

## MIXING IN THE UNITED STATES

Very wide publicity has been given to reports that Canadian grain, especially Canadian wheat, passing in bond through the United States to tide water, was being tampered with and was being mixed with American soft wheat. This information came from Great Britain where it was complained that wheat through certain American ports was being delivered on Canadian Certificate Final which in fact, proved to be a mixture of Canadian and American soft wheat. At an early stage it became evident to us that these reports had caused great alarm to the Canadian producer of hard spring wheat. At numerous points the matter was brought to our attention.

While it was not possible to make a thoroughly exhaustive investigation into conditions at all American North Atlantic seaports we visited Buffalo and New York and examined there the precautions taken to preserve Canadian wheat from contamination while passing through the United States. We have also had the benefit of reports made by the United States Customs Department after investigation into the complaints emanating from Britain. The Board of Grain Commissioners has furnished us with a copy of the report of Chief Commissioner Boyd, and Chief Inspector Serls who went to England a year ago precisely to investigate this complaint. Mr. Commissioner Rutherford who visited the Old Country last summer on our behalf also looked into the matter.

It would appear that certain shipments of Canadian wheat mixed with American soft wheat delivered to apply on straight Canadian certificates have been received in England. The number of instances has not been large. The publicity which these shipments have received in trade circles and the alarm that they have created in Great Britain are significant of the extreme sensitiveness of the British market to any tampering with the quality of grain supplied on Canadian Certificate Final. In tracing statements about illicit mixing of Canadian wheat in the United States made to us at many points we found invariably that they related to the cases investigated by Messrs. Boyd and Serls and covered in their report submitted on November 24, 1923. Mr. Commissioner Rutherford, however, reports another and more recent instance, that of the steamship "Trevider" from Philadelphia, of the arrival in the Old Country of a cargo of grain under Canadian Certificate Final showing strong evidence of admixture.

No complaints are made touching grain shipped through Canadian channels of trade and out of Canadian ports, nor have any complaints been fastened upon shipments from the Port of New York. The cargoes complained about were shipped from Baltimore and Philadelphia though it does not necessarily follow that tampering with the cargoes took place at these points. It might have occurred earlier at the port of entry into the United States.

The duty of supervising the shipment of grain in bond through the United States devolves upon the United States Customs Department. The Customs Department's interest lies in preventing any gap occurring that would allow Canadian grain to be smuggled into the United States free of duty. Mr. Harry W. Smith, deputy collector of Customs at Buffalo stated after complaints had been made, four investigations were made in the United States. Two by the Customs Department, one by the State Department and one by the Federal Trade Commission. The conclusions of these four investigations were almost identical but the Federal Trade Commission did make certain recommendations that they thought would make the supervision absolutely tight. These recommendations covered closer supervision of grain at Philadelphia and certain other minor recommendations. On the whole we find that the regulations appear to be as careful as can be designed and the administration of them alert and strict.

In view of what we have stated above about the sensitiveness of the British Grain Trade to anything affecting grain delivered to them on Canadian Certificate Final we deem it of great importance that any instance of tampering with Canadian grain coming to the notice of our trade commissioners in Great Britain should be at once reported to the Board of Grain Commissioners and that they should take immediate steps to probe the complaint and endeavour to fix responsibility for the occurrence.

It may be pointed out further that apart from legal or administrative action cases of tampering when they occur bring with them a commercial penalty. In the cases that have occurred the shipments were from Baltimore and Philadelphia. As a result these ports are under a cloud so far as shipments out of them of Canadian grain is concerned.

## FINANCING THE GRAIN MOVEMENT

### *Preparation.*

The widespread organization of Canadian banking institutions simplifies the task of assembling sufficient reserves of funds in Western Canada to finance the moving of the grain crop. Apart from thousands of small loans made to farmers on the security of their threshed grain the banks gather together approximately \$150,000,000 each year. This loanable fund has to be secured largely in the east before the crop begins to move. It is not carried as current loanable funds in Western Canada. Such a large volume of purchasing power is drawn from several sources. The banks probably have a certain amount of idle funds on deposit with agents in other countries which they can draw in. They also probably have a certain amount of money on call in New York which they will withdraw for the handling of the crop. Then there are certain loans which are repaid as the money for the handling of the crop goes into circulation. These are farmers' advances, loans made to country storekeepers, and so on.

In addition to these resources there is the bank's own circulation which assists to a considerable extent. Not only is there the regular circulation but between September and February inclusive by special provision 15 per cent of the paid up capital and reserves can be issued in the form of circulation by paying the government five per cent interest upon it. This, also is available.

In accumulating their funds, the various banks act separately. They merely form an estimate of the requirements of their own customers. The total gathered together does not represent a collective estimate of the amount required followed by an agreement by the individual institutions to provide certain amounts.

The banks supply all their branches throughout Western Canada with very substantial quantities of the bank's own notes. Since these notes are the bank's own obligations they do not go into circulation officially until actually paid over the counter.

### *Loaning Powers of the Banks.*

The provisions of the Bank Act under which the banks loan money on grain are found in sections 86, 87, 88, 88a and 89. The form of security taken under section 88 is set forth in Schedule C. of the Bank Act.

### *Loans Made on Threshed Grain Held by Farmers.*

Some farmers after they have threshed their grain desire to hold it for a period before selling. In order to do so they borrow from the bank. On loans made on such security the banks charge interest at rates varying from 7 per cent to 8 per cent. On loans made on threshed grain it is claimed that there is no pressure imposed by the banks upon the farmers to sell their grain and retire their loan. "If the customer wants to sell his grain in July instead of May, the banks will carry him over to July just as well as in May."

Sometimes the banks require that the farmer shall insure his grain when he holds it in granaries. Sometimes the granaries are isolated and there seems to be no risk and it is not insured. The forms used by the bank give it the right to insure if the customer refuses to insure on the bank's request. When the grain is in storage in an elevator the storage charges cover insurance. The total sum that is loaned in this way is made up of thousands of small loans. It is almost impossible to form an estimate of the total.

#### *Loans Made to Country Elevator Companies.*

At the beginning of the season the representative of each company goes to the bank with which it deals and negotiates a credit. In a few instances individual large companies deal with even two or three banks. The credits range from \$50,000 to approximately \$3,000,000. Mr. H. T. Jaffray, chairman of the western subsection of the Canadian Bankers' Association, who was examined on this subject, would not say that there were not cases where an individual company had obtained as much as \$3,000,000 from one bank. Where an account is divided, however, it is usually divided on an equal basis. This is simply a mutual arrangement between the banks and the customer.

The initial steps are taken by the general manager of the country elevator company bringing to the bank a statement showing the financial standing of his company. In the ordinary instance an average substantial company will have on hand at the beginning of the season quite a sum of money to begin the season's work. The amount varies, rising with certain companies to an amount higher than two or three hundred thousand dollars. To save on interest charges companies will use up first the funds they have accumulated out of their own resources. Not infrequently a company will invest part of its capital in bonds for the season that grain is not moving. Then it will sell these bonds in the autumn and in this way recover an amount of ready funds for initial operations.

At the time the credit is arranged the banks do not take any form of security from the customer. Security is taken when the customer begins actually to borrow. It is only when the company has exhausted its own funds that it has recourse to its credit. Country elevator companies thus have on hand usually a quantity of grain which they have either bought outright from the farmers or upon which they have made advances to the farmers when they turn to the banks. This grain can be pledged as security. The forms used in this transaction are based on the Bank Act and are as follows:—

- Form 107 "A"
- Form 107 "C"
- Form 107 "D"<sup>1</sup>

The application form (107A) is usually taken once or twice during the season. The security form (107C) with the promissory note (107D) is taken with every individual advance. The elevator company thus executes a general pledge when it obtains its first loan, which is repeated several times during the season, and executes a separate pledge for each individual advance. In addition it signs a promissory note for each particular sum of money. It will be noted that these forms are used for loans upon grain that is owned by and in the possession of the elevator company. The parcels of grain are described and the place of storage specified or if in transit, identified. These forms are therefore, not intended to be used for grain which the elevator company receives for storage or forwarding.

The accuracy of the statements furnished to the bank is checked up throughout the season by the bank obtaining from the company at frequent intervals a statement of all the grain owned by it that it has in its elevators,

<sup>1</sup>The forms exhibited are those used by the Imperial Bank of Canada. There are minor differences between the forms used by the various banks.

or in transit to or from its elevators, the amount of advances it has made upon farmers' grain, and so on. Such a statement is obtained not less often than every two weeks, sometimes more frequently. An examination of this statement reveals to the bank the elevator company's liquid position as contrasted with its borrowings. It gives the bank a check on the position of its loans.

A further precaution taken is that the bank insists upon the elevator company selling grain against the grain purchased. This is to avoid any possibility of the market price so dropping as to affect the bank's security. Banking practice almost invariably requires that the elevator company should hedge its purchases except in the instance where a customer desires a relatively small loan against a large amount of grain. "If a customer is only going to keep a ten per cent margin the banks would naturally insist that the grain must be hedged, must be protected against fluctuations. On the other hand, if a customer wanted to borrow \$100,000 against a million bushels of grain, the banks would not care whether he hedged or whether he did not hedge. But there are very few customers who need only to borrow a hundred thousand dollars against a million bushels of grain. . . . .The ordinary practice is to maintain about a ten per cent margin."

Country elevator companies thus borrow usually up to ninety per cent of the value of the grain they have bought, plus the amount of advances made upon grain to farmers. This wide use of credit is due to the large volume of grain the country elevator companies handle during the crop moving season. The requirement to hedge is a definite term of the elevator company securing its credit. Interest is charged only upon the loans as made. The banks having accumulated the funds for moving the crop are ready to make extensive loans in this manner. If the loans are not made the banks suffer, since they must hold the funds available in the event of the line of credit for which arrangements have been made being fully taken up.

It sometimes happens that country elevator companies borrow money on grain they have in store at the head of the lakes. Mr. Jaffray would not say it was a common practice, but admitted it was not an unknown practice. The loans are made on the security of the warehouse receipts under Section 86 of the Bank Act. Similarly, loans are made on the security of the bills of lading. Under Section 86 of the Bank Act, the warehouse receipt or bill of lading represents the goods. If a company owned grain which it had stored in a terminal elevator, in submitting statements to the bank showing its position, it would include a classification there under the heading, "Grain in Store in Terminal Elevators." In acting for farmers an elevator company might have in hand bills of lading or warehouse receipts for grain that did not belong to it. If it delivered such documents to the bank in order to obtain a loan it would be financing upon the farmers' grain. Moreover, since these documents represent the goods and vest title in them, it could occur that the bank would acquire property in the goods, as a security for its loan, against the farmer who was the real owner. In the event of the elevator company failing the bank would be protected, and, if there were no other assets to realize upon, the farmer would stand the loss.

Another situation where a farmer's interest might suffer occurs where a country elevator company has its own grain and farmers' grain stored in common storage bins. If the bank had made a loan on the security of 100,000 bushels of grain stored in the country elevator and the company failed and it developed that there were only 100,000 bushels of grain in the elevator where formerly there had been 100,000 bushels of farmers' grain and 100,000 bushels of company's grain, the security of the bank would protect it on claiming on the residue. It was stated that a case of this kind was unknown. The banks rely upon the honesty of the elevator company. They accept the signed statements of the elevator companies as to what grain they hold. The banks do

not make any independent inquiry. In granting a line of credit, in the first place, of course, the banks satisfy themselves as to the integrity of the customer. They have before them also, the audited statement of the company prepared by the elevator company's own auditor. Some companies have their books audited every 3 or 6 months, but the usual custom is to have an audit once a year.

The credit extended to the country elevator company becomes fluid again as soon as the company sells the grain to the exporter. The banks lend money to the exporter to finance purchases from the country elevator company. The exporter pays the elevator company. This is credited by the bank to the latter whose credit becomes liquid again to that extent. The peak of the movement, it is estimated, represents loans amounting to as much as \$125,000,000.

#### *Financing the Commission Merchant.*

Compared with the country elevator companies, the commission merchant borrows in a small way. Commission merchants commonly make advances to farmers on the security of grain placed in their hands to sell. These advances are made on the security of bills of lading. In order to deliver the grain when sold the bill of lading is made out to the commission merchant. When he desires credit a commission merchant will bring to the bank his securities and he will say, "here are bills of lading upon which I have advanced \$30,000, I want \$30,000." The bank takes over the bills of lading as collateral. It does not take a written statement from the commission merchant but relies for its protection upon the documents which, under section 86 of the bank act, represents the goods. The bank thus acquires a right in the goods for the time being and in the event of the commission merchant becoming bankrupt, would be protected against the real owner of the grain. The possibility of loss to the farmer thus exists when the bill of lading for his grain passes over into the hands of the commission merchant. The Grain Act requires commission merchants to execute a bond, but if the bankruptcy is a big one, the bond may not be sufficient to cover losses.

Against the likelihood of farmers suffering losses in this manner there is the fact that bankers will not extend credit freely simply because such excellent collateral as bills of lading are offered. They must have a belief in the integrity of the commission merchant. All banks desire to know the standing and type of men they are dealing with before entering into business relations with them. In practice a bank will not deal with a man at all until it has investigated his antecedents, obtained a statement of his affairs and formed the conclusion that his account would be a desirable one. If satisfied that the customer were an honest commission merchant the bank would then simply advance money to him on the security of the bills of lading presented. Under normal conditions when the grain is sold the purchaser pays the commission merchant who takes up his loan. This releases the collateral, which is delivered to the purchaser.

#### *Financing Private Terminal Elevator Companies.*

At the outset it must be kept clear that private terminal elevator companies are divided into two groups: (1) a private terminal elevator company which handles its own grain; (2) a private terminal elevator company which handles both its own grain and accepts grain for storage. This latter is known in the trade as a "regular" private terminal elevator company. A "regular" private elevator also may issue a form of warehouse receipt though the grain that these receipts are issued upon may in fact be its own property or may be grain stored with it.

Private terminal elevators, not "regular," borrow under Section 88, executing the pledge used in connection with loans made thereunder. As a rule "regular" private terminal elevators follow the same practice. The forms taken are identical with those required from the country elevator companies. Some-

times the "regular" private elevator borrows on a warehouse receipt. In that instance another form is used. This form is taken under Section 86 of the Bank Act.

(Form 107B)

In addition, annexed to form 107B is a letter which goes with the warehouse receipts or bills of lading which specifies on the back the grain in question, car or warehouse receipt No., railway or warehouse, and describes the parcel of grain. This form is used by the bank whenever an advance is made either to a "regular" private terminal elevator or to a country elevator company when it borrows on warehouse receipts.

The bank sends the documents to the Lake Shippers Clearing Association, which acts as the bank's agents. When the grain is sold and goes forward the exporter pays for the grain, the bank obtains the money on behalf of the delivering company and its agent the Lake Shippers' Clearing Association releases the documents. Thus the credit forms and conditions under which private terminal elevator companies finance their grain movement is virtually the same as the conditions under which the country elevator companies finance their business. Where loans are made on the basis of warehouse receipts to "regular" private terminals the same possibility exists that the company may turn over to the bank warehouse receipts for grain in their possession which actually belongs to the farmers. Here, too, in the case of bankruptcy the bank would be protected and the farmer owning the grain might stand the loss. The "regular" private terminal elevator companies are required to be bonded by the Winnipeg Grain Exchange which registers their warehouse receipts as to the quality of their grain, the weight being certified by the official weighmaster.

#### *Financing the Exporter*

The exporter borrows to pay the country elevator company or the private terminal company. Ordinarily he borrows on the security of the warehouse receipts as contracted with the above companies which usually pledge their grain for a credit under section 88 of the Bank Act. The warehouse receipts the exporter deposits with the bank are those representing the parcel or cargo of grain that he is shipping out. Indeed when accumulating a cargo the exporter starts borrowing as he buys the grain against the warehouse receipts. His own capital will enable him to make his initial purchases. These warehouse receipts are lodged with the Lake Shippers' Clearing Association who give a certificate to the Bank that they hold that much grain on behalf of the bank. The bank will lend up to 90 per cent of the value of the grain. The warehouse receipts being in the hands of the Lake Shippers' a cargo is billed out with the shipping bill made in the name of the bank.

In four or five days the exporter will draw on his purchaser with the shipping bills attached and the bank will send the draft forward. The shipping bill will be surrendered on the payment of the draft. These drafts are paid very promptly. In ordinary transactions of this kind there is a draft drawn on somebody in Buffalo, New York or Montreal. The payment of this draft closes out the transaction as far as financing the movement of the Western grain crop concerns the western branches of the Canadian banks.

Ordinarily, however, the banks keep control of the grain until it gets to Liverpool for they are still furnishing the credit facilities which move it forward, and in practice they do not surrender possession until they are paid. Seaboard transactions are a separate stage in the movement. Export paper is handled at the Atlantic ports by the banks at Montreal or New York. It is also handled in large quantities from Vancouver in connection with shipments by the western route. If the business goes through Montreal or Vancouver the

Canadian banks will thus carry the trade from the producer in the West to the ultimate market in Liverpool. If the grain be shipped via New York or other American ports on the Atlantic seaboard the American exporters will deal with their own banks. They will pay for the grain shipped to them by Canadian exporters out of Winnipeg on the delivery of the lake shipping bills. They then sell their sterling exchange to the New York banks. At the seaboard the custom is for the banks to buy sterling outright; the exporter sells his exchange to the bank. The grain crosses the ocean either in the name of the bank, or at other times the grain is shipped to the order of the shipper and endorsed by the latter over to the bank.

The credit used by the exporter becomes liquid at the seaboard when the agent of the British or foreign importer makes his arrangements with the bank to take up the documents sent forward from the west. The credit services of the bank in marketing the western grain crop end when the bank presents its draft with the documents attached to the importer in Liverpool and is paid.

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### Conclusion

A weakness that this system of financing discloses is the possibility that when farmers turn over their bills of lading or warehouse receipts to grain companies, the latter may pledge them with the bank to meet the exigencies of their own financing. While such a proceeding is not contemplated by the banks in the terms of the credit they extend to the grain companies, in the actual rush of business they are not in a position to investigate the statements furnished by their customers. They must largely take their word. If a firm has borrowed largely and pledged farmers' paper and then becomes bankrupt the bank is protected by its pledges and documents under the bank act but the farmer is likely to suffer loss. This is true even though certain provisions of the Grain Act provide for bonding grain companies doing a certain class of business. Farmers have lost heavily on several occasions under circumstances of this nature.

To mend this defect it has been suggested that when farmers' grain is billed out by a country elevator agent a distinctive type of bill of lading should be employed that would indicate that the ownership of the grain in question did not lie with the elevator company or grain merchant. A similar precaution would be taken with warehouse receipts following such bills of lading. Undoubtedly such a requirement would make it impossible for grain companies to finance loans on farmers' grain. There are, however, serious objections to such a requirement. It would make it very difficult for grain merchants to give an advance to farmers when the latter deliver their grain since the banks would not accept for purpose of credit bills of lading or warehouse receipts about which there were any doubt. The use of special documents would also mean that the farmers' grain could not be sold quickly and conveniently on the market. It would hamper delivery of the goods. At present the transfer of documents transfers the ownership quickly and expeditiously, but if the bill of lading or warehouse receipt had to be mailed back to the country point where the owner of the grain resides for endorsement over to the purchaser, disastrous delays would occur and business would not be done. If the farmer, to avoid such delays endorsed the document over to his agent *previous* to the sale of the goods the situation in effect would be the same as at present and nothing would be gained but a further complication to the trade.

The most feasible method of safeguarding the interests of the farmer in this respect is by making more comprehensive and stringent the regulation which covers the bonding of companies, so that in the event of failure the bond will provide a cover for losses.

FORM No. 107 "A"

APPLICATION FOR ADVANCES AGREEMENT TO FURNISH SECURITY, AND DEFINITION OF POWERS OF BANK WITH REFERENCE THERETO.

TO THE IMPERIAL BANK OF CANADA

The undersigned is a Wholesale (a) of or in (b)

(c) and is also a Wholesale Manufacturer of the products of such goods; Imperial Bank of Canada (herein called the "Bank") is hereby requested by the undersigned to make advances to the undersigned (herein called the "Customer"), from time to time, and in consideration thereof, the Customer doth hereby promise, consent and agree as follows:—

1. That the Customer will, from time to time, give to the Bank for every such advance and interest security by way of Warehouse Receipts, Bills of Lading, or securities under Sections 86, 87, 88 and 90 of the Bank Act, (or any sections of any Act or Acts which may be hereafter passed relating to the same subject matter whether by way of amendment, substitution, revision or consolidation of the existing Bank Act or otherwise), covering all the products of agriculture, the forest, quarry and mine, and the sea, lakes and rivers, and all the live stock, and dead stock and the products thereof, and all the goods, wares and merchandise, now or hereafter belonging to the Customer, upon the security of which a Bank may lawfully make advances, including all such products, stock, goods, wares and merchandise (hereinafter called the "goods") now or hereafter belonging to the Customer, of the classes or descriptions following, that is to say: (d)

and all products thereof which are now stored, contained or situated, or which at any time hereafter, whilst any such advances shall remain unpaid, may be stored, contained or situated in the following place or places, that is to say: (e)

or in any other place or places or in transit thereto or therefrom.

2. If the Bank shall surrender to the Customer any Bill of Lading or Warehouse Receipt so given, for the purpose of enabling the Customer to obtain possession of any goods covered thereby from time to time, the Customer shall receive possession of the said goods as bailee for and on behalf of the Bank, and shall store the same for the Bank, and shall give to the Bank proper Warehouse Receipts or securities under Section 88 of the Bank Act, or any section substituted therefor, covering said goods.

3. That the Customer will keep all goods covered by the Warehouse Receipts, Bills of Lading and/or other securities from time to time, and the products thereof, insured against fire to the extent of the indebtedness secured thereby, or to the full insurable value thereof in case such indebtedness shall exceed such insurable value, and will assign the policies to the Bank, or have the loss (if any) made payable to the Bank and the policies forthwith delivered to the Bank. Should the Customer neglect to keep up such insurance, the Bank shall be entitled, but not bound, to effect insurance thereon to such an extent as it sees fit, and add the premiums paid and interest thereon at 7 per cent per annum, calculated according to the Bank's usual custom, to the amount secured by said Warehouse Receipts, Bills of Lading and/or securities, which premiums and interest the Customer agrees to pay on demand.

4. The Bank may from time to time, and either before or after default shall have been made in repaying the said advances or any of them, sell all or any of the goods upon which it may be entitled to security, as well as all or any

(a) Manufacturer, Purchaser, Shipper, Dealer.

(b) Class of goods customer manufactures, purchases or deals in, e.g., lumber, cereals, pulp-wood, grain, fish, live stock.

(e) If not a manufacturer of the products, strike out this line. N.B. All advances must be made on notes, and Current Account must be kept in credit.

(d) Here give general description of the class of goods to be covered by the security, e.g., flour or wheat or lumber; qualifying each commodity with the adjective "all."

(e) Give as particular description as possible of the place or places where the goods to be covered by the security are or are intended to be.



goods covered by such Warehouse Receipts, Bills of Lading and securities aforesaid, and such sale may be by public auction or private sale, and either en bloc or in smaller quantities, at the Bank's discretion, or partly in one mode or partly in the other, and no advertisement or public notice of sale or notice to the pledgor of the time or place of sale need be given, (the same being hereby waived), and every such sale is hereby consented to by the Customer, and shall confer upon the purchaser the absolute title to the goods so sold. Before exercising the foregoing powers the Bank agrees to give the Customer 24 hours notice of general intention to sell by posting a registered letter addressed to the Customer at the address subjoined hereto, but the want of such notice shall not affect the validity of any sale, and if such notice is once given it shall stand good for any sales whenever made.

In the event of any surplus remaining of the proceeds of the goods, after payment of the said advances, interest, premiums and charges, the Bank shall be entitled to apply such surplus in payment or reduction of any other indebtedness or liability, direct or indirect, of the Customer to the Bank, and such surplus is hereby assigned to the Bank for such purpose.

The word "charges" shall include all expenses incurred by the Bank in recovering or enforcing payment of the said advances, or realizing upon any securities therefor, including expenses of taking possession, protecting and realizing upon the goods, or upon insurance policies thereon, all of which, with interest at the rate, and calculated aforesaid, the Customer agrees to pay.

5. The products of all goods covered hereby, or by any security so given to the Bank, and the proceeds of all sales of the same or the products thereof, and all debts arising from such sales, including all negotiable and non-negotiable instruments which the Customer may receive or be entitled to receive in respect thereof, shall be the property of the Bank, and are hereby assigned to the Bank, as additional continuing collateral security for all said advances, interest, premiums and charges, and all other present and future indebtedness and liability of the Customer to the Bank, and the Bank may endorse any such instrument on behalf or in name of the Customer. Execution by the Customer and acceptance by the Bank of an assignment of book debts shall be deemed to be a furtherance of this declaration and assignment and not an acknowledgment by the Bank of any right or title on the part of the Customer to such book debts.

6. If with the consent of the Bank, any of the goods or the products thereof are removed, other goods, of substantially the same character and of at least the same value as those so removed, shall be thereupon forthwith substituted therefor, and the Customer hereby agrees, so often as every such removal and substitution shall take place, to give and shall give Warehouse Receipts, Bills of Lading or securities under the Bank Act covering such substituted goods, all of which shall be subject to the provisions hereof.

7. The Customer doth hereby appoint the Bank the Attorney of the Customer, to execute from time to time for and in the name of the Customer, any of the securities above mentioned and any promissory note or notes representing any advance, and any lease, assignment, instrument or document expedient for the purpose of carrying into effect any of the provisions hereof, and this appointment shall be irrevocable so long as any part of the advances remains unpaid, and every power by this agreement conferred upon the Bank may be exercised on the part of the Bank by the General Manager, or Assistant General Manager or any Inspector thereof, as well as by the Manager, or Acting Manager for the time being of any Branch of the Bank where the Customer may keep an account.

8. The Bank and its assigns may at any time and from time to time enter into possession of all premises wherein the goods or any of them covered hereby or by any security so given to the Bank may be (not being the premises of a warehouseman or carrier), and hold the said premises until such goods shall be fully realized upon and shall have full right of entry, ingress and egress to and from such premises from time to time, and full power to exclude the Customer and all other persons therefrom, and for the purpose of taking such possession the Bank may break open any doors, bars, gates, or other obstructions.

9. The Bank may delegate all or any of the powers hereby granted to it to any Receiver or other person appointed by it from time to time, and on every appointment by the Bank of any Receiver or other person he shall, free of charge, have full power to occupy and use when and so often as he may desire the property and premises (real or personal), of the Customer or any part or parts thereof, and also any camp, mill, mine or factories, supplies, or other property of the Customer, for the purpose of storing or of manufacturing, or com-

...leting the manufacture of, or of shipping or of otherwise dealing with the goods in such a manner as may in his opinion be advisable, and the right to exercise in the name of the Customer all rights, powers and privileges of the Customer of every kind, including any right to use electric, hydraulic, steam or other motive power for the purpose of carrying on any manufacturing or other operation, and such Receiver, or other person, shall also have power if he sees fit, to take a lease of or become tenant of the Customer's premises or any other premises, for all or any of the purposes aforesaid, and every such Receiver or other person shall be the Agent of the Customer, who alone shall be responsible for his acts, and the Customer shall not have any power to revoke or determine his agency.

10. The Bank may compromise, settle or adjust any claim, dispute or difference which may arise in respect of the goods or the proceeds thereof, and shall not be responsible for any neglect or delay in taking possession of, manufacturing, selling or realizing upon any goods or the products thereof, nor for any neglect or failure to exercise or enforce any of the powers or rights vested in or hereby granted to the Bank, nor for any act, default or misconduct of any agent, officer, employee or servant, and the Bank shall be accountable only for such moneys as it shall actually receive.

11. The Customer shall at all times duly and seasonably pay and discharge the wages, salaries and other remuneration of all persons employed by the Customer in connection with the business of the Customer, and shall from time to time as requested by the Bank obtain such waivers of prior liens for salaries, wages or other remuneration as may be necessary to secure to the Bank a first lien on the goods.

12. The benefit of all rules of law or equity, and of all statutes now or hereafter in force inconsistent with any of the provisions hereof, is hereby waived by the Customer.

13. This is to be a continuing consent and agreement, and all the provisions thereof shall extend to all advances or loans of money now presently made or hereafter to be made by the Bank to the Customer, and to all Warehouse Receipts, Bills of Lading, Securities and agreements heretofore or hereafter acquired by or given to the Bank, and to the property covered or intended to be covered thereby, and the products thereof, and every advance or loan hereafter made shall be deemed to be made upon the premises and agreements herein contained.

14. For the purposes hereof the word "Customer" shall extend to and include executors, administrators, successors and assigns of the undersigned.

Dated at... ..the... ..day of... ..19 ..

Signature... ..

P. O. Address... ..

If the Customer is a Company the Corporate Seal must be affixed.

ROYAL GRAIN INQUIRY COMMISSION

FORM No. 107 "C"

SECURITY UNDER SECTION 88 OF THE BANK ACT

No.....  
\$.....

(1) Here describe fully the Bills or Notes.

In Consideration of an advance of..... Dollars, made by the IMPERIAL BANK OF CANADA to the undersigned, for which the said Bank holds the following Bills or Notes: (1)

Date of Note	Promissor	Endorser	When Payable	Amount

the products of agriculture, the forest, quarry and mine, the sea, lakes and rivers, the live and dead stock, and the products thereof, and/or the goods, wares and merchandise mentioned below, are hereby assigned to the said Bank as security for the payment of the said Bills or Notes, or renewals thereof or substitutions therefor and interest thereon.

This security is given under the provisions of Section 88 of the Bank Act and is subject to the provisions of the said Act.

The said products of agriculture, the forest, quarry and mine, the sea, lakes and rivers, the live stock and dead stock, and the products thereof, and/or the goods, wares and merchandise, are now owned by, and are now in the possession of the undersigned, and are free from any mortgage, lien or charge thereon, (excepting only previous assignments to the said Bank, if any) and are in (2).....

(2) Describe fully place or places where the goods are.

(3) Insert general description of goods assigned.

or in transit thereto or therefrom; and are the following; all the (3).....

(4) Insert as accurately as possible quantities of each kind of goods assigned.

and products thereof and all products of similar goods now on hand situated at the places aforesaid and every of them, estimated quantities as follows: about (4).....

If the goods are in different warehouses, yards, mills, or places, show estimated quantity at each place.

and all other products, goods, wares and merchandise in the place or places before mentioned or any of them, or in transit thereto or therefrom.

Dated at.....the.....day of.....19.....

(P. O. Address).....(5)

(5) If a Company affix Corporate Seal.

*N.B.—If necessary for want of space the Bills or Notes or the description of the goods may be set out in schedules to be annexed, in which cases insert in the appropriate spaces the words "those mentioned in the schedule attached hereto."*

*A schedule signed by the customer showing goods on hand at date hereof, may be attached hereto. As new schedules are furnished new security covering the goods therein mentioned should be taken as security for all the outstanding notes.*

Date	Goods Hypothecated	Goods Released	Goods on Hands	Loan Dr.	Payments Cr.	Balance

Form No. 107 D.  
Promissory Note  
Produce Loan..

\$..... Place  
and ..... 192..  
Date

On demand—<sup>I</sup><sub>we</sub> promise to pay to the order of and at the IMPERIAL BANK OF CANADA, here, the sum of ..... Dollars with interest thereon from the date hereof until payment at the rate of .... per cent per annum. Value received.

The foregoing Note is given to Imperial Bank of Canada for an advance made to the undersigned under the provisions of sections 86 to 90 of the Bank Act (or any sections substituted therefor) and the undersigned hereby promises to give to the Bank, from time to time as required by the Bank, security and further security for the foregoing Note by way of assignments and further assignments under said sections of the Bank Act upon all the goods, wares and merchandise (as defined in the Bank Act), live stock and dead stock of the undersigned, or by way of Warehouse Receipts or Bills of Lading for the same or part thereof, and no security taken hereunder shall be merged in any subsequent security or taken to be substituted for any prior security and the Manager of the Bank or the Acting Manager for the time being is hereby appointed the Attorney of the undersigned to give from time to time to the Bank the security or further security above mentioned and to sign the same on behalf of the undersigned.

Dated at.....this.....day of.....192..

.....  
The Borrower to sign here

FORM No. 107 "B"

HYPOTHECATION OF WAREHOUSE RECEIPTS OR BILLS OF LADING AND DEFINITION OF POWERS OF BANK WITH REFERENCE THERETO.

TO IMPERIAL BANK OF CANADA.

In Consideration of an advance of.. ..Dollars  
(To be written in full)

made by Imperial Bank of Canada to the undersigned for which the Bank holds the following Bills and Notes:—(1)

(1) Here describe bills or notes.

the Warehouse Receipts, and/or Bills of Lading following:—(2)

(2) Here describe Warehouse Receipts or Bills of Lading.

are hereby assigned to the Bank as collateral security for the payment of said Bills or Notes or renewals thereof or substitutions therefor and interest thereon, and the undersigned (hereinafter called the "Customer") doth hereby consent and agree as follows:—

1. If the Bank shall surrender to the Customer any Bill of Lading or Warehouse Receipt so given, for the purpose of enabling the Customer to obtain possession of any goods covered thereby from time to time, the Customer shall receive possession of the said goods as bailee for and on behalf of the Bank, and shall store the same for the Bank, and shall give to the Bank proper Warehouse Receipts or securities under Section 88 of the Bank Act, or any section substituted therefor, covering said goods.

2. That the Customer will keep all goods covered by the Warehouse Receipts, Bills of Lading and/or other securities given from time to time, and the products thereof, insured against fire to the extent of the indebtedness secured thereby, or to the full insurable value thereof in case such indebtedness shall exceed such insurable value, and will assign the policies to the Bank, or have the loss (if any) made payable to the Bank and the policies forthwith delivered to the Bank. Should the Customer neglect to keep up such insurance, the Bank shall be entitled, but not bound, to effect insurance thereon to such an extent as it sees fit, and add the premiums paid and interest thereon at 7 per cent per annum, calculated according to the Bank's usual custom, to the amount secured by said Warehouse Receipts, Bills of Lading and/or securities, which premiums and interest the Customer agrees to pay on demand.

ROYAL GRAIN INQUIRY COMMISSION

3. The Bank may from time to time, and either before or after default shall have been made in repaying the said advances or any of them, sell all or any goods covered by such Warehouse Receipts, Bills of Lading and securities aforesaid, and such sale may be by public auction or private sale, and either en bloc or in smaller quantities, at the Bank's discretion, or partly in one mode or partly in the other, and no advertisement or public notice of sale or notice to the pledgor of the time or place of sale need be given (the same being hereby waived), and every such sale is hereby consented to by the Customer, and shall confer upon the purchaser the absolute title to the goods so sold. Before exercising the foregoing powers the Bank agrees to give the Customer 24 hours notice of general intention to sell by posting a registered letter addressed to the Customer at the address subjoined hereto, but the want of such notice shall not affect the validity of any sale, and if such notice is once given it shall stand good for any sales whenever made.

In the event of any surplus remaining of the proceeds of the goods, after payment of the said advances, interest, premiums and charges, the Bank shall be entitled to apply such surplus in payment or reduction of any other indebtedness or liability, direct or indirect, of the Customer to the Bank, and such surplus is hereby assigned to the Bank for such purpose.

The word "charges" shall include all expenses incurred by the Bank in recovering or enforcing payment of the said advances, or realizing upon any securities therefor, including expenses of taking possession, protecting and realizing upon the goods, or upon insurance policies thereon, all of which, with interest at the rate, and calculated as aforesaid, the Customer agrees to pay.

4. If with the consent of the Bank, any of the goods or the products thereof are removed, other goods, of substantially the same character and of at least the same value as those so removed, shall be thereupon forthwith substituted therefor, and the Customer hereby agrees, so often as every such removal and substitution shall take place, to give and shall give Warehouse Receipts, Bills of Lading or securities under the Bank Act covering such substituted goods, all of which shall be subject to the provisions hereof.

5. The Bank may compromise, settle or adjust any claim, dispute or difference which may arise in respect of the goods or the proceeds thereof, and shall not be responsible for any neglect or delay in taking possession of, manufacturing, selling or realizing upon any goods or the products thereof, nor for any neglect or failure to exercise or enforce any of the powers or rights vested in or hereby granted to the Bank, nor for any act, default or misconduct of any agent, officer, employee or servant, and the Bank shall be accountable only for such moneys as it shall actually receive.

6. The benefit of all rules of law or equity, and of all statutes now or hereafter in force inconsistent with any of the provisions hereof, is hereby waived by the Customer.

7. For the purposes hereof the word "Customer" shall extend to and include executors, administrators, successors and assigns of the undersigned.

If a Corporation, Corporation Seal MUST be attached.

Dated at... the... day of... 19...

Signature..

P. O. Address..

## THE WINNIPEG GRAIN EXCHANGE

## DESCRIPTION

Of all the institutions connected with the grain trade of Canada, the most important is the Winnipeg Grain Exchange. Its constitution, and its practices have given rise to much controversy in the past, and were the subject of lengthy investigation by the Commission. The many questions affecting it which require treatment in this report make it necessary for us to trace its origin and its growth, and to describe its activities in brief form. We shall then proceed to dispose of the complaints which concern it.

*Development.*

The development of great produce markets is a phase of the division and specialization of labour. The concentration of population that accompanies large scale production in industrial areas leads to the importation of food supplies in large volume. On the other hand, large areas devoted to specialized agriculture create an exportable surplus of food products. The connecting links are transportation facilities for the physical movement of the commodities and recognized market places with known methods of trading where the buyer may meet the seller, trade and transfer ownership. The form of organization that these market places assume depends in large degree upon the exact nature of the commodity there sold, as well as upon the general degree of intelligence in the two parties to the exchange.

The technical conditions which make it possible for a commodity to be bought and sold in a highly organized exchange are:—

- "(1) The product must be sufficiently durable to enable stocks to be carried for a period of time without deterioration, e.g., from a period of low prices to higher.
- "(2) The product must be one that can be numbered, weighed or measured with accuracy.
- "(3) The quality or grade should be capable of determination yielding the same results when tested by competent officials at different times and in different places.
- "(4) The dealings in the commodity must be of sufficient volume to occupy large bodies of buyers and sellers.
- "(5) The commodity must be one where supply does not vary quickly through rapid changes in the rate of production."

(Organized Produce Markets, by J. T. Smith.)

These conditions are fulfilled by wheat and other grains. Grain supplies can be carried over from one season to another with practically no deterioration. Grain is easy to weigh or to measure and travels well. Definite systems of grading have been devised and are well known. Grain is only produced seasonally. There is a wait from one crop to another. The volume grown upon the North American continent has increased in the last fifty years by leaps and bounds. The figures for wheat alone for 1922 for Canada and the United States show a production of 1,255,997,000 bushels, with exports of approximately 500,000,000 bushels.

