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DOMINION OF CANADA

REPORT

OF THE

ROYAL GRAIN INQUIRY
COMMISSION

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OTTAWA
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1925

OTTAWA, CANADA, January 7, 1925.

The Hon. THOS. A. LOW,
Minister of Trade and Commerce,
Ottawa.

DEAR SIR,—I have the honour to hand you herewith the report of the Royal Grain Inquiry Commission, pursuant to the Order in Council of 1st May, 1923, P.C. 774, a copy of which is attached hereto.

Your obedient servant,

W. F. A. TURGEON,
Chairman.

CERTIFIED COPY of a Report of the Committee of the Privy Council, approved by His Excellency the Governor General on the 1st May, 1923.

The Committee of the Privy Council have had before them a Report, dated 27th April, 1923, from the Minister of Trade and Commerce, submitting that he has had under consideration the present method and system of the handling and marketing of grain, in Canada, and the possibility of improvements therein; and has taken cognizance of the discussions in the House of Commons upon the subject, and has come to the conclusion that it would be to the public advantage that an inquiry be made into the whole matter.

The Minister therefore recommends that under and in pursuance of the provisions of Part 1 of the Inquiries Act, Chapter 104, Revised Statutes of Canada, 1906, a Commission do issue appointing—

Hon. W. F. A. Turgeon, Puisne Judge of Appeal Court, Regina, Sask.
(Chairman);

Professor W. J. Rutherford, B.S.A., Dean of the Faculty of Agriculture,
University of Saskatchewan, Saskatoon, Sask.;

Duncan Alexander McGibbon, Ph.D., Professor of Economics, University
of Alberta, Edmonton, Alberta; and

James Guthrie Scott, Quebec,

Commissioners; and Robert Deachman of Calgary, Secretary, to inquire into and report upon the subject of handling and marketing of grain in Canada, and other questions incident to the buying, selling and transportation of grain; and in particular, but without restricting the generality of the foregoing terms, upon the following matters:—

1. The grading and weighing of grain;
2. The handling of grain in and out by country elevators and from country points;
3. The operation of terminal, public and private elevators;
4. The mixing of grain; and
5. The disposition of screenings.

The Minister further recommends that in addition to the powers in that behalf conferred by the provisions of the said Statute, the said Commissioners be authorized by the Letters Patent of Commission appointing them Commissioners as aforesaid, to engage the services of such accountants, engineers, technical advisers, or other experts, clerks, reporters, and assistants as they deem necessary or advisable, and also the services of counsel to aid and assist them in such inquiry; and to authorize and depute any such accountants, engineers, technical advisers, or other experts, or any other qualified persons, to inquire into any matter within the scope of the Commission, as may be directed by the Commissioners; and that such persons be authorized, in the execution of the powers so deputed or authorized, to exercise the same powers which the Commissioners have to take evidence, issue subpoenas, enforce attendance of witnesses, compel them to give evidence, and otherwise conduct the inquiry.

The Minister further recommends that the said Commissioners be required and directed to report to the Governor in Council the result of their investigations, together with the evidence taken before them, and any recommendations that they may see fit to express thereon.

The Committee concur in the foregoing recommendations and submit the same for approval.

(Sgd.) RODOLPHE BOUDREAU,

Clerk of the Privy Council.

The Honourable
The Minister of Trade and Commerce.

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REPORT OF THE COMMISSION

INTRODUCTION

We have found it our duty in accordance with the commission issued to us by His Excellency the Governor General in Council to devote considerable time to the investigation of a great number of subjects differing widely from each other in character but all of importance as forming part of the subject-matter of the handling, marketing and transportation of grain. Some of the matters investigated have been for years the subject of great controversy among those interested in the marketing of grain either as producers or as traders, and in such cases we have found different practices denounced on the one hand and defended on the other with great vigour, the very existence of certain institutions and of certain forms of business being in fact at stake. In another category of cases we have had to hear evidence and argument on matters in the nature of charges against some of the companies and individuals engaged in the grain trade having to do in some instances with difficulties surrounding the interpretation of parts of the Canada Grain Act and in other instances involving alleged breaches of the clear and uncontroverted provisions of the law. In addition to these controversial subjects we have had to devote considerable time to the study of matters, which, while not the occasion of dispute, stand out prominently as problems demanding solution in order that difficulties involving financial loss may be removed and the production of grain made more profitable to the farmers of Canada.

Canadian grain producers, grain traders, grain handlers, grain carriers and millers have all been heard and have all evinced the keenest interest in the inquiry; and we feel that we have received from all parties concerned whatever could be adduced by them in the way of argument or information to make our task easier. In the course of our work it became necessary for us to visit several cities in the United States of America and there likewise we received nothing but courtesy and the most painstaking assistance from all those whom we interviewed. Commissioner Rutherford visited the United Kingdom and some continental points and there, he, also, was enabled, thanks to the kindness of those with whom he came in contact, to secure valuable advice and information which have been of great benefit to us all. In view of the thorough manner in which all sources of information have been thrown open to us and all matters of controversy have been subjected to our scrutiny from every angle, we have felt it our duty to make our report as full and as definite as we are capable of making it.

ORIGIN AND NATURE OF THE INQUIRY

Between the year 1897 and the outbreak of the Great War in 1914, thirteen investigations into various departments of the grain trade were held by Royal Commissions, in some cases appointed by federal and in other cases by provincial authority. All of these investigations were prompted by complaints emanating from the producers of grain and they all resulted in the bringing about of at least some beneficial changes in the conditions complained of. As an instance of this we may cite the investigation instituted by the Government of Saskatchewan in the year 1910, which had its origin in the complaints put forth by the farmers of that province in respect to the ownership and opera-

tion of country elevators and which resulted in the enactment by the Legislature of Saskatchewan in the year 1911 of the Act creating the Saskatchewan Co-operative Elevator Company, a piece of legislation which has undoubtedly had a beneficial and far reaching effect upon the whole grain trade of the country. Since the year 1914, however, no general investigation of the grain trade has been held, while the trade itself has expanded and developed with great rapidity owing mainly to the change in world conditions brought about by the war, which eliminated from competition Russia and the Balkan States (who formerly had dominated the world as grain exporters) and increased very considerably the exportation of the Canadian product. In the meantime the complaints of the producers have become more specific and their demands for better conditions more and more insistent and more and more extensive, reaching, as they do now, far beyond the local questions which at one time engaged their attention in each province. From time to time the necessity for an investigation was discussed in Parliament and in the session of 1923 the Speech from the Throne of His Excellency the Governor General announced that a Parliamentary inquiry would be held into agricultural conditions generally, including certain matters affecting the grain trade. This announcement was met in the House of Commons by a general demand for the appointment of a Royal Commission to investigate the trade in all its branches. Later on during the session a Special Committee of the House was appointed and held a number of sittings and as a result that committee submitted the following report to the House on March 14, 1923:—

“The committee appointed to inquire into agricultural conditions beg leave to present the following resolution which was unanimously adopted:—

“That in the opinion of the committee it is advisable and in the interest of agriculture in this country that a full and searching inquiry should be made into all aspects of the grain trade in Canada and that for this purpose a Royal Commission should be appointed, clothed with full powers, not only from the Dominion Government, but from all provinces desiring to co-operate in such inquiry.”

This report was concurred in unanimously by the House and in due course this Commission was appointed by the Dominion Government. The invitation to co-operate which was extended to the provinces interested in the inquiry was accepted by the various Provincial Governments in a manner which left no doubt of their desire to see that a full and complete inquiry should take place and that the views of all concerned should be laid before the commission. The Governments of Ontario, Manitoba, Saskatchewan and Alberta, passed Orders in Council under the various Public Inquiries Acts of these provinces conferring upon the commissioners powers similar to those conferred upon them by the Dominion Government, thus removing any possibility of the work of the commission being impeded by questions affecting the jurisdiction of the federal and the provincial authorities respectively. In addition to this, the Governments of Manitoba, Saskatchewan, Ontario and Alberta, each, at its own expense, appointed counsel who attended the sittings of the commission in each of these provinces respectively as well as at Winnipeg and the head of the lakes. The Government of Ontario appointed the Secretary of the Dominion Millers' Association to accompany the commission on behalf of that province in order to secure evidence and lay before us the views of those interested in the grain trade in Ontario. The Premiers of Saskatchewan and British Columbia appeared before us in person and this latter province appointed counsel to attend our sittings in Vancouver. It is also important to note that the different institutions which may be said to constitute the grain trade, and which, therefore, were under investigation, were represented before us by counsel who co-operated throughout in making the inquiry as thorough and as open as possible. By this means both sides of all controversial subjects were laid before us fully, and a great deal of valuable information, which otherwise it might have been difficult

to secure, was made readily accessible to ourselves and to our counsel. In so far as evidence and argument are concerned the case appears to be complete. Independently of our review of the facts, and of the recommendations embodied in this report, the transcript of the evidence (much of which was given by men who are experts in the grain business or in the treatment of the economic problems involved), together with the carefully prepared memoranda filed on behalf of the producers and of the corporations whose activities and methods were under investigation, will be of great benefit to the Government and to Parliament and to all those who may desire hereafter to study the conditions which surround the grain trade of Canada.

Another advantage which has already been realized by means of the inquiry is that of publicity; the making known of the grain grower's desires and of his grievances and apprehensions; and the answer of the trade, necessitating an open examination of its organization and business conduct. Thanks to the constant co-operation of the newspapers, which from the beginning to the end of our labours devoted much space daily to the publication of the proceedings of the commission, the farming community were able to keep in touch with the various phases of the investigation and to read and weigh for themselves the facts brought out from day to day. The publicity given to the complaints lodged by the producers of grain were likewise made known to all concerned. Where points of controversy are involved, each side has heard the allegations and the explanations of the other. We have reason to believe that this publicity has already resulted in clearing up some of the matters in issue and in removing several of the difficulties which we met in the early part of our inquiry.

Pursuant to what was undoubtedly the desire of Parliament, and to what in any event the necessities of the situation seemed to require, the commission held sittings at various points accessible to grain growers in the provinces of Manitoba, Saskatchewan and Alberta, where the complaints of the producers, their views and their suggestions were heard at first hand. Seven such sittings were held in Alberta, ten in Saskatchewan and seven in Manitoba. It was at these meetings that the points of contention between the producers and those who engage in the buying and selling and handling of grain were first brought out and the way was prepared for the lengthy sessions held later on in Winnipeg and at Fort William and Port Arthur, which occupied nearly the whole of three consecutive months with daily sittings at which the operations of the Winnipeg Grain Exchange, of the elevator companies, the commission merchants and of all other branches of the business known generally as the grain trade were examined with the greatest possible particularity.

As the result of our investigation we have before us numerous demands for changes in the present law and present practices. Most of these demands are of great importance, the magnitude of the grain trade of Canada being now such that any change, even one which might appear trivial in character, is almost certain to affect a great number of people and a great volume of business and consequently to result in the aggregate in the loss or the saving of a large sum of money. Moreover, some of these demands which have been the cause of protracted sittings and of strong debate, are of a most serious character and involve the existence of certain institutions and the continuance of certain practices which loom very large to-day in the grain trade of the country.

Our investigation began with the first public sittings which opened at Edmonton, Alberta, on June 25, 1923, and this report will be handed to the Honourable the Minister of Trade and Commerce, before the close of the calendar year 1924. During the period thus occupied in conducting the inquiry and compiling this report, we have witnessed the occurrence of an event which seems destined to have an important effect upon the whole grain trade and which must

be taken into account by us when dealing with many of the questions which we have been asked to solve. We refer to the creation of the organizations of grain growers known as the Wheat Pools in the provinces of Alberta, Saskatchewan and Manitoba. We will deal more fully with each of these organizations later on, and will point out in what manner their existence and the powers and the privileges which they enjoy may have a bearing upon some of the important matters which demand our consideration.

SCOPE OF THE INQUIRY

The scope of the inquiry can best be defined by citing the terms of the commission conferring powers upon the commissioners. According to these terms, the commissioners were authorized and directed, as follows:—

“To inquire into and to report upon the subject of the handling and marketing of grain in Canada and other questions incident to the buying, selling and transportation of grain; and in particular, but without restricting the generality of the foregoing powers, upon the following matters:—

- “ (1) the grading and weighing of grain;
- “ (2) the handling of grain in and out by country elevators and at country points;
- “ (3) the operation of terminal, public and private elevators;
- “ (4) the mixing of grain; and
- “ (5) the disposition of screenings.”

It will be seen, therefore, that the inquiry was intended to embrace every aspect of the grain trade. The broad language of the commission, unrestricted as it is by the five enumerated clauses, subjected to our investigation all the agencies which buy, sell, store or transport grain, or deal in any other manner with the handling and marketing of this commodity.

During the course of the inquiry suggestions were made to us on several occasions regarding the power of the Parliament of Canada to legislate upon some of the matters under discussion. Several of the subjects thus mentioned are now dealt with in the Canada Grain Act. We think it advisable, although not strictly necessary, to state here, as we have stated before, that this commission has no power to express any opinion upon questions of this sort. In dealing with the law as it is, or in recommending new legislation, we do so quite regardless of such considerations. If any doubts exist as to which legislature has jurisdiction over the subject matter, such doubts must be settled in the usual way. A question of this nature has been before the courts recently in the case of *The King v. Eastern Terminal Elevator Co.*, reported in (1924) Ex. C.R. p. 167.

In treating our subject we shall proceed step by step, dealing with the questions under examination as nearly as possible in the order in which they present themselves from the time the grain leaves the farm for the market until it has reached its ultimate destination.

THE FARMER AND THE COUNTRY ELEVATOR

STREET PRICES

The process of grain marketing begins when the farmer brings his grain to the railway shipping station for sale or for shipment. In some cases he goes to a loading platform where he secures his own car and does his own loading and shipping, thus avoiding the payment of elevator charges. We shall revert later on to the subject of loading platforms. We propose in the first place to give our attention to the problems of the farmer who deals with the country elevator, because these elevators handle the great bulk of the grain grown in Canada, and the relations which exist between their operators and the producers are consequently of greater importance than anything else at this initial stage of the marketing process. The country elevator performs a double function; it is a

warehouse where the farmer may have his grain weighed, stored, cleaned (in some cases), and shipped to market; it is also a grain buyer's plant where the grain is weighed, docked and graded and then taken over by the company who pays cash for it to the farmer.

In approaching a study of the relations between the country elevator and the farmer, we find that many difficulties are complained of, all demanding careful treatment and to all of which we shall give our attention in due course. Amongst these, however, there is one subject which seems to exceed all the others in size and importance, because it affects directly and vitally the largest class of grain growers we have; those who sell their grain outright to the elevator. This subject is that of the "Street" price; this term, "street" price being the distinctive name given in the trade to the price paid by the elevator companies for grain purchased by them, in this manner, from farmers, by the wagon load. Not only do the farmers to whom we now refer compose more than half of the grain growing population, but they also produce more than half of all the grain shipped. Individually they do not produce enough of any one kind of grain to make up a carload, and they find it undesirable or impracticable to combine together by twos or threes to load a car, either on account of the expense of bulkheading or for some other reason. After these farmers have sold their grain to the elevator company, they have no further interest in their product and are freed of all responsibility for it. In making their sales, they, of course, are concerned in securing just treatment in the matter of weights, grades and dockage, and will be affected by whatever recommendations we may make regarding these subjects. Once, however, they have settled these questions with the elevator agent in the course of their transactions, and agreed on the net price, they receive payment in full for their grain, and hand it over to the elevator, whose property it becomes. All direct relationship between the producers and those who market their product ceases with that one transaction at the country elevator. Bearing in mind, then, that over 50 per cent of all our grain is disposed of in this manner by those who produce it, the importance of the question of an adequate street price becomes at once apparent.

We find that those who are engaged in the business of buying and selling grain divide prices into four classes, according to the position of the grain which forms the subject matter of each particular transaction. First we have the "spot" or "cash" price at Fort William, which is ordinarily the highest price, and which represents the amount per bushel obtainable for grain stored in a terminal elevator at the head of the lakes. This price has been for many years, and still is, notwithstanding the great growth in Pacific Coast shipments, the basic price for all Western Canadian grain. It is the price quoted on the Winnipeg Grain Exchange. All other prices are based mainly on the consideration of the distance at which the grain is situated from Fort William and the probable time required to deliver it to that point. (We wish to state here parenthetically, however, that in this matter of time and distance we have found that the existence of an alternative outlet at Vancouver has had a favourable effect on the price of the more Western grain, and more particularly the grain of Alberta. This matter will receive attention elsewhere.) The second class of grain for which a price is mentioned is the grain which has passed inspection at Winnipeg, and is in cars on its way to Fort William. Next we have the "track" price, which is the price obtainable for grain situated in cars at points west of Winnipeg. And the last and lowest price known to the trade is the "street" price, with which we are now dealing, and which is the price at which the country elevator buys grain delivered to it by the wagon load.

Now, it will be found that, so far as price quotations go, and taking the case of No. 1 Northern Wheat as an example, the price of "street" wheat is usually given as between 5 and 6 cents lower than the price of "track" wheat, the freight rate to Fort William being the same in both cases and being, of course,

deducted in both cases. Some misapprehension seems to exist on this point on account of the way the spread is quoted, which would make it appear at first glance that the track seller actually receives a net advantage of 5 cents or 6 cents over the street seller, the cash price at Fort William being the same at the time of both sales. Such, however, is not the case. It will help to a better understanding of the character of the price offered by the country elevator to the owner of a wagon load of wheat if we first compare the latter's position with that of the more fortunate producer who has sufficient grain to fill a car.

It must be remembered, as we have stated above, that once the street seller hands over his grain and receives his price in cash, his interest in the grain and his responsibility for it come to an end. With the track seller, the case is different. Out of the track price quoted to him he must pay a number of items of cost, which do not fall upon the street seller. The carload shipper must pay,—

- (a) elevator handling charges,
- (b) storage charges,
- (c) inspection and weighing charges,
- (d) cleaning charges at terminals (less return for his screenings),
- (e) freight on dockage,
- (f) commission on sale (sometimes deducted in advance from track price quotation),
- (g) interest on advances made to him (if any) prior to actual sale.

He also assumes the risk of the weight and grade of the consignment. When all matters are considered, the apparent advantage of say, six cents to the track seller is found to be reduced very considerably. To illustrate the question, we had certain cases worked out from actual prices paid on 37 different dates taken at hazard during the season of 1923-24. The result showed an actual net gain to the track seller varying from a fraction of a cent to 3 cents per bushel, the average being less than 2 cents per bushel. In the interests of the small farmer, every effort should be made to reduce this margin as much as possible.

Such being the difference between the position of the street seller and that of the track seller, we can now proceed to examine more satisfactorily the position of the country elevator as a buyer.

It is evident in the first place that when the elevator takes over the farmer's grain it accepts responsibility for most of the expenses which, as is shown in the above outline, fall upon the carload shipper; such as the cost of handling, storing, weighing and inspecting. It also assumes the risk of any loss which may occur in grades or weights. In financing its purchases, the elevator company usually uses money borrowed from the banks upon which interest is payable and it is put to some expense in remitting funds to country points to redeem its cash tickets. All these considerations are easy to understand, and, with the exception of the risk of loss in grades and weights, they could no doubt be stated in definite figures if the exact time required to deliver the grain at Fort William could be ascertained at the moment of the sale. The general manager of the Saskatchewan Elevator Company aggregated these charges above referred to at approximately $4\frac{3}{4}$ cents a bushel for the period of one month between the purchase and the delivery at Fort William, the interest and storage charges continuing to increase this figure after that period. But it is this element of time that creates the greatest difficulty when an attempt is made to state in positive terms what the spread ought to be, if one were to assume to fix an absolutely fair street price.

It is the practice of elevator companies to hedge their cash purchases. This means that as the company buys grain from day to day it sells an equivalent quantity for future delivery. In cases where the company's purchases are financed by the banks, as most of them are, the obligation to hedge purchases

is usually made a condition of the loan. Whenever the company delivers a carload of purchased grain at Fort William, it sells it as spot, and buys back its future contract. In selecting the future month for its hedges, the company must therefore estimate its ability to deliver its purchased wheat in carload lots in Fort William in a given time. Then considerations arise as to the amount of purchased grain already in the elevators awaiting shipment, the availability of cars, the limitations placed upon the company by law in the securing of cars, the distance from Fort William, etc. And alongside of all this, there runs the risk of a fluctuation in prices between the time the elevator makes its purchase, and the time of its resale. When the flow of purchased grain is steady, so as to permit of the expeditious loading of cars, and the car supply plentiful and traffic free and uncongested, these risks are reduced to a minimum, and the street price plus freight and the necessary handling costs and other expenses should very nearly approach the spot price (were it not for certain other considerations to which we will refer a little further on). But, of course, conditions at the country elevators are not always perfect in this regard, although, as a rule, they are much better now than they were some years ago.

All these factors must necessarily enter into the fixing of a price of street grain, and none of them can be ignored if the elevator company is to remain on the safe side.

But in addition to being on the safe side, the company must be allowed to figure on a reasonable profit on its cash transactions. In this regard, it is in the same position as any other person who buys a commodity for resale. The element of profit making is a necessary incentive to the carrying on of the business. It has been suggested that the making of profit as such should not be considered by the country elevators, but that, having assured themselves in their price against actual loss, they should take over street grain for the sake of earning the handling charges upon it, deducting the cost of these charges from the prices paid. This reasoning would be forceful if the handling charges allowed by law were fixed so as to assure the elevator a reasonable remuneration for the services rendered. We will proceed in a moment to examine whether or not such is the case.

It is clear, therefore, that, in addition to the deduction made for freight between the country point and Fort William, the price of street grain must be less than that of spot grain by a margin sufficient to insure the elevator company against loss, and to provide it with a reasonable profit on its cash transactions; otherwise, the local cash market would disappear. Two questions, however, remain to be examined. In the first place, we must consider whether anything can be done to improve the conditions which prevail in the shipping of grain from country points so as to lessen the risk of loss and expense which are now charged to the street seller. Secondly, we must consider whether other factors than the legitimate ones of insurance against loss and the provision of a reasonable profit are allowed to enter into the fixing of the street price, so as to decrease it still further; if so, an undesirable condition exists, and the price so depressed can no longer be said to be a fair price.

Turning now our attention to this feature of the case, we are convinced that there is just ground for complaint and that the street seller is in fact called upon to bear more than his fair share of the cost of marketing the crop of Western Canada. In the first place, we believe that he is made to suffer from the present restrictions imposed by law upon the supplying of cars to country elevators. We have a recommendation to make on this subject, which we will state later on.

In the second place, we believe that the street seller is called upon to bear the losses which the country elevators make in the course of their general business. These losses are real and are demonstrated by the scrutiny we have made of the business returns of the country elevators. The evidence shows that

according to the tariff of charges now in force the elevator is compelled to render certain services at less than actual cost. For instance, the Managing-Director of the Saskatchewan Co-operative Elevator Company told us at Regina that in his opinion the handling charge of $1\frac{1}{4}$ cents per bushel allowed the country elevator on stored grain is inadequate, the service rendered under this head entailing a cost of from $2\frac{1}{2}$ cents to 4 cents per bushel. His evidence is corroborated on all sides, and there seems to be no doubt that the present maximum charge fixed by the tariff is inadequate. Again, we find that although the tariff allows the elevator to make a maximum charge of $2\frac{1}{2}$ cents a bushel on special bin grain, the Saskatchewan Co-operative Elevator Company appears to be the only company that charges this full amount, the others rendering the same service for the admittedly inadequate charge of $1\frac{1}{4}$ cents. We are told that this policy is followed by the elevators in order to secure volume and to prevent a great deal of this grain being loaded over the loading platform. But admittedly the net loss is taken off the price of street grain.

We find also that the elevators generally make a loss on the grading of all grain handled by them, whether bought or stored. It has been suggested that they make up this loss by gains on their weights. The question as to whether or not any gain is made on weights by the elevators will be investigated elsewhere in this report, as it forms a different subject of inquiry. We can say at once, however, that there is, in any case, a loss on grades which is taxed upon the street seller.

In short, the position seems to be that the country elevator companies look to their profits on cash purchases to recoup them for all their losses, and to furnish them some profit on the annual business of their houses. The uncontroverted evidence submitted to us in behalf of the line companies shows that even assuming each country elevator to be operated to its fullest capacity possible, having regard to the number of elevators, the volume of the crop, etc. the earnings, (apart from cash transactions) would still fail to pay operating expenses.

We are forced by all these considerations to the conclusion that the farmer who sells his grain by the wagon load to the country elevator has not been receiving an adequate price for his product. In order to assist this class of producer and to place him in a more equitable position with his more fortunate fellow farmers, we recommend:—

- (1) That the Board of Grain Commissioners for Canada give their attention to a revision of the tariff charges allowed to country elevators, with a view to securing the collection of proper charges from those who make use of the elevator for handling their grain, the object being to remove the injustice of making the wagon load seller recoup the companies for losses incurred by them in handling stored grain;
- (2) That the provisions of the Canada Grain Act regarding the distribution of cars be modified so as to allow country elevators the privilege of securing two cars instead of one in rotation as the law now provides.

We are confident that a freer allotment of cars to the elevator would remove a great deal of the uncertainty which now exists in regard to the time required to deliver purchased grain at Fort William, and would therefore affect street prices favourably. We believe that the modification which we suggest is a very moderate one, when it is remembered that the large class of producers who are interested in the matter make no use of car order privileges themselves, except in the comparatively rare case where two or more of them combine and ship together. It has been suggested to us that any privilege which might be accorded the elevators of securing more cars than is now allowed should be exercised under the control of the Board of Grain Commissioners. There are, no doubt, certain districts in the Western provinces where street sellers are not

numerous, and again conditions may exist from time to time in any district which would call for a temporary reversion to the one car principle. There is, therefore, much to be said in favour of conferring upon the Board of Grain Commissioners a certain degree of control which might enable them, in proper cases, to cancel or suspend the elevator's right to more than one car. But all considered, we believe the general provision of the law should allow two cars instead of one to the country elevator.

- (3) An effort should be made to reduce the cost of bulkheading cars in order to make this form of shipment more attractive to farmers with small quantities of grain.

By bulkheading, two or three shippers can combine and secure a car. But complaint is made of the extra cost imposed when the car is bulkheaded. The railways add 1 cent per 100 pounds to the freight charge, irrespective of distance, and the terminal elevators charge \$5 per bulkhead for handling and unloading. The extra freight charge is, of course, under the control of the Board of Railway Commissioners, while the terminal elevator charge is regulated by the Board of Grain Commissioners. At the Winnipeg sittings of this Commission on Thursday, February 28, 1924, the question of the extra railway charge was discussed with Counsel representing the Canadian Pacific railway, and the Canadian National railway. A decision of the Board of Railway Commissioners rendered in the year 1909, approving of this extra \$1 charge was read to us. In our opinion, conditions have changed sufficiently since the date of that judgment to render a reconsideration of the matter advisable. It was agreed at our sittings of February 28 that steps would be taken to have an application made to the Board to review the question. As the complaint on this subject came to us mainly from farmers in the Province of Manitoba, Counsel for the Government of that Province agreed to take the steps necessary to apply to the Board for a hearing. The application has not yet been made, but from correspondence which we have received lately, we understand that the matter will be proceeded with in the near future.

The charge of \$5 per bulkhead for unloading made by the terminal elevator should, we suggest, be reconsidered by the Board of Grain Commissioners with a view to reducing the charge, provided, of course, that this can be done without injustice to the elevator. No charge should be so low as to be inadequate and to compel the rendering of a service at a loss; such a false condition would re-act disadvantageously in some other direction, as experience has already shown in regard to country elevators, but we believe that in order to bring relief to the small farmer and to furnish him with facilities which he may use as an alternative to accepting an inadequate street price, such charges as fall on him alone should be scrutinized with the greatest care and reduced wherever possible.

In making the foregoing recommendations, we are actuated in some measure by the belief that the class of farmers with which we are now dealing is likely to increase as time goes on. Efforts are being made in many parts of the West to induce our grain growing population to take up diversified farming. These efforts have already met with some success, notably in the Province of Manitoba, where the growing number of farmers with small acreages of grain has already intensified the demand for greater facilities in the obtaining of cars upon reasonable terms.

Competition in Street Prices.

Competition among street buyers is of course another element that will tend to increase street prices, and anything that can be done to increase that competition should be encouraged. We have thought it advisable to deal with the subject at some length, and under a separate heading, on account of the

great volume of evidence we have heard on the question as to whether or not reasonable competition exists at country points, and also on account of the widespread interest which the grain producer takes in the controversy. The small grain grower is naturally resentful if he feels that advantage is being taken of his position to purchase his grain at an unreasonably low price, and this resentment is greatly increased when he believes that those with whom he is forced by circumstances to deal have combined to prevent him receiving fair play. It is important, therefore, that no effort be spared to investigate the facts as thoroughly as possible.

The complaint about street prices has been voiced on each occasion upon which the operations of the grain trade have been under inquiry. In the older days, when the line companies occupied the country elevator field alone, or alone save for the existence of a few farmers' elevators at a small number of points, this complaint was probably the most important of those made public from time to time. During the period between 1908 and 1913, the Provincial Governments of Manitoba, Saskatchewan and Alberta took action, each in its own way, to meet the demands of the grain growers, who insisted on government assistance to secure better treatment from the country elevator system. The complaints made then covered much the same ground, in this field, as those that were presented to us; they had to do with grades, weights, dockage, cleaning, special bin facilities, etc., but none was advanced more persistently and universally than that of unfair street prices.

The Government ownership policy adopted by the Government of Manitoba in 1910 and the creation in Saskatchewan of the Saskatchewan Co-operative Elevator Company in 1911, and in Alberta of the Alberta Farmers' Co-operative Elevator Company in 1913 (now merged in the United Grain Growers, Ltd.) all represent efforts made by the Governments and Legislatures of those provinces to secure better treatment for the farmer, and particularly for the wagon-load seller, who is interested in common with all other customers of the elevator in matters of grades, weights and dockage, but who alone has to contend with the hardship of low street prices. Those who assert that prices are too low also assert that they are kept low by the system followed by the elevator companies, which system, they say, sets the price for all buyers and prevents competition. We have dealt with the question of a low price, we shall now examine whether or not there is competition in buying, and whether any organized efforts to prevent competition exist among those engaged in the trade.

We can best begin a study of this topic by dealing with certain price lists issued to elevator buyers at country points throughout the Western Provinces and which serve to guide these buyers in making their purchases. In the Province of Alberta, these lists are supplied by the Western Grain Dealers and Millers' Association of Calgary. In Manitoba and Saskatchewan, the lists used are issued by Dawson Richardson Publications, Ltd. of Winnipeg, on the authority of the price committee of the North West Grain Dealers' Association of that city. Practically all the elevator companies doing business in the prairie provinces excepting the United Grain Growers and the Saskatchewan Co-operative are members of one or the other of these Associations and concur through their committees in setting the prices which these lists contain. These lists show the prices which each company authorizes its agent to pay for street grain, and these prices are the same for all companies operating at a given point, subject, in the case of each company, to special instructions which may go to a buyer from time to time as we shall see later. Wires are sent, usually each day, showing track prices payable, these track prices being variable by fractions of a cent, while changes in street prices always take the form of a whole cent, fractions not being considered. This wire is usually sent to the agent of one company at each point, and he passes on to the other buyers the information which it contains.

The issuing of these lists which set out a common street price for a given date, coupled with the close co-operation among the companies shown by the manner of sending out the telegram announcing changes, is taken by those who allege the existence of a combine in restraint of competition as a proof of their allegation. It is necessary for us, therefore, to examine the nature and effect of these price lists and the conditions which exist at country elevator points in regard to grain buying.

Neither in the case of the Western Grain Dealers and Millers' Association of Calgary nor of the North West Grain Dealers' Association of Winnipeg is there any agreement among the firms concerned to follow the prices fixed in the lists or any rule to compel them to do so. Each firm having membership in one or the other of these Associations is free to follow the list or not, without incurring censure or penalty of any kind. No check is kept by anybody on the firms who receive these lists to ascertain whether or not the prices are adhered to. We have already set out the considerations which actuate the elevator companies in fixing their price for street grain, and shown why in our opinion the prices now prevailing are unfair to the producer. The information contained in the lists may properly be described as a recommendation of the members of the price committee of the Association as to the figure that, having regard to the state of the market from time to time, the elevators may pay for street grain and realize all the advantages which we have already enumerated and which they look to realize from the merchandizing of this commodity. By the arrangement made between the different firms and the Dawson Richardson Publications, this company is furnished with a mailing list of all the elevator buyers employed by each member of the Association. The list is mailed direct to each buyer, and is followed by him in making his purchases, unless he receives special instructions of a different nature from his head office. Each country elevator company is thereby saved the trouble of making up its own prices each day, the work being done for them all by this price committee; each firm, however, retaining its right to depart from the common price whenever it may wish to do so. This method of arriving at a common figure for grain prices by means of a list, or by some other equivalent form of notice to country buyers, has been followed by the grain trade for at least 25 years. It was one of the matters inquired into by Mr. Justice Phippen at Winnipeg in 1907, in the case of Rex V. Gage, when he found that this practice did not constitute an infraction of Section 498 of the Criminal Code of Canada, which prohibits combinations in restraint of trade. We cannot find anything which, in our opinion, would differentiate the present practice from the one then followed, and discussed in that judgment.

So much for the list itself. We shall turn now to a consideration of the manner in which it operates. Witnesses on behalf of the country elevators described it as a minimum list. It is a minimum list in this sense, that at points where there are several elevators it would be futile for any one company to offer less for grain than the price contained in the list followed by the others. It is possible to imagine a combination of local grain buyers to disregard the list and pay a lower price, but we have no evidence of any such incident ever having occurred. In fact, there is no evidence of any company ever paying less than list prices for street wheat, although the heads of several companies were examined on this point. We believe, in short, that the list in question can fairly be called a minimum list.

To what extent, then, is this list followed? This brings us back to the main question now under consideration as to whether or not there is competition between buyers at country points. It must be remembered, in the first place, that neither the United Grain Growers Limited nor the Saskatchewan Co-operative Elevator Company makes use of the aforesaid lists supplied from

Calgary and from Winnipeg respectively. These companies fix their own prices, and they form real competition to the line companies at points where they meet. The United Grain Growers have 311 country elevators in the three Western provinces, the Saskatchewan Co-operative Elevator Company have 387 elevators, all in Saskatchewan. These two co-operative farmers' companies have, therefore, 640 country elevators out of a total of 3926, approximately 16 per cent; and they operate at 640 elevator points out of 1,532; which means that they compete with the private elevator companies at 41 per cent of the country points. In so far as the Saskatchewan Co-operative is concerned, we are assured by its officials that they have always shaped their policy so as to secure better treatment for the wagon load seller by forcing up the price of street grain. For this purpose, they have always refrained from paying patronage dividends to their customers, (as has also the United Grain Growers Company) choosing rather to make less profit from their purchases in order to allow the benefit of the higher prices which they set to spread to all the grain growers of Saskatchewan. Again, they charge the full tariff of 2½ cents per bushel for special bin grain, which they say is fully justifiable as a charge in itself, and which increases their revenue from the larger producers quite considerably, when it is noted that their elevators are especially equipped for special binning and that this form of storage comprises usually 50 per cent of the company's entire business. Their general manager told us also that during late years the company has been meeting with keen competition in buying from the line companies. During certain periods of the year, the price committee of the North West Grain Dealers' Association sends out two price lists; the second list, printed on yellow paper, and known as the "yellow list," going to the points where the elevators of the Saskatchewan Co-operative are situated, and containing prices fixed so as to meet the competition forced upon them by that company. There seems to be no doubt that the two co-operative companies have provided real competition in the prices paid for street wheat.

Turning now to these lists which the line companies use, there is no doubt that some competition exists among these companies, notwithstanding these lists. Thus, the figures filed, setting out the operations of all these companies during the year 1922-23, show that 54.4 per cent of all the wheat handled by these companies was bought for cash, and that 21 per cent of this quantity was bought at figures in excess of list prices. Taking at hazard one of these companies with a little over 100 elevators operating in the three provinces, we find that during the same year 60 per cent of its grain was bought on the street, more than half of it at prices in excess of list prices.

In addition to this comparison between the prices in the lists and the prices paid, the evidence shows that the buyers at country points, in order to secure volume for their houses, do compete with each other in the grading which they put on loads. The net result shows that the grading done at country points, and which forms the basis of payment to the farmer, is, on the whole, higher than the official grading at Winnipeg. On the other hand, however, it must be borne in mind, as we have already stated, that this loss in grade is one of the elements that goes to reduce the list price of street grain. The point just now, though, is that this species of competition does take place.

