

FARM AND FIELD.

THE MUCK QUESTION.

A correspondent of the *Germantown Telegraph*, referring to the *Journal of Chemistry's* recent disparaging remarks upon muck, gives the following valuable experience. This person writes as follows:—"I have read an article from the pen of Dr. Nichols; at any rate, it is the same language he used at a farmers' meeting at City Hall, Manchester, N.H., about ten years ago. At that time he made a number of strange and (to many) apparently erroneous statements, some of which I still well remember. For instance, he stated that all the fertile matter contained in a cord of crude manure could be carried in a peach basket. Another apparent wild statement was, he could carry in a bushel basket on to his meadow more fertile matter than was contained in a cord of crude manure, given at the time the brand of superphosphate. Out of curiosity, and to test the doctor's statement, I the next spring applied the phosphate and a cord of crude manure, side by side, on a moist part of my meadow. The result was four times better, and lasted four times longer where the manure was applied. That experience was enough for me on that point. As to his muck statement, I thought the old farmers at the meeting used his laboratory theory entirely up. One old farmer was pretty severe on the doctor. He stated that he had used muck for thirty or more years, and in many instances found the muck more valuable than crude manure. He put a clincher on his argument at the close by saying that twenty years previous he was hauling muck to the barnyard on a sled, and at the last load something scared the pesky cattle just as he was passing the bars from the field over which he was hauling, and striking the stone wall dumped the muck at the bars. He spread it there on the grass the next spring, two and three inches thick. The result with all crops—grass, corn, potatoes, and wheat—for twenty years was nearly double to other parts of the field. He wound up by inviting the doctor to come next year and see what his laboratory of nature says about muck.

"My next neighbour has a field of about four acres, south side of the road. There is a gravelly knoll of about one-eighth of an acre close to the road. He has a bed of muck (hard road deposit) five rods from the knoll. Now, whenever he ploughed and manured that land he would apply about twice the manure to the knoll that he did to the other parts of the field. At last he adopted my suggestion and hauled on to the knoll direct from the muck bed to the depth of about three or four inches, five years ago planted it with corn, and used half as much manure as on the other part of the land. The result was that there is as good corn and grass on the knoll as on other parts ever since. To me this is (to say the least) as valuable as the chemist's theory. As I have often said before, the chemists have done the agriculturist incalculable service; still there are some things the old farmer with nature's laboratory can beat them out of sight—notably the muck question."

A RUN-DOWN FARM.

Professor Lawes, the eminent English agriculturist, writes thus to the *Agricultural Gazette*:—"Not far from where I live there is an unoccupied farm. It consists of rather more than 800 acres fairly good, but rather strong, land. The fields are large; there is no hedgerow timber; the roads are good, and there is a railway station close by. The house is tenantless, and the buildings are much out of repair. The land is almost all arable, and the late tenant sold almost every-

thing away; his system of cultivation being to grow one corn crop after another until the couch grass put a stop to his operations. As I walked over field after field covered with a yellow mass of couch and weeds, so thick that it seemed hardly possible to believe that this had ever been arable land, I thought to myself, if it had been my misfortune to be the owner of this farm, which not many years ago must have yielded an income of from £800 to £400 a year, what should I do with it now? It is quite certain that nothing short of two years of summer fallowing would make it sufficiently clean to grow corn; and if the summer should prove as wet as those of recent years, two years would not be sufficient for the purpose. In the process of cleaning the land, whether for arable culture or for laying down to pasture, a very heavy outlay would be incurred; and when the land was clean there would be a further large outlay required for manure, as after two years' fallowing it would be poorer in condition than at present. I came to the conclusion that the plan I should adopt would be to leave the land as it was, and without attempting to clean it, that I should put a flock of sheep upon the farm, feeding them with plenty of decorticated cotton-cake, and folding them at night. At Rothamsted our experiments upon pastures show that the quality of the herbage depends almost entirely on the manures which are applied, and not upon the seed which is sown. As each field was folded over I should harrow in a small quantity of white clover seed, cocksfoot, meadow foxtail, and one or two more of the best grasses; but I should trust to the manures and time to eradicate the weeds and couch-grass, and produce a good pasture. The distinction between this plan and that which most people would adopt would consist in my spending little or nothing upon tillage and everything on manure. I should turn the enemies who had taken possession of the land to the best account I could, and should expect to improve them off the surface as soon as I had furnished the more vigorous growing grasses with the proper weapons to effect this end. Whether the land should remain eventually as pasture, or as a mixed arable and pasture farm, would be a question to be decided in the future."

