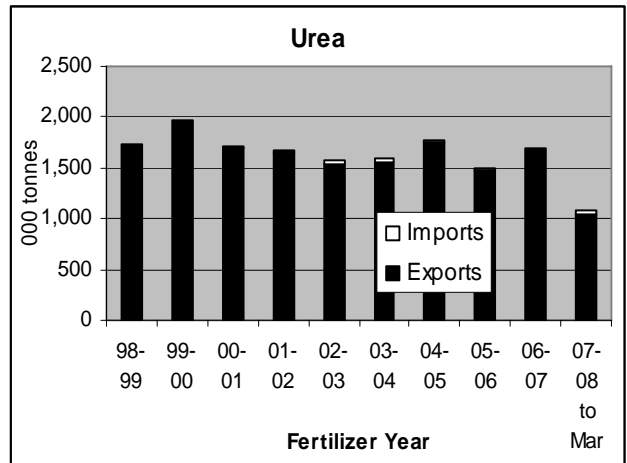
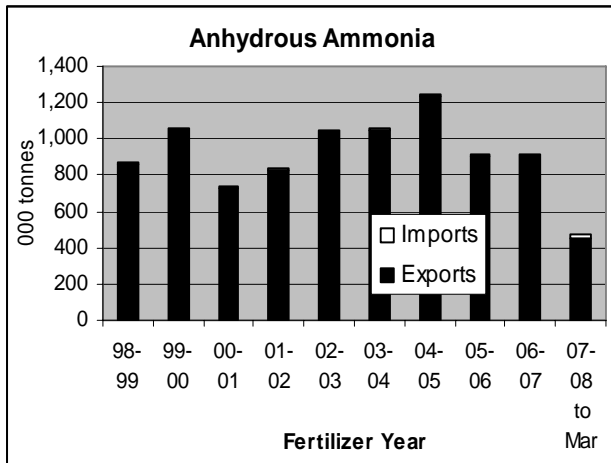
Sample Survey Form

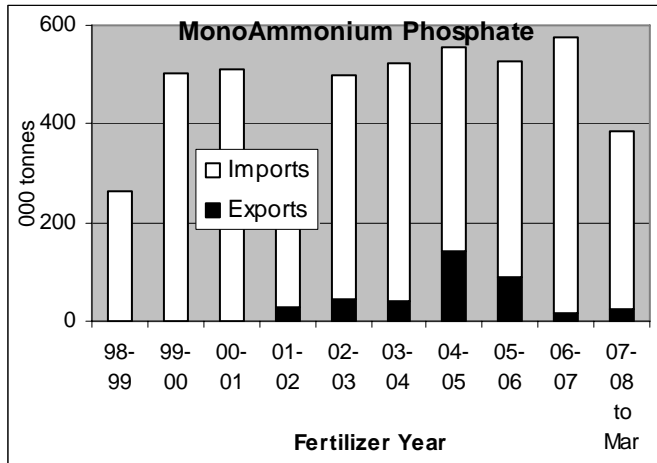
FERTILIZER. <i>Please provide a price quote for the following fertilizers. (The list may include products that you do not handle. Please quote only the major products that you carry).</i>		Price \$/tonne
46-0-0 Urea		
34-0-0 Ammonium Nitrate		
28-0-0 Nitrogen Solution (UAN Urea Ammonium Nitrate)		
27-0-0 Calcium Ammonium Nitrate		
21-0-0-24 Ammonium Sulphate		
10-34-0 Ammonium Phosphate		
18-46-0 DiAmmonium Phosphate		
11-52-0 MonoAmmonium Phosphate		
11-51-0 MonoAmmonium Phosphate		
0-46-0 Triple Super Phosphate		
0-0-60 Potash		
0-0-0-90 Sulfur		
15-0-0-20		
Other, please specify		
MIXED FERTILIZER. <i>Please provide a price quote for major blended product(s) that you supply. Please specify the components and their content in each major mix.</i>		Price \$/tonne
Mix 1:		
Mix 2:		
Mix 3:		
GLYPHOSATE, main or major glyphosate products. <i>Please provide a price quote for: 1) the major Roundup brand product(s); and 2) the major non-Roundup product(s) that you carry.</i>		
Product	Container**	\$Price**
Roundup Products		
Non-Roundup Products		