Treating the question from a more general point of view, we have before us, as against the general allegation that there is no competition on account of the lists being in existence, the opinion of some men who have been in a position to observe conditions in the country, and whose sympathies are all with the street seller, to the effect that competition does exist. Thus, at Regina, we received the evidence of the Hon. C. A. Dunning, the present Premier of Saskatchewan, and formerly general manager of the Saskatchewan Co-operative

Elevator Co. Mr. Dunning's observation convinces him that real competition in the buying of street grain exists among elevator buyers at all points where there are several elevators belonging to companies having different ownership, and when the car supply is good. But he believes that where the car supply is poor, and where there is only one elevator, or several elevators owned by companies composed largely of the same shareholders, the printed list is adhered to, and no competition takes place. The Hon. J. A. Maharg, then President of the Saskatchewan Grain Growers' Association, expressed the opinion that competition in prices did exist among country elevator buyers, notwithstanding the uniform price fixed in the lists.

The foregoing covers the case so far as the evidence goes, and we think it is fairly complete. The list price which we have been discussing is set low enough, apparently, to allow a company which is in favourable circumstances as to car supply, quantities of grain already on hand, facilities for securing car loads promptly, etc., to pay more than the list calls for, and still realize in some measure the advantages which, as we have already seen, country elevators expect to derive from the merchandising of grain. We do not wish to be understood, however, as suggesting that competition in buying is altogether as active and sustained as might be desired. *We believe there is still room for improvement.* In addition to the operations of the two farmers' co-operative companies already referred to, we have now a new factor in this field in the wheat pools which have come to the fore recently with a large membership. The operation of these pools is expected by those interested in their establishment to affect beneficially the condition of the farmer who to-day sells his product by the wagon load. The street seller who is a member of a pool receives the initial cash payment, and he enjoys whatever benefit may be derived from the ultimate price. On the other hand, however, the country elevators assume, in that case, the risk of the grade at which the grain is taken in, and this, no doubt, must tend to lessen the competition between buyers in the form of lenient grading, which sometimes takes place at country points.

GRADING, WEIGHING AND CLEANING AT THE COUNTRY ELEVATOR

Those who bring grain to the country elevator, whether to sell or to store, are interested in the manner in which the services of grading, weighing and cleaning are performed. The producer naturally expects honesty and efficiency in these matters. All grain is weighed, and, unless it is placed in a special bin, the agent must also give it a grade and fix the dockage. When the elevator is equipped with a grain cleaner the agent must clean the grain if requested to do so by the owner. We shall deal separately with each of these subjects of grading, weighing and cleaning.

Grading.

The grading done by the elevator agent cannot be perfect so as to correspond in each case with the official grading fixed by the Inspection Department at Winnipeg, or at other points where official grading is done on carloads of grain arriving from the country. By the very nature of the task of fixing a grade on grain there is bound to be a difference of opinion in some cases even between experts. But most country elevator agents are not expert graders in the sense that the official inspectors may be called expert. They have neither the experience nor the necessary means of study and instruction at hand to enable them to qualify as such. We believe that the companies in their own interest take all reasonable steps to instruct their agents in this difficult work, and we have nothing to recommend as an improvement to the present system of selecting and training country elevator agents. These things must be left to the trade.

The facts show beyond dispute that the country elevator companies lose on the grading done at their elevators. The loss is due partly to lack of expert ability on the part of the agents, and partly to the competition for trade which exists at country points. In some cases, the companies instruct their agents to over grade during certain periods. The agents are naturally anxious to secure a good share of the volume of business available, and sometimes the officials of the companies consent to a sacrifice in grade being made in order to increase trade. But this last case is exceptional. The general policy of the companies is to impress upon their agents the importance of grading carefully and accurately. Nevertheless, the losses on grading continue year after year. We have already noted how this loss on grades is one of the factors that go to reduce the price of street grain.

Grading at the elevator includes the drawing of the sample and the setting of the dockage by the agent. In this regard, many complaints have been made. It was pointed out that the operator took his sample from the top of the load and that it included too large a proportion of screenings and light grain. On this sample, the weight per bushel, grade and dockage is set. It is well known that a wagon load of wheat or other grain, that has been hauled a number of miles, will have its contents settled into two layers, with the heavy grain in the lower layer, and the lighter stuff in the top. It was claimed also that the grade was too often set on the uncleaned sample.

In securing a sample, a much better and fairer method would be to catch it from the stream as the grain is pouring from the wagon box to the scale pit, just as is done in the case of a carload at the terminals. The grade on which settlement is made with the seller should be set on such a sample. Both the grading and the setting of dockage on the farmers' grain should be done with the greatest care, and in so far as possible after the methods that are employed by the Inspection Department at Winnipeg. Careless, haphazard methods or guessing as to grade and dockage are certain to create distrust and dissatisfaction. It must be remembered that much grain is teamed to local elevators by boys, old men, women, and often by foreign-speaking people, who do not know the methods that should be employed. The interest of all must be protected, and confidence established and maintained.

Weighing.

While the country elevator companies lose in grades they gain in weights. The statistics of these companies for the last three years (and in the case of one company we have the figures of five years) show a recurrence of this condition year after year. We have found it impossible to reduce the difference to a money value with anything like precision. Taking, however, the case of two large companies, and making use of averages where exact figures are not available we find that the one company appears to have made a gain during the five year period of $\frac{1}{33}$ of a cent per bushel and the other to have suffered a loss during the three year period of $\frac{1}{25}$ of a cent per bushel. Results obtained in this manner can, of course, be only approximate.

In discussing this question of weights we must bear in mind the difference between gross weight and net weight. The gross weight is the weight given to the farmer when his grain is weighed into the elevator, without deduction for dockage; and again, it is the weight placed by official weighing at the terminal upon the grain shipped to the terminals from the elevator, plus the quantity of grain and dockage remaining in the elevator and the screenings removed. The gross weight shipped out of an elevator should never exceed the gross weight taken in. Any gain in this gross weight in favour of the elevator (and the record shows there always is a gain) is due to some defect either deliberate or accidental, in the method of weighing. With net weights

the case is different, because there the shrinkage allowance and the changes in dockage which accompany changes in grade must be taken into consideration. We are dealing now with the question of gross weights at country elevators, that is to say with the treatment which the farmer receives from the elevator in connection with the weighing in of his grain.

When the commission visited country points in Alberta, Saskatchewan and Manitoba during the summer and autumn of 1923 we received many complaints about the weighing by country elevator agents. Instead of weighing wagon loads accurately so as to allow the scales to come to an exact weight, a method was followed which the agents called "taking the break of the beam," an operation which, according to the evidence given by various witnesses, would result in taking 5 to 40 pounds off the true weight of the farmer's load. In the ordinary case, we were told, the quantity abstracted in this manner would be about 15 pounds, but specific instances of a much larger deduction were given. As a matter of fact, expert evidence on the construction and operation of platform scales which we obtained at Moose Jaw shows that the expression "the break of the beam" as used before us, was an incorrect expression. The break of the beam in pounds is, speaking technically, the quantity which it is necessary to place on the platform to cause the beam to rise from a central position in the trig loop to the top, or, conversely, the quantity required to be removed from the platform to cause the beam to fall to the bottom. A platform scale is said to be in good condition when a change in weight either way of not more than $2\frac{1}{2}$ pounds will cause the beam to shift. Technically speaking, therefore, the break of the beam, assuming that the loaded wagon and the empty wagon were both weighed so as to take this margin of weight from the farmer would not yield more than 5 pounds on scales in good condition. But the practice of reading the weight of a wagon load of grain when the beam is in repose at the top of the loop and to read the weight of the unloaded wagon when the beam is at the bottom, can be used to take much more than five pounds from the owner of the grain, and was so used. Some of the agents who gave evidence told us that they aimed to secure 5 to 20 pounds off each load, others said from 10 to 30 pounds, others put it at 10 to 40 pounds, and others finally said that their object was to take $\frac{1}{2}$ of 1 per cent from all grain weighed in. Some agents told us that they took this allowance off the weights even in cases of special bin grain upon which the regulations provided a shrinkage allowance of $\frac{1}{3}$ of 1 per cent.

There is a loss of weight to be expected through shrinkage and waste in storing and handling grain. Up to recently a regulation of the Board of Grain Commissioners allowed the elevator to take not more than $\frac{1}{2}$ of 1 per cent of the gross weight (2 pounds in 5,000 pounds) to protect itself against such loss. In the words of the regulation this allowance was provided for "shrinkage for stored grain," and this language would seem to cover all grain other than bought grain; but it was interpreted to apply to special bin grain only.

We do not find it necessary to discuss further the methods pursued in the past in view of the situation which exists to-day. After we had finished hearing most of the evidence on this question of weighing at country elevators a new regulation was issued by the Board of Grain Commissioners which, we think, disposes of the difficulty, in as satisfactory a manner as can be devised. This regulation is dated November 13, 1923. It repeals the old regulation which allowed one-half of 1 per cent shrinkage of special bin grain only, and provides instead for a deduction on the gross weight of all grain; cash, special bin and stored to grade grain. This deduction is to be made in pounds according to a table which is required to be posted in a conspicuous place in all country elevators. The deduction allowed is based on the number of bushels in a load as well as the weight. In the case of wheat, flax and rye the shrinkage allowance runs

from 5 pounds on a minimum weight of 1,400 pounds in 25 bushels or less to 45 pounds on a minimum weight of 8,848 pounds on 158 bushels. In oats the allowance was from 5 pounds on a minimum weight of 850 pounds to 26 pounds on 5,372 pounds. In barley the scale goes from 5 pounds on a minimum weight of 1,200 pounds to 36 pounds on 7,548 pounds.

Where the elevators deal with grain as warehousemen so as to be accountable to the owners for the quantity taken in, there can be no question as to the propriety of allowing for the loss in volume which is bound to occur through shrinkage and the waste which attends handling and shipping. It is, of course, impossible to fix an allowance in pounds which will fit in accurately in every case, year after year. The Board, we think, were well advised to begin tentatively with the table based on the experience they have had from the result in the past of making allowance of $\frac{1}{2}$ of 1 per cent on special bin grain. The result of the new experiment can be checked and the necessary modifications made later if the allowance now provided should turn out to be inadequate or excessive. The evidence shows that the new shrinkage regulation did not come into general use during the season of 1923-24 on account of the late date at which it was issued (November 13), the elevator companies being very busy at that period and some time, of course, being required to have the regulation with the necessary accompanying instructions reach all country agents. For this reason we were unable to secure information as to actual results last season.

Some question has arisen, however, over the action of the Board in applying the shrinkage regulation to cash grain, that is, to grain purchased outright by the elevator. In the past the loss through shrinkage and waste has been one of the more or less definite factors going to increase the spread in price between cash and spot grain. There is doubtless a certain anomaly in allowing a purchaser to take a trifle more than he is paying for in order to insure himself against loss by waste and shrinkage. The more natural course would be to allow him to take this probability of loss into consideration in fixing the price he is prepared to pay, as he has done heretofore. But in the grain trade the weight of expediency is altogether the other way. We are convinced from our own experience that it will be more satisfactory both to the farmer and to the purchaser to see a rule adopted which should ensure accuracy in weights while providing reasonably for a probable loss due to the character of the merchandise handled.

The question of accuracy in weights is, after all, the important question. We have seen how, in the past, accurate weights were not given, the "break of the beam" system being used to deduct some pounds from the actual weight. Whatever may have been said in the past in defence of this method, no excuse can be urged for it from now on, the Board having furnished a plan to protect the buyer and the warehouseman. The Act contains provisions (Sections 158 (2), 175, 240, etc.) intended to ensure proper weighing and the giving of just and accurate weights. We know that some companies have already notified their agents that henceforth, in view of the new regulation, they are to take the time necessary to weigh exactly and accurately. Every means should be taken to see that the spirit of the regulation and of the Act is observed scrupulously.

On several occasions during the course of our inquiry it was suggested to us that an official weighing system should be instituted at all country elevator points in the form of government or municipal scales and official weighmasters. We have considered this suggestion, but cannot recommend its adoption. Such a system could only be established and conducted at great expense, and in its operation it could not hope to be perfectly satisfactory. In a large number of towns there are scales, owned either by the Municipality or by some firm, which can be and are used by the farmers as a means of confirming and checking weights received at the elevators. Used in this manner these scales perform a

good service. But it does not follow from this that it would be advisable to incur the expense of establishing official scales at all points to fix the weights of grain and of wagons to be accepted by all elevators, even those at a distance from the scales. Too many difficulties would have to be overcome to make such a system perfect, and unless it was perfect, or nearly so, there would still be room for dissatisfaction. Elevator scales are now inspected officially, usually once a year. This inspection should be more frequent if possible, and the Board of Grain Commissioners should insist rigidly that all weights be taken on an even beam. We found the dissatisfaction over weighing very widespread and it is important that all reasonable measures be taken to remove it.

Apart from the inaccuracies we have referred to in the actual weighing, we had evidence at a few points of another practice followed by some elevator agents which is most unjustifiable. This practice consisted in accounting to the farmer for the even bushels, only, found in his load, keeping the odd pounds for the benefit of the elevator; and this margin was taken, in the cases cited to us, in addition to the deduction already made by the inaccurate weighing. We do not think this practice prevailed to a sufficient extent to be imputed to the trade generally but it was done by some agents and we refer to it as one of the things that must be stopped. Hereafter there will be no excuse whatever for any practice in contravention of the regulation which requires the taking of the exact weight less the authorized shrinkage allowance.

Cleaning.

The subject of cleaning grain in country elevators forms part of the more general topic of cleaning and the disposition of screenings, which is dealt with at length later on in this report.

STATUS OF COUNTRY ELEVATOR AGENTS

Before leaving this subject of weighing at country elevators, we find it necessary to deal with certain questions arising out of the relationship between the companies and their country agents. An organization known as the Order of Grain Buyers brought charges against certain of the companies which were heard during a five days session at Moose Jaw. These particular charges were brought in order to illustrate practices which, the officials of the organization alleged, were carried on by country elevators in dealing with their agents, and, through them, with the public. As these charges had been in circulation for some considerable time, in the form of general statements against the country elevator business, no pains were spared to secure all the evidence to substantiate them which could possibly be obtained. We deal with them at this point, because the question of weights enters into all of them, as will appear. The evidence adduced was directed to establish,—

- (1) that the contractual relations between the companies and their employees are such that the agent is placed in a position of hardship by being made responsible to the company for losses in the handling of grain which do not arise through his negligence or his dishonesty;
- (2) that in some cases false claims of grain shortages are made against the agent by the company in order to extort money from him;
- (3) that in consequence of the situation thus created, the agent is under constant temptation to make himself secure at the expense of the farmer, particularly by giving false weights;
- (4) that in some cases he is actually instructed by officials of the company to defraud the farmer in this matter of weights;
- (5) that a system of "blacklisting" exists whereby an agent who does not comply with the unreasonable and (in some cases) improper requirements of the company is discharged and finds himself unable to secure employment in another company.

The charges produced at Moose Jaw were 23 in number, and affected 14 country elevator companies. To these 23 charges we must add a charge of similar character against another company which was aired later on at Winnipeg. Of these 15 companies, 4 no longer exist. There are now 72 companies doing business in the western provinces. There are, therefore, 61 of these 72 companies against whom, individually, no complaint was laid. The first complaint arising out of the relationship between the elevator company and its country agent, had its origin in the state of affairs which existed prior to the autumn of 1920. In the usual case during that time (and the same is still true to-day), the contract between the company and the agent was a simple contract of hiring without any special terms. The effect of it, therefore, would be that the agent agreed for a stated monthly salary to attend to the buying, storing and shipping of grain at the elevator, and to handle the company's grain and sometimes its money and other goods, such as coal; and to do all this honestly, diligently and to the best of his ability. But the agent seeking employment was obliged to obtain a bond to protect the company from loss, and this bond was furnished usually by a guarantee company. Most of the elevator companies required a bond which went much further than to protect them from losses occasioned by the negligence or dishonesty of their agents. By this bond, which was known in the trade as the "shortage" bond, the guarantee company insured the elevator company against all losses in weights, except in certain specified cases. The agent, in turn, agreed to indemnify the guarantee company against any payments it might make under the bond, and to accept the mere fact of such a payment having been made by the guarantors as conclusive evidence of his own liability to them. By this arrangement, the agent was always in danger of being held liable, and in some cases was actually held liable, for losses which were not due to his own dishonesty or his own negligence. All country elevator companies did not use this "shortage" bond, but most of them did. Among the cases we heard at Moose Jaw, we found some where, although the guarantee company paid claims arising without negligence or dishonesty, no attempt was made to collect from the agent, and other such cases where such an attempt was made and then abandoned. We do not think, however, that the evidence in any case went so far as to show that any company actually pretended falsely to have a shortage when none existed, as was alleged, in order to extort money from the agent. But, on the other hand, we had two cases of undoubted hardship where the elevator companies took advantage of the existence of the bond to collect losses direct from the agents, where, according to the evidence given before us, the losses had occurred through no act of omission of theirs and they paid the claim in order, as they were made to believe, to avoid trouble with the bond company. One of these cases took place in 1918, and the amount paid by the agent was \$681.85. Since this incident occurred, the company in question has been re-organized, and after the facts were made public at Moose Jaw, the present officials of the company refunded the money to the agent. The other case took place in 1920, and the amount paid by the agent was \$400. But the company which took this money no longer exists, and there does not appear to be anybody from whom redress can now be obtained. In both these cases, the bond company was not brought into the matter at all, and is in no way responsible for what occurred. It goes without saying that in addition to any injustice which might be suffered by the agents themselves, as happened in these two cases, it was a menace to the grain producers to have men, working under the pressure of such conditions, employed in the handling of grain. The temptation to make good, and to secure themselves at the farmers' expense by cheating him in his weights certainly existed. Altogether we are of the opinion that this shortage bond practice was wrong in principle, and although the great majority of the companies may never have taken an unfair advantage of it,

it lent itself to wrong doing, and we are pleased to know it is no longer in use. In the autumn of 1921, the Board of Grain Commissioners issued a regulation providing for the cancellation of the license of any country elevator company whose agent was subject to such a bond. There can be no objection, of course, to an elevator insuring itself against all losses, however arising, but to use such an insurance to make the country agent the ultimate insurer was a vicious practice, and we are glad to see that the Board has done all it could to abolish it.

Coming now to the allegation that the country elevator agents have been solicited and invited, either directly or indirectly, to steal from the farmers by giving false weights, we must say that no such charge can be sustained in such a manner as to be a reflection on the grain trade. We are not considering now the instruction which may have gone to agents to allow for shrinkage and waste in fixing weights, as we have already dealt with that question and shown how the difficulties that existed have been met by a new regulation of the Board of Grain Commissioners. We are dealing here with an allegation of deliberate attempts to take grain from the farmers without excuse or colour of right. Considered regardless of morality and from a purely business point of view, it is hard to believe that the grain companies would systematically make thieves out of men who have the handling of their money and their goods. It would be a sure way to make trouble for themselves. It is impossible to imagine bonding companies doing business with elevator companies in the free manner they do, if they suspected such a practice to exist. But, apart from these general considerations, the evidence which we have is sufficient to convince us that any case of this sort which took place was exceptional. The cases which establish guilt, or which even create a reasonable doubt, are very few when we consider the time and care taken to secure evidence and the number of years we turned back in order to allow it in. In one case, we were shown a contract executed on September 10, 1918, between an elevator company and a country agent, whereby the company agreed to pay the agent \$150 per month salary and to allow him in addition 10 per cent of any overage he might have on hand in his elevator at the end of the season. In our opinion this agreement was intended to produce illegal profits for the company and for the agent by defrauding the farmer. The company in question no longer exists and we are informed that several of its officials were convicted of theft some years ago. In another case which happened in 1920 we find certain letters from the manager of a company to a country agent who was said to be short in his grain wherein the agent is urged to "get busy and make an overage while there is still time to do so." The company concerned is a small company with eight elevators. The manager who wrote the letter is no longer in the company's employ. Both of these cases were clear enough to require no comment and they are certainly bad cases. They illustrate the possibilities of fraud which exist in the country elevator business when those who engage in it are dishonest. But it takes sheer dishonesty to produce cases such as these and we have no evidence that the great majority of those engaged in the trade, whether as company's officers or as country agents, are more dishonest than the ordinary run of men. In view, however, of the possibilities of fraud which exist, no pains should be spared to remove temptation from the country agent and to ensure proper supervision of the operations of the companies.

The above cases were the only ones where proof of a guilty intention was brought home to the officials of a company. We had several other cases where there was a conflict of evidence on the question of knowledge by officials of irregularities occurring at country points, but under the circumstances we do not feel justified in holding the company responsible.

One of these cases, however, dealt with a matter which we think requires special notice. We think it will be best to deal with it here, although this may

be somewhat of a digression from our main topic. It relates to the condition of elevator scales at country points.

In the case in question a former agent of one of the companies told us that in the year 1921 he tampered with his elevator scales by filing a notch in the shoulder of the beam behind the zero mark in such a manner that the poise could be pushed back of this zero mark and thus cause the scales to register false weights, and that he used the scales falsely adjusted in this manner during part of the season. He alleged that he performed this manipulation on the instructions of the travelling superintendent of the company. This superintendent gave evidence denying the allegation in so far as he was concerned and disclaiming all knowledge of the illegal filing. It also appeared that this superintendent had dismissed this agent from the company's services on the grounds of incompetence and carelessness. Giving due weight to all the evidence adduced in this case, and which it is unnecessary for our purposes to review here, we cannot hold the superintendent guilty personally of the charge made against him, but the scales were, in fact, found to have been tampered with in the manner described by the agent. The company has since removed this damaged scale beam and put in a new one. Under the rulings which have been given so far on this question, the mere having for use in one's possession of scales in this condition, even without knowledge, is an offence under the provisions of the Weights and Measures Act, rendering the defective beam liable to seizure and the owner to the penalty of a fine. This means that it is the duty of those who deal with the public in the buying and selling of merchandise to make sure that they have not in their possession and use scales which have been falsified. We reported this case to the Department of Trade and Commerce, recommending that it be followed up and that steps be taken by inspection to ascertain, to what extent, if at all, the practice of tampering with elevator scales was being carried on. We were informed that upon several occasions in the past beams containing a false zero notch, such as the one described in the case heard by us, had been seized by Inspectors of the Weights and Measures Branch, Department of Trade and Commerce. Upon receiving the report of the case brought before us at Moose Jaw in August, 1923, the Department took immediate action to discover what elevator scales showed signs of having been manipulated and twelve seizures and prosecutions have since taken place. In each of the cases the tampering was of the same nature as that described at Moose Jaw. A notch had been filed in the beam behind the zero notch so as to provide for the registering of an incorrect weight, the difference thus created in favour of the buyer ranging, in these eleven cases, all the way from 30 to 100 pounds. The wagon load is first weighed correctly, the poise being set at zero and a true weight given. Then after the grain is unloaded the poise is slipped back to the false notch and the extra weight thus created is added to the weight of the empty wagon, thus increasing the deduction to be made from the gross to give the farmer the net weight of his grain. In eleven of the twelve cases convictions were secured. In all these cases, however, nothing further was proved than that the companies had possession of the scales and were using them. In each case the agents denied having used the false notch on any occasion. Some of them stated that they were unaware of the existence of the notch until it was pointed out to them by the inspector. Others said they had found it on the beam when they took charge of the house. The superintendents of the companies likewise disclaimed all guilty knowledge of the condition of the scales. In some cases the company in possession had taken over the elevator only recently from a company now out of business, and the false notch might have been there prior to the change of ownership. Again, the manipulation might have been the work of a guilty agent making a profit for his own purposes. Many explanations of course are possible besides that of guilt attributable to the company itself. It

is worthy of note that these twelve cases affect ten different companies, one company being found to have two such scales in its possession, the others only one each. This would appear to indicate that in no case was it the intention of a company or a superior official of a company to practice this falsification systematically. Whatever the cause may be, the fact remains that the evil has existed, and must be eradicated. It is worth while in the interest of all concerned, to go to considerable trouble and expense in order that the apprehension of unfair treatment be removed from the mind of the farmer. Constant and increased activity in the inspection of elevator scales and the prosecution of offenders in each case, will, in time, produce this result.

We venture to suggest, for the better enforcement of the Weights and Measures Act in respect to elevator scales, that the Royal Canadian Mounted Police be specially instructed to look out for violations of the law in country elevators. With approximately 4,000 country elevators in the prairie provinces, it is, of course, quite impossible for the regular inspectors of Weights and Measures to keep in close touch with the situation in these houses. The police, on the other hand, could, we think, keep things well in hand. The mere knowledge that this well known police body is actively engaged in looking out for breaches of the law would no doubt prove a great deterrent to would be offenders and would also have the effect of giving confidence to those who are interested in receiving fair treatment at the elevators.

The last complaint put forth at Moose Jaw was that a system of "black-listing" existed which operates to the prejudice of honest and efficient grain buyers. The evidence does not show that such is the case. The North West Grain Dealers' Association of Winnipeg, by means of its inspection bureau, keep a record of all country elevator operators, intended for the confidential use of the members of the association, setting out the antecedents and character for honesty and ability of each man engaged as a buyer. When a buyer leaves the employ of a company the company reports the reason for the termination of the employment. By means of this record, a company having before it an application for employment can ascertain whether the applicant has been employed previously by a country elevator company, and if so, whether his antecedents or personal habits were such that it would be unsafe to employ him. It is natural that companies who engage men to handle their money and their goods, and goods for which they are responsible to others, should co-operate to keep each other informed of facts which are essential to the safety of the relationship into which they must enter with their agents. In addition to the companies who are members of the association, the Saskatchewan Co-operative Elevator Company and the United Grain Growers Limited take advantage of the records compiled by the Inspection Bureau and co-operate in supplying information to the bureau. In view of the great number of companies and of agents employed and the frequent changes of agents which are made, it is really difficult to see how the work of such an inspection bureau could be dispensed with without creating confusion, misunderstanding and delay. No agreement exists among the companies not to employ anybody who may be the subject of an unfavourable report, much less is there any evidence of an agreement to refuse employment to anybody who may incur a company's disfavour, which would be the real meaning of blacklisting, in the sense in which the term is ordinarily employed. No fault therefore, can be found with this system in itself. On the other hand, of course, those men whose names and records are kept on this list have an undoubted right to fair and honest treatment. The law already provides sufficient redress for any individual who may suffer an injustice. Of course we find that where a company did compel or attempt to compel an agent to make good a claim for shortage which was not due to his incapacity or his neglect or his dishonesty—and we have referred to cases of this sort which came to our

intention—they gave him at the same time a reputation for unsatisfactory service, which made it difficult for him to secure employment from other companies. This was wrong and was part and parcel of the system which we have condemned. But we have already shown that the cases of this kind which we heard cannot be considered as a reproach to the trade as a whole and similarly they do not establish the existence of what might be called a system of black-listing.

We now revert to the main question involved, namely, the relationship between the elevator companies and their country agents. The companies have, of course, and must continue to have, the free choice of their employees and must be expected to satisfy themselves as to their ability and integrity. It is important, however, that the situation surrounding this employment be such that an honest and diligent agent need have no fear that he may be held personally liable for losses to the company which do not arise through his act or omission. This is important on account of the dual position which the elevator agent occupies. He stands between the company and the grain grower. The company entrusts to his care its documents of liability, sometimes its cash, its goods, and the goods of other people to whom it is accountable. The grain grower depends on him for honest treatment, particularly in this matter of the weighing of his grain. There are nearly four thousand elevator agents in the Western Provinces. All grain which does not go over the loading platform is handled by them. The part which these men fill in the grain marketing system is therefore important. Past experience has shown that there have been dishonest men among them, which, of course, is only to be expected in all human affairs. The best that can be hoped for in the way of legislation or regulation is to provide a condition of employment in which an honest man need never feel insecure or tempted to take from the farmer in order to protect himself against unfair claims.

It is the agent's duty to serve the company to the best of his ability, to take proper care of the property entrusted to him, to carry out the lawful orders which he receives from his superior officers, and generally to exercise reasonable care and skill in the performance of his work. If he is guilty of negligence in any of these things he is liable to his employers for whatever losses may result. It also goes without saying that he is liable for losses which may occur through his dishonesty. But he is not liable for losses which happen through mere accident or through circumstances beyond his control; and this last principle is the important one before us. Any legitimate grievance that we have heard on the part of agents arose from the fact that it had been disregarded. In prohibiting the use of the shortage bond the Board of Grain Commissioners intended no doubt, to put an end to this abuse.

When an effort is made to attach liability to an agent for the occurrence of a loss the onus of proof is on the claimant. He must show that the loss occurred through the fault of the agent. On this point, however, it must be remembered that the agent is in charge of the building, keeps the accounts, has the custody of the books, of the tickets and of the grain; and attends to all the weighing in and shipping out of grain. He has therefore an intimate personal knowledge of the business of the elevator and is able to explain readily many things which an outsider or a casual inspector might have difficulty in clearing up. In view of the nature of his position it is part of his duty in the case of a loss, to assist his employers to trace its origin by placing at their disposal all the information which he possesses and by explaining when an explanation will be of service. He should not hold back and allow his employers to shift for themselves in difficulties which he can assist materially in removing. We mention this last matter because we have found in a few cases a tendency on the part of the agent to take this attitude.

The shortage bond having been abolished (and it must be remembered that some companies never did make use of it), the relationship between the elevator company and the agent would be as above outlined in the absence of any special contract containing exceptional provisions. Usually there is no such special contract except such as may arise indirectly through the bond. The form of bond now in use and which has been found satisfactory to the Board of Grain Commissioners, is known as the "one act" bond. By the terms of this Bond the surety is liable only for losses which occur through the fraudulent or dishonest conduct of the agent. Once the elevator company has established the fact that some portion of the loss has occurred in this manner (hence, the expression, "one act") the onus of the proof is lifted and the surety must pay the whole of the loss except such portion thereof, as it, in its turn, may be able to show did not occur through the agent's fraud or dishonesty. The agent in his application for a bond agrees beforehand that he will indemnify the surety for any loss it may be called upon to pay under the bond and that payment by surety shall be conclusive evidence of his liability. So far as we know this last provision is to be found in all bond applications and its use in the grain bonding business is neither new nor exceptional. The "one act" provision however, does appear to be a novelty. In most businesses, once a dishonest shortage is discovered, it becomes merely a question of auditing to ascertain the size of the shortage, evidence of dishonesty running visibly all through the case. In the handling of grain in and out of country elevators the case is not so simple, as there are many ways in which grain may be lost apart from the dishonesty or even the negligence of the agent, and, it may be impossible, particularly where the agent keeps silent, to distinguish between losses which have their origin in fraud and those which occur through accident or mere negligence. It would appear then, that the elevator companies have reached a compromise basis:—no liability without fraud, and then full liability except in so far as the connection between the fraud and the loss is disproved by the surety.

It is still possible, of course, to imagine cases where an injustice may be done the agent, but the same is true of every bond where the employee binds himself in advance to accept payment by the surety as proof of his own liability. There seems to be a fear that some bond companies, in order to retain business or through some other improper motive, may be induced to pay claims on insufficient proof of dishonesty where they know they can recover with little difficulty from the agent. In practice however, we believe that there is really very little to apprehend on this score. The gist of the contract is that the agent is to be liable under the bond for losses arising through his fraudulent misconduct only. The power given to the surety, by paying, to put the agent in the position of being liable for a loss supposed to be caused by his dishonesty, is one that will have to be exercised in the utmost good faith in order that the letter of the bond may be asserted by the surety against the agent.

In any event we do not believe it is possible to enact any statutory provision that will always and in all conceivable cases prevent wrongs occurring. We believe that a system of control and supervision exercised by a competent body will be much more likely to promote satisfactory results. The Board of Grain Commissioners have already intervened in the question by their regulation of August, 1920, prohibiting the use of the shortage bond. We believe that their jurisdiction over all matters pertaining to the relationship between the elevator companies and their agents should be confirmed, if necessary, and extended. To meet difficulties which may arise in the future, it should be provided by law that bonds for the integrity and fidelity of country elevator agents may be issued by such companies only as are empowered to do so by

the Board. The Board, under this system would issue from time to time a list of those companies which have obtained its approval. The Board's approval could be withdrawn at any time in the case of a company which failed to comply with its regulations or which, in its opinion, had misused its position to deal unjustly with an employee. By this arrangement employees who believe they have a grievance would have a tribunal of easy access which could readily detect the existence of an improper practice and check it in a most effectual manner.

STORING IN SPECIAL BIN AND SUBJECT TO GRADE AND DOCKAGE

Under the provisions of the Canada Grain Act and the regulations of the Board of Grain Commissioners there are four ways in which a farmer may dispose of his grain. He may (1) sell outright to the elevator, accepting settlement according to the grade and dockage fixed by the elevator agent; (2) he may store in the general bins of the elevator, again in that case accepting the agent's grade and dockage; (3) he may, by agreement with the elevator agent, have his grain placed in special bin separate and apart from all other grain, in which case the elevator becomes responsible only for the weight and identity of the grain, and for insuring it against loss by fire; or, (4) he may either sell as in (1) or store in the general bin as in (2), above, but without accepting the elevator agent's grade and dockage as final; whereupon a sample of the grain is sent to the Chief Inspector and final settlement is made according to the decision of that official as to the grade and dockage.

The first two cases do not present special difficulty. In the case of grain received into general storage there are certain ambiguities and inconsistencies in the sections of the Act, the forms of receipt used and the regulations of the Board, when all three are taken together, but the general intention seems fairly clear. We do not believe it advisable to take time now to deal with these matters with more particularity. A careful re-draft of these provisions will suffice, we think, to bring the law into conformity with the practice, and to make the necessary modifications to meet new conditions. The third and fourth cases mentioned above, known respectively as "special binning" and storing "subject to grade and dockage", call for more extended notice here.

Storage in special bins is provided for in section 167 of the Act. The furnishing of special bin service is not made compulsory on the elevator company. In most cases the elevators are unable to supply this service on a large scale, as it would make too great a demand on their storage space. Each case of special binning occurs by agreement between the owner of the grain and the operator of the elevator. In this case, the operator takes the grain into the house, places it in a special bin and issues to the owner a receipt in form "C" in the Act. By this receipt form the elevator company undertakes to insure the grain against loss by fire and guarantees its weight and the preservation of its identity. The Company also agrees, on return of the receipt and payment of all charges, to deliver the identical grain to the order of the owner at the elevator or in carload lots at a terminal. The grain is not graded by the operator. A sample of the grain is drawn and placed in a receptacle provided by the operator. This is done in the presence of the owner. The receptacle is then locked with a padlock supplied by the owner, who keeps the key. The sample is then preserved by the operator until the grain has received official inspection. If as a result of this inspection the owner believes that the identity of his grain has not been preserved, he and the operator forward the sample to the Chief Inspector to be compared by him with the official sample of the shipment. This will determine finally the question as to whether or not the identity of the owner's grain has been preserved.

The storing of grain subject to the inspector's grade and dockage is provided for in Section 172. The intention of this section is to cover cases where the

owner is not satisfied with the grade or dockage offered by the operator. This may happen in the case of a sale or in the case of grain delivered for general storage. It is the duty of the operator to issue a ticket, as in the ordinary case, giving the weight of the grain and the grade set by him. The company guarantees the weight and the grade so set. The operator must however, mark the ticket "subject to inspector's grade and dockage." In the case of a sale the owner is paid at once on the basis of the grade and dockage shown on the ticket, pending final settlement upon a return being received from the Chief Inspector. Samples are drawn by the operator in the presence of the owner from each hopper load. These samples are mixed and a quantity of not less than three pounds is drawn by the owner and the operator and placed in a receptacle which is locked with a lock and key provided by the owner. The receptacle and key are then sent to the Chief Inspector whose duty it is to set the grade and dockage on the sample. The Chief Inspector's finding is binding upon both parties and is the basis of the final settlement between them. In the case of stored grain a storage ticket is then issued by the operator showing the grade and dockage as given by the Chief Inspector for the full amount of the grain. By this storage ticket the company agrees to deliver to the order of the owner at the elevator or at a terminal, the grade and quantity called for by the ticket upon surrender of the ticket and payment of all charges.

