



Supply Chain Impact of Export Sales Data **Transparency in Canada's Grain Industry**

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Executive Summary

The objective of this study is to investigate how greater access to export sales data could empower farmers with insights for better decision-making, potentially influencing market dynamics, pricing structures and the overall competitiveness of Canadian grain in global markets.

Section 1 summarizes the literature on the effect of improved data transparency on agricultural producers and policy makers. The section also includes a comparative analysis of market data available to key competitors, the USA, the EU and Australia. It is observed that farmers and market participants in the U.S. and in the EU enjoy better and more timely export sales market intelligence than farmers and market participants in Canada, while data available in Australia via the Australian Bureau of Statistics is more similar to that in Canada. Additionally, the section provides a closer look at three selected case studies (one for each of the major regions under scrutiny) examining the value of data/market intelligence to market participants and investigates the follow-up policy actions.

Section 2 outlines the model used in this study to measure by how much access to better market information improves farmer grain marketing revenue. The analysis modeled farmer grain sales with and without data-driven decision-making to measure the difference between them. The results provide insights for individual farmers and demonstrate clear economic benefits from improved basis timing through better export data access. Scaling these findings to the provincial level reveal significant economic implications for Saskatchewan's agricultural sector and for the broader economy. Indeed, the results highlight the significant national economic opportunity presented by improving export sales reporting transparency, with benefits distributed across Canada's diverse agricultural landscape.

Section 3 outlines three applicable recommendations on reporting requirements for the grain industry designed to improve export transparency for all stakeholders along the value chain. These center around regular export sales reporting, weekly port loading export reports, and annual pipeline cost transparency data:

1

Export Sales Reporting Program

Daily data on the amount and location of large sales (50,000 mt or more) to a destination and large cumulative sales (100,000 mt or more over a reporting period) to a single destination for major grains: Wheat, durum, barley, oats, canola, soybeans, peas, corn, lentils. AAFC/ STC will also release a compiled weekly report of the amount and destination of all major Canadian agricultural goods on a weekly basis.

2

Weekly Port Export Loading Report

Regular publication of vessel loading data at major ports (Vancouver, Prince Rupert, Thunder Bay, and the St. Lawrence), specifying commodity and destination. This reinstates prior practices discontinued in 2012 and would provide market participants with critical near-term export flow signals.

3

Annual Pipeline Cost Transparency

Public release of average annual rail freight rates and handling costs (FOB and CIF) at both primary and terminal elevators. Aggregated reporting would preserve commercial confidentiality while equipping producers to assess bid competitiveness and pricing signals more effectively.

This study demonstrates that Canadian farmers operate at a significant information disadvantage compared to their U.S. and EU counterparts, limiting their ability to maximize returns in an increasingly competitive global marketplace. Our economic modeling reveals that closing this information gap through enhanced export data transparency could generate substantial revenue gains, up to \$22.7 million annually at the national level. The three recommendations, daily export sales reporting, weekly port loading reports, and annual pipeline cost data, offer a practical roadmap that aligns Canada with international best practices while requiring only modest implementation investment.

While existing authorities under the *Canada Grain Act* and *Canada Transportation Act* appear sufficient to support these recommendations, the ongoing Grain Act review presents an opportunity to codify export reporting requirements into law. Embedding these practices within the Act would ensure permanence, mandate clarity, and industry-wide compliance. Implementation can follow a light-touch approach, such as requiring standardized data uploads to company websites, or through a centralized repository managed by Statistics Canada or AAFC. In either model, private sector tools and platforms can play a key role in aggregating and delivering actionable insights to producers.

This study confirms that modernizing Canada's export reporting framework is both feasible and urgently needed. As international markets move toward greater transparency, Canada must keep pace to remain competitive. By closing the information gap, we can improve price discovery, boost marketing performance, and create a more agile and resilient supply chain. The tools, authority, and opportunity exist, now is the time to act.





Introduction

According to Statistics Canada, in 2023 the Canadian agri-food¹ system provided 1 in 9 of all jobs in Canada (over 11%), employing 2.3 mln people. The Canadian agri-food system generated \$150.0 bln, roughly 7% of Canada's GDP. In 2023, primary agriculture (including farming, nursery and greenhouse) contributed \$31.7 bln to the Canadian economy (1.4% of GDP) and employed 247,200 people.²

Agriculture and trade in agricultural goods are particularly important for the Prairie Provinces. Specifically in Saskatchewan, 4.1% of the total workforce is working in primary agriculture³ (as of March 2025), and Saskatchewan's agricultural industry accounted for \$5.1 bln, or 6.6% of the total provincial GDP⁴ (2023). These statistics only measure jobs and value directly related to the agriculture industry and so the statistics vastly underestimate the importance of the industry with reference to the direct economic activity generated by agriculture in the transportation, construction, and manufacturing sectors.

Markets for agricultural commodities are highly export dependent. Saskatchewan is the nation's second largest agri-food exporter, representing 20% of total Canadian agri-food exports, behind Ontario by \$6 billion. The top five Saskatchewan international market destinations include the U.S., China, Japan, Mexico and Algeria. Value-added processing and agriculture sectors are major components of Saskatchewan's Growth Plan goals, which include increasing crop production to 45 million tonnes, agriculture exports to \$20 billion, and value-added revenue to \$10 billion by 2030.⁵ Most of the value-added products are also export dependent.

Table 1 below illustrates the relative importance of agriculture trade as a percent of total trade for Canada, the Prairie Provinces, and Saskatchewan. The importance of agriculture trade in Canada, Saskatchewan and Alberta as percent of total merchandise trade reaches an impressive 11%, 63.1% and 26%, respectively, when excluding energy products.

¹ According to Statistics Canada, "agri-food" includes primary agriculture, food and beverage processors, food retailers and wholesalers, and food service providers

² <https://agriculture.canada.ca/en/sector/overview>, accessed April 2025

³ <https://dashboard.saskatchewan.ca/business-economy/employment-labour-market/employment#by-industry-tab>, accessed April 2025

⁴ <https://dashboard.saskatchewan.ca/business-economy/key-economic-indicators/gross-domestic-product#by-industry-tab>, accessed April 2025

⁵ <https://investsk.ca/2024/09/16/saskatchewan-surpasses-many-growth-plan-targets-ahead-of-schedule>, accessed April 2025

Table 1:*Canadian International Merchandise Trade by Province, 2020-2024*

Canadian international merchandise trade by province and country, and by product sections, custom-based, annual (x 1,000)

All Industries

Geography	2020	2021	2022	2023	2024
	Dollars	Dollars	Dollars	Dollars	Dollars
Canada	478,768,399.4	582,529,065.5	731,201,339.2	712,038,465.1	720,966,573.0
Saskatchewan	29,768,177.4	37,039,154.4	52,533,624.2	49,422,958.7	45,257,074.6
Manitoba	15,751,282.0	17,436,436.4	20,712,348.3	21,468,742.6	20,538,267.8
Alberta	91,997,950.4	138,070,541.4	204,989,933.3	174,823,423.3	182,723,170.0
SK+MB+AB	137,517,409.8	192,546,132.2	278,235,905.8	245,715,124.6	248,518,512.4

Farm, Fishing & Intermediate Products

Geography	2020		2021		2022		2023		2024		
	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Exl. Energy Products
Canada	45,489,638.7	9.5%	50,660,085.0	8.7%	56,794,361.8	7.8%	60,573,565.9	8.5%	57,927,591.8	8.0%	11.0%
Saskatchewan	16,293,451.1	54.7%	17,415,205.7	47.0%	18,380,595.7	35.0%	20,170,085.1	40.8%	18,432,796.8	40.7%	63.1%
Manitoba	4,733,498.6	5.1%	5,477,683.4	4.0%	6,536,076.1	3.2%	7,000,083.8	4.0%	6,480,773.4	3.5%	3.6%
Alberta	9,005,481.0	9.8%	8,888,554.6	6.4%	10,604,732.7	5.2%	11,932,464.5	6.8%	11,270,057.2	6.2%	26.0%
SK+MB+AB	30,032,430.7	14.0%	31,781,443.7	10.1%	35,521,404.5	7.7%	39,102,633.4	9.8%	36,223,842.9	8.8%	14.3%

Statistics Canada. Table 12-10-0173-01 Canadian international merchandise trade by province and country, and by product sections, customs-based, annual (x 1,000)

The significant export dependence of agricultural products means that farmers need to be able to interpret and respond to market signals transmitted back from international markets to help make production decisions. For example, farmers must prioritize in demand crops in their rotation and make decisions regarding the timing of sales to maximize their returns. Yet major information gaps have been identified in availability of relevant data, data timeliness, and accessibility for crop producers.⁶ The most direct indication of demand is obtained via sales data, but the lack of current export sales data was noted as a major shortcoming in the Canadian system. This not only makes marketing decisions by farmers less efficient, but it also creates informational asymmetries within the supply chain.

This study aims to quantify the effect of better access to export sales data, and how it could empower farmers with insights for better decision-making, potentially influencing market dynamics, pricing structures, and the overall competitiveness of Canadian grain in global markets.

⁶ <https://saskwheat.ca/market-transparency-report/>, accessed April 2025

Study Design Schematic

This study assesses the current data landscape, estimates the effects of the lack of sales data in Canada, and uses the results of the analysis to make recommendations.

The following schematic is designed to help navigate the document.



I. The Current Data Landscape

Literature Review

- Introduction
- Impact of Improved Transparency in Emerging Economies
- Data Transparency Established Economies

Current Data Gaps Canada

- Cropping Decisions
- Marketing Decisions
- Gaps

Comparative Analysis: Data Available to Competitors

- USA
- EU
- Australia

Specific Case Study Details and Impact

- USA - South America
- EU
- Australia



II. Measuring the Impact of Increased Data Transparency in Canada

The Model

- Conceptual Framework
- Basis Timing
- Mathematical Approach

Results

- Farm Impact Simulation
- Impact Regression
- Event Study
- Composite Results

Stakeholder Analyses

- Farmers
- Grain Co's
- Exporters, Processors
- Transportation Suppliers
- Policy Makers



III. Policy Recommendations & Opportunities

Recommendations

- Export Sales Data
- Port Load Data
- Pipeline Cost Data

Opportunities

- Trade Environment
- Grain Act Renewal



I. The Current Data Landscape

1.1 Review of the Literature on Data Transparency

Literature Review

- Introduction
- Impact of Improved Transparency in Emerging Economies
- Data Transparency Established Economies

Empirical research consistently demonstrates that enhanced market transparency improves price discovery, reduces volatility, and strengthens farmers' economic position in agricultural markets. Studies examining USDA export reporting systems have documented measurable price responses and efficiency gains following public information releases, with evidence that these benefits extend across the entire agricultural value chain.

1.1.1 Introduction

Efficient resource allocation depends on a functioning market where buyers can signal their demands and producers can respond efficiently. This communication often occurs through prices. Ideal information flow would result in all market participants having complete, accurate, and instantaneous information of all relevant market events. Greater transparency, thus, enables producers and consumers to adjust to market signals and allocate resources more efficiently.

Data market transparency and the concept of informed decision-making has been of increasing concern to economists, market analysts, and to regulators. The following is a summary of some of the most important findings in the literature on the topic of data transparency. Special attention was taken to review the literature on some of Canada's main competitors in agricultural export markets. However, the majority of the literature is on the data provided by the USDA, due to data availability and the breadth and depth of reports and academic articles available.

1.1.2 The Impact of Improved Data Transparency in Emerging Economies

Numerous studies have investigated the beneficial impact of improved market information on agricultural producers and policy makers in emerging economies. Market information has been shown to help farmers plan their crop mix, improve the timing of their sales, improve the location of their sales⁷, increase market power in collusive buying environments⁸, and improve the prices that farmers receive for their commodities^{9,10}, and attain higher incomes from farm activities¹¹. Readily available market information allows farmers to sell their commodities for better prices, decrease transportation costs, and increase farm income.

1.1.3 Data Transparency in Established Economies

Every transaction involves elements of market power. In the case of agricultural markets, the size and limited number of buyers usually allows them to hold more market power versus the producer. This outsized power gives rise to information asymmetries that put the producer at a disadvantage. Higher levels of information (less information asymmetry) can strengthen the bargaining power of the producer. Fairness in such marketplaces can be improved by ensuring that timely and accurate (current) market data is available.

⁷ Aker, J. C. (2010). Information from markets near and far: Mobile phones and agricultural markets in Niger. *American Economic Journal: Applied Economics*, 2(3), 46-59.

⁸ Goyal, A. (2010). Information, direct access to farmers, and rural market performance in central India. *American Economic Journal: Applied Economics*, 2(3), 22-45.

⁹ Svensson, J., & Yanagizawa, D. (2009). Getting prices right: the impact of the market information service in Uganda. *Journal of the European Economic Association*, 7(2-3), 435-445.

¹⁰ Courtois, P., & Subervie, J. (2015). Farmer bargaining power and market information services. *American Journal of Agricultural Economics*, 97(3), 953-977.

¹¹ Okello, D. O., Feleke, S., Gathungu, E., Owuor, G., & Ayuya, O. I. (2020). Effect of ICT tools attributes in accessing technical, market and financial information among youth dairy agripreneurs in Tanzania. *Cogent Food & Agriculture*, 6(1), 1817287.

Current (up to date) market information best meets the immediate needs of farmers and traders as opposed to historical (dated) information, which can be used for planning and policy¹². Specifically, export data (which usually occurs well after the date the commodity was sold) shows the demand story after it has already materialized, while actual sales data provides information of the demand as it is realized¹³. The benefits of market information, and the relatively small bargaining power of farmers, also gives rise to the argument that market data is a public good and should be thought of in a similar fashion as roads and clean water.

In the US, the United States Department of Agriculture (USDA) is a prominent source of agricultural information and data world-wide. The USDA maintains 29 agencies with nearly 100,000 employees in more than 4,500 locations both in the US and abroad. The USDA has developed sophisticated data information services including export sales reporting programs.

The U.S. congress mandated the Export Sales Reporting Program in response to the Great Grain Robbery of 1972¹⁴. The Export Sales Reporting Program, administered by the USDA Foreign Agricultural Service (FAS), was implemented to reduce the information asymmetry between exporters and producers¹⁵. The program acts as an early alert system of the impact that U.S. export sales may have on the market. It is also used to gauge the strength and origin of demand for U.S. grains as well as the competitiveness of U.S. grains in foreign markets. The U.S. Export Sales Reports are scrutinized and monitored by traders across the world and contribute significantly to global trade transparency. We also note that many of the same companies who oppose sales reporting in Canada routinely report on major export sales in the United States.

Literature on the impact and value of additional market data (usually provided by government agencies like the USDA) can be categorized into three groups: the actionability of the data, evidence the market is responding to the data, and the informational value of the data.

1.1.4 Public data releases need to be actionable to be valuable for farmers

The true value of export reporting lies in how farmers can use this information to make better business decisions^{16,17}. Research shows that improved market information helps producers make smarter grain storage and marketing choices that directly impact their bottom line. For example, studies examining USDA data programs found that farmers with access to comprehensive market information can adjust their grain sales timing to capture stronger prices. A recent review paper consolidated numerous studies on market reactions to government reports. The consensus shows that USDA reports, including Export Sales Reports, have a significant effect on markets¹⁸. While some studies found mixed results about the Export Sales Report's impact, this may be due to different sampling periods and methodologies used across studies. Researchers have also studied how USDA reports affect market uncertainty by examining implied volatility in options markets. The majority of these studies conclude that implied volatility was lower after the release of USDA reports, indicating the reports helped reduce uncertainty in the market. Beyond commodity markets, data transparency impacts other aspects of the agricultural supply chain.

Research has established that public data releases in agriculture yield substantial benefits for farmers while simultaneously enhancing supply chain efficiency. Examples include improved price discovery¹⁹, and reduced storage and holding costs^{20,21}. This positive impact is well-illustrated by the work of Abbott et al. (2016), who employed Monte Carlo simulations through the inventory adjustment model to quantify the value provided by the USDA World Agricultural Supply and Demand Estimates (WASDE) reports. Their comprehensive analysis, which utilized a rational expectations storage model, revealed that these reports deliver significant value to corn market participants. The findings underscore how transparent, publicly available agricultural data serves as a crucial resource that enables more informed decision-making throughout the agricultural sector.

¹² Shepard, A. (1997). Market Information Services: Theory and Practice. Sourced from <https://openknowledge.fao.org/server/api/core/bitstreams/80f10d95-4edf-4e88-93a4-28c6c8541714/content>

¹³ <https://saskwheat.ca/april-2021-data-requirements-for-a-transparent-market/>, accessed May 2025

¹⁴ The Great Grain Robbery is a term used to describe a 1972 event when the Soviet Union bought large volumes of US grain at very low prices. While a large crop and federal subsidies in the US made US grain relatively cheap, a major crop failure in the Soviet Union was leading to food shortages. This led the Soviet Union to buy 19 mln mt of US grain, including about one quarter of the entire US wheat harvest (The University of Kansas, 2024). The massive sales resulted in food inflation and feed shortages in the US. The Soviet's ability to buy the large volume of grain at low prices is largely attributed to the secrecy of the sales system at the time.

¹⁵ <https://saskwheat.ca/april-2021-data-requirements-for-a-transparent-market/>, accessed May 2025

¹⁶ Hayami, Y., & Peterson, W. (1972). Social returns to public information services: Statistical reporting of US farm commodities. *The American Economic Review*, 62(1/2), 119-130.

