

# THE GLEANER.

AND NORTHUMBERLAND, KENT, GLOUCESTER, AND WESTGOUCHÉ  
COMMERCIAL AND AGRICULTURAL JOURNAL.

New Series, Vol. III

*Nec araneorum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut ajes.*

No. 93.

Miramichi, Tuesday Afternoon, March 18, 1845.

## Agricultural Journal.

From the Albany Cultivator.

### PRACTICAL HUSBANDRY.

#### Improvement of Worn Out and naturally Poor Lands, Old Fields, &c., in the Middle States.

I intimated in a late paper in the Cultivator, that I would shortly give the readers of that excellent work an answer to the question how the improvement of the kinds of land mentioned in the heading of this article, could be accomplished in the cheapest way. I now proceed to the fulfilment of my promise. Land is poor or rich from various causes. It may be poor naturally, from being deprived of the accumulation of decomposed organized matter, by the washings of rain, the overflowing of streams, &c., and by its own gravelly and porous nature, admitting the upward filtering of spring water, as is the case in low gravelly bottoms. It may also be poor from the too large a portion of iron in its composition. But the most universal cause of poverty of soil, is exhaustion, from over-cropping, taking away always, and returning nothing; as was so generally the practice in old times and is too much the practice now in all the middle States. In a former paper I have expressed the opinion that a man may purchase and improve a piece of this poor or worn out land cheaper than will be the cost of removal to, and purchase of a piece of land in the west, especially when the sacrifices incident to such removal are taken into the account. I most sincerely believe in the truth of this proposition. But let us proceed to the subject—the how, not the why, this land should be improved.

The first object to be attended to in the improvement of land, is the grubbing up and clearing off every tree and shrub that is not wanted. Let this be done at the beginning. Allow no clumps or clusters of bushes or briars, or single ones either, to remain in the field. The next thing is ditching and draining of all sunken and boggy places, if such exist. Very often the simple plow furrow will answer, but sometimes a deep ditch must be dug. If it be deep enough, a blind ditch should always be preferred, so that you may cultivate the land over the ditch, and also save your land the inconvenience of open ditches. Having grubbed and ditched, and thus drained the land, the next object is to ascertain the quality of the soil, all parts of it. You may find that the low places you have drained are composed of hard clay. Some of the upper or higher places may be too sandy. You will in such case, employ your carts in carrying clay to the sandy parts, and return with sand to the clayey parts; and be very liberal in your exchanges, too. You may spread the clay at once, or allow it to remain a winter in cart load heaps, and spread it in the spring. The sand may be spread, of course, at once. All this is merely getting the land ready. A carpenter bids his shop, and "gets out" his stuff, before he thinks of "going to work" at his trade. So does every other artisan or mechanic. Why should a farmer not, also, before he goes to work to make money and a living, first "get his shop in order?" Having properly grubbed, drained, and mixed the soil, the next thing to be done is to ascertain the quality of the whole. It most probably wants lime to make it complete. Take a handful here and there from the whole field, say twenty handfuls in all; mix them well together; then take a handful from the whole mixture, put it upon a shovel and heat it red hot; then take it from the fire and let it cool; when cold, pulverize it into a fine powder, and pour upon it good cider vinegar; diluted muriatic acid is best, but vinegar, if good, will do; if it foams considerably, you want no lime in the soil; if it do not foam, you must then apply lime. Nearly all the land in the middle States wants lime, and is benefited by its application. If it wants no lime, then go to work as follows: plow in the fall with the deepest working plow you can afford. In the spring, sow corn broadcast; and as soon as it is as high as you can well turn un-

der with a good plow and two or three horse team turn it under well, and immediately sow corn again broadcast; as soon as that is high enough to turn under, turn that also with a deep working plow. Generally you may turn under three crops in the same season. In the fall plow deeply in turning the last crop of corn under, harrow and seed with wheat. However poor your land may have been, you may be sure of a good crop of wheat the ensuing harvest. In sowing the corn, about three to four bushels should be sown to the acre, each crop.

If by the trial above described, you find your land requires lime, then, before the first plowing, apply twenty bushels of slaked lime to the acre, broadcast, then plow as before directed, sow the corn, and proceed as before, taking care to sow twenty bushels of lime before turning under each crop of corn; sow the lime on the corn as it stands, and turn corn and lime all in together. In this way, a first rate soil may be made out of the poorest old field in Maryland or any where else; and it will be observed that the only cost is in the liming and value of the seed corn, except the labor. Those who cannot afford to expend so much labor and money the first season, can extend the time over several seasons, applying say twenty or thirty bushels of lime to the acre, and turning under but one crop of corn each year.