Under these conditions there has been a corresponding development of highly organized grain markets. Well known exchanges in the United States are those located at Chicago, Minneapolis and Kansas City. In 1883 an attempt was made to form a grain exchange in Winnipeg, but the attempt failed. The production of grain in Western Canada was then in its infancy. In 1887 a second and successful attempt was made and the Winnipeg Grain and Produce Exchange was formally opened. It was incorporated in 1891 by an Act of the Manitoba Legislature. In 1908 this exchange disappeared and was followed by the present Winnipeg Grain Exchange, a voluntary non-incorporated association. Increased crop production in the Canadian west has led to its continuous expansion until to-day it ranks as one of the greatest organized grain

markets upon the American continent or indeed in the world. So far as cash wheat is concerned Winnipeg is the largest cash wheat market in the world. In addition to this market there are exchanges at Calgary, Fort William and Vancouver, with beginnings elsewhere. Here discussion will be confined to the Winnipeg Grain Exchange.

### *Objects.*

A grain exchange is essentially an organization to facilitate buying and selling grain by its members rather than a body that itself engages in trading. The objects of the Winnipeg Grain Exchange, as set forth in their constitution are:—

(a) To compile, record and publish statistics, and acquire and distribute information respecting the grain, produce and provision trades, and promote the establishment and maintenance of uniformity in the business customs, and regulations among the persons engaged in the said trades; to inaugurate just and equitable principles in trade, and generally to secure to its members the benefits of legitimate co-operation in the furtherance of their business and pursuits.

(b) To organize, establish and maintain an association, not for pecuniary profit or gain, but for the purpose of promoting objects and measures for the advancement of trade and commerce respecting the grain, produce and provision trades for the general benefit of the Dominion of Canada, as herein provided; to acquire, lease or provide and regulate a suitable room and place for a Grain and Produce Exchange and offices in the city of Winnipeg, and encourage the centralization of the grain, produce and provision trades in the city of Winnipeg, Manitoba; to facilitate the buying and the selling of the products in such trades; to promote and protect all interests concerned in the purchase, sale and handling of the grain, produce and provision trades; to inspire confidence and stability in the methods and workings and integrity of its members; to provide facilities for the prompt and economic dispatch of business; to avoid and amicably adjust, settle and determine controversies and misunderstandings between persons engaged in the said trades, or which may be submitted to arbitration as hereinafter provided: To all of which ends the said association is hereby empowered by vote of its members at any annual, general or special meeting of the association, to make all proper, needful, by-laws, rules and regulations for its government, and administration of the affairs generally of the said association, provided always such by-laws are not contrary to law, and further, to amend and repeal such by-laws, rules and regulations."

### *Membership.*

The last available membership statement of the Exchange shows a membership of 355 men holding altogether 402 membership certificates. (The member who holds more than one certificate has only one vote). Members may be engaged in more than one phase of the grain business but the main business done may be classified thus:—

Elevator Managers.. . . . .	120
Millers and Maltsters .. . . . .	21
Cash Grain Commission Merchants.. . . . .	32
Cash Grain Brokers.. . . . .	13
Futures Brokers.. . . . .	50
Shippers and Exporters.. . . . .	81
Vessel and Insurance Agents.. . . . .	10
Bankers .. . . . .	8
Officials.. . . . .	3
Non-active .. . . . .	17
	<hr/>
	355

The bankers, officials and non-active members do not trade in grain. The vessel and insurance agents represent the transportation companies that carry grain across the lakes. It is their business to charter lake tonnage and provide marine insurance. Of the remaining 317 members, 50 are primarily engaged in "futures" trading, and 267 in the handling and marketing of cash grain. These are the elevator men, the cash grain commission men, the cash grain brokers, the millers and maltsters and the shippers and exporters.

Membership in the Exchange is obtained by written application to the Council, signed by the applicant. This application is verified by a statutory declaration and sets forth the name, residence and business avocation of the applicant, with such further information as the council may require. In addition the application must be accompanied by a signed agreement on the part of the applicant to be governed by the constitution, by-laws, rules and regulations of the exchange. Unless excused by a vote of not less than two-thirds of the members of the council present at the meeting the applicant must personally appear before the council to answer questions which may be put to him. If the council denies the application the applicant has the right of appeal to the whole membership of the exchange. In this event a vote by ballot is taken and if the applicant receives seventy-five per cent of the votes cast or over he becomes entitled to become a member of the exchange. Before being admitted he must pay a membership fee of \$7,500 or secure by purchase and transfer a certificate of unimpaired or unforfeited membership. The last sale of a seat was at \$6,400. Members may have in their own name more than one membership certificate but they have only one vote. There is an annual subscription which must not exceed \$80 for each outstanding certificate.

Members of the exchange have the right to register with the exchange firms or corporations on application. Both the members registering such firms or corporations and the firm or corporation itself enter into an agreement with the exchange that the said firm or corporation will observe faithfully and be obligated by all the by-laws, rules and regulations of the exchange. Upon registration such firms or corporations are entitled to all the rights and privileges, and are subject to all the restrictions, duties, liabilities, etc., of members of the exchange for the current year, and so on, subject to renewal, from year to year. The registering member or members alone represents their firm or corporation on the exchange.

#### *Management.*

The exchange is conducted by a council of management consisting of a president, two vice-presidents, twelve other members of the exchange elected at the annual meeting and a secretary-treasurer or a secretary and treasurer. There are two elected committees of seven members each, the committee of arbitration and the committee of appeals. Members are not allowed to serve on both committees, but members of the council of management may be also members of one or the other of the elective committees. In addition, the council of management appoints members to 12 other committees, each charged with the supervision of some particular aspect of the activities of the exchange. Members of the council of management appear generally on one or more of the appointive committees. The active management and effective control of the institution rests therefore in the hands of probably less than a score of members of the exchange.

#### *Equipment.*

The grain exchange is housed in the Grain Exchange Block, a very large office building, which contains, apart from the trading room of the exchange and the necessary board and secretarial quarters, the offices of a great many of the grain companies with headquarters or branches in Winnipeg. In this building are also located the offices of the North West Grain Dealers' Association and the Winnipeg office of the Lake Shippers' Clearance Association. The Grain Exchange association provides a large room for trading purposes. The mechanical fittings for trading are: two pits, one for coarse grains and one for wheat; a pulpit with four occupants, one to get the wheat prices and have them shown on the blackboard, and, for the current month, on the electric clock; another to get the goarse grain prices and phone them to the blackboard



operators; a clerk to record all these prices; and a fourth to operate the telegraph service sending out Winnipeg quotations to other markets.

#### *Trading.*

The trading hours are from 9.30 to 1.15. Saturday to 12 noon. Between April 30th and September 29th inclusive the hours are 8.30 a.m. to 12.15 noon, Saturday 11 a.m. The various grades of wheat and coarse grains are bought and sold by open offer and acceptance in the pits. Contracts are made for cash grains in various "positions." Grain may be dealt in "on track," "billed and inspected" or "spot." Grain sold "on track" means that the grain is in the cars of the railroad and delivery is made by handing over the railway advice note with the bill of lading properly endorsed to the buyer and with freight and shunting charges duly receipted thereon for delivery at the head of the lakes. If the freight and charges are not paid these are deducted from the invoice. Grain sold "on track" commonly has not had official inspection and the sale is made on the basis of some grade. Should the grain when inspected not be of that grade, settlement is made on the relative value or spread of such other grade of grain on the day of inspection. Grain sold when "billed and inspected" means that the grain has passed through the Winnipeg yards and has had official inspection and is on its way to the head of the lakes. "Spot" grain is grain in store in regular terminal elevators at Port Arthur or Fort William. It may also be "spot" Duluth. Delivery is made by the surrender of the warehouse receipts. In all sales for cash, payment is to be made on presentation of the proper documents within not less than thirty minutes of the closing hour of the bank on the day of the presentation, unless there is a special agreement. Under certain conditions premiums are offered for grain over the current market price. These premiums will be discussed elsewhere.

#### *Trading in "Futures."*

Trading in "futures" means that contracts are entered into for the purchase and sale of grain to be delivered during some future month. Future trades are usually made for delivery in October, November, December, May or July. Because of the conditions under which grain is shipped out of Fort William and Port Arthur these months have proved most convenient for arranging contracts for future delivery. The ordinary unit of trading in future contracts is 5,000 bushels, in case of flax seeds 1,000 bushels. On all trades of grain for future delivery, unless otherwise specified, delivery is required to be made in the contract grades in force at the time the contract is made. On all contracts based on these grades all higher grades of the same grain may be so delivered. In wheat the contract grades are Number One Hard, and Numbers One, Two and Three Northern. Delivery of the grain in fulfillment of a future contract is made by registered warehouse receipts. At the time of the completion of the contract the grain must be in store in a "regular" warehouse or "regular" storehouse at Port Arthur or Fort William.

When a contract is made for the future delivery of grain both parties to the contract may demand then or subsequently that five cents per bushel margin shall be deposited and kept good—based on the market value—until the contract has been carried out. These margins must be deposited in one of the regular chartered banks. If the price fluctuates either party may be called upon to protect his margin and if he fails to do so the party who has called for such margin shall have the right to buy or sell, as the case may be, the property named in the contract. The difference between the contract price and the price at which the property has been sold or bought will be the measure of damages against the party in default. The rules of the exchange further provide that in case the party calling for margins shall elect not to buy or sell the property he

may have the right to consider the contract terminated at the market price of the property named for the delivery specified in the contract. Here also the measure of damages is the difference between the contract price and the market price at the time of giving notice. In case any property contracted for future delivery is not delivered at maturity of contract the purchaser may purchase the property on the market for account of the seller before twelve noon of the next business day notifying of such purchase, or he may require a settlement with the seller at the average market price on the day of maturity of the contract. He can then claim on the seller for any damage or loss due to the purchaser by reason of such purchase or declared settlement. In event of dispute the rules provide for a committee to investigate and assess the damages.

Where future contracts are made between members of the exchange who are also members of the Winnipeg Grain and Produce Exchange Clearing Association the contract may be cleared through this association and under its rules. The clearing association is designed to facilitate the exchange of future contracts.

*Commission and Brokerage Rates.*

The grain exchange as an association fixes the minimum rates which all members must charge for the transaction of business for non-members or for fellow members. These rates are a fixed rate per bushel rather than a percentage of the selling price. They are as follows:—

SUMMARY OF COMMISSION AND BROKERAGE RATES.

	Wheat	Oats	Barley	Flax	Rye
	c.	c.	c.	c.	c.
<i>Cash Grain—</i>					
<i>Commission—</i>					
Non-members.....	1	$\frac{1}{2}$	1	1	1
Members.....	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$
<i>Brokerage—</i>					
Bying.....	1	1	1	1	1
Selling, and Shipping.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Non-members.....					
Members.....					
<i>Futures—</i>					
<i>Commission—</i>					
Non-members.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Members.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
<i>Brokerage—</i>					
Per 1,000 bushels.....	25	25	25	50	25
When trades taken over by principal same day	35	35	35	60	35
<i>Clearing—</i>					
Closed within six days.....	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
Not closed withing six days.....	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

It is to be observed that the charges which most directly affect the farmer are the commission rates on cash grain. The buying, selling and shipping rate affects the sale of grain to the exporter. An exporter who is not a member of the exchange and desires to buy a parcel of grain will pay the 1-cent bushel rate to the member of the exchange who executes his order. The broker finds his employment chiefly in the fact that large buyers or sellers desire to conceal their operations. Instead of going into the pit themselves to dispose of or to pick up a large parcel of grain they will employ a broker. In this way it will not be known who is buying or selling. Brokers' trade is consequently almost wholly within the exchange and between members of the exchange.

*Volume of Trading.*

The volume of grain dealt in annually at Winnipeg is very large. Thus, for the crop year ending August 31, 1923, wheat inspected in the Western Inspection Division amounted to 297,256,700 bushels. Of this, 295,246,417 bushels were

disposed of commercially. There was a total all rail movement eastward of 20,361,532 bushels. Lake shipments from the head of the lakes were 229,176,919 bushels. The figures for coarse grains are: oat inspections in the Western Inspection Division 48,944,000, disposed of commercially, 39,691,717; barley inspections 18,804,775, disposed of commercially, 17,404,199; rye inspections 3,631,500, disposed of commercially, 11,995,533; flax inspections 3,631,500 bushels. (The figures are not available for the amount of flax disposed of commercially). From these figures a fair idea of the actual volume of physical grain bought and sold in the Winnipeg cash market may be inferred. So far as the growth of future trading in Winnipeg is concerned it is more difficult to give figures. Winnipeg is subordinate to Chicago in future trading. It is only in recent years that grain dealers in other lands have been using the Winnipeg market for hedging purposes; formerly they hedged chiefly in Chicago. In 1921 it was stated that there was cleared through the Grain Exchange from September 1, 1920 to April 21, 1921, a total of 1,466,892,500 bushels.

#### *"Regular" Elevators.*

In connection with the trading on the exchange it is to be noted that in all cases where delivery is being made on future contracts at the time of completion of the contract the grain must be in store in an elevator or warehouse at Fort William or Port Arthur which has been declared by resolution of the Council of Management of the Exchange to be a "Regular" elevator or "Regular" warehouse. "Regular" elevators must be connected with one or more of the eastern railway lines and must have direct facilities for lake shipment. A further condition of "regularity," (exception made for an elevator controlled and operated directly by the Government of Canada or the Board of Grain Commissioners), is that the person operating the terminal elevator must be a member of the exchange or if it be a firm or corporation the same must have become entitled to the rights and privileges of the exchange by being registered by a member of the exchange.

Private elevators at Port Arthur or Fort William may be declared "regular" by the council of the grain exchange on application. These elevators are required to file a bond with the grain exchange, as well as with the Board of Grain Commissioners. The basis of the bond filed with the Grain Exchange is not less than 15 cents per bushel upon the capacity of the house, but in no event to be less than \$75,000.

Warehouse receipts on grain stored in a private regular elevator may then be obtained. These receipts are registered as to weight by the Board of Grain Commissioners and as to grade by the Registrar of the Winnipeg Grain Exchange. In this way the intervention of the Exchange permits certain private terminals to be put approximately in the position of the public terminals where warehouse receipts are registered both as to quantity and grade by the Board of Grain Commissioners.

#### *Market Information.*

The Grain Exchange as an association collects and makes available information on the movement of grain, the receipts at points of special importance, the visible supply, inspections, crop estimates, etc. No member, however, without permission of the council of management may publish or report for publication quotations of foreign or domestic markets, statistics, or other data officially procured or compiled by the exchange.

The exchange appoints a committee known as the Cash Closing Price Committee which compiles the closing prices on the exchange. These prices are posted on the exchange daily at the close of trading. They become the basis of the price list prepared by the Price Committee of the North West Grain Dealers' Association.

*Arbitration.*

Provision is made by the by-laws of the exchange for the adjustment of all disputes between members. The aim is to supply arbitration machinery which will obviate expensive appeals to the law courts and at the same time settle disputes expeditiously.

*Licensing of Country Agents.*

A by-law of the exchange requires that no member of the exchange shall employ any country agent unless that country agent is licensed by the exchange. By this regulation the exchange not only exercises a direct influence over the personnel employed in the country elevators of the line companies but also brings within its purview any agents that commission houses may employ to drum up shipments.

*The North West Grain Dealers' Association.*

The North West Grain Dealers' Association is a corporation existing under an Act passed by the Legislature of the Province of Manitoba in 1904. Its membership consists of the line elevator companies and flour mill companies operating a line of elevators. The United Grain Growers and the Saskatchewan Co-operative are not members of the association but are members of an Inspection Bureau conducted by the association. The association buys and sells certain supplies for its members such as gasoline, lubricating oil, fire extinguishers, etc., issues a crop estimate and operates an Inspection Bureau. The Bureau reports on the physical condition of each elevator and also reports three times a year on the country agents.

In addition there is a committee of three members of the association, known as the Price Committee which sends out a minimum list of prices, including street prices, at the close of the market each day. This price list is sent out through the Dawson Richardson Company to the country agents of the companies that belong to the association in Manitoba and Saskatchewan. A similar service is provided by the Western Grain Dealers' Association from Calgary to the members of that association in Alberta. In this way the grain exchange prices reach back to the farmers selling grain at local points.

The North West Grain Dealers' Association, while quite distinct in organization from the Winnipeg Grain Exchange, is closely related to it. All of the directors are members of the Exchange. The chairman of the price committee was a member of the council of management in 1922-23.

*Lake Shippers Clearance Association.*

There is also the Lake Shippers' Clearance Association. Its membership consists of the shippers and terminal companies. It was organized in 1905 and is a co-operative mutual association not incorporated, and operates as a clearing house for grain documents. The directors, with one exception, and the general manager are all members of the exchange. In 1922-23 four of the seven directors were also members of the council of management of the grain exchange.

The Winnipeg Grain Exchange is thus the centre of a wide and intricate organization which dovetails together and exercises large control over the grain trade. This control touches the personnel, the documents, rates of commission, and the general methods of trading. It exists from the time grain enters a country elevator until it leaves the terminal elevator. It is, of course, not the only control exercised over the grain trade. There is control exercised through the Canada Grain Act and the Board of Grain Commissioners acting under that statute.

## COMPLAINTS AGAINST THE WINNIPEG GRAIN EXCHANGE

In a general way the farmers' complaints against present methods of marketing grain focus upon the Winnipeg Grain Exchange as the head and shoulders of the present system. The grain exchange, as the most important organization of the grain handling interests, carries the burden of any attack launched. An analysis of the various grievances formulated does not necessarily connect them all with the exchange. Such complaints as the alleged undue profits made by the country elevator companies, undue spreads between street and track grain, are properly part of the inquiry into the country elevator system and are discussed there. In the same way a series of problems arise which connect themselves with the operations of the terminal elevators. There are, however, certain charges or grievances whose incidence is directly against the exchange itself. These may be summarized as follows:—

- (1) That the Winnipeg Grain Exchange is an organization by which those interested in the movement of the western crop; elevator companies, railways, banks, etc., dominate the marketing of grain in a manner detrimental to the farmer and the country. In brief, that, in a general way, it is an organization in restraint of trade.
- (2) That speculation either on the cash or futures market injuriously affects the farmer and the community: (a) the price of grain is thereby unduly depressed in the autumn when the farmers are selling the bulk of their crop; (b) lucrative profits are made by speculators, scalpers, etc., through gambling with the farmers' product; (c) disastrous losses are made in speculation:
- (3) That there is too large a spread between the prices on the Winnipeg exchange and those on the exchange in Liverpool.
- (4) That the rule of a minimum commission charge per bushel on cash grain is too rigid and does not accommodate itself to variations in price.
- (5) That the grain exchange exercises a sinister influence over the official grading of grain.

It is fair to observe that while charges or complaints of the above nature were put forward from time to time during the course of the investigation, on the whole there was not any large volume of complaint directed against the specific functions of the exchange. The complaints were rather of a general nature, and, as already observed, touched the exchange because of its conspicuous position in the grain trade.

We shall now proceed to consider these charges seriatim.

*Character of the Exchange*

- (1) That the exchange is an organization of the grain handling interests detrimental to the farmers and in restraint of trade.

It is quite true that the grain exchange brings together the various interests engaged in marketing, financing and forwarding grain, and that as an organization it regularizes and enforces certain rules as to the methods by which business must be carried on. In this manner as an association it exercises considerable control over the marketing of grain. These are among the objects for which it was formed. The real question, however, is this: whether the nature of the activity makes it possible and the nature of the control that it exercises are detrimental to the interests of the farmer and the community at large. The broad fact that the men and the companies, interested in the movement of grain, have united to form an organization or a number of organizations to facilitate their business and to protect their interest, in itself, no more places them outside the protection of the law than any other organizations with a

similar aim such as the Canadian Manufacturers' Association, or the United Farmers of Manitoba or Alberta.

In 1907, the Government of Manitoba brought the exchange into court. Mr. Justice Phippen pointed out in the judgment delivered at that time that the right of a particular trade, business or class of traders to protect their property by regulations and agreements, so long as the public interests were not unduly impaired, must be respected. He found that there was no conspiracy to limit unduly the facilities for transporting, producing, manufacturing, supplying or dealing in grain.

The present lengthy and searching investigation does not seem to have disclosed any fact of such importance as, in a general way, to disturb this finding. The Winnipeg Grain Exchange does not appear to have erected undue barriers to the "free and natural competition of commerce." And it must be emphasized that freedom of competition, under the present system of organization, is the surest guarantee to the farmer that undue profits are not being made or that the best service is not being rendered. Several large crops in succession, a period of rapid expansion in grain growing due to high prices or immigration, some technical advance in the method of handling grain, may lead in some instances to generous profits for a year or two. But relatively large profits inevitably attract into the industry more capital and keener competition with an ensuing fall in the level of profits.

At the present time there is no evidence that bona fide traders or dealers in grain have been prevented from becoming members of the Winnipeg Grain Exchange and sharing in the advantages that the organization offers. The United Grain Growers, The Saskatchewan Co-operative Elevator Company, both large farmer companies, are important traders in this market. Mr. James Murray, of the United Grain Growers' Company, is a member of the committee of arbitration for 1923-24. Recently the Alberta Wheat Pool, which stands for a particular theory of buying and selling, obtained representation on the exchange and makes use of its facilities for cash and future trading. The grain exchange cannot, therefore, be deemed a close corporation which keeps out its membership all new competitors appearing, thereby restraining them from taking advantage of the facilities for marketing that have developed in Western Canada.

It is to be pointed out that the licensing of country agents provided for in by-law 20 does not go beyond requiring that persons in the country who solicit business on behalf of members of the exchange shall have their position regularized and be paid a certain salary for their services. Essentially this requirement is closely bound up with the fixed commission rule. It is aimed at preventing the practice of employing touts or agents to canvas for business in the country on such a basis as really would mean splitting the commission.

Nor is there the least evidence to show that individuals or companies who are not themselves entitled to trade on the exchange encounter the least difficulty in making use of its facilities either through the commission or brokerage houses or through the commission departments of the large companies. These interests are in sharp competition to obtain and execute orders. Many farmers load their grain over the platform into cars at local points and sell it directly on the exchange through their commission agents.

Moreover, evidence was given at a considerable number of points by farmers to the effect that their method of marketing grain was to sell it in the autumn at the time of delivery, and then to buy a future which they sold at a later date in the season. This was done, they said, because they found it more convenient to hold a contract for the future delivery of grain which they could sell when the market suited them, than to hold the physical grain itself.

In so far as the exchange, therefore, is an organization to provide for the maintenance of a market place, it forms, without undue restriction, a necessary and beneficial link in the marketing of western grain. The Exchange does not of itself buy or sell grain. It does set up the machinery under which grain can be conveniently bought and sold. It does not appear, then, that there are any undue restrictions placed either upon obtaining membership in the exchange, or upon making use of this machinery in the buying and selling of grain.

#### *Speculation.*

- (2) That speculation, either on the cash or futures market injuriously affects the farmer and the community.

The term "speculation" has a great many shades of meaning, and, as a result, there is a great deal of ambiguity in its use. It is often defined in business as the taking of necessary risks, and in this sense covers an element in all business activity. The term as usually applied to operations on the produce market means technically purchasing on "the expectation of a contingent advance in value and consequent sale at a profit" or "trading on anticipated fluctuations in price" either as between different times or different markets. The term speculation is also often used in a depreciative sense as the equivalent of gambling, although gambling in business is not infrequently defined as the taking of unnecessary risks. In all cases the forms that the actual transactions assume on the exchange are practically the same. Under these circumstances discussion as to the validity of speculation very often leads to controversies at cross purposes.

The lack of precision in the use of the term has been illustrated at various times in the evidence that has been tendered to this commission. For instance, it has been maintained that the farmer who holds his crop in his granary until mid-winter and then sells, although he might have delivered and sold it early in the autumn, is engaged in a speculation, in that he is holding his grain for a contingent rise. That practically speaking there is no difference in the decision to hold grain available for sale and that of buying a future upon the exchange and holding it for a rise. On the other hand some farmers sell their grain early in the season and then invest the proceeds in a future which they sell later on. It was argued by them that this was not a speculative venture since as a precedent act they had sold cash wheat.

Probably the simplest method of approaching a consideration of speculation is to examine the various uses to which the futures market is put and the classes which have recourse to it. Speculation is most commonly associated with the futures market and against it criticism is especially directed.

#### *Hedging.*

In the first place country elevator companies, operators of private terminal elevators, exporters, foreign importers and millers all use the futures market for purposes of hedging. Professor A. B. Clark, Professor of Political Economy in the University of Manitoba, points out that "hedging on the grain exchange is simply a device by which the holder of wheat seeks to protect himself against the risk of loss resulting from an actual sale or purchase, through fluctuations in price by balancing against it an equivalent purchase or sale for future delivery."

"The operator of a country elevator, for example, in buying from a farmer, seeks to protect himself against the loss through a fall in price by selling on the exchange an equal amount for future delivery and the price he pays the farmer will be largely governed by the price he can secure for the sale of the future, being in fact less than the latter, by the amount of the storage, transport and carrying charges. In meeting this future the elevator operator may either make delivery of the actual grain or he may sell it for cash and purchase a future therewith to meet his contract."

It is evident that this transaction on the part of the country elevator company is a method by which it can limit its risk. Losses on either transaction will be balanced by gains on the other. It if had to buy its grain in the country and carry the risk of price fluctuations itself a company would require a much larger capital investment for business of the same magnitude. The cost of warehousing and marketing grain would be accordingly increased. This cost would ultimately fall upon the farmer.

H. T. Jaffray, Chairman of the western subsection of the Canadian Bankers' Association, estimated that there is about \$150,000,000 of credits granted each year to the western grain dealers, elevator companies, commission men and exporters to finance the moving of the crop. The ordinary customer of this group, however, borrows to the extent of 90 per cent of the amount of his purchase of grain, and of his advances to farmers on grain. In the ordinary case the bank requires the grain dealer to sell a future so as to be sure the bank is not taking too much risk. This is a definite term of the credits granted. Without a future purchase the bank would require the grain dealer to have a very large cash interest in his grain apart from what the bank put in. In the very great majority of instances grain dealers do not have a large investment of cash of their own in the grain they are handling. If the elevator companies could not buy grain and protect it by selling a future they would have to buy it on a larger spread between the price they paid the farmer and export prices. This would be necessary to allow for possible losses through fluctuations in price before they could get it to the export market.

The ability to hedge grain and thus limit possible losses increases the borrowing power of the grain dealer. It therefore makes it possible for him to do business with a smaller amount of capital. If hedging were abolished for a time, at least, by curtailing the operation of the grain dealers it would lessen competition. The effect of lessened competition would be that a farmer would get a lower price for his grain. Mr. Jaffray said he was not prepared to estimate whether the farmer would get "10 per cent less or 5 per cent less or 15 per cent less, but in his opinion he would certainly get a substantially smaller price."

The Alberta Pool which had received a line of credit, Mr. Jaffray stated, was not required by the banks to hedge its grain because the farmer gets only a partial advance and carries all the risk himself. That is, the farmer retains such a substantial interest in the grain until it is ultimately disposed of that it is sufficient to protect the advance the bank makes against any loss. Loss, if it occurs will fall upon the Pool members themselves. The witness believed that without hedging the farmer would be unable to dump his large crop on the market within three months of the harvest season without taking a smaller price for it. Evidence was later given by Chester Elliott, Western Sales Manager for the Alberta Pool, that the Pool had sold wheat for future delivery "when prices looked attractive" and had also used the futures market in connection with the export business "to accommodate the buyer." Mr. Elliott, however, said they did not use the market to hedge the grain of which control had been acquired in the country.

The same general considerations apply to the hedging operations of private terminal elevators, exporters, foreign importers and millers, so that hedging in these instances need not be discussed in detail. It is important however, to note that in connection with the sale of grain the ability of the foreign importer to limit risks by use of a future is of sufficient importance in itself to lead the Alberta Pool to enter the futures markets to meet the needs of importers even though, by reason of the farmer pool members carrying their own risk, it does not hedge the grain it actually acquires control of in the country.



It must be pointed out, too, that hedging operations furnish a very large part of the volume of business done in the futures market. At every stage in its progress from the producer to the consumer the grain is hedged. In every instance there is the same motive in doing so, the limitation of risks.

#### *Pure Speculation.*

There remains to be examined instances where purchases or sales are made not for hedging purposes but because the buyer or seller believes that he can make a profit by fluctuations in the price, up or down, as the case may be. At the outset it is necessary to point out that there does not seem to be a really large class of men operating on the Winnipeg Grain Exchange who devote their time solely to speculative transactions. A considerable number of speculative transactions appear to be made by those whose primary interests are in the operation of country elevator companies, exporting, or in other branches of the grain trade. In addition to this, transactions by farmers who have sold their wheat on the cash market and buy futures are prevalent. Finally, from time to time there are incursions of the general public into the speculative field, lured by what they believe to be opportunities to make easy money. It is thus more correct to examine the nature and effects of speculative transactions than to focus attention upon a supposedly large class of speculators upon the exchange who are pure speculators and nothing more.

Making a purely speculative purchase or sale of grain means that a judgment has been formed by the individual operating on the market at the time that the price of the grain traded in does not correctly take into consideration the future state of its supply and demand, and therefore of its price in the future. If the cash price in the judgment of the operator is too low he will buy and will carry the grain until the period when, if his judgment is correct, he can sell at a profit over and above his carrying charges. Conversely, if he deems the cash price to be too high he will sell a future, that is, he will take a commitment to deliver grain at a future date although at the time of the initial transaction he possesses none. He aims to purchase it later on as the market price falls, as he, in his judgment, believes it will. Similarly here if his judgment is correct, he will have a profit.

#### *General Effects of Speculative Transactions.*

It is obvious that professional speculation brings to bear very keen and alert intelligence upon the state of the market from day to day. If prices appear to be out of line with all the facts of the situation speculations sets up an activity which tends to bring them into conformity with the state of knowledge that exists as to supply and demand. The immediate response in speculative activity and a higher range in prices that followed the publication of official estimates of a short crop for the crop year 1924 illustrates the alertness of a futures market.

A second illustration of the effect of a futures market is to be found in its power to absorb large supplies of grain being dumped on it in the months immediately succeeding harvest without the price breaking disastrously. With the mills and other consumers of grain supplied for the time being, additional supplies brought to the market would not find purchasers easily and the price would decline sharply. But with a speculative element in play, as soon as the cash price falls sufficiently to leave an estimated margin of profit between it and the estimated future cash price (carrying charges allowed for), speculative buyers enter the pit and by buying to make this profit hold up the market price. It goes without saying that the keener the competition the narrower the margin of profit there will be over carrying charges.

Not only does the speculative element in this way help to carry the market but incidentally it also serves to establish a continuous market. By this is

meant that grain can be sold at any time. It does not tend to become a drug on the market, selling away below its value at certain seasons of the year. The speculative element stands ready to absorb offerings and thus to keep prices in line with the basic facts of supply and demand throughout the year. The notion that the prohibition of trading in futures would make prices higher in the fall to the farmer when he is pouring his wheat on to the market is unsound.

In its broadest economic aspect speculative trading by calling attention, at the earliest moment that information develops, to changing conditions of supply or demand, warns society that it is on the eve of a period of greater plenty or greater scarcity. The knowledge of a large or a short harvest begins to exert its effect on prices some time before the grain is actually garnered. A fall in prices thus gives notice that a more lavish use of grain and its products is possible. An early rise checks consumption and leads to a conservation of the supply throughout the period of scarcity. The general effect of these reactions by society to high or low prices is to limit the amplitude of the fluctuation in prices. Speculation thus exercises a stabilizing influence.

It must be remembered of course, that speculators do not always form the correct estimate of the future conditions of supply and demand. When this occurs, society, far from benefiting from their activity, suffers. Fluctuations in price are magnified rather than reduced. At the same time it must be noted that the penalty for erroneous judgment that falls upon the speculator himself is loss, often heavy loss, and not infrequently ruin. Occasionally a speculator makes very large gains and these gains are given wide publicity. They are to be balanced by the very heavy losses that even competent speculators make from time to time. Also almost invariably when heavy gains are made by someone they are due to an extremely careful study of conditions which have led a speculator to place his judgment successfully in opposition to the general point of view of the market and of the public.

There is undoubtedly a great mass of suspicion directed against the operations on the exchange. It is commonly believed that the market can be rigged without difficulty, false statements circulated to deceive the farmer, and the market cornered with a little astuteness. There is really no evidence before the commission to justify such a conclusion, nor can countenance be found for such a view in the by-laws of the exchange. As has already been pointed out these provide penalties against the issuance of estimates without official permission, while the designation of several grades as available to fill future contracts is aimed at preventing "corners." The by-laws provide for the expulsion of members guilty of dishonourable conduct.

There is no doubt a considerable volume of speculative transactions entered into by individuals who are not in any way connected with the growing of grain or with the grain trade. Commonly people of this class, and many also of the grain growing class, do not bring a trained intelligence to bear upon the market. It is conceded that these individuals usually lose the money they invest in speculation. John G. McHugh, Secretary of the Minneapolis Chamber of Commerce, one of the largest grain exchanges in the United States, remarks in his work on Modern Grain Exchanges that: "the injury inflicted upon these individuals by their losses is out of all proportion to the services which their speculative trades perform in crop distribution."

#### *Legislation Against Speculation.*

Legislation of this sort is suggested (1) in order to protect the weak and incompetent from their own mistakes, and (2) to prevent what are said to be undue fluctuations in prices working to the detriment of the producer. In our opinion many obstacles stand in the way of enacting legislation which would be effective for either purpose. "Legislation so contrived as to affect the

\*Economics, by A. T. Hadley.

gambling transactions and leave the legitimate ones untouched is extremely difficult to make. The distinction in law cannot be based on the subject matter of the transaction. The illegitimate speculations deal with the same articles as the legitimate ones.

The Criminal Code of Canada provides as follows:—

“Section 231: Everyone is guilty of an indictable offence and liable to five years' imprisonment, and to a fine of five hundred dollars, who, with the intent to make gain or profit by the rise or fall in price of any stock of any incorporated or unincorporated company or undertaking, either in Canada or elsewhere, or of any goods, wares or merchandise,—

“(a) without the bona fide intention of acquiring any such shares, goods, wares or merchandise, or of selling the same as the case may be, makes or signs or authorizes to be made or signed, any contract or agreement, oral or written, purporting to be for the sale or purchase of any shares of stock, goods, wares or merchandise; or

“(b) makes or signs or authorizes to be made or signed, any contract or agreement, oral or written, purporting to be for the sale or purchase of any such shares of stock, goods, wares or merchandise in respect of which no delivery of the thing sold or purchased is made or received, and without the bona fide intention to make or receive such delivery.

“It is not an offence under this section if the broker of the purchaser receives delivery, on his behalf, of the articles sold, notwithstanding that such broker retains or pledges same as security for the advance of the purchase money or any part thereof.”

This provision of the code was brought to our attention on several occasions during our sittings at country points. We have already referred to the practice followed by some farmers of selling their grain on the cash market and investing the whole or part of the proceeds in a future. In such cases the farmer always acts in the expectation that he will never be called upon to take actual delivery of the grain represented by the future contract. He plans to watch the market and to sell his future when he deems the time has come to do so to the greatest advantage. In some cases he is successful and sells it at a profit, but in other cases he waits too long, or the market never supplies the advantageous opportunity for which he had hoped, and he is obliged to take a loss. In either case, the gain, or the loss, is measured by the difference between the price paid for the future contract, and that at which it is sold. The circumstances surrounding the transaction between the commission merchant and the farmer, including the tenor of the written memorandum which is executed in the ordinary case, may reveal an “intention to take delivery” sufficient to satisfy the statute. It may be that such an intention is sufficient, if it amounts to nothing more than an agreement by the farmer to take the grain if ever he should be called upon to do so (a contingency which rarely, if ever, happens), and that it is not inconsistent with the expectation, which no doubt leads him to buy the future and which is realized in practically every case, that the transaction will end simply in a set-off or a payment of differences. It is not, of course, within our competence to deal authoritatively with the strictly legal aspect of the question, but we have endeavoured to enlighten ourselves as to the state of the law and we venture to express the opinion that the decisions of the Canadian Courts have not yet settled the main question as to the condition of guilt or innocence, under the statute, of the farmer or other speculator who buys a future and holds it for re-sale in the manner which we have described. (*Beamish v. Richardson*, 49, S.C.R. 595; *Medicine Hat Wheat Co. v. Norris Commission Co.* (1919) 1. W.W.R. 161; *Maloo v. Bickell*, 59 S.C.R. 429; *Woodward & Co. v. Koeford* (1921) 3 W.W.R. 232). All these cases are civil cases where the statute was raised as a defence against a broker or commission merchant seeking to recover from a speculator on whose behalf he had incurred expenditure. Such cases carry with them considerations which prevent the plain question of criminal law being determined. For instance, the agent's own unlawful intention may also be necessary in order to defeat his civil action (see per *Dennistown J.* in

Woodward v. Koeford at p. 244); and this is not being shown, the case goes off without deciding the question as to whether the buyer has violated the statute. Although section 231 has been part of the criminal law of Canada since 1888, and has been discussed on many occasions in actions arising out of transactions on grain exchanges, we cannot find a single case of a prosecution brought in the criminal courts against a party who participated in any such transaction. In so far as the criminal law is concerned, this section appears to have been used only to punish offenders whose transactions never reached an exchange, as, for instance, in the case of *Rex v. Harkness*, 10 Can. C.C. 199. When first enacted in 1888, this provision was expressly directed at the business conducted in "bucket shops", where simple bets are made upon the rise or fall of prices and where the figures quoted, unlike those quoted on an exchange, have no effect whatsoever upon the state of the market. The object of the legislation, therefore, was not, either entirely or partly, to protect the market by preventing unwarranted fluctuations in prices, but merely to suppress an institution which was deemed to be a nuisance as having the character of a common betting-house or a common gaming-house. Those responsible for the administration of the criminal law seem to have continued to regard this section as if it was intended to achieve its original purpose only. Nevertheless, in its present form in the criminal code this section contains no reference to "bucket shops" but simply prohibits the act of buying or selling in the manner above described regardless of where the buying or selling may take place. It is therefore an offence which may be committed in a place which could not fairly be called a bucket shop. This is the interpretation placed upon it in some of the civil cases mentioned above where the transaction in question took place in an exchange. The statute is aimed directly at those who buy or sell with the intent to make gain by the rise or fall in price and without the bona fide intention of taking or giving delivery of the goods. Of course any broker or other person who knowingly advises or assists in putting through any such prohibited transaction is also guilty under the statute. It was argued on behalf of those who believe in future trading by farmers, that the money invested by them in futures having been realized by the sale of actual grain, their case is different in the eyes of the law from that of the city dweller who speculates with money earned in another occupation. We cannot see how any such distinction can be drawn effectively. The transaction attacked by the statute is the one whereby the future contract is made; it is the nature of this contract which is involved, and the intention behind it. Section 987 of the Code further provides that in case of the prosecution of a buyer or a seller, the burden of proving his bona fide intention to take or accept delivery of the goods is upon the accused. Apparently no buyer or seller has ever yet been called upon to prove that his particular transaction upon the grain exchange bore sufficient evidence of a bona fide intention to take or to give delivery, as the case might be, to satisfy a judge or a jury that the law had not been violated. Each such case would, of course, have to be decided upon its own merits, and it might be impossible to lay down a hard and fast rule as to what constitutes a bona fide intention. Nevertheless, we believe that the great majority of the farmers who invest the proceeds of their crop in the purchase of futures are in the same position, the one with the other, in so far as intention and expectation are concerned. Regarding the advantage or disadvantage of this form of speculation by farmers, the position seems at first sight to be that the farmer who sells his grain and buys a future with the proceeds—and later on re-sells this future—is not taking any greater risk than the farmer who keeps his grain in his granary, or the one who ships it to Fort William, and in either case waits to sell until the market price reaches his expectation. In each of these three cases the delay in selling may bring a loss or it may bring a gain. The future

price is usually so fixed as to take care of carrying charges, so that there is no saving on that score. The grain kept on the farm may suffer destruction or deterioration. Many other contingencies might be imagined which would affect the case one way or another. To put the matter briefly we believe that the farmer who holds the future is in no worse position than the other two. All three are subject to the danger of waiting too long, on account of ignorance or recklessness. But the evil to be apprehended appears to be that the practice of dealing in futures is much more likely to develop the gambling spirit than is that of dealing exclusively with one's own grain. We were told of farmers who by means of future trading risked to their sorrow not only the proceeds of their crop but monies realized from all other available sources. Risks of this kind when undertaken by inexperienced speculators are usually accompanied by an unreasonable expectation that the market price will continue to rise indefinitely. Therefore they frequently result in disaster.

