

FARM AND FIELD.

ADVANTAGES OF MIXED FARMING.

Success in farming consists in knowing how to conduct a farm in the most intelligent manner. In the virgin soil of the West less knowledge is required, as the land is more uniform in its character, and is in condition for successful cultivation without the necessity of enriching it for the time being. The Western farmer has, therefore, a certain advantage over the farmer of the older States, where the original fertility of the soil has been exhausted. Yet the latter may be, and often is, the more successful cultivator of the two, owing to the diversified character of the soil, which, by proper management, can be made to yield a greater profit than that of the West. This is done by mixed farming.

The advantages of this system are many, but they are far from being as well understood as they ought to be. They are based chiefly upon the variety of the soil, of which we have the upland clays and the alluvial loams of the valleys, besides calcareous and sandy soils and reclaimed peat lands. It will be seen that there is a great contrast between the clays and the peat lands, with considerable intermediate variety, each kind of soil requiring for its fullest development a different treatment and crops peculiarly adapted to it. With the land in good condition, underdrained where needed, deeply and well cultivated, and rich enough to grow full crops, wheat will do best on clay, corn on the alluvial soil of the valleys, and rye and potatoes on the lighter soil, while barley and oats may be grown successfully on almost all, and best on the strong alluvial and clay loams. The pea will thrive here also, but it seems to do better on limestone soil.

As to the grasses, timothy (*Phleum pratense*) and red top (*Agrostis vulgaris*) succeed best in clay, as they require land somewhat moist, and should hence never be put on light sandy soil. Blue grass (*Poa pratensis*) is noted for its great growth on the rich calcareous loams of the West, but will do well on any deep rich soil not too dry. So will orchard grass (*Dactylis glomerata*), doing better than blue grass on sandy soil liberally enriched from the barnyard. Red clover will grow on any good soil well prepared. This is fortunate, as each variety of soil may then be improved by it, and it affords a superior feed.

One of the principal advantages of mixed farming is the keeping of stock, in which the dairy takes the lead. Profitable returns are realized at once, and at the same time the productiveness of the land is increased by the manure that is made, while the keeping of sheep on the broken and less accessible land affords a further profitable income on the investment, difficult to be realized in any other way.

Where mixed farming is practised each part is conducted on a reduced scale, which affords a chance for doing the work well and in good time, and with less interruption from unfavourable weather. The spring grains, as well as clover and grass seed, may thus be got in earlier, a point of great importance. This gives a chance for planting corn and early potatoes, followed by the preparation of land for buckwheat and soiling crops, the lessened work of each allowing all to be done in sufficient time to begin the most important work of the farm—the harvesting of the hay crop. Where much hay is to be made, as where the dairy is extended, there is always more or less hay spoiled by wet weather, sometimes the greater part of the crop being all but ruined, while the last that is harvested is of little nutritive value from over-ripeness. Hence the importance of getting the crop soon gathered,

which the reduced quantity in mixed culture favours. Time is also afforded for attending to the corn crop and other hoed crops. Then come the grains, each of which is taken care of in its turn, and all are harvested in good time for other late summer and early fall work. The number of cows in the dairy being reduced, a chance is offered for securing better animals and taking better care of them, whereby the yield of milk is increased, and the profit on it. So, too, with sheep. Where the flock is reduced there will be less crowding, and better attention can be given, which results in a better quality of wool, and more and larger lambs.

Another advantage is in the distribution of the work throughout the year. Less hired help is required. One good hand, with the owner, if he also is a good worker, will do about all that is required on an ordinary Eastern farm, with the aid, of course, of implements and machines, a full complement of which can thus be profitably employed.

By his mixed system, the Eastern farmer seldom, if ever, fails to secure for at least some of his products a good price, and in the best market in the country. If a drought occur in the latter part of the season he has his early crops that escape it. If his winter grain is hurt, his spring grain may escape, and vice versa. He has the advantage of securing a high price for his barley when not enough is sown to supply the brewer, and if there is an overabundant yield he has it to feed instead of other grain that may command a proportionately higher price. If a cool season affects his corn, it benefits his potatoes. If his corn and late potatoes are hurt by drought late in the season, the early products, like barley and peas, and early potatoes, may be depended on.