¹⁷ Bradford, D. F., & Kelejian, H. H. (1978). The value of information for crop forecasting with Bayesian speculators: theory and empirical results. *The Bell Journal of Economics*, 123-144.

¹⁸ Isengildina-Massam, O., Karali, B., Irwin, S. (2024) Accessed 2025 from https://aaec.vt.edu/content/dam/aaec_vt_edu/faculty-research/NCGA%20Report_Final.pdf

¹⁹ Grain Council, 2022. Accessed 2025 from <https://grains.org/wp-content/uploads/2022/04/Chapter-9-Price-Discovery-and-Cash-Markets-20220301-Final.pdf>

²⁰ Abbott, P., Boussios, D., & Lowenberg DeBoer, J. (2016). Valuing public information in agricultural commodity markets: WASDE corn reports.

²¹ Gouel, C. 2020. "The Value of Public Information in Storable Commodity Markets: Application to the Soybean Market." *American Journal of Agricultural Economics* 102(3): 846-865.

1.1.5 Markets respond to public data releases

Research shows that market efficiency depends on information availability. When USDA and other agencies release new agricultural data, markets respond immediately. Multiple studies comparing futures prices before and after report releases demonstrate this effect²². Experts have reviewed the evidence and reached a clear conclusion: USDA reports significantly impact agricultural markets.

Not all reports carry equal weight. WASDE, Crop Production, Prospective Plantings, and Grain Stocks reports consistently show strong market influence. However, livestock reports and some specialized Outlook publications typically have less impact. These different findings likely stem from varying research methodologies and timeframes studied.

Market uncertainty, measured through implied volatility in options markets, typically decreases after USDA report releases. This demonstrates how public information reduces risk for market participants. Government shutdowns in 2013 and 2019 that delayed USDA reports provided natural experiments - both instances showed increased market uncertainty when reports were unavailable. The impact extends beyond commodity markets. Stock prices of agricultural input suppliers rise when reports indicate strong demand for crop inputs. Conversely, food manufacturers benefit when Grain Stocks reports show abundant supplies²³.

1.1.6 Informational value of the public data releases when private reports are available

Government reports maintain significant market influence even with the proliferation of private agricultural forecasts. Research consistently shows that markets react more strongly to USDA data than private alternatives, indicating higher perceived reliability.

Garcia et al (1997)²⁴ discovered that despite similarities between USDA and private corn and soybean production forecasts, markets responded more decisively to USDA releases, suggesting traders view government data as more trustworthy. More recent analysis by Isengildina-Massa et al. (2020)²⁵ confirmed that USDA acreage and production estimates consistently outperform private forecasts in accuracy, with their informational value actually increasing over time.

As private agricultural data providers have grown in number and resources, Karali et al. (2019)²⁶ investigated whether USDA reports still offer unique value. Their findings were clear: the gap between USDA and private estimates has remained consistent over time, while market responses to these differences have intensified. This indicates that despite more competition, USDA information remains distinctly valuable.

Trading return studies further validate this conclusion. Research consistently shows that advance knowledge of USDA report content would create profitable trading opportunities, confirming these reports contain market-moving information not fully anticipated by private forecasts.

1.1.7 Summary: public data releases drive more efficient agricultural markets and supply chains

Market transparency through public agricultural data serves as a critical counterbalance to informational asymmetries that can disadvantage individual farmers facing larger, better-resourced buyers. The evidence is compelling across both developing and established economies: public data releases improve resource allocation, strengthen farmers' bargaining positions, reduce market uncertainty, and optimize storage and planting decisions.

Studies consistently demonstrate that USDA reports maintain their unique value despite the growth of private forecasting services, with their accuracy and market impact actually increasing over time. As C-FARE (2016) aptly notes, public agricultural data effectively "homogenizes expectations" and provides smaller market participants with essential information about fair prices, creating a more level playing field that benefits the entire agricultural ecosystem and justifies treating market information as a public good rather than a competitive advantage for those who can afford proprietary data.

²² Isengildina-Massam, O., Karali, B., Irwin, S. (2024) Accessed 2025 from https://aaec.vt.edu/content/dam/aaec_vt_edu/faculty-research/NCGA%20Report_Final.pdf

²³ Cao, A. N., Heckeleei, T., Ionici, O., & Robe, M. A. (2024). USDA reports affect the stock market, too. *Journal of Commodity Markets*, 34, 100384.

²⁴ Garcia, P., Irwin, S. H., Leuthold, R. M., & Yang, L. (1997). The value of public information in commodity futures markets. *Journal of Economic Behavior & Organization*, 32(4), 559-570.

²⁵ Isengildina-Massa, O., Karali, B., & Irwin, S. H. (2020). Can private forecasters beat the USDA? Analysis of relative accuracy of crop acreage and production forecasts. *Journal of Agricultural and Applied Economics*, 52(4), 545-561.

²⁶ Karali, B., Isengildina-Massa, O., Irwin, S. H., Adjemian, M. K., & Johansson, R. (2019). Are USDA reports still news to changing crop markets?. *Food Policy*, 84, 66-76.

1.2 Existing Informational Asymmetries and Data Gaps within the Canadian Grain Supply Chain

Current Data Gaps Canada

- Cropping Decisions
- Marketing Decisions
- Gaps



In the report, *Data Requirements for a Transparent Market*, Mercantile Consulting Venture Inc. highlighted that there are “questions about transparency and the distribution of returns through the market chain [in Canada]”.²⁷ These questions culminated in the resolutions of six producer groups to lobby “for the establishment of an Export Sales Reporting Program where all sales over the set minimum volume for wheat, wheat products and other crops, must be reported daily, to be compiled weekly, and released in a timely fashion, to add valuable knowledge to aid producers in the marketing of their production”.²⁸

One of the goals of the report, *Data Requirements for a Transparent Market*, was to “determine which information would be most useful to growers and how best to make it available in a regular and efficient manner”.²⁹ Mercantile categorized the data required for Canadian producers to make optimal cropping decisions and marketing decisions.

Reference is made to the Mercantile study to see the specifics of the analysis.³⁰

1.2.1 Cropping Decisions

Ending stock numbers are hugely important in cropping decisions, but given the issues discussed in the Mercantile report, AAFC ending stocks estimates are subject to frequent, and large revisions which limit their usefulness.

1.2.2 Marketing Decisions

To develop an informed opinion on the demand versus the supply of a commodity, the producer needs regular access to timely export projections, export flows, sales data, pipeline costs, price data, and quality data. There is no actual sales data available in Canada; only dated export shipment data (Statistics Canada). Unlike in the U.S., where the USDA Export Sales Reporting System provides sales data by commodity by destination on a weekly and daily basis.³¹ Pipeline cost data (i.e. rail, loading, elevation costs) are not currently available in Canada, but would provide producers with valuable information used to interpret and act on market signals to improve their marketing strategy and sales timing. While pipeline cost data (i.e., rail, loading, and elevation costs) are not currently published in Canada, limited data are available in the United States. The USDA's Agricultural Marketing Service provides weekly updates on rail tariffs, barge rates, and truck freight costs through its Grain Transportation Report.³² In addition, U.S. port and elevation costs are often embedded in FOB assessments or disclosed through port authorities. While not all-inclusive, these data points help American producers better interpret market signals and optimize logistics. In contrast, the EU does not maintain a centralized transportation cost system, and most logistics data are considered proprietary or fragmented across member states. Therefore, the U.S. remains the leading example of transport cost transparency in agricultural markets.

²⁷ <https://saskwheat.ca/wp-content/uploads/pdf/DataRequirementsforaTransparentMarketFinal-Version.pdf>, accessed December 2024

²⁸ <https://saskwheat.ca/wp-content/uploads/pdf/DataRequirementsforaTransparentMarketFinal-Version.pdf>, accessed December 2024

²⁹ <https://saskwheat.ca/wp-content/uploads/pdf/DataRequirementsforaTransparentMarketFinal-Version.pdf>, accessed December 2024

³⁰ Mercantile, *Data Requirements for a Transparent Market*, Sask Wheat Development Commission, April 2021

³¹ Until 2012, the Vancouver Port Authority issued a weekly report on export loadings by commodity and by company, as well as indicating the destination of the vessels loaded. This data was significantly timelier than the Statistics Canada export data, as it showed the actual commodity flow as it occurred. The report was discontinued after the CWB was dismantled. The grain companies owning the facilities in the Port of Vancouver chose to no longer support the report. A reinstatement of the old report would significantly speed up the information flow on export loadings.²⁸ <https://saskwheat.ca/wp-content/uploads/pdf/DataRequirementsforaTransparentMarketFinal-Version.pdf>, accessed December 2025

³² Grain Transportation Report, source: <https://www.ams.usda.gov/services/transportation-analysis/gtr>, accessed July 2025

1.2.3 Data Gaps, Quality, and Timing

Mercantile makes several recommendations on how to improve the data transparency in Canada's grain system. These are summarized on Table 5. Existing data points in need of improvement are in blue. Recommendations on reports that would fill the data gaps, who should administer them, and who would benefit from them are in red.

Table 2:

Recommendation Summary on Improving the Transparency of the Canadian Grain Market

Recommendation Summary

Cropping Decisions				
Data Gap	Collected from Whom	By Whom	When	Benefit
Forecast exports by destination	AAFC/STC from customs data, destination intel	AAFC/STC	Monthly, January onward	Producers
Domestic Use Numbers	Processors/manufacturers	AAFC/STC	Monthly, need to be researched	Producers
Stock Numbers/ Stock-use Ratios	AAFC calculation derived from above factors	AAFC	Monthly, more consistent month to month	Producers
Marketing Decisions				
More timely exports by destination	Customs data	STC	Monthly; s/b within 5 days of month end	System: producers, trade, transportation
Quality data	Farm sample program	CGC	ASAP after harvest	Producers, trade
Export loadings at port	Export Co's	Port Authorities	Weekly	Producers, trade
Weekly Sales by Crop; show destinations	Export Co's	CGC	Weekly	Producers, trade, improved system performance (if used wisely)
Linking overall sales data & export projections with rail capacity available to accommodate agriculture exports	Co's, railroads	Quorum, RR's, AAFC, Trade Cda.	Monthly	Improved system performance/ export maximization/ Productivity gains Cdn. Agric. & Food System
Other (System cost basics)				
Fobbing costs (avg.)	Elevator Co's	CGC	Annual	Producers
Rail costs (avg. main points to ports)	Rail Co's	Quorum	Annual	Producers, trade

Source: Mercantile study; Sask Wheat Development Commission

1.3 Comparative Analysis - Market Data Currently Available to Key Competitors

Comparative Analysis: Data Available to Competitors

- USA
- EU
- Australia

In this section, we look at the availability of published market data in the USA through USDA, in the European Union through the European Commission (EC), and in Australia through the Australian Bureau of Statistics (ABS). Market transparency plays a vital role in fostering a competitive agricultural sector. For Canadian farmers to compete in the global market, they should have access to a similar level of market transparency as is available in competing nations. Section 1.3 explores information reporting systems in the United States, the European Union, and Australia to understand how they address market transparency within their agricultural sectors.

1.3.1 USA: Information Reporting Programs

The United States Department of Agriculture (USDA) maintains the world's most comprehensive agricultural reporting system, widely considered the global standard for market transparency and intelligence. This extensive network developed over decades provides farmers, traders, and policymakers with timely, accurate information that reduces market asymmetries and improves decision-making. The Export Sales Reporting Program (ESR) administered by the Foreign Agricultural Service (FAS) forms the cornerstone of U.S. export transparency.³³ Implemented after the "Great Grain Robbery" of the 1970s, when Soviet traders secretly purchased massive grain quantities causing price spikes, the ESR requires:³⁴

- Weekly reporting of all agricultural export sales by quantity, type, marketing year, and destination
- Daily reporting of large sales (100,000+ metric tons of one commodity to one destination)
- Disclosure of any changes to previously reported sales

This mandatory reporting system ensures that market participants have access to the same information at the same time, eliminating unfair advantages previously held by large exporters. The data provides early indicators of how foreign demand affects domestic supplies and prices, improving market efficiency and competitiveness.

Complementing the ESR, the Global Agricultural Trade System (GATS) offers a comprehensive searchable database on U.S. exports and imports of agricultural, fish, forest, and textile products. Users can analyze trade data by U.S. customs district, state, or national aggregate for all trading partners. While updated monthly (around the fifth day), this system provides deeper historical context than the more immediate ESR.³⁵

The USDA's transportation intelligence is equally robust. The Agricultural Marketing Service (AMS) Transportation Research and Analysis division provides weekly data on truck, rail, barge, and ocean transportation costs through platforms like AgTransport.^{36,37} These interactive dashboards allow producers and traders to compare different transportation modes, identify cost-effective options, and anticipate logistical challenges.³⁸

For production forecasting, the National Agricultural Statistics Service (NASS) issues detailed monthly and seasonal crop production estimates by state, along with weekly crop progress assessments. These reports track planting, growth stages, and harvest progress, providing granular insights into domestic supply conditions.³⁹ The Census of Agriculture, conducted every five years, offers comprehensive structural data on U.S. farms and ranches.

³³ <https://www.fas.usda.gov/about-fas>, accessed February 2025

³⁴ <https://www.fas.usda.gov/programs/export-sales-reporting-program>, accessed February 2025

³⁵ <https://apps.fas.usda.gov/gats>, accessed February 2025

³⁶ <https://www.ams.usda.gov/about-ams/programs-offices/transportation-marketing-program>, accessed February 2025

³⁷ <https://www.ams.usda.gov/services/transportation-analysis>

³⁸ <https://www.usda.gov/sites/default/files/documents/24-2024-AMS.pdf>, accessed February 2025

³⁹ https://www.nass.usda.gov/About_NASS/index.php, accessed May 2025

The Economic Research Service (ERS) completes the picture with forward-looking analysis, including:⁴⁰

- Agricultural Baseline Database (10-year supply, demand, and trade forecasts)
- Commodity Costs and Returns (regional production economics)
- Quarterly Outlook for U.S. Agricultural Trade
- Monthly analysis of domestic and international market conditions

Perhaps most influential globally are the World Agricultural Supply and Demand Estimates (WASDE), which integrate data from across USDA agencies to provide authoritative monthly balance sheets for major commodities.⁴¹ These reports are used by institutions and companies worldwide to validate their own market assessments.

Most of these information resources remain unavailable to Canadian producers or are accessible only with significant delays and reduced detail, creating a competitive disadvantage for Canadian agriculture in global markets. Table 3 provides a summary of the discussed information reporting programs and compare them to the Canadian equivalent if available.

Table 3:
Summary US Information Systems

What	Where	Frequency	Reason for publication	Available in Canada
Actual export sales and price data	USDA-FAS: ESR	weekly	Perceived market failure during “great Grain Robbery”	No
Transportation cost data (truck, rail, barge, ocean vessel)	AMS: TED	weekly	Improve market transparency for all participants	No
Searchable export & import data	FAS: GATS	continually updated	Market transparency; aid trade	Yes, but more delayed
Domestic & global balance sheets	FAS: PS&D, GAIN, WASDE	monthly	Support trade	Only domestic, but not accurate
Policy changes	AMS: Market News	weekly	Market alerts	Occasionally
Searchable US trade database	FAS: GATS	continually updated	Data available to export trade	Yes, but hard to navigate; updated monthly with 2 mos. delay
Domestic crop production details (by state)	NASS	monthly/seasonal	Detailed updates on production outlook (by state)	Yes, monthly
Regular crop assessments/ crop progress reports	NASS	weekly	Updates on production outlook	Seasonal; provincial updates
Agriculture baseline data (10-year forecasts on S & D, trade estimates major commodities)	ERS	annual	To assist with forward planning	No
Commodity costs & returns	ERS	annual	To assist with forward planning	Yes, provincially
Foreign ag trade of the USA	ERS: Fatus	monthly	In addition to sales reporting	Delayed monthly export data
Outlook for US ag trade	ERS	quarterly	To assist with forward planning	No

Note: The table contrasts the U.S. agricultural information reporting programs with the Canadian equivalents if available. The U.S. reporting programs are considered the global gold standard in both breadth and depth of reporting.

⁴⁰ <https://www.ers.usda.gov/about-ers>, accessed May 2025

⁴¹ <https://www.usda.gov/about-usda/general-information/staff-offices/office-chief-economist/commodity-markets/wasde-report>, accessed May 2025

1.3.2 European Union: Information Reporting Programs

The European Union is important both as an importer and exporter of agriculture goods. It is therefore, both an export competitor and an important destination market for Canadian agriculture products. The European Union has developed a substantial agricultural information system that emphasizes price transparency and production monitoring more than transaction-level export reporting. This approach reflects the EU's position as both a major importer and exporter of agricultural goods, along with its consumer-focused regulatory approach.

The European Commission's Directorate-General for Agriculture and Rural Development (DG AGRI) serves as the primary source for agricultural market intelligence. Unlike the U.S. system, which requires reporting of actual sales transactions, the EU publishes weekly price data through its Agri-food Portal and Market Observatories. However, this represents average prices obtained from FAO and private analysts rather than specific transaction details. While less granular than the U.S. ESR, this data still enables valuable comparisons between commodities, locations, and time periods.

