are about the same length, and consequently, as is the case in this country, a great part of the land as well as the care, labour, and resources of the summer, must be devoted to providing food for the cattle and horses during the winter months.

This is a great desideratum in agricultural economy, especially in countries where such long winters prevail. We cannot continue to grow large crops of grain, and keep the soil in good condition, unless we have some means of constantly procuring and supplying the earth with manure, any more than we can continue to plough two acres a day with a good pair of horses, and keep them fat, without a constant supply of nourishing food. I believe the best and most economical manure that can be obtained and used, having regard to the permanent fertility of the soil, is the dung of cattle mixed with the straw and other waste vegetable produce of the farm. And to procure this in abundance, a large number of cattle must be kept. To this end have the late improvements in Britain chiefly tended. Two things have been accomplished there, which in fact constitute the principal modern improvements, both of which are very desirable in this country; a more judicious rotation of cropping, and a thorough system of draining. The latter of these, if not very easy of accomplishment, is at least easily understood, and requires very little assistance from science. In some parts of Canada it is not much required, as on dry sandy soils; but in much of the rich clay land of the country it would undoubtedly prove of immense benefit. There is no obstacle in the way of its adoption, save the expense, which can generally be ascertained pretty accurately beforehand; and a judicious outlay for draining will, in most cases, be found a good investment.

The adoption of a profitable system of rotation of crops, is a question of far greater difficulty. And it is a question that the farmers of Canada should attend to without delay, for by the rotation at present in practice, much of the best land in Canada will at no very distant period be exhausted, and rendered incapable of producing wheat, the staple article of the country. If indeed the most simple system were the best, as it sometimes is in other matters, then the system prevailing most in that part of the country with which I am best acquainted, will hardly be surpassed, for no rotation could be more simple. It consists of fallow and wheat alternately, with as much set apart for pasture, meadow, and spring crop, as will be barely sufficient for the use of the farm. The manure of the barn yard is laid on that part of the fallow which is supposed to have the most need of it, forming a thin coating for one-fourth or one-third of the fallow ground. Some farmers more enterprising than their neighbours, occasionally vary this rotation by growing two successive crops of wheat on a field which has had rather more than its proper share of manure, and this deviation from the general rule though generally resulting in a pecuniary loss to the farmer, yet materially increases his store of scientific knowledge by furnishing him with (for him) satisfactory proof, that wheat will turn to chess! On the other hand some farmers attempting a more meliorating cultivation, but have not generally succeeded in getting so good a return for their outlay as those who adhered more closely to the alternate wheat and fallow system.

This system has certainly succeeded better than any other that has come under my observation; this observation, however, being most confined to strong rich lands but lately reclaimed from the forest. On such lands, it is perhaps the best plan for the present time, or the plan which will give the greatest and most speedy return. And it is certainly not strange that the farmer should hesitate before giving up a system by which he is rapidly becoming rich, for some other plan which has got to be tried, and which he is only certain that it will not make him so good a return for his outlay. Yet if there is any truth in the theory of agriculture, or the experience of other and older countries, the time will come—if this system be continued—when the present rich and productive land of Canada will not only fail to produce the heavy crops of wheat which it now does, but will become incapable of producing wheat at all to any profitable amount. How soon that time may come will depend on many circumstances, but chiefly on the strength and good qualities of the land, and on the extent to which this scourging mode of cropping is carried; and it is advisable for the farmer whose land is now in good condition, to anticipate that time, by adopting a more meliorating system before his land is exhausted, as it is undoubtedly easier and far less expensive to keep land in good condition than to restore it after worn out. The main principle of the improvement of cropping in Great Britain consisted in the introduction of what are called green crops, which answered the double purpose of meliorating the cultivation of the soil, and at the same time producing a greater quantity of manure, by supplying more food for cattle; thus giving the land more food and less labour. By this system the well cultivated farms in Britain, while annually producing good crops are kept in a continual state of fertility, and probably by the same system would produce as good crops a thousand years hence as they do at present. The fallowing is in a great measure done away with, being superseded by green crops; the best lands therefore not being fallowed more than once in seven o