The special bin system was in great demand among Western farmers some years ago and it is still looked upon by many as being the most satisfactory method of storing and shipping grain. The United Grain Growers and the Saskatchewan Co-operative have both built their elevators with the design of doing a large special bin business. This is true also of the International Elevator Co. Each of these companies does over 50 per cent of its business on a special bin basis. They do not do any "subject to grade and dockage" business. In the case of most of the companies, however, the elevators are not constructed so as to allow special binning to be done on a large scale. Nevertheless, there are many cases where the farmer prefers to sell or store his grain according to a grade to be fixed by the official inspector and not by the local elevator agent. In these cases trouble often arises through a confusion which exists between the practice of special binning as set out in Section 167 of the Act and that of storing "subject to inspector's grade and dockage" provided for by Section 172. On many occasions during the course of our inquiry farmers complained of something which had happened in connection with a shipment of "special bin" grain, only to find, when all the facts were brought out before us, that their grain had never been placed in a special bin, and that the special bin procedure had not been followed, although the name was given to the transaction, and in some cases, a special bin ticket (Form "C") issued. The fact is that a practice has grown up which partakes somewhat of the nature of both cases provided for by sections 167 and 172 respectively. The elevator agent does not fix the grade and dockage, which would be the proper practice only in the case of special bin grain—but he puts the grain into general storage and sends the sample to the Chief Inspector, —which is the procedure laid down in the law only for grain delivered subject to inspector's grade and dockage. Special binning requires the grain to be kept separate and its identity preserved; storing subject to the inspector's grade and dockage requires the elevator agent to grade the grain and fix the dockage in the first instance according to his own judgment, the grade so fixed by him to be guaranteed by the elevator company. Form "C" should be used only for special bin grain, never for grain stored subject to grade and dockage. In special binning the sample is sent to the chief inspector only in case of disputes as to the identity of the grain having been preserved; in storing subject to grade and dockage the sample must always go forward to the chief inspector. The three companies above mentioned which do not do any "subject to grade and

dockage" business, have also established a special practice to meet the case of a farmer with a small quantity of grain who cannot fill a carload and who still desires to settle on official inspection instead of on the elevator agent's grading. In such cases they put the grain into a special bin, draw a sample, and send this sample to the Chief Inspector to be graded by him, holding the grain in the special bin until the return is received. This practice, of course, is irregular, but it seems to give satisfaction. Other companies have still a different practice. The National Elevator Company, for instance, does both a "special bin" and a "subject to grade and dockage" business. In this last case, however, the company endeavours to keep the farmer's grain separate from all other grain, or sometimes in a bin with grain belonging to another farmer which seems to be of the same quality. After the grain is inspected by carload in Winnipeg the company settles with the farmer according to the official inspection. The sample drawn from the load at the elevator is not sent to the Chief Inspector unless the farmer is dissatisfied with the return. This practice also seems to give satisfaction to the patrons of the elevator.

We cannot recommend that special binning be made compulsory at the farmer's request, because we do not think that present conditions warrant such a course being taken. We believe in this respect that the law should be left as it is. On the other hand, we believe that the method of storing in general storage, subject to the inspector's grade and dockage, is a useful method designed to meet what is undoubtedly the farmer's desire in a great majority of cases, whether recourse is had to Section 167 or 172: that is, to obtain settlement on the basis of the grade and dockage fixed by official inspection. We think that the Act and the Regulations now contain all that is necessary to surround this practice with proper safeguards. The only change in this regard that we have to recommend is that a new form of ticket be provided for grain stored subject to grade and dockage, instead of form "B" being used with a stamp as the practice now is. But in very many cases, the proper procedure is not followed. In the transaction between the owner of the grain and the elevator agent, no confusion should be allowed to exist between special binning and storing subject to grade and dockage, and in both cases, the procedure required by law should be observed in every particular. This result can only be achieved by proper instructions being given in all cases to elevator agents, and by proper steps being taken to see that the law and the regulations governing the operation of country elevators are properly enforced. In this regard, the duty, in our opinion, lies with the Board of Grain Commissioners. This, we think, is a fitting occasion to make a general recommendation in a matter of great importance. The Board, in our opinion, should be furnished with a sufficient number of officials to allow for a thorough inspection during each season of the practices followed in each elevator. There is no doubt that beneficial results would follow and that much of the dissatisfaction which now exists would disappear. The case with which we have just dealt is a case in point. Those who can be looked upon as capable spokesmen for the farmers who deal with the country elevators have assured us that if the regulations governing the practice of storing grain subject to grade and dockage, such as they now are, were carried out in their entirety, the complaints to which this practice has given rise, would very probably disappear. Since we cannot recommend that special binning be made compulsory, some provision must exist whereby the owner of the grain, whether he sells it or stores it, can be ensured of receiving settlement, if he so desires, according to the official inspector's judgment as to the grade and dockage, and, since his grain is taken over by the elevator in the meantime, have the company's guarantee of weight and of a grade fixed by its own agent. The regulations now provide for all this, but in very many cases they are not being followed.

Proper supervision will bring about a proper practice in this, as in other matters. We intend to refer again later to this necessity of closer contact between the Board of Grain Commissioners and the operators and patrons of country elevators.

Considered ideally, the special bin system seems to be somewhat different from what it is in practice to-day. There is no doubt that this contract, in its ideal form, means that the elevator operator may rent to the owner of the grain a bin in the elevator in which to store his grain; the operator guaranteeing to preserve the identity of this grain and to redeliver it in its entirety either at the elevator or in carload lots at a terminal. In order to preserve evidence of the identity of the grain a sample is drawn and put aside, to be used only in case of dispute. In order to settle disputes about the entirety of the grain, it is weighed on its way into the bin and the weight noted, and this weight is guaranteed by the elevator. But since grain in store is liable to shrink and there is necessarily some waste occasioned by the handling in and out, provision must be made for any loss which may reasonably be attributed to these causes. Consequently the contract provided originally that the elevator was to guarantee that the weight of the grain to be delivered would conform "as nearly as possible" to the weight taken in. Later the Board of Grain Commissioners modified this by regulation setting a definite allowance of $\frac{1}{2}$ of 1 per cent per bushel for waste and shrinkage. This allowance is now computed on a different basis according to a table of weights and bushels. The owner of the grain is entitled, on paying all charges, to have the whole of his grain delivered back to him. If on delivery it is found to correspond to the sample the assumption is that the identity of the grain has been preserved. If it is found to weigh at least as much as the weight guaranteed on the ticket, he can have no complaint against the elevator, any difference between the weight on the redelivery and the gross weight going in being attributed to waste and shrinkage. If it is found to weigh less than the guaranteed weight, the elevator operator must make good the difference, the presumption being that the loss in quantity occurred through failure on his part to preserve the quantity intact. Such a contract imposes a special duty on the elevator operator and makes special demands upon his storage space, and doubtless for these reasons the law does not compel him to receive grain on this basis. He is also allowed to charge more for this service than for the service performed in case of general storage. The farmer, on the other hand, might adopt this form of storage, not only in order to secure official inspection of his grain, but in case he wished to sell it for seed grain purposes, or upon a sample market—if one existed—or for some other purpose that would probably bring him a better price than it could command in general storage.

Such would appear to be the ideal behind the system of storing grain in special bin. The practice, however, has deviated considerably from the above outline. In the great majority of cases the farmer using a special bin merely wishes to obtain official inspection of his own grain out of the car at Winnipeg, and he is willing, if not anxious, to have the car go forward as soon as possible. On the other hand, the company does not consider itself as strictly accountable as the above outline would show. Hence a looser practice has grown up and the regulations have been framed to meet it. Upon a close examination of the actual practice we do not see a great superiority in this method of storing grain over the method provided by section 172 and regulations issued by the Board. Special binning, when no mistakes are made and no leakages between bins occur, does ensure the inspection of the actual grain, identity preserved. But we find that nearly all, if not all the companies, claim the right, as they put it, "to be protected in their weights," before they hand the grain back to the owner; and the regulations of the Board meet their requirements. This, of

course, is necessary where a carload is shipped forward out of a greater quantity in store, leaving part of the owner's grain still in the bin; but in practice it extends much further than that. A strict compliance with the special bin contract, as the Act itself no doubt intended it to be, is incompatible with the bin containing any surplus grain not belonging to the farmer. The essence of the contract is that the identity of the grain is to be preserved. We find, however, that each shipment out of a special bin is surrounded by precautions in the regulations which presuppose that some other grain than that of the owner may have got into the bin; grain belonging to the elevator itself or to some other shipper, the mix occurring through leakage or an accident in spouting, etc. And when the grain out of the special bin is found to weigh more than on shipment in, on account of a mixture, the elevator claims, and is allowed, the surplus and at the same time settles with the owner on the basis (which such facts show to be a false basis) of having preserved the identity of his grain. The weight set in the ticket is not considered to be a minimum guaranteed weight, but to be all that the owner of the grain has the right to receive in any event.

On the other hand, if the provisions of the law as set out in section 172 and the supplementary regulations are observed, as they can and ought to be observed, the owner is assured of a genuine sample of his grain being inspected by the official inspector and of obtaining settlement on that basis.

Special bin grain is shipped forward by the elevator to Winnipeg and the terminals in the same way as general storage grain whenever the elevator finds it necessary to make space. Section 164 of the Act has been interpreted by the companies, and apparently by all concerned, to give the elevator the right to do this. No doubt the owners in the great majority of cases are quite willing, if not just as anxious as the elevators, to have the grain go forward. Some, however, who discussed the question with us, seemed to be of the opinion that grain placed in a special bin was kept "out of the channels of trade" during the owner's pleasure, which is not the case; although the Act itself is perhaps susceptible of this interpretation. In fact the companies, generally speaking, have assumed their obligation under a special bin contract to be only to ship the grain with its identity preserved, barring mistakes or accidents, as far as Winnipeg for inspection.

In so far as dealing with the grain commercially is concerned, all stored grain, whether "special bin" or not, is in the same position in the hands of the company. We mention this to meet another suggestion made in favour of special binning, which the facts do not support. The Act, by section 227A, provides that the elevator company is merely the bailee of all grain stored with it and not its owner, and we find the following among the regulations of the Board of Grain Commissioners, approved by Order in Council:—

"No owner or operator of a country elevator or warehouse shall sell, assign, mortgage, pledge or hypothecate any grain stored in such elevator or warehouse, for which graded storage tickets or 'subject to grade and dockage' tickets have been issued, and the owner or operator may be required by the board to produce at any time proper registered warehouse receipts or bills of lading for such grain as has been shipped from the country elevator or warehouse, and for which there is still outstanding graded storage tickets or 'subject to grade and dockage' tickets or special bin tickets."

We recommend, therefore, that the practice of special binning be continued, as the Act now provides, in cases where the elevator agent and the farmer agree to enter into this form of contract; and that the practice of handling grain subject to grade and dockage be allowed also to continue, but only according to the intention of Section 172, when the farmer desires settlement on official inspection in preference to that offered by the elevator agent, and then only in strict compliance with the Act and the regulations.

LOADING PLATFORMS

The loading platform forms the alternative method of shipping grain from a country station to that provided by the country elevator. The farmer, who makes use of the platform, avoids the payment of elevator charges, and does not dispose of his wheat on a street price basis. On the other hand, he has to secure his own car and attend to its loading and shipping. The loading platform fills a useful purpose, and in our opinion the present provisions of the law, concerning them, are satisfactory, and we have no changes to suggest. The farmer who makes use of the loading platform will be affected, however, by the recommendations we make further on in this report, on the question of bulkheading, the time allowed for loading cars, etc.

SOME RAILWAY PROBLEMS

The matters with which we deal under this heading do not include the larger question of trade routes and freight rates. These are referred to elsewhere. At this point we merely describe the movement which now goes on of the crop on the railways, and deal with some of the matters that are incidental to all railway transportation.

Moving the crop from Western Canada is a transportation task of the highest magnitude. For a short period, all the resources of the railways are used to their highest capacity. The grain must be kept moving in a continuous flow from the country points to the terminals. We find no general complaint prevalent with regard to the manner in which this service is performed. When one considers the average crop harvested, the length of time occupied in threshing the grain, and the elevator facilities at the terminals to receive shipments, the railways appear to be keeping abreast of the growing seasonal demand for transportation facilities. It is estimated that 60 per cent of the cars employed in moving the crop lie idle during spring and summer. There have been no complaints of serious blockades due to the lack of railway service.

The Canadian Pacific Railway Company and the Canadian National Railways have each developed a very complete and careful organization to provide for the accumulation of grain cars at convenient points on their lines before the opening of the crop-moving season. These organizations are then carried through during the period of movement, and keep the cars directed day by day to those parts of the grain territory where shipments are available. For the crop movement of 1922-23, the Canadian Pacific Railway had available between 35,000 and 36,000 cars, and they unloaded during that season 105,000 cars of grain. For the crop year 1923-4, about 36,000 cars were available, and up to February 27, 1924, there had been unloaded in the neighbourhood of 147,000 cars. On September 25, 1922, the Canadian National Railways had 36,684 cars in service. On the same date in 1923, 40,071 cars were in service. For the crop year 1923-24, the Canadian National Railways up to February 6, 1924, had loaded 120,440 cars. During the last three years, the Canadian National Railways increased the numbers of cars in service by approximately 15,000. A general factor meaning an increase in facilities is the use of larger cars and heavier loadings. As an indication of this, it was pointed out by Mr. J. D. Fraser, assistant chief inspector for Canada, that in a given period of ten days in December, 1924, 25 per cent of all the cars of wheat inspected were overloaded as far as the inspection department was concerned. It is admitted that if these cars had been properly trimmed sampling for inspection in two-thirds of the instances could have taken place.

A difference of opinion may easily develop as to what constitutes a blockade or inadequate supply of cars. Taking into consideration the whole movement of the crop, both territorially and with respect to the element of time of

readiness to ship, the railway officials may feel that they are making a fair distribution. Any district, however, ready to ship, in its desire to get the crop away early, may demand a disproportionate car allotment, and not receiving as many cars as asked for, may allege that there is a blockade. If this occurs, shippers or elevator companies, who do not consider they have received an adequate supply of cars, have the privilege of appealing to the Board of Grain Commissioners. The Board has the right to enforce an equitable distribution of cars, and in order to relieve a situation that may be bad has the right to order the railways to place certain cars in certain territory out of turn. Likewise the Board of Railway Commissioners have wide powers to order facilities to be afforded to any district where there is danger of a serious blockade. In 1922 and 1923, the Canadian Pacific Railway received from the Board of Grain Commissioners four complaints with respect to an inadequate car supply, and from the Board of Railway Commissioners two complaints. For the crop year 1923-24, six complaints were received from the Board of Grain Commissioners and two from the Board of Railway Commissioners. On the basis of between seven and eight hundred stations to be supplied with cars, it is evident that complaints are comparatively rare, and that where complaints do arise, the law as it stands provides a method of dealing with them promptly.

CAR ORDER BOOK

To prevent discrimination in the distribution of cars allotted to each station, the Grain Act requires the railway companies to keep a car order book, in which applicants for cars shall make order. In addition, the act requires that the railway agent shall post in a conspicuous place a written notice signed by him, giving the date of application and the name of each applicant to whom on that date he has awarded cars for the loading of grain. Where there are more applications for cars than cars available, the order of distribution follows the order of application. These regulations are in the nature of a general safeguard against favouritism or discrimination. According to the evidence, the actual practice has been to compile a car order book in accord with the act where there has been a need for it, but when cars have been plentiful, it has not been considered necessary. The car order book is kept available if the shippers wish to use it. Mr. Cotterel, of the Canadian Pacific Railway stated that "in 1916, 1917, 1918, 1919 and 1920 and even 1921, when the crop was just an ordinary crop, the car supply was sufficient to take care of all points, and consequently there was no necessity for placing car order books in use in many of the points. It occasionally happened that they might use it, but as a general rule it was not in use." Where there has been a demand for a car order book, shippers have filed their applications and the book has been made up on that basis. Free access to this car order book has been given to all shippers, but the regulation requiring a written notice signed by the agent and posted in a conspicuous place, showing to whom the agent had allotted cars each day, does not appear to be observed. The practice of allowing free inspection of the car order book by all shippers appears to be a satisfactory one, and it would be well, we believe, to incorporate it in the Act in lieu of the present provision requiring the posting up of applications for cars.

In one instance, evidence was presented to the commission that the car order book had been "plugged" with fictitious names. Officials of the railways admitted that this occurs sometimes, but they pointed out that the station agent can hardly be expected to investigate the bona fides of each applicant for a car. Further regulations designed to prevent any irregularities in applications for cars might easily prove cumbersome and of little practical value. When a complaint is made to the Board of Grain Commissioners that there are irregularities in the car order book, the latter have asked the railway officials to investigate. If anything irregular is found, the railway agent cancels the

names in the car order book, and gives twenty-four hours notice to begin a new book. The law now provides penalties for offences in connection with applications for cars, and these should prove a sufficient deterrent. In a single instance mentioned where a railway agent was mentioned as having given cars out of turn, it was pointed out that he was discharged from the service of the company.

The act provides that in the allocation of cars at any shipping point, the elevator companies rank as shippers in the same way as individual farmers or other grain dealers shipping grain. We have already pointed out, in dealing with the subject of country elevators, why, in our opinion, a freer allotment of cars should be made to the elevator.

DEMURRAGE

The usual period allowed to load cars with goods is forty-eight hours. Grain is an exception to this rule, the time allowed being only twenty-four hours. This discrimination was made the subject of complaint by the traffic commissioner for the province of Alberta. Once a car load of grain is accumulated in an elevator, to spout it into a grain car is a simple and expeditious operation. The twenty-four hour rule does not cause hardship for shipments from elevators. It strikes at the farmer who uses the loading platform. It was contended that it was unfair that a rule should be enforced that singled out for discriminatory treatment one class of shippers, particularly as the grain shipped over the platform in most instances had to be hauled some distance to the loading point. Railway officials claimed that the rule was not strictly enforced, and that the number of instances where demurrage was assessed on the Canadian Pacific Railway was less than one-half of one per cent of the cars loaded over the platform in a movement of 8,240 cars.

It was contended that if the longer period were granted, it would slow up the movement of traffic. Evidence was given that the peak of the grain movement is over by December first. Between September first and December first, while the movement is in full tide, it is possible that some delay might be caused by granting a longer period than twenty-four hours for loading cars. During the remainder of the shipping season there are not such conditions of traffic congestion as to warrant discrimination in the time allowed to load cars between grain and other commodities. We are of the opinion that except for the months of September, October and November, forty-eight hours for loading grain into cars should be allowed before demurrage is assessed.

LEAKAGES

The problem of preventing loss to the farmers and to the carriers by the leakage of grain from cars in transit is important. The evidence of M. J. G. White, chief weighmaster for Canada, is that out of approximately 229,000 cars unloaded during the crop year of 1922-23, approximately 30,500 were reported to him as leaking. It was claimed by officials of the Canadian Pacific Railway that this number included 4,200 cars reported at different points on the line, and counted twice, but it was not made clear whether the figures presented by Mr. White were net figures. In any event, losses by leakages are sufficiently great to present a serious problem.

There are really two problems. In the first place, that of preventing the loss of the grain in transit, and, secondly, that of adjusting claims against the carriers, when leakage has taken place. Both railways inspect all cars, condition them where necessary, and card them as fit for grain before they are placed in service at the beginning of the season. Before grain is placed in a car, the car is again inspected by the local railway agent, and by the shipper. These precautions are taken to ensure that all cars leave for their destination in a proper condition, for holding grain. To prevent loss in transit, the cars are further

inspected at all divisional points. When leaks are discovered, repairs take place at once. Section men and station agents have general instructions upon detecting a grain car leaking in a passing train to take steps immediately to have the train stopped at the nearest station, where repairs will be made.

Leaks detected in the Winnipeg yards by the samplers of the inspection department are reported through the inspection department to the chief weighmaster. The railway officials and the shippers are also notified.

Definite government inspection for leakage is made in the yards when the trains arrive at the head of the lakes, and inspection is again made when the cars are delivered at the terminal elevators. It will be observed that government inspection is primarily to protect the shipper, and that precautions taken by the railways are primarily to protect themselves against claims for shortages. The railway companies have every incentive to reduce losses of this nature, since it means a reduction in the number of claims they must settle for shortages. Every possible precaution on their part seems to be taken at the present time.

When a leakage is detected by the inspection or weighing department, this information is transmitted to the chief weighmaster, and a report accompanies the official certificate sent to the shipper or shipper's agent. It is then possible for the shipper to press a claim against the railways for the amount of grain lost. Where a leak has occurred en route, however, and has been detected and repaired before the car reaches Winnipeg, it is possible that the shipment may go forward to the official weighman without the loss of grain being noticed by the government officials. The fact that there has been a loss is reported to the Freight Claims Agent of the railway, but is not known to the shipper or his agent. The shipper may be puzzled by the official out-turn of his car not coming up to expectation, but has no positive evidence to adduce as a reason.

Several suggestions were made with a view to eliminating loss to the farmer that might arise in this fashion. Some elevator companies paste a slip on the car door, stating the amount loaded into the car. If the official weight does not tally, an investigation is at once instituted for evidences of leakage or theft. Where the grain is loaded over the loading platform or is spouted into the car from the elevator without being weighed, all the information that can be given as to the contents of the car at the time of loading is the height of the load line. The chief weighmaster suggested that when leaks are reported by those conducting transportation to the Railway Claims Agent, they should also be reported to him. This suggestion was strongly opposed by counsel for the railways on the ground that it would be "simply an invitation to put in claims". The attitude of the railways appears to be that they are ready to pay claims for all losses that actually have occurred, but fear claims for amounts larger than have been lost. The situation is complicated by the absence of proof in many instances of the exact amount placed in a car.

An application to the Board of Railway Commissioners by the United Grain Growers' Company, a year ago, led to an arrangement being made by the Chairman of the Board, whereby the railways agreed to furnish any information they possessed of a car leaking, on an application being made by any person with an interest in the grain contained therein. At present, therefore, the situation is that if the outturn of a car is less than is expected, and there is no official notification of leakage in transit, the shipper or shipper's agent may apply to the railway for a report on the car. Their reply will show whether the car had leaked and had been repaired before reaching the terminals.

OTHER PROBLEMS

The question of bulkheading has been disposed of in connection with country elevators. The question of car order points, and of stop over privileges are part of the subject-matter of sample markets and interior public elevators, and will be dealt with accordingly.

PUBLIC AND TERMINAL ELEVATORS

Great difficulty arises in dealing with the subject now in hand, on account of the confused nomenclature found in the Canada Grain Act. We shall refer to this question again, later on, in dealing with "private" elevators. We recommend that care be taken on an early occasion to provide a suitable classification in the Act for the different types of elevators that receive grain after it has received official inspection. The matter is one of accurate draftsmanship, and we do not think it requires further elaboration by us here. We refer to it in order to point out the difficulty we find in identifying by a general name the class of elevators with which we now intend to deal.

Our reference under this heading is to the elevators (not private) at the head of the Lakes and at Vancouver, for instance, which appear to be more commonly known in the trade as "public terminals".

Although these elevators are of the greatest importance in the grain trade, on account of the nature of the service they render, and of the great quantities of grain which they handle, we find, as a result of our investigation, that we have little to say regarding their functioning. This, no doubt, speaks well for the method in which the operations of these houses are conducted. It is the duty of these elevators to receive all grain tendered to them for storage in a dry and suitable condition for warehousing, to clean it and to account for the screenings, to bin it according to grade, keeping each grade separate and unmixed, and to ship out equal quantities of the same grade when called upon to do so by the owner or his assignee.

There are four subjects which call for our attention in relation to these elevators.

CLEANING

This subject of cleaning is dealt with more fully under the heading of "cleaning and the disposition of screenings". We wish only to add here the recommendation that steps be taken to provide all of these elevators with sufficient cleaning apparatus. There seems to be a deficiency here, at least in some cases, which makes itself felt disadvantageously during the busier seasons. In different parts of this report, we shall have to refer to the great importance of all grain being shipped out commercially clean, and the first requisite for this end is, of course, the existence of adequate cleaning facilities. The matter is one for regulation and supervision, each elevator presenting a case for the consideration of the Board of Grain Commissioners.

MIXING

The identity of the grades of grain handled in the public elevators must be preserved. The rule against mixing is the fundamental rule governing the operation of these houses. We have no evidence whatever of any illegal mixing having been done. A practice exists, however, which is of a doubtful character and which requires explanation. The matter was brought to our attention by a charge of "mixing" which was made against the Government elevator at Port Arthur, operated by the Board of Grain Commissioners. An examination of the facts involved disclosed the following practice. In the process of cleaning and separating wheat, a certain quantity of the grain passes out in the screenings. The custom is to reclaim this grain from the screenings. Of necessity, the different grades of wheat are often cleaned simultaneously, and the screenings from all the cleaning machines are run into the one bin. It would be impracticable to keep separate the reclaimed wheat from the screenings of the different grades. As a result of the operation of cleaning and reclaiming, the bin in question is found to contain a quantity of wheat admittedly of a low grade.

A sample of this wheat, then on hand, was inspected by an expert for our information, and found to be of grade 5. As a rule, it cannot safely be said to be better than feed. But this wheat has come from all the various grades which have been cleaned. The custom in the Government elevator, and, we understand, it has been a general custom of the business, is to trickle a thin stream of this reclaimed wheat out into shipments from the bins containing the various grades, each grade being made to absorb a quantity proportionate to the quantity estimated to have come out of that grade in the cleaning.

The case presents a real difficulty. The grain run into the screenings must be recovered. It is commercial grain, and the elevator is responsible for it. It cannot be allowed to be shipped out in the screenings. Unless some means were adopted to turn it back into the grades, the elevator would find itself short. Admittedly, there is a weakness in the present practice, through the fact that the wheat thus turned back into the higher grades is of lower quality than the bulk of the grade. Bearing in mind, however, the comparatively small quantity of reclaimed grain handled, and the care taken in having it reabsorbed, we believe that whatever injury may occur is exceedingly slight, if not negligible.

When these facts were brought to our attention, the Board of Grain Commissioners undertook to investigate the practice further, with a view to seeing whether a better system could not be devised to take care of reclaimed grain. There is no doubt that it must be taken care of, to avoid shortages. We believe that the best thing to do is to allow the problem to be worked out by the Board.

WEIGHING

The weighing of grain into and out of the public terminal elevators, as well as the annual weigh-up of these houses, is conducted under the direction of Mr. J. G. White, the chief weighmaster to the Board of Grain Commissioners. We devoted some time to a study of the methods followed by the Chief Weighmaster, and in our opinion this branch of the service is operating most satisfactorily and efficiently. We have no recommendation to offer on this subject, except in so far as it is included in the general observations we shall make later on concerning the administration of the Canada Grain Act.

SUPERVISION

Section 95 of the Canada Grain Act provides that all grain in public terminals shall be binned and handled under the "direction, supervision and control" of an inspector. Subsections 1 and 2 of this section provide particularly as follows:—

"All grain stored as aforesaid shall be binned under the direction, supervision and control of the inspector, deputy inspector or inspecting officer. The inspector, deputy inspector or inspecting officer shall have full control of all grain in terminal elevators and no grain shall be shipped out of, transferred or removed from any terminal elevator without his supervision.

"2. The inspector shall keep the proper records of all grain received into store in any terminal elevator, which records shall show the particulars of each parcel or car-lot of grain received, the date received, the grade, the dockage, if any, and the number of the bin in which such grain has been stored; and he shall keep similar records of all grain shipped from any terminal elevator, which records shall also give the name of the vessel or the number of the car into which such grain has been delivered."

A question was raised before as to the degree of supervision which is in fact exercised over the operations of the elevators by virtue of the method approved by the Board of Grain Commissioners. We found that in lieu of the elaborate and constant form of supervision which the Act evidently calls for, a much simpler system has been followed, whereby the duty of the elevator

to preserve the identity of the different grades of grain and to account for the quantities handled is controlled by an annual weigh-up, and the registration and cancellation of warehouse receipts. We cannot better set out the reasons for the adoption of this system and the abandonment of the more complicated supervision called for by the Act than by citing a memorandum on the subject, prepared for our information by Dr. Robert Magill; now Secretary of the Winnipeg Grain Exchange, who was chairman of the Board of Grain Commissioners when the present practice was put into effect. Dr. Magill's memorandum is as follows:—

"The method of supervising the operation of public terminal elevators was taken up by the Board of Grain Commissioners shortly after it was created under the Act of 1912. The question arose because of the necessity of protecting shippers or owners of grain in the public warehouses.

"The board, at the same time, was considering the advisability of nationalizing the public elevators, and it decided to recommend to the Canadian Government that an elevator should be built and operated by the board as a public utility, and that, so far as the other elevators were concerned, the method of supervision should be made more effective.

"The system of supervision which the board found in operation at the time of its creation was based on bin records. Inspectors and their assistants endeavoured to keep records of all the grain shipped into each bin and of all the grain shipped out of each bin; and for each large terminal there were masses of bin records. Take a terminal of a capacity of from 3,000,000 bushels upwards; consider the quantity of grain put through such a house in twelve months, and imagine the masses of records of shipments into and out from those bins. Those records were useless to the Board of Grain Commissioners. They conveyed very little to the board, and in no way enable the board to exercise any control whatever over the operations of the houses. The board, consequently, after considerable investigation and deliberation decided to put in a different method of supervision consisting of, first, compulsory registration and cancellation of all warehouse receipts; and, second, an annual weigh-up.

"It is understood that the warehouse receipts showed the grades and quantities of grain received into the house; that the house was liable for those warehouse receipts and must honour them; that when these were registered with the proper details, there was a complete record of all the grain received into each public warehouse.

"Similarly, upon the shipment of grain, the warehouse receipt for the shipment was cancelled, with the result that at the end of the year the board could ascertain definitely and accurately all the quantities of all the grades received into and shipped from each house, could list any outstanding warehouse receipts, could weigh up whatever grain was left in the house, and in that way form an intelligent opinion upon the handling of the grain by each house, grade for grade.

"The system of bin records had been recommended, it had been honestly worked. It was found by the Board of Grain Commissioners to have been expensive, and to be useless; with the result that the other system of supervision was inaugurated.

"The object of the board was not to give protection or privilege to the public warehouses, but to give a more adequate protection to the public and to the shipper or owner of the grain.

"I should mention that a large elevator, handling a large quantity of grain is a complicated piece of machinery, and that control by means of bin records, to be anything near complete, would involve a very large expenditure; and in the opinion of the Grain Commission it was unworkable.

"Further, in the opinion of the Board of Grain Commissioners then, the principle of it was doubtful. At any time, if the grain offered to be loaded by the house was challenged, it was difficult to meet the reply of the elevator that the grain was put into the bin by Government officials. In the same connection, the effect of the charge was to place responsibility for the grades squarely upon the house. The result was that the older system of bin records was dropped, and what the board regarded as a more effective system of registration and annual weigh-up was inaugurated. It has been retained since."

There is no doubt of the impracticability of an actual step to step supervision of the operations of an elevator being carried on by inspectors. We are satisfied of this from our examination of the question. We believe, however, that the practice now followed by the Board, as above outlined, would be supplemented advantageously if the elevator were required to furnish to the Board a duplicate of all its records. We think that a system of closer contact could thus be worked out by an expert accountant on behalf of the Board, whereby the

Board could establish a more steady and constant supervision over the operations of the elevator. We think it desirable that steps be taken to establish this closer contact.

INTERIOR STORAGE ELEVATORS

These elevators are located at Calgary, Moose Jaw, Saskatoon and Edmonton. Certain of these elevators were built originally to meet car shortages. It was believed that the short haul to these centres would conserve the use of rolling stock and eliminate blockades in the country. The record shows that they have not been used extensively except when exceptional conditions have developed. Indeed, we were frequently asked why they were not being used to their fullest capacity. At Lethbridge, Macleod and Prince Albert it was urged that we should recommend that storage elevators should be located at these points.

Certain factors militate against the use of interior storage elevators by the farmers. When a farmer's car is ordered into an interior storage elevator it is inspected and graded as it goes in and is binned according to the grade placed upon it by the inspector. If the farmer thinks that he should have obtained a higher grade for his grain he cannot appeal for reinspection or survey, for the identity of his shipment has not been preserved. In practice shipping to an interior storage elevator means that the farmer relinquishes any hope of appeal if the grade placed upon his grain does not come up to expectation. This, he is loath to do, and hence he prefers to ship to the terminal, since his car, if properly loaded will be inspected before its destination is reached and he can make an appeal on the grade if he wishes to do so.

Placing grain in the interior storage elevators ordinarily involves additional handling. Ultimately the grain will have to be shipped forward to the terminals and placed in storage there. The shipper will have to bear the expense of duplicate handling and an additional railway charge for extra terminal services. Unless the grain is very dirty and a saving is made on freight charges through the removal of the dockage it does not pay the farmer to ship to the interior storage elevator. If it is very dirty there is some saving to the farmer in shipping it to the interior elevator to have it cleaned there.

For storage for a period of time while the farmer is awaiting a price at which he will sell, storage at interior points offers disadvantages. The grain is not in the best selling position. It is back too far from the terminal and the warehouse receipt is not deliverable in fulfilment of the ordinary contract made on the Winnipeg Grain Exchange. The grain for that purpose must be forward at the terminal. For all these reasons in an ordinary year interior storage elevators have difficulty in securing patronage. Moreover, it may be pointed out that the original reason of providing these elevators for meeting car shortages has disappeared to a considerable extent with the reorganization of the railway lines composing the Canadian National railways.

On the other hand these elevators are very useful when climatic conditions create anything of a blockade in handling grain, or where there is a large amount of wet or damp grain to be cleaned and dried. They are a resource to fall back upon under these conditions.

They also provide a local market place for buyers of coarse grains or screenings who wish to feed stock. This has its advantages particularly in years when ordinary feed is scarce and the farmers wish to obtain screenings, or again when the climatic conditions have caused a lot of the grain to be of very low grade.

As long as grain from Southern Alberta moves through Calgary to the Coast there does not seem to be any reason for building an additional storage elevator at Macleod or Lethbridge. Nor does the application for a storage elevator at

Prince Albert disclose any pressing reasons why the elevator at Saskatoon would not be sufficient for the district. It is possible that both in Southern Alberta and around Prince Albert, the growth of mixed farming, stock feeding, and future railway development might make storage elevators in these regions at some future date desirable.

THE GRADING OF GRAIN

Methods of grading

Grain of any particular kind has uses that are peculiar to itself. Wheat for flour making, durum for semolina, oats for oatmeal, barley for malting or pearling, flax for oil, and both oats and barley for feeds for stock, all depend for their market values upon three chief characteristics—quality, condition and admixtures. The miller's chief concern about wheat is again of threefold nature—yield of flour and offals, quality of flour and offals, and cost to clean and prepare the wheat for the mill. We are in the habit of thinking of wheat in bulk—wagon-loads, carloads, cargoes and in millions of bushels. But wheat, no matter in how large quantities we consider it, is made up of single berries, and the value of the mass depends upon the kind, quality and condition of these small units together with their freedom from matter other than wheat. The same is true in respect to other grains.

In connection with organized produce markets, there has grown up gradually a system of grading or classification of grains in order to facilitate both home and international trading. The flowing properties of grain have been taken advantage of, and at every point along the line from the thresher to the consumer, where possible, grain is made to flow in a stream. This feature, in connection with Canada's grain marketing system, makes grading an absolute necessity. Consumers—millers, etc.—for the purpose of purchasing ahead at what they may consider an advantageous time or price, can do so only if there are some definite standards of quality, backed up by certificates or warehouse receipts upon which they can rely. If the standards are not reliable, the miller or merchant, or both, will buy on wide margins to the disadvantage of the producer of superior quality grain.

Canada and the United States are the only two grain exporting countries whose marketing is based upon grading systems. The United States had several grading systems. Each grain-growing state had one of its own, put into operation first by a board of trade or exchange, and later by the State. And then, at each port of discharge, another standard was established to suit the exporter. Different ports had different standards. The millers and importers in the receiving countries protested vigorously against this system. It worked hardships upon them, and also upon the producer of the grain. The United States now has a federal system for interstate and international trading, which is having a beneficial effect upon the grain business of the country as a whole. Canada has one national system, adapted to take care of the variety of grades occasioned by climatic and other conditions.

FIXING STANDARDS

The standards for the principal grades of grain for export should be such as will permit of the admission of large quantities within the grade, in order that it may be handled economically in bulk, through terminals, transfer houses and in cargoes. At the same time, the quality of the grade must be maintained at a fixed standard of excellence. The standard of a grade might be fixed so high that a cargo could not be accumulated, or the amount represented by it would be so small that the trade could not care for it, owing to its irregularity

on the market. If, for any reason, the lower line of the grade should be depressed too far, then the average quality of the grade would be lowered. This would result in a lowering of the price and a loss to the producer of superior grain out of all proportion to the gain secured to the producer of the inferior grain. It is necessary that the standards of the various grades, especially those of the good grain, such as Canada's Nos. 1, 2 and 3 Northern, be carefully defined, in order that as little injustice as possible be done to the producers.

In order that trading on grades may be carried on with consequent gain to both producer and consumer, the grades must be as nearly uniform as possible throughout the year, and the same this year as the preceding one. The consumer must have absolute confidence in the system, and in the manner in which the grading is carried out. Reliability will result in purchases being made on the closest possible margins, owing to the removal of much of the element of risk. This benefits the producer.