The Agri-food Data Portal functions as a centralized platform for accessing diverse agricultural information. Its Agri-Food Markets section provides comprehensive weekly data on:⁴²

- Commodity prices by member state and marketing stage (DEPSILO, DELPORT, FOB)
- Production volumes across the EU
- Historical utilization patterns (e.g., diverted to human food, animal feed, exports, biofuels, or seed)
- Monthly trade data by product, member state, and trading partner

Market Observatories offer more specialized monitoring for key commodity sectors including cereals, oilseeds, wine, milk, meat, sugar, and fruit and vegetables. These observatories compile market data on prices, production, trade, and other relevant indicators specific to each sector. The DG AGRI also produces regular Market Situation presentations that integrate local and global analysis, weather impacts, and EU trade developments.

For statistical foundations, Eurostat (the EU's statistical office) harmonizes data from member states' national statistical institutes to enable cross-country comparisons. This includes information on farm structure and economics, commodity prices, land prices, and crop production. While similar to the USDA's NASS in function, Eurostat also shares characteristics with other USDA agencies by conducting economic research (like ERS), collecting trade data (like FAS), and providing market support (like AMS).

The EU's crop monitoring capabilities come through the Joint Research Centre's Monitoring Agricultural Resources (MARS) program. MARS publishes monthly Crop Monitoring in Europe Bulletins throughout the growing season, reporting on weather conditions and crop development across member states and neighboring countries. The complementary Global Outlook Bulletins provide updates on crops in non-EU countries particularly relevant to European markets, such as Russia, Ukraine, Kazakhstan, Turkey, and countries in North Africa.

For forward-looking analysis, DG AGRI produces short-term and medium-term outlooks for various agricultural products. These projections help market participants anticipate future developments and adapt their strategies accordingly. The EU also maintains detailed balance sheets for major crop sectors, though these typically present monthly aggregated data rather than the weekly flow information available in the U.S.

While the EU system provides substantial market transparency, particularly regarding prices and production, it lacks the transaction-level export sales reporting that distinguishes the U.S. system. Canadian producers have partial access to EU production and export data, along with monthly balance sheets for Canadian crops, but comprehensive integration with this intelligence network remains limited.

⁴² <https://agridata.ec.europa.eu/extensions/DataPortal/home.html>, accessed May 2025

Table 4:*European Union Data Reporting Systems Comparison to Canada*

What	Where	Frequency	Reason for publication	Available in Canada
Price, production & trade data; EU balance sheets by crop	EC-Agri-food data portal; EC market Observatories	weekly	Concern about market transparency vis-a-vis consumers and producers	Partially; yes to production and export data. Monthly balance sheets on Cdn. crops only
Data on farm structure & economics, commodity prices, land prices & crop production	Eurostat-database	monthly	General statistics support to industry	Partially annually. Have provincial crop production data
Short term outlooks by commodity	EC-Agri-food markets	monthly	Market transparency; aid trade	Yes, but more delayed
EU & global analysis, agro weather conditions, and EU trade	EC-DG-Agri	monthly	Support to trade & market participants; available to farmers	Only domestic balance sheets (monthly)
Crop monitoring domestic EU & global	MARS: Europe bulletins; Global outlook bulletin	weekly; monthly	To increase market intelligence	Yes, seasonally for domestic conditions only

Note: The EU has an advanced suite of agricultural data reporting programs. Compared to the U.S. it lacks granularity of export sales data.

1.3.3 Australia: Information Reporting Programs

Australia's agricultural information reporting programs are less comprehensive compared to the U.S. and EU, particularly regarding export sales transparency. This reflects both Australia's smaller scale in global agricultural markets and differing perspectives on the value of mandatory reporting requirements.

The Australian Bureau of Statistics (ABS) functions as the country's national statistical agency, comparable to Statistics Canada in many aspects. Through its Data Explorer platform, ABS publishes monthly export data by commodity (using Standard International Trade Classification), destination country, and originating state. However, this information typically becomes available only 3-4 months after transactions occur and must be purchased rather than freely accessed. Most significantly, there is no public domain dataset on weekly sales data for grains comparable to the U.S. Export Sales Reporting Program.

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), a research division within Australia's Department of Agriculture, Fisheries and Forestry, provides the country's primary agricultural intelligence. ABARES releases:

- Insight Reports on various aspects of the agricultural sector
- Weekly Australian Climate, Water and Agricultural Updates
- Commodity Price Updates
- Quarterly Agricultural Commodities Reports
- Quarterly Australian Crop Reports

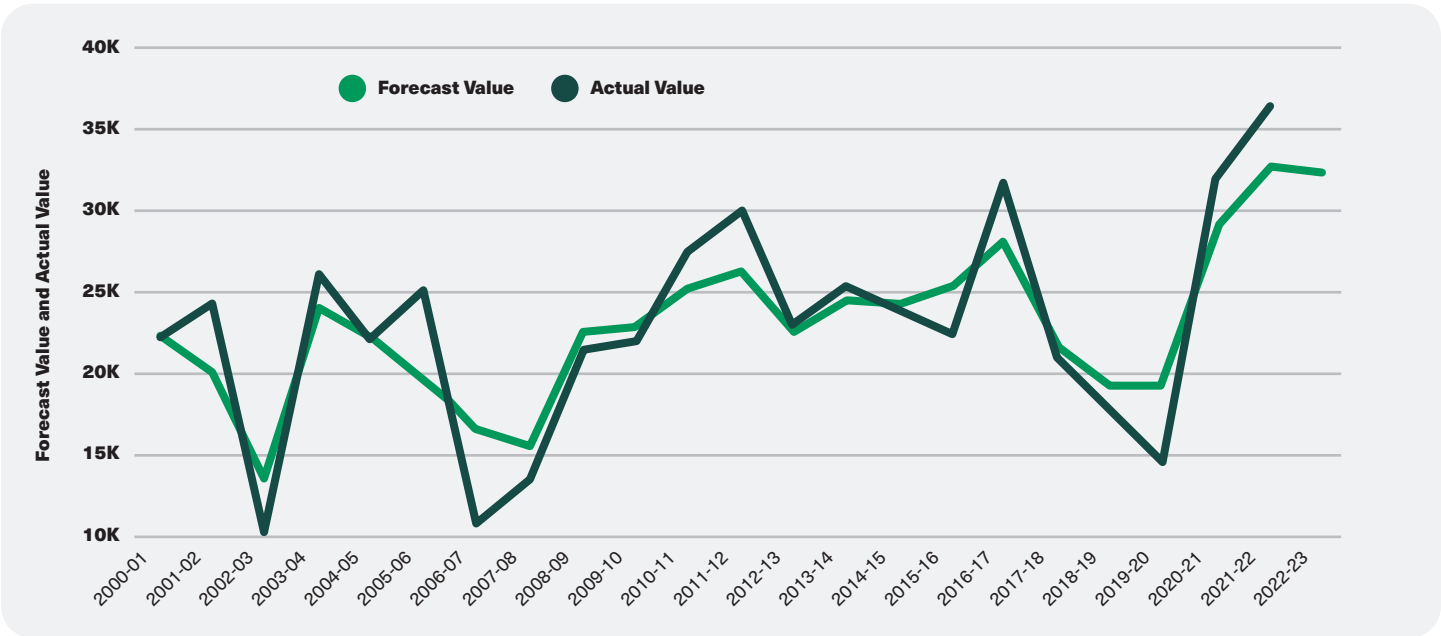
The Agricultural Commodities Reports offer forecasts on the value, volume, and price of Australia's agricultural production and exports. These include data on farm costs and returns, export values and volumes, and average farm yields, along with global perspectives on supply and demand conditions. The Australian Crop Report provides quarterly forecasts for area, yield, and production of major winter and summer crops at state and national levels. The June report presents initial forecasts for winter crops, while the September report introduces the first forecasts for summer crops.

ABARES maintains a database of historical forecasts dating back to 2000, allowing comparison between projected and actual outcomes to verify accuracy over time. This transparency regarding forecast performance represents a valuable feature of the Australian system, though the quarterly publication schedule lacks timeliness. As a result, the impact on enhancing market transparency is less substantial compared to the weekly or daily updates available in the U.S. Australia previously collected and published more detailed data on wheat stocks and exports through ABS, but this practice has been discontinued. The current system overlaps with several USDA agencies in function (NASS, FAS, and AMS), but with less frequent updates and more limited scope. Figure 1 is an example of the charts ABARES provides to compare the accuracy of its forecasts over time.⁴³

Table 5:
Australia's Data Reporting Systems Comparison to Canada

What	Where	Frequency	Reason for publication	Available in Canada
Merchandise Exports by Commodity (SITC), Country & State	ABS-Data explorer: Merchandise exports by commodity (SITC)	monthly	Generally available export data	Comparable to STC export data
Insight reports	ABARES	monthly	General statistics support to industry	No; crop production data by provinces
Ag commodities report (domestic & global perspectives)	ABARES	quarterly	Market transparency; aid trade	Yes, on Cdn. domestic data only.
Ag commodities trade data (value & volume of exports; yields; farm costs & returns)	ABARES	quarterly	Basic trade data	Similar to STC
Australia crop report (quarterly forecasts on area, yield production)	ABARES	quarterly	To increase market intelligence	Yes, seasonally for domestic conditions only

Figure 1:
ABARES September Wheat Production Forecast vs Actual Value for the Current Financial Year



Source: ABARES

⁴³ <https://www.agriculture.gov.au/abares/research-topics/agricultural-outlook/historical-forecasts>, accessed February 2025

Canadian producers have access to similar seasonal domestic crop condition reporting and provincial production data, but the Australian model offers few advantages over Canada's current approach. Both nations lag behind the U.S. and EU in providing timely, comprehensive market intelligence to agricultural stakeholders. While Australia does not publish weekly grain sales data akin to the USDA's Export Sales Reporting Program, its Wheat Port Code of Conduct introduces regulatory transparency requirements that may offer complementary benefits. The Code ensures that exporters have equal access to port terminal services and mandates the public disclosure of shipping stems, loading protocols, and port capacity utilization data. These disclosures enhance logistical transparency and may help smaller exporters and producers interpret trade flows and anticipate market movements.⁴⁴ Although not a substitute for export sales data, these regulatory measures represent an effort to address information asymmetries in the grain export sector and could offer a partial model for Canadian policy design focused on transparency in grain logistics and terminal access.

1.3.4 Summary Comparative Analysis

Examining the agricultural information reporting programs across major exporting nations reveals significant disparities in transparency, timeliness, and comprehensiveness. These differences create varying competitive landscapes for producers and market participants.

U.S. farmers and market participants enjoy the most extensive and timely market intelligence, particularly regarding export sales. The mandatory weekly reporting of all export sales and daily reporting of large transactions provide unprecedented visibility into market movements. The USDA's integration of production forecasts, transportation costs, supply and demand estimates, and long-term projections creates a comprehensive ecosystem that reduces information asymmetries.

The EU system prioritizes price transparency through weekly reporting but lacks the transaction-level export detail found in the U.S. While European producers benefit from regular market observatories and crop monitoring bulletins, they have less visibility into specific export commitments. The EU approach balances producer and consumer interests, providing sufficient information for market functioning while avoiding some of the more stringent reporting requirements imposed on U.S. exporters.

Australia's system is the most limited among exporters evaluated in this report, with no public weekly sales data for grains and quarterly rather than weekly or monthly production updates. The lack of consensus among Australian producers regarding transparency benefits has contributed to this more restricted information environment.

Canada's current reporting infrastructure more closely resembles Australia's approach than the more robust U.S. or EU systems. This puts Canadian producers at an information disadvantage compared to their U.S. and European counterparts, particularly in understanding export demand patterns and transportation economics. Canadian stakeholders have access to some U.S. and EU data, but often with delays or in less accessible formats.

The transparency gap between information-rich environments (U.S./EU) and more limited reporting systems (Australia/Canada) has real economic consequences. In markets with greater transparency, producers can make more informed planting, marketing, and transportation decisions, potentially capturing greater value and reducing risk.⁴⁵ The competitive advantage created by superior market intelligence may benefit countries with high relative transparency such as the United States.

⁴⁴ Australia Wheat Port Code of Conduct, source <https://www.accc.gov.au/business/industry-codes/wheat-port-code-of-conduct>, accessed July 2025

⁴⁵ Ahlers, C., Broll, U., & Eckwert, B. (2013). Information and output in agricultural markets: the role of market transparency. *Agricultural and Food Economics*, 1(1), 15.

1.4 Three Case Studies on Supply Chain Transparency and its Impact

This section provides a closer look at three selected case studies (one for each of the major regions under scrutiny) examining the value of data/ market intelligence to market participants and explores if this has led to any policy actions.

Specific Case Study Details and Impact

- USA - South America
- EU
- Australia



While there is ample mention in agriculture studies across the globe of the need for market transparency to ensure market stability, little empirical work has been done on the topic. This is partly due to the lack of good consistent data, especially for cash transactions. In the context of our study, we have selected three studies to exemplify the approach towards achieving improved market transparency: One from the United States and South America, one from the European Union (EU), and one from Australia.

1.4.1 Case 1: The US and South America

Accurate and timely market information is critical for the efficient functioning of financial markets, particularly in the case of storable commodities. Public agencies, like the USDA, play an important role in providing this information by issuing detailed production forecasts and stock-level reports. However, the economic value and broader implications of such public information often remain underexplored. Christophe Gouel's research⁴⁶, "The Value of Public Information in Storable Commodity Markets: Application to the Soybean Market," presents a theoretical framework to assess the benefits of public information in commodity markets.

Focus of Analysis

Much of the literature available focuses on the immediate market responses to public announcements. There is less emphasis on quantifying the broader welfare impacts of these reports under various scenarios. Gouel's work addresses this by providing a theoretical framework to simulate the welfare gains of public market information.

Focusing on the global soybean market, which is dominated by producers in the U.S., Argentina, and Brazil, the analysis uses a rational expectations storage model to capture the impact USDA production forecasts and other public information has on the storage decisions.

The Model

A rational expectations storage model is used to estimate the impact of "news shocks", defined as advance information about potential crop sizes, on the behavior of market participants (stors and producers) versus a scenario with no news shocks. The study assumes that news shocks come from two sources of information: production projections included in the USDA World Agricultural Supply and Demand Estimates (WASDE), public data for South America, and consensus forecasts (often called "average trade guesses") from private analysts.

The role of the storer is to balance supply and demand across time by transferring stocks between periods. The role of the producer is to make planting decisions based on expected prices. The model assumes producers and stors act rationally, and thus, adjust storage and planting decisions based on future price expectations.

⁴⁶ Gouel, Christophe C. "The Value of Public Information in Storable Commodity Markets: Application to the Soybean Market." *American Journal of Agricultural Economics*, vol. 102, no. 3, 2020, pp. 846-865. <https://onlinelibrary.wiley.com/doi/full/10.1002/ajae.12013>

Results of the Study

Gouel's research found that public information, particularly production forecasts like those from the USDA, played a significant role in improving market efficiency, stabilizing prices, and enhancing welfare in the soybean market. Public information allowed for better allocation of stocks over time, reducing storage costs and ensuring resources are used more efficiently. Conversely, a lack of information (no "news shocks") encouraged higher stock levels as storers speculated on the chance of a crop failure in a major soybean growing area. Public information reduced the need for high stock levels by providing clarity about expected supply. This can lower storage costs and influence international stockpiling strategies. The welfare gains from public information were estimated to be 2% of storage costs.

Public information allowed storers and producers to reallocate resources, adjusting the timing and intensity of price volatility. Public information did not drastically change overall price volatility but rather redistributed it across the growing season. Public information reduced extreme price spikes, benefitting both consumers and producers by creating a more predictable market.

Gouel points out that the limited scope of the paper (only looking at storage decisions) means that it likely significantly underestimates the value of public information.

Geographic Differences

Because the U.S. holds a large share of the global soybean market, public production forecasts for the U.S. crop had a more direct impact on market efficiency. However, aggregated data for South America still played a crucial role, particularly as Brazil and Argentina are major exporters in trade windows when the U.S. supply is lower. The redistribution of price volatility was similar in both the U.S. and South America, with increased volatility just before harvest and reduced volatility post-harvest. However, since U.S. harvest is before South American planting, South American markets were more influenced by U.S. data than vice versa. Public forecasts reduced stock levels in both regions, contributing to better allocation of resources. The U.S. saw slightly greater efficiency gains because its forecasts are perceived as more reliable, while South America had more uncertainty in its data.

Policy Implications

Public information has immense value in reducing uncertainty and improving market stability. Three policy recommendations can be drawn from the study:

- 1. The value of public information:** Investment in timely and accurate information has a positive impact in shaping market behavior and enhancing overall welfare.
- 2. Importance of timely and accurate public information:** As was found to be the case in South America, as the accuracy and timeliness of the information decreases, so does its ability to positively impact the decisions of market players. Efforts to improve the quality of public information are valuable. [This has pertinence to the timeliness and accuracy of Canadian data.]⁴⁷
- 3. Public information versus storage/trade policy:** Governments often use policies on storage, trade, or a combination thereof to battle domestic price spikes. Since public information can stabilize prices, thus protecting consumers from price spikes. Public information could be used instead of other, more costly, government policies.

Conclusions of the U.S. and South America Case Study

Public information plays an important role in the efficient functioning of storable commodity markets. Public information can reduce uncertainty, improve market transparency, and stabilize prices. Timely and accurate information facilitates more efficient stock allocation, mitigates extreme price spikes, and redistributes price volatility throughout the agricultural season. Gouel's research emphasizes the necessary investment in reliable public forecasts. The reduced dependence on production forecasts in South America stresses the importance of strong forecast accuracy. There are significant economic benefits to public forecasts, not only for reducing market inefficiencies but also for supporting the livelihoods of market participants across the supply chain. Expanding the precision of such information can amplify these benefits, promoting resilience and sustainability in global agricultural markets.