We refer to section 231 of the Criminal Code at some length because it has been brought to our attention on many occasions by some who claim that speculation by farmers is growing rapidly and is leading in many cases to great losses and that the facilities of the grain exchange make such speculations possible. In meeting this complaint we must first state, as we have already stated, that, so far as we know, nobody has ever yet been convicted of violating this provision of the Code upon the exchange, or of assisting or counselling any other person to do so. Nor, so far as we know, has the grain exchange ever been placed on trial before our courts or been charged, either in a criminal proceeding or a civil action, with being an institution which breaks the law by encouraging, or by permitting, the use of its facilities for illegal purposes of this kind. It happens, however, that this question in its wide and general scope was examined upon one occasion by the Supreme Court of the United States, under circumstances similar to those with which we are now dealing. (*Board of Trade of Chicago v. Christie*, 198, U.S.R. 236). We mean by this that no particular transaction was impeached in the litigation, but that the broad proposition was advanced, under circumstances which required the court to dispose of it, that the general business of the exchange was of an illegal character. The statute relied on as creating the illegality was a statute of the state of Illinois, expressly directed against "bucket shops or any other office or place wherein is conducted the pretended buying or selling of . . . grain . . . either on margins or otherwise, without any intention of receiving or paying for the property so bought or of delivering the property so sold, etc." The issue involved afforded the court the opportunity to discuss the practices and methods of the exchange at Chicago which, at that time appear to have been substantially the same as those which prevail in the Winnipeg Grain Exchange to-day. Futures were bought and sold and settlements made without the delivery of actual grain ever taking place. The contracts thus disposed of called for many times the total quantity of grain actually received in Chicago. A great many incompetent persons brought themselves to ruin by undertaking to speculate in their turn. The court held unanimously, the judgment being delivered by Mr. Justice Holmes, that these practices were not illegal practices, the sales not pretended sales and the exchange not a bucket shop or an institution of the character of a bucket shop.

The judgment points out (1) that, unlike the case of a bucket shop, the figures used in the transactions on the exchange are real market quotations representing prices and that they are consequently of great importance to the business world; (2) that the fact that the contracts involved call for a much greater quality of grain than is actually received in Chicago is incidental to the practice of settlement by set-off and "is no more wonderful than the disproportion between the currency of the country and contracts for the payment

of money, many of which, in like manner are set off in clearing houses without anyone dreaming that they are not paid;" (3) that this system of trading, based on forecasts of the future, while of course speculative, is the necessary product of the present complex condition of society. The judgment admits that the success of the strong induces imitation by the weak who suffer loss by their adventures in future trading, but it asserts that this is not a sufficient reason to warrant interference with the system. On this point they express themselves as follows: "But Legislatures and Courts generally have recognized that the natural evolutions of a complex society are to be touched only with a very cautious hand, and that such coarse attempts at a remedy for the waste incident to every social function as a simple prohibition and laws to stop its being are harmful and vain."

We, likewise, would not recommend that the system of trading in grain now followed in this country and centred largely in the Winnipeg Grain Exchange, be abolished or hampered in an attempt to eliminate the "waste" which is to be found in the losses suffered by those who, without adequate knowledge and business experience, venture upon this field of speculation. We would, however, strongly urge farmers and others who are tempted to speculate on the grain exchange to beware of the dangers which confront them and which will very likely overcome them unless they possess the necessary education, information and general business ability to qualify as experts. And while we believe it would be unwise to overthrow the structure of trade in order to protect the weak; we do think that the law ought to do what reasonably can be done to make access to this dangerous field more difficult for the unwary. For instance, one person should not be allowed to solicit or induce another to enter into a speculative contract of this sort on or through the grain exchange. In making this suggestion we do not wish to be understood as meaning that the practice of soliciting this kind of business is now followed by any broker or other accredited member of the exchange. So far as our evidence shows this does not appear to be done. But in view of the growth of this practice of speculation among the western farmers it would be well, we think, to make things safe in this respect, for the future.

To revert finally to this Section 231 of the Criminal Code, it may be that in its present form it goes much further than did the Illinois statute which was under consideration by the Supreme Court of the United States in the case above cited. If it goes as far as some of the decisions in our own courts would appear to indicate, it may be made use of at any time to create considerable trouble for those engaged in future trading.

Coming now to the question of legislation designed to curb speculation in order to prevent undue fluctuations in prices and an unwarranted lowering of the price of grain to the producer, we find ourselves confronted with a problem upon which actual experience can throw very little, if any, light. Fluctuations, and sometimes violent fluctuations, in prices do occur on the exchange. Very often, and sometimes during long periods, the price offered for grain does not provide a reasonable return to the grain grower. Are these conditions caused or aggravated by uncurbed speculation, and can legislation be devised which will improve them by restricting such speculation? It would of course, be possible by Act of Parliament to abolish grain exchanges entirely. We have already said enough to show that, in our opinion, such a proceeding would be disastrous to all concerned and particularly to the owners of grain. Without going to this extreme length, legislation might be enacted to limit the activities of the exchange. Again we are of opinion that this should not be done unless the beneficial result aimed at can be fairly well foreseen. It is here that experience has so little to offer.

We have given our attention to legislation recently enacted in the United States and known as the "Capper-Tincher law", which became effective on

April 16, 1923. Its object was to restrict trading in grain futures and thereby to lessen fluctuations and to improve and stabilize prices. We do not think it necessary here to enter into a detailed examination of the provisions of this enactment because we cannot recommend its adoption, by the Parliament of Canada at the present time. Judging by a comparison of the conditions which have prevailed on the American Exchanges since the coming into force of this Act with those on the Winnipeg Grain Exchange we cannot find that its object has been attained. The opponents of the Capper-Tincher measure predicted that its enforcement would decrease trading to the injury of the market. Its promoters admitted that it would decrease trading but they asserted that this decrease would benefit the market. A decrease in trading has no doubt occurred. During the calendar year 1921, transactions in wheat futures on the Chicago Board of Trade amounted to 12,279,477,000 bushels, counting one side of each transaction. In 1922, the figures were 11,072,934,000 bushels. In 1923, during most of which year the Capper-Tincher law was effective, the total amounted to 8,572,111,000. We have no figures for 1924. We know, however, that the great slump in the total volume of trading on the Chicago Board of Trade indicated by the returns for 1923 continued until the Spring of 1924. Some attributed this slump to the Capper-Tincher law, others blamed economic conditions. When the prospects of the 1924 crop became known, trading increased rapidly in Chicago just as it did in Winnipeg, and during July and August the volume of trading reached proportions equal to any since the war. We have the opinion of one of the chief officials of the United States Department of Agriculture, given to us in October of this year, to the effect that it is as yet impossible to say whether or not the law has brought about an increase in the price of grain to the producer or a decrease in the price of bread to the consumer. In so far as fluctuations are concerned, we cannot see that any tangible result has been achieved towards lessening them. We have before us figures for each day during the months of August, September and October 1924 showing the high, low and closing prices for December wheat at Chicago, and Minneapolis and at Winnipeg. A study of the fluctuations of each day and between different dates show practically the same results in the United States as in Canada, while since the end of September the Winnipeg price has been uniformly higher than that prevailing in Chicago or Minneapolis.

We cannot therefore recommend the adoption in Canada at the present time of a measure modeled upon the Capper-Tincher law. The attempt made by the United States Congress to improve conditions in grain markets by means of this law is still in its experimental stage. This experiment will certainly be of benefit to us, and the fact that it is being conducted now will spare us the necessity of venturing upon one of our own. Those interested in the growing and marketing of grain in Canada and those responsible for our legislation will watch developments in the United States with a view to bringing home to ourselves any benefits that may be realized by the American experiment.

Apart altogether from the question of the value of legislation, we think it will be of interest to cite here a statement made by Mr. Julius H. Barnes, quoted in the "Chicago Journal of Commerce" of May 10th, 1924. Mr. Barnes is one of the leaders in the world's grain trade, and he enjoys in Canada as well as in the United States, a reputation which will allow no suspicion of his motives and no doubt of his ability to speak with accuracy on matters pertaining to the marketing of grain. Mr. Barnes was recently President of the United States Chambers of Commerce, and during the war he was head of the American Government's Grain Corporation. The statement which we cite was made by him at a time when grain exchanges in the United States had not yet emerged from the period of lessened activity to which we have referred. His statement, which follows, is a tribute to the benefits of future trading even when carried on under restricted legislation:—

"Trading in futures is the one thing which has kept prices up and the market steady. All wheat is traded on the basis of Chicago market prices and for seven months the trading on this market has held wheat from ten to thirty cents above the world market rate. The sole reason for this difference is because American future trading has held prices above the world level by investment and speculative dealing in futures."

*Conclusions:*

The conclusions drawn from this survey of futures trading and a future market are:—

(1) That a futures market permits hedging and that hedging by dividing and eliminating risks in price variations reduces the spread between the prices paid to the farmer for his product and those obtained for it upon the ultimate market.

(2) That hedging facilitates the extension of credit and thereby reduces the cost of handling grain by making it possible for grain dealers to operate on less capital than would be the case otherwise.

(3) That for the same reason hedging makes a larger degree of competition possible in the grain trade, on a given amount of capital.

(4) That hedging is of advantage to exporters so that even in instances where grain is handled under a pooling organization where the initial risk is carried by the farmer himself, in order to handle successfully the export trade such organizations find it desirable to make use of the futures market.

(5) That a competent speculative element in the market ensures a continuous and searching study of all the conditions of supply and demand affecting market prices.

(6) That speculative transactions tend to keep prices as between the contract grades and as between present cash prices and cash prices in the future in proper adjustment to each other and to future conditions of supply and demand.

(7) That prices thereby tend to be stabilized and fluctuations reduced.

(8) That a speculative element is necessary in an exchange to ensure a continuous market so that when a crop is dumped upon the market in the fall the farmer will not suffer loss by a heavy drop through absence of demand for immediate use.

(9) That individuals who engage in speculative transactions without adequate knowledge or capital not only usually close heavily but also are a disturbing element upon the market. Their transactions become mere gambling.

(10) That it does not seem possible to legislate effectively so as to eliminate such individuals without disturbing the general and genuine usefulness of the exchange; but that legislation should be directed towards preventing the incompetent from being lured into speculation.

(11) That Parliament should not at present enact restrictive legislation in the expectation of tempering fluctuations on the exchange, or of improving and stabilizing prices, but that time should first be taken to allow the new American law on this subject to demonstrate its efficacy.

(12) That the penalties and precautions against rigging the market, or dishonourable trading, seem calculated to make such practices rare and unprofitable.

*Undue spreads in prices—*

(3) That there is an undue spread between the prices on the Winnipeg Grain Exchange and those on the Liverpool Produce Exchange.

The gravamen of this charge is that, by some sort of manipulation, prices on the Winnipeg Grain Exchange are kept lower than they ought to be, with a corresponding loss to the farmer, and a gain to merchandising interests.



Currency was given to this idea by a report on the wheat situation made to the President of the United States by Henry C. Wallace, Secretary of Agriculture to the United States, transmitted to the President, November 30, 1923.

In this report, a comparison (page 99) is made of the prices per bushel of Fort William spot wheat, No. 1 Northern in Winnipeg, and the spot prices of the same grade in Liverpool. The prices are averaged for each month and the comparison extends from January, 1922, to September, 1923. The result makes it appear that over and above freight charges there was a margin between these two markets which was 6.5 cents per bushel for January, 1922, and for August, September and October of the same year was 15.4, 23.7 and 30.6 respectively. In June, 1922, the margin was .01 cent per bushel. Other months gave variations between the high and low figures given above.

We heard James A. Richardson, president and general manager of the James Richardson & Sons Limited, a very large exporter, who submitted that this comparison was unfair in that it failed to take into the reckoning "elevator charges at Fort William, elevator and brokerage charges at New York, ocean insurance, guaranteeing the outturn, brokerage charges to man at the other end." Mr. Richardson estimated that these charges would amount approximately to 5 cents a bushel so that the average profit on the basis of the comparison for the month of January, 1922, which showed a margin of 6½ cents would really be about 1½ cents a bushel, while in those months where the margin was below 5 cents the exporter would make a loss. Mr. Richardson pointed out that for the purpose of bringing the two sets of prices into comparison the freight rate for grain all rail from Port Arthur to New York was taken as the transportation cost but that actually only about 2 per cent of Canadian grain shipped through New York went from Port Arthur by the all-rail route.

In the months of September, October, and November, 1922, where the widest margin was shown, he said a railway strike in the United States had interfered with the transportation of grain to New York. The result was that exporters were unable to get their grain to the vessels and lost heavily through being in default in their deliveries at Liverpool. On the other hand English millers not receiving the grain they had contracted for at its due date bid up the price of what was available "spot" in Liverpool. The high price in Liverpool measured the degree to which the exporters were in default in their deliveries. We are satisfied that the Wallace Report touching this matter is inaccurate and misleading, and does not lend any support to the notion that prices are unduly depressed by manipulation on the Winnipeg market.

#### *Commission on sales*

- (4) That the rule of a minimum commission charge on cash grain is too rigid and does not accommodate itself to variations in price.

The legality of this rule has been challenged and sustained. In *Gibbons v. Metcalf* (15. Man. R. 583) the by-law was upheld as both fair and just. This judgment was afterwards affirmed by the unanimous opinion of the Court of King's Bench of Manitoba in banc. The Commission rule also formed part of the material in the charge of conspiracy heard and dismissed in 1907 (*Rex v. Gage* 18. Man. R. 175). In this judgment, the learned Judge says in part:—

"In the strife to buy track wheat it was found members were employing agents at small points at what was practically a division of commission. It was felt that if this was not discontinued it would make such serious and unnecessary inroads on the commission returns as to prevent members doing business on the one cent margin. The commission by-law was then amended to prevent the members from employing a buying agent at a market which was too narrow to justify paying him a salary of \$50 a month. This resulted in a large number of agents being discontinued at the smaller points and secured a greater portion of the one cent a bushel to the members of the exchange. It did not, however, according to the unanimous evidence, in any way affect the price to the farmer. It did not increase to the slightest extent the profit of the dealer, except in so far as it cut expenses. It did not materially lessen the convenience of the local market to the producer. It was passed for the

supposed furtherance of the business of the exchange and without any intent to lessen, and in fact it did not lessen, the profits of any other than the employees of its members."

After tracing the origin of this rule and examining its effect on the trade and on the producer, the learned Judge concludes that "it would appear in the interest rather than to the detriment of the grain growers of our country that the intermediate profits between the grower and the exporters should be taken care of by a fixed, certain and reasonable commission."

The chief complaint raised at the present time against the commission charges is to the effect that by fixing the rate at so much per bushel the commission merchant is not interested in the price that his client obtains for his grain. It is argued that the rate should continue to be a fixed rate but that the basis should be the value of the grain sold rather than the physical quantity.

Cash grain is handled on a commission basis by the commission departments of the line elevator companies, by the Saskatchewan Co-operative Elevator Company, the United Grain Growers, the independent cash commission merchants and the cash brokers. As the cash brokers deal only with members of the exchange they need not here be considered. The cash commission merchants sell farmers' grain either by disposing of it on the exchange or by selling it to millers, private terminal companies or other grain dealers, if in the latter way they can obtain a premium over the current market price for their customers. The commission departments of the elevator companies carry on business in the same manner. They are in very sharp competition with the cash commission merchants.

The theory of a percentage charge as opposed to the specific charge is that when the price of grain falls the commission merchant should share in the diminution of the returns to the producer and the charge for his service should not be the same; secondly, that as the cost and hazard of handling high priced grain is greater than in the case of low priced grain more risk is involved and there should be a lesser charge made for low priced than for high priced grain.

With regard to such a change acting as an incentive to the commission merchant to give better service it is obvious that the necessity the commission merchant is under of meeting competition and of holding his customers is the strongest incentive that can be given. The fact that the commission rate is fixed, while it does away with price competition makes competition in service very keen since that is the only difference that competing commission dealers can offer over and above their fellows." The opinion expressed by dealers is unanimous that the slight difference in return that would accrue to the commission merchant by the commission rate being fixed on a percentage basis would not prove an additional incentive to good service.

The general notion that a percentage rate would make the commission merchant suffer in a year when there are low prices and the farmer suffers and vice-versa rests upon a misconception as to the main condition which determines the magnitude of the commission merchant's returns. The principal factor is the volume of grain the commission merchant handles. In so far however, as large volume and low prices and limited volume and high prices go together a percentage rate would tend to stabilize returns to the commission class as a whole better than a fixed specific rate. But what the individual merchant is interested in is the volume that he personally handles and this depends rather on his ability to render services to the customer in competition with others.

Moreover, the commission man performs certain services apart from selling the grain, and these services are attached to each car or parcel of grain whether it be of high value or low. From the time the commission man receives the bill of lading until the car is unloaded he follows it to destination, institutes inquiries, checks grades, appeals if necessary, etc. These services of themselves would appear to justify a minimum fixed charge. The main point is that the charge actually made shall be reasonable.

The rate fixed by the Winnipeg Grain Exchange of one cent per bushel for wheat remained unchanged during the period of high prices. Winnipeg is the only large exchange where no increase has taken place. The rate charged in the exchanges at Chicago and Kansas City is one per cent of the gross proceeds with a minimum charge of one cent per bushel. The minimum gross charge at Minneapolis and Duluth is one and one-half cents per bushel. It will be observed that the rate at Duluth and Minneapolis is 50 per cent higher than in Winnipeg, while at Chicago and Kansas City when wheat is below a dollar a bushel the rate is the same as at Winnipeg but if the price advances beyond a dollar the rate is higher. While the argument that the rate should be fixed on the percentage basis is attractive, the present specific rate fixed by the Winnipeg Grain Exchange does not appear to be excessive and it is very doubtful if a change would prove of any real benefit to the farmer.

It was recommended to us by Mr. F. W. Riddell, general manager of the Saskatchewan Co-operative Company, that the rate should be fixed by the Board of Grain Commissioners and that the rate fixed should be a maximum rate rather than a minimum rate. At the present time all commission merchants are bonded by the Board. The Board also sets the tariff of charges for country elevators and terminal elevators, etc. In view of both these circumstances it would appear to be sound procedure to place in the hands of this body the authority to set up a tariff of charges for the sale of cash grain on commission.

The suggestion that the rate fixed should be a maximum rate instead of as at present a minimum rate stands on a different ground. In general it is to be observed that where competition is keen a minimum rate tends in practice to become the maximum charged, where competition is sluggish a maximum set tends in practice to become the minimum charged. The minimum rate as fixed at present by the exchange was found desirable and necessary because under the stress of keen competition charges were reduced until they became so low that the business could not live and there was danger of erratic and unstable conditions, injurious alike to the dealer and to the farmer. Mr. Riddell was not prepared to go so far as to recommend that the Grain Exchange should not be allowed to enforce the minimum rate rule but was of the opinion that since it had not set minimum charges in other instances where the Board of Grain Commissioners had set maximum tariffs there was nothing to show that it would act in this situation. If the Board of Grain Commissioners merely fixed maximum charges and the Grain Exchange ceased to set a minimum charge the way would be open for a recurrence of the previous conditions that experience had shown to be undesirable.

Moreover, such a change would make it possible for large country elevator companies which have a commission department, to reduce commission charges for a time to such a figure as would practically eliminate the independent cash commission merchants who handle farmers' grain. It is doubtful if this would prove desirable in the long run at the present time the loading platforms at country shipping points and the independent cash commission merchants on the exchange give the farmer the advantage of a free access to the market as a competitive service to that offered by the country elevator companies. This is a privilege which in the past has been highly valued by the farmer. It is also a form of competition that is keenly felt by the country elevator companies, especially where a company such as the Saskatchewan Co-operative charges maximum rates for special binning privileges. Further there is evidence to show that when a farmer puts a carload of wheat through a country elevator, the company expects to act as his commission agent in Winnipeg. Difficulties are placed by the elevator company in the way of the farmer who desires to employ an independent commission merchant.

If it becomes possible, as the result of a maximum commission rate only being authorized for the large line companies, to squeeze the independent cash commission merchants out of country business by temporarily lowering rates, they would thereby not only reduce independent competition on the exchange but would ultimately do much to render nugatory the use of the loading platform which competes with their country houses. The net result in that event would be that the farmer would have lost his alternative and competing service. This competing service has its value particularly at shipping points where there is only one elevator. We are of the opinion, therefore, that while the Board of Grain Commissioners should have the authority to set the tariff of commission charges as the circumstances require it should be left at their discretion both as to whether the rate should be a fixed percentage of the value of the grain or a specific rate per bushel and as to whether the rate set should be a minimum rate or a maximum rate; and that in exercising this authority the Board should bear in mind the undesirability of creating conditions which would eliminate the independent commission merchant. It would follow, of course, that the Grain Exchange could not bind its members to a minimum rate higher than the maximum rate, if any, fixed by the Board.

*The Exchange and the Inspection service.*

- (5) That the Winnipeg Grain Exchange exercise a sinister influence over the official grading of grain.

It is not the intention to deal here with the many general problems that arise in connection with a system of official grades and grading, nor to discuss the conditions under which grain is graded out of the terminal elevators at the head of the lakes. These problems are dealt with elsewhere. There are, however, prevalent in many places in the country rumours and suspicions that members of the exchange from time to time tamper with the official grading of farmers' grain. It is always difficult to trace a rumour to its source or to allay a suspicion that has once been given currency. In this instance we believe, after a very thorough and careful examination of the conditions under which farmers' grain is graded, that there is no ground whatever for these rumours and suspicions. Where the official sample drawn from a shipment shows it to be on the border line of, let us say No. 1 and No. 2 Northern, the rule holds, according to the evidence, of giving the grain the benefit of the doubt and grading it in the higher grade. Ownership does not enter into the question.

When the grain is inspected at Winnipeg the inspectors employed in the inside service of inspection, who place the grade upon the official sample, are not in a position to know who the owner of the shipment may be. Not a single instance of tampering with the officials of the inside service at Winnipeg by members of the Winnipeg Grain Exchange or by anyone else was disclosed.

Moreover if it were possible to tamper in any way with this service it would destroy confidence in the validity of the documents essential to the system of buying and selling by grade. Tampering with the official grading system while it would be unjust and injurious to the farmers shipping grain would be absolutely fatal to the organized activities of the exchange. In an inspection system confronted with the magnitude of the task that each autumn faces the inspection staff at Winnipeg certain inaccuracies and errors may develop due to the human element involved. Such possible errors and inaccuracies are altogether remote from results due to tampering with officials and their elimination is part of the general problem that arises in connection with the administration of an efficient system of grading.

## MARKETS AND TRADE ROUTES

## WORLD MARKETS FOR WHEAT

From time to time there has been discussion about the future development of world markets for grain. The subject is a vast one and is of great importance not only to the grain grower in Western Canada but to the world at large. The exportable surplus of grain from Canada has grown very rapidly in the last ten years, and, allowing for seasonal variations, with immigration, bids fair to continue to increase. The salient facts about markets may be briefly summarized. Nothing more can be attempted here.

Between 1900 and 1914 the rapid growth of population in Europe began to excite some alarm about where the means of subsistence were to be obtained. J. M. Keynes, in "*The Economic Consequences of the Peace*" points out that during this period the disquieting fact had become apparent to European statesmen that prices of grains were rising in relationship to other commodities. The Manufacturing nations of Europe were beginning to find that they had to offer larger quantities of merchandise to obtain foodstuffs. This was true despite the fact that Western European nations had improved greatly the technical methods of their agricultural production and were supplying themselves with a larger quantity of home grown produce. Still, population was increasing so rapidly that these technical advances in agriculture in Western Europe did not appreciably ease the situation.

The war caused a sharp positive check to populational increase but at the same time in Central Europe on account of the absence of fertilizers, culture, etc., production fell off. With this was to be added the effect of the revolution in Russia. Before the war Russia exported much grain to Great Britain and Western Europe. The immediate result of the war was to cut off this source of supply. Increased exports from North America, the Argentine and Australia filled in the deficiency.

From time to time there have been reports that Russia was "coming back" as a wheat exporter. While some small shipments have been made from Russia recently they have been without significance upon the market.

The present situation is that natural increase has repaired the losses of the war and the population of Europe is now about equal in numbers to the total of 1914. There is no evidence that Russia will make a speedy return to the position of a country exporting a large volume of grain. While the physical apparatus for moving grain in that country may be repaired with expedition there remains to be created a structure of confidence, of credit and of trading. Experience shows that injury to these more intangible elements in a country's system of marketing do not make rapid recovery but take a long time to renew efficiency.

While the United States continues to export grain and grain products the teeming population of that country seems bound, if not to remove her from the category of food exporting nations, at least to prevent her from increasing in amount her exports of grain or grain products.

The Oriental market also appears to be developing an increasing capacity to buy grain. It must be recognized, however, that there is a close relationship between the Chinese and Japanese demand for wheat and flour and fluctuations in the rice crop. When rice is relatively dear and wheat and wheat products relatively cheap there is a large demand for the latter and vice versa. This makes the situation irregular and uncertain.

On the whole it would appear that the Canadian grower of grain need feel no alarm about the stability of the world markets and its capacity to absorb all that he has to export. Seasonal variations some years may lead to disappointing returns but the general long run trend of prices for grains seem to be upward.

## AN EXPORT DUTY ON WHEAT ENTERING THE UNITED STATES

At the present time, the duty on Canadian wheat—entering the United States—is 42 cents per bushel. On wheat flour, semolina, crushed or cracked wheat, and similar wheat products, the duty is \$1.04 per hundred pounds. These duties are practically prohibitive, in their effect. They prevent Canadian wheat or wheat products having access to the American domestic market. On the other hand, under the provisions governing milling in bond and drawbacks, it is quite possible for the American millers to obtain Canadian wheat virtually free of duty to grind for export. Considerable quantities of Canadian wheat are ground in American mills and exported abroad under these conditions. This American flour ground in American mills, but the product of Canadian wheat, enters into competition with the output of the Canadian flour mills. The benefits of manufacture are lost to Canada, while at the same time, the general benefits of reciprocal free trade in wheat and wheat flour do not exist. It was suggested to us that in view of these conditions, an export duty should be levied at the same rate as in the American tariff, upon Canadian wheat and wheat products entering the United States. The American tariff having already closed effectively the domestic market to the Canadian farmers, the result of such a levy would be to eliminate the export of American flour ground from Canadian wheat, and to transfer this market to the Canadian millers. While, as a general thing, export duties are to be deprecated, the exceptional situation that arises in this instance might warrant such an import.

## THE EASTERN ROUTE

*Canadian and American Ports.*

While shipments of grain from Montreal make it the leading grain port of the North Atlantic it is well known that a large proportion of the grain shipped from there comes from the United States. On the other hand a large part of the Canadian export grain goes through the port of New York or other North Atlantic United States ports. There is a simple explanation to this apparently paradoxical situation. At all times grain will flow along the cheapest route to the old world entrepôts. It is very sensitive to variations in freight rates. The rates that must be considered are not merely the Atlantic freight and insurance rates but the total of rates from the Western terminals on the great lakes to the ports of entry on the other side of the Atlantic. When this is considered, a net difference of a sixpence a ton in favour of one route over the other will attract the traffic.

New York possesses three general advantages. (1) Vessels come to New York from all parts of Europe and there are frequent sailings to these points. There are certain regular lines of steamers between New York and European ports with which at Montreal there is no regular connection. Since grain is an excellent basic cargo space for parcel shipment from time to time offers at very low rates. There is thus a variety of opportunity for securing favourable ocean rates on parcel shipments that does not quite exist at Montreal. (2) Tramp steamers seeking charters lie off Norfolk where they are within convenient call of any of the North Atlantic American ports. A certain advantage attaches to this fact also. (3) On account of Montreal's position the insurance rate is higher on hulls and cargo out of Montreal than out of New York. The net result of these advantages is to give New York a slightly lower rate to Europe and the British Isles than Montreal.

On the other hand Montreal has two great advantages which counteract those stated above and, for a portion of the season at least, put her in a more favourable position. (1) Montreal is on the direct line to Europe from the Western States and while water navigation continues has the advantage of a

cheaper and more direct mode of transportation. (2) The facilities for handling grain at the port of Montreal are superior to those at the port of New York. At New York the grain has to be loaded into lighters and towed to the vessel's side and there elevated into the vessel by a floating elevator. At Montreal the grain can be discharged into the transfer houses and spouted from there directly into the holds of the vessel.

We are now in a position to point to certain conditions which govern the flow of grain during the course of the year to these ports. The American harvest matures several weeks earlier than the Canadian. As a result the advantages of the St. Lawrence route attracts heavy shipments from American lake terminals to Montreal. By the time the flow of Canadian grain begins to assume volume a large part of the American export of grain has been accomplished. On the other hand, on account of the lateness of the Canadian crop, the end of the grain shipping season is approaching on the St. Lawrence, before it does at the head of the lakes. This fact is of great significance as explaining partly why so much Canadian grain goes via New York and other American North Atlantic ports. When the flow of Canadian grain is still vigorous, navigation on the St. Lawrence ceases. Commonly it closes about two weeks earlier than navigation on the Great Lakes. Hence the flow of grain for this latter period is deflected towards Buffalo or the Georgian Bay or lower lake ports from whence it will move to tide water by rail. The end of the season finds these Bay, lower lake and Buffalo elevators filled with grain which will move out gradually during the winter. The grain carrying fleet on the great lakes takes a final cargo for winter storage and a large part of this fleet ties up at Buffalo for the winter. When spring comes, their grain is discharged and moves out chiefly via New York.

In the spring movement one additional factor is of importance. During the winter the Bay port and Buffalo elevators have become emptied of their stock in store. The first movement of grain down the lakes in the spring is to these ports as the most expeditious route to tide water. It will thus be seen that the explanation for a large movement of American grain through the port of Montreal and a large movement of Canadian grain through New York and other United States Atlantic ports rests chiefly on seasonal changes affecting the St. Lawrence route.

It might reasonably be inquired why there is not a considerable movement of grain from the Bay ports to St. John and Halifax. At present there is some movement in that direction, and at St. John this movement appears to be growing. The obstacles to a larger movement appear to be partly high freight rates and partly the absence of available cargo space offering at low rates at these seaports. As we have pointed out above, grain is an excellent basic cargo. As traffic grows at Halifax and St. John a large quantity of cargo space will offer regularly for the transport of grain. When this occurs more grain should move during the winter months through these ports. Lately Halifax has been put on the same insurance basis as New York. This removes one factor which has militated against her in the past.

The situation at Quebec is virtually that of Montreal, with the additional advantage of a longer season. There does not seem to be any reason why the Port of Quebec should not share with Montreal a part of the advantages of the St. Lawrence route. Montreal has developed wide business connections in the grain trade so that the traffic is accustomed to move through this port. It is open to Quebec to do the same thing; no physical obstacles lie in the way of the inauguration of an extensive grain export trade. Indeed, as the capacity of the Port of Montreal begins to be taxed at the peak of the movement, a part of the traffic might with advantage move to Quebec. Quebec also enjoys a more favourable insurance rate and is 180 miles nearer to Liverpool than is Montreal.

*Freight Rates.*

Upon several occasions we were asked to recommend that rates be granted on export grain over the Canadian National Railways to Montreal, Quebec, Halifax and St. John, sufficiently low to deflect to them the traffic which now goes by rail to the Atlantic ports of the United States. The object sought to be attained is undoubtedly a most worthy one: the preservation of Canadian trade for Canadian ports and the expenditure in Canada of a large amount of money which is now earned annually by United States railways. The subject forms an important part of a still larger question which has engaged the attention of Parliament in the past, and is still in the forefront of our national problems which await solution. In 1922, the Senate of Canada investigated the question of the export of Canadian grain and appointed a committee to examine expert witnesses on the subject. Evidence was given by railway officials, shippers, members of the grain trade and other business men. In its report the Committee emphasized the desirability of steps being taken in the national interest to divert this export grain traffic to Canadian ports, and recommended specifically (1) the lowering of rates on the Canadian National Railways, (2) the providing of greater elevator accommodation at Canadian ports, and (3) the making of an arrangement by the Government whereby marine insurance rates from Canadian ports might be lowered to meet the rates prevailing from United States ports.

During our sitting at Winnipeg, we had the advantage of hearing Mr. John E. Dalrymple, vice-president in charge of traffic of the Canadian National Railways, express his views on the question of the reduction of freight rates. Mr. Dalrymple's evidence was, of course, of a technical nature, and was given at considerable length. It is therefore difficult to summarize it fully in this report. It will be found, however, in the record of the evidence taken on March 7, 1924. Mr. Dalrymple's statement was prepared with great care, and it forms a valuable contribution to a study of the subject. The effect of this evidence is that the suggested reduction in rates on the Canadian National Railways is impracticable. Mr. Dalrymple was examined along the lines of the suggestion that export grain be carried from the Head of the Lakes to the Eastern Canadian ports on the basis of the Crowsnest Pass rates now effective on grain hauled from interior western points to the Lakes. His view on this question is (1) that such a reduction would be met by equivalent reductions on American lines, including the lines from the lower lake ports to the seaboard, which would leave Quebec (for instance), in the relative position it is in to-day. (2) Figuring out the Crowsnest rate basis to mean a rate of 15.60 cents per bushel on wheat from the Head of the Lakes to Quebec, he finds that the route via Buffalo to New York is still cheaper, even if no retaliatory reduction took place on the American lines, being 14.32 cents per bushel. (3) On the proposition placed before him by Commissioner Scott that the rate to Quebec on a proper computation of the Crowsnest basis would be 11 cents per bushel from Armstrong, he says that in his opinion the adoption of such a rate would surely bring about the aforesaid retaliatory reductions, and moreover that the revenues of the Canadian National Railways would be depleted, the proposed rate being totally inadequate to cover the expense of handling the traffic. As to the beneficial effect on the farmer of the general reduction of rates, "it would only be temporary," he says, "as the higher rates would be restored as soon as the Canadian National Railways were forced out of business."

Mr. W. P. Hinton, former vice president and general manager of the Grand Trunk Pacific Railway also gave valuable evidence on April 29, 1924 on the points involved. Mr. Hinton corroborated Mr. Dalrymple's evidence as to the impracticability of providing a lower rate on the Canadian National Railways during the period of open lake navigation on account of the certainty of



reprisals on competitive lines in the United States. He stated, however, regarding the winter months, that "there might be some possibility of drafting some rate structure which would allow the route to Halifax and St. John to be used during the winter season."

The question of railway rates in Canada is in itself a complicated problem of the first magnitude, and, as we have already said, the particular question now before us is only part of the general subject. In hearing such representations as were made to us regarding rates on grain, we have always endeavoured to make it clear that we should have to confine ourselves to such general considerations as would appeal to any body of men like ourselves not having the advantages of expert knowledge and expert assistance, and the necessary time to enter, unembarrassed by a mass of other important questions, into an exhaustive study of the numerous technical matters that must be weighed before a definite recommendation for a reduction of freight rates can be hazarded. In view of the evidence of Mr. Dalrymple, supported as it appears to be by the information which was obtained by us from important American railway officials in New York, we shall have to leave the subject as it is. The Board of Railway Commissioners for Canada is the permanent competent tribunal to which all demands for specific increases and decreases of freight rates may be made, and from which definite rulings may be obtained. In addition to this, we are aware of the fact that the whole structure of freight rates in Canada will probably be examined in the near future by the authority of Parliament, with a view to effecting a re-adjustment more satisfactory to Canadians of the different parts of Canada than the situation which now exists. We venture to state that in the course of our investigation we have heard enough to convince us of the urgent necessity of such a step being taken.

In making these last remarks, however, we do so subject to this important qualification. Mr. J. G. Scott of Quebec, one of the members of this Commission, is himself a railway expert of long experience, both as a railway builder and railway manager; and among other things he has the experience of having handled export grain from Parry Sound to Quebec. Mr. Scott gave evidence before the Senate Committee of 1922, above referred to. Mr. Scott, as a result of his own experience and expert knowledge, disagrees with the views expressed by Mr. Dalrymple. Moreover he has certain specific recommendations to make concerning the transportation of the western grain crop at a much lower rate than now prevails. While the other members of the Commission feel themselves bound by the limitation above referred to, they have requested Mr. Scott to state his own views in the form of a memorandum to be submitted to the Government with this report. Mr. Scott has prepared his memorandum, and we have pleasure in handing it in, in order that it may receive the attention of the Government and of Parliament.

#### THE WESTERN ROUTE

The development of the western route for grain export to the Orient through the increase of the demand for wheat from that part of the world, and to Europe through the opening of the Panama Canal, is an event of the first importance in the history of the Canadian grain trade. During our itinerary through the Province of Alberta in the summer of 1923 we found a steady demand from the farmers of that province for lower freight rates, greater storage accommodation and shipping facilities, improvements in the official inspection service and, generally, all other concessions and modifications which would enable them to make freer use of the western route. The availability of this route offers the producer nearer access to the sea, a factor of increasing importance in world transportation, and he is anxious, naturally, to take full advantage of it.

On the question of freight rates we can only repeat what we have said in dealing with the Eastern route. The matter, however, is of prime importance. The extent of the territory in the wheat producing area making use of Pacific ports for shipment will be determined very largely by the prevailing freight rate. It has been estimated that every reduction of one cent in the rate westward, (the rate eastward remaining as it is), will add a strip of from 20 to 30 miles in width to the area shipping to the Pacific.

Not the least of the advantages to be acquired by the providing of facilities for the free use of the western route, is that of regulating conditions in regard to shipments across the great lakes. The Pacific ports, open all year, and ready to receive shipments at any time, will serve to prevent the setting up of exorbitant rates for lake shipments and thus assist materially to dispose of a difficulty which has been encountered in the past.

The initiative in providing terminal elevator facilities on the Pacific coast was not taken by private capital, as was the case at the head of the lakes, but by the Government of Canada. The power to construct and own public terminal elevators was conferred upon the Government for the first time by Amendment to the Canada Grain Act, (Sec. 13) in 1914. Shortly afterwards the Government exercised this new power by constructing an elevator at Port Arthur, three in the interior and the public terminal at Vancouver in 1916. This Vancouver public terminal elevator has since become the property of the Vancouver Harbour Commissioners who have built another and acquired as well a private (mixing) elevator which they have leased to a company. Lately, private enterprise has gone into the public terminal business at Vancouver, on a large scale. An English company has built at that point, and has purchased in addition, a line of elevators in Alberta to ensure its grain supply. We understand also that other private ventures are about to be undertaken.

