An evaluation of the present situation for Western Canadian grain farmers within a historical context

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Summary

Grain farmers on the Canadian prairies are at many competitive disadvantages compared to the other major grain exporting regions, Ukraine, Argentina, Western Australia, and the USA, around the globe. Prairie farmers are landlocked so they rely on two railways to transport their grain thousands of kilometers from the prairies to deep water ports. This adds extras costs in both time and transportation that their competitors do not face. For example the average length of rail haul for grain in Australia is 280 km compared to the Canadian average length of rail haul which is 1524 km.[1] The single-desk Canadian Wheat Board was able to overcome these competitive disadvantages by creating a highly successful and competitive quality-assured, just-in-time grain export system. In addition the single-desk was structured in such a way that it added value to farmers' grain by allowing them to retain the beneficial ownership of their product until it was delivered to their customers. Farmers, therefore, realized extra revenue from many points in the system including despatch earnings and price premiums.

The western Canadian grain handling, transportation, and marketing system is a complex network that has been built and refined since 1900. On 15 December 2011 royal assent was given to Bill C-18 which effectively ended the single-desk Canadian Wheat Board that had been in place since 1943.[2] The end of the single-desk has led to the significant defects for farmers in the remaining system once again manifesting themselves. From a historical perspective the problems which appeared in the western Canadian grain handing and export system as a result of the loss of the single-desk were essentially the same problems which occurred when earlier incarnations of the single-desk marketing of the prairie grain crop were terminated. While the Canadian Wheat Board is the most well-known and longest running grain marketing agency for Canadian prairie farmers it is not the first. Indeed, two other instances of single-desk marketing have existed on the prairies and both achieved successful results for prairie farmers.

Prairie farmers are currently seeing lower farm gate prices largely because of increased basis costs including increased handling and elevation costs. Rail transport of grain has also experienced problems even though railway performance has not experienced negative changes and this in turn has negatively impacted the west coast ports, especially the port of Vancouver. The main issue with grain movement currently is the organization and coordination of grain movement is no longer centralized. This has in turn created the problem of incorrect grades of

grain arriving at ports and grain arriving off schedule. The less accessible port at Churchill has also been significantly and negatively affected by the changes occurring in grain transportation and handling. Additionally, Canada's reputation as a supplier of quality assured grain has been damaged as international customers have publically complained about the quality of Canadian grain received and shipment delays.[3] The Canadian grain handling, transportation, and marketing system became built around the single-desk Canadian Wheat Board so that in essence it acted as the lynch-pin of this system. Consequently at the root of the current problems in the transportation, marketing, and handling of the prairie grain crop is the removal of the single-desk and the functions it performed related to these aspects.

Historical overview

Structure of the Grain Trade

The core structure of the international grain trade has not changed significantly since 1900 and many of the same companies that were involved then remain active in the present. In 2003 80 percent of the grain trade was in the hands of just five companies. The trade is very concentrated. ADM (Archer Daniels Midland), founded 1902, Bunge, founded in 1818, Cargill, founded in 1865, and Louis Dreyfus, founded 1851, are the most dominant grain trading companies in the international grain trade. More recently Glencore, founded in 1974, has become heavily involved in grain trading rising to fifth place. It bought Viterra, which was the result of the merger between Saskatchewan Wheat Pool and Agricore United. In the grain trade "over 70 percent of the global grain market" is controlled by ADM, Bunge, Cargill, and Louis Dreyfus.[4]

In Canada there are two primary railways which move grain from the prairies to deep-water ports. The Canadian Pacific Railway (CPR) was founded in 1881. Canadian National Railway (CNR) was originally created through a government takeover of Canadian Northern Railway in 1918 and other small railway companies in the following years.[5] Currently CPR and CNR are still the major railways in Canada and transport the vast majority of prairie grain. Grain farmers in the Prairie Provinces rely on these railways to move their grain to deep-water ports.

Early single-desk agencies

By the time the federal government was considering the single-desk Wheat Board in 1935 orderly marketing and single-desk selling were not new concepts for prairie farmers and their organizations. They had already been involved with and experienced both in action. Nor were these concepts new for the Federal government. The first single-desk was put in place at the end of the First World War. The futures market for grain, during the war, became essentially non-functional due to the British government's monopoly buying efforts on behalf of the Allies. Since it was common knowledge that the British were the single largest buyers in the market and that they could not resist buying indefinitely, as a pure speculator could, the price of grain would fall rapidly when it was obvious that the British were not buying just as it would rise when they were. Since the war effort required a constant and consistent supply of grain the British buying agency purchased futures contracts at such large volumes it managed to corner the market on wheat in early 1917.

The Federal government in conjunction with Winnipeg Grain Exchange tried to solve the rapidly rising prices created by the combination of a poor quality harvest and the British corner on wheat. There were, however, only short-term remedies that did nothing to prevent the same conditions from occurring again when the Allies needed to buy more grain.[6] Ultimately it was obvious that the speculative market no longer functioned and futures trading had to be stopped.[7] The Exchange itself asked that government takeover grain marketing since it accepted that it could not prevent the problem from occurring again.[8] The Board of Grain Supervisors, therefore, was created to manage wheat marketing and it terminated all futures trading beginning 1 September 1917 after speculative trading created significantly fluctuating prices.[9]

Post World War I – Speculative failures and first single desk

An attempt was made in mid-1919 to re-open the speculative market but once it became clear that grain crops would be lower than expected the futures price rose quickly increasing by 25.5 cents in a week. This sharp increase was taken as a sign of another speculative surge in wheat futures – essentially igniting once more the problem that had initially compelled the closure of the speculative market and the creation of the Board of Grain Supervisors.[10] The obviously destabilized price of wheat caused great concern so the federal government was again forced to intervene by closing the market and implementing a single-desk wheat board.[11] This wheat board was created 31 July 1919 under the War Measures Act by Privy Council (P.C.) 1589.[12] Sir George Foster, who was responsible for grain policy at the time for the Federal government as Minister of Trade and Commerce, explained that with the Wheat Board:

> the farmer will thus receive the best world price for his wheat in a cash payment at the time of his sale and the final payment when the wheat crop has been disposed of . . . The government has been actuated in its decision by desire to secure for the Canadian farmer the best possible price for his product and, at the same time, to ensure to the home customer that his flour shall not cost more than is necessary by actual world prices.[13]

The single-desk of 1919 proved to be highly successful since it got a full payment of $2.63 per bushel to farmers.[14] It should be noted that this single-desk used the same initial, interim, and final payment structure as the Wheat Board which began in 1935. With this structure the 1919 Wheat Board's initial payment was lower than the $2.45 price that wheat had risen to when the speculative market had been briefly opened but once the interim and final payments were added into the price the 1919 single-desk Wheat Board price was better by $0.18 than the prices that had been seen during the rise of the speculative market.[15]

First single-desk ended – wheat prices collapse

This wheat board ended after only a year despite protests from farmers across the prairies who had experienced the direct benefit of having their grain crop marketed collectively through a single-desk. The prominent economist V. C. Fowke notes that the prices farmers experienced under the 1919 wheat board were "the highest on record."[16] Consequently the first response of the agrarian community was to demand the reinstatement of the single-desk. The election of 1921 was telling in its results as no candidates from the Conservative Party, which had refused to reinstate the single-desk, were elected in prairie ridings.[17]

