

REPORT OF TRIAL SHIPMENT OF BULK WHEAT FROM VANCOUVER VIA THE PANAMA CANAL TO THE UNITED KINGDOM

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Since the opening of the Panama Canal the possibility of shipping bulk wheat from Canada to Europe by this route has been discussed a great deal. It was the opinion of many that the conditions to which the grain would be subjected in the tropics would be found too severe for Canadian grain, and that there would be a grave danger of cargoes arriving at their destination in a heating condition. It was decided, therefore, by the Department of Trade and Commerce, when arrangements were made in the fall of 1917 for sending a trial shipment of wheat from Vancouver, to have the laboratory make as thorough an investigation as possible as to the feasibility of the route. In order that a complete record of the temperature changes which occurred in the grain might be secured, the holds of the ship were equipped with electrical thermometers and a representative of the laboratory accompanied the shipment to make the observations and to examine the cargo when it was discharged. Similar experimental work had previously been done by the United States Department of Agriculture in connection with the shipment of corn to Europe, and valuable results, which were found of great use in setting the standards for corn were obtained. From the present investigation it was hoped to secure definite information as to the temperatures which grain would have to stand when carried on this route, and to determine what precautions should be taken to minimize the danger of heating in the event of future shipments being made.

The wheat for this shipment was collected from various points in western Alberta. In Calgary an average sample from each car was tested for moisture and graded by the Inspection Department, and in order to confirm the results of these moisture tests, further samples were taken in Vancouver when the cars were unloaded. These latter samples were sent in air-tight containers to the laboratory, where they were tested on an electrically heated Brown-Duvel apparatus. All the wheat in this shipment was "straight grade," i.e. it did not, in the inspector's opinion, contain excessive moisture and was in every way sound and fit for warehousing. But although the wheat felt very dry and hard it was found that some of the cars contained relatively high percentages of moisture, and it was decided to keep such wheat separate from the rest of the parcel to which it really belonged. Three out of the four parcels were thus divided in the elevator into two portions, these two parts being subsequently kept separate in the holds of the ship. By this means it was thought that some additional information might possibly be obtained with regard to the carrying qualities of wheat containing different percentages of moisture but otherwise similar in every way. Before being binned in the elevator any earload lots containing more than one per cent of dockage were passed over the cleaners.

The grade, weight and percentage of moisture in the different parcels are given in Table 1.