** Please clearly specify the size and type of Container , and Price unit e.g. \$/container, \$/litre etc.		
What are the TERMS of SALE for these products (fertilizer and glyphosate)?		
Typical or usual terms of sale:		
Terms of sale as they apply to prices quoted here:		

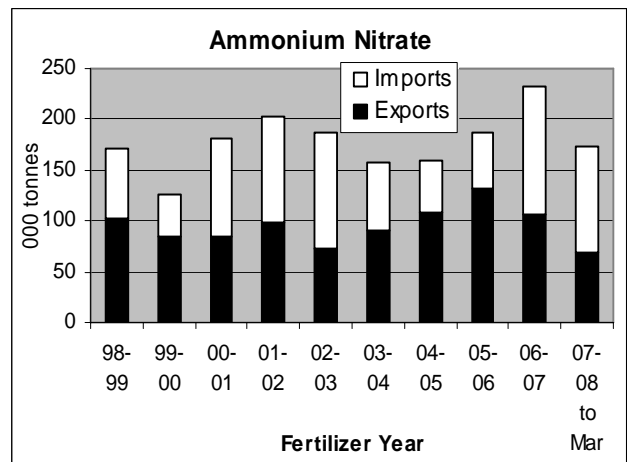
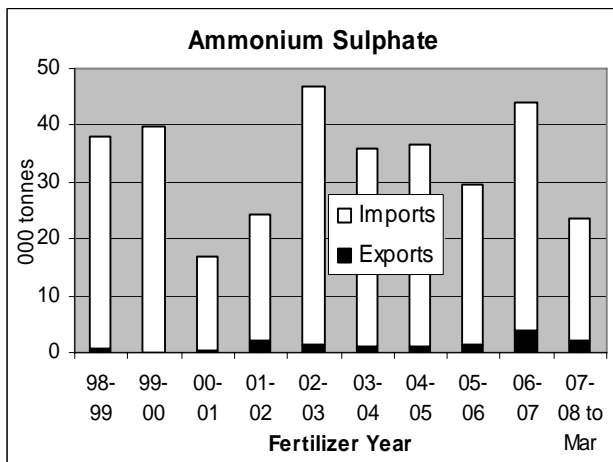
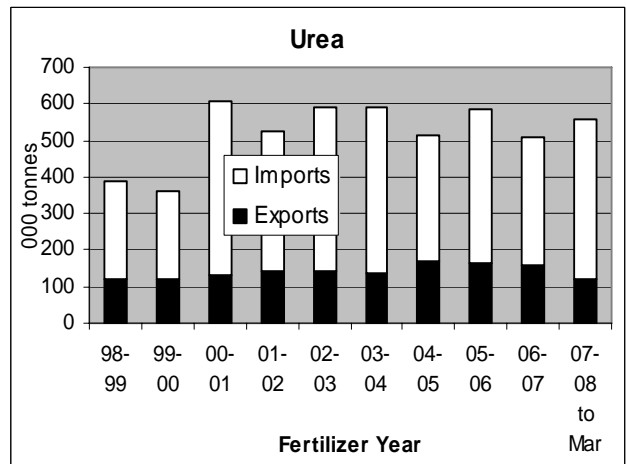
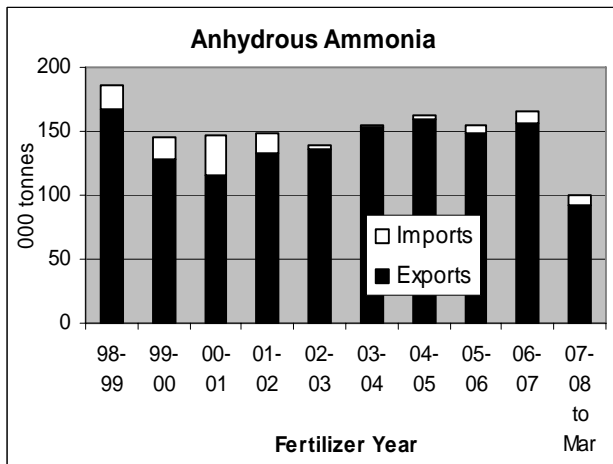
Exports and Imports of Major Fertilizer Products, 1998-2008