⁴⁶ Gouel, Christophe C. "The Value of Public Information in Storable Commodity Markets: Application to the Soybean Market." *American Journal of Agricultural Economics*, vol. 102, no. 3, 2020, pp. 846-865. <https://onlinelibrary.wiley.com/doi/full/10.1002/ajae.12013>

⁴⁷ <https://saskwheat.ca/april-2021-data-requirements-for-a-transparent-market/>

Relevance to the Canadian Situation

It has been identified that the public information in Canadian agriculture lacks timeliness and accuracy.⁴⁸ The implications of this study indicate the shortfalls in Canadian public data impact the ability of farmers to use it to make good production and storage decisions. [See canola example from previous Mercantile study, page 10.⁴⁸

1.4.2 Case 2: The European Union

Rising food prices and extraordinary corporate profit gains since the COVID-19 pandemic and Russia's war on Ukraine rekindled the discussion whether the broad influence of the main actors in global food markets requires more regulation and supervision. In the EU, the AGRI Committee on Agriculture and Rural Development of the European Parliament (EP) requested a study on "The role of commodity traders in shaping agricultural markets".⁴⁹ The study, concluded in November 2024, was conducted by the Policy Department of the European Parliament. It provides an overview of the impact of major commodity traders on agricultural markets. It explores prevailing trends and confronts the challenges that characterize the industry's landscape. Moreover, after analyzing the regulatory state of play at the international level, it provides suggestions towards bolstering the sector's accountability and transparency. The fact that the EP commissioned the study shows that concerns about market concentration and transparency are an issue that has been recognized by other major players.

Focus of Analysis

The AGRI Committee study details the history and trends of the dominant commodity firms (the ABCD's⁵⁰) in agriculture markets, as well as the influence of some of the emerging competitors in various commodities and geographies. Nevertheless, through integration and expansion processes, the ABCD's still handle 50-60% of the worldwide trade in cereals, oilseeds, and the ABCD's jointly still account for 70-90% of the global grain trade. These companies have also grown beyond their traditional core activities into sectors such as animal and pet nutrition, biofuels, chemicals, finance & investment, and human nutrition and health & wellness.

The focus of this analysis is on the impact of major commodity traders on the structure of agricultural markets. One of the key problems identified for agriculture markets is increasing trends in integration and consolidation, and the effect of this on market transparency. The study outlines the vertical integration of up- and downstream segments (upstream commodity production, input financing for producers; downstream processing and marketing), as well as horizontal expansion and diversification. The expansion of control over supply chains is said to further increase the market power of a small group of companies. This market power not only extends to food commodities, but also feed and industrial products, such as biofuels or chemical ingredients.

Corporate concentration and increasing integration processes among traders are shown to have led to an oligopolistic market structure in the agri-commodity sector. "Leading traders have nowadays considerable influence over various aspects of the global food economy, including production patterns, storage capacities, market prices, and innovation prospects."⁵¹ It is observed that small producers in these value chains often have lower bargaining power as they are highly reliant on these integrated buyers. Financialization⁵² of the European milling wheat derivatives market (Matif wheat futures and options) is identified in this study as another significant factor, potentially distorting fundamental signals in these markets.

The Role of a Regulatory Framework in the EU

Recognizing the problem of power imbalances and dependencies in agri-food supply chains, the EU has decided to counteract the impacts of the so-called 'agricultural squeeze' in which farmers operate. The business activities of agri-commodity traders are at varying levels subject to EU regulation and supervision, including the legislative initiatives falling under the **EU Green Deal**, the **EU competition law**, and the **supervision of agri-commodity derivatives markets**.

⁴⁸ <https://saskwheat.ca/wp-content/uploads/pdf/DataRequirementsforaTransparentMarketFinal-Version.pdf>, accessed March 2025

⁴⁹ Wion, A., Luciano A., Gonzalez, S.N., Kuepper, B., Linnaeus Tannor, L., Vander Stichele, M., 2024, Research for AGRI Committee - The role of commodity traders in shaping agricultural markets, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels

⁵⁰ Archer Daniels Midland (ADM, operating since 1902), Bunge (1818), Cargill (1865), and Louis Dreyfus Company (LDC, 1851), collectively known as the ABCDs, play a pivotal role in the global agri-commodity trading market.

⁵¹ Policy Department for Structural and Cohesion Policies Directorate-General for Internal Policies PE 747.276 – November 2024

⁵² Defined here as the growth in importance and activity of financial players and financial strategies in commodity derivatives markets.

As of May 2022, EC Regulation (EU) 2022/791 amended the reporting obligations of EU Member States recognizing the importance of up-to-date data on levels of stocks of crucial agri-commodities held by producers, wholesalers, and relevant operators. The required information covers cereals, oilseeds, rice, and certified seed (EC, 2022a). The collected information feeds into an online dashboard to monitor the EU agricultural markets. The EU 'Market Observatory' covers weekly price and trade data, EU balance sheets, and market situation presentations for cereals, oilseeds and protein crops.

The EU has also implemented several legal instruments to prevent or correct anti-competitive behaviour. EU Competition Law deals, inter alia, with mergers, unfair arrangements (cartels), or the abuse of a dominant position. The EU Merger Regulation (139/2004/EC) sets out the main rules for assessing concentrations, whereas the Implementing Regulation deals with procedural issues. The EU competition legislation includes a comprehensive ban on anti-competitive agreements, the prohibition of abuse of a dominant position, and the control of mergers with a strong supervisory role of the European Parliament (EP).

The main instruments in the EU to regulate agri-commodity derivatives markets and their orderly price setting and risk management function are the European Markets Infrastructure Regulation (EMIR), the Markets in Financial Instruments Directive (MiFID II) and Regulation (MiFIR), and the Regulation and Directive on Market Abuse (MAR and CSMAD).

Concerning commodity derivatives or spot commodity contracts, Article 1(b) defines "inside information" held by non-financial traders as information that has not been made public, but if it were made public,



[...] would be likely to have a significant effect on the prices of such derivatives or related spot commodity contracts, and where this is information which is reasonably expected to be disclosed or is required to be disclosed in accordance with legal or regulatory provisions at the Union or national level, market rules, contract, practice or custom, on the relevant commodity derivatives markets or spot markets



(EP&C, 2024).

Fitness Assessment of Existing Measures

When assessing existing measures in the EU and the U.S., the authors Wion and Kuepper et al. (2024) stated: Due to their increasing market power on the physical commodity markets, their inside knowledge on demand and supply balances, and their hardly supervised subsidiaries or affiliates involved in derivatives and financial markets, the large agri-commodity traders can gain additional profits from (excessive) speculation. This may motivate these actors to intensify their already significant role.

The report stated that UNCTAD⁵³ concluded that the regulatory measures implemented since 2010 were too fragmented and unfit to tackle financial speculation and unearned profits effectively. Only the EU reporting rules provide some public information about increasing non-hedging activities by unidentified commodity traders but too little about strategies of the dominating speculative participants. Supervisors of physical commodity trading are often still missing or not cooperating with financial derivatives' supervisors or operating too much at the national level.

⁵³ The United Nations Conference on Trade and Development

Policy Recommendations of the EU Study

There are four recommendations:

1

Transparency in physical markets

There is a broad lack of transparency in the global commodity trading market. Greater transparency needs are relevant for the intertwined physical and financial markets. It was recommended to standardize and strengthen reporting requirements to the EC dashboard system.

2

Disclosure of financial risks

Introduce an obligation for the agri-commodity traders, being listed or not, to disclose how much of their derivatives trading is strictly hedging and how much is speculative trading. The format could be based on the EU legal reporting requirements, which distinguish reporting on hedging and non-hedging positions.

3

Integrity of derivatives markets and orderly pricing

Imbalances in positions between participants trading to hedge actual physical agricultural commodities and those speculating on higher or lower prices to make a profit, can cause disruptions in futures and off-exchanges derivatives markets. Implementing position limits and maximum price fluctuations can help mitigate excessive volatility and allow all market participants to understand price movements fully. Exemptions to position limits should be strictly limited to hedging of objectively established physical commodity trade.

4

Investigating and regulating market concentration

Market concentration among large commodity traders, characterized by oligopolistic structures, presents several challenges that can have detrimental effects on market dynamics and the global agriculture commodity market and structure. Such concentration can lead to reduced competition, limiting choices for consumers and producers alike, resulting in higher prices, lower quality products, and decreased innovation as dominant players face less pressure to improve their offerings or lower costs. To address these issues, regulatory interventions are crucial, including antitrust measures to prevent excessive consolidation, the promotion of market transparency and competition, and the empowerment of smaller stakeholders through supportive policies and incentives.

Conclusions of the EU Case Study

The study highlights the critical role of commodity traders in the global agricultural market, confirming their significance and influence extending beyond mere trading to comprehensive supply chain management and diversification into other sectors. The increase in concentration of commodity markets have led to concerns about the impacts on commodity price volatility and inflation.

The agri-commodity market landscape, historically dominated by the ABCD traders, has seen significant changes in recent years through the market entry of emerging actors, such as those diversifying from hard commodities into food sectors and state-owned entities serving food security and geopolitical interests. Meanwhile, the historical traders have integrated and diversified, increasing their market clout while complicating transparency issues. Simultaneously, financialization is becoming increasingly important, involving the expansion of financial players and strategies in commodity derivatives markets. Despite the introduction of numerous legislations after the 2008 financial crisis, significant gaps still exist in the supervision and regulation of physical and financial markets. Notably, interventions for greater transparency across physical markets and improved disclosure of financial risks in derivatives trading are recommended.

Furthermore, expanding market monitoring efforts could offer valuable insights into the complex nature of this agri-commodity trading landscape. **To this end, strategies to boost transparency and accountability, such as standardized reporting requirements and increased cooperation among global competition authorities, could be of significant benefit.** This, in turn, would ensure the maintenance of stable food supplies for consumers and promote fair trade practices for the benefit of all stakeholders, primarily the smaller farmers, who form the backbone of this global agricultural industry.

Relevance to the Canadian Situation

The EU study shows that concerns about market concentration and transparency are not uniquely a Canadian problem, but an issue that has been recognized by other major players. In the EU, this has been followed up by the EP with action by using the regulatory framework. Of immediate interest are policy recommendations 1. and 4. dealing with improved reporting requirements to the EC dashboard system, and with antitrust measures to prevent excessive consolidation (in contrast to the recent Bunge-Viterra merger approval in Canada). In the U.S., a detailed export sales reporting system for agricultural commodities already exists. Aligning with such EU and U.S. initiatives would go a long way to improving timely data availability in Canada.

1.4.3 Case 3: Australia

Agricultural forecasts are only useful in planning and decision making if market players can trust the reliability and accuracy of the information. The ability to assess forecast accuracy not only underpins trust in public information but also enhances market efficiency and enables better resource allocation.

In their study: “Enabling Users to Evaluate the Accuracy of ABARES Agricultural Forecasts,” Cameron and Nelson (2022) provide a framework for evaluating the accuracy of nearly two decades’ worth of agricultural forecasts from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES). By examining the accuracy of ABARES forecasts, the study emphasizes the importance of forecast accuracy and the need for public forecasters to be transparent about the precision of their predictions.

Focus of Analysis

In 2021, ABARES began periodically publishing its historical forecasts for Australian agriculture on an online database. The database includes the forecasts for the various variables of Australian agriculture (e.g., production, price, volume, exports) by the month the forecast was issued along with the final realized outcome of that variable. The intention for creating the database was to increase transparency but also to raise awareness of the accuracy and reliability of ABARES forecasts. The database serves as a low-cost platform to assess forecast accuracy.

While accuracy is only one aspect of agricultural forecast quality (other quality metrics include: institutional alignment and usefulness to stakeholders), it is generally considered the most fundamental quality metric. The study highlights the significance of forecast accuracy in ensuring the reliability, credibility, and value of public forecasts. It also examines trends and patterns in forecast accuracy, such as the relationship between the lead time of a forecast and its precision.

The Model

To measure the accuracy of ABARES forecasts, the paper compares several of ABARES’ predictions with the corresponding outcome using mean absolute percentage error (MAE). MAE measures the average magnitude of forecast errors and does not weigh positive forecasts errors more than negative ones. The forecast error was calculated and used to measure accuracy and bias, and to compare ABARES estimates with those of other public forecasting agencies.

Results of the Study

The paper found that ABARES forecasts generally improve over time as more information becomes available. The forecasts with the largest error were those that were made 5-years ahead of time. The relative error decreased as the forecasting horizon shortened. For most agricultural data, ABARES includes “backcast” revisions which are updates made after the event. These are often necessary as the Australian Bureau of Statistics (ABS) final estimates are often not released for 12-18 months after harvest. These backcast estimates are usually the most accurate as they reflect the most amount of information available.

Additionally, the study found ABARES production estimates were highly accurate, and were generally more precise than price and export forecasts which are more subject to external influences like trade dynamics.

Cameron and Nelson (2022) conclude that ABARES forecasts are generally unbiased. They do note that bias can be an issue in markets undergoing structural change. For example, seeded canola area forecasts experienced a period of negative bias (underestimation) in the years following the introduction and rapid adoption of genetically modified canola varieties in the mid to late 2000s. Likewise, forecasts for sheep numbers showed positive bias (overestimation) after price

support in the early 1990s led to a stockpile of wool and resulted in falling wool prices. The authors pointed to some possible origins of bias from other research including systemic factors, poor specification or forecasting procedure, optimistic or pessimistic predictions, and biased exogenous (uncontrollable) input. If one forecast contains bias, so will the forecasts of any following dependent series. For example, if the estimated seeded area contains bias, or is otherwise a poor forecast, the subsequent harvested area, production, total supply, and even demand estimates will be inaccurate because of the error in the initial seeded area estimate.

Importance of Local Forecasts

Although there are several international organizations providing forecasts for Australian agriculture, the paper emphasized the importance of local forecasts. Forecasts published by the USDA and OECD Food and Agriculture Organization (OECD-FAO) for Australian wheat production and exports were compared with those from ABARES. In both cases, ABARES forecasts outperformed the forecasts from the USDA and OECD-FAO. For example, ABARES production forecasts for Australia had an average error of 11% compared to 16% for the USDA and 17% for OECD-FAO. ABARES forecasts for Australian production were found to be more accurate than those of the OECD-FAO in 7 of the 10 years studied. ABARES forecasts outperformed the USDA in all of the 10 years studied. ABARES estimates for Australian exports had an average error of 16% while the average error of both the USDA and OECD-FAO forecasts were 24%. For Australian exports, ABARES estimates were more accurate than OECD-FAO forecasts in 7 of the 11 years and outperformed those of the USDA in 9 of the 11 years.

There are several factors mentioned that likely enhance ABARES' ability to make more accurate forecasts for Australian agriculture. ABARES specializes in Australian agriculture and is likely more able to account for geographic differences. ABARES is better suited to access high quality domestic data. ABARES issues forecasts more frequently than some agencies like OECD-FAO, allowing for more timely adjustments as new data becomes available. Finally, ABARES is able to dedicate more resources into its domestic forecasts compared to organizations that create forecasts for a wide variety of countries.

Policy Recommendations

While no direct policy recommendations were explicitly made in the paper, a few policies could be inferred by the findings of the paper:

1

Transparency of Forecasting Accuracy

Stakeholders must be able to trust in the accuracy of public estimates before making decisions based on the information. The ability to independently assess accuracy builds trust in public forecasts. Policy makers should support open access initiatives for agricultural data, ensuring transparency and allowing stakeholders to make informed decisions.

2

Improving Accuracy for Price and Export Forecasts

The results indicate that export and price forecasts are less accurate than production forecasts due to their dependence on external factors. Therefore, additional information about these variables is necessary to enable stakeholders to make informed decisions. For example, frequent reporting on export prices and sales could allow stakeholders to assess demand for various commodities within the season and make better-informed decisions.

3

Forecasting Adaptability

The study finds that forecasts may include bias during periods of structural change. Because of this, forecasters need to have a deep understanding of the agricultural industry and the agricultural products the forecasts are being made on. Additionally, forecasting models should be able to account for, and adapt to, the changing technology, climate, geopolitics, and demand.

4

Importance of Strong Domestic Forecasting Capacity

Comparisons with USDA and OECD-FAO forecasts show that ABARES was able to make better forecasts for domestic production and exports because of its specialized focus on Australian agriculture. Policymakers should ensure adequate resources for domestic forecasting agencies to maintain high-frequency, region-specific forecasts.

5

Importance of Accurate Forecasts

The study highlights the need for forecast accuracy in supporting agricultural decision-making. Farmers, traders, and policymakers depend on accurate forecasts to plan production, storage, and export strategies. If the forecast for one variable is inaccurate, so will be the estimates of the variables based on it. Government agencies should invest in providing accurate forecasts for the stakeholders of the agricultural industry.

Conclusions from the Australian Case Study

The study by Cameron and Nelson (2022) underscores the importance of forecast accuracy in agricultural markets. ABARES as an example of how transparent forecasts can be assessed for accuracy. ABARES forecasts were found to be generally unbiased, with accuracy improving as more information becomes available closer to market events. Production forecasts are generally more accurate than price and export forecasts which are subject to more external variables.

