

evaporation, or weeds, in order that the trees might get enough. The growth of such plants as clover, which produced much humus in the soil, and thereby increased its water capacity helped to retain enough moisture for the needs of the plants.

In an orchard, where no crop was grown, and constant tillage was practised, there was a danger of losses of available plant-food by the beating of heavy rains late in the season. This could be prevented by any cover-crop grown late in the summer.

Clover had also another effect, in fixing the free nitrogen of the air, and thereby increasing the fertility of the soil. In a particular case cited, where three crops of crimson clover had been plowed under, and the soil analyzed before and after, a gain of 105 lbs. of nitrogen per acre was shown. If this had been bought, in the form of commercial fertilizers, it would have cost \$252.00. This shows that we can continue to enrich our soil and at the same time reap constantly improving crops from it.

Good Roads Convention

A gathering fraught with the greatest importance to the welfare of this province took place in Toronto last week. It was a convention of municipal officers and county councillors, called upon the invitation of the York County Council for the discussion of the good roads problem. About fifty delegates from the municipalities of Ontario were present, besides a number of others prominently identified with road improvement, including A. W. Campbell, Provincial Road Instructor, Mr. A. F. Wood, ex-M.P.P., and Mr. A. Pattullo, M.P.P., organizer of the good roads movement. The important topics discussed were the assumption by counties of the construction and maintenance of certain main-travelled roads in the county, the funds to be raised by a general taxation or by debentures and securing government aid.

The convention opened on the afternoon of December 12th with Mr. C. E. Lundy as chairman and County Clerk



A Canadian Winter Scene. Where Christmas is thoroughly enjoyed.

The future, Mr. Powell believed, had much to promise to young men who take up the study of the science of agriculture, and endeavor to find out and practise the best methods of soil tillage.

In reply to a question as to why, in a particular locality, wheat would not grow now as it did in the past, Mr. Powell suggested that the land might have become sour, either through lack of underdraining or because it needed lime. He suggested that lime be tried.

Professors Day and Shuttleworth followed, the former showing the importance of humus in the soil, and the latter that of lime, in soils where the available lime was exhausted.

The officers of the Experimental Union for 1900 are: President, H. R. Ross; vice-president, Mr. Mason; secretary, C. A. Zavitz; treasurer, Prof. H. L. Hutt. Committee of management, H. R. Ross, Dr. Mills, B. Beckett, N. Monteith, M.P.P., and C. A. Zavitz.

Ramsden as secretary. The chairman in his opening remarks stated briefly the history of the road question in York County from the toll gate to the present day, when the municipalities charged with their maintenance have failed to keep them up. At the June session it had been proposed to take over some of the roads again. A committee was appointed to collect information, but so much had been received that it was felt advisable to hold a convention to discuss it.

HASTINGS COUNTY ROADS.

Mr. A. F. Wood, ex-M.P.P., Madoc, Ont., addressed the meeting on the experience of Hastings county in dealing with the roads. This county has a reputation for good roads of a permanent character, especially the main-travelled ones. These were taken over some years ago by the county and the result has been a permanent system of roadways maintained at comparatively small cost to the