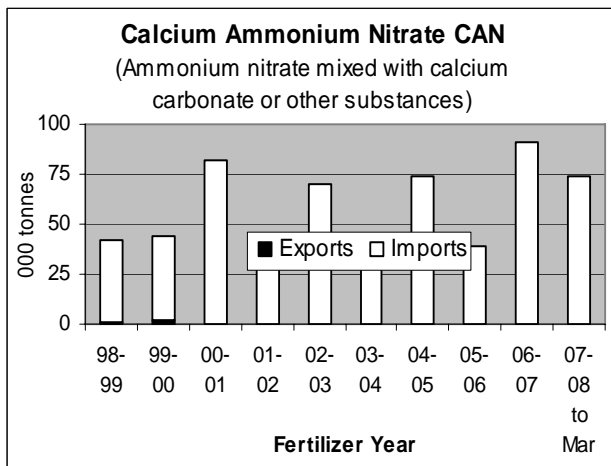
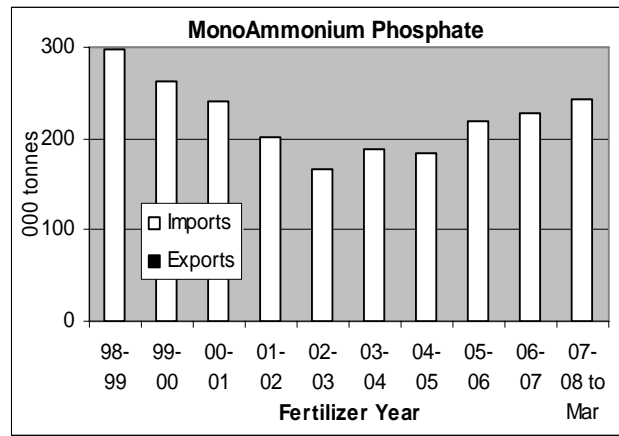
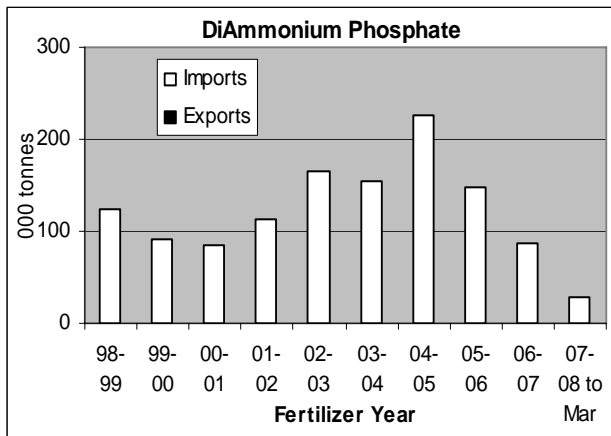
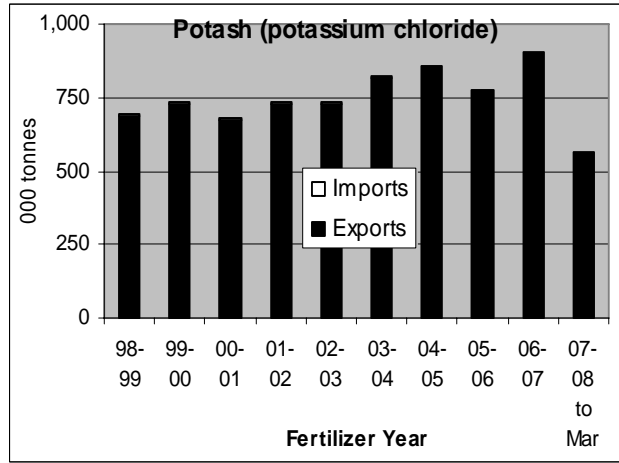
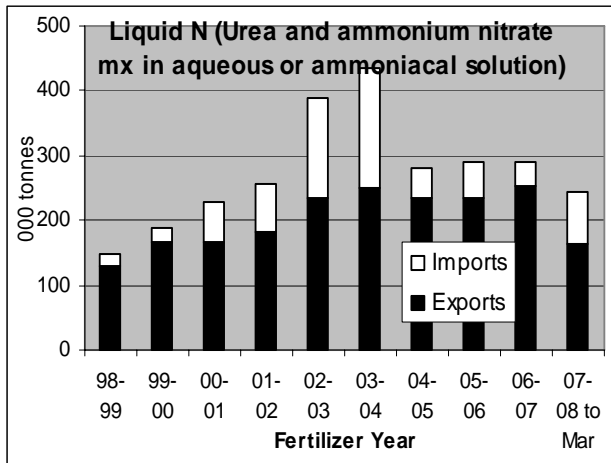
- Western Canada (and Northern Territories)



