FARM AND FIELD.

PROBLEMS IN PLOUGHING.

Whether to plough during the fall or the spring is one of the problems in agriculture that gives rise to endless discussions, in a word there are two sides to the question. The requirements of different soils and localities must be met, therefore definite rules cannot be laid down by which to govern the matter under all circumstances, but each field ought to be considered by itself and broken up at a season and in a style best suited to its own peculiarities.

Two strong arguments in favour of fall ploughing are, advancing the work so as to modify the spring rush and the improvement to the loosened soil through the action of the frost; A team can plough in the same length of time a greater area in the fall than in the spring; these is more leisure time for accomplishing the work and less fatigue to both man and beast. When properly done, fall ploughing affords drainage, so that the soil is ready oftentimes at least a fortnight earlier for cultivation in the spring.

Farmers who are agreed as to the desirability of fall ploughing on most soils differ in their opinions about early and late ploughing. The more universal plan, however, is to plough late—just before the winter frosts come—so that the land will not become beaten into a compact state by the early fall rains. Soils by nature loose are best reserved for spring ploughing, as the mechanical effects from fall ploughing will only increase the fault. Therefor light sandy lands are seldom broken up with benefit during the autumn and experience appears to have demonstrated that land near the sea which is rarely covered with snow produces better when ploughed in the spring than if it is done the previous fall.

Sandy or dry soils as a rule, call for flat ploughing, as this tends to consolidate the land. While on low or strong soil the furrows are left on edge. Much is written and said every season against breaking of ground that is too wet; the other extreme is not so often mentioned, and yet, especially in heavy clay soil, running the plough through earth too dry is almost as pernicious in its effects as ploughing when it is too wet. Sufficient moisture is required to cause the furrows to fall loosely from the plough, with no appearance of packing and no lumps.

More discussions have arisen regarding the question of deep and shallow ploughing than on almost any other subject. Here again it is quite impossible to lay down any rigid rule. This question must be determined by the depth of the soil and the character of the subsoil. A sterile subsoil will not benefit the top soil by intermixture with it, hence here deep ploughing is to be avoided. Where the subsoil is porous shallow ploughing is in order, for the evident reason that the subsoil requires no loosening.

In a general way it may be said that the subsoil ought not to be brought out of its bed, except in small quantities. to be exposed to the atmosphere during the winter and spring or in a summer fallow, nor even then, except when such fertilizers are applied as are necessary to put it at once in a productive condition. Two indifferent soils of opposite character—as a stiff clay and sliding sand—sometimes occupy the relation of surface and subsoil to each other. When thoroughly incorporated and subjected to deep cultivation these will produce a soil of greatly increased value River soils having natural drainage take kindly to deep ploughing as do the black fertile limestone soils.

Lands that are dry, with but a few inches of good soil, will not produce as fine crops by deep as by shallow ploughing. This condition is, however, susceptible of improvement by a thorough system of subsoiling and liberal manuring. Deep ploughing is ill-advised when a basin is formed below a certain line in which water will settle and remain until it can escape by evaporation. Such soil requires drainage, after which the plough can be set deep.

The whole matter of deep and shallow ploughing may be summed up briefly:—Thin soils with worthless subsoils must be ploughed shallow until the cultivator can and will afford the labour and expense of subsoiling and heavy manuringfor a number of years. This extra outlay will repay him in the end with a handsome interest, not only by increased crops but continued value of the land. Deep clay loams and alluvial soils take kindly to deep ploughing. Wet lands should be drained previous to deep ploughing. The medium course, viz., ploughing from five to six inches deep, is exempt from the harmful results of the two extremes.

Experience has proven that time is lost in turning short plots; hence it is economy to run the furrows in the longest direction and so lessen the number of turns.—*New York World.*

HAULING MANURE IN WINTER.

It is a great thing to keep the men and teams profitably employed in the Winter season. In this regison, says a correspondent of the Cincinnatti Commercial, where corn is the main crop, too many farmers go into a state of hibernation as soon as corn gathering is done, and like bears, put in much of their time sucking their paws, or cigars, or doing things about as profitable. We have suggested to some of our corn-growing friends that the teams would be the better for daily work during the winter. But what can we do? says one of them. Well, to him we gently hinted that he could spend at least a week hauling out the manure from the stables and sheds. and cleaning out under the barn all the old trash and litter, and fertilizing material, that have been accumulating there since the barn was built. That manure can be drawn out on the fields intended for corn and spread from the waggon, as time is not so pressing as to make it a rush to get the manure out in the shortest time. When manure is allowed to accumulate about the stables or yards until after the corn crop is laid by, the care of the wheat and barley crops takes all the force till they are safely housed or threshed. When threshing is done at the barn, the tidy farmer wants the barnyard clear before the threshing is done, and if the year's accumulation of manure is yet to haul, this must be done too when the ploughs should be at work on the fallow. If one has a good pile of well turned and fine manure, it comes in just right to top-dress the wheat land after it is broken.

But there are objections to this plan. It requires more work to prepare the manure and haul it out over the ploughed fields, and it is done in hot weather, when men and teams are fagged out with a season of hard work. The hauling too, must be done in a short time, between the ploughing and time for drilling int he grain. There can be no postponment on account of weather. The rains may have made the ploughed ground so wet as that every print of the horses' hoof or the rolling wheel will damage the land. We have seen men hauling manure over wet ploughed land, doing more damage than the manure would do good. Land tramped when wet is bad enough at any time, but especially bad in the Spring or Summer, when the land will dry quick and hard. We here, then, have harder work and less benefit from hauling manure in the Summer rather than in the Winter.

Again, the evaporation of ammonia is greater in Summer heat than in Winter. These are difficulties which are not inherent to the case of Winter hauling. If in the winter the ground should be wet or soft, the chances are that evaporation will be slow and the ground may be frozen, so that by the Spring time it will be friable again. But usually the Winter hauling can be done when the ground is solid, and heavier loads can be hauled. The hauling out of manure as fast as made keeps the stable cleaner and more healthful, and the full strength of the manure goes to the fields, and will not be lost by leaching, as when exposed to the wash and drip of the barns and sheds. The meadows and pastures that are to be top-dressed can receive it in Winter, and will be more benefited by it than if spread on in Summer.

"A MEAN BUSINESS!"

A few years since I met a gentleman, educated for the ministry, who after a few years came into possession, through marriage, of a good farm on the Connecticut River, which had been well managed by the father-in-law and his brother, who owned and improved it in common. On the death of one, the farm and stock were divided; and the homestead, a good-sized farm, with good and convenient buildings, went to this heir, who thought he could run it as well as any other person. He was young, strong and healthy, with a very high estimate of his ability. He tried the experiment. The first season he did not succeed to his expectations, although he had experienced farm helpers; the second season satisfied him, and he was heard to say, "farming is a mean business," and was only too glad to part with the farm.

The observation of this man's experience has led me to reflect upon what qualifications are requisite in a practical farmer to insure success. Given, as above, a strong, healthy body with a good education and a good farm, with all the necessary appliances of conducting it successfully—this is not all in order to meet with success, or even to make a living and not to go into debt. Good farming involves as much thougnt as any other vocation. No doubt had this same man put as much thought into his farming as he afterward, as well as before found essential in his profession,