The nearer the grading is done to the source of supply—the wheat fields—consistent with efficiency, economy and accuracy, the more satisfactory the system is to both the consumer and the producer. The Old Country buyer, especially the miller, has learned through experience to be much concerned about the quality of his shipments, especially if they are subject to two gradings. As an example, take Duluth shipments of hard, red, spring wheats from the prairie states some years ago. Confidence became established in the State system of grading, but the English buyer was much disturbed over what might happen to Duluth wheat after it reached Buffalo and Atlantic ports.

Britain has three methods of buying wheat on contract, viz:—

- (1) Official certificate of inspection to be final as to quality;
- (2) of fair average quality of the season's shipments at time and place of shipment;
- (3) about as per sample.

Canadian wheat is sold almost entirely on the Certificate Final. Small amounts are sold on sample. The Argentine and Australian crops are sold largely on the f.a.q. (fair average quality) plan, which means that samples of the crop are taken at the port of discharge. These are kept over a period of perhaps a month and an average sample drawn. A given weight per bushel is arrived at, and specified in the contract. When the shipment arrives, say at Liverpool, samples are taken, and in most cases arbitration awards are made by a committee appointed for that purpose by the Corn Trade Association in the interests both of the buyer and seller.

When grain is sold at "about as per sample," a sample is sent ahead by the shipper. The receiver, after examining it for the purpose of ascertaining its value, seals the package and keeps it for comparison when the cargo arrives. Wheat purchased by this method, too, is subject to arbitration. Most shippers in Canada and the United States prefer the first plan, as it is felt that it is more economical, less cumbersome, and causes less delay. They claim that the arbitration method is just the opposite in these respects, and in addition that when an award is made, the shipper usually stands to lose.

On the other hand, the miller in the Old Country claims that the arbitration method ensures him a fair settlement, but that the first method is more expeditious and economical. This constitutes a very strong argument in favour of uniform standards that can be maintained, to the end that the confidence of the consumer may be established and retained in the matter of the reliability of a grading system. According to evidence gathered in the British Isles and Holland, Canada's grading system is the most reliable so far as grains arriving on those markets are concerned. The producers in some competing wheat-exporting countries, suffer owing to the careless method, or complete lack of

method, in grading and marketing the wheat crop. India is the worst offender, and probably Russia next. India's wheat, especially that from the port of Kurachi, is paid for only on the cleaned, analysed sample, and so is Russia's. Every cargo is sampled and the rubbish separated, sometimes to the extent of 20 per cent, in the case of Kurachi, when it arrives in England. Argentine's grading is not what it should be, but is gradually being put upon a higher standard to the benefit of the producer. Australia has a very clean white wheat, but her grading is not such as commends itself to the English miller. This results in a hardship on the producer.

Canada's grading system.

Canada's grading system was established under Act of Parliament and is defined in the Canada Grain Act of 1912. It is provided that every carload of grain passing through Winnipeg shall be stopped, opened, sampled, inspected and officially graded by the inspection department, which is maintained for that purpose. Arrangements have been made for inspecting all cars of grain arriving at the interior terminals—Moose Jaw, Saskatoon, Edmonton and Calgary, and at inland mills. All cars whose destination is Vancouver are inspected in the yards as they pass through Calgary and Edmonton. When cars are too full to be inspected at Winnipeg, Calgary or Edmonton, provision is made to have them done on arrival at the ports, either at unloading or in the terminals. In addition to this, there is inspection of grain in both carload and cargoes out of public and private terminals at Fort William and Port Arthur and Vancouver. This will be discussed more fully in another part of this report.

Wheat Grades.

The flourmaking spring wheat of the Canadian prairies is, at present, divided into five classes, as follows:—

- (1) The sound wheat which falls into what are called the statutory grades, No. 1 hard, Nos. 1, 2 and 3 Northern;
- (2) Such wheat as is affected by climatic conditions which vary from year to year. These fall into what are termed commercial grades that are set every year by a Standards Board provided for in the Canada Grain Act. These grades are called Nos. 4, 5 and 6 Northern, and feed, and sometimes because of peculiar conditions such as rust, hot winds at ripening, etc., additional grades are set, called Nos. 4, 5 and 6 Special.
- (3) All wheat that is unsound, musty, dirty, smutty or sprouted; or that contains a large admixture of other kinds of grain, seeds or wild oats; or that, for any cause, is not fit to be classed under one of the recognized grades, is called "Rejected."
- (4) Wheat that is in a heating condition or badly bin-burnt, regardless of the grade it might otherwise be, is called "condemned."
- (5) All good wheat that is excessively moist and therefore unfit for warehousing, is called "No grade."

The Canada Grain Act provides for grading all kinds of grain according to the above classes, and the grades are specified for each kind.

While the grading of Canadian grains is done on bulk carloads or part carload lots, the actual inspection is made of a sample weighing $2\frac{3}{4}$ to 3 pounds, in the case of wheat, which has been taken from the bulk in such a manner as to be as nearly representative of the mass as possible. If, from any cause, it should happen that the sample failed to represent the lot—either superior or inferior to it—then it follows that the grade for the lot will be wrong.

During the sittings of the Commission, we heard much about the grading of grain. It was natural that we should, for the price to the farmer varies

according to the grade, and the miller's profits depend in large measure upon it. The difference in price between one and two Northern is about 3 cents, and between two and three Northern about 4 cents, and so on down the grades, depending upon the factors that affect the spreads. The complaints were made against (1) the specifications of the grades, (2) the taking of samples at Winnipeg, (3) the grading, and (4) setting dockage.

As to the specifications, it was pointed out that the definitions of the statutory grades in the Grain Act, Section 107, were not clear and that they should be defined so as to make them easily understood by all who have to do with them, farmers, country buyers, the inspectors and the trade generally. As an example, take the definition of No. 1 northern wheat, which reads as follows: "No. 1 Manitoba northern wheat should be sound and well cleaned, weighing not less than 60 pounds to the bushel, and shall be composed of 60 per cent of hard Red Fife wheat." What is "sound" wheat? Is bran frosted wheat sound? Is slightly bleached wheat sound? Is wheat that has just started to sprout sound? And so the questions might be multiplied. Sound should be clearly defined for the purpose of the Act. And again, what is the meaning of "well cleaned"? How clean shall wheat be to be "well cleaned"? Does it mean that it shall be free from all admixtures of whatever kind, and fit to go to the rolls in the mill? Or is it to be only commercially clean, and, if so, what degree of cleanness shall it be? Or does well cleaned mean that it shall be free or nearly free from other grains such as barley, rye and oats? And what may the 40 per cent other than the 60 per cent of hard Red Fife wheat consist of? May it be soft wheats, white wheats, other varieties of wheats, durum wheats, or what must it be? And what degree of moisture may it contain to be fit for warehousing?

And then, No. 3 Manitoba northern is puzzling. According to the Act, "Any wheat not good enough to be graded as No. 2 northern shall be graded No. 3 Manitoba northern in the discretion of the inspector. This is known as the inspector's grade, and it varies from year to year; too much, it is thought by both producers and millers. It was suggested that it should be more clearly defined. And so with the grades of other grains.

There were those who complained that wheat that was No. 1 Northern at the opening of the season should not lose a grade, or more often two grades, for having lost its colour through exposure to rain, snow, etc.; that colour was given too important a place in determining the grade of wheat; that sprouted and slightly frosted kernels, and kernels discoloured or shrunken by disease should not be so severely discriminated against. Some claimed that weight should count for more than colour and that it should have more importance attached to it than at present. What is the significance of colour in hard spring wheat?

Complaints were made that the samples of grain on which the grading is done were not taken properly from a load, and that often the car was not sampled at all, but that other grain was substituted. This criticism applies to Winnipeg and other inspection points. It was said that if a car door were hard to open, the car would be passed up; that time was not taken to probe the car, but a sample skimmed off the top where light grain and screenings had accumulated through the shaking of the car on its journey from the country point. It was claimed that because much sampling had to be done at night, proper samples could not be taken from a large percentage of the crop. It was felt by some that the men doing this work were underpaid, and that not enough care was taken in the selection and supervision of the samplers. It was urged, too, that the sampling could not be done properly in the many cars that are filled too high for a sampler to work in. There appeared to be fairly wide distrust in respect to the sampling of cars.

The complaints against grading were many and varied. Numerous cases of what appeared to be bad judgment on the part of the inspectors were cited, and strange to say the severest criticism of the inspection department came from the producers in Manitoba, not from those in Saskatchewan and Alberta, who are farther away. Too often the inspection department was linked up with the grain exchange, and referred to as if they were one and the same institution. The producer seemed to feel that the inspection department was operating in a manner against his best interests.

And similar complaints were made in respect to the setting of dockage. Cases were cited where dockage had been set too high, and again where it was too low, to prove that the sampling and the inspection were not properly done.

It was felt by witnesses in Saskatchewan and Alberta that their distance from the inspection point operated severely against them in the matter of cars too full for sampling at Winnipeg, that had to be sent to the head of the Lakes for sampling and inspection. Before word could get to them of the grade, the car would be unloaded, the identity of the grain lost, and no possible chance for re-inspection or for making an appeal. It was suggested that some system might be adopted to permit of cars being sampled as they passed through points like Moose Jaw, Saskatoon, Watrous, etc., and the samples sent to Winnipeg, or inspected locally by a branch of the department that might be set up to take care of this work. In this connection, it was thought that in case there became a demand for quantities of high protein wheat this would facilitate the securing of samples for making the necessary tests before the cars reached Winnipeg. It was very evident that the producers are aware of the importance of the sample in connection with grading, and are anxious to have this part of the work done in such a way as will insure justice being done to the carload or cargo, as the case may be.

In order to afford greater protection in this respect, it was proposed that a duplicate system of sampling be substituted for the present one. Commission men and others interested would have access to one set of samples, and the inspection department the other for the purpose of fixing the official grade and dockage. In case the grade and dockage were not satisfactory, attention could be called quickly to the apparent error, and re-inspection could be asked for at the head of the Lakes or other terminal point. The main purpose of this duplicate system was to allay suspicion in the minds of the producers; to establish confidence in the manner in which the sampling is done, to ensure the greatest possible degree of care and accuracy in the taking of the samples and in grading.

The actual work of grading was complained against. The feeling was expressed quite commonly that the grading was done to favour some one other than the producers of the grain. It was felt that the grading was too severe, especially on bleached, sprouted and otherwise slightly damaged wheat. It was not easy for the producer to understand why certain causes should produce deterioration, and the grading officials were the ones who had to take the blame. There was no charge of dishonesty, but the thought expressed was that their proximity to the grain exchange, and their remoteness from the producer affected their judgment, to the advantage of the buyers of grain.

The moisture content of grain was a subject that brought forth a good deal of criticism, especially in the northern part of the grain belt, in connection with both wheat and oats. It was felt that the moisture limitations were too low and too rigid, and some lack of confidence in the testing for moisture was expressed. Emphasis was laid upon the matter of having this and other questions in respect to the condition and milling qualities of grain made the subjects of thorough scientific investigation, in order to enable those in charge to establish, if possible, a system of grading, that will more nearly meet the

conditions of grain production and marketing over so large an area as the three prairie provinces. Protein content and quality of gluten, moisture determination and moisture content for safe warehousing, bleached wheat and wheat damaged by disease and frost were specially mentioned subjects for investigation.

There were complaints, too, that the grading through Calgary and Edmonton was more severe—that higher standards were set—than at Winnipeg, and this operated to the disadvantage of the producer and against the port of Vancouver, by sending grain east, where it was claimed the grading was easier.

Complaints were made also against the grading and setting of dockage at country points by country elevator operators. This, of course, is not official grading, but it is the basis upon which about 50 per cent of the grain is bought at primary markets from the farmers who sell their grain by the wagon-load as "street grain." Evidence showed that country elevator operators grade high and dock heavy, or grade low and dock light according as they require to use these devices for winning the favour of a customer.

The principle upon which the official grading of Canadian grains is based is that once a parcel of grain is given a grade, there shall be no alteration of that grade. But we heard many complaints from the millers of Eastern Canada at Montreal and Toronto, that would indicate that this principle does not hold. Both wheat and oats have been delivered to them on Canadian Certificate Final that were inferior and below the grade purchased and below the grade specified on the certificate. The moisture content was above the average, the screenings amounted at times to as high as $1\frac{3}{4}$ per cent and the wheat itself was inferior in quality, owing to the presence of frosted, bleached and sprouted berries.

And the millers of the Old Country made similar complaints, viz.—that one, two and three northern wheats from all Atlantic ports are not as good as they were pre-war. Moisture is higher, yield of flour is less and quality of gluten is lower. Especially is the quality of the wheat lower on receipts from January to July, as compared with October to December. Mr. Kennedy, wheat buyer for the Washburn Crosby Milling Company of Buffalo, in his evidence before us, cited three instances within a short period, where the grading out of Fort William was too low. The first case was a cargo on SS. *W. P. Snyder*, 300,000 bushel, No. 1 northern, bought C.I.F. Buffalo. It was left in store till March and when unloaded out, there was some No. 1 Northern, some 3 Northern,—an average between 2 and 3 Northern. The second was a cargo of No. 3 Northern on SS. *Pollock*, August, 1922. It turned out to be 4 tough and 4 northern. The company took this case to the courts fraud was proved and they were allowed \$38,000 damages. The third case occurred October 9, 1923. The company's agent called for reinspection on a part cargo of 50,000 bushels No. 3 northern on SS. *Grand Island*, and was allowed 1 per cent dockage, which meant a difference of \$500 in the company's favour. Mr. Kennedy thought the inspection out was at fault. He claimed that the moisture content was increasing, and would ultimately have the effect of depressing the price on better grades of wheat.

The opinions expressed and the evidence adduced before us indicates something of the measure of importance that attaches to the inspection and grading department that passes upon the Western Canada grain crop. The welfare of the producer is inseparably bound up with the miller in home and foreign countries. Theo. D. Hammatt, in *Foreign Affairs*, September 15, 1924, says: "Canada's foreign markets are all important to her as the quantity of wheat she must sell abroad far exceeds the amount she consumes at home. In 1922-23, eighty-five per cent of her wheat crop was exported as grain and flour." The confidence of the foreign customer must be maintained, and the responsibility for doing this is placed upon Canada's Chief Inspector of grain in Winnipeg. Can he measure up to this task under present conditions?

After hearing the complaints against sampling and grading, we examined carefully into every detail of the system in Winnipeg, Fort William, Port Arthur and at other points. At Winnipeg, we went to the Canadian Pacific Railway yards, saw the facilities for sampling the cars, and saw the crews at work, taking the samples, identifying, lifting, collecting, recording, checking off and packing in boxes to be transferred to the inspection room.

At the entrance to the railway yards, there is a small building situated not far from the yard office of the railway company. It is known as the yard office of the inspection department. A superintendent has charge of it, and is responsible for the work of sampling the cars of grain on the arrival trains. He has under him foremen, samplers, seal-breakers and door-openers, clerks and carriers for bringing in the samples.

When a train arrives in the yard, a clerk goes to the yard office of the railway company, and, from the conductor's papers, makes out a train list for the samplers, showing train, number of cars—full and empty,—time of arrival, date, and name of conductor, in addition to initials and number of car, contents, origin, destination. With this list, the sampling crew, consisting of a foreman, a seal-breaker and door-opener (in charge of the train list), and two samplers proceeds to the head of the train and starts work. The seal is broken, and the door opened by means of a steel bar by one of the crew, whose business it is to do it.

The sampler, with the aid of a ladder, enters over the grain door, levels off the grain near it, and spreads across a canvas about 30 inches wide and 66 inches long. He has an implement called a probe. It consists of two brass tubes, one fitting securely within the other. The outside tube is finished with a cone-shaped point an inch and a half long. In the tube there are eleven compartments, $3\frac{1}{2}$ inches in length and $\frac{3}{4}$ -inch in width, with a separation of $2\frac{1}{2}$ inches between each. The probe is 63 inches in length from the point to the top of the eleventh opening. A handle is fitted on the end of the inner tube, so that it may be turned, to close and open the compartments. The total length of the tester is 69 inches.

The sampler has instructions to take seven probes from a car of wheat, and nine from oats, in such places as will reveal the quality of the grain and the condition of the load. The probe must be closed and driven as nearly straight down as possible to the bottom of the car, the handle turned to open and allow the compartments to fill with grain, closed, and withdrawn. He empties the contents on the sheet at the door, handle to the left, and so on till seven probes have been taken in various parts of the car. The sampler, in addition to the probes, measures the height of the grain in the car at highest, lowest and average points, and notes whether there are indications of leaks.

In the meantime, the foreman—lifter—is making a record of the initials and number of the car on a small piece of cardboard—"chip"—5 inches long and about $1\frac{1}{2}$ inches wide. He climbs the ladder in time to see at least two of the probes being taken. He examines the probes separately and then mixes all carefully, and fills a bag with $2\frac{1}{2}$ to 3 pounds of wheat, making sure that it is representative of the car load. He then completes filling in the "chip", which now has at the top the car initials and number, and below this the date. Near the bottom, he draws a line to indicate the load line, and marks on it the depth in inches. If the car is unevenly loaded, this line will show it. The initials or name of the sampler are placed on the bottom of the card, and the name of the foreman is written on the back.

All particulars in respect to the carload of grain are on the face of the card, which is now shoved down into the bag and the mouth of the bag closed by means of a loop string. The bag is hung on a bolt head on the outside of the car. Each car is treated similarly. In case a car door cannot be entered on one side, the door opposite will be opened. Frequently it happens now that cars, especially oats and flax, are filled too full for the sampler to take the required

number of probes. In such cases, he takes as many full good probes as possible, and indicates the number on the card as "hold full, 5 good". In case a car is so full that the sampler cannot enter, he pushes the probe in from the ladder, and marks on the card, "hold full, ladder sample", with depth of grain in car.

It happens now and again that a "plugged" car arrives in the yards. A "plug" in this sense is a portion of inferior grain or screenings buried in some unsuspected place in the car, and covered with good grain. The sampler probes every car as if it were plugged and if he discovers one, he must take enough probes to arrive at the length and depth and width of the plug. This must be indicated on the ticket. In the case of a plugged car, three composite samples must be taken and preserved for inspection—one of the good grain, one of the plug and one of the average of good grain and plug.

When the car opener has completed the opening of all the grain cars, he returns to the head end of the train. He carries with him a set of seals, numbered serially. He closes the doors in the order of the appearance of the cars on his list, and seals them. The bags are picked up by a carrier, and taken to the inspection yard office.

The bags are set upright on a table, and the ticket pulled up about $\frac{1}{2}$ its length, so as to expose the car initials and number. A clerk reads the initials and number on the office train list, and a sampler checks off each ticket to make sure that a sample has been obtained from every grain car in the train, and to ensure against errors. The ticket is left exposed.

The clerk then fills in a large sheet from the train list, giving the car initials and number, the point of shipment, the destination and the name of the party to whose order the certificate is to be made out. Underneath this sheet, and separated from it by a carbon copy is a similar sheet on which is copied only the car initials and number. When this is done, the bags are checked off with these lists, the tickets pushed down into the grain, the mouth of the bag closed with the loop string, and the bags placed standing in a heavy wooden box that will hold 23. Each box is numbered. The lid is closed, but not locked. The boxes and lists (each list containing space for 43 cars) are collected morning and afternoon, and transported by dray to the inspection department in the Grain Exchange building in the city. The lists are delivered to the office, and the boxes to the inspection room. The deputy who is to inspect and grade the contents of a box is handed the carbon list, giving only the car initials and number. In the proper columns he will enter as soon as they are ascertained the weight per measured bushel, the grade, dockage and the depth of the grain in the car, and remarks as to evidences of leakages, if such are present.

We have outlined the method of sampling in the yards, identifying and recording the samples, preserving their identity, transporting and placing them in the hands of the deputy inspector, thus in detail to show with what care the system has been worked out by the department, in order that a sample as nearly representative as possible of the carload may be obtained, and that the ownership and other particulars as to the grain be unknown to the samplers and to the deputy inspector. We went to the railway yards, and saw every detail of the work carried out, and we employed a detective for some time to watch the work of sampling, to discover, if possible, any weaknesses in the system.

The actual work of making the probes in a car of grain is not easy. It requires a young, strong, active man of medium stature, who can accommodate himself easily in the small space between the top of the grain and the hoof of the car. It requires strength to push the probe to the bottom of the car. In addition, the man must be thoroughly honest and reliable. Any failures in the workings of the system are due entirely to the failure of the man. The evidence shows that now and again a man has proved unfaithful to his trust, usually through sheer laziness. Instead of making the stabs vertically, he would make them in the easy way through the unpacked grain.

No case of a sampler having been approached to substitute samples or anything of the sort was brought to our notice. Only a very limited number out of the many who have been employed have been dismissed for cause. It may be pointed out here, that it is from the ranks of the samplers that the promotions in the service take place. The present chief inspector and the assistant chief inspector were at one time employed in this capacity.

Inasmuch as the sample is the keystone of the arch of Canada's grain grading system, we cannot urge too strongly the importance of having in the employ of the inspection department a thoroughly honourable and capable staff in the sampling branch of this work. The confidence of the producer and of the purchaser of the grains in the sampling must be established and maintained. The condition of employment and service, and the nature of the work are such as render it impossible for any but those in immediate charge of the work to select men for the positions or to lay down conditions under which they must work. The salaries must be such as will attract men of character and responsibility. The conditions under which the men work are often very trying. They go on in shifts of eight hours each, and the work is carried on continuously, 24 hours a day, 7 days a week, and 52 weeks a year. The men must go about their work in winter and summer, in cold and darkness, and must be trusted at all times to produce a sample that can be relied upon.

It was proposed to us that a duplicate sample system should be set up to act as a check and a safeguard. We are unable to make such a recommendation. The duplicate sample would have to be made by men who would be subject to the same errors or misdemeanours as those who are now doing the work. In case of a discrepancy, it would be a question as to who had made the slip. It was urged that in case a discrepancy were discovered at Winnipeg, an appeal for a reinspection could be made in time to have the car sampled at Fort William. Again, it is pointed out that at present, when a car arrives at Fort William, notice is there in advance as to the grade the grain has received at Winnipeg. The deputy in charge of unloading scrutinizes the contents carefully to see that no mistake has been made. A duplicate system would only cause unnecessary delays, create confusion, and add to the expense without effecting improvement.

Hold full cars.

The railway companies have, during recent years, not only increased the size of grain cars, but they have strengthened their construction so that they may be loaded much higher than was possible a few years ago. This, together with uneven filling by elevator operators has made it impossible for the samplers to take probes in many of the cars arriving in the yards. From the first to the tenth of December, 1923, "hold full" cars arrived in the Winnipeg yards as follows: —

	Canadian Pacific Railway. Per cent.	Canadian Northern Railway. Per cent.
Wheat..	32	18
Oats..	41	37
Barley..	33	28
Rye..	24	23
Flax..	26	18

As was explained above, the sampler takes the best probes he can, and a provisional certificate is issued in Winnipeg. But the car goes on to Fort William, and there a sample is secured either when the contents are running from the car to the pit, or when the grain is running on the belt. On this sample, the final inspection is made. In case the inspector at Fort William thinks the grade should be changed, the provisional certificate issued at Winnipeg will be destroyed and a new one made out. If there is no change made in the grade, the provisional certificate stands, and settlement is made on it. In case the

grade at Winnipeg is not satisfactory to the owner of the grain such a carload may be "special binned" until an appeal or survey has been made.

These "hold full" cars give rise to some complaints on the part of owners who live long distances from Winnipeg. They hold that they do not receive word as to the grade or condition of such a car until it has passed on into the bins of the terminals, when in case of dissatisfaction it is too late to call for reinspection. It should be pointed out in this connection, that the number of "hold full" cars could be reduced to one-third their number; if those who fill would "trim"—level—them off properly. It is the business of the commission man handling the car to look strictly after the interests of his client. We were told that this is done. The shipper can take additional precautions by noting, on his instructions to his agent, the grade and dockage he thinks he should be assessed. He may order the car load special binned in the terminal, to enable him to make an appeal in case his expectations are not reached in the matter of grade.

Sampling cargoes.

When grain is loaded into boats or cars from terminal elevators, there is what is known as "inspection out". In order to make this inspection a sample of the lot, whether it be 1,000 bu. or 50,000 bu., must be taken. If the grain is being loaded out of a public terminal, the grain is sampled twice—once on the belt as it is running from the bins to the shipping bin, and again as it is running from the spout into the hold of the ship. A sampler stands on the deck of the vessel with a pail and a dipper. With the dipper he catches portions from the stream at short intervals, and empties them in the pail. They are examined frequently enough to ensure that the grade specified is being loaded. In the case of private terminals, only one sample is collected, viz.—that on the deck of the vessel from the stream running into the hold just as in the case of the public terminal, except that in addition to inspection, the grade of the cargo is set on the sample so collected just as is done in the case of car lots at an initial inspection and grading point such as Winnipeg, Calgary, etc.

INSPECTION, GRADING AND SETTING DOCKAGE

The Inspection Staff comprises a chief inspector, and assistant chief inspector, first deputy inspector and twelve to twenty deputies. The deputies do the actual work of inspecting and grading the samples. The first deputy and the assistant chief inspector act as supervisors and give such assistance as is necessary. The chief inspector has direction of all the service and the responsibility for the grading of Canada's grain crop rests upon him. He makes up standard samples of the various grades of grain as soon as possible each season for the use of the inspection office and for foreign buyers. All appeals for re-inspection are made to him and his assistant. In addition to this staff there is a Survey Board—a court of last appeal on inspection and grade. This will be dealt with later.

The inspection is done in a long room with ample window space along the north side. The deputy receives his box of samples and the corresponding sheet giving the car initials and numbers. He sets his samples out in order on the table facing the window.

Weight per bushel.

The weight per measured bushel is arrived at by taking a portion of the uncleaned sample and weighing it in a regulation tester. The weight is written on the pastboard ticket that accompanied the sample from the car. The uncleaned sample is used so that in case a claim should be set up for any cause this information would be available. If the weight should later be an important factor in establishing the grade it would be taken on a cleaned sample.

Setting the Dockage.

Dockage is the amount of foreign material that must be removed from grain to render it "commercially clean". In order to arrive at the dockage the deputy weighs out 500 drachms from the sample and cleans it by means of various devices—"kicker" for wild oats and sieves of various sizes. A "kicker" is a machine consisting of a number of slanting screens, one below the other, within a wooden frame, so arranged that they can be agitated by the turning of a crank. The sample is fed into the top of the machine, the crank is turned, and the grain in sliding over the screens is separated, the oats being spouted off into one pan and the other grain flowing through another spout into another pan. The holes in the sieves are of such sizes and shapes that other material, cracked wheat, buckwheat and other seeds may be separated by shaking the grain in them one after another. The total screenings are weighed in the scale, the beam of which is so graduated that the percentage can easily be arrived at. The percentage of dockage is indicated in its column on the deputy's sheet.

Inspecting and Grading.

On a large sheet of brown paper placed on the table before the window the sample is divided into nearly equal parts, one part has been cleaned for the purpose of setting the dockage and for fixing the grade. This portion is spread out on the half of the sheet immediately in front of the deputy and the other half of the sample on the back part nearer the window. The inspecting is done on the cleaned grain. The wheat will fall into one of the five main classes described in a preceding paragraph. In coming to a decision as to what grade shall be given he must make observations that will give him information as to its quality, condition and admixtures (other grains and material that cannot be easily separated).

Quality to the miller means strength and yield of flour with whiteness, bloom and flavour. To the deputy there must be some visible signs of this quality. They are weight, soundness, colour, brightness, plumpness, thinness of bran, freedom from odours and particles of smut. The deputy must carry in his mind accurate standards as to these attributes. Colour alone may make a difference of several grades. He handles the grain to judge of its condition whether it is dry, tough or damp. It must be fit to warehouse. If he is in doubt as to the moisture content and wishes to confirm his judgment he asks to have a test made. This is done by means of a sensitive apparatus that is in use in the United States inspection department as well as in Canada. The admixtures can be easily detected by the eye. If the case is at all in doubt as to these he mixes the sample well, takes out a portion and makes a count. On these observations he bases his judgment and fixes the grade. He records it in its proper column on his sheet.

Now in case he is in doubt about the grade he should place upon it he may refer (1) to a standard sample of the minimum (as nearly as possible), of the grade kept in a tin box on the window in front of him (2) to another deputy (3) to the first deputy or to the assistant chief inspector. All of this must be done quickly.

During most of the rush season the light for inspecting grain is suitable only between the hours of 8 a.m. and 5 p.m. and for quite a period from 9 a.m. to 3.30 or 4 p.m. Carloads are passing through Winnipeg at the rate of over 2,000 a day. A deputy with a helper, can inspect about 200 to 250 cars per day. The evidence is that all "line" samples of grain, that is, grain that might, in the opinion of the deputy, be just at the top of one grade or at the bottom of the next grade above is given the benefit of the doubt and placed in the higher grade. If there were a high proportion of such cars this would have a depressing effect upon the average standard of quality of the higher grade. But the fact is that the grain is given the benefit of the doubt without exception.

When the grade has been finally fixed and recorded, the grain and screenings are thoroughly mixed and put in a tin box with the pasteboard ticket that has followed the sample from the car. In a slot in the end of the box a card is placed bearing the date and the grade, car initials and number. This box is filed away in the sample room for reference. When the deputy has completed the last of the samples and recorded his findings on the sheet he will have noted opposite each carload the grade, weight per bushel, dockage, moisture, if tested, and depth of grain in the car, in case of a claim being made.

The deputy's sheet is handed in to the office where the certificates are made out, and the particulars as to weight, grade, dockage, etc. copied on the larger sheet that came from the yard office. A similar sheet is made out and sent by fast mail service to Fort William for the information of the inspection branch there, in order that a check may be had upon the grain when it is being unloaded.

Up to the time of filing away the sample and sending the sheet to the office, the deputy has no knowledge whatever of the ownership or origin of the cars of grain that he has been inspecting. But when the work of inspection is over for the day, he and another deputy get from the inspection office the lists and the completed certificates, and check them off just to see that no errors have been made.

Should doubt arise in the deputy's mind as to the correctness of a grade, he could at this time go to the sample room, get the sample, and, if he thought advisable, change the grading and have a new certificate made out. It was pointed out by a witness that such a thing might happen, but he had never known it to happen. We are of the opinion that this practice of checking over by the deputy should be prohibited. It serves no good purpose, and only gives grounds for suspicion and distrust. This work can, and should be done by the clerks who are charged with this responsibility.

The Certificates.

The certificates are at once distributed. Some go to the country, but most of them are taken to the office of the agent of the shipper. As soon as possible, usually the following morning, the agent takes his certificates to the sample room and asks an attendant there for the samples corresponding to the certificates. He examines them carefully, in order to safeguard the interests of his client, and notes on the back of the certificate the reasons for the grading. If he thinks a sample should have a higher grade, he places the box with the certificate on a window opening into the sample room, where it is taken by the Chief Inspector and reinspected. If the agent is still dissatisfied, he makes a final appeal to the Survey Board through its secretary. The judgment of the Board is final.

The sample room has space to accommodate about 60,000 samples. During the rush season the samples may be kept not longer than three weeks. A farmer or any owner of grain may go to the inspection department, and ask to see the sample representing his carload and receive explanation as to the grading. Many take advantage of this privilege.

The sample room is made use of to a small extent by representatives of milling companies for the purpose of selecting cars that are suitable for their needs. This is the nucleus of a sample market, and takes place in this way, owing to the absence of such an institution in Winnipeg.

The wheat that accumulates from the samples is sold to one of the milling companies. Other grain is disposed of to the best advantage, and the proceeds of sales are deposited to the credit of the Dominion Treasury. The producer, miller, exporter, importer and financial institution must have implicit confidence in the grading system and in the manner in which it is carried out. The importance of the grading of Canada's grain cannot be overestimated.

Official grading of the producer's grain in carload and part carload lots takes place at Winnipeg, head of Lakes on "hold full" cars, Calgary, Edmonton, Vancouver on "hold full" cars, Moose Jaw, Saskatoon and at mills west of Winnipeg. It is all under the direction of the Chief Inspector at Winnipeg. It is intended to be done as uniformly as possible. A No. One Northern wheat at Winnipeg or Fort William should be a No. One Northern at Calgary, Vancouver, Edmonton or Saskatoon. It is one system. If there is any variation in the grading at the several points, it is due principally to the variety of judgment of the men doing the work. Greater uniformity can be obtained where the inspection staff are working together under close observation and supervision. There are two potent forces operating to influence the grader. The producer's interest on the one hand, and the interest of the purchaser of the grain on the other. If he pays attention to either, he will surely go wrong. There is only one course. He must grade the grain according to the standards laid down for his guidance.

It was impressed upon us that the deputy who passes upon the sample and fixes the grade plays a very important and necessary part in the merchandizing of Canada's grain, and that he should be well qualified to hold such a position. Fitness for the work should be the prime and only consideration in making his appointment. It is absolutely essential that a person to qualify for the position of inspector and grader should possess full knowledge of the specifications of the grades, a knowledge of the uses of grains, quick and accurate powers of observation, the ability to make quick and accurate decisions, and in addition he must be reliable and temperamentally suited for doing exacting work of this kind.

All deputies and inspectors must pass a rigid examination according to the requirements of the Canada Grain Act. But a man may pass the examination and yet be quite unfit to inspect and grade grain. For example, a man with all the knowledge necessary, but slow and indecisive would be useless.

The work of the office staff cannot be overlooked. Upon it, rests the responsibility of making out the lists, certificates etc., of getting them off with despatch, and without error, and of keeping accurate records. The work of the inspection office is not like ordinary office routine. The grain is moving through Winnipeg at the rate of 2,000 to 2,500 cars a day. No part of the system can be allowed to fail. Those experienced in the work should be retained, if possible, from one season to another.

Now that the inspection work is so scattered, the chief inspector should be free to visit each point frequently in order to ensure the greatest care in the taking of samples, accuracy and uniformity in grading, reliability in the records and promptness and accuracy in getting out the certificates and lists.

Inspection and Grading Out of Terminals.

There are two kinds of terminal elevators—the public and the private. The public elevator receives grain for storage purposes. In doing this, it performs the following services: unloads the grain into a pit, elevates it to a garner, weighs by a Government weighman, bins according to grade, cleans as specified by inspection department, stores, insures and discharges into a car or the hold of a ship. The carloads of No. 1 Northern wheat taken into the elevator are, it is fair to assume, representative of all the variations that can fall within the latitude of the grade, i.e., between the minimum and the maximum requirements. The contents of a bin in the process of unloading, cleaning and moving to the scales and shipping bin, become thoroughly mixed, and produce what may be termed the "average" No. 1 Northern into the public terminal, or what is known as the "country run" of the grade. It is expected that every precaution will be taken to see that the identity of a particular grade of grain is preserved in the public terminals, so that the average out shall

be the same as the average in. Samplers of the inspection department are stationed in the tunnels of the public terminals where they catch from the conveyor belt samples of a grade as it is running to the scales to be weighed out. An inspector is present as well. The samples are inspected at frequent intervals to make sure that the grain is of the specified grade called for, and that it is "commercially clean"—bearing less than one per cent of dockage. And again, as outlined previously, a sampler catches a sample as the grain is running from the spout into a car or the hold of the vessel, and inspects it to ensure that the grade is that which is specified for loading. This is called "inspection out" of the terminal.

The private terminal deals largely with its own purchased grain. A private "regular" may also store grain for others. The grain being shipped out of a private terminal is sampled from the stream as it falls into a car or the hold of the vessel. The sample is taken to the inspection office and graded. The standard sample fixed for grading of grain out of private terminals is one that is made up in such a way as to ensure that the average sample out of these houses is as good, in so far as can be judged by the eye and the scales, as the standard sample made up by the Chief Inspector. The inspection department has interpreted, rightly or wrongly, section 99 of the Canada Grain Act to apply to these houses, and the deputies have been instructed to grade according to a composite sample made up by the inspector in charge of terminals at the head of the lakes, as follows: 3 parts standard sample as made up by the Chief Inspector at Winnipeg, and 1 part of the average of the grade out of public terminals. At each terminal elevator, an office and inspection room with all necessary equipment has been provided. The samples from the cargoes are taken to it, graded, and then taken to the inspection department in Fort William and filed away in the sample room for future reference.

During the grain shipping season, it happens that boats are being loaded throughout the whole twenty-four hours, during the night as well as the day. With the aid of lanterns or other artificial lights, samples are obtained during the hours of darkness. These, however, cannot be examined until they can be seen in proper light the following day, when inspection and grading takes place.