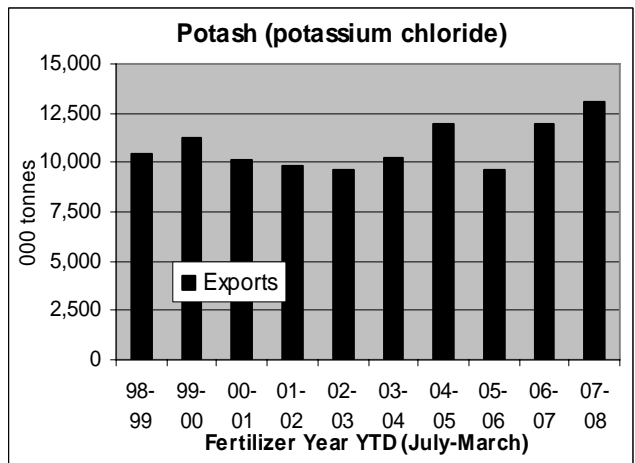
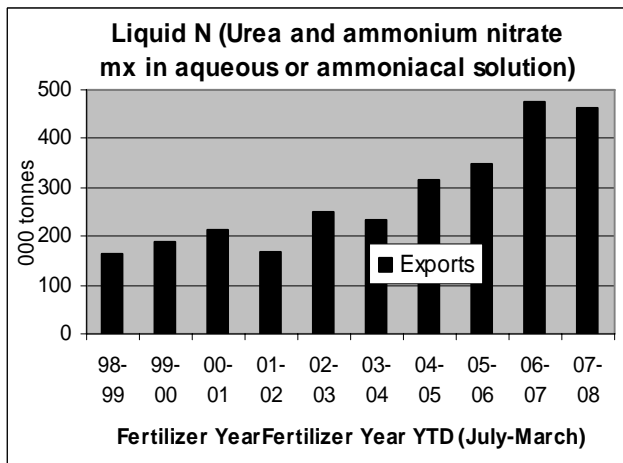
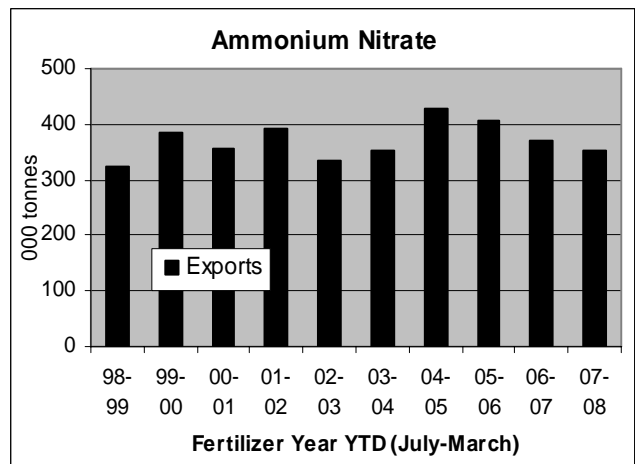
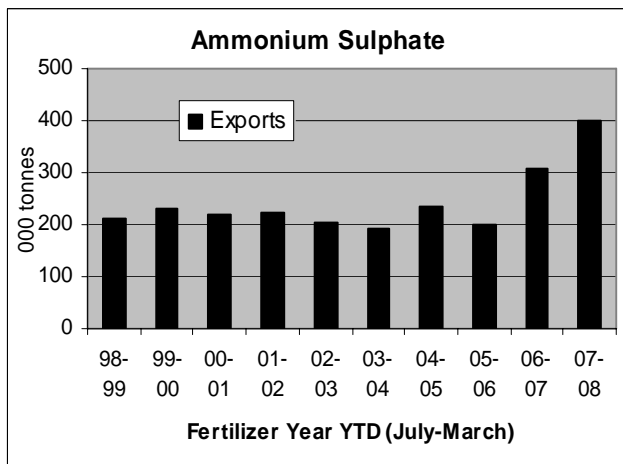
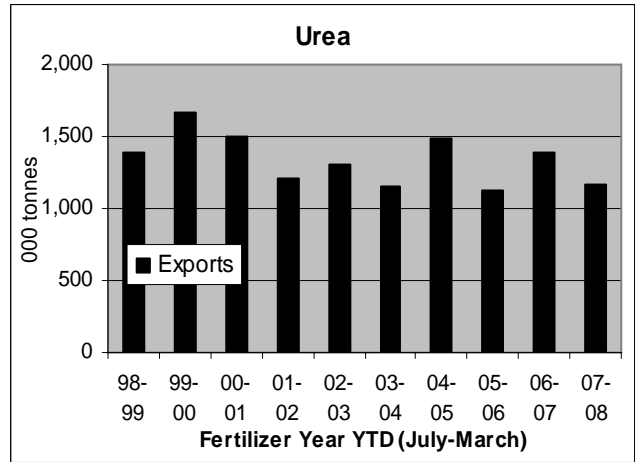
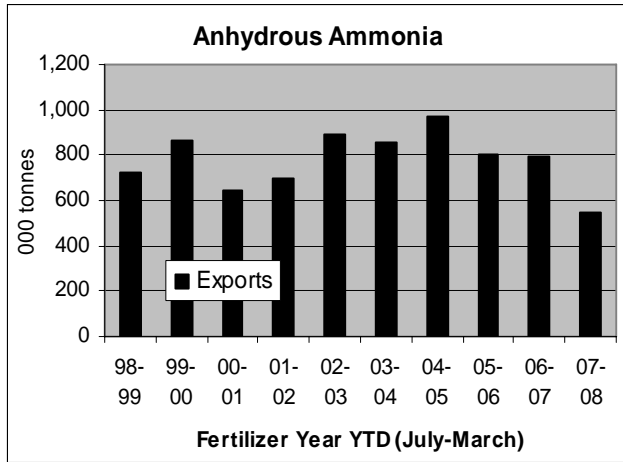