Three Prairie Wheat Pools formed – Central Selling Agency

The three prairie Wheat Pools were formed as a response to the failure of the prairie farmers' campaign to get the wheat board reinstated after its dissolution in 1920.[18] The need to sign contracts with the cooperative Pool, so that the Pool would be guaranteed delivery of grain, meant that farmers in each province formed their own organizations with Alberta Co-Operative Wheat Producers Ltd. (known as the Alberta Wheat Pool) first in 1923, followed by Saskatchewan and Manitoba the following year. In order to gain greater market power as well as the ability to share resources and costs the three organizations created the Canadian Co-Operative Wheat Producers Central Selling Agency (CSA), which would market the Pool's grain to international customers. The CSA also allowed the Pools to avoid competing with each other in the international market. The Pool's CSA was set up in much the same way as the 1919 Wheat

Board illustrating how the Pools were the farmers' fallback plan after it became apparent that the Wheat Board would not be reinstated.[19]

The Pools and through them the CSA were unquestionably popular during the 1920s as can be seen by the fact that CSA was handling roughly half the prairie grain crop because of the volume of contracts farmers had signed with the Pools. By 1927 the Pools held contracts for about "70 per cent of the total wheat acreage in the three prairie provinces."[20] The CSA had a practice of selling directly to overseas customers instead of through the speculative market. Doing this allowed farmers to receive a greater portion of the world price with more reliability than when their CSA sold grain on the speculative market.

Throughout the remainder of the 1920s the CSA successfully sold prairie grain for prices which pleased the members of the Pools. It must be noted that the CSA was able to sell directly to international customers because the Pools controlled a significant network of prairie grain elevators. As a result they did not have to use the facilities of their competitors to move their grain to export position. Part of the reason the Pools created their network of prairie elevators was due to the experience of the Alberta Wheat Pool (AWP) during its first year of operations. Although AWP had agreements with line elevator companies for grain handling the AWP grain was still given a lower priority than the grain owned directly by the company.[21] This situation put the elevator companies in a difficult situation as they had to choose between moving the grain of their competition – AWP – and moving their own grain. Not unreasonably the elevators companies had a strong tendency to prioritize their grain over that of their competition. This situation clearly demonstrated the need for the Pools to handle grain through their own elevators.

Collapse of 1929

The fall of the stock market in 1929 and resulting economic depression with its consequent drop in grain prices left the CSA in a precarious position as it bankrolled its interim payments to farmers through bank loans.[22] The drastic decline in the price of grain resulted in the banks, which held the CSA's loans, becoming increasingly certain that the loans would not be repaid because they were secured by the CSA's grain holdings – the value of which was sharply declining. Significant amounts of grain had been held back so that if the Pools, through their CSA, dumped the entire amount into the already depressed market it would have further negatively destabilized the grain market. Additionally, the economist V. C. Fowke points out that if the wheat pools had failed it might have destabilized both the banking and finance sectors since they were so tightly linked to the grain trade.[23] The federal government, therefore, took over the CSA in an effort to prevent this from happening. It appointed J. I. McFarland, well known for his involvement in the grain trade, to head the CSA in 1930. The original intention of the government's takeover of the CSA was to use it to help stabilize the wheat futures market and therefore wheat prices by acting as a buyer or selling for futures as it was deemed necessary.

The price of wheat, however, steadily declined during this period. The CSA could very rarely sell any of its holdings without causing the market to react negatively. It therefore bought a significant amount of wheat futures contracts in an effort to keep the market up. Unfortunately, this policy was ineffective and by 1932 the price "of No. 1 Northern fell below 40 cents per bushel . . . a price which had no parallel in its world counterpart throughout the preceding four hundred years."[24] After four years of struggling to keep prices relatively stable and to prevent them from falling below $0.50/bushel McFarland and then Prime Minister R. B. Bennett concluded that it was impossible for the government to remove itself from working for market stabilization without having the market revert back to the state it had been in to trigger the government's involvement. Unwilling to see the speculative market, and its attendant lower farm gate prices return, the Bennett government began to look at a more long-term solution.

Creation of 1935 single-desk

The legislation that would create the 1935 Wheat Board was based on the legislation for the 1919 wheat board so that the newly created 1935 Wheat Board would act in a similar fashion in terms of setting an initial payment to farmers.[25] It should be noted that during the 1935 federal election campaign both the Liberal and Conservative parties claimed responsibility for the Canadian Wheat Board Act which is evidence of the level of popular support for the enactment of an orderly marketing system.[26] Indeed, for western Canadian farmers the issue with the 1935 legislation was that it did not proclaim the single-desk immediately[27] but instead created the conditions for what has been characterized as a "dual market" system in which the wheat board competed with the private trade in the speculative marketplace. This placed the newly formed Wheat Board into a similar situation as its precursor the Central Selling Agency which had turned its stocks of unsold wheat and futures over to the new Canadian Wheat Board. It took until mid-1938 to fully dispose of these carry-over stalks which gives an indication of the massive amount that had been purchased by the CSA in its attempts to stabilize the market. [28]

Second single-desk – dual marketing period ends

The period of 1935 to 1943 during which the Wheat Board was voluntary can be seen to have repetitions of the same problems that plagued the CSA. The largest problem was that when the initial price set by the Wheat Board was higher than the market rate producers would deliver to the Board which in turn would create a loss that the federal government would have to support. If the initial price was lower producers would sell on the speculative market and so the voluntary board, including its staff, had little to do.[29] The closure of the futures market and the proclamation of the single-desk clause in the 1935 Wheat Board Act was also the result of the return of a familiar situation. The price of grain futures had been rising and as George McIvor, then head of the Wheat Board, pointed out it was easy for the Board to continue to purchase but if it was to act as a stabilizer in the market the ultimate situation would be very similar to the one the CSA had experienced in the earlier 1930s when the only option had been to hold purchased wheat futures or sell them for a loss into a deflated market.[30] It was therefore decided that the single-desk would alleviate this potential problem. The single-desk was not ended with the close of the Second World War because there was, justifiably, concern that the drastic decline in wheat prices that had accompanied the end of the First World War would return. Secondly, farmers were not supportive of its end. In the 1945 election, the prairie constituencies voted for candidates who were willing to support the continuation of the single-desk which discouraged the federal government from removing it especially when the election results were combined with multiple prairie farm organizations calling for the continuation of the single-desk. For example, the Canadian Federation of Agriculture recommended "that the Canadian Wheat Board be continued as the sole marketing agency for wheat."[31] It was not until 1949, however, that coarse grains were added to the Wheat Board's mandate – something that was positively received by western farmers. As United Grain Growers' official history explained, "U.G. G. and other Western farm organizations took a determined stand that the Canadian Wheat Board was the selling agency of the producers and that its policies should always be based on their interests."[32] The popularity of the single-desk and the decision to expand its mandate to include coarse grains can also be seen in a 1951 plebiscite in Manitoba when "over 90% of the farmers who cast their ballots voted in favour of Board control."[33]

The Canadian Export Grain System

The Canadian export grain trade that served farmers' interests was thoroughly built using a three pronged approach manifested in the cooperative elevator system, the quality assurance and quality control provided by the Canadian Grain Commission, and the market developing and sales function of the Canadian Wheat Board with support from the Canadian International Grains Institute. As the removal of the single-desk Canadian Wheat Board has been the most recent significant change to the system this section of the paper will focus on how it fit into the overall Canadian grain exporting system and how the single-desk provided producers with access to benefits they are unable to attain on their own or through the speculative market.

