

**WINNIPEG GRAIN INSPECTIONS.**

The receipts of grain in Winnipeg for the past two weeks ending April 13th and April 6th, respectively, were as follows:

	Week ending April 13.	Week ending April 6.
No. 1 northern	912	118
No. 2 northern	207	353
No. 3 northern	214	278
No. 4 northern	124	171
No. 5 northern	73	70
No. 6 northern	40	42
Feed wheat	48	52
Rejected	21	25
No grade	737	748
No. 3 special	32	30
No. 5 special	46	27
No. 6 special	24	28
Winter wheat	0	8
<b>Totals</b>	<b>1,648</b>	<b>1,956</b>
Same week last year	2,347	3,220
Oats	7,67	880
Same week last year	824	814
Barley	93	84
Flax	50	113
Same week last year	85	76
Same week last year	46	344

**GRAIN DUST EXPLOSIONS.**

The subject of grain dust explosions was fully discussed before the monthly meeting of the Chicago section of the American Chemical Society, held March 17th in the Sherman Hotel. Dr. H. H. Brown, who is conducting the chemical investigations of dust explosions in the Department of Agriculture, in the United States, presented the subject.

It was shown that a dust explosion and a gas explosion are very similar. A stick of wood will burn slowly. Excelsior or shredded wood will burn much more rapidly, and wood powder, or dust in suspension, as a cloud in the air, will burn with the rapidity of an explosion, the flame travelling through the cloud sometimes at the rate of several thousand feet per second, depending upon the kind of dust, the amount of dust in suspension, and the fineness of the dust. A gas explosion is only a limiting case of a dust explosion. Dust explosions occur in coal mines, in mills, and elevators handling materials which may form inflammable, carbonaceous dusts, and in threshing machines. The United States Bureau of Mines is investigating the causes and means of prevention of explosions in mines, and the United States Bureau of Chemistry, Department of Agriculture, is investigating explosions in mills, elevators and threshing machines.

Explosions in surface plants have been found to have been started by sparks which have been caused by foreign materials passing through the grinding machines, by electric arcs and by open flames.

The laboratory results showed that practically all dusts from plants handling grain and its products are not inflammable than Pittsburgh coal dust, which is considered to be one of the more inflammable coal dusts. The fineness and moisture content of the dust was shown to have a decided effect upon the inflammability of the dust. As a result of laboratory tests, the maintaining of an atmosphere of inert gases, containing 12 per cent or less of oxygen, in all enclosed milling systems, is recommended as an effective means of preventing many explosions. Other preventive measures recommended are the use of properly guarded electric lights, to make provisions for the effective removal of static electricity, to erect separate units of operation for lines of milling where explosion risks have been demonstrated, and to keep the mills and elevators as clean as possible.

During the past three seasons over six hundred dust explosions have occurred in the states of Washington, Oregon and Idaho. These were found to have been due largely to the ignition of wheat smut dust by sparks of static electricity.

To prevent these explosions, an efficient grounding system has been worked out, an effective automatic fire extinguisher has been devised, and it is recommended that a suction fan be placed over the cylinder to remove the dust from the machine.

E. W. Beatty, K.C., vice-president and general counsel of the C.P.R., was recently elected a director of the Royal Trust Company, to succeed the late Hon. Robert Mackay.

**BOARD OF GRAIN COMMISSIONERS OF CANADA.**

Fort William April 14th, 1917.

Statement of Stocks in Store in terminal elevator at Fort William and Port Arthur on April 13, 1917, with receipts and shipments during the week.