All grains inspected out of the terminals at the head of the lakes, Vancouver or from the interior terminals, should go out carrying no dockage. They should be "commercially clean." We found, however, that there have been times when, owing to the rush of grain through the terminals, the cleaners were not of sufficient capacity to do the work and the inspectors at the terminals let it pass the grade with the dockage assessed and shown on the certificate. This is contrary to the law, and should not happen in connection with either public or private houses.

When the inspection is completed and the grade assigned, a Certificate Final is issued covering all the grain in a particular hold or in a part hold where two grades are sometimes separated by canvas. This certificate final makes necessary the preservation of the identity of the grade throughout its course in vessel, through transfer house or houses, in cars, in ocean-going ships, and on through the process of discharge, transfer and carriage of one sort and another until it arrives in the bins of a mill in the importing country. It is on this piece of paper that the purchase is made, and the financing done, hence the necessity for all the care to ensure that the article it represents, the Canadian grain, conforms as nearly as possible, to the definition of the grade which it purports to be.

The Definitions of the Grades.

It is very important in the interests of continuity of the quality of the grades, and for the better understanding of their requirements by the producers

and by the millers and users of grain, as well as the trade generally, which is every year expanding and extending into new markets, that the statutory grades of Canadian grain and also such descriptive terms as colour, soundness and dockage be more clearly defined. When discussing dockage, the terms foreign material, other grains, cracked kernels, etc., were all used, and apparently with much confusion. These terms, as well as others commonly used in relation to grains, should also be defined and made clear as to their meaning and application.

Both Chief Inspector Serls and his assistant, Mr. Fraser, suggested that a great service could be done through a redefinition of the statutory grades *only*, for the sake of clarity. And it must be clearly understood that in doing this there shall be no alterations that would lead to any lowering of the present status of the grades as understood by those engaged in the inspection, grading and merchandising of the crop.

Bleached, Sprouted and Frosted Wheat.

Much time was taken up at Winnipeg in the presentation of a case in respect to the qualities of bleached, sprouted and frosted wheat. There are, of course, all degrees of these affections in the wheat crop of the prairies, varying with seasons. Investigations have shown that the effects of bleaching and sprouting in this grain are very similar, as shown in the faster working of flours produced from them, varying, of course, according to the intensity of the action, and that the effects produced in the flour from frosted wheats were almost exactly the opposite of these.

Slightly bleached and slightly sprouted were terms used to describe slight effects from these causes, and it was argued that because these wheats were nearly as good as Nos. One and Two Northern, they should be put into these higher grades. These wheats have lost their colour, and other marks that indicate strength to the miller and to the trade, and it matters not how good they may be, the uncertainty as to their quality makes it necessary for the miller or trader to buy them on a wider margin. If it were permitted to put them into the higher grades, their presence there would affect the appearance, and have a depressing effect upon the price. If, on the other hand, these wheats were offered on a sample market, where their intrinsic values are known or could be easily ascertained by chemical and baking tests, there is no doubt in our minds but what their true value could be realized.

It was urged, too, that in the case of No. Three Northern wheat, commonly known as the inspector's grade, it might with advantage be changed by keeping frosted and bleached wheat apart. Frosted and bleached implies that the action of the weather has been more intense than in the case of slightly bleached and slightly frosted. If these classes of wheats were produced in large enough quantities to make it possible to merchandise them separately without economic loss, then this suggestion might be entertained and acted upon. It would appear, however, that under present conditions this is not the case, and that the best interests of the producers are served by allowing the grade to stand with perhaps minor changes that would make it more uniform and more valuable to the miller. But in this too, as in Nos. 1 and 2 Northern there must be no lowering of quality for this grade is deliverable on contract and any change made should be to render it more dependable and lessen the risks in buying it. Any change made should be such as would improve its price getting qualities.

Grain Survey Boards.

Under the provisions of the Canada Grain Act the Board of Grain Commissioners have, and do exercise the power of appointing a Grain Survey Board for each inspection division whose duty it is to hear appeals from the grading of the Chief Inspector. The candidates for appointment to such boards are

nominated in the Eastern Division by the Boards of Trade of Toronto and Montreal for their respective cities and by the Boards of Trade of Winnipeg, Calgary and Edmonton and the Minister of Agriculture of the provinces of Manitoba, Saskatchewan and Alberta for Winnipeg and Calgary in the Western division. It is stipulated that a nominee shall be a fit and proper person, well qualified to pass upon grades of grain.

It is but natural that such persons would be looked for among the men active in the grain trade or those who have dropped out of it for various reasons. It is scarcely necessary to point out the undesirability of this system. These men have not qualified as inspectors of grain. They have, it is true, a knowledge of grain from the trader's standpoint, but they are interested in buying wheat in carloads and they are interested in selling wheat in cargo lots. It is quite true that the men sitting on the appeal board do not own the grain in question but that does not affect the anomaly of the position in which they are placed when asked to alter or sustain the judgment of Canada's Chief Inspector.

It is apparent that a change from this method of making an appeal was considered desirable for in 1919 certain sections were passed by Parliament to replace sections 100 to 104 of the Canada Grain Act to come into force upon a date to be prescribed by proclamation. No proclamation has been issued up to this date. These provide for a Board of Grain Appeal to consist of three members who must be expert and experienced in the inspection of grain to be appointed by the Governor in Council. When this plan was contemplated Winnipeg was the only point in the Western Division that was affected. With the opening up of new ports and the development of new trade routes a number of such boards would be necessary. It would be very difficult indeed to secure three capable men for one board without having to provide them for perhaps three or four such boards. There are appeals on only a very small fraction of the inspection so that the cost of the system would be entirely out of proportion to the services rendered. It looks too, as if it contemplated removing the appeals from the inspection department and this, it appears to us, is wrong in principle. We are in favour of placing upon the Chief Grain Inspector for Canada the whole responsibility of grading and of maintaining the integrity of the Canadian Certificate Final. It is with this end in view that we recommend the doing away with the present Grain Survey Board and with the idea of the Board of Grain Appeal as contemplated in the Amendments of 1919 referred to above and that the Chief Inspector's staff be organized in such a way as will enable him to carry out the following:—

- (1) Inspect and grade incoming carloads and outgoing carloads and cargoes;
- (2) Hear appeals from first grading;
- (3) Hear final appeals that were formerly heard by the Survey Board.

We suggest (1) that the first inspection and grading be done by a deputy as at present; (2) that an appeal be heard by a deputy who may be designated an "Appeal Inspector" or/and (3) that an appeal from an appeal inspector's grading be heard by a Board of Grain Appeal consisting of three qualified persons—an inspector and two deputies. Should two deputies not be available any two competent persons who might be designated by the Chief Inspector as eligible, to serve on such a board.

The advantage of this plan would be that the sample of grain would be graded each time by thoroughly qualified men who know the standards and are capable of observing and judging grain. In the case of a final appeal it would come before three so that the sample would have the advantage not only of the careful judgment of trained men, but of differences in judgment, if there were room for such, of three capable persons.

We desire to emphasize that the responsibility for the final appeal should rest upon the Chief Inspector.

No. 1 Manitoba Hard Wheat

We recommend that the grade known as No. 1 Manitoba hard be eliminated from the list of grades set out in section 107 of the Canada Grain Act. Grain of this grade has ceased to be dealt with in practice and it should be merged in No. 1 Northern.

TRADE NAMES

The Trade Name of Canada's Hard Red Spring Wheat

For many years Canada's hard red spring wheat has been traded in under the name of Manitoba Northern; the statutory grades being designated as No. 1 Manitoba Hard, No. 1 Manitoba Northern, No. 2 Manitoba Northern and No. 3 Manitoba Northern. A "trade name" or "brand" when it has become established in commerce stands for all the attributes of the particular commodity which bears its name. The longer the name is in use, provided the thing for which it stands is maintained at a high standard of excellence the more sacred and the more valuable the name becomes.

Oats, barley and flax grown in the same area as the wheat are traded in under the name of Nos. 1, 2 and 3 Canadian Western. Up to 1912, the Act governing the grain trade was called the "Manitoba Grain Act", but in that year the name "Canada" was substituted for "Manitoba" in the Canada Grain Act.

At various times throughout the years, the wish has been expressed in many quarters outside the grain trade to have the name of the wheat from the prairies changed to one that will mean more to all the Western producers and to all the people of Canada. It has been suggested that the name "Canada" be substituted in full for "Manitoba" so that the grades would read—"Nos. 1, 2 and 3 Canada Northern."

During our sittings on the prairies, we canvassed farmers and men prominent in the grain trade as to the desirability of changing the name. Nearly all expressed the fear that if such a change were made doubts would arise in the minds of importers, financial institutions and others who deal in Canadian wheat. While we do not wish to make any recommendation in this respect, we do wish to point out that we are of the opinion that the maintenance of high standards of quality in grades of Canadian grain is of greater importance than the name under which it is merchandised.

NEW GRAINS

We have emphasised in another place the importance to the farmers of sowing pure clean seed of a recognized good variety of grain. The farmer is being exploited continually by amateur plant breeders and expert salesmen, who are dabbling in grain for the sake of notoriety or financial gain, without any sense of responsibility in the matter of maintaining the reputation of Canada's grains on home and foreign markets. Many disappointments come to the farmer as a result of these practices. The quality of Canada's export grain products is lowered through the use of poor seed, either by itself or in mixtures.

We are of the opinion that this question of seed, especially wheat and oats, is sufficiently important to Canada to warrant the Government in taking such measures as will reduce to a minimum the practices noted above.

RESEARCH

We are impressed with the great need for research work to be carried on for the promotion of our grain growing and milling industries. The keeping

up of the quality of wheat alone is of immense importance. Our excellent position in the better export markets of the world can be held only if we guard the quality of our grades. Commissioner Rutherford reported that in the Old Country extensive provision has been made for carrying on investigation and research in connection with wheats, flours and milling, with special attention given to the content and quality of gluten.

When we were in the United States, we visited two well-equipped laboratories for carrying on investigations in respect to wheats and milling, viz.—at Minneapolis, where the State has a 125 barrel mill and other splendid facilities, and at Manhattan, Kansas, where the State has made excellent provision for carrying on investigations in respect to questions relating to wheats, milling, baking and flours.

Canada is now in the position of being the largest exporter of wheat in the world. Not only is she the largest exporter of wheat, but the largest exporter of the world's "best" hard wheat. Her wheat growing area is exceedingly large comprising many soil type areas and is affected by a variety of conditions moisture, soil, rust, disease, hot winds etc. that change the character of the crop by districts every year.

There are also the questions relating to moisture content for warehousing, the methods and technique of moisture testing, and many other problems, all of which have a direct bearing upon the successful marketing and merchandising of Canada's annually increasing exportable surplus of grain crops as well as those questions relating to the milling industry.

The inspection department should have the advantage of a laboratory with a well-trained staff to render assistance in the matter of grading in addition to careful research that should be encouraged in the matter of improving and holding our position as a grain growing and grain exporting country.

SAMPLE MARKETS

The establishment of Sample Markets is provided for in section 57 of the Canada Grain Act. We deal with this subject in the chapter of the report on the subject of "mixing."

CLEANING AND DISPOSITION OF SCREENINGS

Screenings.

Screenings is the name that is applied to everything that may be cleaned out of a sample of grain. Weed seeds, cracked and shrunken kernels, other grains, straws, chaff, and various kinds of foreign matter such as stones, earth etc., are all included under this common term. Screenings vary in kind and quantity on different parts of the same farm, on adjoining farms, in different districts and in provinces. These variations are the results of soil and climatic conditions, diseases, insects and fungi, methods of farming and methods of gathering, threshing and marketing the crop. One sample of grain may contain only a trace, while another may have 3 per cent or more. A sample representing 25,000 bushels of wheat contained 7.4 per cent of foreign material, made up largely of weed seeds, wild oats, black bindweed, and lamb's quarters. A car flax had 16 per cent of its weight made up of weed seeds, one ounce of which contained the following: noxious—hare's ear mustard 73, stinkweed 106, wild mustard 1051, western false flax 429, round seeded false flax 170, tumbling mustard 1009; other kinds—lamb's quarters 152, cinque-foil 10, blackbind weed 14. In some districts, grain carrying 30 per cent screenings is not uncommon.

Wheat that is to be used for making flour requires to have all screenings of whatever nature removed before the process of manufacture can be started. Not only are the necessary mechanical separations made, but the wheat is washed, brushed and scoured, if need be, to make the operation complete. Rye for flour, durum for semolina, barley for pearling and malting, flax for oil, and oats for oatmeal must all be treated so as to leave only the clean grain of each kind to be used for its own particular purpose. Oats for horse feed are more valuable when freed from all foreign material whatever—weed seeds, other grains or dirt. Mixtures of other grains do not add to their value for this purpose. Wheat, barley or rye mixed with oats are likely to cause digestive troubles. All grains are more valuable on the world's markets when offered there as nearly pure as possible.

The Canadian grain grading system has taken account of this in the interests both of the producer who has grain to market in bulk and of the consumer who purchases it on the Canadian Certificate final. While the grain is on its way east or west to the terminals at the head of the Lakes, in the interior, or at Vancouver, it is sampled in the cars and tested in the inspection department to ascertain the amount of foreign matter that should be removed in order to render it "commercially" clean. The percentage set for removal is called "dockage". The Canada Grain Act specifies that the grain shall be cleaned in the terminal elevators to meet the requirements indicated on the inspection certificate, and that all grain passing out of them to the world's markets shall be cleaned in accordance with the definition of the grades in the Act.

Composition of Screenings.

The seed branch of the Federal Department of Agriculture carried on investigations in connection with screenings for a number of years, and in its report upon the work in 1915, it has the following to say:—

"Elevator screenings are so variable in composition that to get an idea of what on the average constitutes screenings, a composite sample representing thousands of tons should be examined.

"Following is the analysis of such a sample representing 6,000 tons of screenings from the 1912 crop, as shipped from various elevators at two or three different periods of the year from Fort William and Port Arthur to Buffalo, Chicago and Duluth:—

- 37 per cent scalplings,
- 7 per cent succotash flax.
- 18 per cent buckwheat screenings,
- 38 per cent black seeds.

"Scalplings consist of the larger grains and weed seeds in the screenings in the following proportions by weight: 65 per cent wheat; 25 per cent wild oats, flax, and barley; 3 per cent weed seeds (wild buckwheat, lamb's quarters, stickseed, ball mustard, prairie rose, wolfberry, great ragweed, cow cockle); 7 per cent straw, chaff, etc.

"Succotash flax is made up of 30 per cent flax; 40 per cent broken wheat; 15 per cent weed seeds (wild buckwheat, stickseed, lamb's quarters, wild oats, false flax, American dragonhead, lady's thumb, knotweed, sunflower, purple cockle, ball mustard, hare's ear mustard, hemp nettle, roadside thistle, prairie rose); and 15 per cent chaff, etc.

"Buckwheat screenings consist of 58 per cent wild buckwheat; 29 per cent wheat, oats, and flax; 9 per cent weed seeds (ball mustard, stickseed, wild oats, cow cockle, purple cockle, ragweed, stinkweed, hare's ear mustard, western false flax, Russian thistle, prairie rose); and 4 per cent chaff, etc.

"Black seeds are composed of the finer weed seeds separated from the screenings by the use of the 1-14 inch perforated zinc screen. This material contains about 45 per cent lamb's quarters; 4 per cent tumbling mustard; 2½ per cent wild mustard; 6½ per cent of other mustards (western false flax, hare's ear mustard, stinkweed, wormseed mustard, shepherd's purse, peppergrass); 8½ per cent other weed seeds (American dragonhead, hedge nettle, stickseed, green foxtail, Russian pigweed, sow thistle, catchfly, roadside thistle, Canada thistle, wormwood, cinquefoil, evening primrose, pale plantain, witch grass); and 33½ per cent dust and chaff."

SEPARATIONS

Screenings as they come from the separator, weed seeds, broken kernels, wild oats and other grains and foreign matter of all descriptions are called "elevator screenings." These are separated by a specially designed machine into three sub-classes or grades known to the trade as (1) Oat scalpings, made up largely of wild black oats, some tame oats and small percentages of other material; (2) standard re-cleaned screenings, composed of wild buckwheat and broken wheat largely with small amounts of other matter; (3) refuse screenings composed of black seeds, noxious and otherwise, and chaff, straw, etc. It is estimated that the oat scalpings and re-cleaned screenings constitute from 25 per cent to 45 per cent of the total run of elevator screenings, and these proportions vary according to the season and district. Screenings from one district may be nearly all small, black seeds, while from another cracked wheat, wild oats or buckwheat predominate.

Value of Screenings for Stock Feeding.

For a number of years previous to and during the war, elevator screenings from the head of the Lakes (Fort William and Port Arthur) found a ready market in the United States, where they were used very largely in the vicinity of Chicago and St. Paul for feeding and finishing sheep and lambs from the ranges. The small black seeds were used as a base for the manufacture of stock foods. During the war, a strong demand arose in Canada for screenings as supplementary feeds for greater production of live stock. In 1914 and 1915, the Dominion Central Experimental Farm conducted a series of experiments, with a view to arriving at the value of screenings, and finding out the best way to feed them to the various classes of live stock. The report upon the results obtained from these experiments carries the following advice:—

"In purchasing screenings or any meals such as patent meals; mill feeds, such as middlings, shorts and bran; or any other stock feed, do not buy any having black seeds contained therein. Black seeds are useless as feed, expensive as adulterants, and dangerous in spreading weeds.

"Screenings vary widely in composition. Before buying, send samples to the seed laboratory for analysis.

"Feeding screenings.—If the black seeds are not removed from the screenings, it pays to screen them out.

"Screenings free from black seeds may be fed freely to all classes of live stock. However, it is more profitable to have such screenings compose not more than 50 to 60 per cent of the total grain ration. Use such screenings as the basis, and add other coarse grains or meals to make the grain ration suitable for the kind of stock being fed.

"If fed whole, screenings with black seeds removed may be used to best advantage for sheep and horses. For swine, it pays either to grind or soak for twenty-four hours to increase the digestibility. For cattle, they should be ground and mixed with other grains, which mixture may be fed with cut roughage or separately as desired.

"If possible, to screen out the flax and wild buckwheat, these are very valuable as the basis of a good home-made calf meal. With the addition of oat and blood meals, such a pulverized mixture makes an excellent milk substitute.

"There appears to be danger in feeding flaxseed screenings."

At various points on the prairies, the value of elevator screenings with the black seeds removed was attested to by stock men who had used them extensively for cattle and sheep feeding. One, who fed 200 head of cattle for 60 days on re-cleaned screenings and hay, secured a gain of 120 pounds per head for that period. Others gave similar evidence. These men place a money value on such screenings at \$14 to \$16 per ton, when barley is worth \$20 per ton, and on oat scalpings a value almost equal to that of tame, feed oats.

The sheep feeders around Calgary and Lethbridge spoke highly of re-cleaned elevator screenings for sheep and lambs. Every year, large quantities are being used by the farmers of Ontario and Quebec, who appreciate their value as feeds. All who gave evidence before us recognized the necessity of having

the small black seeds such as lamb's quarters, pigweed, stinkweed and the mustards, removed. These are bitter. The mustards blister the tongues and mouths of the animals, and they render the rations unpalatable and most unsatisfactory, so far as producing gains are concerned.

Value of Refuse Screenings.

The fuel branch of the Mines Department carried on investigations to ascertain the fuel value of refuse screenings, and found that they were about equal, ton for ton, to low grade lignite coal, and would be worth about \$7 per ton for burning in furnaces of suitable construction. It was suggested that they might be used in connection with central heating plants in cities like Fort William and Port Arthur, where they accumulate in great quantities at the terminals and at present have to be dumped into the lake. Mustard seeds can be separated from the black seeds, and merchandised in quantities in the United States.

Representations made to the Commission, by Farmers, Feeders, etc.

During the sittings of the Commission on the prairies and at other places, we heard much about screenings. In the province of Alberta, both farmers and what might be called professional stock feeders—those who buy stock and feed them near the stockyards—expressed themselves strongly in favour of having screenings from Alberta grain made more easily available for those in the province, who needed them to feed to stock. It was urged at several places that interior terminal elevators at such points as Lethbridge, McLeod and Edmonton would help to solve the problem, in that grain passing through them would be cleaned, the screenings kept for local use, and a saving in freight effected. Some urged that country elevator companies be compelled to equip all their elevators with cleaners. It was felt by most farmers that cleaning grain on the farm was impracticable under present conditions—rush of work, high priced labour, short season and lack of equipment.

In Saskatchewan, the need for saving the losses that screenings entail in hauling, freight, elevating, storing, cleaning, etc., was keenly felt, as was also the need for reclaiming and returning them for feeding to stock. It was urged (not by farmers) that efforts should be made to have the farmers use the interior elevators at Moose Jaw and Saskatoon for storing and cleaning their grain. In this way, the screenings would be kept in the province, and the saving in freight effected. Cleaning on the farms, for any great number of farmers, was out of the question. Quite a number of witnesses, farmers included, felt that the only place to clean grain under present conditions is in the terminals.

In the province of Manitoba, at every point where the Commission sat, the screenings question was strongly in evidence. Manitoba's agriculture is changing, extensive wheat farming is on the wane, and is giving place to a more diversified agriculture, with live stock as an important feature. Weeds are very troublesome now, and the dockage is heavy. The chairman of the Manitoba Weed Commission, in his evidence, gave it as his opinion that Manitoba loses annually 25 to 30 millions of dollars through weeds alone. The farmers feel that the screenings should be kept at home; that the freight bill should be saved, and that the better part of the screenings should be fed to stock. Some approved of compelling the country elevator companies to put in the necessary equipment and to clean all grain, but few would go so far as to say that all farmers should be compelled to put their grain through the elevators and have it cleaned. Others favoured cleaning on the farm, thus saving haulage and freight.

The farmers of all three provinces are keenly alive to the screenings question, and are anxious to find the proper answer to it. None who had had

experience in the matter of having elevator screenings returned in bulk regarded it favourably. It was their opinion that such a practice should be prohibited.

In Ontario, the farmers have lodged complaints with three successive ministers of Agriculture against the importation of screenings from the western crops, on account of the noxious and other weed seeds they contain, and the consequent menace to Ontario agriculture. The screenings are shipped across the lakes in bulk to Bay ports and from there reshipped in cars in bulk to farmers' cooperative societies at country points. From there they are hauled away in loose wagon boxes. The seeds are blown about the railway yards by the wind. They leak out of the wagon along the roadside, where they grow and infest the neighbouring fields. When screenings are fed, unless properly ground or cooked, the seeds pass through the digestive tracts of the animals, germinate and grow in the fields, and become a menace to adjoining farms. The ability of weed seeds to distribute themselves in this way has been amply proven by investigations carried on at various experimental stations. Bulletin 168, of the Maryland station gives the following: A cow and horse were each fed two pounds of the unground grain screenings with middlings, bran and wheat straw each morning and night for seven days. On the evening of the seventh day, they were bedded with sawdust and the dung of one night collected. The sawdust and dung were thoroughly mixed and put in boxes, and set on a bench in the green house. The dung was collected on May 24th. On June 21st, the following seeds had grown:—

<i>Cow Dung</i>	<i>Horse Dung</i>
149 Lamb's quarters,	1,213 Lamb's quarters,
12 Pig Weed,	28 Foxtail,
14 Bindweed,	11 Pigweed,
4 Foxtail,	12 Bindweed,
2 Timothy.	6 Timothy,
	3 Clover,
	2 Morning Glory,
	5 Mustard.

In an effort to prevent the spread of weeds, the prairie provinces have enacted legislation as follows:—

LEGISLATION RESPECTING NOXIOUS WEEDS, THRESHERMEN AND OTHERS

SASKATCHEWAN

An Act Respecting Noxious Weeds, 1924. Chapter 40, Sections 21-24.

21. Every person in possession of charge of any threshing machines shall, before removing such machine or the wagon racks or any part thereof to another farm, thoroughly clean the machine both inside and out by the removal of all seeds and other crop refuse, and cause the wagon racks used in connection with such machine to be thoroughly cleaned and swept immediately after threshing. R.S.S. 1920, c. 167, s. 23, amended.

22. A card containing the provisions of section 21 shall be kept posted in a conspicuous place on the separators of threshing machines when in operation and shall be furnished free by municipal secretaries upon application. R.S.S. 1920, c. 167, s. 23, in part amended.

23. The Secretary of every municipality shall record a list, in such form as the minister may approve, of all the threshermen to whom cards were issued during the year and shall mail a copy of such record to the commissioner not later than the thirty-first day of December in the year to which it refers. New.

24. No person shall for a period of more than five days leave exposed or unprotected at or near any place where grain has been threshed any screenings containing the seeds of noxious weeds, nor shall any person place or leave exposed or unprotected, except in a securely constructed building or other closed container, any matter containing such seeds without having first destroyed the germinating qualities thereof. R.S.S. 1920, c. 167, s. 22, amended.

ALBERTA

An Act Respecting Noxious Weeds, 1907. Chapter 63, Sections 14-18.

14. (1) No person shall purchase or sell, barter or otherwise dispose of or remove from any premises, any bran, shorts, chopped or crushed grain, or cleanings containing seed of noxious weeds, unless the germinating qualities of such seeds have been destroyed; and no person shall at the time of marketing or warehousing his grain remove from any elevator or mill the screenings screened from such grain so marketed or warehoused and such screenings shall be burned by the proprietor of the elevator or mill;

Provided that matter containing seeds of noxious weeds may be removed in closely woven and securely tied sacks from any grain elevator or warehouse to be burned or fed to sheep if such sheep are fed and kept within enclosures which are the property of the feeders; and which shall be subject to inspection by weed inspectors.

(2) Lists of the parties to whom screenings are sold shall be furnished monthly to the Minister of Agriculture by the managers of the elevators or warehouses. 1907, c. 15, s. 14; 1911-12, c. 4, s. 26 (4).

15. No person shall place outside any mill, elevator or grain warehouse, except in a securely constructed building, shed, or covered bin, any matter containing the seeds of noxious weeds without first having destroyed the germinating power of such seeds. 1907, c. 15, s. 15.

16. Every thresher shall thoroughly clean his machine, both inside and out, and all his wagon racks, immediately after threshing at each setting and before removing the machine or any part thereof to another setting. 1907, c. 15, s. 16; 1911-12, c. 4, s. 26 (5).

17. Every thresher shall clean the grain threshed by him, and when delivered to the owner it shall contain not more than one hundred seeds of noxious weeds other than wild oats, to every thousand of grain, and all screenings containing seeds of noxious weeds shall be either destroyed by the owner within five days after the grain is threshed or removed in closely woven and securely tied sacks. 1907, c. 15, s. 17.

18. Every thresher shall display in a prominent place upon his machine a card containing this and the two next preceding sections, which card shall be furnished free upon application to the Department. 1907, c. 15, s. 18.

MANITOBA

An Act Respecting Noxious Weeds, 1924. Chapter 43, Section 46.

Any person, firm or corporation, including railway companies, express companies and other common carriers, being the owner or operator or the agent of any owner or operator of any mill, threshing machine, grain elevator or grain warehouse, farm or other land, who, either by his own act or by another person with his knowledge or consent, places or permits any seeds of noxious weeds, whether mixed with other things or not, to be placed on any road, railway, highway, street or lane in any municipality shall be liable to a penalty of not less than twenty-five dollars nor more than one hundred dollars, together with costs.

Dominion Millers.

At Montreal and Toronto, we heard the complaints of the Eastern Millers in respect to screenings. They purchase their wheats on the Canadian Certificate final. They told the Commission that their shipments of wheat of ten contain 1½ per cent of screenings, and these constitute a big loss to them now that a Dominion law prevents grinding and mixing the screenings with the offals—bran and shorts. Oatmeal manufacturers complained of dirty oats. They urged that an effort be made to have these percentages reduced, at least to the requirements of the statutes in this respect. Old Country millers and merchants complained of too much dirt in wheat, oats and barley shipments on the Canadian Certificate.

Threshermen.

The threshermen's evidence was to the effect that it takes time and labour and power to thresh weeds. Wild oats clog the screens. The small seeds accumulate under the separator and become a nuisance. If he is threshing by the bushel, he must see to it that everything in the form of seeds goes through the automatic weigher. If he is threshing by the hour he can make a better separation which the farmer should be willing to pay for. The thresherman prefers threshing grain rather than weeds. It is more profitable to him and much more satisfactory.

Local Elevator Operators.

The local elevator operator is anxious to secure for his elevator as large a volume of grain as possible, and at the same time give dispatch to the grain wagons. The screenings cause the greatest hindrance in attaining these objects. It takes time to sample, screen, weigh and set the dockage. Unnecessary delays are caused through disputes arising out of the setting of the dockage. If he cleans the grain at the farmer's request, more valuable time is consumed, while in the rush season wagons are waiting outside to be unloaded. Screenings accumulate and have to be removed. While teams are waiting to be unloaded, the threshing outfits on the farms are also being delayed unless extra teams for hauling have been provided, all of which creates extra expense to be borne by the grain.

The elevator operator is in very many cases a man quite unskilled in the operation of a cleaner and of cleaning grain, and as a result the grain is poorly cleaned, if cleaned at all. Often the cleaner is not in a condition to do the work properly. The great variety of screenings contained in the grains makes the problem of handling them by the local operator more difficult, and more expensive.

The Terminals.

The Canada Grain Act provides that grain entering the terminals with dockage set shall be cleaned accordingly and sets forth the conditions and rates to be charged for the service. The terminals face new problems continually in connection with screenings owing to the variations in quantity and kind during a season and throughout the different seasons. Those of one crop year differ from those of another. Cleaning equipment soon becomes obsolete, and new machines with the latest improvements must be installed to take their places. Many terminals are fitted up at great expense with the very latest equipment for taking care of this part of the grain business. One terminal operator stated that his house had \$75,000 worth of equipment for cleaning and conditioning grain. Screenings take up valuable space in the house. If the terminal fills up with uncleaned grain that cannot be gotten out, there is congestion, and heavy losses have to be sustained. At one time during the fall of 1923, the terminals were unable to clean the grain fast enough to keep the crop moving, owing to the high percentage of dockage.

Refuse screenings accumulate and become a nuisance. Their removal costs money and this again becomes a charge upon the grain. Every charge which they necessitate has to be borne eventually by the producer.

It was stated that the terminals have shipped grain containing more screenings than the grade should carry, and that this and the reclaiming of grain from the screenings constitute sources from which overages accrue. It was shown that during the rush of grain intake before the close of navigation, some terminals were shipping to Bay ports grain on Canadian Certificates containing too much screenings—with dockage set by the inspector. This is an improper practice, and is a menace to the Canadian certificate.

The terminals should be fully equipped to make every separation necessary not only to clean the grain thoroughly, but to separate the screenings into market grades—oat scalplings, standard re-cleaned screenings and refuse screenings.

Merchandising Screenings.

The grain companies are endeavouring to find markets and to merchandise the screenings just as they do in respect to any other grain products and at the present time these feeds are becoming fairly well known in international trade and a good demand exists for them. Owing, however, to the difficulties that stand in the way of standardizing them, their full value is not reflected

in the prices quoted for standard re-cleaned screenings. It is expected that this condition will change when confidence in the grades and quality has been established among the purchasers of stock feeds. Suggestions for improvement along these lines will be dealt with later in this report.

CLEANING

On the Farm.

The ideal condition on the farm would be to produce no screenings. But, notwithstanding all the efforts that have been made towards bringing this about on the part of the farmer, investigators, agricultural workers and governments, the amounts and kinds are increasing. Farms and districts and provinces are becoming weedier where extensive grain-growing is practised, and where no system of proper rotation is in vogue. The introduction of Marquis wheat as a substitute for Red Fife has had an important influence upon the increased amount of cracked wheat now found in the screenings, especially from Southern Alberta and Southwestern Saskatchewan, where the conditions are such as to produce a hard dry berry that clings tightly to its chaff. The concaves have to be set closer, and the result is larger quantities of cracked wheat in the screenings. In the districts mentioned above, some years probably 60 to 80 per cent of the re-cleaned screenings are composed of cracked wheat, while in Northern Alberta, Northeastern and Eastern Saskatchewan and Northern Manitoba, the same percentages would hold for wild oats and wild buckwheat. But over the whole of the grain growing area there is a preponderance of small black seeds that are of no value to the farmer.

The screenings are a part of the farmer's crop. A great portion of them have no food value. These small black seeds and rubbish should be kept on the farm and disposed of in such a manner as would render them harmless to agriculture. In this way, a great saving in cost of hauling, elevating, freight, cleaning and storing would be effected. The farmer himself, who knows the conditions of his crop, should be able to figure the cost and saving, and make his own decision as to how he will dispose of these refuse screenings.

Cracked wheat, wild buckwheat and wild oats all have substantial food values for stock of various kinds. They have a market value, too, just as other grains have, but it costs a good deal to separate these from the wheat. The farmer cannot afford, except perhaps in rare cases, where such dockage would be very high, to make such a separation. At the time of threshing, everything has to be done in haste. Labour is high priced, and time itself is valuable. Many witnesses gave evidence on this point. In Manitoba, the farmers believe, and it appears to be the fact, that a better price is received for wheat during the first few days of threshing, and that if they took time to clean on the farm they would lose this margin, and the gain on cleaning would not compensate them for the loss on price. Some, who were more distant from market, and in a part of the country not so favourably situated as regards early threshing, favoured cleaning the grain on the farm, and there were few who practised this method. They did not, however, clean at threshing time, but left it for a winter operation, when time and inexpensive labour were available. This practice will, we feel sure, become more general as farmers change their system of farming and reduce their grain acreages. They will then be able to pay more attention not only to methods of production but to keeping the quality of their products up to a high standard. There should be no relaxation of effort—there should be a renewed effort in the matter of encouraging the farmer along this line. He will, however, have to be the judge as to whether this method is a paying one. If it is, he will probably adopt it; if not, he will reject it and discover a better one.

The Thresherman.

Threshing machines in the Old Country, for example, are made to do practically a perfect job of separating grains not only from screenings, but into grades for market. In their operation, however, the element of time counts for little. By this is meant that they do not have to be hurried. These machines are used in countries where the season and other conditions are favourable to their operation through several months. The grain is all stacked and thatched to withstand the weather. The machines are operated by men who are skilled workmen, who look forward to continuing the work year in and year out, perhaps for a lifetime.

On the prairies the season for threshing is short. The equipment in the past has been expensive. A large amount of capital is invested in the outfit—\$5,000 and often more. On the average of seasons, this outfit works about 26 to 30 days—not long for so great a capital outlay. There is a big gang of men—engineer, separator man, tank man, spike pitchers, teamsters, grain wagon men and often a cook. Interest on the investment, depreciation, wages, all must be paid and a profit secured for the owner and manager of the outfit. And the farmer is in a hurry to get his grain threshed and away to the market, in order that he may sell at once for cash, to discharge obligations, or at such time as the market suits him. Time is an important factor.

We have pointed out that on an average about 55 to 75 per cent of the screenings, depending upon conditions, have no food value and are of little value for any other purpose at the present time. The Canadian thresherman can make almost a perfect separation of these and leave them on the farm where they can be destroyed. But he must be paid for threshing these weeds and for making the separations. The farmer who engages the thresherman should come to terms with him in advance, in respect to this operation, and see to it that the terms of the agreement are properly carried out. We suggest that a more equitable method of paying for threshing is by the hour or day rather than by the bushel. This method will compensate the thresherman and will result in cleaner and better crops on the farms, fewer broken kernels and cleaner grain products for the market.

And yet another plan is in the process of being worked out. A new machine called the Carter Disc Cleaner has come on the market in recent years. This machine is installed in all the terminal elevators and an effort is being made to adopt it for use in the field at threshing time. For the present, the idea of making it a part of the threshing machine has been abandoned. It appears now as if it would come into operation as a supplement to the separator. It is made in different sizes to suit the capacity of large and small separators. The cleaner is mounted on a separate truck, and is driven by a separate engine. It is possible with this machine to make complete separations of wheat, oats, re-cleaned screenings and refuse screenings.

This is extra equipment for handling a by-product of grain growing. If the charge for this additional work is less, or if the saving is greater to the farmer than any other method of dealing with this product, there is no doubt but what he will consider it favourably. At first sight this looks like a solution to the problem of keeping the screenings on the farm where they are produced and in the district in which they may be useful in maintaining live stock; in saving hauling, freight, elevator and storage; and removing other annoyances which appear to have their origin in the screening question.

The United States Department of Agriculture has for a number of years been engaged in carrying on investigations in the wheat belt of the north central States with a view to adapting the Carter Disc to the threshing machine separator, and much valuable data has already been obtained.

We recommend that every encouragement be given to the matter of discovering a practical method of separating the small weed seeds and other refuse

from the marketable grain at the time of threshing. It is desirable also, if at all practicable, to save to the farm such screenings as are valuable for stock foods.

Local Elevator.