Victoria, New Westminster and Prince Rupert are all anxious to become grain shipping ports. So far, private capital has not been invested in public terminals at any of these ports. Parliament, at its last session, voted a sum of money to be expended upon the construction of an elevator at Prince Rupert and we understand that tenders are now being called for the letting of the contract. For the immediate present, Prince Rupert, as the terminus of the Grand Trunk Pacific Railway, and New Westminster, on account of its harbour facilities, both seem to afford reasonable prospects for terminal elevator development. Victoria, seems to us to be a matter for consideration of the railway companies. According to a statement made to us by the Premier of British Columbia, there is a certain class of trans-pacific steamships plying between Portland and Seattle and the Orient which visit Victoria but do not penetrate as far as Vancouver. It is suggested that these vessels would welcome grain cargoes if they could be had at Victoria. If such is the case it might be profitable to ferry cars across to Vancouver Island to be run down to the port, and this would mean in time the providing of elevator accommodation. We understand that the matter has lately been discussed between the British Columbia authorities and the President of the Canadian National Railways.

#### *The Peace River District.*

We think it necessary in dealing with the question of the Western Route to say a special word concerning the Peace River district. This territory is a wheat growing territory and contains a large area still to be developed. On account, however, of its situation, it is too far north and west to ship grain profitably through the East. Its future is bound up with the necessity of securing adequate railway facilities to give it access to the Pacific Coast.

## THE HUDSON'S BAY ROUTE

In 1911 the Government of Canada began the construction of the Hudson's Bay Railway, to provide a new outlet for western products to the markets of Europe. It is not yet completed. In order to meet, in substantial part, at least, the cost of this undertaking, provision was made for the funding of the proceeds of the sale of pre-emption lands and homesteads, the property of the Crown, situated in Alberta and Saskatchewan. Today, while the producers of Alberta are mostly interested in the development of traffic to the Pacific, those of Manitoba and Saskatchewan are looking towards the Bay and demanding with great insistence that the railway project be completed, the terminal facilities provided and ocean carriage secured, in order that they may utilize this route for the shipment of their grain. The expectation is, of course, that this new channel of transportation will prove cheaper than those now available, and that the returns to the producers will thereby be increased.

Our understanding of the position of affairs in regard to this railway is that its completion is assured. From time to time during the course of our sessions we were asked to hear evidence advanced for and against the Hudson's Bay project. Bearing in mind the limitations which must necessarily be read into that portion of our Commission dealing with the subject of "transportation," we endeavoured to confine ourselves to hearing what might be said of the probability or improbability of the opening of the route being beneficial to the shipper of grain. The other features of the railway project are not of interest to this Commission. As a result we feel there is not very much we can say in this report, all of the evidence being founded on probabilities.

However, it would appear that the success of the route from the grain grower's standpoint depends largely upon a question as to which, curiously enough, there seems still to be a great difference of opinion, that is, the navigability of the straits during a reasonable period each year. It would be presumptuous of us, we think, with the inadequate means at our disposal, to offer any decided opinion on this all important point. The question has been the subject matter of investigation by Parliament and by the Government, and we must assume that satisfactory evidence of the navigation conditions has been secured, since the project has been launched and carried well on towards completion.

Assuming that the route through the Bay and the straits will be available during a sufficient period to enable large quantities of Western grain to be shipped by that outlet, use will be made of it for that purpose if it can be carried at ocean rates advantageous to the shipper. The standard of these rates will be affected materially by marine insurance charges, which, of course, increase according to the risks of the zone of navigation. Insurance rates at St. John are higher than those at United States Atlantic Ports, and those at Montreal and Quebec are higher than those at St. John. Will the ocean rates be so high as to offset the advantage derived from the short rail haul? Here we are left largely to conjecture, there being no such thing as a basis of insurance rates in the Hudson's straits today.

Experts, too, have pointed out to us the disadvantage of having to store grain at Nelson after the close of navigation. Grain in storage at that point would, of course, be off the open trade routes and consequently unavailable for marketing until the following season of navigation.

GOVERNMENT ELEVATORS

The question involved under this heading is that of the ownership, management and control of all elevators built at public expense, the property whereof is now vested in the Crown or has been transferred to some public body. We have before us a return supplied to us by the Department of Trade and Commerce, dated September 3, 1924, showing a list of these elevators and particulars of the ownership and management in each case. A copy of this list is given here for the purposes of information.

Location	Owner	Operated as	Operated by
Port Arthur, Ont. (1)....	Dominion Government.....	Public Terminal Elevator..	Board of Grain Commissioners.
Moose Jaw, Sask. (1).....	" .....	" .....	" .....
Saskatoon, Sask. (1).....	" .....	" .....	" .....
Calgary, Alta. (1).....	" .....	" .....	" .....
Edmonton, Alta. (1).....	" .....	" .....	" .....
Vancouver, B.C. (1).....	Vancouver Harbour Board..	" .....	Vancouver Harbour Board.
Montreal, Que. (2).....	Montreal Harbour Commission.	Public Elevators.....	Montreal Harbour Commission.
Montreal, Que. (2).....	Grand Trunk Railway.....	Public Elevators.....	Montreal Warehousing Co.
Quebec, Que. (1).....	Quebec Harbour Commission	Public Elevator.....	Quebec Harbour Commission.
Collingwood, Ont. (1)....	Canadian National Railways	" .....	Leased to E. R. Bacon Grain Co.
Depot Harbour, Ont.-(1).	" .....	" .....	Armour Grain Company.
Tiffin, Ont. (1).....	" .....	" .....	Canadian National Railways.
Port Colborne, Ont. (1)..	" .....	" .....	Canadian Government.
Kingston, Ont. ....	" .....	" .....	Montreal Transportation Co. (not operated).
Halifax, N.S. (1).....	" .....	" .....	Canadian National Railways.
St. John, N.B. (1).....	" .....	" .....	" .....
Port Arthur, Ont. (1)....	" " " " "A"	Public Terminal Elevator..	Saskatchewan Co-operative Elevator Co. Ltd., No. 3.
Port Arthur, Ont. (1)....	" " " " "B"	" .....	Pt. Arthur Elev. Co. Ltd.
Fort William, Ont. ....	" " " " (G.T.P.)	" .....	Grand Trunk Pacific Elev. Co. Ltd.
Transcona, Man. ....	" .....	" .....	Not operated.

In the interim report of this Commission, dated at Vancouver on June 19, 1924, and filed by the Chairman and Commissioner MacGibbon, the question of the ownership, management and control of these elevators was dealt with at length, and the observations of the Commissioners will be found at pages 27 to 30 of the printed copy of the report. The recommendations contained in this interim report are now concurred in by the full commission. In effect it is recommended: (1) that the elevators referred to in the interim report should be acquired by the Government of Canada and vested directly in the Crown; (2) that they should be operated by a person or a body specially appointed for that purpose by the Government; (3) that the Board of Grain Commissioners should be relieved from the duty of operating and managing elevators, which is now placed upon them by section 13 (3) of the Canada Grain Act; and (4) that the person or body charged with the operation of Government elevators should be made subject in every particular to the requirements of the Canada Grain Act, and to the jurisdiction of the board as defined by that Act.

In making the foregoing recommendations, the report had particularly in view the public elevators situated at Vancouver, Port Arthur, Saskatoon, Moose Jaw, and Calgary, and the new elevator then in course of erection at Edmonton, and now completed. The first of these is now owned and operated by the Vancouver Harbour Commission. The others are owned by the Government and operated by the Board of Grain Commissioners under the provisions of the Act.

The reasons which support these recommendations are set out fully in the interim report, and need not be repeated here at any length. In so far as the Board of Grain Commissioners is concerned, however, we believe that the necessity of carrying out the recommendation which has been made will be found to be all the more urgent by reason of what we shall have to say later on regarding the question of the administration of the Canada Grain Act. It seems anomalous to us that the body which is vested with the great responsibility of licensing, regulating and disciplining elevator operators, fixing their charges and hearing complaints made against them, should itself be engaged in the elevator business, and therefore subject to the same criticism and the same complaints as are levelled from time to time against their competitors in the trade. Those unfamiliar with the grain trade will understand the situation better if we say that it is analogous to what would exist if the Board of Railway Commissioners were charged with the operation of a railway.

In addition to the elevators situated at the six points above mentioned, the list contains a number of others located at Atlantic and Lake and Bay ports. Eleven of these belong to the Canadian National Railways, of which six are leased to private companies; two are not operating, and the other three are operated by the Railway. Of the remainder, one elevator is given as owned by the Grand Trunk Railway at Montreal, and operated by the Montreal Warehousing Company; two are owned and operated by the Harbour Commissioners of Montreal, and one by the Harbour Commissioners of Quebec.

The elevators situated in Eastern Canada present a notable difference from those at the head of the Lakes, at interior points in the prairie provinces, and on the Pacific Coast. The elevators in the West are public terminal elevators, in the sense in which this term is commonly used. By this we mean that they receive grain which has been inspected officially, but from which the dockage has not been removed. They receive grain in carload lots directly from the producer. Their duty is to clean this grain, to account for the screenings, to store it subject to warehouse receipt, to preserve the identity of its grades. The producer feels a personal interest in the operation of these elevators, in which the grain remains his own until he has ordered it to be sold and has received his return. As a consequence, the producer is always watchful of the manner in which business is conducted at Fort William and Port Arthur, Vancouver, and the other Western points where his wheat is handled and stored until sold. He has a personal concern in the weighing-in, the inspection, the cleaning, the handling of the screenings, and especially in the manner in which the fundamental rule against mixing is being observed. Hence the occasional complaints against the operators of public terminal elevators and the demand for government ownership and control of these houses, which was heard very loudly at one time, and which led to the amendment to the Canadian Grain Act in 1914 (section 13), empowering the Government "to construct, acquire, lease or expropriate" elevators.

With the elevators in Eastern Canada, such as those situated at Montreal, Quebec, Halifax and St. John, the case is different. These elevators are transfer houses. The grain which they receive has been inspected and cleaned, and has secured its final certificate of grade on its way through the public terminals. Their duty is to store it according to grade, and to ship it out on demand. The grain passing through them has ceased to be the property of the producer, and he, of course, does not take the same interest in them that he does in the elevators of the West. In fact, the greater part of the Canadian grain shipped overseas from the East goes through New York, Philadelphia and other American ports, where the Canadian authorities can exercise no control in any event, and where the work of elevating and loading the grain into vessels is usually done by the Railways as part of their duty as carriers. The care to secure

proper warehousing conditions and efficient service at the eastern ports is therefore one that falls solely upon the exporter of grain, and not upon the producer. It will help to remove misunderstanding if it is remembered that in the mind of the producer Vancouver, for these reasons, occupies the same position as Fort William and Port Arthur, and is not in the position of Montreal or New York.

The foregoing explanation will throw some light on the question which arises as to whether those elevators in the above list handling western grain, but situated in eastern Canada, should also be brought under Government ownership and operation, in the manner recommended for those in the West.

During the course of our inquiry, the question appeared to be confined to the elevators in the West, in so far as the grain growers were concerned. Since the publication of the interim report, however, we have had cognizance of a communication addressed to the Minister of Trade and Commerce by the Executive Committee of the Canadian Council of Agriculture, approving of the recommendation made in the report, and suggesting that the elevators of the class operated at Montreal be included in the proposed change. The Canadian Council of Agriculture is undoubtedly qualified to speak for the producers of Canada; and while the individual grain grower has no proprietary interest in the grain handled in these elevators, it having become the property of the exporters, he is nevertheless interested in principle in everything that relates to the safe and efficient handling of the grain. This recommendation would mean that the elevators at Montreal, Quebec, etc., would be acquired by the Government and operated by a government appointee, and be subject in all particulars to the provisions of the Canada Grain Act and the jurisdiction of the Board of Grain Commissioners.

Bearing in mind the nature of the services performed by these transfer elevators, and the other conditions concerning them outlined above, we do not feel that the reasons which have moved us to recommend the adoption of the policy of government ownership and operation, in connection with the aforementioned western elevators, apply with the same force to them. The suggestion was not before us when we visited the Eastern ports, and we have had no opportunity to hear representations on the other side of the case from the public bodies concerned, and we would hesitate, therefore, to make a positive recommendation that this policy be put into effect concerning them. The interim report suggested that the principle of government ownership and operation which was recommended for the West might be extended to the East, the question being one for fuller discussion and consideration, and having in mind the importance of the matter involved, we do not feel justified in going any further now.

In so far, however, as these elevators at Eastern points are concerned, a middle course suggests itself. We have pointed out that it is the exporter of grain who is mainly interested in the management and operation of these elevators. We have had requests from some exporters to have the elevators at Montreal brought under the supervision of the Board of Grain Commissioners, principally in regard to the weighing and the consequent accounting for shortages.

On June 10, 1914, an Order in Council was passed upon the recommendation of the Minister of Trade and Commerce, conferring upon the Board control and supervision over the elevators of the Harbour Commissioners of Montreal, the Harbour Commissioners of Quebec, and the Government Railway at St. John and Halifax. Although duly passed, this Order in Council has never been acted upon, and the Board has never exercised the jurisdiction which it confers. We have been asked to recommend that it be made effective. The Montreal Corn Exchange Association placed itself on record, by letter

dated May 1, 1923, addressed to the Minister of Marine and Fisheries, as being in favour of having this Order in Council put in force. The letter states that this Association comprises in its membership all the Canadian grain exporters as well as the representatives in Montreal of United States exporters who ship via the St. Lawrence.

Apparently the main desire of the exporters is to have an independent body to whom recourse can be had in cases of disputes arising out of discrepancies in weights.

We are unable to state the reasons which have caused the Order in Council of 1914 to remain so far in abeyance. We believe that the vesting of the control of the weights into and out of these elevators in the body entrusted by Parliament with the administration of the Canada Grain Act, and the control of the grain trade of the country, would be a safeguard to exporters, and would have the effect of strengthening still further the confidence which is now felt in Europe in the integrity of grain cargoes shipped out of Canadian ports. We recommend, therefore, that steps be taken to bring about this result.

### THE ADMINISTRATION OF THE ACT

The Canada Grain Act, 1912, created the Board of Grain Commissioners to administer the Act. Since 1912 the duties and responsibilities of this body have increased greatly with the expansion of grain growing in the West, the opening of new trade routes, and the growth in volume of exports. The importance of the proper exercise of its functions can scarcely be overestimated. It is of vital concern to Canada.

From time to time in our report we have suggested changes in the regulations which necessarily affect the duties of the Board of Grain Commissioners. We do not think these recommended changes call for additional powers to be given to the Board. The original grant appears to be ample. Indeed we have gone further in recommending that the actual operation of terminal elevators, as distinguished from control and supervision, should be divorced from the duties of the Board and given into other hands.

As a result of our investigation through the grain growing provinces we are strongly impressed with the necessity of the Board keeping in closer touch with the primary producers of grain. Small complaints and misunderstandings develop in the country relative to the handling of grain. They do not find a vent and are not cleaned up but fester and poison the neighbourhood where they occur. They create an attitude of suspicion and mistrust of the whole organization of grain merchandizing. At times when such complaints came to our notice we found that they involved matters that might have been disposed of summarily by the Board, but that the farmers concerned had an inadequate knowledge of the duties and powers of the Board and of the means of appealing to it. This does not imply any dereliction of duty on the part of the Board. They have no doubt given their best attention to whatever complaints have reached them. But they have not had the means to establish a close personal contact with the farmers.

The remedy for such a condition of affairs we consider does not lie in adding to the number of commissioners. We think that the Board should continue to be a judicial and administrative body, the members being selected purely on the basis of capacity rather than upon a regional basis. To allow regional considerations to decide appointments would, we believe, lead to an unwieldy Board and would militate against its efficiency.

We do strongly recommend that the Board should be supplied with sufficient expert technical and clerical assistance to enable it to accomplish its routine duties and at the same time to have opportunity to give a large part of its attention to its general functions of supervision, discipline and control over the grain trade.

The Board has the power to license elevators and to revoke licenses. We believe that there follows from this power the obligation to exercise some measure of inspection of the way in which the operators of elevators and other licensees deal with the grain producers. We have already stressed this point in regard to country elevators. *The Board should be an itinerant board* in the same way as the Board of Railway Commissioners, and should visit from time to time convenient points in the grain growing areas to hear complaints and to remedy grievances. We believe that if it acted in this way it would perform a very great service to the grain grower and to the grain trade in allaying discontent and creating conditions of confidence in this industry.

It is to be pointed out that the fees charged in connection with the administration of the Canada Grain Act after covering all expenses have yielded, in recent years, a large surplus. The Canada Grain Act is not designed to be an instrument of taxation but it is purely a regulative measure, the government having undertaken to render certain services and charge certain fees therefor. The fees levied for weighing, inspection, etc., are in themselves reasonable. We think that instead of lowering the fees to remove the element of taxation the surplus could be used to improve the service. Our recommendation that the Board of Grain Commissioners should not be cramped by lack of sufficient technical experts and clerical assistance bears in mind that the grain producers and the grain trade pay for these services and the present scale of charges provide the means to make it more efficient.

It was suggested to us that the efficiency of the inspection services particularly has suffered because the Chief Grain Inspector under the present system has to take all employees, including inspectors and samplers from the Civil Service Commission instead of being able to hire and dismiss these men as he did in former years. We do not recommend that this branch be taken out from under the Civil Service Commission but we think that care should be taken by the latter body to frame rules adapted to the particular exigencies of the grain trade. There is no doubt a need for much greater elasticity in the relations between the Civil Service Commission and the inspection and weighing departments.

At the present time the schedule of charges operative for different classes of elevators or other services are validated in various ways. Some are authorized only by the Board of Grain Commissioners, others require to be confirmed by Order in Council. We think that uniformity in practice in this regard should be established.

Finally we are of the opinion that the Annual Report published by the Board of Grain Commissioners should contain (1) an account of the activities of the Board itself during the year, (2) the detailed reports of its officers as at present, and (3) should show all orders in council in force supplementary to the Canada Grain Act.

All of which is respectfully submitted.

W. F. A. TURGEON,  
*Chairman.*

W. J. RUTHERFORD,  
J. G. SCOTT,  
D. A. MacGIBBON,

*Commissioners.*

OTTAWA, January 7, 1925.

P.S.—In signing the above report, I do so subject to the reservations on the subject intituled "The Eastern Route," which will be found in my memorandum filed herewith.—J. G. SCOTT.



## APPENDIX

## REPORT OF INVESTIGATION MADE IN GREAT BRITAIN AND HOLLAND

At the request of the Royal Grain Inquiry Commission I went to the British Isles and Holland for the purpose of making inquiries respecting the receiving, handling, weighing, storing and transporting of Canadian grain in the Old Country; the markets—how Canadian grain is bought and sold, its intrinsic qualities in the milling economy; its intrinsic value and comparative value; impressions as to grade standards; buying on Canadian certificate final and f.a.q. (fair, average quality); public storage; complaints respecting the deterioration of Canadian grades while wheat is passing through the United States in bond; methods of purchasing grain from other countries, and anything else that might be helpful to the Commission and of value to the producers of grain and to the grain trade of Canada. I left Saskatoon May 15 and on my way east stopped off at Winnipeg and procured from the Grain Inspector's office average and standard samples of Manitoba Number One, Two and Three Northern, and Four, Five and Six Commercial, and special wheat, Number One and Two C.W. oats, Number Two and Three C.W. barley. At Montreal I discussed features of the grain trade with Mr. A. A. Bowen, Inspector for the Eastern Division, with special reference to cases of complaints by Old Country purchasers in which he had been employed in trying to make satisfactory settlements.

I arrived in Liverpool May 31 and proceeded to London. Here I called on Hon. P. C. Larkin, Canadian High Commissioner in London, and discussed with him the subject to our inquiry. He told me of the complaints that had come to his office from British traders in Canadian grains respecting shipments of Canadian wheat (Manitoba) through United States ports that were below the standard of quality which they expected to receive on Canadian Certificate final, and gave me access to the files in his office containing these complaints and the correspondence relating to them. He also gave me letters of introduction to men prominent in the grain and flour trade in London and Liverpool, all of which was helpful. I then called upon Mr. W. A. Wilson, Agricultural Products Representative for Canada, who introduced me to Mr. Harrison Watson, Chief Canadian Government Trade Commissioner in the United Kingdom. Mr. Watson gave me much helpful assistance. He arranged for me a meeting with several representatives of the large grain importing companies, who not only gave me valuable information themselves but who put me in touch with the people in the trade who could, and did, give the detailed information desired. Mr. Watson also wrote to the Canadian Trade Commissioners in Glasgow, Liverpool, Bristol, Rotterdam and Hamburg, pointing out to them the importance and the bearing of the inquiry, and indicating to them the manner in which they might make arrangements for me to meet the trade when I visited their points to secure evidence. He also wrote Mr. Urquhart, Secretary of the Liverpool Corn Trade Association, in respect to my visit there. As a result of Mr. Watson's help and that of his associates, excellent arrangements were made at every point in advance, so that full time could be given to matters pertaining to my mission.

I made my studies in London, Glasgow, Rotterdam, Edinburgh and Liverpool in the order named. More than seventy prominent men afforded me opportunities of discussing the various questions with them, and of seeing the

facilities they had for handling Canadian and other wheats from the ship throughout its devious course of unloading, weighing, transporting, storing, conditioning, grinding, testing and baking the flour into bread and testing the final product before putting it on the market. Among these were bakers, flour importers and merchants, expert wheat buyers, grain storage and transit companies; mill managers and millers, laboratory officials and expert bakers, elevator and dock superintendants, officials of Corn Trade Associations and representatives of wheat producing countries, such as India, Australia, and the editor and statistician of Broomhall's Corn Trade News. A list of those who assisted me is attached. I was fortunate in being in the Old Country at the time of the Empire Exhibition at Wembley. I visited it on three occasions, for the purpose of studying the agricultural exhibits of grain exporting countries within the Empire, chief of which, in addition to Canada, were Australia and India, and of discussing with the agricultural experts of these countries their problems of production and marketing. And I was fortunate, too, in being there just at the time when the United States Government issued what appeared at the time to be a bullish crop report, and to be able to follow at first hand its effects upon the various branches of the grain trade as it affected the old country and the wheat producing and exporting countries as reflected on the importing markets.

I wish here to record my appreciation for the unflinching courtesy with which I was received, and my many and pertinent questions were answered; for the valuable information given and suggestions offered, and for the many kindnesses extended to me both in the United Kingdom and Holland on the part of those who voluntarily assisted me.

The British Isles for two thousand years have grown wheat of varying quality and quantity, and at times have had surpluses for export. When England developed into a great pure bred live stock country, and suitable crop rotations became established, she still grew quite large acreages of wheat. Local mills had been established to grind the wheat and were dependent almost wholly upon local supplies for their requirements. The farmers naturally sought large returns from their fields, wheat for the mills and straw as a by-product for feed and for bedding for the stock. In securing these ends, the farmers lost sight of the needs of the miller to such an extent that in 1900 the National Association of Millers circularized the most prominent agricultural societies through the country, pointing out that since 1890 "the tendency in many parts of the country has been towards a further deterioration in the milling quality of home-grown wheat, and we attribute this to the fact that farmers and seed-raisers pay more attention to the large quantity of straw and wheat produced by some of the newer varieties, whilst overlooking the fact that some of these are singularly destitute of gluten, and of other characteristics which are of utmost value for milling purposes."

Since England has developed into a highly industrial and trading country, she has become dependent upon other lands for much of her bread supplies and for large amounts of stock foods—oats, barley, maize, beans, pease and oil-cakes. Her ships carry merchandise to the ports of the world, and, where grains are available, bring them back either as full or parcel cargo, e.g., England sends coal to the Argentine and brings back wheat and maize. The annual requirements, so far as wheat is concerned, to furnish bread for the people of the United Kingdom is approximately 270,000,000 bushels, of which, in 1922, 60,000,000 bushels were produced by the farmers of the homeland. Of the balance, Canada furnished, in wheat and flour, 195,431,346 bushels, while the remainder came largely from Argentina and Australia, with contributions from United States, Chili, India, Egypt and Persia. Great Britain is Canada's best customer, not only for wheat, but for all other grains for which Canada has to find a market abroad.

The business of assembling the grain supplies for the United Kingdom is carried on by individuals or companies, commonly called importers. These may be simply middlemen who purchase from the exporter on C.I.F. terms, and resell to millers, standholders (merchants) etc., or they may be the large millers or groups of millers who purchase, or instruct their agents in distant markets to purchase from exporters wheat for their own mills. Brokers sometimes handle the exporters' wheat or other grains on a commission basis. British importers of grain have built up for their own service extensive office and field staffs and possess every known facility for acquiring information from the users of grain in their own and other countries, as to their approximate present and future requirements for a given period, and from wheat growing or grain growing countries as to acreages sown, weather and other conditions affecting crop growth, probable yields and quality, exportable surpluses, prices etc. Of necessity, large quantities of grain are purchased on contract for future delivery.

Importers and other dealers in grains have organized themselves into what are known as Corn Trade Associations. The London Corn Trade Association was the parent organization, founded in 1878, and incorporated under the chairmanship of Mr. John Ross in 1886. The first contract drawn up was the East Indian. Others quickly followed, and now number seventy-four. The sister organizations of Liverpool, Bristol, Hull etc., have a number of their own contracts, but generally speaking, the major portion of the world's grain business is done upon the basis of the London Corn Trade Association's contracts. The membership is international in character, including nearly 500 of the leading grain firms of the world, some of whom reside in New York, Buenos Aires, Melbourne, Winnipeg, Montreal and in every grain centre in the United Kingdom and the continent. Among the duties of the Association is the important one of taking samples of arriving shipments and that of making arbitration awards by its various committees in the interests of its members in the Kingdom and in other grain trading centres of the world.

In the eighteenth century, and previous to that time, the methods of trading in grain were primitive, awkward and cumbersome, and most inconvenient. For instance, in London the millers, grain merchants and farmers used to meet in Whitechapel, Mark Lane and Tower Hill Inns to transact their business. The farmers from both sides of the Thames formed the habit of meeting in Mark Lane to compare notes, and in time the idea of having a common meeting place where the interests of all three classes could be best served was evolved. In 1747, the corn factors or merchants subscribed enough capital to erect such a building where their business could be more expeditiously transacted, and this they called Mark Lane Exchange. From time to time the place was enlarged to accommodate the increasing trade. In 1882, the new Exchange was built. It has a large hall with 19,100 square feet of floor space. Round the hall there are 70 large stands with 20 small stands in the aisles, and round the clock in the centre of the market there are 8 more stands, while at the entrance there are 24 desk-stands. The market is held on three days of the week—Monday, Wednesday and Friday—from 12 noon to 3 p.m. It is free to all buyers, but sellers have to pay an annual subscription. On a market day, the floors of the exchange are crowded with busy men—importers, standholders (merchants), millers, feed merchants, representatives of farmers' co-operative societies etc. The business is carried on in a very quiet manner, in contrast with the methods employed on the floor of an exchange on this side the Atlantic. This is not a cargo market. It corresponds more nearly to, and in fact is, a retail market. The actual goods are not displayed, nor do the purchasers see, except in rare cases—stored grain or sample parcels—samples of the grains that are being retailed.

A standholder leases one of the stands for his use on market days. Arranged neatly on the stand are samples of all the various grades and kinds of grain

which he has for sale—not of the actual grain but of the grade or kind. The samples displayed were taken by a man, delegated to do that work, from the last arrival shipment, all of which has been sold and probably ground, or is in store in the bins of up-country mills. On one of these stands, I saw in bags, containing a few pounds each, samples of Canadian No. One, Two and Three Northern wheat from Atlantic ports, and No. One, Two, Three and Four wheat, via Vancouver, Australia (white wheat), Argentine—Rosafe and Barusso; Indian—Karachi wheat. In no case did the sample on the stand represent a parcel for sale. The sample represented a grade or a kind. If a sale were made, the contract specified the amount of the grade or kind selected. If the purchaser chose a load of No. One Northern via Vancouver, the purchaser expected to receive and the standholder expected to have delivered to him 8,000 bushels of No. One Northern equally as good as the sample, and up to the average of that which he was accustomed to receive on the Canadian Certificate final. The miller made careful comparisons between samples displayed on the same stand, and he also compared the samples on different stands, but even then he could not choose one which represented an actual parcel for sale except in the case of a sample cargo or stored wheat, and it was not my good fortune to see one of these on sale in this market. I asked the standholder if he knew the statutory definition of Manitoba Number One Northern. His answer was "No." He liked to trade on the Canadian Certificate final. It gave them the least trouble. I asked him if it would be an advantage in selling Canadian wheat if he could guarantee the miller a grade with say 14 per cent protein. "It would," he agreed, "be of advantage to the miller to have such information and more, if possible." He preferred to give the purchaser as little information as possible. "The miller likes to use his own judgment and I like to let him." On this market, the miller discriminates between Manitoba's via Vancouver and the same grades via Atlantic ports, Vancouver ones being 6d. and sometimes a shilling per quarter (8 bushels) more than Atlantic ones, and Vancouver fours being just about as much as Atlantic threes. This disparity in price and values had prevailed for some time.

There were on another stand samples of C. W. barley and C. W. oats. The standholder made no complaints so far as the quality delivered on the Canadian Certificate was concerned, but he pointed out the reasons why these grains would not bring prices equal to those from some other exporting countries. He was a manufacturer of pearl barley. He showed me the products made from our C. W. barley and from Danubian. That from C. W. contained too many bluish tinted grains, while that from the Danubian was white. C. W. oats had too many green kernels, and too much dirt. And these are the comparisons which the customer makes for himself during the trading hours on the Exchange. One miller objected to the frosted kernels which he found in a Number One Northern Wheat. After watching the millers and talking with a number of them on this market, I came to the conclusion that they know pretty well what they want for their purpose, and that they know what they expect to have delivered on a Canadian Certificate final via Atlantic ports, and via Vancouver. They pay more for Vancouvers and expect a better delivery. If, in making his selection of wheat, the miller finds the price of Manitobas "out of line" (higher in price), then he looks for a partial substitute which he may find in Rosafe or Russian. While Mark Lane Exchange is a market on which samples of grains are displayed, it is not a sample market as we understand the term on this side the Atlantic.

Only a few blocks away from Mark Lane is the Baltic Mercantile and Shipping Exchange. It, too, is a busy place, but trade of quite a different sort is carried on there. It is on the Baltic that most of the purchases of grain in cargo lots are made, and it is in one part of this market that is centered the world's trade in ocean vessel space. If an exporter, say at Vancouver, wishes

to purchase space for shipping to any part of the world, a cargo of wheat, lumber or other commodity, his order is eventually passed through this clearing house. The membership of this organization is large and includes much of the membership of the London Corn Trade Association as their interests are so largely identical.

There is no futures market in London. The importer explained that he protects himself when buying, say Manitobas, by selling Plate or Australian or any wheat which he may have in an advantageous position at the time. He pointed out the importer's job was a hazardous one financially always, but especially so since the war, owing to the fluctuations in rates of exchange, ocean freights, and unsettled work and trade conditions generally. "Several companies have lost fortunes and some failed completely. Competition is extremely keen. The margin of profit on which the business is carried on is very small, approximately  $\frac{1}{4}$  of a cent a bushel. Success depends upon the volume of business and elimination of risks."

The markets in other cities, such as Liverpool, Glasgow, etc., are comparable to Mark Lane, except that in addition Liverpool has a "futures market" which is conducted in a room adjoining the spot-market. The futures market was established for the purpose of enabling the trader in grain commodities to hedge his purchases and sales; to act as a barometer of world values of grains; to help to establish a parity of values and to stabilize prices. In addition to the legitimate use of such a market, there is a purely speculative element that attaches to it, and here, as elsewhere, the gambler comes to grief sooner or later. Liverpool has the only futures market in the United Kingdom and is the only one of its kind in Europe at the present time. The prices ruling on the Liverpool market are cabled daily to all the great grain trading centres of the world and the state of other markets are received daily by Liverpool.

Owing to the fact that Liverpool has a futures market, there is always kept in store varying quantities of wheat deliverable on the contract. The average amount so kept would be about 1,000,000 bushels, while it might at times be as high as 5,000,000 bushels. A good Number Two Northern delivered on the contract will usually bring a small premium to the seller, while a good Three will give a like premium possibly a little better to the buyer. I saw here a sample of Canadian hard spring wheat that had been tendered on the contract and refused on account of the high percentage of wild oats it contained. The storage company had cleaned up a sample for re-tendering. The cleaned sample looked like a good Three Northern, and it was expected that it would be accepted. This was a sample cargo, and the oats so extracted would probably be displayed as Canadian sample oats. It should be noted then that the importer broker who simply buys and sells wheat is interested primarily in securing a large volume of trade. His capital is turned over quickly. He is satisfied with a small margin of profit per unit, but must handle a large number of bushels in order to maintain his service. Quality of product is of interest to him mainly in securing and holding customers, and in this connection, of course, uniformity of product counts for much. The importer generally is highly satisfied with the Canadian system of grain marketing, grading and the Canadian Certificate final. He buys usually almost entirely on C.I.F. (cost, insurance and freight) terms. The grain is delivered in the hold of a vessel at the dock of the port to which it has been consigned. Technically speaking, the freight includes lifting the grain from the hold and placing it at the rail on the deck of the vessel, which is known as Master Stevedoring. The stevedore is the servant of the ship owner. The consignee purchases the grain from the exporter at a certain price, say 51s. per quarter (8 bushels), and sells it to a purchaser at a certain number of shillings per cental (100 pounds) in Liverpool. The selling price takes into account the C.I.F. price plus interest, insurance, bank charges, risks and profits. The importer has no delays when handling Mani-

tobas on Canadian Certificate final; no arbitrations and few complaints of a serious nature, except on shipments that have been deteriorated by mixing or substitution while passing through United States territory in bond. Now and then a shipment is too dirty from both Vancouver and Atlantic ports. The banks like the Canadian system on account of the facility with which the business can be done. The dispatch with which the transactions can be carried on is apparently a strong factor in making the Canadian system so satisfactory to those who have to do with getting Canadian grains into the Old Country markets.

Now and again an exporter, for reasons known best to himself, consigns to an importer (broker) a shipment of wheat with the American Seaboard Inspection Certificate. This certificate states that the grain covered by it is of "Manitoba origin." Shipments on American Seaboard Certificates do not tend to improve the situation for Manitobas on Canadian Certificate. Not many experienced buyers are deceived by it, but new customers would be disappointed, for, from those who have had experience with this kind of shipment, the reports are unfavourable, and the results unsatisfactory. And then there are sample cargoes. An exporter thinks he can do better by sending a sample ahead of his shipment, with a guarantee to deliver a consignment as good as the sample. He quotes a price, and probably in the end accepts an offer. Not much business is done according to this method. Most importers find it much easier to do business with the standholder and miller on the Canadian Certificate final. One large miller told me of a recent experience he had along this line. It was anything but satisfactory. He still had the wheat in store and did not know what to do with it. He said, "I thought I was getting a bargain and I got just what I paid for."

So far as the importer merchant is concerned, then, he can sell any kind or grade of wheat at a price. For example, if Number One Northern export wheat were reduced in weight, colour, variety, hardness, soundness, cleanness to the minimum of the grade, 60 pounds to the measured bushel, 60 per cent of hard Red Fife or Marquis wheat, he could sell it after a time, when the buyers had become accustomed to it, at a price just as he sells Number One Northern now, but the price would be reduced relatively in consequence of the reduction in quality of the grade. And if this grade were kept uniform, confidence would in time be re-established, and the prices offered would be in keeping with the quality, and according to the degree of confidence of the trade in the new standards. But this would do an injury to our producers as I shall point out further on.

#### *Millers.*

The millers of the United Kingdom are divided into two main groups—the port and the inland—and these are again arranged in economic groups according to locality—Liverpool, Manchester, Hull, Bristol, London, Glasgow, Edinburgh, Midlands, etc., for purposes of mutual benefit that may accrue through united effort, research, education and economic policies. The port mills are at the dock side as in Liverpool, London, etc., or they may be located at convenient distances from the dock as in Glasgow and Edinburgh. The inland mills are in many instances situated on small streams and on the canals. A number of the larger millers or groups of millers import their Canadian wheat, or very large quantities of it, directly, or through their agents located in New York, Montreal, Winnipeg and Vancouver. One of the large millers' associations on the continent employs one agency to purchase and import all the wheat its various members require during a period of five years, so satisfied are they with this method of assembling their supplies. The smaller millers, located inland, are able at most times to procure supplies of wheat from the farmers of the district. This source is not constant in quantity, nor is it

uniform in quality. The seasons vary and it follows that the wheats do likewise. English wheats have undergone marked improvement during the last twenty years, due to the research work carried on in this connection at Cambridge and Rothamsted. But the inland millers must still have Manitobas or other strong wheats to blend with the softer home grown, in order to produce a brand of flour that will suit the needs of the baker.

At the time of my visit, the inland miller had to seek most of his supplies from abroad. The competition of poultry raisers for home wheats for chicken feed having put them, for the time being, completely "out of line." This new competitor may, for a time at least, make the lot of the inland miller a hard one, as it was his nearness to the source of supply of raw materials, together with good home markets for offals that enabled him to compete successfully with the larger port millers more advantageously situated for obtaining the raw materials from abroad.

The British and Irish Millers Association is an organization comprising a large membership, upwards of 1,400. Its chief function is to further the interests of its members and to improve the industry, both from a technical and economic standpoint. It was a committee of this association that, a few years ago, called the attention of the home farmers and seed growers to the deteriorated quality of the wheats they were raising, and interested the research stations in the work of improvement. And it is this association now that has promoted the idea of a research laboratory in connection with the milling industry, and has raised funds for procuring a mill, for equipping a laboratory, for engaging a director of research and staff, and secured grants from the government to aid the work. Until just recently, this organization provided the facilities for instructing the apprentices in the science and practice of milling and mill management.

#### *Transportation of Canadian Grain.*

Wheat and other grains of Canadian origin are carried to the ports of the Old Country in both full and parcel cargoes that have been taken on at the various Canadian ports of Montreal, Quebec, St. John, Halifax and Vancouver, and at United States ports, Portland, Boston, New York, Baltimore, Philadelphia, Hampton Roads and Newport. Tramp steamers are ordered to these ports, and when they have been properly cleaned, fitted and inspected are loaded with bulk grain and safely packed with bagged grain on top to keep the bulk from shifting in rough seas. The hatches are then closed and tightly caulked to prevent water entering the holds from the deck, proper papers and certificates covering the wheat are given the captain, and the boat is released to sail for Liverpool, London, Rotterdam, Marseilles or whatever its destination may be. Sometimes these tramps or "grain liners" sail, not knowing where they are going to discharge, until they receive final orders from some European port of call or wireless station. And then there are the big ocean liners that ply regularly between Canada and the United States and the Old Country. Wheat makes an excellent basic cargo—ballast. It is easily taken on and easily discharged. Ocean freights, rates of insurance on both hull and cargo, position of grain and time to arrive determine in a large measure how grain shall move—by full or parcel cargo—and from what ports it shall move. A fraction of a cent may, and very likely will, change its course.