The chance afforded to turn down sod is one of the chief advantages of mixed farming. By this process the ground is enriched, and a means afforded for improving the land that has been in grain, and is more or less exhausted. As our droughty seasons here allow only a few years to grass, and the same time for grain, there is not that exhaustion of the soil as where grain is made a speciality; hence the land is improved and continues to improve in texture and fertility. Weeds are also better kept down by variety in farming.

PROTECTING THE MANURE PILE.

Touching upon the point of keeping up the fertility of the land, the man who handles and breeds purely bred farm stock mainly has greatly the advantage over those who force the farm animals to rough it, eating other than first-class foods, and dropping impoverished manure here and there, the owner making no calculations for getting it together and putting it upon needy fields. These advantages are mainly two—first, that by feeding the more nutritious foods the manure is made rich, and second, through a systematic stabling process the manure is kept in a snug shape—in other words, in such form as to render its protection easy. The manure is needed, and there is no farm, no matter how new or fertile, can do well without it any more than a man merely because he is in full flesh can do without food daily and regularly to replace that which daily exercise and work take from him.

During the winter the accumulation, if on an impervious foundation, has doubtless been pretty well preserved, but if it be permitted longer to remain in the pile it should from this time on be carefully protected from rainfalls. If in compact shape this may be cheaply done with boards, and, of course, it matters not how indifferent the lumber is in quality, provided it turns water when set on end at a sharp angle. A thick covering

of straw or refuse hay will answer the same purpose. The main bulk of the manure is refuse woody fibre, a substance that is of little value when put upon the land, and not likely to be washed away while in the manure heap. But the real elements of fertility, the potash, soda, magnesia, phosphoric acid, soluble silica, etc., are carried by each rainfall, if no protection is given, to the most accessible sink hole, ditch or stream, and hence lost. These valuable constituents are thus readily washed out, leaving a residuum of too little value to pay for hauling it upon the field. Yet, a vast quantity of such so-called manure is carted out upon the farm under the mistaken notion that in proportion as there is bulk, in that ratio there is value.

Nor is it alone through the process of being washed away upon the surface that the manure pile is rendered less valuable. If it be upon a pervious foundation, there is constantly, even when all around the pile is frozen solid, a secret unobserved process of wasting going on, the surface for several inches immediately beneath the pile becoming richer to the cubic foot in valuable constituents than the manure pile itself. On a certain occasion, the earth upon which manure had been for several years stored and hauled off annually to the fields was removed, and its fertility tested alongside of the manure that had been stored above it, the result being that the earth promoted a more vigorous growth of the crop than occurred upon the surface where the manure had been applied. Nor did the experiment stop here, the sand, taken from a depth of two feet and more from the surface, placed by itself, produced a crop of grass such as no mere sand, manured in the ordinary mode, could be expected to do.

Therefore, the store of manure should be kept upon a concave foundation, made impervious through the use of whatever material is most available and economical. Moisture in the manure pile is of value, if it can be retained there without finding its way through the pile, sinking thence into the earth, or stealing out over the surface, carrying all there is of value with it. Ammonia, a valuable element in manure, is engendered within the pile, and escapes if the manure is permitted to dry up, as is often the case. Therefore, moisture without drainage or leaching, preserves the accumulation; and during the leisure time between now and the busy season any accumulation that is to be retained for future distribution should be forked over, put upon a suitable foundation, and carefully covered, provided there is any opportunity for a rainfall to rob it of valuable properties.—*National Live Stock Journal*

HOW TO KEEP THE BOYS ON THE FARM.

On this highly important subject a correspondent of the *Farmers' World* writes as follows.

I find no better way to keep the boys at home than to encourage them in their work. In the first place, never lie to them. If you want them to work faithfully encourage them by paying them a small sum occasionally. Give them a piece of land to work and raise what they see fit. Give them plenty of time to attend it and keep it clean, let them have a team to work when necessary. Have them raise something nice to take to the fair, go with them and see that they get it entered right. Unless you are sick, don't sit around and send the boy to the field, day in and day out, to work alone. Go ahead, there is nothing more encouraging than for a parent to start in the morning and say, boys, come, we must do so and so to-day. Be kind to them, and they will work with pleasure. If they fail to do as you wish, take hold of the plough or