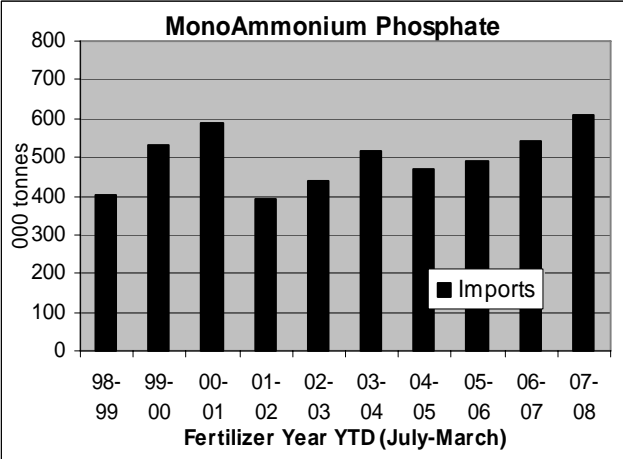
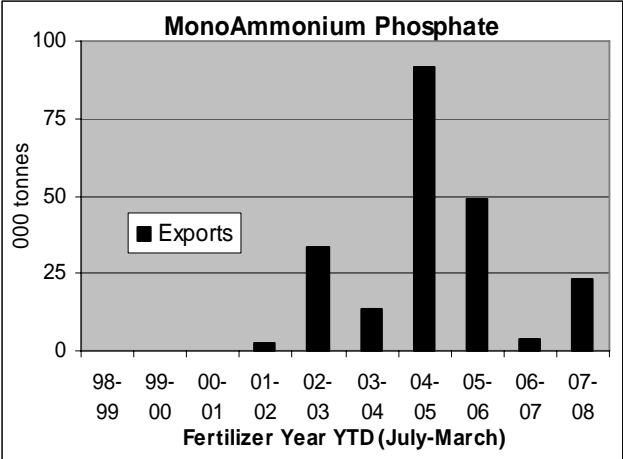
• Eastern Canada





Canadian Exports of Major Fertilizer Products Year-to-Date, July-to-March 1998-2008





REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant Minutes of Proceedings ([Meetings Nos. 12, 20 and 21](#)) is tabled.

Respectfully submitted,

James Bezan, M.P.
Chair

MINUTES OF PROCEEDINGS

A copy of the relevant Minutes of Proceedings ([Meetings Nos. 12, 20 and 21](#)) is tabled.

Respectfully submitted,

James Bezan, M.P.
Chair

