

cover, so as to be thoroughly protected from the wet. Two or three good waggon loads will last an ordinary family a year, allowing that it is to be used only once. The fine and dry earth from a dry bit in a lamized or very sandy roads would answer very well.

In stationary closets the vault may be made of such a size as to go for three, six, or even twelve months without emptying. Surface water should be carefully kept out of the vault. A small door at the side or rear of the closet, gives access to the vault for the removal of its contents. The contents of the receptacle of the portable, or of the vault of the stationary closet, may remain until full without transmitting the slightest impurity to the surrounding atmosphere, and when they are removed the operation is attended with no more unpleasantness than if it were so much garden earth.

In places where it is difficult to obtain a supply of suitable earth, the contents of the vault, after being dried by the sun or by fire-heat, may be again used, being entirely inodorous, having the appearance of pure earth, and acting as effectively as when first used. This may be repeated as many as six or seven times, without impairing the deodorizing qualities, and each time greatly increasing the value of the material as a fertilizer. After seven fold use the material will have become about as strong in fertilizing qualities as Guano.

Experiments have been tried with the earth by applying it to turnips; one hundred pounds weight of earth that had been used seven times was applied to an acre with the most marked effect, not only upon the roots, but the benefit of the top-dressing was very apparent on the succeeding crop of turnips, both crops being much in excess of the yield from an equal quantity of ground adjoining; not thus manured; while the earth was applied with as little difficulty and unpleasantness as would be found in using so much bone dust.

Every ton of hay or bushel of grain, which is produced over and above the quantity necessary for home consumption, and which is in consequence sold out of the country, adds just so much to the wealth of that particular nation; and if every available fertilizer was returned to the soil at such a cost as to yield a handsome profit on the outlay, the profits thus secured would form quite an item in the annual exports of the country that might pursue such a course.

It is estimated that the human manure wasted in the United States, amounts to the annual value of *fifty million* dollars. This one fact is sufficient to clearly illustrate and prove the importance of this subject to agriculture.

Farmers have been advocating through the various agricultural journals the advantages of co-operative societies, and have made a practical move in that direction, in the case of cheese factories. Here is a good opportunity for co-operation. Let a number of

enterprising farmers, who happen to live near a town or city, form a company, rent a suitable building for a store-house and drying shed; let each shareholder deliver annually a certain quantity of dry earth at the store house, and receive his share of fertilizing material; let them employ men and horses to distribute dry earth to the closets and collect the waste earth again, and let them share the expenses thus incurred. If the size of the company and the extent of its operations be properly proportioned, the shareholders will thus secure an abundance of manure, at a cost far below its actual value, and they will thus promote their own interests and the public welfare.

Mr. Postans went on to show the immense advantages, in a sanitary point of view, which would assuredly accrue from the adoption of this system, and thus doing away with the thousands of festering pools of corruption, that like a many-throated monster send up their poisonous breath to pollute the surrounding atmosphere.

Our space will not permit us to report thereunder of Mr. Postan's able essay, in which he pointed out in plain practical, and forcible language the advantage of this system in the prison, hospital, sick room, and dwelling-house; the simplicity of its actual working, and its effectiveness as a promoter of both private and public healthiness.

The Scotch Double-Furrow Plough.

An agricultural writer in the *Mark Lane Express*, describing a visit paid to Stirlingshire in the beginning of December, thus reports the working of the double furrow plough:

On the removal of the corn crop, the stubble is turned over on the first favourable opportunity, as deeply as possible. The double-furrow plough being admirably adapted for this work on medium soils, and a considerable number of them being at work in this district, and all giving much satisfaction to those who had the spirit to purchase them, I will here describe its workings. The one on this farm is of Scotch make, exceedingly simple in construction, easily thrown in or out of gear, and is turned at the end of the ground with as little difficulty as the ordinary swing plough.

The furrow slice was exactly nine inches in width by seven in depth, the soil admitting of nothing further; and yet it seemed to me that it was deep enough for all ordinary purposes, the work being so thoroughly well done. At this depth and width, and with the plough powerfully horsed, the breadth gone over in a day amounted to an acre and a half imperial. Many persons may say that this is not doing much, but when it is taken into consideration that this work was done in the best manner, and but by one man and three horses, it will be found that it was really a great deal.

The most striking feature in looking along the furrow is the beautiful way in which the bottom is cleared out; no ridge, no unsoftened piece of soil being visible along its entire length. This is a matter always difficult to manage with the ordinary plough, but with this one it is easy; as, when once set, there is no possibility of missing. Viewing a break of about ten acres finished with this plough, I found every furrow neatly laid over to the proper angle, firmly packed, and the stubble completely buried. The field sloped considerably, and the ploughing was across; yet there appeared to be no difference in the quality of the work done, the packing being quite as firm on as off the land; or, in other words, as well and firmly laid up the hill as down. As large a surface was exposed to the disintegrating influence of the frosts of winter as could possibly be obtained, care being taken at the same time to preserve an angle on the furrow sufficient to defend the land from the injurious effect of heavy and continuous rain.

Comparing the work done by the single and double plough, as seen in the same field, the superiority of the latter was distinctly observable, both as regards quantity and quality, as with this implement drawn by three horses, and guided by one man, exactly the same amount of work was done as could be accomplished by four horses and two men, working the ordinary swing ploughs. In the one case, scarcely an open backed furrow was met with, while in the other, they were pretty numerous, and the bottom not nearly so well cleared out, as in many instances when thrown out by a stone, the horses had moved on several yards before the ploughman could recover his depth.

Looking upon the double-furrow plough as an implement which should be on every farm of sufficient size to require four horses, I yet consider it of no use in the hands of those farmers who keep light or badly fed horses, as disappointment and disgust will be the inevitable result of such men attempting to work it. To turn over the soil in a manner fit to bear inspection, the horses must possess both bone and substance, and be liberally fed so as to be above their work, and to be able to maintain a steady, unbroken step from morning till night. It is absolutely painful to witness the struggles and unequal pulling of weak, under-fed horses when on any plough; but with this one they cannot get on at all, unless it is lifted so far out the ground as to entirely destroy its efficiency.

Tea plants set out in California do not seem to thrive well. A new importation of fresh seed is now to be tried.

During the past winter the range of the thermometer has varied as much as 72° in New England within twenty-four hours.

Many milk cows and horses are being imported at the present time to the United States from Canada.