

The crops of Manitoba, the commissioner said, in opening his address, had not improved during the last ten years. Old years had been exceptionally good, but the average yield had not increased. Enquiry among grain dealers revealed the fact that Manitoba wheat was not improving in quality. Neither of these conditions should exist. In Great Britain proper method of culture and seed selection had increased the yield 30 per cent, and in France the yield had been doubled, largely through the instrumentality of illustration stations such as the present government proposed to establish. Wheat raising was Manitoba's chief source of income and yet it was growing harder every year. This was due to the partial exhaustion of the soil, the increasing prevalence of weeds and increasing prevalence of fungus diseases.

What was the cause of small crops? The most frequent was lack of moisture in the soil. He thought even this could be controlled in some degree. Decaying vegetable matter in the first four inches of soil would assist it in retaining moisture. Rolled land showed by actual experiment a difference in temperature of three degrees at a distance of 11-2 inches below the surface. Rolling would then partially overcome another cause of failure, that of unfavorable temperature at time of germination. The reports of experimental farms showed better results from rolled than unrolled land almost without exception. A third cause of failure in crops was lack of inherited vigor in the seed, and lack of suitable food for the young plant in the seed. This was a point he wished more particularly to discuss.

It had been proved by repeated experiments that large heavy seeds give better and bigger crops than smaller and lighter seed of the same variety. Peas, selected in this way for three years, had shown a yield double that of which the medium sized peas only had been sown each time. This law had proven true for wheat, oats and potatoes. During some seasons there is no difference between crops raised from well selected and poorly selected seed, but these were in exceptionally good seasons. The reasons for this were plain. The seed besides containing the embryo of the plant contains food for that plant in the earliest stages of its growth. A plump seed contains a larger supply of nourishment than a smaller and lighter seed. In a good year this smaller supply is all that is required but should the surroundings be unfavorable, the large plump seed has a considerable advantage. The first week of a plant's growth is the most important in its life. A setback received at this earlier period leaves a lasting blight on the plant.

It is a well known fact that wheat grown on too rich soil produces a great deal of straw and little seed, while a plant grown on poorer soil has much less straw but much more grain. The main point then was to give wheat a good start in the spring but to have less favorable conditions arise when the seed producing period arrived. This condition would be obtained by plowing down weeds and then surface cultivating instead of plowing a second time.

The question of the rotation of crops was an important one since it secured these conditions. In a test made in England, land sown to turnip, barley, clover and wheat on the fourth year produced 114 per cent

more wheat than land sown continuously with wheat. Manitobans will, according to this, have to raise some other crops or summer fallow.

No two seeds of the same variety are alike, but they produce plants similar in color, form, habit of growth, and hardness. It would naturally be expected that the productiveness would likewise not vary, but it does. Of sixty-five varieties of oats sown on the five Dominion experimental farms, at Napan, Ottawa, Brandon, Indian Head and Agassiz, the variety least productive at Ottawa was most productive at Agassiz and the twelve best varieties at each of the five farms included forty-one of those on the list. Of the forty-two varieties of wheat, thirty-three were included in the lists of the best twelve. It will be seen by this and experiments everywhere have shown similar results, that one variety is better than another only because it suits the condition of a certain locality better. There is no necessity for changing seed. It does not "run out" if the best is selected each year. The experiments at the Ottawa experimental of grain, some from same seed continuously, are tabulated thus:

	Average 1st 5 yrs.	Average 2nd 5 yrs.
Oats ... ..	70	78
Barley ... ..	50	58
Spring wheat ... ..	23.9	27.6
Potatoes ... ..	145	199

This comparison is not quite fair since the second five years may have been more favorable than the second. Observations taken year by year showed the same result however. In 1895 the average yields of wheat sown on the Guelph experimental farm showed that seed which had been sown on the farm for six years continuously yielded 32 bushels per acre, that sown five years ago, 30 bushels; that sown four years, 28 bushels; sown three years, 27 bushels, while that sown for the first time yielded only 16 bushels.

He believed that by the selection of the best seed from the best part of his crop the Manitoba farmer could increase his average production 30 per cent. France had doubled its average yield, why could not Manitoba do something on the same line.

Mr. Robertson was loudly applauded on taking his seat.

S. A. Bedford, superintendent of the Brandon experimental farm, corroborated Prof. Robertson in all that he had said. Red fife wheat and Banner oats had always proven themselves the best varieties for Manitoba. He had raised them continuously for nine years on the farm, and yield and quality were improving every year.

S. J. Thompson, of Carberry, said he had sown the grain continuously for sixteen years, and it had improved in yield each year. He selected the best part of his crop, cut it by itself, and had it threshed by itself for seed. The results had been the best.

Hugh McKellar pointed out that the adoption of this system meant an increase of over a million bushels of wheat in the province, if carried out by the farmers. He hoped they would be able to secure other such lectures for other wheat growing centres of the province.

Premier Greenway, of Manitoba, declared to a temperance delegation who called on the provincial government one day this week, that the government would prohibit the sale of intoxicating liquors to the fullest extent of their authority.

## THE DRY GOODS TRADE

### MEN'S FURNISHINGS.

This department of the dry goods business is showing more activity. There is a very active demand for negligee shirts. A line of cotton shirts with fronts of silk in stripes and checks in appropriate quiet colors is very popular, and as they are sold to retail at a moderate price are going out well. They have no attached collar, but are sold to wear with a "stand up turn down" collar. There have been increased sales this week of bul-briggen and natural underwear. Cotton and lisle thread half hose have been selling freely. There is a good demand for one piece bathing suits. Bicycle hose have had a good sale recently, and plain black and navy, with fancy white tops, are popular. Outing coats in black and grey lustre and light tweed are selling well.—Globe.

### THE TRADE IN WOOLLENS.

The trade in woollens was perhaps never more satisfactory than it has been the past six months. The sorting trade, which is now occupying the attention of those in the business, is quite active. It is rather late for this trade now, but it has been keeping up well. A leading house here reports that its sales every month this year have been larger than the corresponding months in 1898. The spring trade this season has exceeded the fall trade of last year. This is an abnormal condition, because, owing to the quality or weight rather of the goods that are sold in the fall, they are necessarily more expensive than spring lines. Payments in the woollen business are very good, and there are fewer failures than for many years. There are not, it appears, more men in the retail business, but the retailers in business now are more generally of a better class, and are men of capital and experience, and dealing with such a class of people of course enables the jobbers to show better results on the business done. The values of woollens have been steadily advancing, but people do not seem to mind the higher prices. They are better able to pay for them, and are indeed even with prices moving upward taking a much better class of goods than in former seasons. The advances in prices are chiefly confined to the higher grades of woollens, and on some of the finer grades of imported goods the advances are as much as 20 and 25 per cent.—Globe.

### DRY GOODS TRADE NOTES.

Receipts of wool are increasing in Ontario, but prices do not seem to improve any.

Canadian homespun cloths are selling freely in the old country this year and good prices are being realized.

Cotton goods continue to rule very firm in New York, and there is not the slightest weakness apparent in the market.

Canadian buyers of woollen and worsted goods are placing very heavy advance orders in anticipation of further advances.

The Dominion government has decided that no railway charters will be granted in the Yukon territory this year pending the settlement of the boundary dispute with the United States. Several bills are now before the house.