#### *How Grain is Discharged.*

The large liner landing at, say Liverpool, after its passengers are unloaded, moves to its own dock and there puts off its cargo other than grains. Floating elevators equipped with the most modern pneumatic suction and bucket conveyors move up beside the vessel and at the same time discharge the grain in

huge conical piles on the quay in long sheds provided for the purpose; overside into small coasting vessels for delivery to coast mills, and into barges for mills inland, or into wagons, motor vans or railway trucks. The tramp, or "grain liner" is usually provided with a special place for berthing where its cargo of grain is emptied directly into mill silos or into barges, coasting vessels, etc., or it may be into a public storage silo, if it is a wheat tenderable on the Liverpool futures contract. The writer visited the ports of London, Liverpool, Glasgow and Rotterdam, and saw Canadian wheat, oats and barley being unloaded, and lying in heaps in the sheds on the quays, saw the grain being weighed by automatic weighers and by the antiquated system of manhandlers; saw it being loaded into vans and barges and saw it being put into public storage in Liverpool for future delivery.

The ports visited are all well equipped for handling the grains from the ocean carriers. The Liverpool Grain Storage and Transit Company Ltd., is typical. It has made most complete arrangements for discharging vessels and for weighing and reloading; for storing, cleaning, cooling and drying grain; for bagging and reshipment of grain; in bulk or in bags by barge, motor or railway truck or coasting vessel. This company has the most modern facilities for the conduct of its business in the way of silos (4,640,000 bushels capacity) with deep water berths at the Alexandra and Brunswick docks; floating elevators with bucket and pneumatic unloading and loading equipment; automatic weighers; barges, coasters and lighters; motor and railway vans; and a complete set of tracks connecting its silos with the large railways to facilitate and expedite the transshipment of grain for inland destination.

The charges for the various services rendered by the Liverpool Grain Storage and Transit Co. Ltd., are as follows:—

RATES EX SHIP IN BULK

—	Wheat or maize in bulk		Barley, rye or peas in bulk		Oats in bulk		Railway haulage
	2,240 lbs.	100 lbs.	2,240 lbs.	100 lbs.	2,240 lbs.	100 lbs.	
<b>No. 1 Quay Rate—</b>							
Receiving ex ship in bulk, barging, discharging from barge, weighing, housing and delivering (or weighing over) including sack ties, including three days free rent from average date of housing.....	s. d. 3 0	s. d. 0 1-6	s. d. 3 6-75	s. d. 0 1-9	s. d. 4 2	s. d. 0 2-23	s. d. 0 9
	cents 72-9	cents 3-21	cents 86-6	cents 3-5	cents 101-27	cents 4-54	cents 18-2
<b>No. 2 Quay Rate—</b>							
Receiving ex ship in bulk, barging, discharging from barge, weighing, housing and delivering (or weighing over) including sack ties, including six days free rent from average date of housing.....	s. d. 3 6-75	s. d. 0 1-9	s. d. 4 3-25	s. d. 0 2-25	s. d. 4 11	s. d. 0 2-63	s. d. 0 9
	cents 86-6	cents 3-5	cents 103-8	cents 4-55	cents 119-5	cents 5-07	cents 18-2
<b>Warehousing Rates—</b>							
Receiving ex ship in bulk, barging, discharging from barge, weighing, housing and delivering (or weighing over) including sack ties.....	s. d. 4 2	s. d. 0 2-23	s. d. 5 0	s. d. 0 2-67	s. d. 5 9	s. d. 0 3-08	s. d. 0 9
	cents 101-2	cents 4-54	cents 121-5	cents 5-09	cents 139-7	cents 7-69	cents 18-2

Note.—Pound Sterling taken at Normal (\$1.86½).



RATES FOR GRAIN CARGOES AT DEEPWATER BERTHS, ALEXANDRA AND BRUNSWICK DOCKS, INCLUDING MASTER STEVEDORING AND MASTER PORTERAGE

	Wheat or maize in bulk		Barley, rye or peas in bulk		Oats in bulk		Railway haulage
	2,240 lbs.	100 lbs.	2,240 lbs.	100 lbs.	2,240 lbs.	100 lbs.	2,240 lbs.
Receiving in bulk, weighing, housing and delivering (or weighing over) including sack ties.....	s. d. 3 0 cents 72·9	s. d. 0 1·6 cents 3·21	s. d. 4 0 cents 97·2	s. d. 0 2·14 cents 4·05	s. d. 5 0 cents 121·5	s. d. 0 2·67 cents 5·09	s. d. 0 9 cents 18·2

The above does not include stevedoring charges.

RATES FOR OTHER SERVICES

	per 2,240 lbs.		
	s.	d.	cents
Weighing over, and restowing (wheat or maize).....	0	10	20·2
Weighing over, and restowing (oats).....	1	2	28·3
Delivering ex store (goods having been weighed over) (wheat or maize)	0	10	20·2
Delivering ex store (goods having been weighed over) (oats).....	1	2	28·3
Use of separator.....	0	8	16·2
Use of cooler (Alexandra silo).....	0	8	16·2
Turning by hand, wheat, maize or oats.....	0	4	8·1
Use of electric fan.....	0	6·5	13·2
Sampling over bands, per silo..... per sample	2	6	60·7
Drawing samples, including bag, and delivering at merchant's office in the city.....	5	0	121·5
			per sack
Sewing sacks, including cost of twine.....	0	1	2·02
Sewing sacks, merchant's twine.....		0·5	1·01
			per silo or any portion thereof
Ascertaining and certifying natural weight per Imperial bushel.....	6	6	158·0
			per sample
Ascertaining moisture content of grain by Duval Moisture Tester....	2	6	60·7

NOTE.—Pound Sterling taken at normal (\$4.86½).

Any extra work (such as turning by hand labour, weighing over screenings, chaff, etc., or otherwise not included in the foregoing rates, are charged for according to labour and materials expended, plus) establishment charges.

Hess Drier.

The company have installed at the Cobourg Granary a Hess Drier, capable of drying or cooling 95 tons of grain per hour.

The machine can be so operated as to extract moisture, say from ¼ per cent (minimum) up to 25 per cent maximum.

The company's rates are:—

For cooling only.....	9d.	(18·2 cents) per 2,240 lbs.
For drying with hot air, including extraction of moisture....	9d.	(18·2 cents) per 2,240 lbs.
		per cent of moisture extracted.

NOTE.—Pound Sterling taken at normal (\$4.86½).

Warrants.

The company, under its charter obtained in 1885, is authorized to issue certificates and warrants to consignees. A charge for making out warrants, if more than one is required for each parcel (exclusive of Government stamp), each 3d. (6.7 cents).

Extra charges are incurred in case the grain is moved on the company's railway tracks from its storage silos to the railway company's depot, where regular rail haulage begins. This company takes no responsibility for the condition of the grain. Each parcel is stored by itself, and the owner must assume the responsibility for knowing himself as to the condition of the grain. He obtains from the company permission to inspect the surface of the bins, and if he suspects that everything is not right, he must give directions to the company as to what he wishes done in order to know definitely its conditions and in case

it requires moving, cooling, drying, etc., specific instructions must be given by him in respect to what service or services he wishes the company to perform. All charges must be paid before the grain can be ordered out of the company's storehouse.

It will be seen from a study of the foregoing, in respect to storing or handling wheat or other grain in a port like Liverpool, that every time the grain is touched an extra charge is put upon it, and, in addition, if stored, there are the accumulating interest and insurance costs, and in some cases depreciation from the effects of heating, weevils, etc.

The Mersey Docks and Harbour Board have facilities of a like character for discharging grain cargoes, transferring, storing, etc.

At London, the port authority has a complete monopoly of the unloading facilities and of storage, (except that owned by port-side mills), and of the berthing docks and the land along the river on either side. Practically all of the wheat unloaded at the port of London is into dock-side mills and barges and coasting vessels that carry it by canal to the mills up country and to those at or near the sea coast. Storage is provided on either side of the Thames, but is seldom used for wheat.

Glasgow's port is under the control of the Clyde Navigation Corporation. I visited this port, accompanied by the Superintendent of Clyde Docks and the Traffic Superintendent of Clyde Elevators. The Canadian Pacific liner *Marloch* was discharging 40,000 bushels of No. One Northern wheat at the rate of 50 tons per hour in a huge pile inside the shed on the quay. In the same sheds there were great heaps of No. 2 C.W. oats and No. 3 C.W. barley, and sample wheat. This system of discharging the grain in loose piles in open sheds, where it would appear comparatively easy to have mixtures occur, not only of grades but of varieties of grains, gives no trouble, nor causes any uneasiness to the purchaser. The wheat being unloaded was for the Scottish Co-operative Wholesale Society, one of the largest users of Canadian wheat in Scotland. It has experienced no troubles arising out of this method of handling the grain. Other millers gave evidence to the same effect.

The wheat was being conveyed to the mills by motor vans, into which it was being weighed and loaded, some in bags and some in bulk. There were two systems of weighing and loading in operation that day on the same quay. The first was the old method of man handling. Five men constitute a squad. They use a bucket-shaped like a half barrel, and a beam balanced at 120 pounds. Two men fill the bucket from the pile, and hand it to two who hang it on the end of the balance beam. They brush off, or add, enough wheat to make it balance evenly (there was no "break of the beam" in evidence) and the two empty it into a sack held by the fifth man, who ties and places it on the truck or van. Two buckets (240 pound) made a bole. One gang of man handlers load about 800 boles per day. In the same shed, an automatic weigher and loader was at work. It elevates, weighs in drafts of 240 pounds each, and bags or loads in bulk as required, at the rate of 60 tons per hour per double machine.

The port of Glasgow has in addition the Meadowside Granaries with silo capacity of 20,000 tons and two sheds of 5,000 tons capacity each, where cargoes are discharged. The largest bins hold 275 and the smallest 28 tons each. These granaries are equipped with both bucket and pneumatic lifters. The buckets have a capacity of 80 tons and the pneumatic 90 tons per hour each.

Rotterdam, near the mouth of the Rhine, possesses a very fine harbour, and is the receiving port not only for Holland, but for western Germany as well. The flour mills of Mannheim and Strasburg obtain their supplies of wheat through this port. Grain is carried here as to other ports in both parcel and cargo lots. The large ocean liners have their own berthing places, while the full cargoes tie up for unloading in what is known as the Maas harbour, and discharge through unloading silos. Up to 1904, all unloading in Rotterdam was

done by hand by what are known in England as master stevedores and master porters. In that year, two floating elevators were introduced. At the present time, the Grain Elevator Company of Rotterdam has 13 floating elevators with a discharge capacity of 250 tons per hour each; the Mutual 13, and the Furniss Company two. The Grain Elevator Company guarantees the vessel owner a discharge of 3,000 tons per day, failing this it pays demurrage, a thing which the company claims it has never had to do. The charges at this port are very similar to those made in Liverpool for the same services. Ninety-five per cent of the grain imports at Rotterdam are transhipped by vessel or barge, while at the port of Antwerp fifty per cent goes by cars.

The weighing of grain at Rotterdam is all done automatically. All out-turn weights are guaranteed by a company called the Internationale Controle, and no serious complaints as to shortages were reported.

I saw here a cargo of rye from Russia being unloaded by one of the company's floating elevators. The grain was very dirty, and on account of this and the contract under which Russian grain is sold at the present time, a number of men were employed sampling the grain in the interests of both the seller and buyer for arbitration purposes. Russia's system of marketing her grain is in marked contrast to that of Canada's. Those in charge of unloading expressed high appreciation of the Canadian grading and grain marketing system, and the facility with which shipments of Canadian grain are cleared. When grain arrives in the port of Rotterdam on the f.a.q. contract or a modification of it, as in the case of Russia, the interests of the seller and of the receiver of the grain are protected by the Central Grain Factory, which is an organization composed of 60 grain factors. This body looks after the sampling, cleaning to grade, making arbitrations and adjustments, taking up of papers, and the interests of importers generally. In 1913, grains to the amount of 5,100,000 tons were handled at Rotterdam for Holland and Germany, and only 2,600,000 in 1923. Holland's grain imports have increased, but Germany's have decreased.

The system of receiving, weighing, discharging and caring for Canadian grain in the different ports is good. A few antiquated methods are still in vogue, but these affect only the people concerned, and do not affect the quality of the grains handled. On the whole, the work is done expeditiously, and costs are kept down by competition. At no port were there any recent complaints as to outturn weights—all being within one-half of one per cent.

#### *Storage for grain in importing countries*

There are four forms of storage provided for wheat and other grains in the United Kingdom and Holland, where this question was studied. They are—first, sheds and flat warehouses on the quays; second, bins and silos that form a part of the milling plants; third, public flat warehouses and silos owned by port authorities and private companies; and, fourth, in barges and vessels. Of the first, little need be said, for storage on the quays in sheds and flat warehouses is almost entirely of a temporary nature, while the grain is passing from the ship to the mill. It is there long enough to be weighed and loaded. The place must be cleared quickly to make room for the next ship's cargo. In some cases, however, where the owner is not ready to accept it, or where a shipment awaits an arbitration award, the grain may remain in this form of storage for a longer time. The second form—silos and bins forming a part of the milling plants, are as necessary as the mill itself. The mill must be kept going—there must be constant supplies—and to ensure this, there must be ample storage, not for one grade or one variety, but for many grades and many varieties. The writer was unable to arrive at even an approximate estimate of the mill storage for wheat in the United Kingdom, but was able to secure definite information in this respect as to the storage at some of the large mills. One company,

whose annual grinding capacity is 3,200,000 to 3,600,000 bushels, had storage for 360,000 bushels. On the day of my visit, the stores contained the following wheats, all in separate bins: Canadian, One, Two and Three Northern; Plates (Argentine) Barusso and Rosafe; United States No. Two soft red winter and hard red winter; Indian, Karachi. In two of the silos, there were 70 bins of about 2,400 bushels each, while the third had less. The manager explained that he could not take any chances on being short of any of the wheats which he must have at his command for making certain grades of flour with which his trade was familiar.

Under present conditions, wheat passes as directly as possible and with the minimum of handling from the hold of the ship to the storehouse of the miller. Intermediate costs must be kept down. The amount of wheat in the mill store is known only to the miller himself, and this knowledge enables him to make his purchases with greater freedom, and with less likelihood of being put at a disadvantage, or of being embarrassed in case of temporary fluctuations in prices.

The third form—publicly owned silos and flat warehouses—have been erected after most modern plans for intake, weighing, cleaning, cooling, drying, sampling, storing and discharging. They are located most conveniently at ocean ports. All the ports visited were amply furnished with this form of storage.

There is, all told, in the United Kingdom approximately 32,000,000 bushels public storage space for grain of all kinds. There is always a small amount of grain stored, but the problem facing the owners is to get sufficient grain to defray interest charges on the capital invested in the stores. Grain unsold will of necessity pass into public store, where costs of one kind and another accumulate. The buying trade know of its presence, and are likely to let the owner hold it till he must make an offer. Importers, as has been explained, make their purchases of Canadian grain almost entirely on c.i.f. terms and sell before arrival if possible, in order to escape not only the cumulation charges of public storage—interest, exchange and price fluctuations—but also the awkwardness of the situation of having grain at a fixed place, where, because of its position, it can be available, at a price, to only a small area and to only a fraction of the users of such grains. This question of public storage was discussed with importers, and with millers in the various centres, and with storage owners and directors in Liverpool, Glasgow and Rotterdam, and with Col. Stevens, representing the Trafford Estates, Manchester. In ordinary times, wheat should move as directly as possible from the producer on the farm to the consumer (miller) in the importing country. Canadian wheat, moving from farm to the seaboard is not easily diverted from its course. It follows the course of least resistance—low handling charges, low freight and insurance charges, etc. The least barrier will turn it into another channel. It will not stand even the slight extra charge of going into an interior terminal at Saskatoon unless forced by embargo. And so it is in the importing country. The same economic laws govern. Suppose an importer should take 100,000 bushels of wheat from a vessel and deliver it into public store on the south side of the Thames. It would be done either because it was unsold or because he intended speculating on it for a higher price in the future. In either case, the storage charges and the handling in and out are very high, about 10 cents per bushel, and added to this are interest and other carrying charges. When eventually he is ready to sell, he is limited so far as purchasers are concerned to those tributary to the storage south of the Thames. The place to store grain, in the best interests of the producer under present conditions, is at convenient ports in America (Canada and the United States) where it can be sold and shipped via various competing ports to the highest bidder in any part of the world.



bread-making purposes. Yield of flour (indicated in part by weight per measured bushel and appearance of bran or wheat covering) is also a factor affecting the value of Canadian hard spring wheat.

The Durums are used for making semolina for macaroni manufacture.

The winters are used alone or in combinations for making soft flours—lacking in strength—for household purposes for making scones, cakes and pastry, and for blending with strong flours for bread-making. They are exported now in the form of flour.

#### *Bread-making in Great Britain and Holland.*

In order to understand better certain important features in connection with the merchandising of Canada's wheat—especially Manitobas—one must know something of the systems of bread-making that are in vogue in the importing countries. The habits and customs of the baker, the tastes of the people, together with the laws governing labour determine largely what the system shall be. The features characteristic of a good loaf are pretty much the same, though there are details in which they differ, but the methods employed in arriving at the loaf are very different, and must be understood in order to appreciate fully why the Old Country bakers, flour merchants and millers play such an important part in determining Canada's system of grading and marketing her wheat.

The characteristic features of a good loaf of bread—one that will satisfy the customer and enable the baker to meet competition—are (1) volume—length and height with perfect shape, uneven bulking being a sure sign of uneven qualities of gluten; (2) colour—whiteness of crumb with bloom; (3) porosity—the texture of the loaf should be uniform throughout, and relieve the closeness; (4) texture—it should be firm and not too solid. Crumbiness indicates deteriorated gluten or excess of gliadin; (5) elasticity—it should retain or regain its shape under pressure and be relatively light; (6) crust—this must be of a reddish brown tint or clear yellowish red. It must not be of an opaque or leathery texture nor flake off; (7) flavour—it should be sweet to smell and taste. Strongest aroma given off just when loaf is fresh from the oven. Should masticate crisply. This latter quality is a good indication of successful wheat blending.

In Scotland, the baker arrives at this loaf by quite a different system from that employed by the bakers of England and Holland. On the evening preceding the baking, he sets a sponge—a mixture of flour and water in the proportion of about 10 to 12 pounds of flour to a gallon of water and adds to this a little over an ounce of yeast and a little salt, and sets at a temperature of about 72 degrees Fahrenheit to allow the process of fermentation to go on. When this has proceeded sufficiently, he mixes in flour to make a dough, using about as much as he used before. This time, instead of all strong flour, he uses part strong and part soft. This is set to rise again, and lastly he mixes in another portion of soft white or coloury flour. This was described as the "quartern" process. From the time of setting, until the loaf is out of the oven, the time required is from 12 to 16 hours. In order that this method may be successfully carried out, the flour for the sponge must be one that is characterized as "strong," which means that it must carry a high per cent of gluten of the right quality in order that during the process of fermentation the gases may be caught and held so as to produce the desired effects when the loaf is baked.

In a baking test in the west of Scotland just before my visit, the first prize loaf was one baked wholly of flour made from Canadian hard spring wheat.

In England, the prevailing system is what is known as the "short method." The time consumed from the setting to the finished loaf is four hours or less. The success of this method depends entirely upon the quality of the gluten. The fermentation process is carried on rapidly, and the gluten must possess a quality that was described as "distensibility." It was pointed out in England that quantity of gluten in a flour was not so important with their system as

"quality" of gluten. In Holland, again, owing to labour laws and other causes, the short system is used entirely, and here again emphasis was laid upon the quality of gluten. "Holland has better bread than she used to have," was the evidence given, and consequently requires a higher grade flour.

The bloom and colour of the loaf is obtained from the flour. Strong flours from hard spring wheats do not give this bloom and creamy whiteness which the Old Country bakers are desirous of producing for their customers. The softer wheats of Australia, the Pacific states, Chili, English and Scotch wheats produce flours with these desired qualities, and these are used by the baker to give this characteristic to his loaf. And high flavour is obtained by the use of flours made from home-grown wheats.

But the baker cannot be satisfied with the production of a satisfactory loaf only. He must be able to produce from the sack of flour (280 pounds) at least 94 to 96 four-pound loaves of bread. The flour he uses must possess what he terms "absorption." It must be able to take up and hold additional moisture. This is one of the principal characteristics of "strong" gluten.

#### *Flours from Canadian and Other Wheats.*

The wheat berry or kernel consists of an embryo or baby plant, which occupies a small part in the lower end of the grain, and a much larger part known as the endosperm (starchy part). The whole is surrounded by a many-layered covering. In the process of milling, the wheat berries are conditioned, tempered, etc., and rolled and crushed and sifted or bolted so that in the end important commercial products are obtained. Among these are flour and offal. The flour usually represents about 70 per cent of the total weight of the wheat, though this will vary with different kinds of wheat, and according to the weight per measured bushel. It will also vary according as the miller wishes to take a high or low extraction.

Flour, the finished product, consists largely of carbohydrate substances, of which starch is the most important, and proteins. An average or a typical result from the analysis of a great number of flours has been given as follows:—

	Per Cent
Carbohydrates . . . . .	72.92
Protein . . . . .	13.31
Fat . . . . .	1.22
Ash . . . . .	0.39
Water . . . . .	12.16

But analysis of the flour is not sufficient for the baker. He has learned from long experience to look for certain physical properties which are of great importance to him, and to test in a very practical way for the hidden but all important property of "strength" and "quality of strength" which is wrapped up in some obscure manner in what is known as the gluten. The gluten is of a gluey nature, and its elasticity enables it under the pressure of the gas formed in the fermentation of the dough to form the many vesicles which, when fixed under the influence of heat, give the familiar honey-combed appearance to the crumb of bread. While the quantity of gluten in a flour is important to the baker, it is the quality of the gluten that interests him most, for if its stability and elasticity are poor, the baking qualities of the flour are poor in proportion.

The baker has for his own purpose classified flour under two heads—strong and soft or weak. If a flour will make a loaf that will stand up, keep its shape, without cracking, falling over or running flat, and has good absorption, it is termed "strong." If, on the other hand, the loaf does not stand up, and falls or cracks or runs, the flour is called "soft" or weak. The strong flours are indispensable for bread making, and the soft are equally as important for scones, biscuits, crackers and pastry. The chemist has not as yet worked out a satisfactory method for discovering by chemical reaction the "quality" of the gluten.

When talking this matter over with the head of one of the large baking companies in Glasgow, I asked him what he looked for in a good flour for bread-making. His answer was: "We want first, colour—a creamy whiteness without bleaching. Bleaching destroys the bloom. Second, strength—high gluten content with that quality that we describe as distensibility. It will stretch and not break or crack. High absorption—I want it to take up water, and I want my bread to 'keep,' not get stale quickly. Third, bloom—silky appearance and touch." To illustrate this characteristic, he called my attention to a loaf made from Hungarian flour, of which he had a small quantity, and with which he was highly pleased. Fourth, flavour and aroma—free from bad odours—nutty when baked. Fifth, starch—fine quality, not easily described, but easily detected, and again he referred to the Hungarian flour loaf. Sixth, moisture content low. "I want to add the moisture. And," he added, "it is very important that the deliveries of the same brand of flour be uniform." He then proceeded to show me his method of testing flours. He had a number in the laboratory set for testing, so it was of interest to know that some were of Canadian flours—one from Boissevain, one from Strathroy, and one from London, Ont., one of which proved not good—the gluten was "too brittle."

His method was as follows: "Weigh out 3 ounces of flour and thoroughly mix with 30 drachms of water into a dough, and allow to stand for a few hours, perhaps over night in a warm temperature (about 72° F.). Two people make the final test. The hands are rubbed in flour and then shaken so that excess flour is removed. The lump of dough is flattened out until it resembles a scone. The two operators take hold of opposite sides and pull gently while one manipulates it underneath with his fingers until it looks like a thin creamy-coloured piece of toy balloon rubber. In this way, the stretch of the gluten is tested. If it breaks easily or tears, it is judged not good, and is so noted in a book of records kept for reference. Not only are single flours tested, but also various blends which the baker himself makes.

The tests made in the laboratory are recorded in the following manner:—  
Physical test of flour—

	Per Cent
Absorption.. . . . .	54.8
Gluten wet.. . . . .	40.0
Gluten dry.. . . . .	13.4
Moisture.. . . . .	12.0
Ash.. . . . .	0.43
Fat.. . . . .	1.25

This indicates fairly well what he may expect from the flour. These tests and similar ones are applied not only by bakers, but also by flour importers, flour merchants and by the millers themselves; for the interests of these four are all identical. The baker must be suited and all have to cater to him, except under conditions such as existed during the war when he had to take what was allotted to him and make the best of it.

Fifty per cent of the flour used in Scotland is imported. Canada and Australia get a fair share of this trade. Canada's is substantial, and Australia's would be larger if her supplies were more constant. I was told in Glasgow that it was the flour made from the strong hard spring wheats imported many years ago that necessitated the change in the milling system, and created the place for them in the milling economy of Scotland. An experienced baker in Glasgow said to me, "Flour made from your One Northern wheat is our 'trump card.' It has strength and on account of that constitutes the base in our system of breadmaking. We insist upon having flour made from No. 1, because that grade is supposed to be made from sound wheat—no frosted, no bleached or sprouted kernels. When we get flour made from frosted, bleached or sprouted wheat, it does not work right, and the results would be very bad if we let it get into our



bakeshop. Our experience has taught us that we must test every flour in order to ensure a uniform product and prevent losses to our business." "Australian flour," he said, "does not possess the strength suitable for the Scottish system of breadmaking, but it is valuable on account of its superior creamy white colour, and for its bloom. We use it in the doughing stage to impart these qualities to our bread." This flour is increasing its hold upon the Scottish market and would, because of its uniformity, displace other soft flours, if supplies could be relied upon uniformly throughout the year. The limited amount of this flour and the demands for it at times in South Africa and the Orient are factors that affect the quantities imported into Scotland. It would supplant United States soft flours as at present in this market.

"United States flours are of such a varied character and have changed so much of recent years that their imports into the United Kingdom are falling off. Flours made from the hard spring wheats are required for home consumption and so are those from the hard winters. The soft flours from the Pacific coast wheats have lost favour owing to a lowering of quality due to mixtures of wheats grown by the farmers themselves and because of too many varieties of different qualities being grown in the area from which the mills draw their supplies or by a process of indiscriminate blending or mixing which has led to a deteriorated brand of flour that lacks dependability on the part of bakers and householders who are large users of soft flours for scones, pastry, etc." "Hungarian flour is a very superior article, but we cannot get it now in sufficient quantities."

The following figures indicate the trend of the import flour trade of the United Kingdom, so far as Canada, the United States and Australia are concerned:—

FLOUR IMPORTED INTO THE UNITED KINGDOM

	Canada	United States	Australia
	bbi.	bbi.	bbi.
1921.....	3,314,285	4,514,285	742,857
1922.....	3,714,285	2,571,428	971,428
1923.....	3,142,857	2,171,428	971,428

It will be noted that in 1922 Canada took first place and maintained that position in 1923, so far as volume is concerned. The United States by 1923 had fallen off in her volume by over fifty per cent, Canada about six per cent, while Australia had increased hers by twenty-nine per cent. Canadian flour imports through United States ports are credited to the United States, so that the volume of Canadian flour appears much less than it really is. Scotland takes the larger portion of Canada's to satisfy her breadmaking system, and owing to the insistent demand of the Scottish bakers for the best strong Canadian flour, the millers of Scotland, in order to hold their fair share of the flour trade in competition with the flour importers, are forced to grind in large measure No. One Northern wheat. As Canadian flour manufactured from No. 1 Northern wheat is the "trump card" of the Scottish baker, so Canada's No. 1 Northern wheat is the trump card of the Scottish miller. He grinds breadmaking flours almost wholly from one kind of wheat, "strong" flours from One, Two and Three Northern, Mediums from Plates and United States winters, and soft from Australian and Pacific. Some millers use Manitobas as a base, and introduce smaller proportions of other wheats of a like character, according as quality and price are consistent with quality of product. But when it comes to making soft flours, he does much blending of wheats and produces a brand of flour that perhaps a few years ago was made from a single type such as Walla Walla, a Pacific coast wheat. Owing to crop failures and to the changes in quality of products from certain areas, he has been forced to adapt his processes to meet the new conditions.

In England, the practice is different. Breadmaking flours are made very largely from blends of three or more wheats. In one instance, the miller explained that the blend he was grinding the day of my visit consisted of One and Three Northern, Australian,—Baril and Rosafe; Pacific hard, Russian, White Karachi and Chilian in varying proportions to suit price and maintain quality. Thirty per cent of the flour from this run went into the top, and seventy per cent into a lower grade, with about a seventy per cent reduction. In another, only three wheats were being ground with a sixty-five per cent reduction to make a certain high grade flour for a special trade.

In England, the breadmaking flours must possess strength, but in talking of strength, it is "quality" of the gluten that is held to be of greater importance than "high" gluten content. Strength is secured from the inclusion of Manitobas in the blend, but if Manitobas are too high in price—"out of line"—a substitute can be had in Rosafe from the River Plate or from Russian, if it happens to be available. What I wish to make clear is that Scotland, owing to her system of breadmaking is insistent in her demands for flour made from high grade Canadian, while England, owing to her system, demands a flour that may be derived from the blending of a variety of wheats with a strong wheat as a base to give strength. What is true of England is also true of Holland.

#### *Canadian Flour*

Imported strong flours from Canada enter into sharp competition with that produced in the Scottish mills. It will be seen that the Scottish miller has to be very cautious in the matter of quality of wheat, price, etc., selection of grades, handling and milling in order that he may secure both quality and yield of product to meet this competition—the home market. He has an advantage in that he has his by-products—the offals, bran, shorts and middlings—that usually bring a good price. Low ocean freights may give flour from certain other countries an advantage as in the case of the United States. At one time, Hungarian flour, because of its superior qualities already referred to, was considered the Scottish baker's "trump card". It was supplanted by Minneapolis flour made from what was known as Duluth wheat and St. Louis flour made from hard red winter, and these in turn have given way to Canadian. Quality and price are the determining factors as to the brand or brands of flour that the baker will use, bearing in mind always that the quality of the loaf and the required number of loaves from the sack must be maintained.

#### *Offals*

In the process of milling, a complete separation is made between the flour and the coatings and germ. The latter are called the offals and are divided according to physical properties into broad bran or sharps and pollards or shorts. These constitute about 30 per cent of the total grain milled, the proportion of bran to pollards varying according to the kind, variety, grade and condition of wheat from which it is a residue. They are used extensively as supplementary feeds for the various kinds of stock raised in the United Kingdom and Ireland. Dairy cows and beef cows in milk, young cattle and horses are all large consumers of bran, while the pollards are fed to pigs as well as to other classes of stock. Bran is a condiment of a laxative nature. It has greater intrinsic value as a food when the milling process has been less perfect and more starchy particles have been left adhering to the coatings. Very efficient mills, when flour is dear and offals are cheap make a high reduction—70 per cent and over according to the kind of wheat they are grinding—while when the reverse is the case they would make a reduction of 65 to 75 per cent. The offals would vary in quantity and quality accordingly.

Wheats are of three distinct colours—red, noted for strength, white for colour, and yellow for brittleness. When reds and white are milled separately,

the bran from each is known as red bran and white bran respectively, and in certain markets these are valued quite differently. It is the Irish farmer who discriminates in this way between red and white bran. In his judgment, white bran (the residue from white wheat) is better for his stock, and he backs up his judgment by offering more and paying more for it—sometimes 20, 30 and 40 shillings per ton (2,240 pounds). The Scottish, English and Irish millers know of this discriminating judgment of the Irish farmer, and in order to be able to furnish his requirements they compete with each other for the limited supplies of white wheats—Australians, Karachi, Chilian, White Bombay and Walla Walla. These white wheats are comparatively scarce and their arrivals in the United Kingdom are irregular. The flours produced from them are soft and have their own particular uses—especially Australians for colour and bloom. Frequently these wheats sell at a higher price f.a.q. than Canada's on Canadian Certificate final, owing to the fact that the miller can make more money out of them. Reds are usually more plentiful, and while the total offal is about the same as from the white wheat, the broad bran from the reds is approximately 50 per cent less. The Australian millers have an excellent home market for their bran, owing to the well developed dairy and stock industry, and so are able to quote comparatively low rates on flour to importing countries. The importers of Canadian in the Old Country are anxious that Canadian exporters of flour should devise some method of packing offals so that these could be economically and safely shipped to them along with flour. This, they think, would enable them to secure a larger flour trade and would enable them the better to meet the competition of the home miller, who, on account of his good markets for by-products, is able to keep the price of flour down.

*Wheat Designations—Manitoba, Karachi, Rosafe, Duluth, etc.*

Wheats are known on the markets of the world by some distinctive name, and as each wheat imparts some one or more fairly marked characteristics to the flour derived from it, the name very soon becomes associated with these qualities. The consumer—importer, merchant, miller and user of the flour manufactured from the wheat—becomes so familiar with these qualities that the name stands for the qualities. At one time, on the British wheat market, Hungarian stood for the very best in respect to strength, low moisture content and quality of starch. Then, as it disappeared, Duluth Hard took its place, and was known to the British miller as the world's "strongest" wheat. And, even before this began to lose in favour, a new arrival appeared, which became known as Manitoba Hard, with all the excellent qualities which Duluth formerly possessed. Manitoba, the province in which most of this was grown at that time, gave to it a name. This name applies now to all the hard red spring wheat produced on the prairies from the Red River to the foothills of the Rockies, and from the International boundary to the Peace river, including three provinces, Manitoba, Saskatchewan and Alberta. The name Manitoba is a part of all the statutory and commercial grades of hard red spring wheat produced in this area, as e.g., Manitoba No. 1 Hard, Manitoba No. 1 Northern, 2 Northern and 3 Northern and on down to 6, and collectively they are known as Manitobas, not only in the United Kingdom, but in more than a score of countries on the five continents to which enterprising exporters have sent them.

Indian wheats are grown in the interior of that country, and have taken on a variety of names, the most important of which is Karachi (red and white) from the name of the port at which it is collected, and from which it is exported, though no wheats are grown in the vicinity of the port, nor for many miles beyond it till the limits of the desert are passed.

The wheats grown in the Argentine are known generally as River Plates or Plates from the river of that name bordering on which were the first wheat growing areas. As the industry extended, certain areas and certain ports gave definite names to their wheats, which, in most cases, represent certain distinct characteristics even though they are all grown in the same country. These are Rosafe (Rosario and Sante Fe), Barusso, Baril.

Australian wheats are remarkably uniform in colour and in quality; though it is claimed that the wheats of Western Australia—a comparatively dry area—possess greater strength and lower moisture content than otherwise. They are traded in under the name of Australians, though the shipment may be designated as from Queensland, New South Wales, Western Australia according to its place of origin.

*Canadian Certificate final and f.a.q. (fair, average quality) contracts.*

The two principal methods of purchasing grain on the Old Country markets are (1) contract, f.a.q. (fair, average quality) which means that samples of the season's crop in the exporting country are collected over a certain period, say a month. This sample is sent forward to the importing countries, and constitutes the standard—quality, weight per measured bushel, colour, moisture content, cleanness, soundness, etc.—which will be delivered on the contract, failing which an arbitration will be held and matters adjusted as between buyer and seller. A fair sample of the shipment is taken by authorized agents of the Corn Trade Association of the port where the cargo has been landed. Two disinterested arbitrators are appointed from the arbitration committee of the local Corn Trade Association. Failing to agree, these choose a third, and if a satisfactory settlement cannot be arrived at the matter is referred to the whole committee for final judgment. Should the grain be adjudged under the standard of the f.a.q. sample, the seller must compensate the buyer up to a stated amount per cental and vice versa. Both Australian and Argentine wheats are dealt in on the f.a.q. contracts, which have been gotten out in printed form by the different Corn Trade Associations, all based upon the form of the London Corn Trade Association. In the case of Russian wheat, that is now coming on to the British and the continental markets, in small quantities with variable amounts of mixtures of other grains (rye, etc.) and extraneous matter (soil, weed-seeds, etc.) specific clauses have been added to the London contract to fit the case, and afford mutual protection to the buyer and the seller. The f.a.q. method is cumbersome and expensive, and leads to numerous disputes and much delay. The millers like it in some respects, as they can always get an adjustment on a shipment that is not up to standard samples.

The second method is the Certificate final based upon a strictly uniform grading system. By this method, most of the wheat imported from Canada and much from the United States is bought. Canada has four statutory grades for red spring wheat, Manitoba No. 1 hard, No. 1, 2, and 3 Northern; three commercial grades, 4, 5, and 6 and feed, and, when seasonal conditions warrant the making of them, 4, 5, and 6 special. Other grains also are graded according to established standards fixed either by law or by a Standards Board appointed by statute. The grain trade of the Old Country has become familiar with the name Manitobas, as applied to Canadian wheats and to Canada Western (C.W.) as applied to oats, barley and flax, and it has certain well-defined standards of quality which it expects delivered on the Canadian Certificate final, which it purchases. The millers, whether they purchase their supplies from the importer, merchant, or directly through their own agent, feel that they have a real grievance if the grain, when it arrives, is not up to the standard they expect it to be. From the average of many parcels which they have already had delivered to them, they expect to get fairly definite results in quality and yields of flour from a particular grade of Manitobas. If a sample of the grain from a ship-

ment is not up to the standard which they expect to have delivered in colour, hardness, quantity and quality of gluten, soundness, freedom from mixtures, moisture content and cleanness, they are disappointed—their confidence is shaken. They talk the incident over with their associates, and their brother millers, and the result is that the reputation of Manitobas has suffered.

On the whole, the Old Country trade thinks very highly of the Canadian system of marketing grain. Especially is this true of the bankers, and importers, because of the expedition with which business can be done, the quick turnover, the facility with which the paper can be handled and the large volume of trade that can take place with such a small amount of friction. The millers like it because of the economy of the system, the reduction of costs to the minimum and the ease with which the business can be transacted, and on the whole they are well satisfied with its workings, but they point out that the occasional degraded deliveries cause them severe losses and disturb their confidence in the Canadian Certificate. One miller put it this way—"We want to be assured that we actually get on the Canadian Certificate final wheat that is fully equal to that we should expect, and that the grading shall be accurate and regular." "We want uniformity in the grading, so that we may know what to expect—uniformity throughout the season and the same uniformity through the years." Another miller said, "I am indifferent as to how the Canadians handle their wheat so long as the quality, the uniformity of quality, and the price suit the conditions, *i.e.*, meets the competition ruling here as affected by the competition of other exporting countries. You may be sure of this, that Manitobas have an intrinsic value in themselves, *viz.* for their strength and yield, especially ones and twos. If these are impaired in any way—if the grades are lowered by degrading or mixing either intentionally or unintentionally, the British miller will know it, and the price will be lowered in consequence." This was confirmed by the evidence of other millers.

#### *How Values are Ascertained.*

In order to satisfy myself on this question of value, I made inquiries of the millers as to what steps were taken to ascertain the intrinsic values of the various wheats they grind. In the office of one large milling company, I put the question to the Director in charge of this branch of the work, whose duty it is to direct investigations respecting the milling values of wheats, and advise in respect to purchases of kinds and quantities to be used in several large mills. He turned at once to a pile of unopened mail on his desk, and picked up several envelopes of the same kind and said, "These are from our central laboratory and contain the reports of the work done on the various shipments of grain just received." He opened some at random, and showed me the results of the examinations of some Manitobas among others. Without any attempt at selection, he gave me a few exhibits. The following are copies of two of these:—

ROYAL GRAIN INQUIRY COMMISSION

177

TO TECHNICAL COMMITTEE, LONDON

143

Examination of Wheat  
Type No. 1 Manitoba.  
Shipped from New York.  
Quantity 4,000 Qrs.

