

third of August, 1887, barley was ripe and being cut, and the fields of wheat were quite tinged with yellow. On the 17th of August the settlers were reaping the dead ripe wheat, which gave promise of a very heavy yield.

Absence of
summer frosts.

Reasons.

Luxuriance of
herbage.

Sheltered
position.

Presence of
trees.

The summer frosts, too, which have occasionally proved prejudicial to the crops in some parts of Manitoba and the North-West Territory, appear to avoid this favoured district. This is, no doubt, in part due to the slope of the surface, the cold air sinking down the gentle incline till it reaches the lake, where it is warmed by radiation from the surface of the large body of water which has been warmed by the hot sun of the day before, and which, on account of its shallowness, gives out its heat rapidly to the overlying air. The great luxuriance of the grasses and herbage in this district has also much effect in hindering the occurrence of summer frosts. By increasing the amount of water evaporated in the day time it renders latent a large amount of heat which again becomes sensible when this moisture is deposited in the evening in the form of dew. Growing grain would also have precisely the same effect. Its sheltered position is also very much in its favour. A wind blowing from the east across the great lakes of the Winnipeg basin will be loaded with moisture, which, if it does not fall as rain, will form into clouds or be deposited as a heavy dew, and will avert a frost either by hindering the radiation of the heat from the lower stratum of air, or by raising its temperature. If the wind is blowing from the drier plains to the west it will be partly diverted to the south-west along the Duck and Riding mountains, and what crosses the mountains, though very dry, will be so much warmed by condensation in descending thirteen to eighteen hundred feet that little danger of frost need be feared from it. In this connection, it may be remarked that it appears very probable that the planting of trees around the fields on the plains of Manitoba and the North-West Territory would have considerable influence in preventing the occurrence of summer frosts by breaking the winds and hindering the free circulation of air. The moisture that was evaporated from a field of growing or ripening grain or other crop would then, to a considerable extent, remain over the field, whereas now it is often replaced by dry air from the plains, which offers no obstruction to the rapid loss of heat from the earth by radiation. The circumstances under which frost occurs are often as follows:— During the day a stiff wind is blowing from a westerly direction, carrying off the moisture as fast as it is evaporated. In the evening the weather becomes very calm, and on account of the absence of any moisture in the atmosphere the stars shine with exceptional brilliancy. The earth is warm from the heat of the day, but radiation