

“In 1890 it was found that all the grain plots had become so weedy that the growth of the crops was much interfered with, and with the view of cleaning the land one-half of each of the wheat and oat plots was sown with carrots in 1891, and one-half of each of the barley plots with sugar beets. In 1892 the other half of each plot in each of these series was sown with carrots. In 1893 it was thought desirable to continue this cleaning process, and carrots were again sown on the half of the wheat and oat plots occupied with this crop in 1891, and also on the half of the barley plots cropped with sugar beets that year.” In 1894, 1895 and 1896 the one-half of the oat plots were sown again with carrots and the half of the plots devoted to wheat and barley were planted with potatoes.

“ TREATMENT OF SOIL.

“The treatment of the soil on all the grain plots has been to gang-plough soon after harvest, and after the shed grain and weeds have well started to plough again about 7 inches deep. In spring the plots have been disc-harrowed twice or gang-ploughed once before applying the fertilizers, and again harrowed with the toothed or smoothing harrow before sowing. On those plots where barn-yard manure has been used, the manure has been lightly ploughed under as soon as possible after it has been spread on the land and harrowed with the smoothing harrow before sowing. Wherever barn-yard manure is spoken of, it is understood to be a mixture of horse and cow manure in about equal proportions.”

It is proposed to give each year in the annual report a summary of these permanent fertilizer plots, taking the average yield of the whole of the previous period, adding the results of the current year, and then giving the average yield for the full time. The experience of each year will add materially to the value and reliability of the tests for the whole period.

WHEAT PLOTS.

The seed sown on each of these plots from the beginning has been in the proportion of  $1\frac{1}{2}$  bushels per acre, excepting in 1894; and the varieties used were as follows. In 1888-89 and 1891 White Russian, and in 1892-93 Campbell's White Chaff. In 1894 the Rio Grande wheat was used, and shortly before sowing, it was tested as to vitality and found to be very deficient in germinating power, less than half the kernels sprouted. As it was not practicable then to secure better seed, double the usual quantity of seed was sown, namely: three bushels per acre, which gave a proportion of growth on each plot of about the usual thickness. In 1895 and 1896 the Red Fife wheat was used in the usual quantity of  $1\frac{1}{2}$  bushels per acre. In 1896 the Red Fife was sown 2nd May, came up 9th May and was harvested 10th August, requiring from the date of sowing to maturity a period of 100 days.

The season of 1896 at Ottawa has been favourable for the growing of spring wheat, and has given crops considerably above the average. This year the plot on which the fresh manure was used has yielded 10 lbs. per acre more than that on which the rotted manure was used. This gain is not however sufficient to offset the gain of the rotted manure plot in 1895 and the rotted manure plot averages a little higher than any other plot in the series.