

has restored it. Then again the use of bone dust, it is well known, will improve the grain, and enlarge the ear—it is the case at home where bone dust is constantly used, and in Lower Canada where the wheat in some places has failed, it has been restored by the use of bones. You will easily see the reason, when I tell you how every bushel of wheat contains about 1 lb. of phosphoric acid, and how that acid is extracted from the soil, and unless means are taken to restore it, the time will come that the quantity will be so small that the crop must fail, entirely, so you see the necessity of using those substances as manure which contain it. Now I say, in order to make the land more productive, a better course of manuring is requisite; you will see how applicable it is to farmers when I shew you how favourable your colony is to growing wheat. I believe your average is about fifteen bushels an acre, and that of the whole State of New York is not more than fifteen bushels. The lands of Canada are capable of growing thirty bushels, which your sons will find out. I may allude to another course to improve your crops, that is, when the snow falls heavy, sow winter wheat, and when the fall is not heavy sow spring wheat.—There is also deep ploughing to be attended to, and a proper selection of implements. You will ask how are those things to be obtained. One of the sources of this knowledge is from agricultural schools, but I will pass that over for the present. Another source is the agricultural societies. The small societies promote emulation among the farmers, as to their keeping their lands improving in neatness and their implements in order. Again, the larger societies promote emulation on a larger scale; you have men from all parts of the country, and the intercourse improves your intellectual talents, and will bring out talents which you did not know you were possessed of. Your agricultural Journals, though small, are useful in laying agricultural subjects before the public. They are something to show what has been done from year to year. Every society both in Scotland and England publish reports, and are by this means made aware of each others' transactions. I will draw your attention to a volume containing an account of the State Fair in New York; now I say you might publish some similar journal and you will stimulate your members to try experiments; this is a matter involving some expense, but there is nothing can be done now without expense. I will now tell you how to improve the exhausted land. The particular point to which I will draw your attention is drainage. There are two kinds of drainage: the first is cuttings from the springs, and bringing the drains along the lower parts of fields; it was introduced by Mr. Elphinstone, and would answer well in many parts of Canada.

In many countries where drainage is extensively carried on, there is another system called thorough drainage, but I would not recommend

thorough drainage for this country, or for such soils, particularly as the money you would expend might purchase better land elsewhere; but in time that will be altered, the land that is considered new now will become old settlements, and farmers will be obliged to turn their attention to their improvement in preference to moving elsewhere. The drainage from springs is in use in every country in Europe, but thorough drainage has not been very generally introduced. I need scarcely explain to you the great advantage to be derived from draining. If I pour some water out of this glass, on my hand, it will feel colder than it now does, and according as the water evaporates, it will extract more heat from the hand. Just so with the land where the wet is allowed to lie. The heat which the plant requires for nourishment is for the most part given off in evaporation. Also, if I place you in a bog, will you not feel colder than if placed on a dry soil? and no animal can be expected to thrive so well on a wet cold soil as on a drier one. The failure of the wheat crop is much to be attributed to low situations, and drainage might tend in a great degree to its improvement.

There is another thing that strikes me might be introduced here with advantage, that is the growing of green crops, such as turnips, carrots, mangel-wortzel. Now you know that in your province the winter is apt to eat up the summer, that you have to grow good quantities of hay to support your cattle over winter, and in a dry season like this, when the hay crop has failed, it becomes necessary to provide other means for the support of your cattle. I do not pretend to lay down any rules for you here, but I merely make the suggestions your own experience may teach you whether or not you should adopt them. In Scotland there were scarcely any green crops grown 20 years ago, and consequently, but little good beef was to be seen in the markets; but now the case is different; the cattle are entirely fed on green crops, and consequently the beef is much improved, and at a much cheaper rate than if they had been fed on hay. Another advantage to be derived from feeding cattle here, is the facility for transporting cattle to market, and as the want of convenient markets is complained of everywhere, as well in the United States as here, it is much easier to convey your fat cattle to market than your grain, and your quantity of manure will be much increased, which is a great desideratum when perhaps you may not have the means or opportunity of buying bone dust or other manures. You may readily perceive how all those things are linked together, and how they all tend to the improvement of agriculture. There is another subject to which I would draw your attention, that is an improvement in your farm implements. You may readily perceive how all those things are linked together, and how they all tend to the improvement of agriculture. There is another subject to which I would draw your attention, that is an improvement in your farm