The local elevator is usually a house with a binning capacity of about 30,000 bushels and costs now, at least, \$10,000 to erect. Its chief functions are to take in grain either on its own account or for the farmer; to store and discharge into cars for shipment. In doing this, it has to sample, ascertain the weight per measured bushel, screen and satisfy the farmer as to grade and dockage except in the case of special bin grain, and weigh and elevate the grain as well as weigh the empty wagon. If the farmer asks to have it done, the operator must run his grain through the cleaner, if he has one in operation.

In order to operate a house and perform these services, we have evidence that it costs on an average from \$3,800 to \$4,200 a year. The charge for weighing, elevating and storing and insuring for 15 days, and loading into cars, is $1\frac{1}{2}$ cents per bushel. A similar charge is made for special binning, except in the case of the Saskatchewan Co-operative Elevator Company, whose charge for this service is $2\frac{1}{2}$ cents per bushel. It will be seen that if a country elevator handles 100,000 bushels, which is more than the average for the 4,000 elevators on the prairies, its revenues on handling and binning will be only \$1,750. But, it has been shown in evidence that the loss—a very evident one on handling—is made up on the purchased street grain, which amounts to about 50 per cent of the grain handled at the country elevators.

The local elevator must handle volumes of grain with dispatch, in its own interest, and also to facilitate and expedite the movement of the crop as a whole. The crop must be gotten as far on the way to the seaboard as possible before navigation closes.

But some country elevators are equipped with cleaners and cleaning is included in the charge of $1\frac{1}{2}$ cents for handling through the elevator. The evidence goes to show that a large number of country elevators in the past had cleaners installed in them, and that many of them have been removed or have gone into disuse because the farmers did not patronize them. The elevator companies themselves did not use them for cleaning their own purchased grain. In many cases where they were used, the screenings were left to accumulate and became a nuisance and an expense to the elevator, and a menace to the farms of the district. The Saskatchewan Co-operative Elevator Company, in 1922 and 1923, had in all 387 country elevators and of these 367 were equipped with cleaners at the request of the shareholders, and as a matter of policy. It cost about \$1,500 to equip a new elevator with an ordinary utility cleaner, and about \$2,000 to remodel and equip an old type house. If a Carter Disc machine were installed it would cost at least \$2,000 more. The Company had a total capital investment in cleaners amounting to \$496,500. During the crop handling season—September 1, 1922 to August 31, 1923—only 25 per cent of these cleaners were used, and out of a total of over 40,000,000 bushels of grain handled, cleaned only 2,175,150, and this at an average cost of $2\frac{3}{4}$ cents per bushel. In making this estimate of the cost, the engineer in charge took into account only the interest on capital, the depreciation in value of the mechanical equipment and cost of gasoline. He allowed nothing for use of building nor for the labor involved in doing the work, which, in the estimation of the commission, is a very considerable item of cost in cleaning grain, especially during the rush of harvesting and threshing.

The manager of the company, when giving evidence, stated that the cost of cleaning a bushel of wheat in the country elevator to be about 4 cents. Mr. Forsythe of Portage La Prairie also put the cost of cleaning at 4 cents per bushel. The Saskatchewan Co-operative Elevator Company, handling between

40,000,000 and 50,000,000 bushels, about 50 to 60 per cent of which is purchased grain, does not clean its own, but sends it on to the terminals, where it claims the work can be done better and much more economically.

The engineer of the Saskatchewan Co-operative Elevator Company, in his evidence, stated that No. 1 Northern Wheat containing about 12 per cent dockage would require two cleanings. It would take about 20 minutes to put an 85 bushel load through, and if the dockage were much above 12 per cent, of course, it would require more time. Evidence was submitted on various occasions that the time required to discharge an average load of wheat is 4 to 5 minutes, and this is in accord with other evidence received to the effect that a country elevator would, during the rush season, under average conditions, handle from 8,000 to 10,000 bushels during a ten-hour day.

Now let a farmer drive on the scales with an 85 bushel load of wheat with 12 per cent dockage. Without cleaning, he would be off with his ticket in, at most, 5 to 6 minutes, and the next wagon would be on the scales and treated likewise. But the man with the 12 per cent dockage wants his wheat cleaned. In the remodeled elevators, the wagon remains on the scales while the wheat is being cleaned and the screenings drop into the wagon box. While this is going on, at least 20 minutes of valuable time is consumed. The waiting farmers outside might have been unloaded—at least three or four of them—and away for other loads. But the elevator, too, has lost four loads of 85 bushels each, or 340 bushels, which might have been put through at $1\frac{1}{2}$ cents per bushel, or purchased, as the case may be.

At best, the ordinary cleaner in the elevator cannot make a complete separation. The grain will have to be cleaned again at the terminals, at a cost to someone, which eventually falls upon the grain itself, and is paid by the farmer. An elevator, to make a complete job where wild oats are present, must have installed a Carter Disc machine, which will increase the capital cost by at least \$2,000 and decrease the handling space in the elevator. The ordinary cleaner will put through about 500 bushels of No. 1 Northern wheat per hour, provided it is not heavily charged with wild oats. Lighter wheat runs more slowly, and is consequently more expensive to clean. The expense of all this has to be borne by the grain and in the past has fallen directly upon the seller of street grain in wagon-load lots.

While there are carloads with very high dockage and districts that produce quite a number of these carloads, it should be pointed out that the average dockage set on the whole wheat crop of the prairie provinces by the Inspection Department from September 1, 1923, to March 1, 1924, was 2.64 per cent, and the dockage set on all the grain received into the public terminal elevators at Fort William and Port Arthur for the crop year 1922-23 was as follows:—

Grain	Bushels	Carloads	Screenings per car bush.	Per cent
Wheat.....	137,873,297	104,131	23.5	2.17
Oats.....	16,856,331	8,385 $\frac{1}{2}$	1.1	0.11
Barley.....	12,237,244	8,193 $\frac{1}{2}$	19.9	1.32
Flaxseed.....	2,097,278	1,897 $\frac{1}{2}$	102.0	11.73
Rye.....	10,059,076	7,429	23.0	1.86

It was suggested to us that all country elevators should be compelled to put in cleaners. Then, in order that no injustice should be done the country elevator companies, it would be necessary to make it compulsory for the farmers to have their grain cleaned. This, however, would be impossible, for in Manitoba, where we heard most about this, there are districts where 60 to 70 per cent of

the farmers use the loading platform, which they regard as a part of their charter of liberties, so far as the marketing of grain is concerned. To force all country elevators to equip with cleaners would add a very heavy financial burden, which would in the end have to be borne by the farmers' grain.

There are a very large number of farmers who market their grain with little or no dockage, and only a few whose grain contains a high percentage. The equipment would have to be installed for the very few, at the expense of the producers of clean grain.

Mr. Forsythe of Portage la Prairie, who handles grain for mixing purposes, stated that a country elevator equipped fully to clean grain will cost at least \$15,000, and this, with a handling capacity of 100,000 bushels. Mr. John McFarland, of the Alberta Pacific Grain Company, in his evidence said that his company had a number of elevators equipped with cleaners, but that the farmers did not use them. The following table shows the present state of a representative number of elevator companies as regards cleaners installed in their country houses:—

CLEANERS INSTALLED IN COUNTRY ELEVATORS

Company	Total number of elevators	Number equipped with cleaners	In use
			per cent
Saskatchewan Co-operative (Farmers' Company).....	387	367	25
United Grain Growers Ltd. (Farmers' Company).....	367	267	25
National Elevator Co. (Private Corporation).....	105	17	5
Saskatchewan Elevator Co. (Private Corporation).....	(Not put	on any cleaners	to date)
"A"—Private Company.....	61	2	
"B" ".....	79	0	
"C" ".....	155	3	
"D" ".....	96	25	1
"E" ".....	96	34	10
"F" ".....	47	1	
"G" ".....	17	0	0
"H" ".....	123	17	12
"I" ".....	117	1	0

Recently some companies have installed cleaners at a cost ranging from \$2,500 to \$3,300 to enable them to compete for volume with other companies at the same points, to find that these cleaners have been used little or not at all.

We have found that a number of country elevator companies in all three provinces at one time or another equipped more or less of their houses with cleaners; that the cleaners were not patronized by the farmers generally; that where they were used the screenings were too often left at the elevator; that the actual cost of cleaning grain in country elevators is excessive except under abnormal conditions; that the charge allowed for cleaning is entirely inadequate; that cleaning grain in country elevators under conditions prevailing in Western Canada is uneconomical and unjust in that the burden of the cost falls directly upon the seller of street (wagon load) wheat, who is least able to bear it; that the tariff rates for cleaning should be revised; that it would be physically impossible for the country elevator to clean all the grain taken in; that the grain, when put through the cleaners, is only roughly cleaned, and has to be cleaned again at the terminals; that country elevator companies do not clean their own purchased wheat, amounting to from 50 per cent to 60 per cent of their handlings, because it does not pay them to do it. One of the best examples of this is the Saskatchewan Co-operative Elevator Company, which was organized for the purpose of doing as much as possible to assist the farmers to market their grain to advantage. It has installed cleaners in 367 out of 387 of its houses. It has experimented with cleaners and investigated the economical

bearing of cleaning upon the handling of grain. Its general manager says that cleaning grain in country elevators is not economically sound and that he would advise against it. His company does not clean its own purchased grain.

From the evidence submitted, we cannot recommend that country elevators be compelled to instal cleaners nor can we recommend that farmers be compelled to have their grain cleaned at country elevators, as this would deprive them of the use of the loading platform, which is so extensively used in the province of Manitoba, and would entail other losses as well. In the three provinces, there are 1,530 shipping stations with 1921 loading platforms, over which, from September 1, 1922, to May 25, 1923, there were 31,750,000 bushels of grain loaded.

Nor do we find that we can recommend the practice of cleaning grain at country elevators. If there is a cleaner, the farmer himself will have to be the judge as to whether or not it will pay him to use it. No one can work this out better than the farmers themselves, and the practice of a district in this respect will usually be found to be that which pays best. The fee for cleaning at country elevators as at present is entirely inadequate, and if it were adequate it would be much more than all, but a very few farmers with very dirty grain, could afford to pay.

At Terminal Elevators.

The terminal elevators at Fort William and Port Arthur and Vancouver, and those in the interior at Saskatoon, Moose Jaw and Calgary, are all equipped with cleaners of the most modern design, and are able not only to clean grain, but to make practically every separation that is required. They can operate twenty-four hours a day if necessary. They have men specially qualified for operating the cleaners, in order that the greatest efficiency may be secured. All grain coming into the terminals, with dockage shown on the certificate, must be cleaned, in order to pass inspection out. (See Canada Grain Act, section 100, and Regulations of Board of Grain Commissioners covering same.) The shipper knows that his grain can be cleaned there to better advantage than at any other point, and that the charge for doing it is reasonable. His screenings can be separated and graded and merchandised, and he will receive a cash return for them, just as he does for his grain of whatever kind. On account of the volume and the efficiency of the plant, the terminals can do this work more economically than it can be done at any other point, and they can do it better. The screenings being concentrated at a point such as at a terminal, can be handled and put upon the market to the best advantage. It may be that the freight rate will be so high that they cannot be returned to the district or the province from which they came, but they will follow the course of least resistance, and find a place where they can compete in price with other feed stuffs, such as feed oats, low grade barley and wheat.

The interior terminals are in a different position. Grain does not pass into them unless it is economical and advantageous for it to do so. It may be for seed grain, or it may be to relieve congestion on the railway, or from some other course, but the expenses on grain passing through an interior terminal—additional railway and elevating charges—constitute a barrier. The farmer or grain buyer hesitates to put grain into an interior elevator because of its usual disadvantageous position. He wants it as near the seaboard as possible. When grain, for any cause, does go into these elevators, it is cleaned and the screenings are available for the home market. This source of supply, however, cannot be depended upon, owing to its irregularity. When screenings are available at such points, they come into competition with other marketable feeds of the district. When coarse grains are scarce, recleaned screenings have considerable value, but, on the other hand, when there is an abundance of coarse grains for feed, it is difficult to find profitable markets for screenings at interior points.

For the year ending August 31, 1913, the screenings cleaned out of the Western grain crop were a little in excess of 100,000 tons.

DOCKAGE ON WESTERN CANADIAN GRAIN CROP OF 1923

Dockage on Receipts at Fort William-Port Arthur and Vancouver Terminals

	Total Gross Receipts	Total Net Dockage	Dockage
	lbs.	lbs.	per cent
<i>Fort William-Port Arthur—</i>			
Wheat.....	18,287,758,760	470,507,550	2.57
Oats.....	1,982,832,320	560,740	0.028
Barley.....	771,443,890	7,433,450	0.97
Flaxseed.....	293,952,330	21,685,810	7.38
Rye.....	393,715,030	9,292,020	2.36
Mixed Grain.....	57,881,160	690,070	1.19
Total all grains.....	21,787,583,490	510,169,640	
	or	or	2.34
	10,893,791 tons	255,089 tons	
<i>Vancouver—</i>			
Wheat.....	3,189,488,040	47,232,870	1.48
Oats.....	31,192,860	6,120	0.02
Barley.....	3,473,280	13,190	0.38
Rye.....	18,851,620	185,990	0.88
Mixed Grain.....	59,670		
Total all grains.....	3,243,065,470	47,418,170	1.46
	or	or	
	1,621,532 tons	23,709 tons	
<i>Grand Total, Fort William-Port Arthur and Vancouver—</i>			
Wheat.....	21,477,246,800	517,740,420	2.41
Oats.....	2,014,025,180	566,860	0.028
Barley.....	774,917,170	7,446,640	0.96
Flaxseed.....	293,952,330	21,685,810	7.38
Rye.....	412,566,650	9,458,010	2.29
Mixed Grain.....	57,940,830	690,070	1.19
Total all grains.....	25,030,648,960	557,587,810	2.23
	or	or	
	12,515,324 tons	278,793 tons	

Approximate amount paid for the transportation of Dockage in grain shipped to the Fort William-Port Arthur and Vancouver terminals, Crop of 1923—
 557,587,810 lbs. at 21c. per 100 lbs. \$1,170,934 40

From these figures, it will be evident that the total volume of screenings arriving at the various terminals annually is very large, and that it is continually increasing as the volume of grain increases. These screenings, at the head of the Lakes and other terminal points, constitute a real problem, as shown in this report. (1) They have a considerable value as stock foods, when separated from the refuse screenings, and the western producer feels strongly that he should derive some pecuniary advantage from their salvage and sale; (2) they are a source of noxious weed distribution on the farms of eastern provinces and states, where in the past they have been distributed in a careless manner; (3) they are finding their way in too large quantities into out-going shipments of grain from the terminals, and are thus lowering the quality of the grain represented by the Canadian Certificate final; (4) their presence in the outgoing grain accounts in part for the overages of wheat and other grains in the terminals; (5) the producer suspects that a higher dockage is set by the Inspection Department, than is taken out by the terminals; and (6) that the amount of screenings shipped is less than the dockage set usually by an amount that constitutes a considerable portion of the overage in the terminals.

Under present conditions, many difficulties stand in the way of dealing with this large volume of screenings, so as to prevent alleged abuses and allay suspicions. We, therefore, recommend that all the screenings, to the amount of the dockage set on the grain entering the terminals at the head of the Lakes, Vancouver and other terminal points, be cleaned out and handed over to the Dominion Government; that the Government provide such facilities for handling them as will safeguard the interests of all concerned; that the Board of Grain Commissioners establish a scale of fees for cleaning all grain carrying dockage, not excepting wheat carrying 3 per cent and oats 5 per cent as at present; and that the terminals be compensated for the services they perform in cleaning the grain, and for handling and storing screenings. We recommend, further, that an effort be made (1) to have the inspection department at Winnipeg and other points indicate approximately on the original grade certificate the percentage the recleaned screenings bears to the total dockage to enable settlement being made to the farmer; (2) to establish a system of grading the recleaned screenings, so that they may be dealt with as cracked wheat, oat scalplings or wild buckwheat to enable those charged with administration to classify them more nearly in accord with feed standards, and merchandise them more easily and profitably.

The government, having taken over the screenings, should have them cleaned to grade, according to fairly definite standards suitable for stock foods, and ground by attrition mills so that the small percentage of weed seeds that remained would have their germinating powers completely destroyed.

Some of this work could be done at the terminal point. At the head of the Lakes, all the cleaning for that point could be done, and some grinding for re-shipment to the prairies and to Northern Ontario. But large quantities of screenings are purchased annually by Ontario and Quebec farmers. These could be carried more economically by boat in bulk across to a Bay port, where suitable facilities should be provided for grinding and re-shipment. When all charges incidental to handling, and merchandising the screenings have been paid, the balance should be distributed among the producers, or handled in such a manner as would remove the dissatisfaction that now exists.

Recommendations

We recommend—

- (1) that every effort be put forth by farmers to reduce the quantities of weeds grown in the grain crop;
- (2) that threshermen be encouraged to equip their separators to clean out all small seeds from the grain during the threshing operation, one of the strongest inducements being to pay him by the hour or day, or to arrange to measure the weed seeds threshed by some equitable method, and to pay for separating them;
- (3) that, under conditions where it will pay the farmer to do it, encouragement be given to the use of a supplementary separator that will extract the screenings that have value for stock feeds, and retain them on the farm;
- (4) that where conditions are favourable the farmer clean his own grain on the farm;
- (5) that investigations be carried on to help solve the question of cleaning on the farm, either at threshing or at other convenient times.

We cannot recommend that country elevators install cleaning equipment, nor can we recommend the country elevator as the proper and economical place to clean grain, under present conditions.

MIXING IN PRIVATE TERMINAL ELEVATORS

GROWTH OF THE SYSTEM

Since complaints touching the mixing of grain have received wide publicity and since there appears to be a very considerable degree of confusion in the public mind as to what is actually meant by the practice it may be well at the outset to distinguish between three kinds of mixing.

Types of Mixing.

(1) Canadian wheat may be purchased by American importers, brought into the United States and there mixed with American grain. This grain may then be sold and shipped abroad under an American certificate of grade. This practice is not illegal and is beyond Canadian control. The American certificate issued indicates to the European importer the nature of the product he is receiving.

(2) Canadian wheat while passing through the United States for shipment abroad may be tampered with and mixed with American wheat. Complaints that this has occurred have been made by British importers. What has been alleged is that cargoes of wheat carrying official Canadian certificates of straight grades of Canadian hard wheat turned out to be cargoes of mixed wheat, consisting partly of Canadian wheat and partly of softer and inferior varieties of wheat grown in the United States. Such a condition means an illegal and clandestine adulteration of the Canadian product. The extent of this evil and the precautions adopted to eliminate such irregularities and frauds are reviewed and discussed elsewhere.

(3) There is also the mixing together in licensed private elevators at Fort William, Port Arthur, and elsewhere of straight grades of Canadian grain, including the grades fixed by statute and the commercial grades fixed by the Standards' Board. After mixing when the product is being shipped out in cargo shipments, if the elevator is on the waterfront, or in carlots out of an inland house, the grain is sampled by the officials of the Inspection Department, examined, and receives, according to quality, a regular straight grade official certificate, exactly the same as those issued upon grain when initially inspected at Winnipeg or other Western inspection point, or upon grain coming from the public terminal elevators.

In the case of the public terminal elevators all grain of a given grade is required to be stored together, the inspection outward being merely a check to see that the public terminal elevator has in fact done what it is obligated to do. With the private terminal elevators, on the other hand, there is no such obligation; mixing takes place and when the grain is shipped out there is a second inspection of the grain and a straight grade is placed upon the mixture.

Against this practice of giving straight grade certificates on mixed grades of grain very strong objections have been urged by farmers and public men at various points throughout Western Canada, also by the Dominion Millers' Association. On the other hand, the practice has been strenuously defended by the large and powerful interests engaged in the business, in fact, by the grain trade generally.

The subject has had extended inquiry. The significance and perplexity of the problem do not become apparent at first view but its importance warrants very full consideration of the evidence presented on both sides. A determination of policy here means a determination of the lines along which the grain trade must go in its future development. We purpose, therefore, to trace the use of the mixing houses to their present position of importance, as the best way to throw light upon the situation.

Situation Between 1883 and 1904.

In the early days there were several private elevators at Winnipeg and one at Emerson, Manitoba. These elevators bought and mixed grain after it had been graded. They sold their output in various ways. They handled it on the basis of sample, shipped it to the American market and had it graded into the public terminals. The grain trade was in its infancy and the general regulations at first were not as comprehensive and carefully drawn as later. Meanwhile, at the head of the lakes, between 1883 and 1904 the railway companies owned and operated all the terminal elevators. At times during this period complaints were made that mixing or manipulating grain was occurring in these terminals. The practice was considered irregular and received no support from the railways or from the trade. W. C. Van Horne, of the Canadian Pacific railway wrote (May 23, 1892) "The manipulation of grain at terminal or transfer elevators, I hold to be wrong in principle. The practice in many of the private elevators in the United States has been a source of scandal." In the same year the Winnipeg Grain Exchange, supported by the Boards of Trade at Winnipeg, Brandon and Toronto, asked the Department of Inland Revenue, under whose supervision the inspection of grain then fell, to require that the inspection certificate on mixed cargoes should be in such form as to show the composition of the cargo. This request was acceded to and instructions issued to the Grain Inspector at Fort William to act accordingly. It will be noted that these instructions aimed at protecting the export trade. Nothing was said about giving a grade to mixed grain being put into storage at the terminals.

Again in 1889, the Winnipeg Grain and Produce Exchange (which succeeded the Winnipeg Grain Exchange), complained that mixing was occurring at the terminals and alleged that the practice was injuriously affecting the reputation of Manitoba grain on the European markets. It urged that all grain should be inspected at Winnipeg and should be warehoused at Fort William on that basis.

The amendments of 1899 to the General Inspection Act did not allow straight grades on mixed grain. When Mr. T. G. King, the owner of a cleaning and drying elevator at Fort William complained in 1900 that the new grain inspection system was injuring his plant the utility of his elevator was recognized, and a conference with the Department at which Mr. King, the Chief Grain Inspector and the Secretary of the Winnipeg Grain and Produce Exchange took place. It was agreed to be within the spirit of the regulations that when grain was graded as "no grade" or "rejected" on account of being smutted or damp, it might, after being cleaned, scoured or dried, receive a certificate specifying the state or quality of the grain. It was provided, however, that the grade should not be other than a commercial grade and that the certificate should include the term "scoured" or "dried" as the case might be.

Thus, between the year 1888 and 1904 the development was that to ship out mixed cargoes of grain under a straight grade certificate was not considered desirable and was forbidden. Cleaned or dried grain might be regraded but the certificate must show on its face if the grain had been scoured or dried. The ideal aimed at was that a straight grade certificate on outward shipments should mean the average of the grade in the views of the terminal elevators. The trade was intent upon making and establishing a high reputation for grain sold under the Canadian certificate.

Between 1904 and 1912.

In 1904 two public elevators were built at Fort William by companies in the grain business. These were the first public elevators to be owned and operated by other than the railway companies at the head of the lakes. Other grain companies followed this lead. In 1907 a private elevator (i.e. mixing house)

was built at the head of the lakes and two more were built in 1909. In 1906 the Canadian Northern railway leased its terminal houses to grain companies.

The period thus marks the gradual assumption by the grain companies of control over the terminal facilities at the lakehead, replacing the railway companies. The terminals and the country elevator system were being connected up. In addition, private elevators or mixing houses made their appearance.

During this period the public terminals were operated under the jurisdiction of a warehouse commissioner and were required to be licensed. This was part of the Manitoba Grain Act of 1900. When the private houses appeared at the head of the lakes they were called upon by the warehouse commissioner to take out licenses as public terminals. The private elevators objected that they did not have sufficient storage and that they wished to confine their operations to their own purchased grain. Considerable difficulty arose. In the event the private elevators were operated either under a terminal elevator license, a country elevator license or no license at all. These private mixing elevators shipped grain into the public terminal elevators where it received a grade upon being inspected in.

After 1912.

The third period dates from the enactment of the Canada Grain Act, 1912, to the present. The Canada Grain Act, 1912, itself introduced a number of important changes in the regulations governing the grain trade, but the period includes the exceptional conditions under which the grain trade was conducted during the war; the striking growth of the farmers' co-operative companies, changes in the American market for Canadian grain, the rapid increase of private elevators for mixing at Fort William and Port Arthur, and a change in the attitude of the trade to the shipping of mixed cargoes of grain under straight grade certificates. A certain amount of confusion is to be found due to the rapid changes in the situation.

Increase in Private Elevators.

In 1909 there were three private elevators at the head of the lakes. In 1912 four more were built. This number has increased until now there are twenty-five private elevators at Fort William and Port Arthur. Not all of these were built as private elevators. A number were large plants which originally operated as public terminals. Sixteen of the private elevators are on the lake front, and nine inland. The total capacity of the group is 23,535,000 bushels. Added to this there are five private elevators at Winnipeg with a capacity of 1,350,000 bushels. These elevators now operate as private elevators, licensed as such by the Board of Grain Commissioners. All grades of grain are inspected into these mixing houses, mixing takes place, cargo or carload shipments are inspected out and receive a straight grade certificate, indistinguishable in form from those issued upon grain shipped from the bins carrying the average of the grade in the public terminals.

Compared with the twenty-five private elevators at Fort William and Port Arthur there are at present ten public terminals, but these are relatively large houses and they have a total capacity of 39,925,000 bushels, collecting much in excess of the private houses. It has already been pointed out, also, that certain houses, built as public terminals, have recently turned private. It may also be noted that the railway companies have leased one house after another to grain companies until now, with one exception in 1923-24, there are no railway-operated elevators at the head of the lakes.

Yet despite this great change in terminal conditions at the lake head it may almost be said that private elevators are not known to law. The interpretation section of the Canada Grain Act, 1912, defines all kinds of elevators, but does not include therein private elevators. Except for a minor amendment, sub-

section 5, of section 57, touching warehouse receipts, inserted in the Act in 1919, private elevators are not mentioned. If it appears desirable to make the law conform to the present practice the statute must be modified considerably to make it conform to this view.

The Canada Grain Act, 1912.

The Canada Grain Act, 1912,—

- (1) created the Board of Grain Commissioners with power subject to the consent of the Governor in Council, to make rules and regulations for the government, licensing and bonding of terminal or other elevators and all matters necessary to the carrying out of the Act;
- (2) provided for hospital elevators;
- (3) made provision for sample markets;
- (4) provided that the mixing of grain might be permitted in connection with sample markets under such rules and regulations as were recommended by the Board of Grain Commissioners and approved by the Governor in Council.

Hospital Elevators.

We may first note the sphere and status marked out for the hospital elevators. Section 2, clause 3, defines hospital elevators as including "every elevator or warehouse which is used for the cleaning or other special treatment of rejected or damaged grain and which is equipped with special machinery for that purpose."

Section 124, subsection 1, states that "there may be such number of hospital elevators as are determined by the Board, which shall be governed by such regulations and restrictions as are imposed by the Board." Subsection 2 says that "any such elevator shall be required to take out a license and furnish a bond in such amount as the Board determines." Subsection 3 provides that "notwithstanding anything in this Act, but subject, nevertheless, to the provisions of Section 99, and subsection 5 of section 115, grain which is being shipped out from a hospital elevator shall, at the request of the owner or possessor thereof, or of his authorized agent, be inspected and graded, and that the grade so arrived at shall be the grade thereof."

Section 99 to which reference is made, states that "when grain is shipped from any elevator being systematically reduced in quality below the general average quality of the grain of similar grades in the bins of the terminal elevators, the Chief Inspector shall instruct inspecting officers that no such grain shall be allowed to pass inspection except on a lower grade." Section 115, subsection 5, says, "no grain that has been subject to scouring or treatment by use of lime or sulphur shall be graded higher than No. 3." Where hospital elevators were inland the application of section 99 would prevent them causing a deterioration of the grain in the bins of public terminals by shipping in to them a minimum grade.

These sections of the Act obviously aimed at the authorization of a limited number of hospital elevators which would receive tough, damp, smutted or otherwise damaged grain. By cleaning, scouring and mixing the grain it could be put in marketable shape and was to be inspected out, or into the public terminal elevators chiefly in the lower grades. It will also be noted that the Board of Grain Commissioners were empowered to impose regulations and restrictions, but that the Act, in this instance, does not say that these regulations or restrictions must be submitted to the Governor in Council for approval. In fact, they were not submitted for approval.

The Act, moreover, is not clear in its definitions of kinds of elevators. Section 2, Clause (y) defines a terminal elevator as including "every elevator or warehouse which receives or ships grain, and is located at any point declared by

the Governor in Council to be a terminal. Fort William and Port Arthur have been declared by Order in Council to be such a terminal. Since hospital elevators located at the head of the lakes received and shipped grain they might therefore be classed as terminal elevators. On the other hand many of the terminal elevators were equipped with machinery for drying, cleaning and other treatment of rejected and damaged grain. Under the two definitions every terminal elevator might be a hospital elevator and every hospital elevator a terminal.

The private elevators then in existence were not mentioned in that Act. There were of relatively small capacity and lacked the general facilities necessary to receive and handle grain in large quantities. They were unfitted to qualify as terminal elevators. In the circumstances, actually what happened, after the enactment of the Canada Grain Act, 1912, was that these private elevators obtained licenses from the Board of Grain Commissioners as hospital elevators. They were bonded as such. They are referred to in the Annual Report of the Board submitted January 7, 1913, as being "private hospital elevators," which neither treated nor stored grain for the public. Regulations were issued by the Board which prohibited them from taking into their elevators No. 1 Hard, No. 1 Northern and No. 2 Northern wheat. A fuller series of regulations appeared later which went farther: "Grain received into hospital elevators must be the property of the hospital elevator owners." Subsection 3, Section 124, stated that the grain being shipped out of a hospital elevator at the request of the owner or possessor should be inspected or graded but a rule issued by the Board declared that "all grain received into hospital elevators will be officially inspected in and out and officially weighed in and out." The rules issued to inspectors at hospital elevators cover cargo shipments and indicate the issue of straight grade certificates on mixed cargoes: "Deputy Inspectors shall not accept grain for sampling where two or more streams are run to the same hold, if they find there is any difference in the grain of the different streams. All grain must be finally mixed before it arrived at the point of sampling."

The private elevators took out licenses as hospital elevators and were bonded as such from 1912-13 to 1917. The report of the Board of Grain Commissioners submitted January 7, 1913, states that at that time there was only one public hospital elevator at the head of the lakes which treated grain for the public. But as this elevator in addition stored grain it was licensed and bonded as a terminal elevator rather than as a hospital elevator.

It thus comes about that elevators licensed as hospital elevators limited themselves to handling their own grain. Of these "private hospital elevators," as they were denominated by the Board of Grain Commissioners, there were eight. They did not perform a public service. They neither treated nor stored grain for the public but they enjoyed as licensed hospital elevators under the Board the right to have their grain inspected out and given a straight grade certificate. In this respect these "private hospital elevators" enjoyed greater latitude than the terminal elevators, subsection 8 of Section 126 definitely forbidding mixing in terminal elevators; Section 92 enacts that all grain shipped from any terminal or public elevator within the western inspection division shall be shipped only as graded into such elevators except when grain has deteriorated when a certificate shall be issued in accordance with the facts. Section 93 enacts that "if otherwise shipped a Western Inspection Certificate for a straight grade shall be refused and the quantity of such grades composing the mixed cargo or carload if shipped by rail, shall be written across the face of the certificate."

The net effect of the interpretations and regulations adopted by the Board of Grain Commissioners was to change the general conception of what constituted a hospital elevator and in point of fact, to limit that category to a group of private elevators handling their own grain and mixing it and shipping it out under straight grade certificates. The only restriction was that they could not

take in No. 1 Hard, No. 1 Northern, and No. 2 Northern. Under the Act itself, (Section 115, sub-section 5), no grain that had been subject to scouring or treatment by use of lime or sulphur could be graded higher than No. 3, but apart from this prohibition these mixing houses could ship out mixed grain of other grades under a straight grade certificate.

Sample Markets.

The Canada Grain Act, 1912, in sub-sections 2 and 3 of Section 57, provides that sample markets may be established and the mixing of grain permitted in connection therewith, under such rules and regulations as are recommended by the Board of Grain Commissioners and approved by the Governor-in-Council. Sub-section 4 of Section 57 enacts that sub-sections 2 and 3 shall only come into force upon proclamation of the Governor-in-Council in the Canadian Gazette, but that the proclamation shall not be made "unless and until the Governor in Council is satisfied that the proper conditions exist for bringing the said sub-section into force." The Board of Grain Commissioners submitted a report to the Privy Council and a proclamation was made by Order in Council on October 27th, 1912, providing that subsections 2 and 3 of Section 57 should go into effect the first of September, 1913. This proclamation was published in the Canadian Gazette on November 9th, 1912. In pursuance of subsection 2, Section 57, an Order in Council was passed in 1917 approving of a set of rules and regulations for sample markets. Rule 4 empowered the Board to "issue public terminal licenses and private terminal licenses." By Order in Council of 1923, the latter are now called private elevators. Rule 5 stated that "any person, firm or corporation, now operating elevators at terminal points will have the right to operate their elevators as public or private terminal elevators." Five rules cover the operations of private elevators. They are as follows:—

"(13) Grain received into private elevators must be the property of such elevators. Private elevators are prohibited from doing a public storage business; provided, however, that nothing contained herein shall curtail the right of sale of grain in store in any private elevator.

"(14) All grain received into private elevators will be officially inspected in and out, and officially weighed in and out.

"(15) Any private elevator may issue warehouse receipts for grain in store which shall be registered by the board as to quantities only, and no grain covered by any receipt so registered shall be shipped until such receipt is registered for cancellation.

"(16) Such elevators shall make out weekly or other statements for the board as required.

"(17) Notwithstanding the foregoing rules and regulations for private terminal elevators the owner or owners of grain may enter into a contract for the handling and mixing of grain in such private terminal elevators."

These rules, with certain enlargements, are those which have been governing "private hospital elevators". Private elevators are not prohibited from receiving No. 1 hard, No. 1 Northern and No. 2 Northern. Private elevators are bonded by the Board. Private elevators may issue warehouse receipts but registered by the Board as to quantities only. Private elevators may be required to and do make weekly or other statements to the Board.

While certain preparations were made by the Winnipeg Grain Exchange for a sample market, there was opposition to the proposal by the railway companies on account of the war. The Grain market was closed from 1917 to 1920. Through various causes a sample market has never become effective. Nevertheless, although the Act states that it is in connection with sample markets that the mixing of grain shall be permitted, private elevators or mixing houses have been licensed under the regulations governing sample markets and these elevators have been in operation since 1917. When the rules and regulations governing sample markets were promulgated the elevators that had hitherto been operating as "private hospital elevators" took out licenses as "private terminal elevators". During the crop year ending August 1917 the Board

issued 15 licenses for terminal elevators and 21 licenses for hospital elevators. In the following year ending August, 1918, after the Order in Council on sample markets provided for private terminal elevators there were issued 17 licenses for public terminal elevators and 17 licenses for private terminal elevators, and 3 licenses for hospital elevators. For the year ending August 1919 licenses for private terminal elevators had increased to 18 and licenses for hospital elevators had disappeared. As we have already shown there are now at the head of the lakes 25 private elevators and 10 public elevators. If this trend continues privately owned public terminal elevators may disappear at Port Arthur and Fort William.

Moreover, since 1917, the privileges of the private terminal elevators by Order in Council have been further enlarged. In 1920 Rule 17 was amended to read as follows:—

“(17) Notwithstanding the foregoing rules and regulations for private terminal elevators, the owner or owners of grain may enter into a contract for the storing or handling and mixing of grain in such private terminal elevators, and such contract may, if desired, be in the form of a warehouse receipt, which shall be registered by the board as to quantities only.”

(Amended by Order in Council P.C. 2110, dated September 2, 1920.)

The effect of this amendment is to permit private elevators or mixing houses to act as storage elevators where farmers' grain may be stored. Some private elevators have made use of this rule and store farmers' grain. These elevators are bonded by the Winnipeg Grain Exchange. They are known in the trade as “private regular” houses. Practically all the private elevators are allied or affiliated with country elevator companies and by reason of the close relationship between them it is understood that the country elevator company ships practically all its grain to the particular elevator to which it is allied if that elevator can take it in. A country elevator company may ship the bulk of the farmers' grain it handles to a public elevator for storage and its own grain to a private elevator; and another country elevator company may ship both its own grain and farmers' grain for storage into a “private regular” elevator. We will discuss later on the peculiar system of diversion and warehouse receipts this practice involves. In five or six instances the country elevator company and the private terminal company are one and the same company. In 12 instances country elevator companies hold stock in private terminals. Common shareholders may also ensure a community of interest, where there is no formal relationship.