The above may be considered a brief summary of the whole argument; and, it seems to me, scarcely requires elucidation. Some may however require explanations, and I therefore proceed to give them.

A clay soil requires only sand to make it a good one, so far as constitution is concerned; a sandy soil requires clay to make it good. These two elements of a good soil generally exist on all farms; and wherever they do exist in separate places, they should be combined and mixed, that the whole may be made fertile. If your land be too clayey, and you have no sand on your farm, probably some neighbour would be glad to exchange some of his sand for some of your clay, doing half the hauling, and thus both farms will be benefited at half the labor each. Rely upon it, there is more to be obtained in the improvement of land by a judicious admixture of soils, than is generally supposed. Manuring cannot supply its place, however large the quantity applied; and, when once made, the effect is permanent, the benefit perpetual, the improvement lasts for ever.

Low wet places are not only unproductive, but they are unhealthy, unseemly, and an absolute loss of all the land so situated. If your farm consists of one hundred acres, and twenty acres of it is of this low and wet kind, you have but eighty acres of land. Therefore drain, by ditching this low land, make it productive, by adding sand, &c., where necessary, and you will in effect have added twenty acres to your farm. And in draining, take care to avail yourself of the advantages of blind ditches. I do not suppose it necessary to tell you how to make them—the way may be found in almost all agricultural works, and they are very simple. A summary of the different plans may be stated as follows. Dig the trench as in the usual way of making an open ditch, of the proper depth and capacity, to carry off the water. Then lay in the bottom of the ditch, stones loosely packed so that water will freely pass between them, about a foot deep. Then lay upon these loose stones, larger and flat ones, to keep the earth from filling the interstices, and then return the earth thrown out leveling the whole surface. Some, instead of stone, lay in the bottom of the ditch, branches and limbs of trees and shrubs, and cover these with earth; but such blind ditches are obviously subject to obstruction from the decay of the wood, and thence from the caving in of the superincumbent earth. Others, in Europe especially, use an arching of tiles in the ditch instead of stones or brushwood; but this is too expensive for this country as yet. Where stones can be had, a good blind ditch may

be made permanently effective by their use; next to stone, brushwood is to be preferred.

It surely cannot be necessary to say a word in illustration of the grubbing up of all useless growths of bushes, trees, &c. Never allow your fences to be sheltered by bushes or trees of any kind; they rot the timber, and you lose all the land they occupy. "Head lands," as they are called, are just so much deducted from your measure of acres. Clear out all such. If you have no other clean place in your field, let the head lands and fence corners be clean.

In ascertaining the precise quality of the soil you accomplish precisely what every other artisan does when he ascertains his ability to do a certain job. You find out what the materials you are to work upon are capable of producing.

If in that examination, you find your materials deficient in any one necessary ingredient—lime, for example—you, as other artisans would necessarily and instinctively do, apply lime. If you find it deficient in vegetable fibre, &c., you apply that substance, and if you find it deficient in clay or sand, as either of these preponderate, you apply the one or the other, as the result of the examination shall indicate.

Having prepared the soil for the reception of manure, the cheapest and most efficient method and material for supplying nutritious principles to the soil, is the next matter for consideration. I believe that corn sown broadcast, as above directed, is the cheapest, most efficient and speediest fertilizer. Some, and very many, suppose, that the old plan of clover laying is the best and cheapest. I differ with them. You can only turn under a crop of clover once in two years; you can by an effort turn under three crops of corn in one year; and I believe that each crop of corn will carry as much nutritious matter into the soil as each crop of clover can do.

Now in this system of improvement, you have only to purchase the lime, if that be necessary; you can raise the seed corn on some part of the farm. All the rest of the improvement is derived from labor.

Never undertake the improvement of more land than you are certain you can manage. If you expend your funds upon too large a surface, you will be likely to lose the whole advantage of them. Calculate how much land you can work well, and confine yourself to that and no more. And in all your operations in agriculture, take care not to undertake too much. Suppose you can only work ten acres well in one year, if you undertake twenty acres, some of it will have injustice done it, and the result is obvious.

