

drawn from Principal Dawson's "Contributions towards the improvement of Agriculture in Nova Scotia" which contain a large amount of valuable scientific and practical knowledge. We now proceed to the subject of Manures,—a subject perhaps of even greater importance to the farmers than soils. These are usually divided into two great classes, *organic* and *inorganic* or *mineral*. We of course begin with the former. Were the following remarks by Mr. Dawson on the subject of stable manures carried into effect throughout the Province it has been computed that a saving of at least £100,000 per annum would be secured.

#### ORGANIC MANURES.

Under this head, I group all those fertilizing substances which have formed parts of animals or plants, and are restored to the soil, whence, or by the aid of which, they were obtained; though some of them cannot, in strict chemical language, be termed organic.

*Stable Manures.*—Agricola long ago said, "More than one-half of the manure made in the Province, is absolutely wasted, from ignorance and inattention; and the other half is much more unproductive than it would have been under more skilful direction. We have almost no pits, dug upon a regular plan, for the collection and preservation of the dung which, from time to time, is wheeled out of the barn. Sometimes it is spread out on the green sward; sometimes carelessly in a court, or adjoining yard; but seldom is an excavation made, purposely for retaining the juices which run from it. These are suffered either to stream along the surface, or sink into the earth; and in either case, their utility is sacrificed to inattention or ignorance. This is no more, however, than half the evil. The exhalations which arise from the ardent influence of the summer's sun, or from the natural activity of fermentation, are permitted to escape freely, and to carry with them all the strength and substance of the putrescible matter." There is, no doubt, much more attention given to this important subject just now; but still, the waste of barn-yard manure, both solid and liquid, is a great loss, and a fruitful cause of agricultural poverty, and failures of crops. About two years ago, I had referred to this subject in a public lecture, and happened, immediately afterward, to drive ten or twelve miles into the country, with an intelligent friend, who doubted the extent of the loss. We were driving through one of the oldest agricultural settlements in the Province, and by way of settling the question, determined to observe the capacity of each barn yard that we passed, for the preservation of manure. It was in early spring, and we found scarcely one barn that had not its large manure heap perfectly exposed to the weather, and with a dark stream oozing from its base into the road-side ditch, or down the nearest slope; while there was evidently no contrivance whatever for saving the liquid manure of cattle. Here was direct evidence, that a large proportion, probably not less than one third, of the soluble part of the solid manure, and the whole of the liquid manure, which all agricultural chemists think to be equal in value to the solid part, was being lost. In other words, each farmer was deliberately losing between one-half and two thirds of the means of raising crops, contained in his own barn-yard. What would you think of a tradesman or manufacturer, who should carelessly suffer one half of his stock of raw material to go to waste; and the waste of such farmers is precisely similar. The results of chemical analysis will enable us to form more precise ideas of the nature and amount of this waste.