

ertion, and more accurate observation. Man-kind, it has been truly said, seem to thrive and civilize in proportion as they multiply, and by a recurrent action multiply as they thrive, civilize and prosper. Thus necessity compels to invention and stimulates to improved modes of cultivation, the introduction of new species and of more fruitful varieties of agricultural produce, in order to keep pace with increasing population; thus resting upon a basis of facts, vindicates the wisdom of Providence, and refutes the superficial theory of over production.

It is under a combination of these circumstances that the agricultural produce of England has increased from the insignificant amount that was its value at the time of the Norman invasion, to the enormous annual amount of £200,000,000! And it is certain that in this country and in other parts of the world, the produce is a small portion of what the soil is capable of producing, under a thorough system of cultivation. Agriculture is the art of obtaining from the earth food for the sustenance of man and his domestic animals; and the perfection of that art is to obtain the greatest possible produce at the smallest possible expense.

Upon the importance of this art it is needless to insist, for by it every country is enabled to support in comfort an abundant population; on this its strength as a nation depends, and by it its independence is secured. An agricultural country has within itself the necessaries and comforts of life, and to defend its rights and independence there will never be wanting bands of patriot soldiers.

Of the delights that the cultivation of the soil is capable of producing, facts in abundance exist in the devotion with which many of the most eminently gifted men have applied themselves to it, and the delight we all experience on beholding a highly cultivated piece of land; a proof of the infinite wisdom, that has so ordered the events of this life, as to make the most devoted attention to what is useful the highest source of rational enjoyment.

Let us then endeavor to make some enquiry into the best method of bringing about the results to which we have alluded, and what procedure is most conducive to that end. At the early settlement of any section of this country, the soil, abounding in vegetable mould, required early the attention necessary to keep under the luxuriant growth of noxious weeds, to secure an abundant return to the husbandman, of almost any crop he properly put in the ground; but from too rank a growth the wheat crop is liable to lodge and rust. This, for several years, has been almost the only drawback the new settler experiences, if he is careful to provide himself

with clean seed and sows in proper season. But as the absorption of vegetables and other organic matters contained in the soil is constantly going on by cropping, some means must be resorted to that these fertilizing principles may be supplied, in order that the productiveness of the soil may be maintained; and it is fortunate for us Canadians that we have it in our power to avail ourselves of the experience of those countries, whose practice has taught those engaged in the cultivation of the soil, what is the proper course to pursue that this important result may be produced. One of the first requisites is a knowledge of the deficiency of the soil, and what is proper to apply in order to supply that deficiency. Every farmer of experience knows that barn yard manure is the best possible fertilizer, and that its benefits are alike perceptible on all soils, for this simple reason, that it returns to the soil that of which it was necessarily exhausted, in order to produce the material of which the barn-yard manure is composed. But as the necessary quantity of this valuable material cannot always be had, scientific men have been led to give their special attention to the discovery of substitutes, and while no author worthy of attention, has ever recommended an abandonment of the produce of the stable and barn-yard, they have written much to show how the quantity and quality of the material may be increased, and what may be used with advantage as substitutes; and some of those are extremely valuable, because of their cheapness in transportation and application. It will also be discovered when we turn our attention to the subject, that there are sources from which valuable manures may be procured, that have as yet, in this country, been entirely neglected.

Nothing has been discovered more beneficial than a judicious rotation of crops. Clover and turnips are said to be the two main pillars of British Husbandry, they have contributed more to preserve and augment the fertility of the soil, for producing grain, to enlarge and improve breeds of cattle, and sheep, and to produce a supply for the butcher's stall all the year round, than any other crops. Mangold & Wurtzel, the Belgian Carrot, and Parsnips, are all highly valuable for the same purpose, and when fed in a proper manner, contribute largely to increase the quantity and quality of the manure heap, and most valuable as preparatory crops for the production of grain, as every farmer of experience well knows; and when a supply of milk and fresh butter is an object during the winter or early spring, (and who will deny that it is a comfort to have them), then roots, if we except the turnip, must be invaluable. Much might be said on this subject, but as the limits of this essay will not permit of details be-