

PREFACE.

"To the North of Lake Huron, and between Georgian Bay and the Ottawa River, the superficial covering of the country is almost invariably a yellow sand. This, also, overlies the clays of this region, which are exposed only in river cuttings. This sand is most largely developed along the principal rivers of the district, and it also covers St. Joseph's Island, and part of the Grand Manitoulin. It is largely developed on the Dog and Kaministiquia Rivers, and spreads over a considerable tract below the Great Falls of the Michipicoten, as well as over a smaller area on the Batchewahung River. The Goulais River, in its lower stretch, flows in a very tortuous course between mountain ranges, through a wide and fertile valley, which has yellow sand as a subsoil over a great part of its area. This yellow sand also extends far and wide over the higher table-lands of the Thessalon and Mississagui Rivers. On either side of the Spanish River, below the great bend, it forms an extensive plain, bearing a heavy growth of pines, and it is also found in large patches north of that part of the coast lying between the mouth of the Mississagui and Spanish Rivers. The sand is widely spread almost all along the valleys of the White-fish and Sturgeon Rivers.

"Much of the region thus covered, lies within the District of Algoma, and this great arenaceous deposit may hence be conveniently designated as the Algoma sand."—*Extract from Geology of Canada*, 1863, pp. 907-8.

In a soil like that just described, hemp and flax will flourish well.

The wide distribution of hemp is remarkable, but easily explained when we consider that it is an annual which requires only a few months of summer temperature to bring it to full perfection. It thrives in the north of Russia, and in Italy. If we compare the summer temperatures of these countries, we shall not find so great a difference as we might be led to expect by considering only their latitudes, or their mean annual temperatures. Thus Petersburg and Moscow, in N. latitude $59^{\circ} 56'$ and $56^{\circ} 45'$, have mean summer temperatures of $62^{\circ} 06'$ and $67^{\circ} 10'$ of Fahr., while Milan and Rome, in N. latitude $45^{\circ} 28'$ and $41^{\circ} 53'$, have summer temperatures of $73^{\circ} 04'$ and $75^{\circ} 20'$.

From observations taken by Professor Kingston at the Magnetic Observatory, the mean summer temperature for Toronto, in N. latitude $43^{\circ} 30'$, or the mean of June, July and August, is 65° nearly.