

consequently he very often, after a few losses of this kind, gives up sheep farming altogether. A by-law compelling dog owners to secure their dogs every night for three months during the fall of the year would be no hardship to anyone, and if it will prove effective in preventing the worrying of sheep by dogs we say by all means let such a law be put in force at once. The sheep industry of this country is too important a one to be side-tracked in any way because some dog owners allow their dogs to prowl around at all hours of the night. It is time that some effective measure such as the one outlined above were in operation in every township so that no obstacle would in any way come between the farmer and profitable sheep-farming. At least a dozen good sheep should be kept on every 100-acre farm in the country. They are easily kept, add to the fertility of the land, and, when properly managed, will return a good profit to the farmer.

Freight Rates and Grain Prices in the United States

There has always been more or less agitation in the United States in regard to railway freight rates, and certain agitators have alluded to the railroads as the oppressors of the farmer. The New York *Financier* takes the matter up in behalf of the railroads, and gives some valuable data compiled from a pamphlet issued by the Agricultural Department at Washington from which we take the following: "First we give a table showing the relative decline in the price of the more important grains in various years since 1870, and the fall in freight rates in the same period. The figures are based on the average prices of the six years between 1867 and 1872, which are taken as a standard of 100. The figures follow:

	1870	1877	1885	1896
Corn.....	102	72	67	44
Wheat.....	87	98	71	67
Oats.....	102	74	75	49
Rye.....	91	71	72	51
Hay.....	107	72	74	56
Tobacco.....	103	70	83	65
Freight rates.....	103	70	55	44

From this it will be seen that the decline in freight rates has been greater than in any of the grains. It is also pointed out that if 1897 and 1898 figures were included the disparity would be greater. Comparing 1896 with prices in 1867, the railroad freight rates decreased 23 per cent. more than the price of wheat, and 12 per cent. more than the price of hay. In comparing the export prices and freight rates it is pointed out that the railroad ton-mile rate on wheat between Chicago and New York has been cut in half since 1886, falling from 8.71 cents to 4.35 cents, but the export price of wheat in the same time fell off only 12 cents, or about 14 per cent., as against the 50 per cent. reduction in freight rates.

Another table gives the number of bushels of wheat and corn carried between New York and Chicago for the price of one bushel as follows:

	Wheat.	Corn.
1867.....	5.77	4.94
1870.....	7.54	5.84
1877.....	10.41	5.95
1885.....	14.65	10.04
1897.....	17.24	8.18

From this it will be seen that the United States farmers had nearly three times as many bushels of wheat carried in 1896 for the one bushel paid the railroads as in 1867.

The charges for carrying a ton of freight one mile and per passenger per mile for various years since 1867 are given as follows:

	Freight per ton mile.	Pass. rate per mile.
1867.....	1.925	1.994
1868.....	1.810	2.164
1871.....	1.789	2.632
1877.....	1.286	2.458
1885.....	1.011	2.216
1896.....	.806	2.019

"The decline in the freight rate in thirty years is thus shown to be over 58 per cent., while wheat prices in the same period have fallen only 18 per cent. It will be seen that the passenger rate shows a higher figure in 1896 than in 1867, but the rate in that year was exceptional. Comparing with 1868, the actual cost of passenger travel has been reduced 23 per cent., and the facilities and comfort provided cannot be compared with the conditions of thirty years ago."

The journal referred to concludes that these figures prove conclusively that a greater loss was sustained by the railroad in the decline of prices. Though the figures seem to show this, the great decline in freight during the past thirty years does not prove that the farmers of the United States are not now paying exorbitant freight rates, for even present rates may be high. But this is neither here nor there. Our only object in giving the above figures is to show the great advantage the American farmer has obtained by a reduction in freight rates over his Canadian competitor. Though we have no data to the contrary, we do not think the same favorable showing can be made in behalf of the Canadian railways. We venture to state that, while the prices of Canadian farm products have declined considerably during the past decade, there has been no corresponding reduction in railway freight rates. It has been shown in these columns that the Canadian shipper has to pay \$6 per head more to send his cattle to Great Britain than the shipper in the United States, and we feel sure that a comparison will show as wide a difference in the carrying of grain.

Some Important Agricultural Experiments.

Some interesting experiments along the line of cross fertilizers have been carried on for the past eighteen years by a couple of Lancashire farmers, Messrs. John and Robert Garton, which should prove of value to agriculturists all over the world. Though these experiments were begun in 1880 it is only now, after eighteen years of careful and painstaking labor, that they are able to announce a successful solution. A correspondent of the *London Chronicle* who recently visited the farm of Messrs. Garton says:

"I spent a day during the present week at Newton-le-Willows, and saw enough to convince me that a work was being carried out destined to have a remarkable influence over the future of agriculture. . . . Already they have succeeded in producing varieties of wheat the average weight of the grain of which is sixty per cent. heavier than the average weight of grains of wheat in ordinary cultivation. With oats they have been even more successful. I saw a field of black oats growing at Newton which was just ready to be harvested, and the grains were just as much finer than the best Poland white oats as these latter are larger and finer than ordinary Tartarians. Already they have varieties of wheat and oats which promise to yield thirty or forty per cent. more per acre than ordinary varieties, and so increase the national production by that amount."

To show how far-reaching and complete the work of these investigators has been, it is only necessary to point out that the whole world has been ransacked for specimens of different kinds of cereals, every one of which has been carefully grown, and its peculiarities noted through several seasons. Nearly 350 varieties of wheat have been collected, including varieties from every wheat-growing country in the world. One hundred varieties of oats have been got together, as well as a large number of varieties of barley, from every country where these grains have been grown. In addition, every plant or weed analagous to the three varieties of grains already mentioned have been secured. To show the value of some of these weeds, the writer above quoted says: "The ordinary British oat has a thick and tough hull. When oats have to be prepared for human food this hull has to be removed by a process which impairs both its flavor and its value as a food stuff. But the