Comparisons with USDA and OECD-FAO show that ABARES outperforms international agencies in forecasting Australian wheat production and exports. Better forecasting ability is primarily due to its regional focus, frequent updates, and strong domestic data sources. These findings highlight the need for experienced, high-quality, country-specific forecasting institutions that can provide accurate forecasts. Policy makers should focus on: transparent forecasting, readily available export and price data, adaptable forecast models, and improved forecast accuracy. These measures can support better decision-making for all agricultural stakeholders.

Relevance to the Canadian Situation

Canada relies on forecasting agencies such as Statistics Canada and Agriculture and Agri-Food Canada (AAFC) to provide agricultural outlooks. Recurrent inaccuracies limit their usefulness, and can result in suboptimal storage, seeding, and investment decisions, and can lead to price volatility. These could be minimized with revised forecasts.⁵⁴ More accuracy could boost trust in Canadian public forecasts and encourage their use in decision making.

Forecast accuracy directly affects producers' choices regarding planting, storage, and sales timing. Accurate forecasts are especially important for those crops that Canada is a "price setter," like in canola, lentils and peas, where the impact of what happens in Canada is felt in the global price. The above study found that price and export forecasts tend to be less accurate due to external factors such as trade policies, currency fluctuations, and global market shifts. While these factors are difficult to control for, Canada could provide the agricultural industry with additional tools to better recognize and adjust to these changes. For example, timely export sales, pipeline costs, and price data could allow stakeholders to recognize shifts in demand and adjust their strategies in a timelier fashion.

⁵⁴ Current example: On April 17, 2025, AAFC projected '24/25 canola exports at 7.5 mln mt. As of shipping week 35 (Apr.23), the CGC handling numbers showed canola exports at 7.38 mln mt, with 17 shipping weeks still to go. The canola export number obviously is too low, and should have been corrected, thus lowering the important '24/25 AAFC canola ending stock number.



II. Estimating the Impact of Increased Data Transparency

Enhanced export sales transparency would deliver measurable economic value to Canadian farmers through three critical pathways: improved basis timing, increased market efficiency in illiquid markets, and better-informed crop planning decisions. Our analysis quantifies that even modest improvements in marketing decisions from better export data access could generate \$22.7-\$56.6 million in additional revenue for Canadian grain producers annually. By reducing information asymmetry that currently favors intermediaries, this data democratization represents a rare opportunity to strengthen farmers' competitive position while creating system-wide efficiencies throughout Canada's agricultural supply chain.

2.1 The Model and Farm Impact

The Model

- Conceptual Framework
- Basis Timing
- Mathematical Approach

2.1.1 Conceptual Framework of Export Sales Data Transparency and the Effect on Canadian Farmers and the broader economy

The problem at hand is to measure by how much access to better market information improves farmer grain marketing revenue. The analysis detailed below quantifies the impact of improved marketing decisions by using both simulated and historic price data. We have modeled farmer grain sales with and without data-driven decision-making to measure the difference between them. This provides insights for individual farmers and the broader economy.

Conceptual Framework

Canadian farmers make forecasts of commodity price levels and local basis rates to optimize farm sales. Farmers can benefit from more thorough and timely export sales data in three main ways:

1

More accurate forecasting of local basis at future time periods

2

Market efficiency improvements in illiquid or private markets

- a. Canola: Canada is a global price setter.
- b. Peas: Improved volume and price discovery benefits both sellers and buyers.

3

Enhanced new market development and crop planning

For farmers, export sales data could be used to optimize grain marketing strategies that minimize local basis by timing sales decisions. Whereby, farmers more optimally assess demand and trends more quickly leading to an expected increase in efficiency. Consequently, greater export data transparency is expected to increase the efficiency and profitability of the agricultural sector in Canada.

Basis Timing as the Cornerstone of Analysis

Basis timing, being the most quantifiable impact, serves as the core analytical component. Improved transparency in export sales allows farmers to make more precise marketing decisions, optimizing the timing of grain sales to minimize basis risk.

Export sales data may be valuable to farmers trying to maximize farm profits by minimizing the basis they receive. Farmers could use the information to inform their grain marketing strategy and to minimize local basis by timing sales and storage decisions. In the current market dynamic farmers are at a disadvantage relative to the grain buyers who are assumed to purchase export sales data through private data vendors at price points not accessible to producers. Thorough and timely export sales data could level the playing field between farmers and grain buyers. This assumption is grounded in the established existence of private market intelligence and data analytics firms specializing in global commodity markets, such as KPLER, AgFlow, DTN, S&P Global Commodity Insights, and data services from Bloomberg and Reuters. These vendors do not directly obtain Canadian grain sales data from grain companies; instead, they aggregate extensive datasets from vessel tracking, customs records, port logistics data, and proprietary analytics, synthesizing these into detailed trade intelligence reports. While grain companies and large traders purchase these insights for strategic advantage, the high cost and specialized nature of these services result in an information asymmetry, disadvantaging farmers who lack affordable access to such synthesized, real-time market intelligence.

Key Assumptions:

- Farmers hedge futures price at harvest (September)
- Cash price = Futures price + Basis
- Basis patterns reflect local supply/demand dynamics
- Storage costs are excluded for simplicity
- Marketing decisions can be shifted based on seasonal price patterns
- Total annual production remains constant (only timing changes)

Mathematical Approach to Basis Timing

Basis timing, being the most quantifiable impact, serves as the core analytical component. Improved transparency in export sales allows farmers to make more precise marketing decisions, optimizing the timing of grain sales to minimize basis risk.

The basis (B) is calculated as:

$$B = P_{local} - P_{futures}$$

(1)

Where:

- P_{local} is the local cash price.
- $P_{futures}$ is the futures price.
- B_t is the basis

Farm-level optimization of basis timing involves minimizing the average basis over the marketing season: *Minimize* $\sum_{t=1}^T B_t$. Assuming the farmer hedges their production at the harvest price using forwards or futures markets the basis risk will have the largest impact on received revenue from the sale of the crop. The analysis uses historical basis data from North Dakota hard red spring wheat as a proxy to Saskatchewan farm basis variability. Using this data the potential improvements in basis timing ascribed to enhanced export sales reporting will be estimated.

Simulating the effect of improved export sales data on farm marketing decisions

The simulation aims to quantify how enhanced transparency and timeliness of export sales data can influence farmers' marketing decisions, specifically by optimizing basis timing. To achieve this, historical basis data from North Dakota hard red spring wheat is used as a proxy to estimate the variability and seasonality of elevator basis.

Two contrasting marketing scenarios were developed:

1. **Baseline Scenario:** Represents equal monthly grain sales throughout the marketing year, reflecting a non-strategic sales approach where farmers sell an equal proportion of their crop each month.
2. **Improved Scenario:** Uses a decision-quality weighting formula to redistribute monthly grain sales towards periods with historically more favorable basis conditions. The formula implemented as follows:

$$\text{Sales Weighting} = 1 + (\text{Price Rank} - 0.5) \times \text{Improvement Factor} \times 2$$

(2)

Formula 2 redistributes sales volumes based on historical price rankings, thus prioritizing months with historically higher cash prices relative to futures (basis optimization). The formula uses percentile ranking (deciles from 0-1) to determine each month's Price Rank, where months are arranged by cash price and assigned values from 0 (lowest price) to 1 (highest price). This percentile approach ensures that the weighting adjustments are proportional to each month's relative price strength within the marketing year. By subtracting 0.5 from the Price Rank and multiplying by the Improvement Factor, the formula creates a balanced redistribution that increases sales during stronger basis periods while reducing them during weaker periods. Importantly, the total annual grain volume sold remains constant to ensure comparability between scenarios. The futures price is assumed to be hedged using the nearby futures contract price from the first week of September and as a result the basis variability drives the change in cash price month over month. The simulation uses the proportional crop mix for Saskatchewan grain farms, based on the latest Canadian census data, to allocate acreage by crop. Next year forecasted average crop prices are sourced from the Saskatchewan Crop Insurance Corporation to ensure the economic analysis reflects realistic farm-level prices.

A series of scenarios are simulated, varying the improvement factor from a conservative 1% up to a more optimistic 5% improvement in basis timing. These improvements translate directly into increased annual farm revenues, estimated by multiplying the incremental basis improvement by total annual grain production. These improvements are applied to production volumes to estimate the total annual revenue gain.

Estimating the Magnitude of the Enhanced Export Sales Data on Elevator Basis

To estimate the expected percentage improvement farmers may realize from timely and transparent export sales data, a cross-sectional regression approach is applied. This analysis seeks to quantify how much of the weekly elevator basis can be explained by concurrent export sales data.

A weekly time series of wheat basis values from North Dakota HRS wheat is constructed and joined with USDA export sales data on the same weekly date index. Several export sales-related variables are created and used as independent variables in the regression. More details are in the data section.

The regression model estimates the proportion of variation in basis that can be attributed to changes in export sales variables. The strength and consistency of these relationships provide an empirical basis to infer how farmers might leverage this data to make more profitable sales decisions. The analysis demonstrates that certain patterns in export data, particularly large export sales announcements, tend to precede a narrowing of basis, as large grain movements tighten local supplies and temporarily strengthen cash prices.

This approach not only quantifies the potential magnitude of improvement in basis but also illustrates how export sales data can be transformed into predictive signals for grain marketing. The expected percentage improvement is determined by analyzing historical basis changes and the potential impact of timely and transparent export sales data on farmer decision-making as determined by the regression analysis results. These results are then used to infer a reasonable estimate for basis timing improvement, which are then inputted into the simulation results to estimate farm-level impact. These results offer a quantifiable measure of potential farm-level economic gains, which are then generalized to project the broader impacts across the Canadian agricultural sector.

Analytical Steps:

Farm-Level Simulation Steps:

1. Use historical basis data to simulate optimized marketing strategies.
2. Compare baseline vs improved grain marketing strategy to quantify potential gains from improved information transparency.
3. Quantify how much of the weekly elevator basis can be explained by concurrent export sales data.
4. Use results from Step 3 (above) and simulation outcomes from Step 2 (above) to approximate impact.
5. Scale farm-level findings to represent an average Saskatchewan farm.⁵⁵

Sector-Level Generalization Steps:

1. Scale farm-level findings to represent the Saskatchewan agricultural sector.
2. Aggregate these findings across the Canadian agricultural sector to estimate total economic benefits.

⁵⁵ StatsCan shows avg SK farm at crop mix, source: Statistics Canada, Census of Agriculture, 2006 and 2011
<https://www150.statcan.gc.ca/n1/pub/95-640-x/2011001/p1/p1-01-eng.htm>

Other Effects: Market efficiency and futures/forwards price accuracy

The effect of more thorough and timely export sales data on agricultural commodities is difficult to anticipate because the extent that the market currently prices in export sales data and the extent of the data available is unknown. However, we can expect that for large established futures markets in which Canada makes up a small portion of supply such as Corn and Soybeans, the effect will be small to negligible. For smaller markets that are not listed on futures markets such as edible beans and for markets such as Canola, for which Canada is a major producer, we may expect the effect on price setting to be larger. For the purpose of this analysis, we make a conservative assumption that the futures/forwards market is efficient, which we acknowledge will underestimate the overall effect of more thorough and timely export sales data. In the results section we highlight research that evaluates the effect of USDA reports and how that information affects markets and speculate on how this data may affect markets such as edible beans and canola.

Other Effects: Export sales driven planting decisions

Export sales data may be helpful for farmers when selecting crop rotation and acreage allocations. The addition of new export partners, changes in export market demand, and demand trends in foreign markets may help farmers anticipate demand for crops. In practice, planting decisions use a confluence of data and farm specific constraints to determine the optimal crop mix. Isolating the effect of more thorough and timely export sales data is challenging. For the purpose of this report, we do not consider the effect explicitly in our quantitative analysis, which downward biases the potential impact of export sales data initiative. However, we look at case studies and research to estimate the directional effect and relative magnitude of this effect.

More thorough and timely export sales data is expected to increase the efficiency and the profitability of the agricultural sector in Canada. For this report, we focus on the effect on grain marketing, specifically on the impact on grain basis minimization.

2.1.2. Data

This analysis relies on a comprehensive dataset that combines historical grain basis information and export sales data to assess the impact of an enhanced transparency Export Sales Report. We use historical basis data for North Dakota Hard Red Spring Wheat from 2007 to 2023, covering a 17-year period. This data serves as a practical and geographically relevant proxy for Canadian wheat markets, given the agronomic and commercial similarities between regions.

Basis and nearby futures price data were sourced from the USDA Agricultural Marketing Service (AMS), specifically through the Grain Basis tool⁵⁶. Weekly basis data was then joined with weekly export sales data released by the USDA Foreign Agricultural Service (FAS)⁵⁷.

The resulting merged dataset was constructed on a weekly time index. Key variables created from the export sales data include: "total_exports", "accumulated_exports", "outstanding_sales", "gross_new_sales", "current_my_net_sales", "current_my_total_commitment", "next_my_outstanding_sales", "next_my_net_sales", and "basis_lagged". These features enable both regression and simulation-based analyses of how export sales movements correlate with and potentially predict basis behavior.

This integrated dataset provides a robust foundation for quantifying how enhanced access to export data could influence farmer behavior and improve market outcomes.

⁵⁶ Source, agtransport.usda.gov, accessed May 2025

⁵⁷ Source, apps.fas.usda.gov, accessed May 2025

2.1.3 Results of Quantitative Simulation, Regression Analysis, and Event Study

Results

- Farm Impact Simulation
- Impact Regression
- Event Study
- Composite Results



Improving transparency and timeliness in Canada's export sales reporting has the potential to reshape on-farm decision-making and strengthen the broader agricultural value chain. This section presents the results of our quantitative simulation and regression analysis, estimating the economic value of enhanced export data access for Saskatchewan grain producers. It also explores the broader macroeconomic and structural implications for the Canadian agricultural sector. We quantified farm-level profitability improvements from more strategic basis timing, then generalized these findings to the provincial and national level. Beyond individual farmer gains, we assessed how enhanced transparency could contribute to a more efficient, responsive, and resilient supply chain while creating ripple effects for grain buyers, processors, and exporters.

Farm-Level Economic Impact of Improved Basis Timing

The results indicate that improved access to export sales data, used to inform grain marketing decisions, can lead to meaningful increases in annual revenue for grain producers across Saskatchewan, including cereals, oilseeds, and pulses. The specific reference to wheat arises from our simulation methodology, which utilized historical basis data from North Dakota Hard Red Spring Wheat as a representative proxy. By shifting grain sales toward months with historically stronger basis values, even modest improvements in marketing decision quality translate into measurable financial gains.

Simulation results and farm impact assessment

Using a 17-year historical dataset of North Dakota Hard Red Spring Wheat basis, we simulated grain sales for a representative Saskatchewan farm (2,000 acres) under two scenarios: a baseline strategy with equal monthly sales and an improved strategy using a decision-weighting formula responsive to historical price patterns. Farmers are assumed to hedge their futures price at harvest, isolating the revenue impact to basis movements alone. **Table 6** shows an example of the sales weighting algorithm.

Table 6:

Weighting Formula Example Baseline vs 1% Grain Basis Improvement

Month	Cash Price	Price Rank	Baseline % Crop Sold	1% Improvement Initial Weight	Normalized Weight	% of Crop Sold
Sep	\$6.50	0	8.33%	0.990	0.991	8.26%
Oct	\$6.60	0.1	8.33%	0.992	0.993	8.27%
Nov	\$6.70	0.2	8.33%	0.994	0.995	8.29%
Dec	\$6.80	0.3	8.33%	0.996	0.997	8.31%
Jan	\$6.90	0.4	8.33%	0.998	0.999	8.32%
Feb	\$7.00	0.5	8.33%	1.000	1.001	8.34%
Mar	\$7.10	0.6	8.33%	1.002	1.003	8.36%
Apr	\$7.20	0.7	8.33%	1.004	1.005	8.37%
May	\$7.30	0.8	8.33%	1.006	1.007	8.39%
Jun	\$7.40	0.9	8.33%	1.008	1.009	8.41%
Jul	\$7.50	1	8.33%	1.010	1.011	8.42%
Aug	\$6.40	0	8.33%	0.990	0.991	8.26%
			100.00%	11.990	12.000	100.00%

Note: This table demonstrates how a 1% improvement in basis timing redistributes grain sales throughout the marketing year. Cash prices are arranged in ascending order and assigned a percentile rank (deciles from 0-1), with higher rankings indicating stronger historical cash prices. The weighting formula adjusts sales volumes proportionally toward historically stronger basis months, with the normalized weight ensuring total annual sales remain 100%. This modest 1% redistribution represents a conservative estimate of how farmers with export data access might adjust their marketing patterns to capture stronger basis opportunities.

