

## APPENDIX No. 1

quality is ascertained by putting each sample into a small cylinder furnished with a light movable cap. These cylinders which are all of the same size, and are submitted to a temperature of about 300° F. in an electrical oven, so arranged that the temperature can be easily regulated. When exposed to such heat the gluten gradually expands, filling the cylinder and pushing the light cap up as it rises. The length of the bars of gluten when finished indicates their quality. Another sample of the product of each mill is handed to a baker who mixes it with yeast and bakes in each case a small pan of buns. These are carefully examined and compared, and thus from day to day the exact quality of the flour produced is determined. These experiments were very interesting and instructive.

The CHAIRMAN.—Are we to have Mr. Pedley and Dr. Saunders to-morrow?

The WITNESS.—I have some further matters to present to the committee, which would probably occupy another hour.

HOUSE OF COMMONS,  
COMMITTEE ROOM 34,

THURSDAY, March 13, 1902.

The Select Standing Committee on Agriculture and Colonization met here this day, at 10 o'clock A.M., Mr. Legris, Chairman, presiding.

Dr. William Saunders, Superintendent of Experimental Farms, was present at the request of the Committee, and testified as follows:—

THE FERTILIZING VALUE OF GREEN CLOVER DEMONSTRATED.

Mr. Chairman and Gentlemen, the first topic I want to bring under your notice this morning is one which I have referred to once or twice before, that is the great usefulness of the ploughing under of green clover to enrich the soil, especially in all the eastern provinces of the Dominion. We have been carrying on at the Central Experimental Farm experiments for the past four or five years to determine, as far as we can, the value of ploughing under crops of green clover. The clover has been sown in each case with the spring crop of grain, and after the grain has been cut, the clover has been allowed to grow until about the middle of October, by which time a mat of growth about ten or twelve inches high has been produced, when this has been ploughed under as a preparation for the crop of the following spring.

The turning under of that clover has been of great advantage to the soil as shown in the following crops:

As a result of the experiments in growing oats after the ploughing under of such clover, twelve trials have been made in all, covering a period of four years, and in those experiments the average increase in crops from this treatment has been 7 bushels per acre. A comparison has been made with plots alongside of those treated with the clover, which have not had any clover grown on them and the results from a series of these has shown this average increase of 7 bushels of grain per acre.

Experiments with barley, covering nearly the same period, have shown an average increase in the grain of 8 bushels 31 pounds per acre.