Working

Date 27th May, 1924.  
Ex. S.S. (Deleted)  
Lbs. per bushel 63.  
Kind of sample—Bulk sample from  
W. Vernon & Sons, Ltd., London X  
Mill.

Admixture Report		Analytical Report		Remarks
	%		%	
Broken and small wheat.....	1.93	Moisture.....	12.86	
Oats.....	0.10			
Barley.....	0.05			
Black seeds.....	0.17			
Other seeds and dirt.....	0.16	Gluten..		
Knottings.....	0.02	{ Wet..	36.81	
Chaff.....	0.05	{ Dry..	13.15	
		Strength fig...	72.5	
Admixture.....	2.48			
Clean Wheat by diff.....	97.52			
Total.....	100.00			

General Remarks on Condition, Smell, Weevils, Smut, etc.

Green Wheat (3 berries in 50 grm)..... 0.12%  
Frosted Wheat (34 berries in 50 grm)..... 2.08%  
per I

Laboratory.

Where sample is too small to give a reliable figure under a heading leave it out. Always make a note if sample is received in a non-hermetically sealed package. Under heading "kind of sample" state who from and whether from bulk, paper bag, etc.

TO TECHNICAL COMMITTEE, LONDON

153

Examination of Wheat  
Type No. 3 Manitoba.  
Shipped from New York.  
Quantity 5,000 Qrs.

Date 6th June, 1924.  
Ex. S. S.  
Lbs. per bushel 62½  
Kind of sample—Bulk sample from  
W. Vernon & Sons Ltd., London X  
Mill.

Admixture Report		Analytical Report		Remarks
	%		%	
Broken and small wheat.....	1.45	Moisture.....	13.83	
Oats.....	0.98			
Barley.....	0.21			
Black seeds.....	0.09	Gluten..		
Other seeds and dirt.....	0.10	{ Wet... 32.49		
Knottings.....		{ Dry.. 11.60		Below average strength.
Chaff.....	0.03	Strength fig...	52.0	
Admixture.....	2.86			
Clean Wheat by diff.....	97.14			
Total.....	100.00			

General Remarks on Condition, Smell, Weevils, Smut, etc.

Green Wheat (5 berries in 50 grms)..... 0.20%  
Frosted Wheat (66 berries in 50 grms)..... 2.97%  
Bran frosted (84 berries in 50 grms)..... 6.28%

W.H.S.  
per I

Laboratory.

Where sample is too small to give a reliable figure under a heading leave it out. Always make a note if sample is received in a non-hermetically sealed package. Under heading "kind of sample" state who from and whether from bulk, paper bag, etc.

I visited the laboratory later. The chemist and his assistant were examining samples of wheat and testing wheats and flours for moisture content and for quantity and quality of gluten. In an adjoining room an expert baker was testing the flours in a practical way to ascertain their strength, absorption and other baking qualities, yield, etc. The manager of this—one of the newest and most modern mills in England—discussed the qualities of the various wheats that contribute to his mixtures or blends. "We buy Manitobas for strength and yield. They are better at the first of the season, October, November and December, than from January to the end of the season. They contain less moisture and possess a better quality of gluten." The chemist came in from the laboratory and laid before him a report on a Manitoba One Northern with a note as follows: "The quality of this gluten is below normal and should be used with caution." On another report covering a parcel of Manitoba One Northern received May 27, 1924, it was noted at the bottom, "34 frosted berries in 50 grams—2.08 per cent." I said to him: "Do you know the statutory definition of Manitoba One, Two and Three Northern?" He said "No." I asked him how he arrived at the price he could pay for these various grades. "I take into consideration what I expect to receive on the Canadian certificate based on my past experiences—strength as measured by the action of the flour when baked and yield of flour from the mill. Anything in a sample of wheat that deteriorates its strength or lessens its yield of flour lowers its value to the miller and consequently lowers the price he can offer for it. Frosted kernels spoil the flour. Most of our bakers use machines for mixing the dough and get bad results from such flour." "What effect would a sprinkling of tough kernels have?" "The tough kernels do not condition the same as dry kernels. They are soft into the endosperm and flatten out under the rolls and do not release the flour. There is a loss in yield and they make a bad job of our milling." "Can you detect tough berries in a sample by physical examination?" "No, the moisture content of the sample would show a little higher than it would if they were not there, but we should not and could not detect the presence of a few tough kernels. One of the essential things in conditioning wheat is to have the berries uniform to start with. If a sample is all tough we dry it and then add sufficient moisture to make it mill properly. I have talked with a number of millers," he said, "who say that Manitobas from Atlantic ports are not nearly so good as they were pre-war. We feel comparatively certain that Canadian wheats are 'whankled' (water added, soft wheats added, etc.) in Philadelphia. A number of millers have told me also that Manitobas through Vancouver are superior to the same grades through Atlantic ports this year. We specify when possible to get wheat through Vancouver. We pay more for it. Shipments on Canadian Certificate final vary too much through Atlantic ports. They are too uncertain. When we get a bad shipment we have no redress and consequently we bid lower and substitute other wheat when possible." In discussing Manitoba 3 Northern this miller felt it would be a distinct improvement so far as the millers were concerned if the bleached and sprouted could be kept separate from frosted wheat. These two classes of wheat give directly opposite results in the flour. "Manitoba threes are too variable," he said. His advice was for Canada to maintain a high and uniform standard for her grades so as not to disturb the confidence of the ultimate purchaser, the British and foreign miller. This was a London miller.

I went into this question of intrinsic values of wheat with several Liverpool millers. They analyze the samples from every shipment, as do the London millers, and they know the particulars in respect to what they are in the habit of receiving on the Canadian Certificate. I found some pronounced views in respect to the Canadian Certificate, and its finality, owing to a much degraded lot having recently been received by a Liverpool miller from Philadelphia on the ss. *Trevider*. The certificate called for 100,000 bushels Manitoba 1 North-

ern. It was badly mixed, some of it as low as 3 Northern, causing a big loss to the miller. This miller felt quite strongly that it was an injustice. "On this Canadian Certificate Final I have no redress, whereas, if this were on an f.a.q. contract, I would get a fair settlement." This miller was one of a number who opposed Australia's adopting a Certificate final plan. It was felt that the Canadian Government should stand behind its certificate, and guarantee the purchaser against such losses when the grain delivered was clearly below the grade specified on the Canadian Certificate final.

The Liverpool trade on the whole say that Canada's system of marketing her grain is the best in the world, but a great many complaints have been made during the last two or three years by the Liverpool Corn Trade Association to the Canadian High Commissioner's office in London owing to the receipt of off-grade shipments via Atlantic U.S. ports. The complaint is general from the millers here that Manitobas through Atlantic ports, without exception, are not as good as they were pre-war. Shipments from January on to the end of the year are not as good as they are in October, November and December—more moisture and more unsound kernels and the gluten strength is of a lower quality. One prominent miller had samples of Manitoba One Northern containing frosted and soft kernels. He was disappointed. They were not up to what he expected to receive, and for which he had bid a price based upon getting as good as the standard.

Another milling director, whose mills grind over 450,000 bushels per week, told me of his laboratory facilities for studying wheats. They have a chemist and a baker who make the necessary analyses and baking tests to enable the miller to know how to use the wheats to the best advantage and to enable the buyer to decide upon his quantities and fix his price for each particular grade or sort. He said, "Your Manitobas via Atlantic ports are not as good as they used to be; moisture is greater and gluten strength is not so good—too many soft berries. Vancouver's are better—all grades, but especially 3, 4, 5 and 6. We can use Vancouver 6's, but would not think of using Atlantic 6's. Atlantic 3's vary too much, frosted, bleached and sprouted. Manitoba One Northern via Vancouver is worth a shilling a quarter over Atlantic, and Vancouver threes have been nearly as good as Atlantic twos, and fours as good as threes, or nearly so. We set our prices according to what we expect to receive, based on past experiences. If the qualities of Manitoba threes are disappointing, we drop out of the market." Asked as to his opinion of the Canadian system of handling the grain crop, he said: "The Canadian system is the most reliable in the world, but the position of your producers would be bad if Canada allowed her grades to deteriorate or to lack uniformity. Keep your grades high and uniform and organize your sales better."

On this day, July 2nd, Manitobas were advancing in price. They were "out of line," and the millers and others were trying to find suitable substitutes. A cable from Buenos Aires while I was sitting in the office read: "Markets stronger following Canada," which indicated to me that where either quality or price are not satisfactory the English miller will endeavour to find a wheat that will satisfy the conditions of trade. While it was the general opinion of Liverpool millers that Manitobas through all Atlantic ports from Montreal south were not as good as pre-war, and not as good to-day as the same grades through Vancouver, there was not a single complaint against a shipment through a Canadian port either Atlantic or Pacific, for intentional adulteration with soft wheats. On the other hand, Liverpool buyers, while they prefer all Canadian shipments, do not discriminate in price against Manitobas via United States ports, nor do they specify via Canadian Atlantic ports.

In Glasgow, the opinions were in accordance with those expressed by the English millers. The Scottish millers are more dependent upon Manitobas than are the English. They must have strength (quality for a long strain) and this



they now can get only from Canadian Manitoba One Northern and from clean Russian when it is available. They were even more critical of the gradual deterioration of wheat on Canadian certificates. "Shipments of Manitobas of the same grade through Atlantic ports are not as good as they were pre-war—more moisture and lower gluten strength and the same grades are poorer now than they were last season up to December. They contain now more moisture and more thin immature inferior kernels." One miller said "I get 2 per cent less yield of flour now than I got last fall and early winter. I buy nearly all Manitoba One Northern because I have to in order to compete with the flour imported from Canada." Asked if he knew the statutory definition of Manitoba One Northern he said, "No." "What do you expect to receive when you buy a Manitoba?" He said, speaking for the millers present: "We expect to get as good as the standard sample and as good as we have been accustomed to receive." "How do you fix your price?" His answer was "the Canadian miller fixes the price and the Scottish miller has to compete with him for the wheat." "What would be the effect on price if Canadian grades were lowered?" "The price would be lowered accordingly." This miller said "we are not getting as good wheat from Canada through Atlantic ports as via Vancouver. Vancouver wheat is heavier per measured bushel, has more uniformity, larger dark red berries with thinner bran and is lower in moisture content."

"How does Manitoba 3 Northern meet your requirements?" "There are three factors affecting it, (1) frost, (2) soft wheat, (3) lightness, and we don't know what to expect. Frost is the most undesirable, and starchiness next, but we do not mind thinness in 3 so much, as with it we are likely to get more strength, and it is for strength primarily that we buy Manitobas. We have been told that the Canadian miller picks the best of the wheat for his purposes and this makes our position the more difficult. We are right up against it—we grind Manitobas alone for making our best flour, and we want it free from *frosted*, *bleached* and *sprouted* grains."

I then asked why they paid more at times for Australian if Manitobas were so important to their business. "We use Australians for another purpose altogether. They give us colour—whiteness and bloom—and a soft flour for household purposes and for scones, pastry, etc. Another important factor in making a price for them is the price we can get for white bran. The Irish farmer will pay us from twenty to forty shillings, nearly \$10 per ton (2,240 lbs.) more for it than for red bran. And Australians give us about 50 per cent more broad bran and 1½ per cent higher yield of flour. Australians are scarce and arrivals uncertain owing to the good markets in the Orient and South Africa for their wheat. It all depends upon the supply and demand and the prices we can get for the flour and offals. If Manitobas were scarce and Australians plentiful the situation would be reversed. Keep your grades up to a high standard. We want uniformity and quality."

From him I heard the same evidence as to the superiority of Vancouver over Atlantic shipments. He had been in Vancouver and was told while there by someone interested in the trade of that port that the grading was higher than that through Eastern channels, and "this," he said, "explains why Scottish millers are paying premiums for Vancouver shipments. Vancouver flour's are better than Atlantic three's. We have our laboratory for testing our wheats. At one time we were hopeful of getting our wheat supplies direct from the farmers of the prairies, but we have had to give that idea up as we found it impossible.

We grind large quantities of Manitobas, chiefly One Northern. Our capacity is about 5,000,000 bushels annually, 75 per cent of which is Manitobas. Our objection to Manitoba No. 3 Northern is the uncertainty as to the character the parcel will be when it arrives. Frost, bleaching and weight

all affect its value from the miller's standpoint. I would advise Canada to keep her standards high. It is our opinion that standard (statutory) grade Canadian wheats should be continuous and unalterable, irrespective of the nature of any particular season's crop. Conditions respecting Canadian grades should be such as would enable buyers to determine at the commencement of a season whether they could rely upon No. 1, 2, and 3 Northern wheat being of a similar quality to that of the previous year. If a superior grade of wheat could be created and maintained the millers of Scotland would not hesitate to pay a premium for the higher quality, e.g. a No. 1 Northern with a minimum weight of 62 pounds per measured bushel and this maintained throughout the year. We have no preference as to which Atlantic ports we buy through, but we have a decided preference for shipments via Vancouver." During 1923, 77 per cent of this company's wheat was Manitobas, of which 79 per cent was No. 1, 6.12 per cent No. 2, and 14.66 per cent No. 3.

The situation in Holland was different. They have been in the habit of expressing a decided preference for shipments via Atlantic ports; the reasons they gave me for so doing were: "Vancouver is on the Pacific coast. Our understanding has always been that only soft wheats are grown on the Pacific coast and we are afraid of mixtures of soft wheats with Manitobas." They preferred Atlantic shipments through all Canadian channels, as did so many others, but not to the extent of bidding a higher price to secure them in that way or of specifying through Canadian Atlantic ports.

#### *Manitobas—Characteristics and Attributes.*

The British and Continental miller has certain and well-defined characteristics which he attributes to Manitobas. He thinks of them as hard, red spring wheats. Taking the berries singly or in bulk, they possess a horny, vitreous appearance. Each kernel should be sound—free from frost, bleaching, sprouting, or from any defects from whatsoever cause. White or starchy kernels are objectionable. They give yield but lessen the strength of the flour. Frosted kernels are most objectionable, as the quality of the gluten is deteriorated, according to the degree of maturity at the time of freezing and according to the intensity of the penetration. Frosted berries do not condition the same as the sound ones and so there is a lack of uniformity and a consequent loss in milling. Bleached and sprouted berries and those damaged by disease are objected to for similar reasons—deterioration of quality and strength of gluten and reduction of yield. Slightly bleached and slightly sprouted may be affected but very little, and if they were by themselves, might, when the millers' confidence were established, command a good price, but again it is the uncertainty as to quality. Immature kernels of varying degrees, if present, alter the character of the flour and lower the yield. Smutty wheat, berries with smut spores adhering to them on the brush and in the crease not only give bad odour and flavour but discolour the flour. Tough kernels lower the yield and musty ones injure the quality. Broken wheat and other extraneous matter lower the yield.

Taking into consideration all these characteristics, natural and affected, the Canadian grades have been defined in order that the grain products may be handled and marketed and merchandised in bulk, with despatch, in the most efficient and economic manner from the producer to the consumer in the different foreign countries.

In the early days when southern Manitoba and southeast Saskatchewan made the name "Manitobas" known on the world's markets quite large quantities of Manitoba No. 1 hard were produced and forwarded overseas, but of late years there is none of this put on the foreign markets, the reason given being that there is not enough of it now to enable it to be accumulated in sufficient quantities economically for export. It was suggested that a grade be made

with a minimum at about the average of No. 1 Northern with a minimum weight of 62 pounds per bushel that would include what is now No. 1 hard and a large part of the better No. 1 Northern and constitute a quantity large enough for export. It was suggested that No. 3 Northern be made more uniform by separating frosted and bleached and sprouted, and that the weight per measured bushel be more uniform. Such grades, it was argued, would command higher prices than Nos. 1 and 3 grades do now.

#### *Mixing.*

I made inquiry in respect to mixing wheats in the Old Country. I was unable to find that importers and standholders mix wheat for the miller. The miller buys his wheats or grades of wheat, cleans, conditions and mixes them to suit his own particular requirements—products, quality, brand and prices considered.

The Transit and Storage Company of Liverpool has all the facilities for cleaning, drying and caring for wheat. It bins and grades separately. It could mix if asked by a miller to do so, but does not do a mixing business.

#### *Sectional Preferences.*

The Scottish Co-operative Wholesale Society had hoped to be able to secure wheat for their mills directly from the Saskatchewan wheat fields, and to this end established a small line of country elevators and started wheat raising themselves in one of the good-quality producing sections of Saskatchewan. They were, however, disappointed in this, for they could not make arrangements to preserve its identity.

The Dutch millers expressed a desire to purchase Saskatchewan wheat. They had a knowledge that good wheat was produced in that province and wished to get into communication with exporters who could furnish them with wheat grown there.

Spillers' Industries Limited are erecting a very large storage elevator at Vancouver and securing a chain of country elevators on the prairies partly in order that they may secure to themselves as far as possible, wheat in its natural condition. This company looked over the whole field, studied conditions and made this decision.

#### *"Best Wheat in the World"*

The President of Spillers' Industries Limited, in his address before the annual meeting of that Company, referred to Canadian wheat as generally recognized as the "best wheat in the world." When he said this he was referring to the expansion of wheat growing on the prairies and giving reasons for pushing their business into these new fields. . . . "But Manitoba 1 and 2 Northern are recognized as the best hard, red, strong, spring wheats in the world's markets. There is no doubt of this. Russia's wheat could be good, but it is not. It is full of mixtures and of dirt. But some day it will have to be reckoned with as a competitor. U. S. Red Winters and Duluths are required at home. Rosafe from the Argentine is a good wheat and can be substituted partially for Manitobas." "But you must bear in mind," said a miller importer, "when talking about *best wheats* that you are not comparing Manitobas—hard spring—with soft wheats or with durums that are used for entirely different purposes." "Manitobas have been too cheap this last year and we have used large quantities of them. If they become too dear—'out of line'—we will look for substitutes."

#### *Other Grains.*

Canadian oats are dirty. A better market would be afforded if they were cleaner. Horse feeders like a large, plump, white, thin hulled oat and will pay

more for it. Frosted oats have a black thread running along the crease. This gives an objectionable appearance to oatmeal.

The director in charge of buying oats for oatmeal manufacture gives the following description of oats wanted for milling: "Oats for milling should be sound, free from frost and reasonably dry. Tough oats can be used providing the percentage of moisture does not exceed 14 per cent and provided the price takes into consideration the extra cost of handling and the excess moisture content. The mixing of tough oats and dry oats is objectionable and results in an uneven quality of product. In general, oats for milling must be sound and sweet and of normal test weight; free from foreign grains, particularly barley, free from frost and of good merchantable quality. The general average test on oats of Western Canada of around 38 to 40 pounds might be said to be entirely satisfactory." Varieties should be grown pure as in the case of wheat. Yellow hulled oats give the appearance of weather and when mixed with white oats give the whole a suspicious appearance."

Canadian barley is dirty, lacking in uniformity of maturity, and on account of these defects cannot command the price of Danubian, Chilian, Californian or Russian either for malting or for the manufacture of pearl barley. A better quality would place it in a higher class than it now finds itself, and a higher price would obtain.

#### *Centralized Buying and Selling.*

Much interest was evidenced in the wheat pools of the prairies and their central selling agencies. The millers are anxious to know if it will reduce the price of wheat to them and the importers are busy trying to make connections that will ensure a continuity of supplies. There appears to be a gradual working towards centralized buying. The Dutch Millers' Association have contracted with the Von Stock Grain Co. of Rotterdam to purchase their wheat from them for a period of five years. The Russo-British Grain Export Co. was formed October, 1923. Note the following references to it:—

*The Daily News*—November 6, 1923:—

"Details of the Russo-British Grain Export Company Limited, registered on November 1, 1923. Nominal Capital £100,000 in £1 shares. The company is composed of fifty British and Russian interests. Russian: State Grain Export Co., The Russian Co-operative Union, and the Arcos Buying and Selling Agency in England. British: The Co-operative Wholesale Society, Shipton, Anderson & Co., A. E. Lawrence & Co., (grain brokers) and Furness, Withy & Co., ship-owners and shipping agents."

*The Morning Post* of April 7, 1924 contained the following:—

"The composition of the Russo-British Grain Export Company is the following:—

On the Soviet side:—

- (1) Centrosouz.
- (2) Arcos.
- (3) Exportkhlil.

On the British side:—

- (1) The British Society of Wholesale Buyers.
- (2) Shipton, Anderson & Co., Brokers.
- (3) Furness, Withy & Co., Shipping firm.

Capital provided equally by both sides. Active association exists with Lloyds Bank Ltd., who granted a loan on grain of more than £500,000 in a very short time."

*Eastern Morning News*—Hull, April 7, 1924, had the following:—

"It is stated that during the last two months the Russo-British Grain Export Co., Ltd., chartered some 70 steamers through Furness, Withy & Co., for transport of grain from Southern Soviet Ports. The Chief purchasers were: Germany, Holland, France, Belgium, Great Britain, Sweden, Norway, Denmark, Italy, The Near East and Finland."

During the time of my visit Russian wheat was being received by the millers in both England and Scotland. It was being purchased on the London Corn Trade Association's contract with special clauses added to guarantee fair treatment in the matters of quality and price to both the buyer and the seller.

#### *Milling.*

A large section of the British and Irish Millers' Association have a research association for the purpose of investigating problems confronting them in their business of milling. They have received a financial grant from the government to assist in carrying on their work; secured a mill; provided for a laboratory and engaged Prof. E. A. Fisher to direct the research. This will probably be extended to include the bakers whose interests so far as flour is concerned, are identical with those of the millers. British millers are much interested in the work of wheat improvement that is being carried on in India, Argentine, Australia and Canada. India's wheats are being improved in strength and so are those of the Argentine. Canada's rust problem is of particular concern to them as are Australia's droughts.

The breeding of wheats for strength is being carried on in India under the direction of Prof. Howard. Already very encouraging results have been obtained. Higher gluten wheats have been produced. These have been tested for yield and strength on various soils and under a variety of conditions in different parts of India. Samples have been sent to the millers in England in order to get the benefit of their criticisms and suggestions.

Australia's wheats are good as a result of the splendid research work carried on there by the late Prof. Farrar, who produced for Australia the wheat known as "Federation"—a white wheat of excellent quality. But Australia's wheats are not as good as they can be. They lack uniformity of strength which is so important to the miller. Efforts are being made in Australia and encouragement is being given to the matters of wheat improvement, and not to wheat improvement only but also to methods of marketing and merchandising.

The British miller is very much interested in the wheat crops of the Argentine. And Argentine is more or less a competitor with Canada. The wheat known as "Rosafe" from the country tributary to Rosario and Santa Fe compares favourably in respect to strength with Manitobas. Efforts are being made to improve both the quality and the methods of handling the wheat of the Argentine. At the present time the Brazilian millers are able to secure the cream of the Argentine wheats for their mills but British millers are making efforts to secure a share of this better wheat by bidding a higher price for it. Argentina is increasing her acreage annually and in consequence, her exports. Since the war her exports have increased 59 per cent over her ten-year pre-war average.

Russia's case is different. During the ten year pre-war period she produced approximately 20 per cent of the world's wheat crop and outside the countries of Europe exported about 27 per cent. Since the war her exports have been almost nil. It has been pointed out that strong efforts are being made to organize a merchandising scheme for Russia's grain and evidence is not lacking that just as strong efforts will be made to restore production, and improve the quality especially of Russia's wheat. The time is looked forward to when Russian wheat will be a strong competitor with Manitobas on the

British market. Just now the shipments are foul with rye and other grain mixtures, together with straw, soil and other rubbish (screenings) amounting in some cases to over 10 per cent when delivered to the British miller. Adjustments in price are made according to arrangements set forth in a special clause attached to the London Contract covering dealings in Russian grains. (A copy of this contract is attached to this report marked Schedule "A.") Russian wheats were being tested by several British millers at the time of my visit. A laboratory report on Russian Wheat comparing it with Manitoba One, Two and Three Northern is also attached marked Schedule "B."

Attached also is a laboratory report of different species of Australian Wheat, marked Schedule "C."

#### *Quality of Canadian One and Two Northern Wheats.*

Among the millers interviewed in the Old Country on this question, the preponderance of opinion was to the effect that during the last ten or twelve years there has been a slight gradual lowering of the milling value of Canada's One and Two Northern wheat shipments to the Old Country through Atlantic ports, the evidence in the main being that in appearance the colour is lighter, the number of starchy kernels increased, the bran a little coarser; that frosted and damaged diseased berries are more common; that there is more foreign material—screenings—present; that the moisture content is higher. The importers and merchants made no complaints except against the occasional degraded shipments through Philadelphia and Baltimore.

In order to get the point of view of the millers, I examined with them a number of samples in their offices. I also saw samples in the offices of importers and on the stands in Mark Lane, and I examined arriving shipments on the docks. In addition, I obtained from the millers results of laboratory analyses, some of which have been made use of in this report. Invariably the miller separated out for my attention the kernels of the following description: piebald—starchy, frosted, immature, shrunken, deformed and discoloured. So far as frosted or otherwise unsound kernels are concerned, they undoubtedly had a grievance. The Canada Grain Act makes plain that Nos. One and Two Northern wheat shall be sound. But, in respect to the starchy berries, if they are present in a larger proportion than they were in former years, of course the colour of the sample will be lighter and the strength reduced.

It must be pointed out, in respect to this characteristic of our wheat grown in the hard spring wheat area, that many changes during the last fifteen years have taken place. The introduction of Marquis wheat, with its early maturing advantages, over Red Fife from 1911 on, made wheat growing comparatively safe in many districts where only coarse grains were grown before, and pushed the boundaries of the wheat belt much farther to the north. This, in itself, accounts for greater variations. And then it is well known that certain types and kinds of soil produce from the same seed wheats that are quite different in appearance and character from the parent seed and from one another. Marquis wheat in one district may contain 10 per cent while the same seed sown in another district will produce a 16 per cent protein product.

The climate has much to do in affecting the character and quality of wheat. Rain, sunshine, heat and cold—each appear to play very important parts in producing a particular type of berry. One district in southern Manitoba for many years produced a distinct type of wheat—fairly small, hard, red, vitreous kernels that used to be known as Manitoba No. One Hard. In another part of the same province, a distinctly different type of wheat grown from the same variety of seed is invariably produced—a large, bolder, duller coloured berry with more or less white starchy spots showing. And what is true of Manitoba is also true of the provinces of Saskatchewan and Alberta. These are the

extreme types, but in between them there are all shades of differences that are affected by one or more natural causes.

And then our wheat crop has its enemies. Among these are diseases of one sort and another, insects, etc., hot winds, frost, etc., all of which may and do alter the character of the appearance and quality of the berries.

The practice of mixing at the head of the lakes and at other points before reaching there has been going on for a number of years in a comparatively small way, but has increased rapidly since 1920. The evidence before our Commission showed that, while there were often times superior cargoes shipped out of the private houses, on the whole the grain out of the private houses was slightly inferior to that out of the public; the private house now is permitted to store its grain in the bins of the public along with the country run of other stored grain. No doubt the mixing of grain, as it has been carried on in the past, has played a part in reducing the quality of grain through Atlantic ports.

Canadian hard, spring wheat through the port of Vancouver originates almost wholly in the province of Alberta. That province had in 1923 a particularly fine crop all over the southern part of the province, where the conditions are favourable to the production of hard, red, plump berries. The crop from this district constituted a large part of the volume that was shipped via the Pacific route. This may, in part at least, account for the higher prices bid for this wheat at times by the British miller.

Poor seed has been responsible too for a lowering of the quality of hard spring wheats. Mixtures of soft wheats exercise a baneful effect in this respect. Pure Marquis seed or other similar variety will tend to keep our quality up to the standard of excellence required by the miller. Every effort should be made by those who have to do directly with improving the grain products of Canada to improve the practice of the farmers in the matter of selecting and sowing good seed of an approved variety.

Now it must be remembered that Canada's grading system, superior and all as it is, cannot be one hundred per cent perfect. It is not an exact science, and in the very nature of things cannot be reduced to mathematical exactness. Take for example No. One Northern wheat, which must be 60 per cent hard, Red Fife or Marquis wheat, sound, well cleaned and weigh 60 pounds to the measured bushel. It would be very difficult indeed, and I venture almost humanly impossible to produce a bushel of wheat that would exactly conform to the requirements as stated in the Statutory definition. But that could never have been intended.

Now, it may happen that a carload of wheat from a certain district may have fully 60 per cent of hard, red wheat, and the balance may be made up of starchy kernels of the same or a similar variety. If it is sound and clean, and weighs 60 pounds per measured bushel, it will grade No. One Northern. If there should happen to be any large number of such cars being emptied into the bins of a terminal at the same time, there is no doubt but what the character of a cargo of such wheat would make a very bad impression upon the miller who received it. It is possible for such a thing to occur, but it is not very probable for it to do so. It is, however, easily conceivable that millers do receive and have been in the habit of receiving during recent years shipments of wheat that contain a larger percentage of off-coloured berries than they were accustomed to receive in former years. Canadian wheat has usually been of such a high quality that it is not easy for the Old Country miller to understand why there should be anything else received from Canada.

That this colour and hardness indicating strength are important as price fixing factors is evidenced by the fact that analyses are made by the large millers of every arriving cargo, to ascertain the amount and quality of the gluten content.

The following data was furnished me as a sample of the work in this line:—

(a)

Grade	1924	From	Gluten		Index fig.
			Wet	Dry	
No. 1 Nor.....	June 6	New York	35.76	12.76	70 (Above average strength)
No. 2 Nor.....	May 16	"	36.51	13.04	71 (good average strength)
No. 3 Nor.....	June 4	Montreal	32.48	11.60	52 (below average strength)
No. 3 Nor.....	June 4	New York	32.44	11.58	46.5 "
No. 3 Nor.....	May 24	Montreal	33.44	11.94	59
No. 3 Nor.....	May 29	New York	33.76	12.06	48 (below average strength quality inferior to average)

Another wheat buyer gave me the following report on several cargoes:—

(b)

DELIVERED AT MILL 13-15TH NOV. 1923

	No. 1 Nor.	No. 1 Nor.	No. 2 Nor.	No. 3 Nor.	No. 3 Nor.
Protein.....	11.97	11.34	11.57	10.00	10.00

From one of the large Canadian mills in Western Canada, I obtained a report on the protein content of 114 cars of One Northern wheat, ranging from 10.8 per cent to 16.5 per cent.

I asked Mr. Jas. Begg of John Jackson & Company, importers, if No. 1 Northern wheat, guaranteed 14 per cent protein, would bring a higher price on the Glasgow market. His answer was: "We believe that millers would pay a premium for wheat of a guaranteed standard of gluten over the ordinary run, if the cost entailed by making this standardization and the preservation of its identity in transport did not exceed the commercial value of the higher gluten grade."

*Cleanness.*

Canadian wheat has left the terminals at the head of the Lakes and at Vancouver, sometimes with dockage. This was due to a very dirty crop that could not be cleaned fast enough to keep the grain moving from the country to the seaboard. In other words, the dirt choked the machinery and caused a blockade. No grain should be allowed to go abroad on Canadian Certificate final carrying dockage. The value of the wheat to the purchaser is reduced, and the effect will reflect itself in lower bids.

*Unsound Berries.*

The foreign miller expects No. One and Two Northern wheat to be sound—free from frost, sprouted, etc. The results of their analyses showed frosted kernels in these grades. A tightening up in the grading system, both into and out of terminals, will correct this.

*Moisture Content in Canadian Hard Spring Wheats.*

As pointed out in another part of this report, millers complained of the increase in the percentage of moisture in Canadian wheat from Atlantic ports.



The following figures, showing the moisture content of Canadian shipments, were obtained from millers:—

Glasgow millers—

	1923	Shipments from Atlantic ports		Average
No. 1 Northern.....	Jan.	12.5	12.8	12.65
	Feb.	12.5	12.6	12.55
	Mar.	12.8	13.1	12.95
No. 3 Northern.....		13.6	13.7	
No. 1 Northern.....		From Vancouver		
		12.2		

During the months of January to March, Australians tested 11.5 per cent to 11.7 per cent, and Indian Karachi 10.7 per cent, 10.6 per cent and 11 per cent.

The English Co-operative Wholesale Society gave me the following data on natural moisture content of shipments received at intervals from 1914 to 1924:—

Date	Average Moisture	Date	Average Moisture
	%		%
July, 1914.....	12.6	November, 1922.....	14.0
March, 1920.....	12.6	August, 1923.....	12.8
June, 1920.....	12.8	October, 1923.....	11.8
November, 1920.....	13.4	May, 1924.....	12.6
July, 1921.....	13.00	July, 1924.....	13.00
October, 1921.....	13.2		

From a number of the report sheets from the laboratory of Spillers Industries, Ltd., I obtained figures on the moisture content of cargoes arriving in England as follows:—

Date	Grade	Moisture
		%
June 6, 1924.....	No. 1 Northern.....	12.70
June 17, 1924.....	No. 1 Northern.....	12.63
May 16, 1924.....	No. 2 Northern.....	12.89
June 12, 1924.....	No. 2 Northern.....	12.75
May 22, 1924.....	No. 3 Northern.....	13.87
May 24, 1924.....	No. 3 Northern.....	13.71
June 4, 1924.....	No. 3 Northern.....	13.18
June 4, 1924.....	No. 3 Northern.....	13.41
June 13, 1924.....	No. 3 Northern.....	13.83

The mill manager for Joseph Rank and Son, Birkenhead, gave me the following average moisture contents on shipments received on 1923 crops.

No. 1 Northern, 12.45 per cent.

No. 2 Northern, 13 to 13.25 per cent.

No. 3 Northern, 14 to 14.5 per cent.

It is common knowledge to all who are familiar with the production of wheat that moisture content varies with season, district, soil, maturity and exposure. Individual carloads and cargoes vary. It is because of this that the millers have samples of every cargo analyzed that they may know how much this important price fixing factor will have to be reckoned with in determining the price they

can bid for a particular grade of wheat. It was stated in evidence that good sound wheat fit for warehousing will sometimes contain 15 per cent of moisture. Some years ago, the regulation limit of moisture, so far as the test was concerned was  $12\frac{3}{8}$  per cent. It has been raised to 14 per cent and this may have something to do with the increased moisture content of our wheat on the foreign market, if the contention of British millers is correct.

It was suggested—

(1) That samples of our grades be placed in the offices of the various trade commissioners, especially on the continent, as early as possible each year, in order that the trade in a port like Rotterdam might consult him regarding them.

(2) That the Canadian Government use its best efforts with the United States Government to secure the preservation of the grades against deterioration through mixing and substitution while Canadian grains are passing through United States territory for export. Shipments of more or less frequency have been received by importers and millers that are decidedly of lower grade than that named in the Canadian Certificate Final covering same. In certain cases, the shipments have contained mixtures of soft wheat. Baltimore and Philadelphia are the worst offending ports in these matters.

(3) That the quality of the wheat grown by the farmers should be continually watched by the various institutions of research and government to ensure that the grain at its source is not deteriorated in quality on the farm through the use of poor seeds, mixtures, soft varieties, etc.

(4) That our grades be maintained at a uniformly high standard of quality to the mutual advantage of both the producer and consumer.

(5) That Canadian millers should study the question of offals and see if it would not be possible to ship Canadian mill feed of the various classes properly sacked, in bags of 112 or 224 pounds each. If this could be done successfully, it would help to merchandise Canadian flour in Scotland and other parts of Britain.

All of which is respectfully submitted.

W. J. RUTHERFORD,  
*Commissioner.*

OTTAWA, January, 1925.

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## SUMMARY

1. The United Kingdom and Holland import large quantities of Canadian wheat and other grains. Most of this is on Canadian Certificate Final; small quantities on sample and on American seaboard certificate.

2. The Canadian system of handling and exporting grain is considered by importers and bankers, and the trade generally, as being the best in the world—most expeditious, most economical. Millers would like compensation when shipments are not up to average. The f.a.q. contract system in practice with all countries except Canada and the United States is not as good as the Canadian system—too much delay, too many disputes, etc. Millers are compensated for inferior parcels under this system. Millers opposed Australia's Certificate Final plan.

3. Canadian grains are handled at the ports of landing in such a way as to preserve the identity of the grades and to secure out-turn weights—at least no complaints were made in these respects.

4. The hard red spring wheat of Western Canada is used for making flour. It is noted for its high protein—high gluten—and medium moisture content.

5. Systems of bread-making vary in different countries and in different sections of the same country. In Scotland it takes 12 to 16 hours from the flour to the loaf, and in England and Holland only 3 to 4 hours. What is known as the long sponge system as in Scotland, requires a very strong, high-quality, gluten flour; while the short system, as in England, requires "quality" of gluten rather than total strength.

6. Canadian flour made from Canadian hard spring wheat has an excellent reputation among Scottish bakers. Canadian flour imports made a place for Canadian hard wheats in the milling economy of Great Britain.

7. Canada's One and Two Northern wheats have an intrinsic value of their own, viz.—strength—gluten content. This makes for them a place in the milling economy. Being in this class of strong red wheats, they compete with such for place and price, e.g., Russian, Duluth and hard red winters. Canadian hard spring wheat does not compete in this sense with Australia's (white, soft wheat).

8. The millers of the Old Country have laboratory and other facilities for testing wheats and flours and know the intrinsic values of the wheats they purchase. So far as concerns Canada's One and Two and Three Northern, the important price fixing factors are strength, moisture content and yield of flour.

9. The price, dependent upon quality, appears to be determined largely by the law of supply and demand. There are, on the Old Country markets, occasional flurries in prices—a sudden rise and fall—caused by unreliable reports or mistaken judgment, but, on the whole, the law operates. Canadian hard wheats were too cheap up to June, because of the very large supply in sight—more than could be absorbed and consumed.

10. Liverpool, because of its futures market, is a sort of world barometer for grain prices. The Liverpool market has the fullest possible information respecting world crop conditions, world needs and world supplies, and naturally its ruling prices have a substantial effect upon the prices of wheat in all exporting countries.

11. Manitobas shipped via Vancouver are superior to those shipped via Atlantic ports, either Canadian or United States, grade for grade. This is especially marked in the grades from 3 to 6. Vancouver 3's are nearly as good as Atlantic 2's, and 4's nearly as good as 3's. The trade often spoke of wheat coming through Vancouver as Vancouver's. The difference in quality is marked in the goldness and redness of the berry, and the lower moisture content. So superior are the shipments from Vancouver that the millers will pay 6d. to a shilling per quarter (8 bushels) more than for the same grade via the Atlantic ports, Montreal and all ports south.