Figure 2:
Change in Monthly Sales with Modelling Support

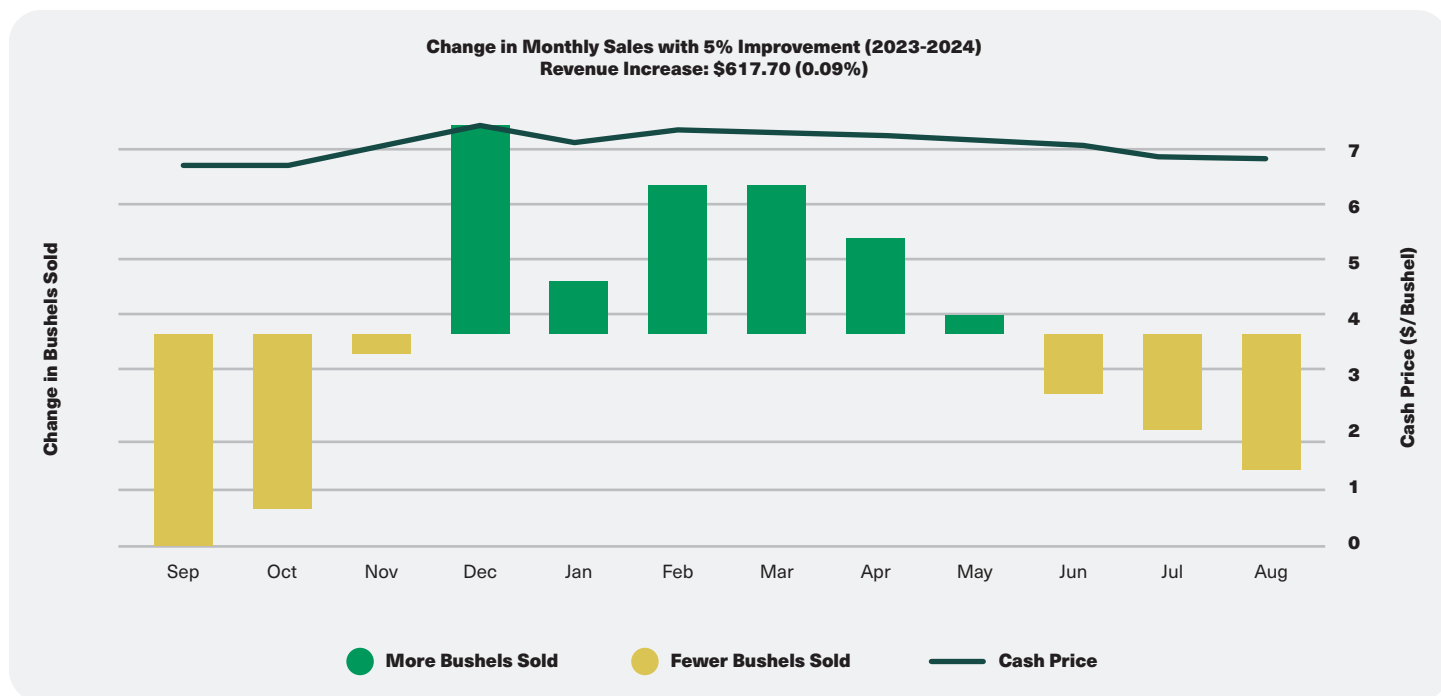


Figure 2: Change in monthly sales with 5% improvement using the 2023-2024 grain marketing year as an illustration. Data sourced from the USDA for Hard Red Spring Wheat. \$/bushel is shown in USD. With improved basis timing farmers shift grain sales to lower basis months.

Across multiple improvement levels, the simulation produced the following results:

- A **1% improvement** in basis timing corresponds to an **average gain of \$0.01 CAD per acre** for wheat.
- A **5% improvement** yields an estimated **\$0.05 CAD per acre** for wheat.
- Although modest at the farm level, at scale, these improvements would translate into **provincial-level revenue gains of millions CAD annually** for Saskatchewan grain producers alone.

Regression results

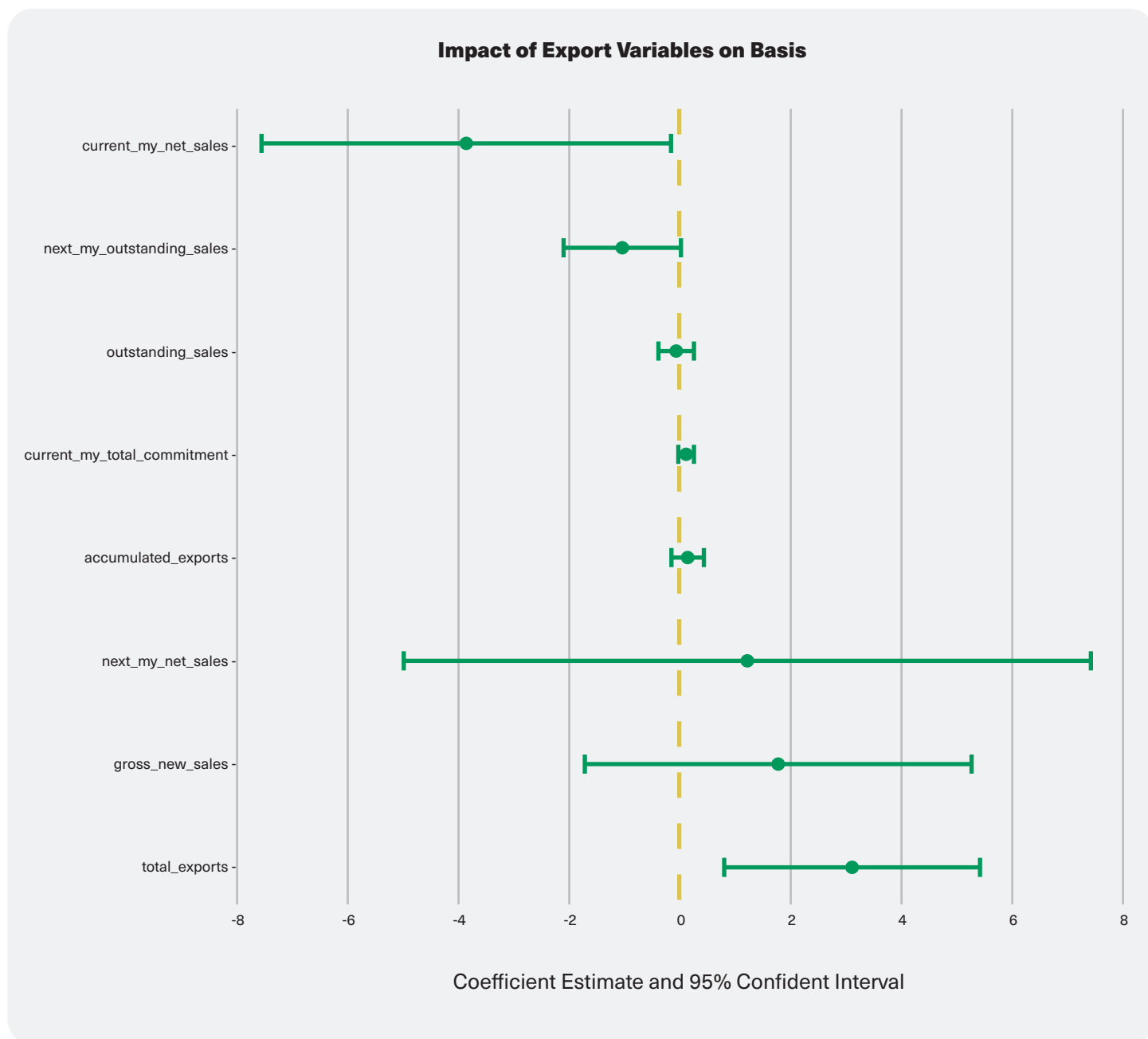
Export sales-derived variables are statistically significant in our regression model and, alongside other explanatory factors, account for 68.7% of the variation in weekly basis levels ($R^2 = 0.687$). This result underscores the informational value of timely export data for enhancing grain marketing strategies.

To estimate a reasonable real-world improvement in basis timing from better export data, we regress export sales variables on basis. This means we demonstrate how basis (as the response or dependent variable) is dependent on or influenced by export sales data. The model, which explains approximately 68.7% of basis variation (adjusted $R^2 = 0.68$), includes several statistically significant predictors derived from USDA export sales data: notably, **“total_exports”** and **“current_my_net_sales”** both showed significant associations with basis movements at the 1% and 5% levels, respectively. These findings suggest that timely export reporting does capture a portion of the basis signal currently unavailable to most farmers.

While basis changes are influenced by many factors, the regression results in Figure 1 provide evidence that export sales variables explain a substantial portion of weekly basis variation. The adjusted R-squared of 0.68 indicates a well-fitting model, with several predictors — including **total_exports** ($p < 0.01$) and **current_my_net_sales** ($p < 0.05$) showing statistically significant effects. These variables would be directly observable under a more transparent Canadian export reporting program. This implies that a meaningful share of basis predictability is currently captured by export sales data, yet unavailable to most farmers due to lack of access.

Figure 3:

Regression Coefficients and Confidence Intervals showing the impact of export sales variables on elevator basis.

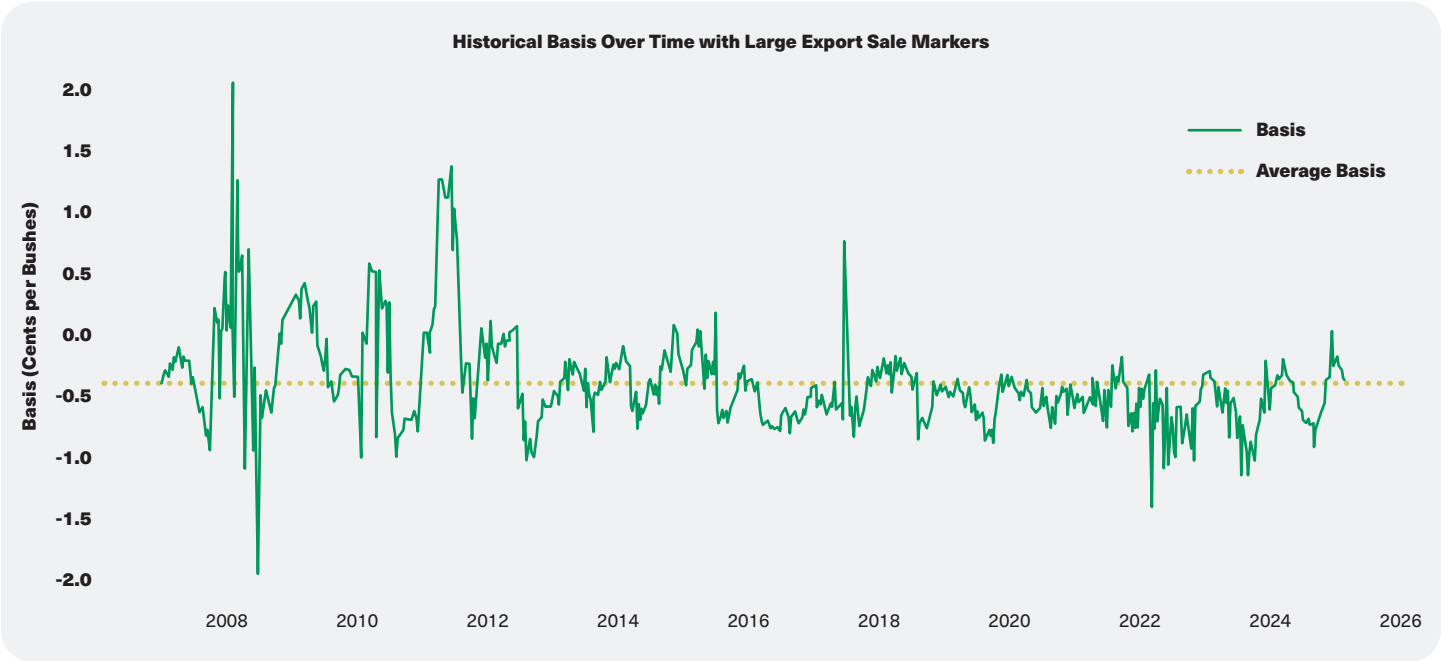


Event-based analysis results

Event-based analysis also supports this finding. Following very large export announcements ($\geq 250,000$ tonnes), average basis improves across one, two, and three-week horizons (Figure 5, p.35, left). Specifically, the 2-week average basis improvement reaches 0.06 to 0.14 cents per bushel depending on export size and timing. While modest, these changes compound across crop volumes and farm acreage.

Taken together, the regression and event-based results support a conservative real-world estimate of a 2-5% improvement in basis timing for farmers who actively integrate export data into marketing decisions. This range underpins our simulation assumptions and falls well within observed post-export movements. It also excludes secondary effects such as inventory rebalancing or deferred pricing strategies, suggesting it may understate the full value of transparency. These findings are visualized below.

Figure 4:
North Dakota HRS Basis and Large Export Sales (250k+mt)



The dotted yellow lines in **Figure 4** depict large US wheat export sales events that were reported in the market. It can be observed that there has been a basis response to the sales data publications.

Figure 5:
Average basis response by export size (left); distribution of 2-week basis changes after large exports (right).

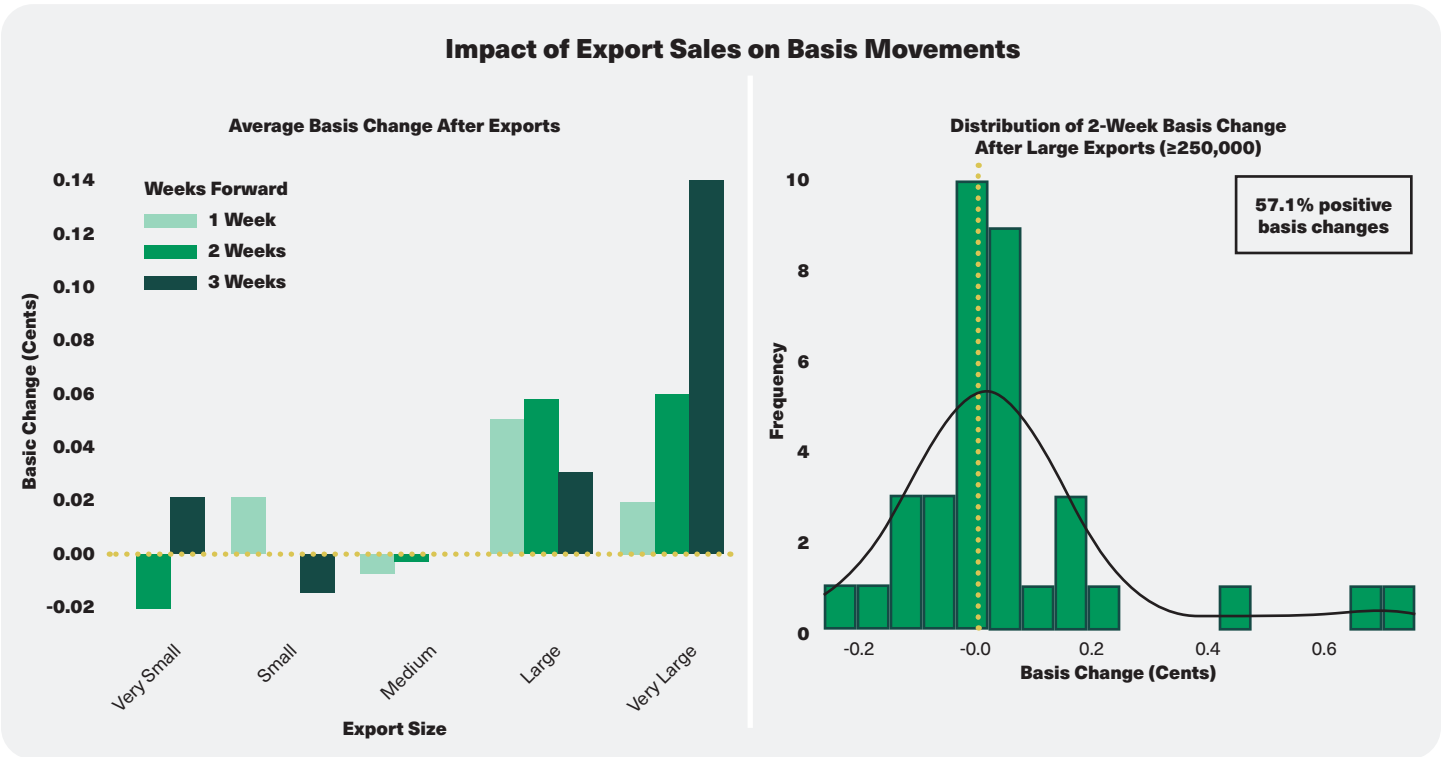


Figure 5 demonstrates the impact of export sales data on basis one, two, and three weeks following the sales data publication (left graph). It also shows the basis change distribution two weeks after large export sales were announced.

Composite results: Interpreting the 2-5% Basis Improvement Estimate

To determine a realistic and conservative estimate of the improvement in basis timing farmers could achieve with timely access to export sales data, we combined evidence from analyses conducted in this study with outside research.

First drawing on the primary analysis results, the event study of large weekly export announcements revealed that basis tends to improve by approximately 0.06 to 0.14 cents per bushel within two weeks of very large sales ($\geq 250,000$ metric tonnes), suggesting that informed sales timing could capture a portion of this movement. Second, the regression results, from the previous section, showed statistically significant effects of export variables like `total_exports` and `current_my_net_sales` on contemporaneous basis levels, even after controlling for prior-week basis.

Additionally, these findings are consistent with past research indicating that USDA export sales reports move futures and cash markets, especially in the week of release⁵⁸. For example, USDA export sales reports have been shown to contain price-relevant information not fully anticipated by markets⁵⁹. Moreover, studies have shown that basis levels are sensitive to unexpected shocks in demand⁶⁰, such as shifts in trade policy.

Together, these findings support an estimated **2-5% improvement** in realized basis as a conservative, attainable outcome for farmers using enhanced export sales data to inform marketing strategies. This range reflects modest shifts in timing, not perfect foresight, and aligns with the historical scale of basis volatility observed in Western Canadian grain markets. **Table 7** references the sources of evidence of the 2-5% improved basis and outlines impact and contribution to the estimate.