On reviewing agricultural publications over its tenure, it is evident that the longer the single-desk Canadian Wheat Board was in place the more confusion over what it did and how it operated appeared in the general discussion of grain marketing, transportation, and handling. The Wheat Board acted as a single-desk seller for western Canadian farmers' wheat, barley, and, until 1989, oats for export and domestic human consumption.[34] William Morriss, who wrote the official two volume history of the Wheat Board, describes it as "a federally mandated co-operative selling agency based on the pooling concept of equal delivery and benefit rights to the participating farmers."[35] The Wheat Board consistently stated in its *Annual Reports* that its goal was to "maximize returns to western Canadian grain producers."[36] As a single-desk seller it had a competitive advantage that was enhanced by its focus on selling into the niche market for reliable, high-quality grain. It was not to have retained earnings so all revenues, minus operating costs, returned to farmers.

Orderly Marketing and Price Pooling

The first and most significant benefit that the Canadian Wheat Board provided to producers was single-desk orderly marketing and its attendant price pooling. Marketing is often confused with pricing even though the two are significantly different. Pricing is only finding out the price a buyer is offering for a product. Marketing, on the other hand, includes negotiating with buyers, branding and promoting the product, negotiating costs of moving the product to the buyer, on-going customer relations, and developing new markets. By controlling the marketing of the entire prairie wheat and barley crop the Wheat Board was able to measure out the sale of prairie grain so that the market for this grain did not experience high supplies at the fall harvest and consequently low prices or the low supplies and higher prices in the spring. This orderly marketing of grain helped to create a measured and consistent supply of grain. The single-desk issued delivery calls to farmers for delivery of grain to meet its sales commitments. In examining its organization of grain delivery the office of the Auditor General of Canada , and the Commissioner of the Environment and Sustainable Development noted that "the CWB manage[d] the overall distribution and timing of the delivery calls across Western Canada to ensure that farmers [had] equitable opportunities to deliver their grain during the crop year."[37]

Since the Wheat Board used the system of initial, interim, and final payments combined with a cash advance program farmers who needed immediate cash flow, especially revenue to service farm debt, were still able to benefit from higher prices that occurred later in the crop year. Essentially price pooling "mange[d] the risks associated with pricing farmers' grain in complex and volatile markets."[38] The pooling system for grain meant that all farmers who delivered grain to the single-desk received a percentage of the returns from the crop year.

There is a common idea that the single-desk was of more benefit to small farmers. This, however, does not fully convey how the benefits of the single-desk worked. The benefit of the single-desk was that it got proportionally higher returns per bushel for farmers. So the greater the volume of grain that a farmer delivered the greater the per bushel benefit that was received. This extra percentage return meant that the single-desk system was of more benefit to larger farms since they delivered greater volumes of grain and consequently would receive larger payments. It is important to note that under the *Canadian Wheat Board Act* the single-desk was mandated to return all the profits it made from the sale of grain, minus the expenses of its operating costs, to the farmers whose grain had been sold through the single-desk.[39] Currently, farmers sell grain to various grain companies which are either publically-traded shareholder-owned or privately owned. The companies have a mandate to create profits for their owners or shareholders. This need is fundamental to most companies both within and outside of the international grain trade. It is, therefore, highly unlikely that the grain companies which now buy farmers' grain will ever be in a position to return the full amount of their sales minus only operating expenses to the producer as the single-desk was able to do.

Without a single-desk selling agency farmers have an additional cost added by their need to invest in more storage capacity for their harvests so that they can, if they feel the price will rise, store the grain longer and have room to carry-over a harvest from a previous year. A study done by Iowa State University found that "between 2004 and 2013, holding grain off the market until the following spring resulted in prices 10 to 20 % higher than those available during harvest."[40] With the price pooling system prairie farmers had very little incentive to carry their grain over into a later point in the year or another crop year since regardless of delivery time they would receive the pooled price which allowed them to benefit from periods of high prices that occurred after their delivery.

The benefit of transparency and orderly marketing in Canadian grain exports that was achieved by the single-desk's ability to negotiate the sale of the entire prairie grain crop was graphically illustrated by the grain deals between the Soviet Union, the United States government, and American grain companies in 1972 creating what the Americans called "The Great Grain Robbery." During 1972 the Canadian Wheat Board made steady and increasingly valuable sales to the Soviet Union. In contrast to this positive experience the American grain market experienced the result of a lack of transparency; the Soviets were able to buy a significant portion of the total American grain crop at below market prices because each grain company thought it alone was negotiating a sale to the Soviet Union. Indeed, American regulations around the disclosure of sales were changed as a direct reaction to the 1972 sales in the hope that such a lack of transparency would not occur again.

The single-desk meant that all Canadian export and domestic human consumption sales of wheat, barley, and oats were made by Wheat Board staff, and the Soviets could not make use of a lack of transparency to buy Canadian grain at unusually low prices as they had done in the American system. Secondly, as the Wheat Board was aware that the Soviet Union's domestic circumstances would require significant grain imports, the Wheat Board was able to meter out Canadian grain sales over the year so that their sales would benefit as the market price of grain rose as the Soviet's intentions became more apparent. Price pooling meant that all Canadian prairie farmers benefited from the increased grain prices of that year whereas their American counterparts only achieved this benefit if they were able to hold onto their grain to sell late in the year. There has been concern since the end of the single-desk that it would be possible for Canada to experience its own version of the 1972 American Great Grain Robbery. Currently there is very limited transparency in terms of sales and pricing in the present structure of the Canadian export grain handling system.[41]

Beneficial Ownership

The second benefit of the single-desk was that it provided beneficial ownership to the farmers who used it as an agent to sell their grain. Beneficial ownership means that the owner of the product – in this case grain – retains the benefits of owning that product even after the legal title to the product has been transferred.[42] In the case of farmers, they retained the beneficial ownership of their grain until it arrived at the buyer. With the beneficial ownership provided by the CWB single-desk prairie farmers did not lose the ownership of their grain when it was delivered to the elevator as is currently the case. Stewart Wells, a former farmer-elected CWB director summarized the importance of beneficial ownership to farmers by saying that "farmers retained the beneficial ownership of their grain from the farm gate to the end-use customer and the Board was able to add value at each step of the way and then return that extra money to farmers."[43] More specifically this value adding could include the revenue generated by the single-desk's blending program and any despatch charges accumulated from the delivery of the grain. Now farmers lose both the title and beneficial ownership once they deliver it to an inland elevator. This means that any revenue generated from blending, despatch, or other uses of the grain is retained by the grain company that the farmer sold to and does not get passed back to the farmer. The National Farmers Union notes that "multinational grain companies' profits from their Canadian operations have gone up dramatically."[44] The loss of farmers' beneficial ownership of their grain can be seen as the loss of an indirect revenue source for farmers.

Blending

Blending is particularly important for selling commercial size lots of grain. Blending is combining or blending multiple grades of grain into a lot with averaged characteristics required by the customer. For farmers in Manitoba, where grains are prone to developing the fusarium head blight fungus[45] the blending program meant that grain that would otherwise be downgraded due to its fusarium content could be, with the customer's knowledge, blended into a batch of higher grade grain to create a shipment that matched the specifications of the customer.

In 2010 the fusarium head blight levels in Manitoba grain crops were unusually high.[46] Normally this would have meant affected producers receiving lower payments for their grain. Instead, the ability of the single-desk Wheat Board to access the whole prairie grain crop and blend it to customer specification meant that the board could "provide farmers the ability to receive a higher value for their grain which without this program they would not be able to receive."[47] By blending with access to the entire prairie crop the Wheat Board could take fusarium contaminated grain and have enough high quality grain to meet the Canadian Grain Commission's requirements for fusarium contamination for an export quality-assured grain grade.