12. British millers and importers complained that deterioration of Canadian wheats takes place occasionally—too frequently—while they are passing through the United States in bond, especially through the ports of Philadelphia and Baltimore, and that they have no redress on the Canadian Certificate Final, unless fraud can be proven. The millers generally were of the opinion—

- (a) that Manitoba 3 Northern is too variable in its composition—frosted, bleached and sprouted kernels; in weight per measured bushel; that the shipments of this grade lack uniformity within a crop year, and that they vary too much from one year to another;
- (b) that Nos. 1 and 2 Northern contain too frequently frosted, immature, unsound, broken kernels, and starchy berries; also excess screenings;
- (c) that there has been a slight gradual lowering in the quality of Manitobas through Atlantic ports since pre-war and that the receipts of these grades from January to June and July are inferior to those

received from October to December, due to higher moisture content, more immature, starchy, unsound berries and excess screenings, and that in consequence the yield of flour is lowered, and its strength reduced.

13. The British miller—even the small miller up country, does his own mixing. He buys his different wheats, conditions them separately and then blends them in his supply bin. A miller may be grinding 75 per cent Canadian wheats to-day, and in a short time be grinding only 40 per cent or less. Prices and quality are factors that determine. The British miller is most expert. He can condition almost any kind of wheat if he has it by itself, but not if it is mixed with other different wheats, e.g., he can condition frosted wheat or durum wheat if need be when he has them by themselves. He cannot properly condition mixed dry and tough, hard and soft, thick and thin skinned, or sound and frozen wheats.

14. Old Country millers advise Canada to maintain high standards and keep them as uniform as possible throughout the season and throughout the years; retain confidence of consuming nations by making the Canadian Certificate a most reliable document; "keep your wheat up to the reputation it has on the prairies of being the best hard, red, spring wheat in the world." Duluth hard used to have this reputation.

15. The Scottish Co-operative Wholesale Society thought at one time they might get their wheat direct from the farmers of Saskatchewan, and so established a small elevator system and started a wheat farm, but found themselves unable to do this. Spillers have looked the field over, and have decided to erect a very large elevator at Vancouver and secure a chain of country elevators as feeders to enable them to get Canada's hard wheat as directly as possible from the wheat fields.

16. There is approximately 34,000,000 bus. capacity public storage silos and flat warehouses at the ports of the United Kingdom, and 1,550,000 at Rotterdam. Much of this storage is not used. It does not pay the owners interest on the investment. Wheat or grains will not go into public storage in the Old Country unless forced there. It takes the wheat out of its regular channel, and it costs too much to do this.

### SCHEDULE "A"

#### CONDITIONAL CLAUSES GOVERNING PURCHASES OF RUSSIAN WHEAT TO THE UNITED KINGDOM

*Analysis attaching to and forming part of Contract dated 16th June, 1924.  
200 tons Russian wheat per ss. Gileston.*

Any percentage of rye not exceeding 12 per cent to be taken and paid for a wheat and any excess over this to be allowed for by seller at contract prices.

Any percentage of barley and/or maize and/or oats up to 2 per cent to be allowed for by seller at half contract price. Any excess over this to be allowed for by the seller at contract price.

Any percentage of grain and/or seeds other than specified above up to 1 per cent to be taken and paid for as wheat. Any excess over 1 per cent up to a further 2 per cent to be allowed for by seller at half the contract price. Any excess over 3 per cent to be allowed for by seller at contract price. Any percentage of dirt and other extraneous matter up to  $\frac{1}{2}$  per cent to be allowed for by seller at contract price. Any excess above  $\frac{1}{2}$  per cent to be allowed for by seller at double the contract price.

In the event of the grain being sold fair average quality, an average sample of the delivery shall be taken and sealed jointly at port of discharge by the agents of the shipper and the agents of the holders of the bill of lading or shipper's delivery order, and forwarded to the association for standard purposes. The expenses of sampling and forwarding to be paid half by buyer and half by seller.

LONDON CORN TRADE ASSOCIATION  
BLACK SEA AND DANUBIAN GRAIN CONTRACT

STEAMER OR POWER VESSEL

1922.

Issued 1st August, 1922

Copyright.

Parcels  
Tale Quale

LONDON... ..192..

Bought of .....

Sold to .....

on the printed conditions and rules endorsed on this contract.  
.....of.....

Quality. \*at time and place of shipment about as per sealed sample marked... ..  
in possession of.....

Shipment. The grain is not warranted free from defect, rendering the same unmerchant-  
able, which would not be apparent on reasonable examination, any statute or  
rule of law to the contrary notwithstanding.

Shipment in good condition.  
from.....

Bills of Lading .....

Quantity. ....say.....

.....units, 5 per cent more or less.

Contract price. reckoning 1,016 kilos. or equal to 2,240 lbs. English  
at the price of... ..less... ..per cent, say .....

Destination freight payment. per... ..lbs. shipped, including Freight and Insurance to... ..  
Freight payable on discharge, less advances for the ordinary ship's disburse-  
ments at Port of Loading.

Payment, cash in London, in exchange for Shipping Documents within  
seven days after receipt of invoice, less discount for the unexpired term of three  
months from date of Bill or Bills of Lading at Bank rate of the day on which  
the invoice is received by Buyer, but not less than 5 per cent per annum. If  
shipping documents have not been sighted at time of vessel's arrival at port of  
discharge, Seller must provide documents entitling Buyer to obtain delivery  
of the grain and payment must be made in exchange for same, such payment  
to be made without prejudice to Buyer's rights under the contract.

Policies. Seller to give all policies of insurance (for original and for increased value,  
if any) on the parcel, all duly stamped, and for not less than 2 per cent over  
the invoice amount, including the above 2... .. per cent, any amount over the  
2 per cent to be for Seller's account, in case of total loss only, and if and when  
called upon for the purpose of claiming upon Underwriters to give a letter  
certifying that there are no other insurances affected by him or by holders ante-  
cedent to him. Insurance on Lloyd's conditions which shall include the Lon-  
don Corn Trade Association's War Risk clause (or clause or clauses equivalent  
thereto), and the London Corn Trade Association's F.P.A. clause, to be effected  
with approved Underwriters and/or Companies domiciled in and paying losses  
in England on gold basis, for whose solvency Seller is not to be responsible.  
Any expense for covering the London Corn Trade Association's War Risk ex-  
ceeding one-half of one per cent to be for account of Buyer.

Discharge. Vessel to discharge according to the custom of the port.

The discharging strike clauses in the Black Sea, Azoff and Danube Charter  
Parties of 1890 are to be understood as forming part of this contract. (See back.)

Any lighterage charged by ship in accordance with the lighterage clause of  
the Black Sea, Azoff and Danube Charter Parties of 1890 to be paid by Receivers  
pro rata according to their respective Bill of Lading quantities, such expenses  
to be refunded by Sellers to Buyers in Final Invoice; and all Sellers and Buyers  
under contracts containing this clause shall be deemed to have entered into  
mutual agreements with one another to the above effect, and to agree to submit  
to arbitration all questions between them or any of them in regard to such pro

*rata* settlement as aforesaid in manner provided by this contract for arbitration of disputes.

If parcel sold to London vessel to discharge in one of the customary Docks, should vessel not so discharge Seller to be responsible to Buyer for all extra expenses incurred thereby.

If documents are tendered which do not provide for discharging as above, or contain contrary stipulations, Seller to be responsible to Buyer for all extra expenses incurred thereby.

The Unit of quantity under this Contract to be . . . . . **Unit pro rata.**

Should any of the above-mentioned quantity form part of a larger quantity of bags of the same mark, or of similar quality, whether in bags or bulk, no separation or distinction shall be necessary. All loose collected, damages and sweepings, and any excess or deficiency in the quantity delivered, shall be shared by and apportioned *pro rata* between the various Receivers thereof buying under contracts containing this clause, and any of them receiving more or less than his *pro rata* share or apportionment shall settle with the other or others of them for the same in cash at the market price of the day of Vessel's arrival (such price to be fixed by arbitration unless mutually agreed). All Sellers and Buyers of any part of such larger quantity as aforesaid under contracts containing this clause shall be deemed to have entered into mutual agreements with one another to the above effect, and to agree to submit to arbitration all questions and claims between them or any of them in regard to such *pro rata* sharing or settlement as aforesaid in accordance with the arbitration rule endorsed hereon.

Sellers and Buyers shall give all reasonable assistance in ascertaining the *pro rata*.

All Sellers shall be responsible for the settlement of the *pro rata* by their respective Buyers within reasonable time.

If mutually agreed between Seller and Buyer, the Grain may be weighed by approved Hopper Scale of 2,000 pounds or over, in which case the allowance for draught shall be 2 pounds per 2,000 pounds, any custom of the port to the contrary notwithstanding. **Weighing.**

Seller and Buyer shall have the right of supervision both as to weighing and delivery.

In case of Sea Accident (pumping up grain excepted) causing a deficiency on Invoice Weight, Provisional Invoice quantity to be final as to measure, but the weight to be adjusted by the average weight of the sound grain delivered; but when shipment is made by weight, the Provisional Invoice to be final, unless, however, the deficiency cannot be accounted for by the nature of the accident and is not recoverable from Underwriters. **Deficiency.**

Any deficiency on Bill of Lading weight to be paid by Seller and any excess over Bill of Lading Weight to be paid for by Buyer, at contract price. The whole shipment to be weighed.

Damage by sea-water, or otherwise, if any, to be taken as sound. Any increase of weight by water to be allowed for.

Any general average prior to date of Contract to be for Seller's account. Buyer in such case to furnish Seller, on settlement of amended Invoice, with the usual documents required by Average Adjusters for preparation of Average Statement, and to return to Seller the policy or policies received from him, together with all subsequent policies, if any, effected to cover any increase in c. f. & i. value, and to give a letter certifying that there are no other insurances known to Buyer. **Average.**

Should the fulfilment of this contract be rendered impossible by prohibition of export, blockade or hostilities, this Contract or any unfulfilled part thereof to be cancelled. **Prohibition.**

Seller to pay . . . . . Brokerage of . . . . . per cent on the c. f. & i. price, Contract cancelled or not cancelled. **Brokerage.**

Buyer and Seller agree that, for the purpose of proceedings, either legal or by arbitration, this Contract shall be deemed to have been made in England, and to be performed there, any correspondence in reference to the offer, the acceptance, the place of payment or otherwise notwithstanding, and the Courts of England or Arbitrators appointed in England, as the case may be, shall, except for the purpose of enforcing any award made in pursuance of the Arbitration clause hereof, have exclusive jurisdiction over all disputes which may arise under this contract. Such disputes shall be settled according to the law of England whatever the domicile, residence, or place of business of the parties to this contract may be or become. Any party to this contract residing or carrying on business elsewhere than in England or Wales, shall, for the purposes

## ROYAL GRAIN INQUIRY COMMISSION

of proceedings at law or in Arbitration, be considered as ordinarily resident or carrying on business at the office of the London Corn Trade Association, and if in Scotland, he shall be held to have prorogated jurisdiction against himself to the English Courts, or if in Ireland to have submitted to the jurisdiction, and to be bound by the decision of the English Courts. The service of proceedings upon any such party by leaving the same at the office of the London Corn Trade Association, together with the posting of a copy of such proceedings to his address abroad, or in Scotland or Ireland, shall be deemed good service, any rule of law or equity to the contrary notwithstanding.

Difference in quality shall not entitle the Buyer to reject, except under the award of Arbitrators or the Committee of Appeal, as the case may be. All disputes from time to time arising out of this contract, including any question of Law appearing in the proceedings, whether arising between the parties hereto, or between one of the parties hereto and the Trustee in Bankruptcy of the other party, shall be referred to Arbitration, according to the Arbitration Rule endorsed hereon, and this stipulation may be made a rule of any of the Divisions of His Majesty's High Court of Justice in Ireland, on the application of either contracting party, for the purpose of enforcing an award against a party residing or carrying on business in Ireland. Neither Buyer, seller, Trustee in Bankruptcy, nor any other person claiming under either of them, shall bring any action against the other of them in respect of any such dispute until such dispute has been settled by Arbitrators, or by the Committee of Appeal, as the case may be, and it is expressly agreed that the obtaining an award from either tribunal, as the case may be, shall be a condition precedent to the right of either contracting party to sue the other in respect of any claim arising out of this contract. All costs of or connected with the stating and argument of any Special Case for the opinion of the Court on any question of law arising in the course of the reference shall be borne and paid by the party requiring the same to be stated unless or except so far as otherwise determined by the award to be made in the reference.

## ROUMANIAN LOADING STRIKE CLAUSE

The Arbitration to be held in London.

1. Should shipment of cargo or parcel or any part thereof be prevented at any time during the last 28 days of guaranteed time of shipment, or at any time during guaranteed contract period, if such be less than 28 days by reason of riot, strike, or lockout at port or ports of loading, then Shipper shall be entitled at the termination of such riot, strike, or lockout to as much time for shipment from such port or ports as was left for shipment under the contract prior to the outbreak of the riot, strike, or lockout. In case of non-fulfilment under above conditions the date of default shall be similarly deferred.

2. Shipper shall give notice by cable naming the port or ports not later than two days (Sundays and holidays excepted), after the last day of guaranteed time for shipment, if he intends to claim an extension of time for shipment, such notice shall limit the ports for shipment after expiry of contract period to those from which an extension is claimed. All such notices shall be passed on in due course.

3. The Official Certificate of the Executive of the Special Committee of the Association of Merchants and Exporters of Cereals of Roumania, certifying the existence and duration of riot, strike or lockout causing the delay shall be attached to the shipping Documents.

4. Notices of the outbreak and termination of riot, strike or lockout shall be cabled by the above Executive to the London Corn Trade Association within five days of each event.

## CONDITION AND RULES

**Appropriation.**

1. *Notice of Appropriation* with ship's name, date of Bill or Bills of Lading and approximate quantity loaded shall be given by the Shipper of the grain tendered under this contract direct or through his House or Representative or Agent in London to his Buyer within 10 days from date of Bill of Lading and by each other Seller within 10 days, or in due course if received by him after that time, should the Shipper's notice be delayed beyond the 10 days through any cause beyond his control it shall be given within one business day from arrival of documents in London, and shall be passed on by each other Seller to his Buyer in due course on receipt. On demand of Buyer, Seller shall give a copy of the particulars contained in the notice of appropriation received from his Seller, and Buyer shall, on demand, give to Seller a written receipt of notice

of appropriation. A valid notice of appropriation when once given shall not be withdrawn. Provisional Invoice based on Bill of Lading weight with ship's name and date of Bill or Bills of Lading shall be sent by Shipper's house or representative in London to his Buyer within two business days of receipt of notification of arrival of documents in London and by other Sellers to their Buyers respectively in due course after receipt. A notice or tender to the Broker or Agent shall be deemed a notice or tender under this contract. Any appropriation or invoice received after five o'clock p.m., or half-past twelve p.m. on Saturdays, shall be deemed to have been received on the business day following. If shipping documents have not been sighted at time of vessel's arrival at port of discharge, landing charges, if any, incurred shall be borne by Seller, and allowed for in final invoice, unless the Buyer has refused to pay against the documents tendered in payment clause in contract.

2. *Shipment Clause*.—Should the grain arrive out of condition, due allowance shall be made for the time of year in which the shipment took place. The fact of the parcel so arriving shall not necessarily be sufficient proof of an improper shipment.

2a. *Any Commission on Freight* to be for Seller's benefit, but any discount for payment of freight in cash to be for account of Buyer.

3. *Bill of Lading* to be considered proof of date of shipment in the absence of evidence to the contrary. Each shipment appropriated in whole or part fulfilment of this contract to be considered a separate contract, but each Bill of Lading not to be considered a separate shipment except as to the date on which it can be appropriated. In the event of more than one shipment being made each shipment to be considered a separate contract but the margin on the mean quality sold not to be effected thereby.

4. *Notice to Retire Documents* shall be given by Buyer to Seller before 11.30 a.m. on the day of payment, non-business days excluded; except on Saturdays when the time shall be 4 p.m. on the business day prior to date of payment. *Non-Business Days*.—Sundays, Good Friday, Easter Monday, Whit Monday, the first Monday in August, Christmas Day, and the next week-day following, and any other days proclaimed as Bank or General Holidays.

5. *Settlements*.—After the documents have passed, first Seller and last Buyer may settle all claims together, in which case the intermediate provisional invoices shall become final. When settlement of final invoice is not made until after the prompt date has expired, interest on the amount due shall be added from the prompt date to the date of payment, at bank rate but not less than 5 per cent per annum.

6. *Sampling*.—Samples taken at time of discharge shall be the only samples used for Arbitration purposes.

7. *Default*.—(a) If the Seller defaults in shipping or declaring shipment the contract shall be closed by invoicing back the goods contracted for at such price, whether higher or lower than the contract price, as the London Corn Trade Association or persons appointed from time to time by them shall determine, such price to be accepted as final and binding by all parties. The Association shall if requested by either party declare the closing price, and settlement shall be made in accordance with and on the basis of such price by nett cash payment not later than 30 days thereafter.

(b) If the Buyer defaults in the fulfilment of contract, the Seller shall have the option after giving notice by letter or telegram (without prejudice to any other rights he may have), of re-selling against the Buyers who shall make good the loss, if any, sustained on such re-sale on demand.

(c) *If either party shall suspend payment or become Bankrupt or Insolvent, or commit any act of Bankruptcy or (being a Company), go into liquidation whether voluntary or otherwise, except for the purpose of reconstruction, or shall become lunatic or insane or die without leaving executors or others willing and able to take over the liability attaching to such party, he shall be deemed to be in default, and the contract shall be closed forthwith either at the market price of the day to be declared by the London Corn Trade Association as above provided or at the option of the other party at a price to be ascertained by re-purchase, or re-sale as the case may be before the expiration of the next following business day after the cause of the default shall have become known to the other party any difference between contract and settling prices to be for account of the party in default.*

8. All claims for *Arbitration*, except for quality and/or condition, shall be made, and the party claiming shall appoint and instruct his Arbitrator not later

Shipment  
Clause.

Proof of  
shipment.

Retirement of  
documents.

Settlements.

Sampling.

Default.

Claims for  
arbitration.



than twelve months after expiry of contract time of shipment, or not later than six months after final discharge of ship whichever period expires last, but when Buyer claims arbitration for quality and/or condition upon samples previously drawn and sealed, he shall, if he is the last Buyer, appoint his Arbitrator, and give notice of such appointment to his Seller not later than seven running days after final discharge of shipment, but if he is an intermediate Buyer then in due course after receiving notice from his Buyer. If the claim is for condition, the Seller, if he is the Shipper, shall appoint and instruct his Arbitrator, within three business days after receipt of Buyer's nomination; and if he is an intermediate Seller, then in due course after receipt of nomination from his Seller. If the Arbitration is delayed by either party without reasonable cause, the Arbitrators shall take such delay into account in making their award.

Finality rule.

9. *Finality Rule.*—Arbitration on quality having been claimed in accordance with the terms of this Contract, the parties claiming must proceed with the Arbitration within 28 days of final discharge when sold on sample, or when sold fair average quality within 28 days of the publication in the Trade Lists that the Standard has been, or will not be made. After the expiration of these limits, claims for quality to be void unless the delay is, in the opinion of Arbitrators, considered justifiable.

"About."

10. The word "*About*," when referring to quality at time and place of shipment, shall mean the equivalent of one-half of one per cent on Contract price.

Arbitration Allowance Clause.

11. If in the opinion of the Arbitrators, or the Committee of Appeal, the difference between the delivery and the standard (after taking into account the amount, if any, allowed for deficiency in natural weight), does not amount to one-half of one per cent on Contract price, no allowance for quality shall be made, otherwise the full allowance for difference in quality shall be awarded.

Arbitration.

12. *Arbitration.*—All disputes arising out of this contract shall be from time to time referred to two Arbitrators, one to be appointed by each party in difference, the two Arbitrators having power to appoint a third. In the event of one of the parties appointing an Arbitrator and the other refusing, or, for seven days (three business days if for condition), after notice of the appointment omitting to appoint and instruct his Arbitrator, or if any one or more of the Arbitrators shall die, refuse to act, or become incapacitated, and the person or persons with whom his or their appointment originally rested shall omit to appoint and instruct a substitute within three days after notice of such death, refusal or incapacity, or in case the Arbitrators or two of them shall not within 28 days (seven days if for condition), after the appointment of the last appointed of them make an award, then upon application of either of the disputing parties, and provided the applicant pays to the Secretary of the Association the sum of £3 3s., the question in dispute shall stand referred to two Arbitrators to be appointed by the Executive Committee of the London Corn Trade Association, such two Arbitrators having power to appoint a third. In case the Arbitrators appointed as last mentioned shall not within 60 days (seven days if for condition), after their appointment make an award or appoint a third Arbitrator, or in case either of the Arbitrators appointed by the parties shall refuse, or for three days after notice from the other of them shall omit to concur in the appointment of a third Arbitrator, then (and in such last mentioned case provided the party requiring the appointment shall pay to the Secretary of the Association the sum of £3 3s.) the said Executive Committee shall appoint a third Arbitrator, and in the case of the death, refusal to act, or incapacity of any Arbitrator appointed by the Executive Committee, the Committee shall from time to time substitute a new Arbitrator in the place of the Arbitrator so dying, refusing, or becoming incapacitated.

The Arbitrators appointed shall be, in all cases, at the time of the appointment, Principals engaged in the Corn Trade as Merchants, Millers, Factors, or Brokers, or Directors of a Company so engaged, and shall also be members of, or partners in a firm or Directors of a Company members of the London Corn Exchange, the Baltic, or the London Corn Trade Association, and residing in the United Kingdom.

No award shall be questioned or invalidated on the ground that any of the Arbitrators is not so qualified as aforesaid, unless objection to his acting be taken before the Award is made.

Every award shall be in writing on an official form to be supplied by the Association at a charge fixed by them, and the award in writing, on an official form, of any two Arbitrators (subject only to the right of Appeal hereinafter mentioned), shall be conclusive and binding upon all disputing parties, both with respect to the matter in dispute and all expenses of and incidental to the reference and award. The Arbitrators may at any time, if in their opinion the

circumstances require it, make a partial award, reserving any further questions in the reference for a further award or awards by them.

In case either party shall be dissatisfied with the award a right of appeal shall lie to the Committee of Appeal elected for that purpose in accordance with the rules and regulations of the London Corn Trade Association in force at the date of the Contract, provided the following conditions are complied with:

- (a) The Award intended to be appealed from has been taken up.
- (b) Notice claiming appeal is given to the Secretary of the Association within seven running days from the date of the award, or if the award has been made by Arbitrators appointed by the Executive Committee as above provided within seven running days from the date of notice from the Secretary of the Association that the Award has been made. (If the party desiring to appeal is not resident in the United Kingdom of Great Britain and Ireland the time within which such notice must be given is extended for a period of 7 days beyond the times above mentioned.)
- (c) On giving notice of Appeal, payment of the following sum is made to the Secretary of the Association:—
  - (1) £26 5s. 0d. for members of the Association.
  - (2) £31 10s. 0d. for non-members of the Association.

If the Appeal relates to questions other than quality, even though including quality, the Appellant shall also pay to the Association such additional fees and expenses in respect of the hearing of the Appeal and Award, as the Appointed Committee of Appeal in their sole discretion shall by their Award direct to be paid.

The Committee of Appeal shall confirm the award appealed from, and the Appeal fees shall follow the award, unless four Members of the Committee decide otherwise. The award of the Committee whether confirming or varying the original award, shall be signed by the Chairman of the Committee, whose signature as Chairman shall be conclusive, and shall in all cases be final.

No appeal will be allowed unless the award is in writing on an official form, nor on awards for condition where the grain is sold on terms known as Rye terms.

Any person having an interest in the matter in dispute shall be incompetent to act as Arbitrator, or on the Appeal, or to vote on the appointment of Arbitrators by the Executive Committee, or at the election by the Committee of Appeal, but unless objection is taken at the commencement of or prior to the hearing of the reference or of the Appeal as the case may be, no award of Arbitrators or the Committee of Appeal shall be questioned or invalidated upon any of these grounds.

Notices under this Rule to be given in writing, and sent by post to, or left at the place where the person, firm or company to whom they are addressed is carrying on or (by reason of the provisions of the Contract), is to be considered as carrying on business, and shall be deemed to have been received not later than 24 hours after the same are so sent or left.

*N.B.—The Discharging Strike clauses in the Black Sea, Azoff, and Danube Charter Parties of 1890, are as follows—*

If the cargo cannot be discharged by reason of a strike or lockout of any class of workmen essential to the discharge of the cargo, the days for discharging shall not count during the continuance of such strike or lockout. A strike of the receiver's men only shall not exonerate him from any demurrage for which he may be liable under this charter if by the use of reasonable diligence he could have obtained other suitable labour, and in case of any delay by reason of the before-mentioned causes, no claim for damages shall be made by the receivers of the cargo, the owners of the ship, or by any other party under this charter.

## SCHEDULE " B "

## LABORATORY REPORT ON RUSSIAN WHEATS

The samples were analyzed and compared with Nos. 1, 2, 3 Northern. The samples were marked as follows:—

- (a) No. 181, ss. *Finchley*.
- (b) No. 180, ss. *Dromore*.
- (c) Type 1 Nicolaeff Red Lima wheat.
- (d) No. 1 Siberian.
- (e) No. 2 Siberian.

An analysis was made on the dirty samples of a, b, and c, also on the clean wheat after the impurities had been picked out. For distinction the samples were numbered as follows:—

- 1—No. 181, ss. *Finchley*, dirty wheat.
- 2—No. 181, ss. *Finchley*, clean wheat.
- 3—No. 180, ss. *Dromore*, dirty wheat.
- 4—No. 180, ss. *Dromore*, clean wheat.
- 5—Type 1 Nicolaeff Red Lima, dirty wheat.
- 6—Type 1 Nicolaeff Red Lima, clean wheat.
- 7—No. 1 Siberian.
- 8—No. 2 Siberian.
- 9—No. 1 Northern Manitoba.
- 10—No. 2 Northern Manitoba.
- 11—No. 3 Northern Manitoba.

*General Appearance.*—The impurities in No. 1 sample were composed mostly of rye with a little cockle, smut grains and stones. The amount of impurities was estimated at 8.5 per cent. The general appearance and size of the clean wheat was found to be better than Northern; the grain being long and plump, while the Northern grain was short and had a clearer skin or glassy appearance.

*No. 3.*—The amount of impurities in No. 3 sample was estimated at 10 per cent, mostly composed of rye with a little cockle and foreign seeds. The amount of dust was greater than in No. 1, but not possible to estimate. The general appearance of the wheat was similar to No. 1 sample.

*No. 5.*—The amount of impurities in No. 5 sample was found to be 8.7 per cent and mostly composed of rye. The clean wheat was found to be a better quality than either No. 1 or No. 3, the grain being larger with not so many opaque grains.

*No. 7.*—The wheat was found to be practically free from rye and the size of the berries was of a fair average.

*No. 8.*—The wheat was found to be practically free from impurities, but the quality was not so good as No. 7.

Generally No. 5 is best for quality with the exception of the impurities. Next No. 7 and No. 8. Then 3 and 1.

The analysis of the samples showed the following:—

—	Moisture	Oil	Ash	Proteins	Sol. Ext.	Fibre	Starch
No. 1.....	12.31	1.44	1.72	11.45	3.88	1.2	71.88
No. 2.....	12.26	1.44	1.54	11.74	3.20	1.5	71.49
No. 3.....	12.72	1.52	1.62	12.08	3.66	1.5	70.56
No. 4.....	12.93	1.38	1.52	11.74	4.80	1.4	71.03
No. 5.....	13.55	1.50	1.59	12.95	4.16	1.7	68.71
No. 6.....	13.72	1.10	1.66	12.82	3.84	1.3	69.40
No. 7.....	13.31	1.48	1.66	12.59	4.00	1.5	69.46
No. 8.....	13.83	1.61	1.74	13.62	4.00	1.6	67.60
No. 9.....	12.20	1.78	1.46	11.38	3.80	1.4	71.48
No. 10.....	12.17	1.84	1.60	10.43	3.40	1.4	62.56
No. 11.....	12.36	1.72	1.70	10.20	3.72	1.7	72.68

From the above results the protein value of all the Russian samples are higher than No. 1 Northern which indicates plenty of strength. The samples appear to be in sound condition which is indicated by low soluble extract and moisture content. The oils of the Russian samples are lower than that of the Northern. The ash and fibre are about the average, while the starch is variable. However, there is one point which we might mention. The protein contained in rye have a proteolytic enzyme which have a power to dis-

solve protein matter into simpler substances, viz., amino acids. This would be inclined to make the gluten softer unless the rye can be removed.

*Summary.*—Our conclusions are that the Russian wheats are good as the Northern, but one objection is the amount of the impurities.

June 6, 1924.

SCHEDULE "C"

LABORATORY REPORT—ANALYSIS OF DIFFERENT SPECIES OF AUSTRALIAN WHEATS

The samples of wheat vary in colour from white opaque to thin flinty grains like Northern Wheat:—

- No. 1. Sample was of white opaque variety of Wheat, very good quality and sound.
  - No. 2. Sample was more of a flinty nature, long in size and not so plump as No. 1 sample.
  - No. 3. Sample was between No. 1 and No. 2 but smaller in size and of inferior quality.
  - No. 4. Sample was white in colour and opaque, small in size, shrivelled and bleached.
  - No. 5. Sample was very much whiter than either No. 1 or No. 4 was of good size and average quality.
  - No. 6. Sample resembled No. 3 for colour, opaque and good quality.
- The analysis of the above samples was found to be as follows:—

	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
Moisture.....	11.19	11.19	11.19	11.19	11.19	11.19
Oil.....	1.33	1.45	1.24	1.19	1.35	1.51
Ash.....	1.20	1.26	1.18	1.23	1.24	1.36
Soluble Extract.....	3.75	3.36	3.36	3.64	4.16	4.95
Fibre.....	5.7	6.3	5.6	7.2	6.5	6.5
Proteins.....	10.08	11.40	13.56	12.56	13.11	9.12
Starch.....	70.45	68.40	67.23	66.53	64.01	70.52
	100.00	100.00	100.00	100.00	100.00	100.00

From the above analysis it would appear that the various samples were different species. The greatest difference seems to exist in the soluble extract, proteins and fibre—the proteins value being exceptionally high in some cases.

GLASGOW, June, 1923.

A PARTIAL LIST OF PERSONS INTERVIEWED

EDINBURGH

- Mr. Wm. Smith, Milling Director, Scottish Co-operative.
- Mr. McLeod, Director, Scottish Co-operative.

GLASGOW

- Major Johnston, Canadian Trade Commissioner for Scotland and Ulster.
- Mr. John Martin, Secretary, Glasgow Corn Trade Association.
- Mr. Law, Flour Importer.
- Wm. Rutherford, Flour Importer.
- Mr. Billsman, Baker.
- Mr. Wm. Clark Reid, Flour Importer.
- Mr. Isaac Scott of Craig Hill Milling Company.

- Mr. Matthew White, Jr., of John White & Sons Milling Company.  
 Mr. Wm. Primrose of Wm. Primrose & Company, Grain Importers.  
 Mr. Jas. Begg of John Jackson & Company, Grain Importers.  
 Mr. Wm. McDonald of McKinnon & McDonald, Grain Importers.  
 Mr. Jas. McKim of I. & R. Snodgrass, oldest milling firm in Glasgow.  
 Mr. Frederick Pool of Riverside Milling Company.  
 Mr. Aikin, Grain and Flour Importer.  
 Mr. Archie Campbell, Traffic Superintendent, Clyde Navigation Association.  
 Mr. David Johns, Elevator Superintendent.

## LIVERPOOL

- Mr. Urquhart, Secretary, Liverpool Corn Trade Association.  
 Mr. Wm. Love of Charlton & Bagshaw, Vice-President of Liverpool Corn Trade Association, Grain Importer.  
 Mr. Richard A. Love, of Shipton, Anderson & Company, Grain Importers.  
 Mr. A. B. Earl of Earl, Clayton & Stoddart, Grain Importers.  
 Mr. Norman Vernon, Managing Director, Spillers Industries.  
 Mr. Alfred H. Holby, Expert Wheat Buyer for English Co-operative.  
 Mr. John Westgate, Wheat Buyer for Jos. Appleby Company, Millers.  
 Mr. R. C. Winter, Manager, Liverpool Grain Storage & Transit Company.  
 Mr. J. W. Charlton of Charlton & Bagshaw, Grain Importers.  
 Mr. John Proctor, Miller & Wheat Merchant.  
 Mr. E. Rice, Manager for J. Rank & Sons, Ltd.  
 Mr. Geo. Broomhall, Editor, Liverpool Corn Trade News.

## LEICESTER

- Mr. Lindley Walker, Australian Wheat Exporter, Sidney, Aus., Interested in Australian Pools.

## LONDON

- Hon. P. C. Larkin, Canadian High Commissioner for Canada in London.  
 Mr. Harrison Watson, Canadian Chief Trade Commissioner to the United Kingdom.  
 Mr. W. A. Wilson, Agricultural Products Representative for Canada.  
 Sir Herbert D. Robson of Ross D. Smyth & Company, Grain Importers.  
 Sir Arthur Holmes of Shipton, Anderson & Company, Grain Importers, Chairman of Royal Commission on Wheat Supplies.  
 Mr. Webb, Importer.  
 Mr. K. B. Stoddart, of Earl, Clayton & Stoddart, Importers.  
 Sir Geo. Saltmarsh, ex-Member, Port of London Authority, 1908-1923, Member and Vice-Chairman, Royal Commission on Wheat Supplies, 1916-1920.  
 Mr. B. E. Spicer, Member, Associated Flour Millers Association.  
 Mr. Plunkett, Agricultural Expert for Australia, Australia House.  
 Mr. G. H. Mills, Managing Director, Yorkshire Farmers, Ltd., York.  
 Mr. J. H. Green, Manager, Co-operative Mill, Silvertown.  
 Mr. J. T. Thompson, of Hovis, Ltd.  
 Mr. J. G. Treharne, Director in Charge of Wheat Buying, Spillers Industries.  
 Mr. W. A. Vernon, Director, Milling Expert, Spillers Industries.  
 Mr. H. Wallace Vernon, Manager, The Millenium Mill.  
 Mr. Richardson, Superintendent of Milling, The Millenium Mill.  
 Col. Stevens, Representing Trafford Park Estates, Manchester.  
 Mr. Webster, London Representative of Trafford Park Estates.  
 Mr. Petrie Nichols, Wheat Buyer for Spillers Industries.  
 Mr. Allen }  
 Mr. Allen } Directors, Spillers Industries.

## ROTTERDAM

- Mr. Frederick H. Palmer, Canadian Trade Commissioner, Rotterdam.  
Mr. J. C. Smolt, General Manager and Director, Grain Elevator Company.  
Mr. C. A. J. von Stock, President, von Stock Grain Commission Company.  
Mr. P. Speerenburg, General-Managing Director, von Stock Grain Commission Company.  
Mr. W. Verbeek, Manager of Wheat Department, von Stock Grain Commission Company.  
Mr. A. de Koster of de Koster Flour Milling Company, Leiden.  
Mr. H. L. Ravensway, Flour Miller, Rotterdam.

(Copy)

## ROYAL GRAIN INQUIRY COMMISSION

QUEBEC, June 28, 1924.

The Hon. W. F. A. TURGEON,  
Chairman,  
Prince Albert.

DEAR SIR:

## TRANSPORTATION

At the last meeting of the members of the Royal Grain Inquiry Commission, at Winnipeg, on the 29th April, 1924, you and other gentlemen composing the Commission—Dean Rutherford and Professor McGibbon—did me the honour to request that I should draw up a memorandum of my views as to transportation, in order that the same be attached to the original report of the Commission.

The very ample evidence which we have received at every important point from Prince Rupert to Halifax and from Vancouver to New York, upon this as upon all other questions connected with the object of our inquiry, as to grain and its movement, since the beginning of our work, on the 20th June, 1923, has, I think, made us all equally familiar with the question of transportation, and I fear that you attach too much importance to my having had 25 years experience in railway management and because several years thereof were connected with the transportation of export grain from Parry Sound to Quebec. Nevertheless, I shall do my best to meet your wishes, to the best of my ability.

One of the most important questions to be considered in connection with the successful production of grain in the prairie provinces of Canada is, naturally, that of transportation, or the means of bringing the grain of Manitoba, Saskatchewan and Alberta to the world's market, by the most economical route possible.

The position of these three agricultural provinces, in the centre of a great continent, with enormous distances separating them from the ocean, across which their grain has to be carried, is without parallel in the world. Little more than forty years ago, this country was an uninhabited wilderness.

To-day, less than two millions of people are scattered over an area of about 750,000 square miles of agricultural country, a territory larger than the combined areas of France, Germany, Italy and Great Britain, in Europe, countries which sustain a population of 185,000,000.

The farmers of these three provinces raised in 1923 about 450,000,000 bushels of wheat and 455,000,000 bushels of other grain.

The local consumption of grain is small, the urban and manufacturing population of these provinces being limited. And the imposition of a duty on wheat of 30 cents per bushel by the United States Government, subsequently increased to 42 cents, having had the effect of limiting the export to that country, the large surplus of our crop, after supplying the needs of the flour mills of Eastern Canada, has to find a market in Europe and other countries.

The great bulk of the grain, not used locally, finds its way to market by rail to Fort William and Port Arthur, at the head of Lake Superior, where the elevators have a capacity of 63,000,000 bushels, and thence, by water, to Buffalo, and other United States Lake ports, to ports in Canada, on the

Georgian Bay and at Port Colborne—and, to a very limited extent, by water, to Montreal. During the last few years, an export movement has taken place via Vancouver, which shipped eight million bushels of Alberta wheat in 1922, 18 million bushels in 1923, and an increasing quantity in 1924, probably reaching 50 millions.

The grain shipped from Fort William to Buffalo and other United States lake ports is almost all reshipped by rail to New York and other United States seaports, in bond, and exported abroad, very little being consumed in the United States on account of the heavy duty; some of it is ground, in bond, in United States mills and then exported as flour.

The grain shipped to Georgian Bay ports and to Port Colborne, and some of that sent to Montreal, is largely used for the supply of flour mills and grist mills in Eastern Canada, for seed grain for the farmers of Ontario and Quebec, and only a limited quantity is exported at Montreal, Quebec, Portland and St. John.

The statistical reports published by the Minister of Trade and Commerce, at Ottawa, give the following figures as to shipment by water from Fort William and Port Arthur in 1921, 1922 and 1923.

IN 1921		Bushels
To Buffalo and other United States lake ports.....		106,599,310
Georgian Bay, Port Colborne and Montreal.....		119,970,041
		226,578,351
IN 1922		
To Buffalo and other United States lake ports.....		150,226,027
Georgian Bay and Port Colborne.....		119,257,113
Montreal.....		4,710,796
		274,193,936
IN 1923		
To Buffalo and other United States lake ports.....		140,625,386
Georgian Bay, Port Colborne and Montreal.....		156,049,694
Europe direct.....		196,300
		296,871,370
SEVEN YEARS		
From 1912 to 1918, seven years—		
To Buffalo and other United States lake ports.....		518,762,749
Canadian lake ports.....		577,883,581
		1,096,651,336

The above figures cover grain of all descriptions—wheat, oats, rye, etc. But as the diversion of our export grain trade to United States seaports consists almost entirely of wheat, a comparison of the exports from United States and Canadian seaports should be limited to that commodity.

The report of the Minister of Trade and Commerce shows that, in the crop year 1921-22, the exports of Canada wheat:

	Bushels
From New York, Baltimore, Boston and Portland, were.....	100,009,466
From Montreal and Quebec.....	28,130,051
From St. John, N.B.....	6,604,898
	134,744,415

So that the comparison between United States and Canadian seaports, in the export of Canadian wheat in that year was 74 per cent and 26 per cent.