Table 7:
Evidence Supporting a 2-5% Basis Improvement Range

Source of Evidence	Observed Basis Impact	Contribution to Estimate	Reference
Export Event Analysis	0.06 to +0.14 cents (avg. 2-week gain)	Reflects directional basis shifts following large export demand shocks	This study
Regression Analysis	Adj. R ² = 0.68; significant export predictors	Demonstrates export sales variables explain meaningful variation in basis	This study
USDA Export Report Studies	Futures and basis respond to export data	Confirms price-relevant info in USDA sales reports not fully priced in pre-release	Colling et al. (1996); Karali et al. (2019)
Demand Shock & Trade Policy Research	Basis shifts due to unexpected policy/demand shocks	Shows basis responds to shifts in global trade conditions and transparency gaps	Nigatu et al. (2020)
Basis Range Context	~15-30 cents typical intra-year swing	Small optimization gains (~2-5%) are meaningful in price terms	Composite
Demand Shock & Trade Policy Research	2-5% improvement in realized basis	Conservative range grounded in empirical results + real-world basis behavior	Composite

⁵⁸ Colling, Phil L., Scott H. Irwin, and Carl R. Zulauf. "The Reaction of Wheat, Corn, and Soybean Futures Prices to the USDA Export Inspection Report." *Review of Agricultural Economics* 18(1996):127-136.

⁵⁹ Karali, Berna, Olga Isengildina-Massa, Scott H. Irwin, Michael K. Adjemian, and Robert Johansson. "Are USDA Reports Still News to Changing Crop Markets?" *Food Policy* 84(2019):66-76.

⁶⁰ Nigatu, Getachew, Flavius Badau, Ralph Seeley, James Hansen. 2020. Factors Contributing to Changes in Agricultural Commodity Prices, ERR-272, U.S. Department of Agriculture, Economic Research Service.

Economic impact of a representative farm

The analysis of a representative 2,000-acre Saskatchewan grain and oilseed farm demonstrates economic benefits from improved basis timing through better export data access. As shown in **Table 8**, a diversified operation, with 29.7% in canola (594 acres), 17.6% in spring wheat (352 acres), and various other crops, generates approximately \$753,535 in total revenue under current conditions. With just a modest 2% improvement in basis timing, this farm could realize an additional \$429.22 in average net gain, while a 5% improvement would yield \$1,070.39 in additional revenue. These gains are most pronounced for canola (\$150.74-\$375.90) and spring wheat (\$71.39-\$178.02), which together comprise nearly 48% of the farm's acreage. Even crops with smaller footprints, such as peas at 5% of acreage, show meaningful improvements (\$21.26-\$53.03). Although the impact on a farmer's overall financial position may be small, these results indicate that even incremental improvements in marketing decisions through better export data can translate to meaningful financial benefits and when aggregated amount to a large amount. While larger farms are common in Saskatchewan and could demonstrate a higher per-farm impact, our selection of 2,000 acres as representative is conservative and grounded in publicly available statistics. Specifically, the 2021 Statistics Canada Census of Agriculture reports an average Saskatchewan farm size of 1,794 acres. This choice ensures that the results remain robust. It should be noted, however, that due to the linear scaling of the methodology, stakeholders can easily extrapolate results to larger farm sizes (e.g., 6,000, 8,000, or 10,000 acres) for communication purposes, reflecting higher per-farm economic impacts.

We also note that 28-32% of Saskatchewan acres are seeded to cash crops, where no futures markets exist. While futures prices already translate much of the fundamental data, the gains to higher market transparency are likely much bigger for cash crops than for major crops.

Table 8:

Farm level impact of a representative grain and oilseed farm in Saskatchewan, Canada

Crop Type	% of Farm Area	Acres	Avg. Price (CAD/bu)	Yield (bu/acre)	Revenue (CAD)	2% Basis Gain	5% Basis Gain
Canola	29.70%	594	\$13.5	33	\$264,627	\$150.74	\$375.90
Spring Wheat	17.60%	352	\$7.74	46	\$125,326	\$71.39	\$178.02
Durum Wheat	11.60%	232	\$8.01	33	\$61,325	\$34.93	\$87.11
Lentils	9.30%	186	\$18.6	22	\$75,304	\$42.89	\$106.97
Barley	9.00%	180	\$4.68	63	\$53,071	\$30.23	\$75.39
Oats	4.20%	84	\$3.31	79	\$21,965	\$12.51	\$31.20
Peas	5.00%	100	\$10.37	36	\$37,332	\$21.26	\$53.03
Other Crops	13.60%	272	\$9.46	45	\$114,585	\$65.27	\$162.77
Totals	100.00%	2000			\$753,535	\$429.22	\$1,070.39

Note: For lentils, red lentils at \$0.31/lb is used and scaled to bu/acre by multiplying by 60. The 2% Basis Gain column shows the revenue if the basis timing improved by 2%. The 5% Basis Gain column shows the revenue if the basis timing improved by 5%. All yield data comes from the 2024 Saskatchewan crop reports. All price data comes from the SCIC 2025 base prices. Other Crops price and yield are assumed to be the average price and average yield from the itemized crops.

2.1.4 Aggregate Impact on Saskatchewan and Canadian Agriculture

Scaling these findings to the provincial level reveals significant economic implications for Saskatchewan's agricultural sector. **Table 9** shows that across Saskatchewan's 50.2 million seeded acres in 2024, the total production value reaches approximately \$19.4 billion. With a 2% improvement in basis timing, Saskatchewan's grain and oilseed producers could collectively realize an additional \$11 million in revenue, and this figure jumps to \$27.5 million with a 5% improvement. The largest gains would be realized in canola (\$3.1-\$7.6 million) and spring wheat (\$1.8-\$4.6 million), reflecting their dominance in Saskatchewan's crop mix with 12.1 million and 9.1 million acres respectively. Even smaller crops like peas, with 1.7 million acres, could see provincial gains of \$369,072-\$920,384. These figures demonstrate that seemingly modest improvements in basis timing can generate substantial aggregate economic benefits across Saskatchewan's agricultural sector.

Table 9:
Saskatchewan Economic Impact of Basis Improvements on Grain and Oilseed Production

Crop Type	Seeded Acres in Saskatchewan (2024)	Avg. Price (CAD/bu)	Yield (bu/acre)	Total Production Value (CAD)	2% Basis Gain	5% Basis Gain
Canola	12,085,600	\$13.5	33	\$5,384,134,800	\$3,066,878	\$7,648,107
Spring Wheat	9,056,600	\$7.74	46	\$3,224,511,864	\$1,836,727	\$4,580,385
Durum Wheat	5,115,800	\$8.01	33	\$1,352,259,414	\$770,266	\$1,920,870
Lentils	3,646,900	\$18.6	22	\$1,476,483,934	\$841,026	\$2,097,330
Barley	2,803,800	\$4.68	63	\$826,672,392	\$470,884	\$1,174,279
Oats	1,033,000	\$3.31	79	\$270,119,170	\$153,864	\$383,701
Peas	1,735,600	\$10.37	36	\$647,934,192	\$369,072	\$920,384
Other Crops	14,708,600	\$9.46	45	\$6,196,244,194	\$3,529,467	\$8,801,699
Totals	50,185,900			\$19,378,359,960	\$11,038,183	\$27,526,755

Note: Seeded acres are sourced from the 2024 Stats Canada Seeded acres table <https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3210035901>

At the national scale, the economic impact of improved basis timing is even more substantial. **Table 10** illustrates that across Canada's 102.4 million seeded acres in 2024, the total production value approaches \$39.8 billion (assuming Canadian average yields and seeded acres rather than harvested acres). With a 2% improvement in basis timing through better export data access, Canadian producers could collectively gain an additional \$22.7 million in revenue, while a 5% improvement would yield approximately \$56.6 million. Nationally, canola remains the largest beneficiary (\$5.6-\$13.9 million) followed by spring wheat (\$4.1-\$10.3 million), reflecting their respective 22 million and 20.3 million acres of production. The "Other crops" category, encompassing 37 million acres, could see impressive gains of \$8.9-\$22.1 million. These figures highlight the significant national economic opportunity presented by improving export sales reporting transparency, with benefits distributed across Canada's diverse agricultural landscape.

Table 10:*Canada Economic Impact of Basis Improvements on Grain and Oilseed Production*

Crop Type	Seeded Acres in Canada (2024)	Avg. Price (CAD/bu)	Yield (bu/acre)	Total Production Value (CAD)	2% Basis Gain	5% Basis Gain
Canola	22,010,800	\$13.5	33	\$9,805,811,400	\$5,585,526	\$13,929,051
Spring Wheat	20,283,400	\$7.74	46	\$7,221,701,736	\$4,113,582	\$10,258,351
Durum Wheat	6,364,400	\$8.01	33	\$1,682,301,852	\$958,263	\$2,389,692
Lentils	4,174,500	\$18.6	22	\$1,690,088,070	\$962,698	\$2,400,752
Barley	6,405,400	\$4.68	63	\$1,888,568,136	\$1,075,755	\$2,682,691
Oats	2,899,900	\$3.31	79	\$758,294,851	\$431,935	\$1,077,150
Peas	3,212,800	\$10.37	36	\$1,199,402,496	\$683,196	\$1,703,739
Other Crops	37,000,800	\$9.46	45	\$15,587,206,952	\$8,878,690	\$22,141,463
Totals	102,352,000			\$39,833,375,493	\$22,689,644	\$56,582,888

Note: Seeded acres are sourced for 2024 from Stats Canada at <https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3210035901>

Macro-Level Implications of Improved Export Data Transparency

Beyond the direct revenue benefits to producers, enhanced export sales reporting could alter dynamics throughout Canada's grain value chain. Greater transparency would strengthen farmers' pricing power by reducing information asymmetry that currently favors grain companies and exporters. When farmers lack visibility into real-time export demand, they operate at a strategic disadvantage during price negotiations, often accepting suboptimal terms due to incomplete market knowledge. With access to timely export data, producers would gain leverage to time their sales more effectively and negotiate with greater confidence, potentially capturing a larger share of the final export value.

This rebalancing could lead to a reduction in margin capture by intermediaries, who currently benefit from opacity in the system. Naturally, grain companies, processors, and exporters have leveraged their information advantage to optimize their purchasing strategies and maximize margins when acquiring grain from producers. As transparency increases, some of these intermediary margins may redistribute toward primary producers, creating a more equitable distribution of value across the supply chain. While this shift might encounter resistance from entities benefiting from the status quo, it represents a more economically efficient outcome that better aligns information access across all market participants.

2.1.5 Stakeholder Implications Across the Value Chain

Stakeholder Analyses

- Farmers
- Grain Co's
- Exporters, Processors
- Transportation Suppliers
- Policy Makers



Farmers

Enhanced export reporting would provide producers with significantly fairer market access by closing the information gap they currently face. With timely export data, farmers would gain critical visibility into global demand patterns, allowing them to make more strategic marketing decisions rather than relying on limited local signals. This increased transparency would likely contribute to improved income stability by reducing the “guess work” in timing grain sales and helping farmers capture stronger basis opportunities throughout the marketing year. Additionally, farmers would be empowered to make more informed storage and sales decisions, potentially optimizing their on-farm storage utilization and reducing cases where grain is sold at seasonal lows due to information disadvantages. For smaller operations with limited market intelligence resources, this democratization of export data would be particularly valuable in leveling the playing field against larger, more sophisticated market participants.

Grain Companies

The implementation of comprehensive export reporting would reduce the significant information advantage grain companies currently enjoy in the marketplace. Companies that have traditionally leveraged proprietary export sales knowledge to optimize their procurement timing and margins would need to adjust their business strategies in a more transparent environment. This could necessitate a shift toward creating value through enhanced service offerings, logistics efficiencies, or risk management tools rather than information arbitrage. Some grain companies may need to redesign their procurement approaches to maintain competitiveness in an ecosystem where farmers have greater pricing leverage. However, those companies that adapt effectively could benefit from more stable sourcing relationships and potentially increased volumes from producers who appreciate transparent dealing, ultimately creating a more sustainable business model built on service quality rather than information asymmetry.

Exporters & Processors

For exporters and processors, greater transparency in export reporting would likely create more predictable grain flows throughout the supply chain as producers respond more rationally to actual market signals. This improved predictability could enhance operational planning and reduce some logistical bottlenecks currently experienced during peak seasons. However, these entities would also likely face potentially tighter margins as farmers capture a greater share of the export value through better-timed sales. Export-focused businesses may need to find new sources of competitive advantage beyond information control, such as developing specialized market relationships, improving logistical efficiency, or offering more sophisticated risk management products to farmers. Those processors and exporters who embrace transparency as an opportunity rather than a threat could strengthen producer relationships and differentiate themselves in a changing marketplace that increasingly values ethical business practices and informational fairness.

Transportation Networks

For Canada's railways, ports, and associated logistics providers, enhanced export reporting would level the playing field by facilitating access to critical demand information that currently remains accessible only to the largest players with significant resources. While major rail companies and large grain handlers likely already purchase proprietary export sales data through private vendors, making this information publicly available would benefit smaller logistics operators, short-line railways, and independent trucking firms that currently lack the financial resources to acquire such intelligence.

This broader distribution of export information may enable more coordinated system-wide planning rather than fragmented decision-making limited to dominant players. Even for larger transportation entities that already access some export data, a standardized, comprehensive reporting system could provide greater detail and reliability than the current patchwork of private intelligence. This shared visibility would facilitate better integration between different transportation modes, rail, truck, and vessel, allowing for more seamless multimodal coordination as grain moves from farm to port. The resulting improvements in transportation efficiency could reduce seasonal bottlenecks, lower overall logistics costs, and potentially create more competitive pricing for producers as transportation providers compete on service quality rather than information advantage.

According to CN's 2023-24 Grain Plan (p. 18), "Customers across all CN business segments have knowledge critical to CN's resource planning... The more information is shared with CN about forecasts and resource updates, the more CN can adjust to the uncertainties that impact markets and demand."⁶¹ Ultimately, a more transparent export reporting system would benefit Canada's grain transportation network — driving a more cohesive, responsive supply chain better equipped to serve the dynamic needs of global grain markets.

Policy Makers

The quantifiable economic benefits demonstrated in this analysis provide compelling evidence for policy makers to support public investment in export transparency systems. With potential national gains of \$22.7-\$56.6 million annually, the case for regulatory reform becomes financially justifiable on pure economic grounds. Policy makers would have clear metrics to evaluate the return on investment for developing and maintaining comprehensive export reporting frameworks similar to those in competing markets like the United States. Beyond direct economic returns, policy makers could point to broader benefits including enhanced market efficiency, improved international competitiveness of Canadian agriculture, and greater rural economic stability. The data also suggests that such transparency initiatives align with policy objectives around supporting small and medium-sized farm operations, promoting more equitable distribution of value throughout the agricultural supply chain, and strengthening Canada's position in increasingly complex global markets where information access is a critical competitive factor.

Counter arguments and industry pushback

A counter argument raised by some industry groups and certain grain companies is the potential risk that detailed export sales reporting could inadvertently benefit competitor countries by providing them better insights into the Canadian situation. However, as analyzed extensively in Section 1.3, Canada's current lack of transparency is itself the true competitive disadvantage, considering that Canada's major competitors, notably the U.S. and EU, already operate within a highly transparent market environment. Thus, sophisticated competitors already have sufficient access to global market intelligence through robust public systems such as those maintained by the USDA and EU, enabling strong inferences about Canadian market positions. Conversely, Canadian farmers, facing greater effort and cost constraints, are disadvantaged by their inability to aggregate and leverage such existing global data sources effectively.

Therefore, implementing a Canadian export sales reporting system would not necessarily provide competitors with novel insights unavailable elsewhere but would rather level the informational playing field, benefiting Canadian stakeholders by providing equal access to high-quality and timely data already influencing their international counterparts. Notably, many of the same companies opposing this measure in Canada are already complying successfully with similar requirements in the U.S.

⁶¹ CN 2023-2024 Grain Plan, source: <https://www.railwayage.com/freight/class-i/cn-releases-2023-24-grain-plan>, accessed July 2025

2.1.6 Supply Chain Resilience and Innovation

Qualitative Benefits

Enhanced export transparency would catalyze significant improvements in demand forecasting capabilities across Canada's agricultural supply chain. With timely export sales data, stakeholders from farm to port would gain the ability to anticipate market movements with greater precision, reducing the reactive decision-making that often characterizes the current system. This improved foresight would allow for more proactive resource allocation, from on-farm planning to transportation logistics. Specifically, farmers could better anticipate regional demand surges, elevator managers could optimize facility utilization, and rail providers could allocate cars more efficiently to meet actual export commitments rather than speculative estimates.

The availability of comprehensive export data would fundamentally transform inventory management and export scheduling throughout the grain handling system. Currently, information gaps lead to suboptimal storage decisions and inefficient movement of grain, contributing to seasonal bottlenecks and logistical constraints. With greater transparency, the entire supply chain could better coordinate grain movements to match actual export sales commitments, potentially reducing costly demurrage charges at ports and alleviating the periodic transportation crunches that undermine Canada's reliability as a supplier. This improved coordination would likely result in more stable basis patterns throughout the marketing year, benefiting both producers seeking to sell and buyers needing to acquire grain.

Perhaps most significantly, enhanced export reporting would provide the foundation for a new generation of digital tools and advisory systems that integrate public data feeds into actionable market intelligence. These innovations could range from farm-level marketing apps that alert producers to emerging export opportunities to sophisticated enterprise systems that optimize grain company operations. The democratization of this critical market information would stimulate technology development from both established agricultural technology firms and innovative startups seeking to add value in a more information-rich environment. The resulting ecosystem of data-driven tools would enhance decision-making at every level of the supply chain, creating compounding benefits beyond the direct financial impacts quantified in our analysis.