The consequence of the loss of this blending program can be seen in a 2014 story in *Grain News* which advises farmers to try to blend their grain themselves, a difficult prospect for the individual farmer who may or may not have individual access to sufficient amounts of clean grain, or to see if a grain company may be willing to buy it for blending. Blending grain or taking it for cleaning, which can only be done in Saskatchewan or Manitoba due to zero-tolerance fusarium programs in British Columbia and Alberta, adds extra costs for the producer. Consequently, the *Grain News* article notes that "selling at a lower grade may not only be the more cost-effective option, it may be the only option."[48] This is a significantly different position that producers with fusarium infections are placed in now compared to when the single-desk offered fusarium blending programs. While grain companies may still buy fusarium infected grain for blending, the farmer will not receive the benefit of this blending as they would have with the single-desk blending program because their ownership of the grain ends with the delivery to the elevator. In short, farmers no longer receive all the extra revenue from blending as they used to with the single-desk CWB.

Quality Assurance

Canadian wheat has been branded around the world as being high quality. Having a high quality product, however, is not sufficient to create a strong brand. Customers needed to be assured that they will receive consistently high quality product. To ensure that customers' needs for this were met the single-desk worked together with the Canadian Grain Commission (CGC) which issued a Certificate Final which was a certification of quality for each shipment of grain.

Originally created in 1912 as the Board of Grain Commissioners the CGC, under the Canada Grain Act, "shall in the interests of the grain producers, establish and maintain standards of quality for Canadian grain and regulate grain handling in Canada, to ensure a dependable commodity for domestic and export markets."[49] It establishes the requirements for grain grades. Variety registration is handled by the Canadian Food Inspection Agency but the CGC is actively involved in the process which ensures that new varieties of grain entering into the Canadian market will perform at acceptable levels to maintain Canada's reputation for high quality grain. For exporting one of the CGC's most important roles is the issuing of the "*Certificate Final* [which] is the customer's guarantee that if there is a disagreement concerning quantity or quality of a shipment, the Canadian Grain Commission will investigate."[50] The CGC sets the standard for the grade that is loaded into an export vessel and it also sets the standard for how that vessel is to be loaded. These standards have to be met to make sure the grain is export quality. The Certificate Final was an important aspect of the sales strategy of the single-desk CWB because it could market based on quality assurance given by an independent third party. Farmers captured the price premium the single-desk was able to generate through the guarantee of quality to the buyer. Even without the single-desk the CGC's Certificate Final acts as assurance of quality control and that the customer has an official recognized procedure to use should there be issues with quality. The price premium that this can generate, however, is no longer captured by farmers.

Price Premiums

In their discussion of Canadian Wheat Board economists Andrew Schmitz and Hartley Furtan point out that "it is generally recognized that the CWB can achieve price premiums over and above what would be achievable in either its absence, or in an environment in which the CWB would be competing with other sellers of Canadian wheat, durum and barley."[51] One of the ways in which the single-desk generated price premiums was through price discrimination. As the sole marketer of Canadian wheat and barley the Wheat Board did not have to contend with other sellers potentially undermining its pricing. It was, therefore, able to price grain in different markets differently to react to the demands of each specific market. It would be difficult to do this with multiple sellers of Canadian wheat and barley. With multiple sellers of the same type of product the buyer will, not unreasonably, pick the lowest price. Although sales contracts are confidential Richard Gray, an economist who had access to Wheat Board data, writes that "I've seen the price differentials. I've done work with the CWB. I saw sales contracts on the same day for different prices. I've seen the data."[52]

Protein Premiums

One aspect of how grain is graded is its protein content. Since protein content, particularly high protein content can be a highly desirable trait some buyers have been willing to pay extra to ensure they receive grain with the protein levels they want. "Premiums are developed in response to the quantity of high quality and high protein [emphasis in original] wheat that is produced and are only revealed in the market as a cash premium."[53] Under the single-desk if buyers paid a premium for protein, that payment would become part of the return received by the farmers. In the mid-1990s, the CWB advocated for greater segregation of protein to allow for it "to meet that demand and to reflect the appropriate value back to farmers."[54]

The decline and, in some instances, the total loss of protein premiums is another significant issue related to revenue from their grain that farmers have experienced since the end of the single-desk. Grain companies do not have the same need to return the extra revenue realized from protein premiums. While protein premiums will fluctuate based on the available supply it is highly unlikely that customers have stopped paying these premiums. In 2015 prairie farmers noticed that although the prairie grain crop was yielding consistently high protein grade the premium for it was not appearing in the grain prices. The loss of protein premiums in this year was suggested to be a direct result of the high supply of protein.[55] However this argument appears to lack nuance since "a government report said the former Canadian Wheat Board payments for 2006-07 — another high-protein crop year — offered premiums of $4.56 per tonne for CWRS, 14.5 per cent protein."[56] The Alberta government's agriculture department suggests that farmers "Shop the market for the best deal . . . shop around for the company willing to offer you the best price for your specific wheat grade and protein level."[57] This is advice which implicitly supports the conclusion that currently protein premiums exist but that different companies, if they are able to secure them in their own sales, will return varying levels of this premium to the farmers who provide the high protein grain. Thus it seems unlikely that the significant difference in protein premiums that farmers have experienced with and without single-desk orderly marketing can be solely attributed to an increased supply of high protein grain. Due to distances between competing elevators it can be difficult for farmers to price discriminate amongst them. In practice looking for alternative pricing is time consuming and a higher price may not offset the extra cost to the farmer of hauling grain a longer distance.

Effectively farmers are rarely able to access a complete selection of primarily elevator companies due to the distances between delivery points.

Despatch, Demurrage, and Level of Service

Beneficial ownership also plays a role in farmers receiving despatch earnings. In contracts for grain shipping there are clauses for payment of demurrage and despatch. Demurrage is paid to the ship owner if the ship has to wait longer than the agreed upon time to be loaded. Despatch happens when the shipper loads the ship "ahead of schedule."[58] Under the single-desk any earnings from despatch would be returned to the farmer just as the farmer would ultimately pay for costs incurred in demurrage. Since the grain handling system in Canada is designed to run at or near capacity it is important to have the movement of grain coordinated so the "pipeline" of grain to the ports is always being filled in the prairies and emptied at the ports with the right grade and type of grain at the right time. When this system did not function for reasons such as the wrong grain being moved from the prairies at the wrong time or lower railway performance the single-desk would incur demurrage since as the ships waiting in port would be delayed.