WASTES ON THE FARM.

The greatest of wastes on the farm are in not using brains—the greatest because at the bottom of all other wastes. A little thinking often saves wastes. After accomplishing almost any labour, the most of us can look back and see how we could have improved on it if we had but thought.

The ditch we dig through our meadows was not done in the most economical way. We dug too deeply at first, and did not allow for the settling of the land. That was an unnecessary waste of labour.

We omitted to buy a implement that would have saved nearly the cost in one year's use, until we had spent much in trying to do our work without it. Another waste.

We carry a waste-pipe too near the surface to save the expense of digging a trench of a safe depth, and the winter's frost necessitates a replacement of the pipe and an additional digging. Another waste here.

We allowed the weeds to grow on one piece of land, not thinking to what proportion they would grow by the time the crops were too far advanced to admit the hoe. A waste here which might have been obviated. And so on, wastes, little and big, everywhere—all arising from our not thinking sufficiently—waste because easily avoided.

We omit the ordinary waste from neglect, from laziness, from want of appreciation of clean-

liness—the waste from our stock, from our manure heap, from our household.

A very little thought will save to the farmer much, and the saving through this means even on a small farm will represent the interest on a considerable capital.

The wastes arising from ignorance can very easily be diminished, and are in a large part inexcusable. Those arising from carelessness are not deserving of sympathy. The farmer, as well as the business man, must use business principles to secure the largest success, and the one should be as careful of the outgoes as the other.

CLOVER IN THE ROTATION.

Corn, oats, wheat, and then clover, is a rotation that has become quite general on the Western Reserve, Ohio, one of the finest agricultural sections in that "great garden of a State." Manure well rotted, comes in along with the wheat. This rotation does more than maintain the productivity of the soil. It grows richer on this plan. Both light and heavy soils are thus treated, with equally good results. No "clover-sickness" has yet appeared; nor is it likely to do on this system. A five years' rotation would no doubt be better still. Let a due proportion of stock be kept, enough to consume all the hay, straw, and coarse grain produced; then alternate with manure and clover, and all complaint of land impoverishment will become a thing of the past.

MANURE MADE UNDER COVER.

Of course all the advantage of making manure in covered yards may be secured by box-feeding, with less outlay for roofing, since more space must be allowed for a given number of animals turned loose together than when confined in stalls. It is the protection from rain and sun, the abundant use of litter, and its thorough incorporation with the excrements, and the exclusion of air by compact treading, which go to make the superior manure. All these features of the method work against the loss of valuable plant food. Nor does box-feeding and constant accumulation of the manure under the feet of the animals necessarily imply offensive stalls. It is only essential that enough litter be used to absorb all liquids, and this absorption is more effectual if the straw is cut up.

One method or the other, box-feeding or covered yards, should be adopted by every farmer who lives where manure is worth saving, and who finds himself compelled to supplement his stable manure with commercial fertilizers. Stable manure must not be lost sight of in this increasing interest in these concentrated fertilizers; for we cannot produce our crops and have enough for ourselves and others without its aid. And there is nothing in all the list of commercial mixtures which gives so good an average return for the money invested in it as well-made stable manure.—*Prof. Caldwell, in American Agriculturist for October.*

PLASTER ON LAND.

George Geddes, of Central New York, has been very successful in raising clover and wheat by the simple application of plaster. For fifty-five years he has raised these two crops with no other fertilizer, a heavy crop of clover being turned under as a fertilizer for the wheat. This particular field lies on the Onondaga salt group of rocks, and from these rocks in all probability the soil obtains some fertilizing matter.

THE area of the Dominion, according to a return recently issued by the Department of the Interior, is 3,406,542 square miles.