Connection to Global Competitiveness

Implementing comprehensive export reporting would position Canada as a transparent, efficient export origin in increasingly scrutinized global markets. As international buyers place growing emphasis on supply chain visibility and predictability, Canada's reputation would be enhanced by providing clearer signals about its export commitments and available supplies. This transparency could strengthen Canada's competitive position relative to origins with more opaque reporting systems, potentially attracting buyers who value reliability and clarity. In particular, this could create advantages in premium markets where buyers are willing to pay for reduced supply chain uncertainty.

The adoption of enhanced export reporting would also align Canadian practices more closely with those of major competitors, notably the United States and European Union, both of which maintain more robust export reporting frameworks. This alignment would level the competitive playing field, eliminating a structural disadvantage currently faced by Canadian market participants who must operate with less information than their American counterparts. Furthermore, it would facilitate more seamless cross-border trade analysis and decision-making, particularly important given the integrated nature of North American agricultural markets. By adopting export reporting standards comparable to these leading agricultural exporters, Canada would demonstrate its commitment to modern, transparent market practices while ensuring Canadian farmers and grain companies have access to the same quality of information as their international competitors.

2.1.7 Risk Scenarios and Implementation Considerations

Adoption Curve Challenges

The successful implementation of enhanced export reporting faces a significant challenge in the varied capacity of farmers to interpret and effectively utilize the newly available data. This adoption curve risk represents perhaps the most substantial barrier to realizing the full economic benefits quantified in our analysis. While larger operations with dedicated marketing staff may quickly incorporate export data into their decision-making, many small and medium-sized farms lack the analytical resources or specialized knowledge to translate raw export figures into actionable marketing strategies.

The technical nature of export data, including considerations like outstanding sales, shipment schedules, and destination markets, requires contextual understanding that many producers may initially find challenging to develop.

Farmers typically operate within established grain marketing frameworks, often relying on trusted advisors, grain marketing consultants, or agricultural economists to inform their selling decisions. For export transparency to deliver its potential value, this new data stream must be effectively diffused throughout existing advisory networks and integrated into the practical recommendations that reach farmers. This process will require deliberate knowledge transfer efforts, including educational initiatives, training programs for farm advisors, and the development of interpretive resources that translate complex export patterns into straightforward marketing guidance. Without these supporting mechanisms, there exists a risk that the benefits of transparency will flow primarily to sophisticated market participants, potentially exacerbating rather than reducing existing information disparities.

The agricultural technology ecosystem will play a crucial role in addressing this adoption challenge by developing user-friendly interfaces and decision support tools that make export data accessible to farmers with varying levels of marketing sophistication. However, the development of these tools depends on private sector perception of market opportunity, which may result in uneven availability across different crop types or regions. Ultimately, the success of export reporting reforms will be measured not just by the quality of data provided, but by how effectively that data is integrated into the practical marketing decisions made by farmers throughout Canada.

Implementation Costs and Considerations

The establishment of a comprehensive export reporting system entails significant implementation considerations related to timeline, and data standards. Government infrastructure requirements represent another important consideration. A robust export reporting system would necessitate the development of secure data collection portals, verification mechanisms, analytical capabilities, and public-facing dissemination platforms. Additionally, consideration must be given to how export data will be integrated with other agricultural statistics programs to provide a coherent analytical framework for users. The staffing implications may also be significant, as the system would require personnel with specialized expertise in agricultural markets, data management, and compliance monitoring to ensure accurate and timely reporting.

Establishing appropriate data standards represents a critical foundation for effective export reporting. These standards must balance several competing objectives: providing sufficient detail to be actionable, maintaining commercial confidentiality where genuinely necessary, ensuring compatibility with international reporting frameworks, and remaining adaptable to evolving market structures. Decisions regarding reporting thresholds, frequency of updates, level of disaggregation by crop type and destination, and verification procedures will all significantly impact the system's usefulness. Furthermore, consideration must be given to how Canadian reporting standards can align with major trading partners like the United States and the European Union to facilitate cross-border market analysis. By carefully addressing these implementation considerations, policymakers can create a system that delivers meaningful transparency while minimizing disruption and administrative burden for market participants throughout the agricultural value chain.



III. Summary and Policy Recommendations

Recommendations

- Export Sales Data
- Port Load Data
- Pipeline Cost Data

3.1 Summary of Findings

Section 1: Current State and International Comparison

Section 1 of this study provided a detailed analysis of the current export sales data landscape, revealing that Canada significantly lags behind key competitors in agricultural data transparency. The literature demonstrates clear consensus that higher levels of data transparency led to economic gains. Our comparative analysis shows:

- **United States:** Maintains comprehensive daily export sales reporting through USDA, providing daily and weekly market intelligence to all participants
- **European Union:** Enforces strict transparency regulations designed to promote competition throughout the supply chain. Reports and data releases are timely, but reports are more aggregated than the U.S.
- **Australia:** Similar to Canada, with limited real-time export data availability
- **Canada:** Lacks timely export sales reporting, creating information asymmetry that disadvantages farmers

The analysis documented increasing market concentration among grain buyers, leading to power imbalances that could be mitigated through equal access to current sales data. Both the U.S. and EU have implemented protocols specifically designed to foster competitive marketplaces through data transparency, an approach notably absent in the Canadian system.

Section 2: Economic Impact Analysis

Section 2 quantified the economic benefits of improved market information access through comprehensive modeling of farmer grain marketing decisions. Key findings include:

- **Individual farm level:** Access to export sales data could improve farmer revenues through better basis timing and marketing decisions
- **Provincial impact:** Scaling to Saskatchewan alone shows potential \$11 mln annual gains
- **National implications:** Significant economic opportunity, potentially \$22.7 mln, across Canada's grain and oilseeds sector
- **Supply chain benefits:** Improved planning and resource allocation for exporters, processors, and transportation providers

The analysis likely underestimates true benefits, as it focuses solely on marketing decisions without capturing additional gains from improved cropping decisions and supply chain efficiencies. While farmers gain from increased market intelligence, grain companies may experience reduced information advantages, a transition successfully managed in other jurisdictions. Furthermore, welfare gains can be experienced up the entire supply chain as the data can be used by exporters, processors and transportation providers to make better planning and resource allocation decisions, improving responsiveness and promoting productivity gains throughout the supply chain.

3.2 Policy Context and Importance

The current market environment, characterized by ongoing trade tensions, tariff uncertainties, and the imperative for market diversification, underscores the critical importance of data transparency programs for maintaining competitiveness in global export markets. Producer margins remain under intense pressure from high input costs and volatile commodity prices, making even modest improvements in price realization vital for farm viability. Canada's ability to compete in existing and new markets depends fundamentally on streamlined supply chains, rapid demand response capabilities, and marketing agility, all of which are enabled by transparent market data.

This report provides compelling evidence that greater data transparency generates positive aggregate impacts on Saskatchewan and Canadian agriculture broadly. However, the implications vary across the value chain, which will influence stakeholder support levels. Farmers gain through increased access to current market intelligence, while grain companies face reduced information advantages and must adjust their procurement strategies, noting that major grain companies have successfully adapted to similar changes in the U.S. and EU markets. Our analysis indicates that export sales data could improve the price that farmers receive for their grain by minimizing basis by 2-5%, a conservative estimate that likely understates the true value when considering additional benefits from optimized resource allocation and cropping decisions. In addition to more optimal marketing decisions, sales data may also help in farm resource allocation (e.g., cropping decisions). Furthermore, welfare gains can be experienced up the entire supply chain as the data can be used by exporters, processors and transportation providers to make better planning and resource allocation decisions, improving responsiveness and promoting productivity gains throughout the supply chain.

Understanding these differential impacts across stakeholders is crucial for policy makers. Without comprehensive appreciation of both the overall benefits and the specific effects on each supply chain participant, policy makers risk being swayed by selective voices of vested interests rather than pursuing reforms that maximize total economic value for Canadian agriculture.

3.3 Policy Recommendations: Reporting Requirements

Based on our analysis, we propose three core reporting mechanisms to align Canada with international best practices:

Proposal 1: Export Sales Reporting Program

We recommend establishing a comprehensive export sales reporting system that publishes daily data on large sales (50,000 MT or more) to individual destinations and cumulative sales (100,000 MT or more over a reporting period) to single destinations for major grains including wheat, durum, barley, oats, canola, soybeans, peas, corn, and lentils⁶². Exporters would report commodity type, class, quantity, marketing year of shipment, and destination (if known) by the afternoon following the sale, with summaries published the next business morning. The system would differentiate reporting thresholds by commodity: minimum 50,000 MT for wheat and canola, and 20,000 MT for durum, barley, oats, soybeans, peas, corn, and lentils. Additionally, AAFC/Statistics Canada would release a compiled weekly report every Thursday morning summarizing all major Canadian agricultural exports by amount and destination, with free public access to all reports.

The Canada Statistics Act grants broad authority to the Minister and the Chief Statistician to determine the scope and frequency of data collection and publication. Specifically, **Section 21** empowers the Chief Statistician to “collect, compile, analyze, abstract and publish statistical information” on economic activities, while **Section 22(h)** explicitly includes “foreign and domestic trade” as a subject of collection. Under **Section 25**, customs officers must collect and transmit export information “in the manner and form prescribed by the Minister.” Taken together, these provisions suggest that implementing a daily or weekly export sales reporting system for agricultural commodities falls within the existing legislative framework and could be enacted through ministerial regulation or directive, without requiring amendments to the Act itself.⁶³

⁶² The crops are aligned with data already provided in the weekly CGC handling report.

⁶³ Canada Statistics Act, source: <https://laws-lois.justice.gc.ca/PDF/S-19.pdf>, accessed July 2025.

Proposal 2: Weekly Port Loading Export Report

We propose reinstating weekly export loading reports for each major port (Vancouver, Prince Rupert, Thunder Bay, and St. Lawrence), detailing volume, commodity type, and vessel destination. Port authorities already collect this operational data as part of their mandate to manage goods movement within their jurisdictions. Under **Section 28(2)(a)** of the *Canada Marine Act*, port authorities are empowered to engage in activities “related to shipping, navigation, [and] transportation of... goods” as specified in their letters patent, the formal instrument that defines each authority’s operational powers.⁶⁴ Precedent exists: until 2012, the Port of Vancouver published weekly vessel lineups and loading volumes every Friday by noon. Reinstating this reporting would transform a system currently reliant on historical data released weeks later into a real-time market intelligence tool, supporting faster, more coordinated decision-making across Canada’s grain supply chain.

Proposal 3: Annual Pipeline Cost Transparency

Understanding pipeline costs is fundamental to interpreting international market signals and assessing elevator bid competitiveness, yet farmers currently lack any reliable method to evaluate FOB or CIF⁶⁵ market values against posted elevator bids. Both rail freight rates and handling costs remain opaque under claims of proprietary information. However, it is possible to publish average rail rates and average handling charges incurred, while preserving privacy around company rail contract rates and individual handling charges. We propose that Quorum Corporation⁶⁶, in its role as monitor of the prairie grain handling and transportation system, publish annual average rail freight rates by corridor and commodity, aggregated to protect individual contract confidentiality while providing essential market visibility. Additionally, the Canadian Grain Commission should publish average FOB costs at both primary and terminal elevators, enabling producers, policy analysts, government agencies, and politicians to understand and assess true system costs while preserving competitive confidentiality.

Existing legislation provides a pathway for publishing aggregated and anonymized cost data while preserving commercial confidentiality. Under **Section 50(1)** of the *Canada Grain Act* ⁶⁷, each elevator licensee must file “a schedule of the charges to be made at the licensed elevator” before the crop year begins. This gives the Canadian Grain Commission (CGC) access to a consistent data set that could support the publication of average FOB costs at both primary and terminal elevators. Aggregating these values would enhance transparency and market insight while respecting company confidentiality.

Similarly, under **Section 50(1)** of the *Canada Transportation Act* ⁶⁸, the Canadian Transportation Agency (CTA) has authority to inquire into and report on “any aspect of the federal transportation system.” While the Act does not explicitly address confidentiality, in practice, public agencies like Quorum Corporation, operating under Transport Canada’s Grain Monitoring Program, have successfully published system-level performance and cost data without compromising commercial privacy. Building on this precedent, Quorum could publish annual average rail freight rates by corridor and commodity, empowering producers and policymakers with clearer insight into the cost structure of grain movement across the Prairies.

⁶⁴ Canada Marine Act, source: <https://laws-lois.justice.gc.ca/eng/acts/c-6.7/>, accessed July 2025.

⁶⁵ Free on board (FOB), and Cost, insurance, freight (CIF).

⁶⁶ https://grainmonitor.ca/about_us.html accessed May 2025.

⁶⁷ Canada Grain Act, source: <https://laws-lois.justice.gc.ca/eng/acts/G-10/>, accessed July 2025.

⁶⁸ Canada Transportation Act, source: <https://laws-lois.justice.gc.ca/eng/Acts/C-10.4/index.html>, accessed July 2025.

3.4 Implementation Opportunities

Opportunities

- Trade Environment
- Grain Act Renewal



Responding to a Shifting Global Trade Environment

The agriculture trade environment has not been left unscathed by the ongoing tariff escalation initiated by the United States. The evolving trade landscape demands immediate action to foster productivity gains and enhance competitiveness. The ongoing disruptions in global agricultural trade, characterized by tariff uncertainties and shifting trade relationships, have forced all major exporters to seek market diversification. Canada faces intense competition for alternate markets, and success will depend on continuously streamlined supply chains, rapid response to new demand, and marketing agility. The current environment of information asymmetry inhibits supply responses and constrains export maximization precisely when flexibility is most needed. Implementing these transparency measures would provide the foundation for Canadian agriculture to respond effectively to rapidly changing global market conditions.

For producers specifically, the outlook suggests persistently tight margins due to elevated input and machinery costs against volatile commodity prices. In this challenging environment, any measurable improvement in returns per acre through better market timing and enhanced resource allocation becomes critically important. Data transparency offers a cost-effective mechanism to improve farmer profitability without requiring significant capital investment or operational changes.

Solidifying Changes in Legislation: Canada Grain Act Opportunity

The recent analysis suggests that new legislation may not be strictly necessary to implement improved export sales and cost reporting. Existing authorities under the *Canada Grain Act* and *Canada Transportation Act* already empower agencies like the Canadian Grain Commission (CGC) and Quorum Corporation to collect and publish relevant data, particularly when aggregated to preserve commercial confidentiality. However, the ongoing review of the *Canada Grain Act* presents a timely opportunity to codify these practices into law, providing permanence, clarity of mandate, and enforceability across government and industry stakeholders.

Embedding export sales reporting requirements within the *Canada Grain Act* would formalize authority within the CGC, while enabling the Minister of Agriculture and Agri-Food Canada (AAFC) to direct implementation through regulation. This would strengthen the role of AAFC as the coordinating body for publication and dissemination, building on its existing functions and relationships with both Statistics Canada and the CGC.

Codifying such requirements would not only level the playing field between producers and other supply chain actors but would also enhance Canada's ability to anticipate transportation needs and respond to shifting export demand. Improved demand visibility, grounded in actual sales data, would help optimize rail capacity allocation, reducing costly bottlenecks and ensuring the sector can fully capture export opportunities. As global markets move decisively toward greater data transparency, Canada must evolve in step. The policy infrastructure already exists; what remains is to solidify the system through clear, enforceable legislation that protects producers' interests, aligns with international best practices, and reinforces Canada's position as a trusted global supplier.

Agriculture remains a cornerstone of the Canadian economy, generating significant export revenues and supporting rural communities across the nation. To maintain and enhance this vital sector's contribution, we must embrace reforms that enhance efficiency, productivity, and competitiveness. The recommendations presented here offer a clear path forward, grounded in international best practices and supported by quantitative economic analysis. As global agricultural markets evolve toward greater data transparency and Canada pursues broader trade relationships, modernizing our export reporting framework becomes increasingly important for maintaining competitiveness. The opportunity exists, the benefits are clear, and the time to be forward-looking is now.

Approaches to Implementing a Data Release System

Regardless of legislative path, implementation should prioritize simplicity, scalability, and usability. Two viable approaches that are available are:

1) decentralized approach and

2) centralized approach.

A lightweight decentralized approach could be adopted wherein exporters, grain companies, and relevant logistics actors are simply required to publish data in a standardized format, for example, through weekly spreadsheets or downloadable dashboards on their websites. By specifying a consistent schema and schedule, and requiring machine-readable formats (e.g. CSV, JSON, Parquet), policymakers can ensure usability while minimizing compliance burdens. This model mirrors successful low-cost reporting frameworks used in other jurisdictions and sectors.

Alternatively, a centralized system managed by Statistics Canada or Agriculture and Agri-Food Canada (AAFC) could serve as a common repository, with stakeholders submitting their data through a secure portal. While this model would involve more infrastructure, it would also enable broader data linkages and facilitate more timely analytics across government and industry.

Importantly, these public-sector options need not shoulder the full burden of information delivery. Private firms and farmer-facing platforms are well positioned to build value-added services, from aggregating export flows and prices to integrating the data into existing tools and applications. A public data release mandate would unlock this innovation, enabling the private sector to meet producers where they are and tailor insights into farm-level decision-making.