An Order in Council passed in 1923 requires that “cars of grain belonging to farmers which are shipped without selling instructions or with instructions to hold for further orders shall not be ordered to or unloaded into any private elevator, whether by country elevator operator, commission merchant, or any other party acting for the farmer, without the express consent of the farmer given in writing; and such cars shall not be received into any such private elevator.” This requirement does not appreciably affect the practice. Country elevator companies specifically instruct their country agents to take authority as a matter of course from the farmers to unload their grain in private elevators when the shipment is made; or the authority is taken of the farmer when he receives an advance upon his shipment.

Returns from 41 country elevator companies show that with one or two exceptions they unload a certain percentage of farmers' consigned grain into private elevators. In the case of 13 companies the percentage is 90 per cent or over. In other instances country elevator companies may have affiliations only with public terminal elevators.

While the regulations of the Board of Grain Commissioners were enlarging the privileges of the private elevators the public terminal elevators were being subjected by legislation to closer restrictions. By an amendment to the Canada

Grain Act passed in 1919, (Section 95, sub-section 7), the public terminal elevator companies are required to surrender to the Crown the surplus grain found in each elevator at the annual stock-taking when such surplus is in excess of one quarter of one per cent of the gross amount received in the elevator during the crop year; the excess surplus to be sold by the Board of Grain Commissioners and the proceeds applied towards the cost of the administration of the Canada Grain Act. The object of this legislation was to take away from the elevator companies what Parliament considered to be unearned profits which fell into their hands through their operations as public warehousemen, and to apply these profits to a public purpose. It has had the effect however, of strengthening the tendency of elevators operating at the head of the lakes to elect to take out private terminal licenses in preference to public terminal licenses. Under Rules and Regulations No. 4 *re* sample markets they are able to exercise a choice. For the crop year 1919-20, 17 licenses for public terminal elevators were issued by the Board of Grain Commissioners and 17 licenses for private terminal elevators. For the crop year 1920-21, only 12 licenses for public terminal elevators were issued, but 25 licenses were issued for private terminal elevators. By a recent decision of the Exchequer Court of Canada, this amendment to the Act has been held to be *ultra vires*, but the issue is under appeal. (The King vs. Eastern Terminal Elevator Co. (1924) ex. G.R. 167.)

Under the regulations issued by the Board of Grain Commissioners for sample markets, private terminal elevators have practically all the advantages of the public terminal elevators without the obligations and restrictions placed upon the latter. Private terminal elevators may mix different grades of grain, and obtain a straight grade certificate on the same when making shipments out. They may take in farmers' grain for storage. They may issue warehouse receipts.

A difference in the receipts they issue from those issued by the public terminal elevators is that, while registered by the Board as to quantities only, they are registered by the Winnipeg Grain and Produce Exchange as to grade. With public terminal elevators, the Board registers both as to grade and quantity. So that while the public terminal elevators are bonded by the Board at 15 cents a bushel on the capacity of the house, the private terminal elevators are bonded by the Board at 8 cents a bushel on the capacity of the house, and also by the Winnipeg Grain Exchange. In the two respects where the official regulations of the Board of Grain Commissioners do not provide for the private terminal elevators, the Winnipeg Grain and Produce Exchange steps in and meets this difficulty.

The preceding sketch shows that the private terminal elevators have grown up in an irregular manner through making use of regulations intended to function under different circumstances. By this, we mean that their present position is legally based on the assumption that there are sample markets although none are at present in operation. The increase in number of private terminal elevators in recent years has taken place largely at the expense of the development of public terminal elevators.

The situation being as thus described, we are asked to deal with it in various ways. It is contended, on the one hand, that the practice of mixing should be continued, and the Statute brought into conformity with existing conditions. The opponents of the practice demand it be abolished, and all grain handled through a public terminal system of elevators. Others, again, are opposed to mixing as carried on by the companies, and suggest that if the mixing houses are to be continued, they should be operated in such a manner as to bring their profits back to the producers, as, for instance, by means of Government ownership and operation.

. OBJECTIONS TO MIXING .

The objections which have been urged against allowing grain to be mixed in private terminal elevators revolve around the contention that mixing lowers the quality of the grain shipped out under the official Canadian Certificate. This is the crux of the whole matter. The chain of cause and effect is traced out in this way:—"If the grain that is being exported is being lowered in quality, this must lower the reputation of Canadian grain on the English and foreign market. The British or foreign miller will give less for it, because it will be worth less to him. Canadian grain will sell, therefore, at lower prices on British markets than it would otherwise command. But the prices obtained on the Liverpool market reflects back and influences the prices made on the Winnipeg Grain Exchange. Exporters from Canada cannot offer as much for Canadian grain if they cannot obtain as much for it on the other side of the water. This depresses the Winnipeg price of grain, and that depression necessarily reaches back in its effects until it hits the producer by the lower price at which he must sell his grain, either in Winnipeg or at the country elevator." According to this line of reasoning, mixing grain works a double injury; it hurts the reputation of Canadian grain abroad, and it reduces the price the farmer receives for it at home. This is the main argument offered against mixing. All the other objections are secondary or grow out of this one.

The grain trade itself is conceived of as being indifferent to the quality of the product it handles. It is considered that all that the trade desires is uniformity of grade in the grain traded in, be it high or low. With that assured, traders will make their profit on the turnover. A large portion of the trade is known to be interested in mixing elevators. Farmers think that the mixing elevators make large profits in an illicit fashion at their expense. This is accomplished, it is claimed, by purchasing the farmers' low off-grades at very much reduced prices, and working it off into the higher grades. The ability to obtain a straight grade certificate on the mixed product facilitates the process.

Another complaint comes from the Dominion Millers' Association. The membership of this Association is composed largely of the smaller mills in Eastern Canada. It is pointed out that, during the last three years, numbers of these medium sized mills running from 50 to 100 barrels to as high as 600 and 700 barrels daily capacity have gone out of business. Among the reasons given for the reduction in number of this type of flour mill is inability to obtain straight grades of unmixed wheat. These relatively small mills urge that they perform a useful local function in supplying feed stuffs to the farmers of Ontario and Quebec. It is submitted that this is of National importance. But the small mills complain that they suffer unduly from the competition of the large mills which have their own lines of elevators in the West, and are thus able to secure the straight grade of grain as it comes from the producer. They find their inability to obtain similar grain easily a handicap in their business.

It was also pointed out that there are great difficulties in administering a system of inspection where private terminal elevators are allowed to have their grain graded out on certificate. In the case of the public terminal elevator, it is urged that the elevator does not own the grain and has little interest in attempting to influence or bring pressure to bear upon the inspector or sampler while he is at his work. But, in the case of the private terminal elevator, the elevator owner is also owner of the grain. On a large cargo shipment, say 400,000 bushels, a difference in grade between one and two Northern at a spread of 3 cents a bushel would mean a loss to it of \$12,000. Under the circumstances, it is naturally feared that pressure may be brought to bear on the inspector to set a lower grade than ought to pass.

In general, an apprehension is expressed that if the present trend at the terminals continues, the public terminal warehouses, as a real factor in the

situation, will disappear. They will all turn over and become private houses. This would produce a situation comparable to that in the United States where terminal warehousing of grain in the primary markets in the West is done almost entirely by private warehouses.

Effect of Mixing on the Quality of Canadian Export Grain.

On this question, we have had an enormous mass of evidence presented to us, bearing on every phase of the problem. The inquiry was most exhaustive, and we think conclusive. We purpose to deal with the evidence in the following order:—

- (1) The actual process of mixing employed in the private elevators.
- (2) Methods of inspection out of private and public terminal elevators.
- (3) The opinions of the chief inspecting officials.
- (4) The evidence of the Eastern millers.
- (5) The reputation of Canadian grain in Great Britain.

Methods of Mixing.

On this question, Mr. J. H. Irwin, Manager at Port Arthur and Fort William for the Western Terminal Elevator, a private terminal, was called and examined. Mr. Irwin stated that his connection with the grain business extended back to the operation of a mixing elevator at Emerson, Manitoba, during the period 1890 to 1904, where he assisted his father, who was Superintendent of the house. The Western Terminal Elevator, of which he is now manager, has a capacity of 3,000,000 bushels, divided into about 277 bins. Ninety-one bins are used specifically for cleaning, and 186 for storage. This is a larger number of bins than a public house of the same size would ordinarily have, because they have a good many bins of 1,500, 2,000 and 2,500 capacity. Practically all the bins are in use when the elevator is busy.

The witness stated that about 90 per cent of the cars coming into his house are sampled by his own man on the track before they get into the house. These cars are examined for the quality of dockage they carry. In examining them, they pick out and select the best cars of the different grades and bin them accordingly. All wheat entering the elevator is cleaned, whether it carries dockage or not, as set by the Winnipeg Inspection Department. The wheat is cleaned heavy; that is, more is taken out in the tailings than the percentage of dockage set on the certificate. Where it is intended to mix a quantity of No. 1 Northern with a quantity of No. 2 Northern and to turn the product out as a No. 1, both lots are given an extra cleaning in each instance, a certain amount of thin, shrunken or immature wheat is removed, larger screens are placed in the cleaner and extra wind is applied to accomplish this result. With respect to the proviso in the Act that No. 1 Northern must have 60 per cent of Hard Red Fife Wheat, as a rule the higher grade carries an overabundance of the quality, which is short in the lower. As a matter of fact, no shipment had been turned down in No. 1 or No. 2 for lacking the required percentage of Red Fife.

In other instances, witness stated, cars came in that had been graded No. 2 Northern because they had some specific defect such as carrying white kernels of grain, or having a sprinkling of rye or a sprinkling of durum. These cars would have weight, but would lack the percentage of Red Fife. They would be specially binned, and would eventually be raised or absorbed into the higher grade. No. 3 and the lower grades were handled much in the same way. The lower grades lent themselves more readily to selection, but the elevator did not obtain the same quantity of them. The volume of business was done in the higher grades. With respect to the smutted or tough grain, these grains were cleaned and treated, and then mixed according to the best advantage. The witness admitted that grain graded as heated had been mixed in the straight grades. It was also pointed out that the state of the market might make it

more profitable to use No. 1 Northern by mixing to make No. 2 Northern. This would depend on the demand and quality of the wheat.

This is as far as the witness was able to go in explaining the actual processes of mixing or blending grain. No detailed evidence was submitted to show what had, as a matter of fact, gone into a shipment loaded from that elevator. It was represented that this would reveal a "trade secret." When attempts were made to deduce from receipts in and shipments out the actual composition of the cargo shipment, it was pointed out that this could be merely a "paper mix," and might not correspond with the actual facts, even though the assumptions made were those most favourable to the elevator.

General returns were submitted by all the private elevators, showing receipts and shipments for the crop year 1921-2, and 1922-3. We include here the returns covering wheat submitted by the Western Elevator, the Saskatchewan Co-operative Elevator No. 2 and the Paterson Elevators "K" & "O." The first returns in each instance show all the wheat received in and shipped out, the grades being bracketed together. The second return shows the off-grades separately.

ROYAL GRAIN INQUIRY COMMISSION

WESTERN ELEVATOR—CROP YEAR 1922-23

WHEAT	Receipts	Per cent of Total	Shipments	Per cent of Total
1 Hard.....	51,613—20	0.3		
1 Northern Grades.....	15,097,536—40	80.2	16,849,880—50	88.8
2 Northern Grades.....	2,275,487—40	12.1	829,967—50	4.4
3 Northern Grades.....	1,022,713—50	5.4	979,246—00	5.1
Number 4 Grades.....	149,262—40		60,464—10	
Number 5 Grades.....	31,551—30	1.0	94,211—20	1.2
Number 6 Grades.....	7,232—30		80,409—40	
Number 5 Special Grades.....	8,339—00			
Number 5 Special.....	13,128—00	0.2		
Number 6 Special.....	1,951—30			
Feed.....	6,639—40			
Heated 1 Northern Grades.....	19,496—10			
Heated 2 Northern Grades.....	13,025—50			
Heated 3 Northern Grades.....	6,887—10	0.2		
Heated Number 5 Grades.....	1,589—50			
No. established Grade.....	1,593—20			
1 Durum Grades.....	5,071—40			
2 Durum Grades.....	40,155—20	0.6	{44,601—30}	0.5
3 Durum Grades.....	43,992—40		{45,519—50}	
Other Durum Grades.....	19,877—40			
Total.....	18,817,146—00	100.0	18,984,307—10	100.0
Stocks in store Aug. 31, 1922.....	223,185—10			
Stocks in store Aug. 31, 1923.....			72,524—40	
Grand Total.....	19,040,331—10		19,056,831—50	
1 Hard.....	51,613—20	0.27		
1 Northern Grades—				
Straight 1 Northern.....	14,948,488—40	79.44	16,849,880—50	88.8
Rejected 1 Northern.....	67,683—20	0.35		
Smutty 1 Northern.....	12,019—30	0.06		
Tough 1 Northern.....	65,687—40	0.34		
Tough Rej. 1 Nor.....	991—10			
Tough Smutty 1 Nor.....	2,666—20	0.01		
2 Northern Grades—				
Straight 2 Northern.....	2,087,274—20	11.09	829,967—50	4.4
Rejected 2 Northern.....	64,447—30	0.34		
Smutty 2 Northern.....	8,409—00	0.04		
Smutty Rej. 2 Nor.....	108—40			
Tough and Damp 2 Nor.....	111,612—40	0.59		
Tough Rej. 2 Nor.....	3,635—30	0.02		
3 Northern Grades—				
Straight 3 Northern.....	820,438—50	4.36	959,471—10	5.0
Rejected 3 Northern.....	43,705—20	0.23	19,774—50	0.1
Sprouted 3 Northern.....	6,957—50	0.04		
Smutty 3 Northern.....	335—30			
Tough and Damp 3 Nor.....	136,364—20	0.72		
Tough Rej. 3 Nor.....	6,029—30	0.03		
Tough Sprouted 3 Nor.....	8,882—30	0.05		
No. 4 Grades—				
Straight No. 4.....	120,645—30	0.64	60,464—10	0.3
Rejected No. 4.....	3,264—50	0.02		
Sprouted No. 4.....	601—50			
Smutty No. 4.....	854—40			
Tough and Damp No. 4.....	21,505—30	0.11		
Tough Rej. No. 4.....	818—20			
Tough Sprouted No. 4.....	1,572—00	0.01		
No. 5 Grades—				
Straight No. 5.....	26,106—40	0.13	94,211—20	0.5
Rejected No. 5.....	350—00			
Tough and Damp No. 5.....	5,094—50	0.03		
No. 6 Grades—				
Straight No. 6.....	7,232—30	0.04	80,409—40	0.4
Feed Grades—				
Straight Feed.....	5,616—10	0.03		
Tough Feed.....	1,023—30	0.01		
Total.....	18,642,037—50	99.0	18,894,185—50	99.5
Other Grades (see previous page).....	175,108—10	1.0	90,121—20	0.5
Grant Total.....	18,817,146—00	100.0	18,984,307—10	100.0

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SASKATCHEWAN CO-OPERATIVE No. 2 ELEVATOR—CROP YEAR 1922-23

Wheat	Receipts	Per cent of Total	Shipments	Per cent of Total
1 Hard.....	38,691—40	0.4		
1 Northern Grades.....	7,590,777—00	72.5	9,242,326—10	87.9
2 Northern Grades.....	2,026,377—50	19.3	1,230,695—10	11.8
3 Northern Grades.....	744,367—10	7.1	35,931—40	0.3
No. 4.....	33,831—20	0.3		
No. 5.....	1,034—50			
Smutty Grades.....	13,054—50			
Heated and Fireburnt 1 Nor.....	4,205—40	.4	1,557—50	
Heated 2 Northern Grades.....	1,106—00			
Spring and Durum.....	23,901—20			
Total.....	10,477,397—40	100.0	10,510,510—50	100.0
Stocks in store Aug. 31, 1922.....				
Stocks in store Aug. 31, 1923.....			7,127—50	
Grant total.....	10,477,397—40		10,517,638—40	

SASKATCHEWAN CO-OPERATIVE ELEVATOR No. 2—CROP YEAR 1922-23

Wheat	Receipts	Per cent of Total	Shipments	Per cent of Total
1 Hard.....	38,691—40	0.37		
1 Northern grades—				
Straight 1 Northern.....	7,368,668—00	70.33	9,241,349—10	87.9
Rejected 1 Northern.....	70,534—00	0.67	977—00	
Tough 1 Northern.....	144,552—40	1.38		
Tough Rejected 1 Northern.....	7,022—20	0.07		
2 Northern grades—				
Straight 2 Northern.....	1,892,595—40	18.07	1,230,695—10	11.8
Rejected 2 Northern.....	31,069—20	0.30		
Tough 2 Northern.....	98,324—10	0.94		
Tough Rejected 2 Northern.....	4,388—40	0.04		
3 Northern grades—				
Straight 3 Northern.....	684,906—30	6.54	35,931—40	0.3
Rejected 3 Northern.....	16,019—20	0.15		
Tough 3 Northern.....	40,971—50	0.39		
Tough Rej. 3 Northern.....	2,469—30	0.02		
No. 4 Grades—				
Straight No. 4.....	28,668—00	0.28		
Rejected No. 4.....	1,331—00	0.01		
Tough No. 4.....	3,832—20	0.04		
Total.....	10,434,045—00	99.6	10,508,953—00	100.0
Other grades (see previous page).....	43,352—40	0.4	1,557—50	
Grand total.....	10,477,397—40	100.0	10,510,510—50	100.0

ROYAL GRAIN INQUIRY COMMISSION

PATERSON ELEVATORS "K" AND "O", CROP YEAR 1922-23

Wheat	Receipts	Per cent of Total	Shipments	Per cent of Total
1 Hard.....	35,525-50	0.3		
1 Northern Grades.....	5,810,206-40	48.8	2,221,827-50	18.6
2 Northern Grades.....	2,158,144-10	18.1	8,157,559-00	68.2
3 Northern Grades.....	2,900,202-30	24.9	1,153,843-30	9.7
Number 4 Grades.....	423,876-10	3.6	55,054-20	0.40
Number 5 Grades.....	69,120-00	0.6		
Number 6 Grades.....	15,030-20	0.1		
Number 4 Grades.....	46,695-50		35,089-40	
Number 5 Special Grades.....	33,808-10	1.0		0.3
Number 6 Special.....	25,000-20			
Feed.....	7,819-10		179-20	
Smutty 1 Nor. Grades.....	35,887-10		19,400-00	
Smutty 2 Nor. Grades.....	80,373-50		96,915-10	
Smutty 3 Nor. Grades.....	50,812-40	1.5	15,491-40	2.1
Smutty No. 4 Grades.....	6,747-10		68,724-50	
Smutty No. 5 Grades.....	1,008-00		51,224-50	
Heated 1 Nor. Grades.....	19,550-50		1,133-20	
Heated 2 Nor. Grades.....	8,594-00		1,014-10	
Heated 3 Nor. Grades.....	8,846-00	0.3		0.7
Heated No. 4 Grades.....	3,114-40			
Heated No. 5 Grades.....	1,444-00			
1 Durum Grades.....	11,982-40			
2 Durum Grades.....	37,764-20	0.7	56,241-20	
3 Durum Grades.....	21,087-10		15,775-40	
Other Durum Grades.....	13,314-30		3,563-20	
Sample.....	927-10			
Wheat and Wild Oats.....	3,040-00	0.1		
Alberta Red Winter Grades.....	8,991-10			
Total.....	11,903,914-30	100.0	11,953,038-00	100.0
Stocks in store Aug. 31, 1922.....	250,549-00			
Stocks in store Aug. 31, 1923.....			63,783-00	
Grand Total.....	12,154,463-30		12,016,821-00	

ROYAL GRAIN INQUIRY COMMISSION

PATERSON'S ELEVATOR "K" AND "O", CROP YEAR 1922-23

Wheat	Receipts	Per cent of Total	Shipments	Per cent of Total
1 Hard.....	35,525-50	0-30	.....
1 Northern Grades—				
Straight 1 Northern.....	5,444,238-00	45-73	2,221,827-50	18-58
Rejected 1 Northern.....	178,496-30	1-54	.....
Tough 1 Northern.....	183,448-50	1-54	.....
Tough Rej. 1 Northern.....	4,023-20	0-03	.....
2 Northern Grades—				
Straight 2 Northern.....	1,597,800-30	13-42	8,040,559-00	67-26
Rejected 2 Northern.....	210,206-40	1-77	117,000-00	0-98
Tough and Damp 2 Northern.....	335,542-40	2-82	.....
Tough Rej. 2 Northern.....	14,594-20	0-12	.....
3 Northern Grades—				
Straight 3 Northern.....	2,292,611-10	18-26	1,108,465-10	9-26
Rejected 3 Northern.....	119,824-50	1-01	45,378-20	0-37
Sprouted 3 Northern.....	61,840-00	0-52	.....
Tough and Damp 3 Northern.....	399,566-30	3-35	.....
Tough and Damp Rej. 3 Northern.....	27,018-00	0-23	.....
Tough Sprouted 3 Northern.....	59,342-00	0-50	.....
No. 4 Grades—				
Straight No. 4.....	299,095-10	2-51	55,000-00	0-45
Rejected No. 4.....	23,982-10	0-20	54-20	
Sprouted No. 4.....	15,252-20	0-13	.....
Tough No. 4.....	68,879-40	0-58	.....
Tough Rej. No. 4.....	6,456-50	0-05	.....
Tough Sprouted No. 4.....	15,210-00	0-13	.....
No. 5 Grades—				
Straight No. 5.....	56,374-30	0-47	.....
Rejected No. 5.....	1,232-00	0-01	.....
Sprouted No. 5.....	240-20	.....	.....
Tough No. 5.....	11,273-10	0-09	.....
No. 6 Grades—				
Straight No. 6.....	13,429-20	0-11	.....
Rejected No. 6.....	67-30	.....	.....
Tough No. 6.....	1,533-30	0-01	.....
Feed Grades—				
Straight Feed.....	7,780-00	0-07	179-20	
Tough Feed.....	39-10	.....	.....
Total.....	11,484,924-50	96-5	11,588,464-00	96-9
Other grades (see previous page).....	418,989-40	3-5	364,574-00	3-1
Grand Total.....	11,903,914-30	100-0	11,953,038-00	100-0

We also add a summary of the total handlings of wheat by grades at private elevators at Fort William and Port Arthur during the crop year 1922-23. The second shows the off-grades.

SUMMARY OF TOTAL HANDLINGS OF GRAIN, BY GRADES, AT PRIVATE ELEVATORS, FORT WILLIAM AND PORT ARTHUR, DURING THE CROP YEAR 1922-23

Wheat	Receipts	Per cent of Total	Shipments	Per cent of Total
1 Hard.....	228,805-20	0-2	11,153-40	64-4
1 Northern Grades.....	70,883,531-20	62-8	73,577,295-20	
2 Northern Grades.....	20,286,709-40	18-0	24,709,311-30	21-6
3 Northern Grades.....	16,988,554-10	15-0	13,567,507-00	11-9
Number 4 Grades.....	2,030,433-40	1-8	939,893-20	0-8
Number 5 Grades.....	538,102-40	0-5	424,429-50	0-3
Number 6 Grades.....	193,465-10	0-2	153,944-30	0-1
*No. 4 Special Grades.....	99,809-00		47,689-40	
*No. 5 Special Grades.....	86,119-50	0-3	12,550-30	0-1
*No. 6 Special Grades.....	53,620-10		1,100-00	
Feed.....	112,714-50		57,853-40	
Smutty 1 Nor. Grades.....	118,409-00		21,947-30	
Smutty 2 Nor. Grades.....	134,893-00		107,209-20	
Smutty 3 Nor. Grades.....	133,889-20	0-4	73,830-40	0-3
Smutty Number 4 Grades.....	11,305-10		68,724-50	
Smutty Number 5 Grades.....	1,008-00		51,808-40	
Heated 1 Nor. Grades.....	96,762-10		11,831-40	
Heated 2 Nor. Grades.....	74,196-00		12,740-30	
Heated 3 Nor. Grades.....	50,194-40		21,118-30	
Heated No. 4 Grades.....	15,618-30	0-5	2,477-20	0-1
Heated No. 5 Grades.....	7,334-30		5,001-30	
Heated Number 6.....	597-20			
Condemned.....	20,639-40		11,673-00	
1 Durum Grades.....	30,116-00		10,889-40	
2 Durum Grades.....	168,947-10	0-5	201,273-10	0-4
3 Durum Grades.....	166,521-40		156,262-30	
Other Durum Grades.....	140,587-50		31,821-40	
Sample.....	133,814-00			
Alberta Red Winter Grades.....	13,096-00			
No Established Grade.....	2,479-50	0-1		
Wheat and weed seeds.....	8,680-40			
Total.....	112,880,956-20	100-0	114,291,139-30	100-0
Stock in store Aug. 31, 1922.....	1,604,167-00			
Stock in store Aug. 31, 1923.....			433,420-00	
Grand Total.....	114,485,123-20		114,724,559-30	

*The special grades are early arrivals of the 1923 crop, of which shipments before the end of August were small although fair quantities were received.

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SUMMARY OF TOTAL HANDLINGS OF GRAIN, BY GRADES, AT PRIVATE
 TERMINAL ELEVATORS, FORT WILLIAM AND FORT ARTHUR, DURING
 THE CROP YEAR 1922-23—Continued

Wheat	Receipts	Per cent of Total	Shipments	Per cent of Total
1 Hard.....	228,805—20	0.20	11,153—40	0.01
1 Northern Grades—				
Straight 1 Nor.....	68,761,359—10	60.92	73,487,759—40	64.31
Rejected 1 Nor.....	1,154,536—00	1.02	52,402—20	0.05
Tough and Damp 1 Nor.....	936,939—00	0.83	37,133—20	0.03
Tough and Damp Rej. 1 Nor.....	30,697—10	0.03		
2 Northern Grades—				
Straight 2 Nor.....	17,841,833—10	15.81	24,235,973—00	21.21
Rejected 2 Nor.....	949,653—40	0.84	420,857—10	0.37
Tough and Damp 2 Nor.....	1,426,404—20	1.26	52,481—20	0.05
Tough and Damp Rej. 2 Nor.....	67,285—50	0.06		
Sprouted 2 Nor.....	1,424			
3 Northern Grades—				
Straight 3 Nor.....	14,115,928—10	12.52	13,320,290—10	11.65
Rejected 3 Nor.....	610,423—00	0.54	93,518—10	0.08
Tough and Damp 3 Nor.....	1,755,526—40	1.56	121,610—30	0.11
Tough and Damp Rej. 3 Nor.....	104,371—20	0.09	1,868—20	
Sprouted 3 Nor.....	196,655—30	0.17	22,899—40	0.02
Tough and Damp Sprouted 3 Nor.....	205,649—30	0.18	6,738—20	
No. 4 Grades—				
Straight No. 4.....	1,550,134—50	1.38	921,457—50	0.81
Rejected No. 4.....	74,302—20	0.07	7,802—10	
Sprouted No. 4.....	48,029—30	0.04	5,533—20	
Tough and Damp No. 4.....	278,672—20	0.25	5,100—00	
Tough and Damp Rej. No. 4.....	31,714—00	0.03		
Tough Sprouted No. 4.....	46,726—00	0.04		
No. 5 Grades—				
Straight No. 5.....	476,156—10	0.42	420,603—40	0.37
Rejected No. 5.....	9,553—10		2,940—00	
Sprouted No. 5.....	2,990—20			
Tough and Damp No. 5.....	46,046—00	0.04		
Tough Rej. No. 5.....	1,954—40		1,470—00	
Tough Sprouted No. 5.....	1,402—20			
No. 6 Grades—				
Straight No. 6.....	166,811—50	0.15	153,234—40	0.13
Rejected No. 6.....	67—30			
Tough No. 6.....	25,496—40	0.02	709—50	
Tough Rejected No. 6.....	1,089—10			
Feed Grades—				
Straight Feed.....	99,109—20	0.09	56,422—00	0.05
Tough Feed.....	13,605—30	0.01	1,431—40	
Other Grades (see previous page).....	111,261,353—30	98.57	113,441,388—50	99.25
	1,619,603—10	1.43	849,750—40	0.75
Grand Total.....	112,880,956—40	100.0	114,291,139—30	100.0

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As the crop varies considerably from year to year, these returns only illustrate results for the year in question. The variations in the crop from year to year, as shown by the following table of inward inspections in the Western Inspection Division for ten years.—

INWARD INSPECTION

PERCENTAGES, AS TO GRADES, TOTAL CARS INSPECTED, WESTERN INSPECTION DIVISION

	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18
1 Hard.....	0-19	0-57	0-02	0-76	0-05	0-84
1 Northern.....	10-66	55-48	16-88	49-11	10-94	50-26
2 Northern.....	10-85	56-05	16-90	49-87	10-99	51-10
	34-22	26-97	34-20	17-46	19-34	20-43
3 Northern.....	45-07	83-02	51-10	67-33	30-33	71-53
	24-04	6-75	24-09	12-98	18-10	12-73
Number 4 Grades.....	69-11	89-77	75-19	80-31	48-43	84-26
	5-00	1-41	12-61	5-98	8-67	4-81
Number 4 Special.....	74-11	91-18	87-80	86-29	57-10	89-07
					3-66	
Number 5 Grade.....	74-11	91-18	87-80	86-29	60-76	89-07
	1-19	0-36	3-41	1-95	4-52	3-00
Number 5 Special.....	75-30	91-54	91-21	88-24	65-23	92-07
					3-17	
Number 6 Grade.....	75-30	91-54	91-21	88-24	63-45	92-07
	0-91	0-17	0-69	0-58	2-79	2-05
Number 6 Special.....	76-21	91-71	91-90	88-82	71-24	94-12
					1-79	
Feed.....	76-21	91-71	91-90	88-82	73-03	94-12
	0-30	0-02	0-10	0-13	4-08	0-62
Rejected.....	76-51	91-73	92-00	88-95	77-11	94-74
	2-88	4-23	2-89	2-13	1-90	2-46
No grade.....	79-39	95-96	94-89	91-08	79-01	97-20
	19-33	0-81	3-91	7-68	20-45	2-18
Smutty.....	98-72	96-77	98-80	98-76	99-46	99-38
	1-09	3-09	1-13	1-18	0-46	0-52
Heated and Condemned.....	99-81	99-86	99-93	99-94	99-92	99-90
	0-02	0-09	0-06	0-03	0-05	
No established grade.....	99-83	99-95	99-99	99-97	99-97	99-90
					0-03	0-10
Durum.....	99-83	99-95	99-99	99-97	100-00	100-00
	0-04	0-01		0-3		
B.C. 1, 2 and 3 Spring.....	99-87	99-96	99-99	100-00	100-00	100-00
Rejected, sprouted.....	99-87	99-96	99-99	100-00	100-00	100-00
Miscellaneous.....	99-87	99-96	99-99	100-00	100-00	100-00
Total.....	99-87	99-96	99-99	100-00	100-00	100-00

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PERCENTAGE AS TO GRADES, TOTAL CARS INSPECTED, WESTERN INSPECTION DIVISION

Grades	1917-18	1918-19	1919-20	1920-21	1921-22	1922-23
1 Hard.....	0-84	0-55	0-13	0-09	1-21	0-33
1 Northern.....	50-26	39-86	35-45	38-06	29-87	65-65
2 Northern.....	51-10 20-43	40-41 17-11	35-58 22-59	38-15 23-68	31-08 20-30	65-98 16-80
3 Northern.....	71-53 12-73	57-52 15-90	58-17 14-53	61-83 24-47	51-38 23-81	82-78 9-31
Number 4 Grade.....	84-26 4-81	73-42 10-28	72-70 1-27	86-30 5-32	75-19 8-62	92-09 0-77
Number 4 Special.....	89-07	83-70	73-97 3-72	91-62	83-81	92-86 0-15
Number 5 Grade.....	89-07 3-00	83-70 5-12	77-69 0-68	91-62 0-90	83-81 2-44	93-01 0-21
Number 5 Special.....	92-07	88-82	78-37 0-87	92-52	86-25	93-22 0-11
Number 6 Grade.....	92-07 2-05	88-82 3-33	79-24 0-21	92-52 0-29	86-25 0-71	93-33 0-06
Number 6 Special.....	94-12	92-15	79-45 0-20	92-81	86-96	93-39 0-10
Feed.....	94-12 0-62	92-15 0-87	79-65 0-16	92-81 0-05	86-96 0-18	93-49 0-07
Rejected.....	94-74 2-46	93-02 1-85	79-81 3-77	92-86 1-06	87-14 1-49	93-56 2-13
No grade.....	97-20 2-18	94-87 4-16	83-58 15-95	94-82 4-68	88-63 5-98	95-69 2-63
Smutty.....	99-38 0-52	99-03 0-73	99-53 0-28	99-50 0-28	94-61 0-34	98-32 0-33
Heated and Condemned.....	99-90	99-76	99-81	99-78	94-95	98-65 0-02
No established grade.....	99-90 0-10	99-76 0-08	99-81 0-03	99-78 0-03	94-95 0-02	98-67
Durum.....	100-00	99-84	99-84 0-07	99-18 0-09	94-97 0-44	98-67 1-25
B.C. 1, 2 and 3 spring.....	100-00	99-84 0-16	99-91 0-09	99-90 0-10	95-41 0-02	99-92
Rejected, sprouted.....	100-00	100-00	100-00	100-00	95-43 4-55	99-92 0-03
Miscellaneous.....	100-00	100-00	100-00	100-00	99-98 0-02	99-95 0-05
Total.....	100-00	100-00	100-00	100-00	100-00	100-00

These variations from year to year naturally affect greatly the methods and output of the mixing houses.

Inspection out of the Private and Public Terminals.

Section 99 of the Canada Grain Act provides that when grain shipped from any elevator is being systematically reduced in quality below the general average quality of the grain of similar grades in the bins of the terminal elevators it shall not be allowed to pass inspection except on a lower grade. This section is not definitely connected by any reference in the Act or by rule to the private elevators. The section goes back to 1904, before the private terminals were in existence. In the Canada Grain Act, 1912, the Hospital elevators are brought under it. However, in practice, the Inspection Department have always interpreted this rule to apply to the private terminals. Mr. J. D. Fraser, Assistant Chief Inspector for Canada, stated that instructions were given to the deputy inspectors at Fort William and Port Arthur to this effect. Mr. Fraser said that he considered "mixing" and "systematically reducing" to be the same thing.

Mr. F. Symes, inspector in charge of terminals at Fort William and Port Arthur, said that he received certain standard samples from the Chief Inspector's office at Winnipeg which he described as being the minimum, as he understood it, of the grades of both the standard and the commercial grades. These standard samples arrived sometime in October; until that time, they were working practically on last year's standards. These standard samples were sent by Mr. Symes out to all the public terminals for the purpose of inspection in and inspection out.

As a guide to the deputy inspectors at the private terminals, to guide them in inspecting out, Mr. Symes said he sent to them a composite sample which was a little better than the standard sample. This sample was composed of three parts of the Winnipeg standard as set by Chief Inspector Serls, and one part of the average taken by himself from the public terminal houses on the shipments that had taken place up to the date on which he made his sample. This composite sample was the actual sample employed by the deputy inspectors inspecting out at the private terminals. The standard sample set by Mr. Serls and the composite sample made up by Mr. Symes were submitted for inspection to Messrs. D. D. Young, technical adviser to the Commission, C. B. Watts, representing the Dominion Millers' Association and Mr. Stuart Langell, an inspector. These three men agreed that the official standard which came from Mr. Serls and the other were practically alike, except that the official standard had a little brighter colour. The composite sample weighed sixty-four pounds, and the standard sample sixty-three and one-half pounds. Mr. Watts stated that he considered the composite sample had a little more of what might be called weathered wheat in it, (bleached) and was a shade lighter in colour than the standard. Mr. Young and Mr. Watts agreed that if they were picking for a mill they would pick the official standard sample, rather than the composite sample. Mr. Symes stated that his composite sample was the only sample made up for grading out of the private terminals, and it was intended to be a guide for the men to keep their shipments fairly uniform. His instructions were that the inspectors were to keep up to the composite sample as nearly as they could, consistent with sound judgment and common sense. He had shown the samples to Mr. Serls, the Chief Inspector, who agreed that it was all right to put them out. He stated that he had seen samples of cargoes going out below the composite samples, and samples of cargoes going out better. The sample was merely a guide. In reply to a query as to what he would do if a sample of a cargo from a mixing house were laid before him that weighed sixty pounds and had sixty per cent of hard Red Fife Wheat in it, was otherwise sound and clean, and, in brief, complied with definition of One Northern found in the Act, Mr. Symes said he would have to pass it. He added that he had never been called upon to do so. Following instructions from the Chief Inspector, Mr. Symes said he had endeavoured to keep the grain coming out of the private terminals as

close to the average as he could. He pointed out that he had turned down samples that he believed were not up to the average of the composite sample, and the grade had been raised on an appeal to a Survey Board. These samples were below the average going out of the public terminal, but above the minimum of the grade defined by the Act.