In the last fourteen years of its operation the single-desk only paid significant net demurrage twice: once in 1996 and once in 2001.[59] The single-desk's shipping experience and resulting demurrage cost of $24 million during the 1996-1997 crop year and its $5 million in despatch earnings the following year are illustrative of the benefits producers received from having a single organization which handled their grain sales.[60] The cost of demurrage was so great to the CWB and consequently to farmers that the CWB launched a level of service complaint against both Canadian National and Canadian Pacific Railways through the Canadian Transportation Agency (CTA). In this complaint the CWB successfully argued that due to the failure of the CNR and CPR to "provide adequate transportation service for grain movement . . . farmers suffered substantial financial losses that included demurrage, deferred and lost sales, costs payable to customers, foreign exchange losses, additional storage costs, and interest loss to the pool account resulting lower pool returns. Damages extended to the CWB's reputation as a reliable grain supplier to world markets."[61] The CTA ruled in favour of the CWB which allowed the CWB to sue both rails to recover costs. Eventually the CWB agreed to settle with the CPR for $15 million and for an undisclosed amount with CNR.[62]

The process of launching and defending a level of service complaint is time consuming and costly as is bringing forward a legal case based on the results of that complaint. The single-desk CWB was able to do this because it had significant resources, both financial and in terms of staff expertise, to bring to the proceedings. It also acted as a shipper of grain and could provide substantial data on all aspects of the grain handling, transportation, and sales process which made it relatively easier to provide the data that would support its complaint. Secondly, the CWB's complaint acted as a form of market discipline for the railways which can be seen in their improved performance in years following the complaint to the point that the CWB did not pay demurrage charges again until 2001 and even then the charge was a relatively smaller $6 million.[63]

In the 2013-2014 crop year there was a severe backlog in grain handling and consistent reports of ships accumulating demurrage charges as they were loaded behind schedule. The Canadian Canola Growers Association (CCGA) "attempt[ed] to step into the role played by the former Canadian Wheat Board, albeit with far fewer resources" [64] when they filed a level of service complaint against CPR and CNR.[65] The CTA, however, rejected their complaint in large part due to their failure to provide substantial evidence to support their claim.[66] At the same time Louis Dreyfus Commodities Canada received a ruling in its favour from the CTA over its own level of service complaint. The difference in these two rulings illustrates not only that "the regulatory system, as it is presently structured, doesn't allow for the farmers' voice to be heard" [67] but also that the success of the CWB's complaint will be difficult, if not impossible from a practical stand point, for a group representing farmers to duplicate.

In the CTA decision on the CCGA's complaint the Agency stated that "CN and CP cannot adequately respond to the allegations in CCGA's complaint because they are too vague."[68] This statement shows the importance of solid evidence – a consideration which the decision focuses on in some detail. The Canadian Wheat Board as both the seller and shipper of prairie grain was in an especially good position to have the available information needed for a successful complaint to the CTA. Louis Dreyfus Commodities Canada as a both a shipper and seller of prairie grain also had access to the required level of information to make a successful complaint. The fact that the CCGA was unable to provide a sufficient level of detail is helpful in illustrating the difficulty of compiling the required data for a regulatory hearing.

Without the single-desk Wheat Board the farmer will see the result of grain handling companies having to pay demurrage charges resulting in lower prices for their grain. Grain handling companies, needing to make a profit, offset the cost of demurrage by buying grain at a lower price. This difference can be seen in a larger basis cost. "The basis is the difference between the world futures price and the price at the point of sale and normally reflects transportation costs, terminal handling costs, transaction costs, demurrage costs and grain company margin."[69]

The significant problems in grain handling and transportation during the 2013-2014 and 2014-2015 crop years resulted in "elevated export basis … [which] had a very large and significant impact on grain producer income in Western Canada . . . plausible impacts [were] in the order of $5 to 6.7 billion"[70] according to a study done by agricultural economist Richard Gray. The Saskatchewan Barley Development Commission notes that "using the basis numbers from Gray (2014), Saskatchewan's share would be $1.6 billion or approximately half of the cost for Western Canada. The excess basis would represent a significant revenue transfer from producers to the grain companies and the railways combined."[71] Although there were issues with transportation CNR and CPR did not experience decreased revenues.[72] Additionally, the high basis, which includes transportation costs like demurrage, "substantially increased the bottom line of grain companies and processors."[73] Farmers, as individuals, have the least market power in the grain handling and transportation system. They are price takers and therefore do not have the ability to easily download their costs to another part of the system unlike railways, grain handlers or processors. Gray notes that "Yes, (western) farmers had a good year, but that doesn't take away from the fact they could've been several billion dollars better off."[74] They would have been better off if they had not paid the higher basis costs.

The problems in shipment in the 2013-2014 and 2014-2015 crop years have been characterized as an issue with rail capacity. This contention can be seen as insufficient when viewed against the grain monitoring provided by Quorum Corporation. It has been monitoring the handling and transportation of grain since 2001 and "consults extensively with the industry's key stakeholders. The Monitoring team meets with over 40 different stakeholder groups at least once a year."[75] Its *Annual Report: 2014 – 2015 Crop Year* is a useful source of information on how the grain handling and transportation system was functioning during a time that a bumper crop was harvested and then unable to be moved to fill demand requirements at the deep-water ports.

Interestingly Quorum notes that "more grain moved through the Grain Handling and Transportation System (GHTS) in the 2014-2015 crop year than at any other point in the history of the GMP [grain monitor program]. This was reflected in record handling in the country, by rail and at the ports."[76] Rail movement of grain increased by 9.8% in the 2014-2015 crop year compared to an increase of 17.7% in the 2013-2014 crop year.[77] The Canadian Transportation Agency found that the movement of grain in 2013-2014 was 18.8% greater than in the previous year.[78] Given this positive increase in railway performance the explanation that the grain back log and consequent increase in the delayed loading of ships can be attributed only to a lack of rail capacity is not supported by the data on handlings. The single-desk CWB "often ordered [the railways] to use certain corridors, despite the longer cycle times, to ensure grain in isolated regions was not forgotten."[79] With the ending of the single-desk there was no replacement entity to perform this logistical oversight. This removal of logistical oversight for the entire grain handling and transportation system was sudden so there were no reasonable alternatives to coordinate grain movement. It is not unreasonable to conclude that a lack of logistical coordination for the system created problems with grain movement especially in light of the railways' increased performance. In 2014 when discussing problems with grain movement Claude Mongeau, President and CEO of Canadian National Railway, noted that "one of the biggest root causes of the challenge we face is lack of co-ordination across the supply chain and growing pains from new grain marketing strategies following the change in the role of the Canadian Wheat Board." [80] Reducing the issue to simply one of capacity overlooks an important aspect of how the system works has changed. Serious study and consideration must be given to the issue of a lack of system wide logistical oversight for grain movement and whether the creation of a new form of system wide logistical oversight is needed to prevent a reoccurrence of the grain movement problems of 2013-2015. Additionally, given the possible solution of creating a "grain czar" to act as logistical oversight for the system the question must then be asked if this would create higher farm gate prices or if any extra revenue generated by better organized grain movement would be retained by the grain companies acting as middlemen between the farmer and the end-use customer.

Freight Rates and the Maximum Revenue Entitlement

The Canadian Transportation Agency under the authority of the Canadian Transportation Act determines the Maximum Revenue Entitlement (MRE) for both the Canadian National and Canadian Pacific Railway Companies for hauling statutory grains to export position.[81] The MRE has been in place since 2000. It allows CNR and CPR to set their own freight rates instead of the previous legislation which set maximum freight rates that the railways had to follow. As the name implies the current MRE sets a limited on the maximum revenue amount that can be generated on the movement of western grain through freight rates. [82] Section 151 of the Act determines the MRE is to be based on several variables including the revenue of the company, tonnes of grain moved, and the length of the haul along with a factor to provide the railways with a return on their investment in grain hauling. [83] This is applied to all grains grown in western Canada and moved "from a point on any line west of Thunder Bay or Armstrong, Ontario, to 1. Thunder Bay or Armstrong, Ontario, or 2. Churchill, Manitoba, or a port in British Columbia for export."[84] Each year the CTA reviews the relevant data from the railways and determines if they have underperformed, met, or exceeded their MRE. Should a railway exceed its MRE it must pay a penalty plus the excess to the Endowment Fund managed by the Western Grains Research Foundation (WGRF).[85] This payment then benefits farmers as the WGRF funds research into plant breeding including wheat and barley research as well as other crops. The funding from the Endowment Fund requires that research projects "show potential for farmer benefit and demonstrate scientific merit."[86]

