

Co-operative Experiments.

During the past few years some very interesting and valuable experiments have been conducted over the Province by members of the Ontario Agricultural and Experimental Union and other leading agriculturists. The object has been to obtain a better practical knowledge of some of the most easily procured Canadian fertilizers. The Union has forwarded material for the tests free of charge to those desirous of undertaking the experiments, and the very enthusiastic manner in which this work has been taken hold of by College Associates, and others has almost surpassed our expectations. The number of experiments has become greater each season, and the number of those carrying on the tests has increased about eight fold during the last three years.

It would be impossible to give a detailed account of the work in the limited space of the REVIEW, but this will all occur in the Annual Report of the Association. A summary of the results of the past three years may be here given with advantage, as it will show in a general way the most economical use of some of the forms of plant food available to the Ontario farmer.

Table showing the yield of grain from each fertilizer for three consecutive years:—

FERTILIZERS.	GRAIN PER ACRE IN POUNDS.		
	1887.	1888.	1889.
Salt.....	1348.4	1393.2	1140.8
Superphosphate.....	1408.8	1432.0	1073.8
Ground Apatite.....	1271.6	1307.6	1099.0
Fresh wood ashes.....	not used.	1274.4	1068.0
Farm yard manure.....	1384.8	1412.8	1235.0
No manure.....	1252.8	1221.6	1028.0

The averages given are those of oat, spring wheat and barley crops taken together. Those given for 1887 are from plots fertilized in the spring of the same year. Those of 1888 from plots fertilized in spring of 1888, but those for 1889 are from plots, nearly all of which were fertilized in 1888, and show the effects of the fertilizers the second year.

From the above table we observe that during the two years (1887 and 1888), when the fertilizers had been applied each spring, the results came out relatively the same, while for 1889, being the second crop after the application of the fertilizers, the order is somewhat changed. The farm yard manure now takes the lead and the superphosphate, which, during the first years of its application, gave the largest returns, at present occupies the third place. The plot without being fertilized comes the lowest in every instance.

Taking the average of the three we get the following results, being the average of eighty sets of the experiment:

	Pounds of Grain Per Acre.
(1) Farm yard manure.....	1344.2
(2) Superphosphate.....	1304.9
(3) Salt.....	1294.1
(4) Ground Apatite.....	1266.4
(6) Fresh wood ashes.....	1171.2
(6) No manure.....	1107.5

An average of about 14 tons of farm yard manure was applied per acre, and the other fertilizers were sown at the rate of 400 lbs. per acre. The superphosphate cost \$26, and the Ground Apatite \$12 per ton. Farm yard manure is usually valued at \$1 per ton in making calculations. Fresh wood ashes and salt vary much in price owing to locality in which they are to be used.

For a more detailed account of the experiments the readers of the REVIEW are referred to the Union Reports of 1888 and 1889, and to the one of 1890 when published.

Ontario Agricultural and Experimental Union.

The Agricultural Committee of the Experimental Union has arranged the work of 1890, and instructions along with blank forms are now being sent to those desirous of carrying on the tests. Should any of the readers of the REVIEW, who have not yet received the circular on the experimental work, wish to join the members of the Union in the experiments for 1890, kindly let us know by an early date. The following introductory to the circular will give the reader an idea of the line of investigation:—

GUELPH, MARCH 15th, 1890.

DEAR SIR, Experiments carefully carried on have done much towards improving the methods of farming. With this fact in view the Ontario Agricultural and Experimental Union has been carrying on co-operative experiments from year to year, which have been gradually growing in importance and value. Those proposed for this year's work should be appreciated by every farmer. If you can give the small amount of time and careful attention required to carry on one or more of these tests, you will be amply repaid for the trouble taken by yourself by the conclusions arrived at on your own farm. You will also have the benefit of the results of similar experiments conducted in different parts of the Province, all of which, when carefully carried out, will be presented at the annual meeting of the Association, and afterwards entered in The Annual Report of the Union, a copy of which will be sent to each experimenter.

The experiments for this year are as follows:—

(1) A continuation of the test with Superphosphate, Dried Blood and Scrap, Farmyard Manure, and no manure, with oats, applied without additional fertilizer.

(2) New plots with Superphosphate, Dried Blood and Scrap, Farmyard Manure, and no manure with oats.

(3) Application of Sodium Nitrate to either Spring wheat or Fall wheat, to be applied in the Spring at the rate of 200 lbs. per acre.

(4) Testing new varieties of cereals.

(5) Different modes of cultivating corn, similar to 1889.

(6) The growing of Lucerne.

Full particulars for carrying out the above experiments will be sent on application.

Fertilizers and seeds required for the tests will be sent free of charge to your nearest Express Office.

The materials for Nos. II, III, V, and VI, being expensive, only a limited number of these can be sent out. Those applying first will of course have the preference.

If you are in a position to carry on one or more of these experiments, kindly let us know as early as possible which test or tests you prefer, mentioning your nearest Express Office, so that the materials shall reach you in time.

Kindly forward all communications regarding experiments to C. A. Zavitz, O. A. College, Guelph, and return the results of the tests by Oct. 20th, 1890.

Yours sincerely, AGRICULTURAL COMMITTEE.