A list of appeals to the Survey Board for that season showed that there were twenty-three appeals in all against grades and dockage placed upon grain being shipped out of the private terminals. In twelve instances, the inspector's grade was sustained; in four cases, the dockage was struck off; on seven occasions the grade was raised.

The evidence of a number of the deputy inspectors employed in grading out shipments from the private terminal elevators confirmed Mr. Symes' statements as to practice. It was clearly proved that the problem that confronts the inspector, inspection out shipments at the private terminal elevators, is not whether the grain turned out is up to the legal minimum of the grade as set forth in the Act, but whether the grain is up to the average of shipments out of the public terminals. With respect to the public terminals, while all agreed that a cargo of No. 1 or No. 2 Northern being shipped out, down to the minimum of the grade as defined in the Act, must receive that grade, yet such a shipment, it was said, never occurred. An average considerably above the minimum was, in point of fact, shipped out of the public terminals.

With respect to the official standard samples sent to the public terminals by the Chief Inspector, Mr. Serls, it was pointed out that, while it was referred to as the minimum of the grade, actually it weighed 63½ pounds to the bushel, and contained more than 60 per cent of hard Red Fife Wheat. It was, therefore, higher in quality than the minimum of the grade set forth in the Grain Act. It was explained that for the year 1922-23, on account of the quality of the crop, it would be difficult to obtain sound hard Red Fife Wheat that did not weigh more than 60 pounds to the measured bushel. The official standard of No. 1 Northern and No. 2 Northern was a minimum only in this sense; having regard to the quality of the crop this was what might be expected as the minimum of quality that would be delivered on these grades.

Opinion of the Chief Inspecting Officials.

During the course of our investigation into this question, various tests or demonstrations of the quality of mixed grain as compared with the general run of the grades found in the public terminals were presented to us. We do not attach much importance to this evidence. All it shows is that very excellent mixtures can be made, and that, on the other hand, grain may be so mixed as to deteriorate its quality seriously. Mr. Symes stated that the best shipment of No. 1 Northern wheat he had seen out of the Lake ports in the autumn of 1923 was shipped from a private terminal elevator. On the other hand, we had evidence presented to us at Buffalo by the Washburn Crosby Milling Co. that a certain shipment they received from a private house was much below what it purported to be. It appears, however, that in this last case fraud was proved on the part of the inspector, who was discharged. Further, the private elevator did not, in the succeeding year, obtain a license. It is obvious that a case of this nature, into which fraud enters, while it may illustrate possibilities of wrongdoing, does not in itself throw any light on the real question at issue: the quality of the product which obtains an honest certificate of grade.

We have, however, given consideration to the average condition under which cargoes are shipped out of the private terminals. We have sought to determine, on the average, how the quality of the grain they ship out compares with that shipped out of the public terminals. It was the opinion of Mr. Serls, to whom samples of all cargo shipments are sent for review, as it was also the opinion of Mr. Fraser and Mr. Symes, that the average from the public terminals would

probably be a little better than the average from all of the private elevators for the last two years. Mr. Serls said, "I might say that I would see some cargo samples probably from the private elevators that would be, if anything, better than the public terminals, and then I would see some that would run lower, but the average from the public terminals would probably run more even." This last year, Mr. Serls said that the private elevator shipments were more uniform and came nearer to the public terminals than they did the previous year. This conclusion does not go beyond an opinion on the average grades being shipped out of the public and private terminals. The evidence of Mr. Fraser, Assistant General Inspector for Canada is that the average of the grades going through Winnipeg is higher than the average in the public terminal elevators. The explanation he gave is that the Winnipeg average is made up of the inspection of all cars. The difference is caused by the better class of the higher qualities of No. 1 Northern being selected by mills and other elevators. As an instance, Mr. Fraser said that a mill might be shipping wheat from the country itself. It would take the better qualities of the grain into the mill and let the minimum No. 1 Northern go through to the public house. That would lower the general average in the bins of the public terminal.

Moisture Content of Grain from the Private Terminals.

At Montreal and Toronto, we heard evidence from the western millers. Their evidence was that they preferred where possible to buy their grain out of the public terminals, because they had found it of a more satisfactory character. One particular feature of their complaint is worthy of consideration. This relates to the moisture content of the grain. The moisture test applied to grain is a warehousing test. If it will stand warehousing, it will pass in the grade to which it otherwise belongs. The ordinary test is by feeling it in the hand. If there is any doubt, a moisture tester is used. The rule is that all wheat that contains 14 per cent of moisture up to 17 per cent shall be graded tough to the grade it belongs. If it contains over 17 per cent, it shall be graded damp. It is obvious that there may be considerable variation in the moisture content of grain before it actually could be graded as tough. At Montreal, Mr. F. C. Cornell, for the Canadian National Millers' Association, which he stated represented pretty close to 85 per cent of the milling capacity of the country, submitted the results of moisture test on a shipment of 38 carloads of wheat direct from the northwest. These cars showed a variation in moisture content of from 9.4 to 14.5 or over 5 per cent. The average for the total shipment, however, was 11.5. A cargo shipment—a boat load transhipped from Port Colborne—showed an average moisture content of 13.3 or about 2 per cent greater. This meant a difference in value of almost 2 cents a bushel. However, it was not shown that this boat load came from the private terminals. Mr. W. B. Woods, President of the Dominion Flour Mills, supported Mr. Cornell and claimed that the tough wheat at the private terminals was being mixed in with the straight grades. Thus, twelve cars of No. 1 Northern, with a moisture content of 12 per cent, he said, could be mixed with 9 cars of tough No. 1 Northern with 16 per cent moisture, and the whole 21 cars would inspect as straight No. 1. Northern, with an average moisture content of 13.7 per cent. "The Miller", it was complained, "was paying for 4 per cent of water on nine cars, or say 540 bushels of water that the farmer was not paid for." Under the general rules governing moisture content, grain might be shipped out of private terminals carrying a moisture content, up to 14 per cent. The returns submitted show that they receive considerable quantities of tough wheat, but there are practically no shipments out. The evidence of Mr. Irwin, Manager of the Western Terminal Elevator, a private house, is that they keep no record of the quantities of grain that they dry for themselves. His statement on examination was that they shipped no grain as straight that was carrying

over 14 per cent of moisture, but he admitted that they did add tough wheat to the straight grade without drying it.

Reputation of Canadian Grain in Great Britain.

From time to time, at various points in the West, evidence was presented to the effect that farmers had sent samples of their wheat to grain merchants or millers in England, and had been informed that their samples were much superior to the Canadian wheat obtainable over there. The conclusion was always drawn that our wheat was being deteriorated by mixing. It is difficult to weigh incidental evidence of this nature. It is not possible to ascertain if the sample sent from Canada is the equivalent of the average of the grade or better, nor is it possible to be certain that the grain with which it is placed in comparison has actually reached England with a Canadian certificate. On the other hand, we had the evidence of Mr. Serls, who had just returned from England, where he had been on a mission of investigation. Mr. Serls went over to investigate the mixing of Canadian wheat with American in transit. Mr. Serls said that he investigated six complaints, one of which dealt, however, with a shipment of all Canadian grain. In this one instance, the grain had come from a public terminal, and, after careful investigation, he had concluded it had been mixed after it had left Fort William. In general, the Canadian Official Certificate had a high standing, and all grain through Canadian channels had been very satisfactory, and they were well pleased with it. Mr. Serls, it is true, was not investigating the general quality and reputation of Canadian wheat on the British market, but it is inconceivable that if there had been any general and serious deterioration of Canadian grain on the British market he would not have heard of it. This view is confirmed by an experience which he related concerning the crop of 1921. He said, "The crop in 1921 had a good deal of this bleached and sprouted wheat. It was No. 1 Northern wheat, practically all of it, before it got weathered. I heard so much—it had been poured down my throat, I might say, so long, that this bleached wheat, sprouted wheat, was equal to the best wheat. Against my better judgment I allowed the benefit of the doubt to go with the producer, to the extent that I let that into No. 3 Northern, bleached wheat and a certain percentage of sprouted wheat. Well, the effect of this was this: in October the spread between 1 and 3 Northern started off at about five and a half cents. It gradually increased as the season went till in May that spread came to 14 cents and over. And I might go on and tell that when in England after that, at every point I visited that was the first thing that was thrown in my face."

We heard evidence from Mr. Thos. Sales, M.P., for Saltcoats, who stated that he had been in the Old Country in 1923, and that while there the Manager of one of the largest mills in the Old Country had asked him "What is the matter with your Canadian wheat the last three years? Well—it is not anything like it used to be before the war", and as near as Mr. Sales could quote his words he added, "neither in yield, in strength, or absorption."

In view of the importance of the question, after the sittings of the Commission had finished, Mr. Commissioner Rutherford made a visit to England specially to investigate this matter. Commissioner Rutherford's report, after an extended survey of the situation, is attached to this report.

Undoubtedly from time to time, English millers may be found who may think Canadian grain has deteriorated, but both Chief Inspector Serls and Commissioner Rutherford were on official mission, charged to meet the trade and the millers. It was known they were in England for that purpose. They were in the way of hearing complaints if there were any serious ones to be made. Both agree that the reputation of Canadian grain stands high on the English market.

In general we find—

(1) That the quality of the grain shipped out of the mixing houses is slightly lower than that shipped out of the public terminals.

(2) It may be argued that in view of the use made of tough wheat that grain from the mixing houses carries a higher percentage of moisture, but we have no evidence that such is the case.

(3) We cannot say from the evidence we have of conditions overseas that the quality or reputation of Canada's grain and therefore the price, has suffered in Britain as a result of mixing in private elevators being allowed.—

PRICES AND PROFITS

Apart from the main argument that the private mixing houses were lowering the quality of grain being exported under the Canadian Certificate, various arguments and some evidence was adduced which touch the prices of grain received by the producer. These arguments, if sound, are of some importance, and must be examined.

Flooding the Market with No. 1 Northern.

It is alleged that since more No. 1 Northern is put on the market as a result of the operations of the mixing houses the tendency is to flood the market and thus depress the general level of prices for the contract grades. The economic effects of this is alleged to be that the grower of high class grain suffers to the advantage of the grower of poor grain, who may benefit through having his poorer stuff purchased by the mixing houses. The argument assumes that the world's market for high class wheat is narrower than it actually is. There is an enormous demand in Western Europe and Great Britain for wheat and flour. Price fluctuations do take place of considerable magnitude on this market, but this fluctuation is in response to the world supply of wheat or flour available for export set over against needs and the ability to purchase.

For the crop year 1922-23, Canada's total exports of wheat and wheat flour reduced to bushels at 4½ bushels to the barrel was 279,492,557. The total shipments from the private elevators was 114,291,139 bushels. Of that quantity, 73,577,295 bushels were One Northern and 11,153 bushels of No. 1 Hard, or a total of 73,588,448 of One Northern or better. The private elevators received 70,883,531 bushels of No. 1 Northern and 228,805 bushels of No. 1 Hard, a total of 71,112,336 bushels of No. 1 Northern or better. Subtraction shows that the actual increase of No. 1 Northern or better, due to the operations of the mixing houses, amounts to 2,476,112 bushels. This additional quantity of high grade wheat is altogether too small to have any appreciable effect on the ruling price for No. 1 Northern in Liverpool.

The Spread between Contract Grades and the Lower and Off Grades.

(1) It is contended that the private elevators by providing a market for the lower and off grades keep the market price of these qualities of wheat at a higher level. The contention is difficult to prove or disprove. The market for these grades has become organized around the mixing houses. If these were swept away, there might, until other organizations replaced them, be a greater spread between the prices paid for the top grades and the lower grades.—

But it is claimed that there is a demand in the market for lower grades elsewhere. Mr. C. B. Watts' statement on this point is as follows: "Our small millers cannot possibly make good flour out of low grade wheat, and they haven't the export trade for low grade flour, but take the mills in making their high grade flour. They take up what they call a 'clear' or '2nd clear'. In some cases it is called 'Second Patents' or something like that. They have these clears that they use the low grade wheat for and mix it in and make an inferior

flour for export purposes for which there is a big demand in Europe. Some of the mills that I speak of buy this low grade wheat and grind it straight into low grade flour for Europe, as I said, mixing in a little No. 3 or possibly No. 2 in the low grades to make the flour uniform. So there will always be a demand from the old countries for the export of these low grade wheats."

On the other hand, the evidence of the large Western millers is that they are unable to use the lower grades to any degree. They find it more economical where a low grade flour is desired for export to use a high grade wheat and change the mode of extraction. Of course, the composition of the crop affects the percentages of each grade used each year.

Mr. N. J. Breen, Western General Manager of the Lake of the Woods Milling Company said they had milled about 14,000,000 bushels the preceding year. The percentages of the grades were as follows:—

No. 1 Northern..	56.8
No. 2 Northern..	25.2
No. 3 Northern..	16.3
Number Four..	1.3
Number Five..	0.6
	100.0

J. W. Horn, Assistant General Manager of the Western Canada Flour Mills, reported on 18 months grinding of 15,366,000 bushels.

No. 1 Northern..	73.9
No. 2 Northern..	14.7
No. 3 Northern..	9.2
Number Four, Five and Six..	2.2
	100.0

Mr. Horn said a fairly decent flour might be made out of 4, 5 and 6, but it would be commercial suicide economically to attempt the business.

Similar evidence was given by Mr. R. R. Dobell, Western Manager of the Ogilvie Flour Mills Company. Mr. Dobell gave figures for the Winnipeg mill only; these showed:—

No. 1 Northern..	38.26
No. 2 Northern..	21.31
No. 3 Northern..	39.89
Number Four..	0.54
	100.0

He stated they had made use of a parcel of No. 4 wheat as an experimental grinding, but found they could not make flour out of it, of the kind generally known in Canada. They were unable to use it in their brands of flour.

Winnipeg inspections for the crop year 1922-23 show that 7.01 per cent of the grades of the total crop were below No. 3 Northern so that it is evident that the large Western Mills were not absorbing a proportional share of the lower grades. While they handled the lower grades in their country elevators, it was stated the cars were sent forward to be sold at the head of the Lakes. There is no specific evidence to show that the Canadian Mills can provide a market sufficiently broad to absorb the grain offering in the lower grades. Of course it is possible that mills abroad might absorb this wheat if the trade were organized to export it to them.

(2) Statistics showing the range of prices for the various grades were submitted covering a period of eight years. On the whole, these statistics did not reveal any appreciable difference in the spread between the prices paid for wheat in the contract grades, as compared with those paid for wheat in the off or lower grades. It is impossible to draw with certainty any valid conclusions from this fact. The conditions of relative demand change from year to year,

due to the quality of the crop in the higher grades, and the proportion that the quantity of wheat in the higher grades bears to that in the lower. When the bulk of the crop is of the contract grades, there is a tendency towards a rise in price of the lower or off grades available for mixing. Under these circumstances, the demand from the mixing houses probably tends to narrow the spread in prices between the higher and lower or off grades. On the other hand, where there is a relatively large proportion of the crop below the contract grades, competition will tend to focus on the demand for No. 1, 2 and 3 Northern. Under the circumstances, on account of the large supply of the poorer grades of wheat, the spread between the higher grades and the lower or off grades will be widened rather than narrowed, by the competition of the mixing houses. The problem will be to obtain high grade wheat with which to mix the poorer grades.

Effect of Private Elevators on the Market and Cash Prices.

It is generally agreed that a cardinal factor in the profits that elevators make is the volume handled. It is the desire of the owner of every elevator, private or public, to handle the maximum capacity his house or houses will permit. The methods by which the private elevator companies secure the grain which goes through their houses may be reduced to four: (1) The grain handled may be altogether their own grain purchased for them by track buyers, or by agents at a line of country elevators, which they control, or with which they are in affiliation. In these instances, the prices paid to the farmer are determined by general conditions governing street and track prices at country points. The conditions have been surveyed elsewhere. It does not appear that the prices paid for grain purchased in this manner by the private elevators exert any direct influences upon the price the farmer receives except in so far as the ability to mix grain in a private terminal enables them to compete more effectively for grain in the country by offering higher prices there. Two of the country elevator companies state that their mixing house business permits them to do this.

(2) The private elevator may enter the market at Winnipeg and buy track grain, or grain when it is billed and inspected before it has been unloaded in a public terminal elevator. The grain may then be ordered into their terminal. Purchases of this nature are directly reflected in the market prices for cash wheat on the Winnipeg Grain Exchange.

These two methods were the only methods that were open to private terminals until 1920. The rules, as laid down in 1917, did not permit them to handle grain that was not their own. But, as we have already noted, in 1920 Rule 17 was amended to enable private elevators to take in farmers' grain into store. In 1923, Rule 17 was further amended to require that cars belonging to a farmer should not be taken in without the express consent of the farmer, given in writing.

The amendments to Rule 17 make possible two other methods by which a private terminal can secure grain:

(3) In the first place, they can store grain belonging to farmers in the private mixing house. Since 1923, the companies use a form of shipping instructions which authorizes the country elevator company to have the farmers' grain unloaded at any mill or elevator in the Western Inspection Division. Under this authorization, the country elevator company can order the car into its own private terminal elevator or into the one with which it is affiliated. The farmer may order the car to be sold before the ten days' free storage has elapsed, or he may hold it in storage for some time. In any event, settlement is made on the basis of the cash price for the day on which the farmer orders the grain to be sold. If the period exceeds the free storage period, storage is charged. During this period, the private terminal or mill is said to be "carrying" the grain.

If in any case it should happen that a farmer's car is placed in a private terminal elevator without his consent, and he objects, the elevator company will provide him with a warehouse receipt for grain of the same grade in store in a public terminal.

Where the method is carried on with the consent of the farmer, obtained at the time of shipment, it allows the elevator company to select the best cars of any grade or the cars most suitable for mixing purposes for its own terminal. In this instance, private elevators do not apparently exert much influence on the price. They merely settle for the wheat at the ruling price of the day that the farmer decides to sell. The market may be steadied a little in that if a large number of farmers ordered their wheat to be sold on the same day the sale of these cars might cause a fall in price, whereas under the system of diversion it simply means that settlements on the cash price of that day are made between the farmers and the private terminals where the grain is in store.

On the other hand, the private elevators obtain this grain at the time they actually want it. It may be to fill export orders or because it is a good car to blend, or it may be simply to increase the volume of their handlings. As private elevators they are not compelled to receive grain for storage. But when they wish to accumulate large amounts, they are not required to go into the market and offer a price that will induce the farmer to part with his grain. It is true they engage themselves to settle for the grain on the day the farmer may select, but they secure the grain as a result of his determination to sell not through their own determination to buy being exerted in a bid for grain in the cash market. Incidentally, while the grain remains in their elevator waiting sale, or perhaps, to speak more accurately, settlement-storage after the ten days period is being charged against it, or, rather, is being earned on it for the private elevator. Meanwhile, the grain can be used for the operation of the mixing house.

Diversions and Premiums.

(4) This brings us to the method of securing grain by diversion. The evidence shows that each year approximately 25,000,000 bushels of farmers' grain is placed in the hands of the independent commission merchants to sell. When the shipment is made to the order of the commission merchant, a form of consent is usually attached, and signed by the farmer, so that the commission merchant can direct the car into a private elevator or mill, even though the consignor does not wish to sell the car immediately.

There are some private elevator operators who are not well equipped for the purchase of grain through allied country elevators. Further, the quality of the grain coming from their own country connection may not give all the grades suitable for mixing. Also, certain private elevator operators accumulate parcels of grain of a certain quality for the purpose of selling it to millers. The mills themselves are in the market for the higher grades which they desire to grind. Finally, the very rapid increase in the number of private terminals leads to keener competition between themselves to secure grain for these plants, in order to secure a maximum volume of handling.

For all these reasons there is a market for wheat in Winnipeg before it has been placed in storage in the public terminals. This market might be called the premium market or the diversion market. It will be recalled that the Canada Grain Act, 1912 provided that mixing might take place in connection with sample markets. While an open sample market has not become an effective factor in the exchange this is the substitute that has appeared.

Mr. C. E. Graham, of Blackburn, Mills & Graham, Commission Merchants, in his evidence, stated that the practice was increasing of taking samples of what are called the off-grades around and showing it to possible purchasers. This work, he said, occupied most of the time of the senior member of his firm.

Samples are also often given to the brokers to do the same thing. The purpose is to secure, if possible, a premium over the regular market price. The witness stated that sixty per cent of his consigned grain would go into the public terminals, the other forty per cent would, on their orders and with the consent of the farmer, be diverted as a result of this practice into the private elevators or the mills. Of the forty per cent two-thirds would be sold immediately, ten per cent of the balance would be sold during the free storage period and the remainder would be waiting in the private terminals or mills for instructions from the farmer to sell. In that event the commission house would obtain from the private elevator a warehouse receipt for the grain if the elevator were a regular private elevator and from other private houses an official outturn and the weight certificate.

Before the cars were ordered to be diverted to the private elevators or mills the commission house would arrange for a premium to be paid over the cash price on grain prevailing on the day that the farmer ordered his car to be sold. This is the nature of the bargain and this premium is the incentive for diversion. These premiums range from $\frac{1}{4}$ of a cent to one cent per bushel. When the commission merchant makes settlement with his customer, the farmer or consignor gets any premium that has been obtained in the sale. It is not possible to state fully the total amount paid as premiums over and above the ruling cash price for any period. As to premiums for the year beginning the 1st September, 1923, 15 private elevators reported that they paid a total of \$408,705.39. Three mills paid a total of \$51,000. Two private elevators kept no records. There are no complete figures as to the quantity of grain upon which these premiums were paid. Twelve private elevators report premiums paid on a total of 53,314,892 bushels. Five kept no records.

Profits made by Private Elevators.

A statement prepared by Marwick, Mitchell & Co., Chartered Accountants, was filed, which shows the net profits per bushel realised by the private elevators for the two seasons 1921-22 and 1922-23. These figures are for fourteen elevators operated by twelve companies. The companies investigated do not include the private elevators operated by or on behalf of the two farmer companies. The net income taken was adopted from the creditors' annual reports and excludes dividends on investments and any capital profits or losses. Income tax has also been provided. The profits shown include all profits of the terminal elevators whether made from trading (both cash and future), cleansing, mixing, storage, elevation, etc. The bushels handled is based on figures supplied by the elevator companies.

Summary of earnings of twelve companies owning or operating 14 houses and reporting for an aggregate of 26 fiscal periods; thus two periods for 12 houses and one period for each of the remaining two:—

	1921-22	1922-23	Total
Net profits.	\$ 1,174,067	\$ 957,07	\$ 2,149,874
Bushels handled.	93,393,000	114,231,000	207,624,000
			Average
Rate per bushel.	1.256c.	.854c.	1.035c.

These figures may be compared with those compiled on the country elevator companies where the net earnings for the year 1920-21, 1921-22, 1922-23 averaged four-fifths of a cent per bushel. The average net earnings, it will be observed, are considerably higher for the private elevators. Returns are not available to show the average net earnings of the public terminals for the same period.

Complaints of the Eastern Millers.

We have sympathy with the difficulties of the smaller flour mills of Eastern Canada. It is clear that these mills perform a useful local function in the

agricultural economy of the country. The difficulties which they find, however, in competing with the larger mills in general are due to the advantages of large scale production which these larger mills enjoy. Many of these advantages would exist even if the mixing houses were not allowed to ship grain on straight grade certificates. They claim, however, that they are under an appreciable disadvantage in so far as the grain coming from the mixing elevator carries a larger moisture content than the average of the contract grades in the public terminals.

Difficulties in the Administration of Inspection.

In all instances where the values of goods are determined by official inspection the danger is always latent of fraud creeping in. The best preventive against such an occurrence is in the character of the men selected to do this important work. In our investigation into the handling of grain we have formed a high opinion of the integrity and capacity of the inspection staff. We wish to point out also that advantage would accrue to the public terminal elevators where grain is inspected out at a higher grade than that to which it rightly belongs, by the creation of overages; provided, of course, that these overages are retained by the elevator.

Evidence given by deputy inspectors shows that frequently they were on duty during the rush of fall shipments for very long hours, on one instance as long as forty-eight hours. Where men are on the stretch for unduly long periods there is always the danger that the quality of their work will not be up to the standard. Evidence was also given that deputy inspectors were often attached for duty to the same terminal elevator for three or four years.

Mixing at Country Elevator Points.

Mixing in country elevators stands in a somewhat different position to mixing in the private elevators. The grain has had no legal grade placed upon it; consequently whatever mixing may occur is mixing *before* grading, while that of the private elevators is mixing *after* grading. The area from which the country elevator draws its supplies is limited and in many parts of the country usually provides grain of nearly the same quality. The construction of country elevators unfits them for mixing and as a rule they are not equipped with sufficient machinery to put grain into condition to do so. The country agent has not sufficient information or skill to help him decide how to mix the grain so that it will get just under the inspections for the higher grade. The country agents are not encouraged to mix by the head offices. On the whole, as a matter of business practice the tendency is all against encouraging the country elevator agent to mix grades. At one local point in Manitoba, however, mixing appeared to be carried on in the same general manner as it is at the private terminal elevators. The witness stated he had six country elevators, three being located at one station. He bought all his grain and this grain was unloaded at the central point into two of these elevators and cleaning and re-cleaning was concentrated in the Wind house. The grain was mixed before being sent forward. This is an isolated instance.

ATTITUDE OF THE GRAIN TRADE

We do not accept the view that the men engaged in the grain trade are indifferent either to the quality or to the reputation of Canadian grain. There are always exceptions in every trade, but we are convinced that the majority of men handling Canadian grain are interested in putting out a good grade, one that will reflect credit on their house. While the general operations of the Lake Shippers' Clearance Association means that an exporter may obtain his grain from anyone of the lake front houses, it is always open to the exporter to bring pressure to bear on the seller not to receive grain from a certain house. This

pressure has been exerted at various times. It is therefore very much to the interest of the private elevators that the grade of grain they ship should not be below the average shipped elsewhere. It is also worth noting that if a deterioration of Canadian grades began to take place, while the effect of this condition ultimately would be to injure the Canadian producer by lowering the price received for his grain, the incidence in the first place would be upon the Canadian exporter. He would be the first to suffer. He would be in difficulties with his English customers over the quality of the cargoes they were receiving. On the other hand, if the cargoes are of excellent quality it is that much easier for him to sell Canadian grain in competition with grain from other parts of the world. Undoubtedly, of course, if a continued period of deterioration in quality were to occur the result would go beyond the making of complaints to the Canadian exporter and would register itself in the lower bids for Canadian grain. The English importer bases his offers on the quality of Canadian grain that he is receiving at Liverpool.

Mr. James Stewart stated that when the Wheat Board was in existence he found it advisable, in order to enable him to dispose of the lower qualities of the wheat, to encourage mixing houses to blend these lower grades and try to give them a larger quantity of the higher grade. That was in 1920. He stated that with the Wheat Exporting Company and with the Wheat Board, from 1917 to 1920 inclusive, when he was in charge of exporting, he had an inspector of his own at the lake front to check shipments from the mixing houses. He had an arrangement with the mixing houses that they would receive the same price for their shipments if the quality was as good as that coming out of the public terminals. On the other hand he had a four cents a bushel latitude if they did not give, in the opinion of his inspector, a quality that was as good or better than that coming out of the public terminals. Mr. Stewart said he did not recollect one occasion when he had to put that penalty into force, to within one-quarter of a cent.

Mr. Stewart said that originally he was not in favour of mixing because he had the idea that it was not the right thing to do. Later he changed his opinion because the competition set up by the mixing houses was such that he satisfied himself that the farmer got more for his produce under this system than if he only had the public terminals.

Mr. James A. Richardson, president and general manager of the James Richardson & Sons, Ltd., said they had been in business for many years, and had extended their business until either in their own name or through affiliated connections they had the handling of grain in the different branches from the country elevators clear through to the exporter. They had made the first shipment of Western Canadian wheat which was made from this continent. For the crop year ending 31st August, 1923, they had shipped from Fort William a little less than 67,000,000 bushels. Mr. Richardson said that in 1917 they commenced work on a large elevator at Port Arthur primarily with the idea of going into the private elevator business. They had in mind particularly at that time the possibility of free wheat entering the United States. He said "we believed that if we were not in a position to operate as a private elevator we might find ourselves in the position of being able to ship our grain to private elevators at Duluth and buy it back from them f.o.b. our boats, to better advantage than we could by handling it through our own plant; that is, we were afraid that we would not be able to compete with private elevators operating in Duluth." He stated that they had operated for one season as a public house and then had become private, because they believed they could handle their grain more economically and more efficiently and get better results by operating as private. They had a certain amount of their own grain coming from the country in the lower or off-grades and they were not able to utilize the flow to the best advantage. They did not want to lose the handling of their own grain

by sending it to private elevators who might be in a position to outbid them.

Mr. Richardson said that the desire to survive in the grain business compelled them to endeavour to cut out as far as possible every intermediate service that it was economical for them to eliminate. He believed that the private elevators covered a field that the public elevators did not cover, and that in covering this field they benefited the producer. Ten or twelve years ago he was not in favour of private elevators as he did not see where there was any pressing need for them. Our grain was nearly all high grade and nearly all clean. As we produced grain longer our crop tended to get dirtier, and as the area widened there was nearly always some section of the country which suffered from rust, heat, frost, rain or snow or some of the other enemies of the wheat plant. The restrictions on the operations of the public elevators debarred them from putting a lot of the off-grade grain into the best marketable shape, so that it could be sold most advantageously. The result was that small elevators were built to take care of this grain. This was not a good national development. These small elevators could not handle this grain to nearly as good advantage as the larger elevators. The difficulty of inspection was increased; additional work was imposed on the railways; and there was more lower grain than they were able to buy and handle. They did not provide the competition necessary to give appreciably a better price to the producer. Now that some of the large terminal elevators had become private they had the effect, he said, of preventing the lower grades going to an undue discount, particularly in off-grade years.

ATTITUDE OF FARMERS' ASSOCIATIONS

A large part of the grain trade is in the hands of the farmers themselves. For many years, we have had the Saskatchewan Co-operative Elevator Company and the United Grain Growers Limited. More recently, we have the Wheat Pools formed in the provinces of Alberta, Saskatchewan and Manitoba. Those who participate in these large enterprises must, of necessity, be watchful of the interest of the producer in all their activities. We find that they are now all engaged in the mixing business. This fact alone must be weighed very carefully when consideration is given to the demand that this business be abolished or be restricted in a material manner, as, for instance, by limiting it to mixing in the low grades, or by ear-marking the product of the private elevator so as to preserve its identity separate on the market from that of the public terminal. The fact that these organizations have entered the mixing business themselves, and have not asked that it be discontinued or hampered, must indicate that in their opinion this business is not a hopelessly evil one, and that it does possess commercial advantages which can be passed on to the producer.

Hon. J. A. Maharg, then president of the Saskatchewan Grain Growers Association, and a director of the Saskatchewan Co-operative, of which company he is now president, said that the directorate of his company, with perhaps one or two exceptions, were individually opposed to the practice of mixing, but, because the practice had become prevalent, the company found that they had to go into it to make money to compete with their competitors, and they were forced into it. His personal view was that mixing was done by the farmer on the farm, it was done in the country elevator, it was done by all who handled wheat, and he believed Canadian wheat to be mixed in the United States; and, therefore, since it could not be stopped, mixing in the private elevators at the head of the lakes should not be stopped.

Mr. J. B. Musselman, managing director of the Saskatchewan Co-operative, said that the company has been engaged in mixing since 1917. Lately, the company has spent a large sum of money in doubling the capacity of its

private elevator. This step was taken, he said, after the directors had given full consideration to the question of mixing, and had placed themselves on record by resolution, as concluding from the experience of the company, that mixing can be carried on with advantage to its patrons. In his opinion, the whole question was one of proper inspection out of terminals, and at points of transshipment.

On the other hand, the Hon. Geo. Langley, then president of the Company, declared himself as being opposed to mixing in the three contract grades.

The position of the United Grain Growers Limited, as stated by counsel, was that mixing in the private terminals was beneficial provided that the standard of inspection outward was maintained.

The three wheat pools have taken in their charters the power to mix grain. For instance, the charter of the Saskatchewan Pool, chapter 66 of the Statutes of 1924, contains the following language in section 4, which sets out the powers of the Association:—

“To carry on the business of.....cleaning, treating, conditioning, mingling, mixing, grading, blending, processing,.....marketing and exporting grain.....”

Lately these three pools have co-operated in established a central selling organization, which has leased to private elevators at the head of the lakes, and is now operating them as mixing houses.

RECOMMENDATION

The conclusions that we come to after studying very carefully all the evidence presented on this vexing but important problem is that the position of the private terminal elevators should be legalized, but that they should be restricted to taking in only their own grain. Briefly, we believe that the best interests of the producers of Canadian grain would be served by a reversion to the position in which the private elevators were placed originally by the regulations of the Board of Grain Commissioners in 1917, before Rule 17 was amended to permit them to store grain.

In this respect, however, care should be taken to see that nothing is done which will prevent the wheat pools' selling agents from taking into their private elevators the grain forwarded by the members of the pools, or by the organizations on behalf of the members. According to the agreement entered into by each producer who joins the pool, the grain remains his own property until sold by the selling agency, and the producers are virtually doing their own mixing.

While we do not think the private terminal elevators should cease to enjoy the privilege of receiving straight grade certificates on the outward inspection of their grain, we consider it to be of equal importance that confidence in grain in the public terminal elevators should not be disturbed. We consider it should be possible for the exporter or the eastern miller to obtain his shipments from grain in the general bins of a public terminal if he so desires it. It should be equally certain that the farmer should be able, without encountering undue pressure or obstacles, to place his grain in the general bins of the public terminals if he wishes to store it there or sell it in that position.

With a view to maintaining the quality of the grain in the public terminals, they should not be allowed to accept for storage in their general bins grain coming from elevators licensed as private mixing houses. The identity of grain shipped from a private mixing house into a public elevator should be kept separate, and arrangements for such shipments should be made by special binning, as provided by section 229 of the Canada Grain Act, 1912.

In general we found that an inappreciable amount of mixing before official grading occurred at country points west of Winnipeg. In one instance, in Manitoba, under a country elevator license we found grain being concentrated and being cleaned and mixed before it was sent on to Winnipeg for inspection. Where such a practice exists, we recommend that the Board of Grain Commissioners should require such elevators to be licensed as private elevators.

Requiring the private elevators to receive only their own grain should eliminate the practice of diversion as it exists at present. Any disadvantages that may exist in the functioning of a sample market are incurred under diversion without the full advantages to the farmer being attained. Where country elevator companies ship selected cars of farmers' grain directly to their own private houses, without giving a premium for this diversion, no direct advantages accrue to the farmers. There is some advantage where the private elevator is forced to pay a premium to procure diversion. The same advantage and possibly greater could accrue to all farmers whose cars are diverted if the private elevator that desires to accumulate grain must go into the market and offer such prices as would induce the farmers to part with their grain at the time that the private elevator needed it.

We do not go so far as to recommend that any further provision for setting up a sample market should be made in the Act at present, but we think that if the privilege of diversion were eliminated, the effect would likely be to establish a sample market just as soon as the demand for cash grain at Winnipeg or Fort William would make the occasion ripe for it. We would leave the present provisions in the Act for a sample market available for use when needed. We point out, however, in respect to subsection 3 of Section 57 of the Act, that the exemption of subsection 3 of Section 208, as to carload shipments of grain, from being applied to sample markets ("twenty-four hours free time after such advice of arrival should be allowed the advisee in which to dispose of his property") would greatly hamper the proper functioning of such a market.

With regard to the inspection of grain out of the private terminals, we recommended that a sample should be supplied to the deputy inspector attached to these houses to be followed by him in all cases, which should actually be the average of the grain, at the initial inspection point, properly cleaned. All grain should be required to come up to this standard in order to secure the grade desired.

It should also be made clear in the Act that an exporter shall have the right to appeal against the grading of an inspector when he is not satisfied that the grain in question meets the aforesaid requirements.

We recommend also that deputy inspectors should, from time to time, be changed from house to house in carrying out their duties. We do not think deputy inspectors should be attached to any individual elevator for long periods of duty. We believe this change would lead to a greater uniformity in the various grades shipped by broadening the experience of the inspectors. We recommend that sufficient inspectors should be engaged to make it unnecessary to keep the same man on duty for long hours of overtime. The importance of the service, apart from other reasons that might well be urged, warrants this precaution. We repeat that we regard most highly the character of the men employed in the grain inspection department. We believe that the wages paid and the general conditions of service should be such as to procure and hold men of suitable education and proved character in this branch of the work. In the long run this is true economy and the surest safeguard against laxity or fraud.