Multiplier Effects from Agriculture and Prairie Communities

The consequences of changes to farm income that result from increased costs are not restricted to farmers. A recent study suggests "that the total value of loss to producers [in the last two years] is approximately $6.5 billion dollars."[87] Farm revenue is returned to rural communities, provincial economies, and ultimately the national economy. The benefit of this revenue outside of the farm can be seen through examining agricultural multiplier effects. A multiplier effect, at its most basic, is the increase in revenue that can be seen from the addition of revenue in a particular sector. To use a simplified example a multiplier can be used to estimate how much revenue is generated in the wider community given a specific level of agricultural revenue. For example, "for every dollar worth of cattle produced by a cow-calf farm, almost 76 cents are added to the GDP."[88] This same principle also applies to grain farming as well. A case study of Brandon, Manitoba suggests that a value added multiplier effect of 0.80 applies to the agricultural industry in the province. Using this multiplier the study concludes that if there was a "$1 million increase in agricultural final demand in Brandon[,] Manitoba will sustain a total provincial income of $797 thousand and a local income impact of $521.7 thousand."[89]

Winnipeg

PricewaterhouseCoopers studied the economic effects of the single-desk Canadian Wheat Board in 2005. The study found that there were significant economic effects both directly from CWB activities and indirectly through economic activity that was linked with CWB activities. The study found that in the city of Winnipeg there were 460 jobs directly created by the CWB with another 1,834 "full-time equivalent jobs [that were] sustained by the CWB's administrative expenditures" resulting in at least $66 million in wages and salaries.[90] The end of the single-desk and its subsequent transition to a grain trading company resulted in a high level of job loss with the company laying off the majority of its workforce with the end goal of having only about 100 employees.[91] The study finds that beyond the generation of jobs and wages the single-desk's activities also resulted in "local government collect[ing] $3.1 million annually." [92] It gives a multiplier effect for the gross output of the single-desk's activities as 1.58 in Winnipeg and 1.90 in Manitoba which are part of the overall total multiplier of 2.06 generated by these activities in Canada. The gross provincial income impact totaled $852 million with $210 million generated in Manitoba. Winnipeg received $86 million in gross provincial income impact.[93]

In looking at the study done by PricewaterhouseCoopers it is clear that "significant economic gains accrue to the City of Winnipeg" but also that the economies of the Prairie Provinces were positively impacted.[94] The decrease in staff combined with the closure of the Cereal Research Centre and removal of administrative positions with the Canadian Grain Commission suggests that the economy of Winnipeg and, more broadly, Manitoba will have felt some negative impact.[95] It is unclear, however, what the level of impact would be, how long it would be felt, or how it may or may not have been off-set by the recent $2 million investment given to the Canadian International Grains Institute by the Manitoba government and federal government.[96] To date there has been no detailed study of the total economic impacts of the end of the single-desk in terms of its effects on the city of Winnipeg or the overall economies of the Prairie

Provinces but given the loss in value that famers experienced in the last two years, it is highly likely that there are broader economic losses.

Churchill

The single-desk CWB had a policy of moving grain through the port of Churchill because it was "the most cost-effective corridor for farmers in the north-eastern Saskatchewan catchment area. It save[d] farmers money in rail freight and avoid[ed] St. Lawrence Sea charges."[97] The same advantage applied to farmers in northwestern Manitoba. The Churchill Freight Advantage Rebate program was implemented in 2000 so that the CWB could "tie freight savings more closely to grain shipments."[98] The port's shipping season is short compared to other Canadian ports so to use it effectively required grain from the previous year's harvest to be easily available when the port's season began in early July. To deal with this need for grain supply in the Churchill catchment area the CWB began the Churchill Storage Program for the 2007-2008 crop year. The program paid farmers, who were in areas with favourable freight rates to Churchill, a premium to store grain on farm until a delivery call was made for it. This program was part of the Churchill Corridor Guaranteed Delivery Contract.[99] With this contract farmers would receive a "premium of $2.50 per tonne, storage payments of $1 per tonne per month and a minimum eight-month storage period, the contract would pay an extra $10.50 per tonne."[100] It should be noted that the Churchill Storage Program was a region specific program but it was similar to the Wheat Storage Program offered by the CWB, initiated in 2006-2007 crop year, to all prairie farmers to store "high-quality, high-protein, No. 1 Canada Western Red Spring . . . ensur[ing] a consistent stock . . . to satisfy the needs of farmers' premium customers."[101] Both the Churchill Storage Program and the Wheat Storage Program are no longer available to farmers.

Grain movement to the port of Churchill, Manitoba, has significantly declined since the end of the single-desk. The terminal at Churchill is owned by OmniTrax Canada. This is unlike other port terminals in Canada which are horizontally owned by inland grain handling companies and have significant levels of vertical integration with the four dominant transnational grain companies. Since these companies have port access through their own terminals they have less incentive to pay to use a terminal, like Churchill, they do not own.

The federal Conservative government created the Port of Churchill Utilization Program to provide a subsidy for the port as a way to soften its transition from the benefits of the CWB single-desk to the speculative market, since the majority of grain moved through the port was by the single-desk Canadian Wheat Board. Given that use of the port has decreased there is some concern that the end of the subsidy might mean the closure of the port.[102] This concern was exacerbated by the recent news that OmniTrax was looking for buyers for both the port and its rail line to the port.[103] A group of northern Manitoba First Nations has expressed interest in purchasing it but negotiations were still ongoing as of 24 March 2016 although Merv Tweed, President of OmniTrax Canada, suggested they might be concluded by July. How this would affect grain shipments through the port is unclear though OmniTrax indicates it “wants to move” grain through the port this coming year.[104]

Customer Reactions and Quality Concerns

There has been a recent and concerning shift in the relationship major grain consumers have with Canadian grain. News stories from Reuters and in the *Western Producer* about customer complaints about Canadian grain quality appeared in 2014 and 2015.[105] The Canadian Grain Commission, which oversees the quality control of Canadian grain, argues that “Canada’s wheat quality assurance system has not been weakened by elimination of the Canadian Wheat Board’s sales monopoly or inward inspection at export terminals.”[106] It is significant, however, that these reports of quality control and quality assurance issues have been made widely public within the agricultural press. While the single-desk competed globally through quality assurance most grain traders tend to focus on margin trading which prioritizes the volume of grain moved over the quality of that grain. It may not always be as immediately profitable to focus on quality over quantity. Additionally, there is also the problem of no company having full access to the prairie grain crop which presents the dual challenges of gaining knowledge of where to find high quality grain and still profit while incurring the costs that come with keeping high quality grain identity-preserved within the grain handling and transportation system. Part of the issue may therefore be related to the change from a single marketer of Canadian grain to multiple sellers.

The concerns around quality control may also be related to the shift from incremental grading, also known as incremental loading or incremental certification, to composite loading of grain ships.[107] Incremental grading required that each 2,000 tonne lot of grain being loaded into the vessel had to meet the required specifications for that particular load. Beginning in 2014 the Canadian Grain Commission changed their policy on how loading of ships could be done. Prior to that each ship's hold had to contain the specified grade of grain but the new policy allowed for each hold to have grain that "deviate[d] slightly from specifications as long as the composite sample for the whole vessel [met] the requirements."[108] This was brought into effect as an option to allow for what the CGC characterized as "more efficient and less costly" loading of ships.[109]

Conclusion

The single-desk Canadian Wheat Board performed a number of functions beyond simply pricing grain. Its role in marketing grain included promoting Canadian branded wheat and barley, customer relations, developing new markets, and financing sales. It acted as the lynch-pin of the Canadian grain handling, transportation, and marketing system in large part because this system evolved around the single-desk's operations, which structured the system to act in the interests of prairie grain farmers. The end of the single-desk in 2012, therefore, was a significant change in the structure of the Canadian grain handling, transportation, and marketing system.