Elevator.	Wheat.	Oats.	Barley.	Flax.
C. G. T. . . . .	4,746,401	2,066,815	247,470	.....
Empire . . . . .	918,733	309,342	36,639	233,746
Consolidated . . . . .	1,083,769	220,348	75,490	168,736
Ogilvies. . . . .	1,095,012	192,324	38,699	.....
Western . . . . .	1,001,631	193,908	32,866	551,215
G. G. G. Co. . . . .	1,293,851	606,920	98,205	.....
Fort William . . . . .	882,915	445,002	25,729	60,930
Eastern. . . . .	1,100,712	510,589	46,391	.....
G. T. P. . . . .	3,257,323	2,193,354	141,215	83,985
Can. Northern . . . . .	4,682,679	2,500,912	416,508	161,813
Horn & Co. . . . .	311,492	114,708	28,620	151,700
Can. Govt. . . . .	1,994,344	544,348	81,486	149,401
Thunder Bay . . . . .	740,169	241,561	49,054	62,742
<b>Total . . . . .</b>	<b>23,109,035</b>	<b>10,140,137</b>	<b>1,318,379</b>	<b>1,624,270</b>
A Year Ago . . . . .	27,566,989	9,549,509	1,946,238	1,002,369
Receipts . . . . .	684,515	476,388	33,711	39,048
Ships--Rail . . . . .	545,321	499,702	11,108	44,193
Winter Storage				
Afloat . . . . .	89,245	101,331	.....	.....
Winter Storage				
A Year Ago . . . . .	2,447,386	974,311	.....	.....

**STOCKS BY GRADE.**

Wheat.		Oats.	
One Hard . . . . .	15,907	1 C. W. . . . .	15,844
One Nor. . . . .	2,069,290	2 C. W. . . . .	2,570,907
Two Nor. . . . .	3,912,678	3 C. W. . . . .	871,309
Three Nor. . . . .	4,002,218	Ex. 1 Pd. . . . .	1,479,523
No. Four. . . . .	3,341,742	Others . . . . .	5,202,552
Others. . . . .	9,768,098		
<b>Total. . . . .</b>	<b>23,109,035</b>	<b>Total . . . . .</b>	<b>10,140,137</b>
		Barley.	Flax.
		3 C. W. . . . .	214,986
		4 C. W. . . . .	603,706
		1 N. W. C. . . . .	1,158,844
		2 C. W. . . . .	322,833
		3 C. W. . . . .	90,416
		Others . . . . .	52,176
		<b>Total. . . . .</b>	<b>1,318,379</b>
		<b>Total . . . . .</b>	<b>1,624,270</b>

**WHEAT ACREAGE IN ALBERTA.**

Several officials of both the United Farmers' of Alberta and the Alberta Farmers' Co-operative Elevator Company were questioned with reference to the prospective acreage for wheat in Alberta this year, and none of the estimates received was for less than an increase of fifty per cent. in the total wheat acreage as compared to last year's.

In addition to the fifty per cent. increase already manifested in the area of ground already prepared, there will be a large area of ground prepared this spring for flax and oats. This ground already is being worked, many tractors working both night and day shifts in the southern part of the province for the big planting which is coming.

**ARGENTINA'S WHEAT EMBARGO.**

A Buenos Ayres report says: England has put powerful pressure on Argentina to force the raising of the wheat embargo. It is learned on unimpeachable authority that the British government has threatened an embargo on coal as a reprisal against the grain ban.

Argentine officials are hurriedly making another inventory of the republic's food supplies, it being known that without British coal all railroads and shipping and the industries of the nation would be paralyzed.

**HOW PEANUTS GROW.**

Several misstatements about the way peanuts grow have been made in recent weeks and have been brought to the attention of the editor of the American Nut Journal who seeks correction. Peanuts do not grow on roots as potatoes do. The formation of the peanut is started in pods succeeding the flowering period on the branches of the plant above ground. The branches gradually dip toward the ground, in which the pods bury themselves and there mature. It is true that peanuts are dug out of the ground, but they do not grow on the roots of the plant. The throwing of earth over the fruiting branches helps develop a larger crop. Peanuts may properly be called the poor man's favorite nut, for they are within the price of 2¢

**MEAT PACKING PROFITS.**

From recent statements issued by the great meat packing houses of Chicago it would appear that the war has been one of the greatest blessings to this industry in a financial sense at least.

