

the work be done any time before frost sets in. There are, however, special advantages which can be secured by *early* fall ploughing. If it be stubble land that is ploughed, a crop of weeds is turned under, which might otherwise go to seed and give annoyance another year. The weeds together with the roots of grass and stubble of the cereals are converted into manure, during the mild weather that precedes the setting in of winter. If ploughing is done in cold weather, or just before frost sets in, the roots and stems will remain undecayed until spring. The turning up of fresh surfaces to the action of the weather before the season of growth is over, affords an opportunity for fertilizing gases to be absorbed, and fixed for the use of a future crop. The soil is not only a reservoir of plant-food, but it attracts that food, and when it is made to lie up lightly it is full of cells and interstices, each one of which is a little storehouse of nutriment for vegetable life. Moreover, early fall ploughing gives a chance for enriching the soil with the ammonia that descends in the rain-fall of thunder storms, a benefit by no means to be despised. Fall ploughing, whether late or early, exposes the soil to the action of frost and snow during the winter, by which important results are secured. It becomes finely pulverised, many fertilizing ingredients are made available, ammonia is absorbed from the snow, and stored away for future use, tough clay is softened, hard sods are crumbled, and nature is made to help and lighten the toil of man.

FALL SOWING OF TIMOTHY.

TIMOTHY is usually sown in spring along with a grain crop, and as is well known, there is always more or less of uncertainty as to its getting a good "catch." The grain, of course, comes on faster than the grass, and not only overshadows it, but extracts the lion's share of the moisture which the young timothy greatly needs in the earlier stages of its growth. It is considered that the shade afforded by the grain is favourable to the grass, preventing its being parched by the hot summer sun. This is doubtless true to some extent, but the shade is excessive, and being associated with a monopoly of the moisture, there can be no question that on the whole, the timothy has a pretty hard struggle to live. Evidence of this is furnished by the frequent partial or entire

failure of a seeding down. Sometimes drought prevents its taking well, and when the summer is moist so that it gets a good start, many of the young plants are crowded out by the thick grain, or trodden and crushed to death in harvesting, or trampled, torn out, and destroyed by the pasturing of cattle and pigs in the stubble. Under the most favourable circumstances it is questionable whether spring sown timothy will cover the ground as well the following season, as that which is sown in the fall, provided the ground is properly prepared and the work well done. We believe that where a due amount of attention is paid to the getting in of the seed, fall sowing will result more satisfactorily than spring sowing. Generally speaking, farmers grudge the same trouble and labour on grass seed as they bestow cheerfully on all other crops. But being smaller and more delicate, the seeds of the grasses ought to receive greater care than those of larger and sturdier crops. The gardener sows his finer seeds with special care, mellowing the land as much as possible, and even dusting the tiny seeds with soil passed through a sieve, so as to give them the best possible chance of germination. So should the farmer bestow extra attention upon his smaller seeds. Thorough preparation of the land for a timothy meadow will pay, and a stubble field re-ploughed, harrowed, and seeded down in the fall, will yield a far better crop of grass the following year, in nine cases out of ten, than the same field would have done with the timothy sown along with the grain. Not only should the soil be well mellowed for a fall seeding of timothy, but the now general use of mowing machines renders it necessary that the ground should be free from stones, grubs, and stumps; also that the surface be made as level and smooth as possible. The success and profit of the crop will also be enhanced by this course. From the beginning of September to the middle of October, timothy may be sown with good chance of its doing well. The earlier it is got in, provided the ground is moist enough and the weather favourable, the better the plants will become rooted before winter, and the more able they will be to withstand the effects of the late fall and early spring frosts. A bushel of seed will sow six acres. Some sow less than this. A gallon per acre is considered sufficient by many. It is better, however, to sow grass seed with a liberal hand, and make sure of putting on enough.