When the CWB's role as a single-desk marketer ended in 2012 nothing replaced its function as the logistical oversight for the movement of the prairie grain crop. The loss of logistical oversight can be seen in the recent problems with grain movement during the 2013-2014 and 2014-2015 crop years. For prairie farmers these problems manifested as increased basis costs including demurrage charges for falling behind schedule on loading grain on ships waiting at port.

It is important to note that "these companies are more likely to market grain as commodities, with limited incentive to market branded products. This means that they trade grain on margins, making every attempt to buy low from farmers and sell high in the market place."[110] The result of marketing grain based on margins – essentially a focus on volume – can be seen in the concerns raised by customers over Canadian quality assurance and the decline in price premiums, including protein premiums, farmers have experienced. For prairie farmers the present state of the grain handling, transportation, and marketing system is not working in their favour. In the past two years grain farmers have lost "in the order of $5 to 6.7 billion"[111] which has impacted not only them but their local communities and provincial economies too. Economist James Nolan has suggested models show that if farmers continue to have the least market power within the grain handing and transportation system their share of a grain sale could decrease to about twenty percent compared to the forty to sixty percent they currently receive.[112] The current configuration of the prairie grain handling, transportation, and marketing system has not provided prairie farmers with a better share of the port price nor has it provided better transportation logistics for grain movement.

Looking at grain handling, transportation, and marketing in Canada from a long-term historical perspective it becomes obvious there were many attempts made to create a grains sector that would be profitable and efficient from a farmers' perspective once the initial speculative euphoria of settler recruitment waned and obvious issues began to surface. The creation of the Manitoba Grain Act, later the Canada Grain Act, to provide, among other things, provisions for grain grading and standardization provided some stabilization of the grains sectors but did not solve the problem of individual farmers being at a disadvantage to a grain handling company when selling their crop. Much like today grain prices during the early half of the twentieth century were volatile and subject to boom-and-bust price cycles that were responses to speculation and changes in supply and demand. In order to stabilize this cycle so that grain farming on the prairies could be profitable over the long term for farmers many mitigative measures were attempted but none were as successful as single-desk orderly marketing and price pooling. Given that the majority of the grain trade is still controlled by four major companies, just as it was earlier in the twentieth century, and there are only two major railways serious consideration must be given to the question of whether it is reasonable to expect that other mitigative measures, besides single-desk orderly marketing, will truly be able to raise the farmers' share of the port price or even end the significant farm income decline that has been experienced in the past two years. Solutions to the problems farmers are facing need to take a comprehensive approach within the context of western Canada's agricultural history.

Notes

[1] Grain Infrastructure Group. "Western Australia's Grain Freight Network Review: Appendices," December 2007, 34.; Canadian Transportation Agency, "Decision No. 400-R-2015," *Canadian Transportation Agency*, 29 December 2015.
[2] It should be noted that the Canadian Wheat Board Act was given royal assent in 1935 but operated in competition with the speculative grain trade for several years as the single-desk clauses were not proclaimed immediately. This attempt at a dual market proved to be costly for the federal government. The single-desk was, therefore, proclaimed in 1943.
[3] Rod Nickel, "Canadian wheat exports dogged by quality complaints," *Reuters Canada*, 3 December 2014. http://ca.reuters.com/article/domesticNews/idCAKCN0JH0BX20141203?sp=true
[4] Jennifer Clapp, "ABCD and beyond: From grain merchants to agricultural value chain managers," *Canadian Food Studies* 2, no. 2 (2015): 128-129.
[5] T. D. Regehr, *The Canadian Northern Railway* (Toronto: Macmillan Company of Canada Ltd., 1976), 452 – 470.
[6] Allan Levine, *The Exchange: 100 Years of Trading Grain in Winnipeg* (Winnipeg: Peguis Publishers Ltd., 1987), 94-96.
[7] C. F. Wilson, *A Century of Canadian Grain: Government Policy to 1951* (Saskatoon: Western Producer Books, 1978), 88.
[8] Mitchell W. Sharp, "Allied Wheat Buying in Relationship to Canadian Marketing Policy, 1914-18," *Canadian Journal of Economics and Political Science*, 6, no. 1 (1940): 382.
[9] Sharp, "Allied Wheat Buying in Relationship to Canadian Marketing Policy, 1914-18," 381-382.
[10] Wilson, *A Century of Canadian Grain*, 134-35; Fowke, *National Policy and the Wheat Economy*, 171.
[11] Wilson, *A Century of Canadian Grain*, 142-145.
[12] Ibid., 141.
[13] *Winnipeg Free Press*, 31 July 1919 quoted in Wilson, *A Century of Canadian Grain*, 136.
[14] Wilson, *A Century of Canadian Grain*, 162.
[15] V. C. Fowke, *The National Policy and the Wheat Economy* (Toronto: University of Toronto Press, 1957), 171-173.
[16] Fowke, *The National Policy and the Wheat Economy*, 177.
[17] John Herd Thompson, and Allen Seager, *Canada 1922-1939: Decades of Discord* (Toronto: McClelland and Stewart, 1985), 333.
[18] William E. Morriss, *Chosen Instrument: The McIvor Years*, (Edmonton: Reidmore Books, 1987), 14.
[19] Fowke, *National Policy and the Wheat Economy*¸ 262-3.; H. S. Patton, *Grain Growers' Cooperation in Western Canada*, (Cambridge: Harvard University Press, 1928), 199-212; Grace Skogstad, *The Politics of Agricultural Policy-making in Canada*, (Toronto: University of Toronto Press, 1987), 40; Wilson, *Century of Canadian Grain*, 172-3.
[20] Levine, *The Exchange*, 142.
[21] Leonard D. Nesbitt, *Tides in the West* (Saskatoon: Modern Press, n. d), 103-104.
[22] Morriss, *Chosen Instrument: The McIvor Years*, 38-39.
[23] Fowke, *The National Policy and the Wheat Economy*, 256-57
[24] Ibid., 259.
[25] Wilson, *A Century of Canadian Grain*, 473.
[26] Ibid., 474.
[27] Fowke, *The National Policy and the Wheat Economy*¸ 262-3. Prairie farmers had been directly campaigning for a single-desk system since 1930 with the campaign for "100% Pool" that was done in Saskatchewan. After the end of the 1919 Wheat Board the agrarian leadership in the prairies was consistently on record as having no faith that the private speculative market system of the grain exchanges would work in the interests of farmers. It was felt that farmers needed another way to deal with the selling of their grain than the speculative system. While opinion was divided between a voluntary pool, a single-desk system, or a third way, it was consistently agree on that the speculative system could not remain the only way to sell grain. Over the fifteen year between 1920 and 1935 the majority opinion settled on the need for a single-desk in part because the 1919 wheat board had been beneficial for farmers.
[28] Fowke, *The National Policy and the Wheat Economy* 259.
[29] Wilson, *A Century of Canadian Grain*, 796
[30] Ibid., 770.