In addition to this, several million bushels were shipped by Vancouver and went to Japan and China, or through the Panama Canal, to Europe.



In the crop year of 1922-23 (1st September, 1922, to 31 August, 1923) the exports of Canadian wheat were—

	Bushels
To United States.....	12,936,048
Via United States ports to United Kingdom and elsewhere.....	129,871,095
Exported from Montreal and Quebec.....	57,030,848
Exported from St. John, N.B.....	12,014,152
Exported from Vancouver.....	17,829,671
Total.....	229,681,814

which makes the comparison between United States and Canadian Atlantic seaports 65 per cent and 35 per cent as regards exports overseas.

The distances, over which this great volume of business is being carried across the Atlantic, are as follows:—

<i>Via New York—</i>	Miles
Winnipeg to Fort William, rail.....	420
Fort William to Buffalo, water.....	860
Buffalo to New York, rail.....	400
New York to Liverpool, ocean steamer.....	3,100
Total.....	4,780

whereas, if sent all rail to Quebec or Montreal, the figures would be:—

<i>Via St. Lawrence—</i>	Miles
Winnipeg to Quebec, rail (1,372 to Montreal).....	1,350
Quebec to Liverpool, ocean steamer.....	2,633
Total.....	3,983

So that, western province grain exported via New York has to be carried 800 miles further than if it were shipped at Quebec, or about 650 miles further than if sent all rail to Montreal.

It is true that the grain sent by New York has a shorter rail haul than that sent all rail to the St. Lawrence, but on the other hand, it is subject to two double transshipments, one at Fort William and one at Buffalo, which are not encountered on the other route. These additional elevator charges, combined with the lake freight and the marine insurance from Fort William to Buffalo, not incurred on the all rail Canadian route, should more than compensate for the greater rail haul. For instance, the cost of handling wheat from Fort William to New York, in October, 1923, was:

Elevator charge, Fort William.....	per bushel	cents
Lake freight, Fort William to Buffalo.....	"	1-25
Marine insurance.....	"	5-20
Elevator, Buffalo.....	"	0-30
Railroad freight, Buffalo to New York.....	"	1-00
Elevator, New York.....	"	9-10
Cents per bushel.....		17-85

The rate by the new Erie canal, Buffalo to New York, was  $7\frac{3}{10}$  cents per bushel and yet the railway got the business.

A portion of the elevating charge at Buffalo and at New York is, in some cases, absorbed by the railway company, and the lake freight of 5-20 cents, from Fort William to Buffalo, in October last, was probably higher than in some previous years.

The all-water rate—lake and canal—from Fort William to Montreal was  $12\frac{1}{2}$  to 14 cents per bushel in October, and although four cents cheaper than the through rate to New York, the latter secured 74 per cent of the business.

To what, then, is to be attributed this diversion of our western export grain to United States seaports? It is not a new question. It was the principal reason for which the Parliament of Canada, in 1904, undertook the building of the National Transcontinental Railway, as a public work; a road which was completed in 1916, which shortens the distance between Winnipeg and Quebec by 214 miles, and whose maximum gradient is four-tenths of one per cent, making it one of the most economical roads on the continent to operate. In 1913, the Quebec Board of Trade drew the attention of the Government to the alarming proportions which this great diversion had attained, and urged as a remedy the adoption by the Government of a policy which would make it substantially cheaper for the northwestern farmer to export his grain by Canadian seaports than by those of the United States.

These suggestions of the Quebec Board of Trade were three in number, namely:—

1. That the Government should make a freight rate over the National Transcontinental Railway then approaching completion, and about to be operated as a government line, of ten cents per bushel upon export wheat only, from Winnipeg to Quebec, with the usual reductions to Halifax and St. John.

2. That storage should be built for ten million bushels at each of the seaports of Quebec, Halifax and St. John as Montreal already has—so as to enable the railways to have a continuous flow of traffic, instead of the rush which now forces almost the whole business to the head of the lakes and thence to United States seaports during three months following the maturity of the crop.

3. That the Government should arrange with the marine underwriters that the rates of marine insurance upon vessels and cargoes, to and from Canadian seaports, should be made the same as those of New York.

In 1916, upon completion of the National Transcontinental Railway to Quebec, an attempt was made to carry out at least one of these recommendations. The railway was opened for traffic, under Government management, and a rate of freight was made from Armstrong to Quebec or Montreal, of 6 cents per bushel upon export wheat. The effect was instantaneous, a large quantity of wheat was brought to Quebec and Montreal for export and a number of ocean steamers were loaded. The then Minister of Railways, Dr. Reid, stated that the rate of 6 cents had been profitable when the grain was brought to Quebec and the Government railway got the whole of the earnings, but that it had been unprofitable when it had to be divided with two other roads in bringing it to Montreal.

This rate was shortly afterwards cancelled, and has since been raised to 34½ cents per 100 pounds or 20½ cents per bushel, which, of course, is prohibitory and compels all the traffic to take the lake boats at Fort William, thus facilitating the diversion of the export grain to Buffalo and New York.

In 1922, as a result of continued pressure from the farmers of the Northwest, the rates of railway freight from points in the Prairie Provinces to Fort William were reduced about 28 per cent to 30 per cent, a relief to the farmer of about 6 cents per bushel. This was a very considerable reduction, and gives the Canadian farmer a rate about 30 per cent to 40 per cent cheaper to Fort William than the United States farmer pays for similar distances from Montana and Dakota to Duluth, an advantage of about 8 cents per bushel. But this concession terminates at Fort William, whence the rate to Montreal or Quebec continues to be as before 20½ cents per bushel, whereas, if the new rate from Calgary to Fort William were taken as a basis, the rate from Armstrong or Fort William to Montreal or Quebec should be only 11 cents per bushel, which was also the average boat rate in 1923 from Fort William to Montreal. This removal of competition, by the all-rail route, placed the western farmer more or

less in the hands of vessel owners on the lakes, and the result was that the water rates in the fall of 1922 were from  $1\frac{1}{2}$  to 2 cents per bushel dearer than the previous year.

The traffic is being handled at present by three routes from Fort William, viz., to New York, via Buffalo; to Montreal, via Georgian Bay, and to Montreal, all water.

The comparative cost of these three routes, say in October, 1923, when a large business was done, was about as follows:—

	New York via Buffalo	Montreal	
		Via Georgian Bay	All water
Elevator, Fort William.....	1-25	1-25	1-25
Lake freight.....	5-20	4-50	12-60*
Marine insurance, lake.....	0-30	0-30	0-60
Elevator, Buffalo, Georgian Bay.....	1-0	1-0	.....
Railroad freight, Buffalo to New York.....	9-10	.....	.....
Railroad freight, Georgian Bay to Montreal.....	.....	8-60	.....
Elevator, Montreal or New York.....	1-0	1-0	1-0
Total per bushel.....	17-85	16-65	15-45

\*All water rate to Montreal fell to 11 cents in November, which is the average rate for the last six years, and it is still lower in 1924.

It will be seen from the above, that, although the cost of shipping via Buffalo to New York, is about  $1\frac{1}{2}$  cent dearer than by the Georgian Bay to Montreal, and nearly  $2\frac{1}{2}$  cents dearer than by the all-water route, from Fort William to Montreal, New York and other United States seaports continue to capture from 65 to 75 per cent of our export grain trade.

It is evident that Canadian seaports must have a margin of three cents per bushel, or perhaps more, in their favour in the inland rate to the seaboard, if they are to get this shipping business, or any considerable share of it, under the present conditions.

Notwithstanding the fact that New York is 500 miles further from Liverpool than Quebec is, ocean rates of freight from New York to Europe are considerably cheaper than from the St. Lawrence.

For instance, in October, 1923,—October is the busy month for Canadian grain shipments—the ocean rate from New York to Liverpool was  $\frac{2}{3}$  or  $6\frac{2}{3}$  cents per bushel, whilst the rate from Montreal was 3s. per quarter or 9 cents per bushel, a difference in favour of New York of  $2\frac{1}{3}$  cents per bushel. Authorities most familiar with the trade state that the spread in ocean rates, as between Montreal and New York, averages one shilling per quarter of 480 lbs. to United Kingdom ports, which is equal to three cents per bushel, in favour of New York.

This discrimination in freight rates, notwithstanding the great saving in distance by the Canadian route, is largely due to the higher rates charged by the underwriters, to insure vessels using the St. Lawrence, than are charged for vessels using United States seaports north of Cape Hatteras. This applies also for cargoes, the rate from Montreal, in October, being 36 per cent dearer than from New York. Although the St. Lawrence route has been greatly improved and well lighted, at great expense, some excess in the rate of insurance might be looked for. But not 36 per cent. And it seems most unfair that Halifax should pay 15 per cent more than Portland. Should it not be the reverse, for so good a port? The recommendation of the Quebec Board of Trade is that the Government of Canada should arrange with the underwriters

to charge the same rates of insurance from Canadian ports as from New York, or do the business.

The Quebec Board of Trade, in its recommendation to Government in 1913, advised, so as to enable the railways to handle a continuous flow of grain traffic to Canadian seaports, instead of the rush that now forces so large a portion of the crop to the head of the lakes, and thence to Buffalo and New York for export, during the three months following its maturity, that elevator storage should be put up for ten million bushels, at each of the seaports of Quebec, Halifax and St. John, to make their facilities equal to those of Montreal, at that time. It was pointed out that the grain storage in the prairie provinces and on the Great Lakes was about 200 million bushels and at our seaports less than twenty millions.

This is being remedied to a moderate extent by the erection of an elevator at Montreal, which will have an ultimate capacity of 14 million bushels. But these facilities cannot pretend to compete with those of the present lake route which provide storage at the Georgian Bay and Port Colborne for 23 million bushels, at Buffalo for 29 millions, at New York for 9 millions, besides floating storage at Buffalo and New York, for several millions more. The Canadian wheat crop has increased from 193 million bushels, in 1919, to 474 millions in 1923. More storage must be provided if this increase continues, and upon the location of that additional storage will depend the route to be followed by the grain to the ocean vessel. That the present facilities are inadequate is proved by the fact that during the last three years many lake vessels and many ocean steamers have been under demurrage in Montreal on account of delay in getting access to terminal facilities. This means extra expense, which ultimately has to be paid for by the western farmer. If Canadian seaports are to obtain a substantial share of the trade which has been diverted to United States seaports—they cannot expect to get it all—or even if they are to take care of the annual increase of the crops, they must be properly equipped to handle it as well as the present export is now handled by the admirable organization which, for the present, finds it profitable to direct that export to New York. In other words, they must make the Canadian route the cheapest, not only to the seaboard, but to the consumer in Europe.

During the past three years, the port of Vancouver has attracted a considerable share of the export grain of Alberta and of western Saskatchewan, which finds a market in the Orient, and also by the Panama Canal, to Europe. This year, the figure has reached the substantiated quantity of 50 million bushels, and it is hoped that the quantity will increase from year to year. This great advantage to the farmer of the far west has been made possible by the wise action of the railways in reducing their rates to Vancouver. For instance, the rate from Calgary or Edmonton to Vancouver, which, in 1920, was 15½ cents per bushel, has been reduced to 13½ cents. And even such points in Saskatchewan as Battleford, Biggar and Prince Albert, will find it cheaper to ship by Vancouver in consequence of these reductions.

The following figures will show the advantage which Calgary and Edmonton have enjoyed, say, in October last, in shipping by Vancouver instead of Fort William.

## VIA VANCOUVER

	Per bush.
	c.
Calgary or Edmonton to Vancouver, 22½ C.P. 100 lbs.....	13½
Elevating at Vancouver.....	1
Freight to Liverpool.....	19½
Marine insurance.....	½
<b>Total.....</b>	<b>34½</b>

## ROYAL GRAIN INQUIRY COMMISSION

VIA FORT WILLIAM	Per bush. c.
Calgary or Edmonton to F.W. 26c. per 100 pounds.....	15½
Elevator at Fort William.....	1½
Lake freight to Montreal.....	11
Lake insurance to Montreal, 30c. to 50c. per 100.....	½
Elevating in Montreal.....	1
Freight to Liverpool.....	8
Marine insurance.....	½
	37½

These figures do not include commissions, brokerage or inspection fees in either case.

Notwithstanding the wise policy of the Government and of the railways, in thus opening up a cheaper outlet by way of Vancouver, the cost of bringing the grain to market is still a formidable burden for the farmer, who, three years ago, was getting from \$2 to nearly \$3 per bushel for his wheat at Winnipeg, and now finds the price reduced to a trifle over a dollar.

The situation is such a difficult one that it has been the subject of parliamentary inquiry since. So much so, that a special select committee of the Senate of Canada made a special investigation of the subject, which lasted over two sessions of Parliament. After an exhaustive inquiry, at which the evidence of a great number of the best informed men in the country, in the grain trade, in elevating and in transportation had been taken, the Committee reported to Parliament that they recommended that the petition of the Quebec Board of Trade, as stated in its memorial of 3rd February, 1921, to the Railway Commission, be granted.

The conclusion of the Senate report, which was adopted on the 9th June, 1922, is as follows:—

"After careful consideration of all the evidence submitted, your Committee is of opinion that there exists a most serious condition of affairs, with regard to the diversion of the western grain trade to New York and other United States seaports, for export. There seems to be no doubt that two-thirds, and probably four-fifths of that trade takes that route, and that we are paying many millions annually to United States railways, lake carriers and elevators, that would be earned by our own railways and trainmen, if it were possible to export this grain at Canadian seaports. Since this evidence was taken, and at the present writing, Government statistics show that the diversion still continues, and that of the bountiful crop of 1921, no less than 99 million bushels of wheat went from Fort William to Buffalo.

"After all the sacrifices that Canada has made in building three transcontinental railways, it is impossible that we should go on allowing our seaports to be deprived of their legitimate traffic, to obtain which our people have been and are being so heavily taxed. A persistence in this policy must inevitably lead to serious dissatisfaction, not only in Quebec and in the Maritime Provinces, but also amongst the farmers of the Northwest, who will soon realize that these hostile railway tariffs are imposing a burden upon them which they are not called upon to bear.

"It may be, as some of our railway witnesses have suggested, that a reduction in the rate upon grain to our seaports might lead to reprisals and corresponding reductions on the part of the United States railways which have been handling so large a share of this traffic. But this cannot be injurious to our own railways, because it is an export traffic which, practically, they are not getting.

"In any case, such reprisal would certainly benefit the western farmer, and your Committee feel that it is their duty to report that they recommend that the petition of the Quebec Board of Trade, as stated in the memorial of that board to the Railway Commission, dated February 3, 1921, hereto attached, be granted, and that the Government be advised:—

"(1) To cause rates to be granted upon export grain over the Canadian National Railways to Quebec, Montreal, Halifax, St. John and Vancouver, such as would develop trade through the above ports.

"(2) As a corollary to the recommendation in paragraph 1, that necessary elevator accommodation should be provided by the Dominion at Canadian ports.

"(3) To arrange with the marine underwriters or others in such a way that the marine insurance rates from Canadian seaports be as cheap as from United States seaports.

"Respectfully submitted,

"(Sgd.) D. O. LESPERANCE,  
Chairman."

In May, 1923, the Government of Canada named a Royal Commission, composed of Hon. Judge W. F. A. Turgeon, of Prince Albert, Sask.; Dean W. J. Rutherford, of the University of Saskatchewan, Saskatoon; Professor Duncan A. McGibbon, of the University of Alberta, Edmonton, and James Guthrie Scott, Railway Manager of Quebec, to make a careful examination of the whole question of raising, transporting and marketing the grain of the prairie provinces.

This Commission has been at work since 20th June, 1923, and has visited all the most important points in Canada, and besides gaining information as to agriculture, which is separately treated of, has made a very close inspection of the methods and means of transportation, and has examined a large number of witnesses interested and versed in transportation.

Sir Henry Thornton, President of the Canadian National Railways, was examined at Saskatoon in July of last year, and gave the Commission much useful evidence. As to freight rates, he referred us to Mr. J. E. Dalrymple, Vice-President in charge of traffic, of the Government Railway System.

Mr. Dalrymple appeared before the Commission at Winnipeg on the 6th March last and gave evidence which lasted all day and which was most interesting and instructive. He was asked to explain why the rate of freight upon export wheat, from Armstrong or Fort William, to Quebec or Montreal, over the Transcontinental Division of the Government Railway System; which had been 6 cents per bushel, in 1916,—rate which the Minister of Railways had declared to be profitable—had been increased to 20½ cents. And also, whether, in his opinion, the rate could not be reduced, as requested by the Quebec Board of Trade, to 11 cents per bushel to Quebec or Montreal, so as to place it on the same mileage basis as the rate now in force—Crow's Nest basis—between Calgary and Fort William.

When cross-questioned, at some length, upon these points, by Mr. S. Woods, K.C., for the commission, Mr. Dalrymple admitted that the rate of 6 cents had been made in 1916, and read a letter from Mr. J. T. Ross, President of the Quebec Board of Trade, to the Hon. J. D. Reid, Minister of Railways, dated 4th February, 1920, quoting Hansard, page 3184, in which the Minister said that there was a loss when the grain was carried to Montreal for 6 cents, because the rate had to be divided between three railways (this is not now necessary) but that "though there is not very much profit in a 6 cent rate between Armstrong and Quebec, it pays, with a train load such as I have stated."

With regard to the suggested reduction, from Armstrong or Fort William to Quebec or Montreal, to 11 cents per bushel, or even to 15-<sup>6</sup>/<sub>10</sub> cents per bushel, Mr. Dalrymple stated that if it were done, he thought the result would undoubtedly be:—

*First.*—The American lines, from Duluth would make the same rate to Philadelphia.

*Second.*—This would be immediately followed by a corresponding reduction from Milwaukee and Chicago.

*Third.*—This reduction from Chicago would be followed by a reduction from all the lower lake ports, including Buffalo.

*Fourth.*—The reduction from Buffalo would necessitate a similar readjustment from Georgian Bay ports to Montreal and Quebec, which is always ½ cent per bushel cheaper than to New York, reducing the present rate from 8.60 cents to 6.60 per bushel.

He concludes that he is convinced that the rate of 11 cents per bushel to Quebec will create a general reduction in rates on grain, and will unnecessarily deplete the revenue of the Canadian National Railways.

In further cross-examination by Mr. Woods, Mr. Dalrymple stated that the interstate commerce rules, in the United States, would not compel United States railways to reduce their rates from Duluth to Philadelphia in the event of Canadian rates being reduced, nor would it be necessary for them to have the permission of the Interstate Commerce Commission to reduce rates. He said that the present tariff rate on export wheat from Calgary to Port Arthur, 1,299 miles, is 26 cents per 100 pounds which is equal to  $15\frac{1}{10}$  cents per bushel or  $\frac{1}{10}$  of a cent per ton mile; from Port Arthur to Quebec or Montreal, 987 miles,  $34\frac{1}{2}$  cents per 100 pounds and to Halifax, St. John, Boston or Portland  $35\frac{1}{2}$  cents. He stated that the maximum grades on the Transcontinental, East bound, are  $\frac{1}{10}$  of 1 per cent and compare favourably with those further West; that Vancouver has come to stay, as a winter port, and that the winter shipments from the head of the lakes have a tendency to decrease. He admitted that of the shipments of wheat, by boat, from Fort William, in 1922, United States seaports exported 100 million bushels and Canadian seaports 35 millions, and that during the months of December, January and February last, only 3,869,000 bushels of wheat went East by rail from Fort William, and that the traffic going to St. John is moved over the Long Lake Cut-off, and via Quebec over the Quebec Bridge. He said that Buffalo is considered by operators a strategic point for the distribution of grain to Europe, through all the U.S. seaports, from Boston to Newport News (Note—This is of no benefit to Canadian railways) and that 45 million bushels of the wheat sent to Georgian Bay and Port Colborne is used by Canadian Flour Mills.

In answering a question as to the desirability of getting for Canadian seaports the 74 per cent of the Canadian grain export which now goes by New York and other United States seaports, and thus giving to Canadian railways about \$15,000,000 which is now paid to American railways for carrying our grain from Buffalo to New York and other United States ports, Mr. Dalrymple said that if Canadian ports would provide a steamship service equal to that of the United States seaports and provided the rate of railroad freight would be profitable, then it would be in the interest of Canadian railways to handle the business. And in reply to a question as to whether the transportation men and elevator men of Canada should not get together to see if they cannot get the trade out of the rut that it is in to-day, Mr. Dalrymple said he should be glad to sit into any conference with that object in view.

Mr. W. P. Hinton, formerly General Manager of the Grand Trunk Pacific Railway, gave evidence before the Commission at Winnipeg, and upon being questioned as to the advisability of making a rate of 11 cents per bushel upon export wheat from Armstrong or Fort William, to Quebec or Montreal, with the usual addition to Halifax or St. John for winter shipment, said he thought that if care were taken not to provoke American reprisals, it might be arranged to make a winter rate over the Transcontinental Railway that would enable Halifax and St. John to compete with Atlantic ports obtaining their grain via Buffalo or New York. That it might be used as a club against boat combinations; that if a winter rate were obtained it might remain in effect all the year; and that 11 cents would compete with the present water rate to Montreal.

Mr. R. R. Dobell, General Manager of the Ogilvie Flour Mills, Winnipeg, also gave evidence before the Commission at Winnipeg, and stated that the recent transfer of the new Cunard liners *Caronia* and *Carmania* from the New York to the Quebec route will be of great benefit to Canadian trade and to the Prairie Provinces, and especially to the flour trade, as the docks at Quebec are admirably situated and equipped, and trains run close alongside the ocean steamer, avoiding the injury to flour bags, due to extra handling by shipment on the lake route, and securing economy in marine insurance. The wheat handled from the head of the lakes has increased eight times in twenty years,

and the export trade in flour is assuming very great proportions and is absorbing a large percentage of the wheat raised in the West. If the all-rail rate to Montreal and Quebec, over the Government railway, could be made as cheap as the rail and lake rate, on export wheat and flour, it would give a great impetus to milling in the West, furnishing a market to the farmers and employment to the people, and turning to Canadian seaports a large proportion of the great volume of our exports which now goes by New York. The present rate on flour, all rail, to Montreal is 35½ cents per 100 pounds.

The Royal Commission also examined a large number of other witnesses on the transportation question, railway and steamship officials, elevator men, grain merchants, shippers, etc., in Montreal, Toronto, Quebec, Halifax, St. John, New York, Buffalo, Fort William, Port Arthur, Winnipeg, Regina, Saskatoon, Edmonton, Calgary, Vancouver, Victoria, Prince Rupert and other points.

The result of the investigation proves, without doubt, the hardship of the position in which the farmer of the Northwest finds himself. Three years ago, he was getting from \$2 to \$2.60 for his wheat. To-day he is getting \$1.10. It does not cost him any less now than then to produce it. On the contrary, he complains that he has to pay more for his labour than formerly. It costs him 40 cents per bushel to get his wheat to the consumer in Liverpool. This is too big a share of the value of the article. But what is he to do? The price of the grain is regulated by the world's market, it cannot be raised artificially, as in the United States—a self-contained country—by the imposition of a custom duty. The Canadian farmer is the victim of his geographical position. He is too far from the seaboard. We have been trying to colonize a fertile country, almost as large as Europe, with little groups of settlers—scattered, perhaps unwisely because too soon—over a vast area, even as far north as Peace river, 2,843 miles from the ship at Montreal.

The soil has responded to the call in a marvelous manner. Canada has become the second largest wheat raising country in the world. Our agricultural revenue has increased from \$364,000,000 in 1900 to \$1,420,000,000 in 1922. The Prairie Provinces, with only one-sixth of the population of Canada, raised 51 per cent of Canadian field crops in that year. According to a recent report of the Department of Trade and Commerce, the value of the field crops of the province of Saskatchewan in 1922 was greater than that of Ontario, with four times its population. And yet, our production of wheat is only 14 per cent of that of the world. We cannot control the price. The cities and towns growing up in the Northwest show wonderful progress and vitality. But they can only consume a small portion of the crop. The surplus must be exported. The railways have done their duty. Not only have they moved the enormous crop with celerity, so as to give the farmer his money quickly, but they have reduced the grain rates in the Prairie Provinces to the Crowsnest basis, making the rates 38 per cent cheaper than the United States farmer pays in a similar zone, and they have also lowered the rates to Vancouver.

The population of the Prairie Provinces which has produced these wonderful results is largely composed of the best elements of Eastern Canada, of the best British farming class and of the best of the same class from the middle west of the United States. It is no exaggeration to say that this combination should produce the finest rural population in the world. The late war has shown us what those men could do in defence of civilization. They were largely instrumental in saving the Empire. Is it not worth some special effort on our part to keep this population in our country and to augment it? These men say that they cannot live in raising wheat at the price at which they now have to sell it. This seems very probable, when we consider the Canadian farmer, one hun-



dred years ago, sold his wheat for \$1.29, when the dollar was worth far more than it is to-day. His cost of living has greatly increased since then. What are we to do? Are we to allow this splendid population to drift away from us?

In the United States, the policy has been to protect the workingman and the farmer, so that they may earn a good living, and to such an extent has this been done, that both these classes are the best paid in the world and live in comfort. We have seen that the United States Government have not hesitated to protect the American farmer who raises wheat, even to the extent of 40 per cent of its value. But the United States is a self-contained country. It does not need to export food stuffs. Its enormous population is able to consume everything that its farmers raise. Our case is different, although we aim at the same results. Our population is sparse and scattered, and until it becomes more evenly balanced as to urban, manufacturing and rural population, we must export our surplus agricultural production, and it is a very large one. To do this, we must face the competition of grain raised by the cheap labour of India and Russia. We do not want our people to be paid on that scale. How are we to avoid it?

It is said that great ills require drastic remedies. Is not this a case in point? Is it not worth our while to endure some sacrifices, say for 10 years, so as to allow this great country, as to whose ultimate value there can now be no doubt, to get filled up a bit, to get a more dense population, to be able to consume more of its own products, to become more independent of the outside world? In other words, to make it possible for the people, so far away from their present market, to live by farming.

The only way to accomplish this is to cheapen, still further, the cost of bringing the export wheat of the prairie provinces to the ocean vessel. Every outlet should be opened wide to the farmer. The less he pays for the cost of putting his wheat in the world market in Liverpool, the more it will net him on the farm. And the price he nets for what he exports fixes the price at the farm for all he raises, whether he exports it or not. For this reason, the railways should make a specialty of export wheat. They have gone a long way towards this in adopting the Crowsnest basis of rates to Fort William. They should go further and should reduce the rates to Vancouver and Prince Rupert to the same mileage basis as the Crowsnest basis to Fort William. They should make the rates on export wheat and flour, from Armstrong or Fort William to Quebec or Montreal 11 cents per bushel, and to Halifax and St. John 12 cents per bushel, so that they may get the winter traffic, and thus carry out the recommendation of the Quebec Board of Trade, endorsed by the special Committee of the Senate. Moreover, it is the duty of the Government to do this, because it was on the distinct promise in Parliament, in 1904, that the Trans-continental would cheapen the rates of freight upon western grain to Canadian seaports, that the people consented to the building of this railway, which has cost the country \$160,000,000. It is a breach of faith with the Eastern seaports to keep the rate of freight at such a figure as to prevent this being done, after the railway has proved its ability to do it, and to do it profitably. The fear of retaliation on the part of American railways, is not well founded. Is it likely that they would reduce their rates to an unprofitable basis for their own large traffic, simply as a retaliation because Canadian railways made rates to bring Canadian traffic to their own seaports? How long would it last? The American Grain—largely corn from Chicago—that comes to Montreal and Quebec for export, comes there because it pays the shipper better to ship from there than from American seaports. There is no sentiment about it. Why should we not carry our own grain, over our own railways, to our own seaports? As the Senate Committee reported to the Government, this cannot be

injurious to our railways, because it is an export traffic which practically they are not getting at all. The railroad tariff prevents it.

Some people argue that we should carry out the costly scheme of deepening the St. Lawrence between Montreal and the Great Lakes, and also the Hudson Bay railway, both nominally for the purpose of cheapening the cost of bringing the western grain to market. But why go to this vast expense before giving the Transcontinental Railway now shut off by hostile tariffs, an opportunity to prove whether it can do what it was built to do? Is not our present policy most unbusiness-like? Would not our American friends be the first to tell us so? A canal is good for six months in the year. A railway for twelve months. The new Erie Canal was built for the purpose of bringing the western grain to New York. The railways continue to get the business, and in increasing volume.

Many people ridiculed the idea of building the National Transcontinental Railway, through the uninhabited North Country, even though, in 1,350 miles, it shortens the distance between Winnipeg and Quebec by 214 miles. Nevertheless, it was built, and so well built, and with such easy grades, that, as Mr. Dalrymple tells us, it is better than the roads west of Winnipeg. It has put 17,000 of 18,000 new settlers into the uninhabited Abitibi district. With a proper colonization policy, it will create a chain of settlements in the clay belt between Quebec and Winnipeg, through which it runs and will remove that menace of an unpopulated zone between the East and the West, which sometimes threatens our disruption. And this brand new railway has put to shame all the prophets of evil by doing a wonderful business. Last year, according to the Government Blue Book,

Its earnings were.....	\$ 14,139,136
Its expenses.....	14,120,975
Surplus.....	<u>\$ 18,161</u>

And this result was achieved when the gross earnings of other divisions of the Government Railway System were millions of dollars less than their operating expenses, and in spite of the fact that it carried no share of the grain trade, for which it was built, except for the short distance between Winnipeg and Fort William, where, it is to be presumed, it received a share of the through rate, which the accounts do not disclose. We cannot go far wrong in carrying export wheat over this excellent road from Armstrong or Fort William (or even from Winnipeg) to Quebec or Montreal at 11 cents per bushel, when a former Minister of Railways told parliament he could do it profitably for 6 cents, and when we see it being carried from Calgary to Fort William, over less economical tracks, at mileage rates proportionate to 11 cents.

I would go further than that, I would advise that the through rate upon export wheat and flour from all points in Saskatchewan and Alberta to Canadian seaports, should not exceed that from western Manitoba. For instance:—

Take Virden as a western point in Manitoba and Medicine Hat as a central point of Saskatchewan and Alberta, the present and suggested rates would be:—

	Miles	Present		Suggested	
		\$	cts.	\$	cts.
Virden to Fort William or Armstrong.....	600	10	80	10	80
Fort William to Quebec or Montreal.....	960	20	70	11	00
Per bushel (cents).....		31	50	21	80

	Miles	Present	Suggested
		\$ % c.	\$ c.
Medicine Hat to Fort William.....	1,075	14 40	10 80
Fort William or Armstrong to Quebec or Montreal.....	960	20 70	11 00
Per bushels (cents).....		35 10	21 80

By this plan, the western farmer would save from 10 to 13 cents per bushel, as compared with present rates, on any grain that he may send all rail to Canadian seaports, and from 7 to 10 cents per bushel, as compared with what he now pays to New York.

In the Peace River district, said to be the finest wheat growing country in the western provinces, the new settlers—I am told there are 8,000 of them—are 1,850 miles from Fort William and 1,175 miles from Vancouver, by the present route. It is impossible for them to pay freight upon their wheat for that distance, and live. They have commenced to leave the country. They should never have been allowed to go there. Their natural outlet, over the lowest summit in the Rockies, is Prince Rupert, or the Portland Canal, on the Pacific Coast, a distance of about 450 miles. The rivers and summit lend themselves to such a location and such a line would pass through, or close to the Ground Hog coal field, on the Upper Skeena, where there are enormous deposits of anthracite coal, said to be the only *true* anthracite west of Pennsylvania. Until such an outlet is built for this valuable country, I would recommend the Government to pay the cost of railway freight on grain from Peace River to Edmonton over the existing line, which would put the Peace River settlers on the same basis as the western Alberta farmer for exporting his wheat by Vancouver. This would probably cost the Government much less money than paying the interest upon the cost of another railway to join Peace River to the Government Railway System.

The unity of Canada and the ultimate success of its railway system, and the ability of that railway system to continue to make low rates of freight upon the grain of the prairie provinces, will depend largely upon the creation of a chain of settlements between the provinces of Quebec and Ontario and Winnipeg. The location of the Transcontinental division of the Government Railways through the clay belt, between the headwaters of the St. Maurice and Winnipeg, lends itself to this colonization movement. Already, one of the most rapid colonizing efforts which this continent has witnessed has taken place along this line, in the Abitibi district, which a very few years ago was an uninhabited forest. There are 18,000 new settlers there now. They have 22 organized parishes, substantial churches and schools and 45 saw-mills, and, last year, in spite of unreasonable freight rates, and lack of encouragement, they raised crops to the value of over a million of dollars and made pulpwood and sawn lumber in clearing their farms, to the extent of two millions additional. The valley of the river St. Maurice is the busy centre of the paper business of Canada, an industry which has become the second in importance in the Dominion. With this industry and this colonization, it is no wonder that this railway is already a paying proposition.

The development by railway of the spruce forests and water powers of the North has been more than equally successful in other parts of the Province of Quebec. Before the Lake St. John Railway was built, the population of the Lake St. John and Saguenay district was 10,000. To-day, it is nearly 100,000 and the region is one of the most progressive agricultural and industrial districts in Canada. It owes its rapid advancement to the wise colonization policy of the local Railway Company, which selected the settlers, carried them

and their household effects to destination free of charge, and helped them and their industries in the beginnings. A similar policy between the St. Maurice and Winnipeg should produce similar results. Pulpwood and lumber made in clearing farms might also be carried at more moderate rates to Canadian paper mills and new settlements, say, at rates not in excess of those charged upon coal from Nova Scotia mines. It might be well for the Government to establish an experimental farm on this railway in each of the forest provinces of Quebec and Ontario, and in each of the prairie provinces of Manitoba, Saskatchewan and Alberta, and perhaps one in the Bulkeley Valley near Prince Rupert. These farms would form the nuclei which would attract settlement on a larger scale.

The Canadian Pacific and Canadian National Railways have done wonders for the development of Canada, and they have tried to meet the wants of the people in the reduction of rates in a generous manner, as the comparison of rates with American western roads has shown. It is not fair to ask of them further sacrifices, in the present position of operating expenses in which 60 per cent of the gross earnings of the Government line have to be expended on wages. So I would suggest that if the programme I have outlined should be adopted, the railways should, as compensation for the reduction of the rates on export wheat and flour, not be disturbed in their present tariffs west of Fort William on any other goods for the period of ten years, except, perhaps, in the rates on farm implements, or any other rates that the Railway Commission may deem unreasonable. And, furthermore, that if at the end of each year, they can prove that the reduced rates above named have not covered the cost plus twenty per cent, the Government shall refund the difference, as its contribution towards the work of colonization. I would also suggest that the Government and the railways should hold a conference with the railway employees, to see if they will contribute towards this good work by making some concessions which will prevent the paylists from absorbing so great a percentage of the earnings.

The establishment of flour mills in the prairie provinces should also be encouraged, as giving employment, and leading to Canada taking possession of export markets, which the higher cost of American flour, owing to dearer wheat, will put in our way. Government returns show that last year this industry, which employs 7,000 people, used 84 million bushels of wheat, produced 19 million barrels of flour and exported 11 million barrels.

The Canadian National and the Canadian Pacific Railways should place, at the service of this route, from Quebec and Montreal, in summer, and from Halifax and St. John in winter, all their freight steamers, at the same rates of freight as are current in New York. The Grand Trunk and the Grand Trunk Pacific, when they undertook the construction of the last-named railway, in 1904, entered into a formal contract with the Government of Canada, that they would furnish ample steamship tonnage at Canadian seaports to handle all the traffic that the railways could bring to those ports, and bound themselves to use all their influence to have the export trade directed to Canadian seaports. The Government of Canada, in taking away the Transcontinental and the Grand Trunk Pacific from its original lessees and owners, thereby assumed all their obligations. The action of the officials of the Government Railway in making a tariff upon export grain to Montreal and Quebec, at prohibitory rates, as Mr. Dalrymple's evidence admits, and thereby diverting it to the New York route, means a distinct breach of faith, and would seem to be a contradiction of the intention of Parliament, as expressed in the Statute of 1904, and should be immediately remedied.

If the above programme can be carried out, and if the Government will put 10 million bushels storage at each of the ports of Quebec, Halifax and St. John, and 14 millions (now building) at Montreal, and arrange for marine insurance at New York rates, as recommended by the Senate, I feel confident

that Canadian seaports will get a large share of this trade, the western farmer will be put in a position to live, and the settlement of the country will progress rapidly.

I do not believe that this plan will be injurious, in any way, to the trade on the lakes, which is bound to get its full share, nor to the capital invested in elevators at Fort William, Georgian Bay and Port Colborne, nor to the splendid organization which has heretofore directed so well the movement of this vast trade.

If the production of wheat goes on on anything like the scale of the last twenty years, there will be plenty for everybody.

It has been stated that Buffalo is a strategic point for the storage of grain prior to its export. But if we can formulate a policy which will bring ocean tonnage to our seaports, why not store at these seaports? In any case, Quebec and Montreal are only 300 miles from Portland, whilst Buffalo is 400 miles from New York.

I cannot close without expressing my admiration for the wonderful machinery which has been created for the handling of this traffic, working smoothly, without friction or dispute. At every railway station where grain is grown to any extent, there are two, three—even up to six or seven—country elevators belonging to different owners, competing for the farmers' grain. If he does not sell, he has the option to store, or to send it to the large terminal elevators at Fort William, where there is similar competition. So he should get the best price the market offers, and is protected by Government inspection as to the quality of his grain, and by a competent, highly trained staff of government officials.

Yours very truly,

J. G. SCOTT.

P.S.—A very active colonization policy, such as settled the Lake St. John country so rapidly, is essential to giving this new country a density of population sufficient to maintain the moderate rates of freight outlined above. In any policy which the Government may adopt to this end, it is to be hoped that efforts will be made to stop the emigration of farmers' sons from the Province of Quebec to the United States, and to induce them to take up land, not only in the wooded districts, but in the prairie country which was first discovered by their forefathers. They are the best of settlers and far better suited than people from Europe for this work. I know them, because I worked with them in colonization for twenty years.

J. G. SCOTT.

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## SUPPLEMENTARY

OTTAWA, January 7, 1925.

Since the above was written, the crop of 1924 has been gathered, and a material alteration has taken place in its value, the price of wheat, owing to short supply, being now about \$1.80 per bushel at Fort William. But, unfortunately, the farmer will not benefit materially, because the quantity raised per acre is little more than half of what it was in 1923. So that the situation remains at about what it was, and the conclusions arrived at in this memorandum do not require any modification.

The figures are also now available with regard to the export of Canadian wheat for the crop year ending 31st August, 1924, and are as follows:—

	bushels
To United States for consumption.....	21,320,242
To United States seaports for export.....	141,079,337
Exported from Montreal and Quebec.....	63,568,444
Exported from St. John.....	9,412,533
Exported from Vancouver.....	53,809,505
Total.....	<u>289,190,061</u>

These figures show that the eastern coast exports continue, as before, 66 per cent via United States seaports and 34 per cent via Montreal, Quebec and St. John.

J. G. SCOTT,

*Commissioner,  
Royal Grain Inquiry Commission.*