

most active that could be produced, being a mixture of phosphate of ammonia, nitrate of potash, and chloride of sodium.

From similar experiments made at the Agricultural Observatory at Montsouris, France, results of a like nature were found to follow ; and it was demonstrated that for a crop of forty bushels per acre of wheat, the minimum amount of water evaporated through the leaves was six inches in depth over the whole surface of the field, whilst the maximum reached was seventeen inches of rainfall. Though 40 bushels of wheat is considered a good crop in this country, from 64 to 66 bushels are not uncommon with the farmers in England. If however only six inches of water is evaporated through the leaves, when we take into consideration the amount evaporated from the ground, the quantity of water that runs away during the heavier rains, and that which is lost unassimilated through the drains, it will be evident the rainfall of say half April, May, June, July and August,—the growing season,—amounting to  $13\frac{1}{4}$  inches, (the average rainfall in Canada,) is “not enough to moisten the ground,” and that “water is in a great measure wanting.”

It is utterly impossible in Ontario to rival the crops of England without a larger supply of water than the clouds are willing to give, and if such is the case with wheat how much more is it with regard to the grasses and the more succulent garden vegetables. Every year we see the pastures more or less burned up, and even the foliage plants, with the exception perhaps of Indian corn and millet, would give a much larger yield if water were at hand for irrigation.

It is hardly a fair comparison to set the climate of Ontario and England in juxtaposition with regard to irrigation, as there is relatively no similarity. The evaporation from the sea keeps the atmosphere there continually moist. We hear of such things as eight hours sunshine in eighty days, I think in the year 1877, but of course in the year referred to the crops were unusually bad, whereas the average of cloudy weather here is only 0.61.

I am aware that sewage farms have not so far met with the success anticipated. It appears that the thicker parts of the manure collect around the stems of the grass plants, and the growth is checked or decay ensues. But water meadows have always proved a success.

The vineyards of the Crimea which are planted in four villages, and extend over an area of 15,000 acres, are regularly irrigated,