[31] Quoted in Wilson, *A Century of Canadian Grain*, 809.
[32] R. D. Colquette, *The First Fifty Years: A History of United Grain Growers Limited* (Winnipeg: The Public Press, 1957), 262.
[33] W. E. Morriss, "Chosen Instrument: The Canadian Wheat Board: Facts, Fiction and Fallacy," in *The Prairie Agrarian Movement Revisited* eds. Murray Knuttila and Bob Stirling, (Regina: Canadian Plains Research Centre, 2007),89.
[34] Full details can be found in *Canadian Wheat Board Act*, S.C. 1935 and *Canadian Wheat Board Act* 1985 R. S., c. C-12, S.1. The Act was revised in 1998 to amend the governance of the Wheat Board to being more farmer-driven through the election of a 10 farmer-elected members of the Board of Directors.
[35] Morriss, "Chosen Instrument: The Canadian Wheat Board: Facts, Fiction and Fallacy,"83.
[36] Canadian Wheat Board, *Annual Report 2000 – 2001* (Winnipeg: Canadian Wheat Board, 2001), 1. This idea appears consistently though sometimes the terminology changes slightly. For example in *Annual Report 200-2007* it uses "maximize returns for farmers" instead. Canadian Wheat Board, *Annual Report 2006 – 2007* (Winnipeg: Canadian Wheat Board, 2007), 16.
[37] Office of the Auditor General, and the Commissioner of the Environment and Sustainable Development, *Canadian Wheat Board Special Audit Report Presented to the Board of Directors on February 27, 2002* (Ottawa: Office of the Auditor General and the Commissioner of the Environment and Sustainable Development, 2002), 13.
[38] Canadian Wheat Board. *Annual Report 2009-2010* (Winnipeg: Canadian Wheat Board, 2010), 35.
[39] See specifically section 33 of *Canadian Wheat Board Act* 1985 R. S., c. C-12, S.1.
[40] Des Keller, "Storing Profits," *Farm Life* (Spring 2016): 9.
[41] See for example agricultural economist Ken Rosaasen's comments in Allan Dawson, "Open-market support predicts pain from rushed end to monopoly," *Alberta Farm Express*, 5 October 2012, http://www.albertafarmexpress.ca/2012/10/05/open-market-supporter-predicts-pain-from-rushed-end-to-monopoly%E2%80%A9/
[42] John A. Yogis, *Canadian Law Dictionary* (Woodbury, NY: Barron's Educational Series, 1983), 26. Very similar to the idea of beneficial use.
[43] Stewart Wells quoted in Friends of the Canadian Wheat Board, "Farmers Disappointed by Supreme Court Refusal to Hear Case", Press Release, Swift Current, Saskatchewan, 9 April 2015.
[44] National Farmers Union, "Rebuilding Canada's agricultural institutions in the public interest for sustainable prosperous family farms: NFU submission to Federal Pre-Budget Consultation, February 2016," *National Farmers Union*, February 2016. http://www.parl.gc.ca/Content/HOC/Committee/421/FINA/Brief/BR8096092/br-external/NationalFarmersUnion-e.pdf
[45] Randy Clear and Susan Patrick, "Fusarium head blight in western Canada," *Canadian Grain Commission*, 25 January 2010, http://www.grainscanada.gc.ca/str-rst/fusarium/fhbwc-foc-eng.htm. Fusarium Head Blight first appeared at a serious level in Manitoba in the 1980s. While the province is still the most effected the disease has been moving across the prairies in the intervening decades and has been documented as far west as the grain growing areas of eastern British Columbia.
[46] Pamela de Rocquigny, Manitoba Department of Agriculture, "Managing Fusarium Head Blight At Harvest," *Manitoba Government, Department of Agriculture*, August 2010. http://www.gov.mb.ca/agriculture/crops/plant-diseases/print,managing-fusarium-head-blight-harvest.html
[47] "Fusarium Program for Wheat," *Portage Online*, 27 November 2010. http://www.portageonline.com/local/19968-fusarium-program-for-wheat
[48] Patty Milligan, "Fusarium in the bin," *Grain News*, 3 December 2014. http://www.grainews.ca/2014/12/03/fusarium-in-the-bin/
[49] Canada Grain Act. R. S. C., 1985, c. G-10, s. 13.
[50] Canadian Grain Commission, "Wheat Grading and Classification in Canada," *Canadian Grain Commission*, last modified 6 June 2009. https://www.grainscanada.gc.ca/research-recherche/dexter/cw-bc/cw-bc-3-eng.htm
[51] Andrew Schmitz and Hartley Furtan, *The Canadian Wheat Board: Marketing in the New Millennium* (Regina: Canadian Plains Research Center, 2000), 75.
[52] Richard Gray, "The Economic Impact of the Canadian Wheat Board," in *Our Board, Our Business*, eds. Terry Pugh and Darrell McLaughlin (Black Point, N.S.: Fernwood Publishing, 2007), 67.
[53] Gord Flaten, David Przednowek, and Don Flaten, "Protein Profits in the Market Place – Watch for the Signals," paper presented at Saskatchewan Soils and Crops Workshop, Saskatoon, Saskatchewan, 24-25 February 2000, 13.
[54] Adrian Ewins, "Higher the protein, higher the money," *Western Producer* 13 July 1995.
[55] Sean Pratt, "Protein levels 'almost off the chart' for wheat, durum," *Western Producer* 1 October 2015.

[56] Jade Markus, "Prairies see high-protein wheat crop, but few premiums," *AgCanada.com* 16 October 2015, http://www.agcanada.com/daily/prairies-see-high-protein-wheat-crop-but-few-premiums
[57] Neil Blue, "Wheat Quality and Protein – Why Does it Matter?," *Alberta Agriculture and Forestry,* last revised 20 August 2015. http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sis14235
[58] Canadian Wheat Board. *Annual Report 1997-1998*, (Winnipeg: Canadian Wheat Board, 1998), 15.
[59] See Canadian Wheat Board *Annual Reports* for this time period under the category of net dispatch which provides the difference between any demurrage paid and any dispatch earned for the crop year. Canadian Wheat Board, *Annual Report 2000-2001* (Winnipeg: Canadian Wheat Board, 2001), 19.; Canadian Wheat Board, *Annual Report 1996-1997* (Winnipeg: Canadian Wheat Board, 1997), 22-24.
[60] Karen Briere, "CWB earns $5 million for quick delivery," *Western Producer*, 19 November 1998.; Canadian Wheat Board, *Annual Report 1996-1997* (Winnipeg: Canadian Wheat Board, 1997), 22-24.; Canadian Wheat Board, *Annual Report 1997-1998* (Winnipeg: Canadian Wheat Board, 1998), 15, 17-19.
[61] Schmitz and Furtan, *The Canadian Wheat Board*,172.
[62] Today's Trucking, "Canadian Wheat Board, CP Rail settle claims dispute," *Today's Trucking,* 8 March 1999.
[63] Adrian Ewins, "Wheat board blames demurrage on CPR," *Western Producer,* 29 November, 2001.
[64] Laura Rance, "Grain backlog a crisis Ottawa has yet to solve," *Winnipeg Free Press* 10 November 2014.
[65] Canadian Canola Growers Association, "Canola Growers File Level of Service Complaint with Canadian Transportation Agency," Winnipeg: Canadian Canola Growers Association, 29 May 2014.
[66] Rance, "Grain backlog a crisis Ottawa has yet to solve."
[67] Ibid.,
[68] Canadian Transportation Agency, "Decision No. 360-R-2014," *Canadian Transportation Agency*, 1 October 2014.
[69] Saskatchewan Barley Development Commission, "Submission to the Canadian Transportation Act Review Panel," (Regina: Saskatchewan Barley Development Commission, December 2014), 1.
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