Deep plowing is one of the most efficient agents in the improvement of soils, as it is in the continuation of good soils. Never omit it. It may pay you scantily for a year or two; but it will ultimately repay you an hundred fold. Without it, there cannot be any continued successful farming, no matter what the original soil may have been. Discard all shallow working plows from your farm, except the mere seed and cultivator plows.

Some lands will be benefited by 50 bushels of lime to the acre, and by it be rendered sufficiently calcareous; others may require 100 bushels; all this is to be found out only by proper experiments, as above indicated. If the solution of the soil foams freely in the vinegar or muriatic acid, it wants no lime; if but partially, it wants probably 50 bushels to the acre; if not at all, it may require an hundred bushels. If it be red clayey soil, it wants more lime than if it be white or blue or yellow.

If you have no lime, and wood ashes are at hand, you may accomplish all the objects you aim at by their application. As ashes are mostly composed of different kinds of lime, besides their more soluble potash, from 50 to 100 bushels of ashes to the acre, applied in the same manner as directed for lime, will have the same effect as lime, besides giving you the advantage of the potash, the first year.

Where neither lime nor ashes are to be obtained, Plaster of Paris, as it is called, may be applied to most lands with ad-

vantage. The action of plaster continues to be a subject of dispute. My opinion is, that it simply serves the purpose of fixing the ammonia floating in the atmosphere, and that evolved from decaying animal matters, and thus securing it to the uses of the soil. No matter what its mode of action is, however, it certainly is a very efficient agent in soils generally, and in the absence of other still more effective agents it should always be used, or at least tried.

I have said nothing of fencing, the most expensive item of farming, because it has nothing to do with the main object of this paper, and because the cheapest fence is that which each locality can afford with the greatest facility. One farmer can build a stone fence all around his farm, easier than he can a rail fence, simply because he has too many stones on his land, and in getting rid of them he hauls them to the line where he intends to make his fence, and in the seasons when he cannot be more profitably employed, he erects the wall. In the absence of stone, and where timber is plenty, the rail fence, the post and rail, &c., will of course be the cheapest fencing. I have no favorable opinion of hedges, except in the absolute absence of both stone and timber. They require a long time to grow; and in this country there is not a single kind of hedge plant that has succeeded satisfactorily. There are a few instances of good hedges being made, but I will venture to say there is not one in the United States that can be imitated profitably as to cost, time, and efficiency. If nothing but live fences had ever been in use, and some inventive genius had discovered the use of artificial fencing with rails and stone, he would have been considered the benefactor of his age. For myself, though I have travelled much, and have extended my observations over fifteen of the States of the Union, I have never seen a good efficient hedge occupying the place of ordinary firm fences. And yet the attention of farmers has been directed to it ever since the country was settled; the oldest American writers recommend them; seeds were imported to plant them a century ago; and all these efforts have been continued to the present day with increased force each year. And yet there is not, so far as I know, a single farm in the United States protected by hedges, in all its parts, or in any considerable portion of them. The economical farmer, therefore, will look to some other mode of fencing for protection; and, as said above, that which his land affords most plentifully and most easily of access, is the cheapest and best for him.

I must not omit a few words more upon deep plowing. I know it is the general opinion that we must not plow so deep as to turn up the "hard pan" of clay, or the white gravel, &c. &c. I am very certain this is a very great popular error. If we had a plow that would turn up the earth two feet deep, I do not care what the subsoil may be, in five years the fertile soil would be two feet deep. I admit, that generally a very sifting crop would be produced for the first two or three seasons; but I also assert, that the third and fourth, and all subsequent seasons, will pay not only for all the deficiencies of the first two or three, but an hundred fold interest. Wherever a deep working plow has been used, the drouths of a dry season are not felt. The roots of plants pass deeply into the earth, and the burning suns and parching winds pass over them harmlessly. The subsoil plow is a good thing. It enables the farmer to avail himself of most of the advantages of deep plowing without any sacrifice of the first and second season's crop; but then it does not turn up this subsoil—it merely looses it, enabling the roots to pass deeply. The roots, however, get no other advantage in this deep rooting, than that of protection from drouth; they get no nourishment in those depths. The protection from drouth, however, is an important consideration, and should always be availed of. But I would seek this advantage always when I could by the use of the deep plow, even at the sacrifice of a portion or even all the first two or three crops.