In 1916 the surplus of Armour & Co. had risen to \$98,000,000. Last fall they took \$80,000,000 of this amount and gave it to the stockholders in the shape of a 400 per cent stock dividend. Most of this \$80,000,000 was made before the war started. The Armour surplus is now reported, from the last statement of October 28, 1916, is \$36,833,116. The surplus Swift & Co. reported last fall was \$60,315,000. Morris & Co. about the same time gave their surplus as \$32,142,483. Wilson & Co. (formerly Sulzberger & Sons) reported on the first of this year \$9,359,811.54, and the Cudahy Packing Company on October 28, 1916, \$3,588,393. These five big houses reported in the fall and at the close of 1916 a total surplus of over \$140,000,000. Far and away the greatest share of this, if not entirely all, represents profits of the business. Parenthetically, the \$25,000,000 cash dividend declared by Swift & Co. last fall on \$75,000,000 stock, a 33 1-3 per cent dividend, presents another item in the line of packing profits.

As to the earnings themselves: For the past year the packers' statements give the following net: Swift & Co., \$20,465,000; Armour & Co., \$20,100,000; Wilson & Co., \$4,913,872; Morris & Co., \$3,832,216; Cudahy & Co., \$3,011,414. These figures set the total earnings of the five for the past year in the neighborhood of \$50,000,000.

It is interesting to make a comparison of the profits of a few years' back with those of to-day. For the three fiscal years beginning October 24, 1908, after charging liberally for depreciation, Armour's net earnings averaged \$5,500,000, and for the eight years ending on that date over \$4,200,000 a year. As late as the year ending November 2, 1912, total net earnings of Armour & Co. stood at \$10,130,307. As previously quoted in this article, the 1916 earnings came to \$20,465,000. That is to say, in the last four years the net earnings of this house have nearly doubled.

The statements of Swift & Co. indicate that it has done even better. In 1912 their net profits stood at \$9,877,840, as compared with \$20,465,000 in 1916.

**WHY SUGAR IS HIGH.**

Europe will need not less than 2,000,000 tons of sugar from overseas in 1917. Where is it to come from, asked Dr. H. C. Prinsen Geerligs, a leading Dutch authority. It is already certain that the 1916-17 European crop will be a disappointing one, and that in general it has not yielded enough to allow of an unlimited consumption even in the countries of production, regardless of the possibility of any exports.

The estimates for Germany do not put the yield at more than 1,600,000 tons, or only enough for a moderate economical consumption. In Austria-Hungary the production is large enough for a normal consumption.

None of the European producing countries have anything to export, whereas France, Italy, Switzerland, Norway and Russia are likely to need more or less large imports. Great Britain is entirely dependent on overseas countries for its sugar. Putting the British import requirements in 1917 at 1,800,000 tons, France needs at 400,000 tons and the import requirements of the other countries named at 300,000 tons, a total is arrived at of 2,000,000 tons.

Dr. Prinsen Geerligs concludes that Britain will be mainly dependent for its supplies on the United States, Cuba and Java. In Java the crop has turned out very well, yielding 1,617,000 tons of sugar, or about 300,000 tons more than in the preceding year. The area planted for 1917 has been somewhat extended, and the prospects of the next crop are very good, so that about 1,600,000 tons may be again expected.

In 1916, Cuba and the United States together sent 1,489,446 tons of raw sugar to Europe, and as Java shipped over 500,000 tons to the same destination, these countries alone provided last year an amount equal to the present estimated needs.

The crops in the United States, Porto Rico, Hawaii and the Philippines, are, altogether, a little larger than the previous year. Sugar consumption in the United States in 1916 was somewhat less than in 1915, while the Cuba crop for 1917, is expected to be larger than that of 1916. There will thus be certainly as large, and probably a large surplus available in the Western Hemisphere than last year, and if adequate cargo space and shipping facilities are available to bring it safely across, overseas countries will be in a position to fully meet Europe's requirements.