

Experiments With Thick and Thin-sown Clover.

There has, of late, been much controversy as to the quantity of clover seed advisable to sow on an acre. In a former communication I mentioned my experience of the growth of self-sown clover seed, and called the attention of my brother farmers to the fact, that the failure of clover seed to produce thick seeding was not altogether necessarily due to the insufficient quantity of seed sown, but might be attributable as much to the bad quality of the seed. In support of this theory, early in May this year, I seeded something over fifty acres with timothy and clover. The quantity sown was, 3 lbs. of broad 1 lb. of alsike, and 3 lbs. of timothy to the acre. On the 1st of October I carefully examined the result, and found the ground literally covered with clover plants, the growth of which was about six inches in height. The crop seeded was barley, and the produce not a heavy one in grain, but plenty of straw—in fact, too much so. Some months since, in one of the numbers of the CANADA FARMER, there was a correspondent who then stated, that 10 lbs. to the acre would pay better than 3 lbs., and some of the English periodicals advocated as much, if not more.

My experimental trial most satisfactorily proves that anything over 3 lbs. of broad, and one pound of alsike, is altogether unnecessary, provided it all grows. The timothy sown has not yet attained much growth, as it does not usually show so much as the clover in autumn; but the clover alone is as thick as a mat, and when timothy is added to it, as it will be next spring, it will be quite as thick as there is any possibility for growth to take place. Now, all this goes far to show, that the seed sown as above was abundant in quantity, and also that the quality was good, and probably all the seed grew. Ten or fifteen pounds per acre of clover seed at \$7 a bushel, costs about \$1.25 to \$1.75 per acre, for seed alone; and poor seed that requires ten to fifteen pounds per acre to produce a crop, when half the quantity of good seed is equally efficient, is rather a costly piece of deception, especially where, as in my case, there are from forty to fifty acres sown. The fact is that the late stir amongst the seed dealers in England explains much that we did not understand before. In the revelations lately made on this subject many respectable seed dealers fully exposed the "tricks of the trade," and publicly stated that others used "killed" seed of similar appearance, but cheaper in price, for the purpose of enlarging the bulk and weight of the good seed, mixed through the worthless. These hints are valuable to us farmers, and we ought to fully endorse any action taken that most effectually puts down such nefarious traffic. In the records alluded to there were many kinds, such as cabbage and cauliflower seed, worth, by the ounce, ten times as much as the rape and turnip with which they were mixed. It is

true that all these seeds were said to have been "killed" before mixing, so that none of them would vegetate, and some credit was taken for this act of generosity and magnanimity; with little reason, so far as I can see, as, of course, if any one who sowed cauliflower seed reaped turnip, the deception would be too apparent. I am not prepared to show what seed, if any, is used to adulterate clover; but I am prepared to prove that any quantity over three pounds of broad and one pound of alsike and three pounds of timothy, provided it all grows, is wasted; and the want of good seed or good management causes the waste, from a poor crop, of a vast quantity of land sown with the above grasses, and the consequent disappointment attending on failure. Another cause of loss of crop may be the imperfect way in which sowing is completed, and any correspondent who will enlighten us on the subject, and show, practically, how and where the remedy for this lies, will most certainly deserve thanks at our hands, and I, for one, will cheerfully render my mite of praise.

My experience goes far to show, that if clover seed is harrowed in with the crop sown with it, many of the seeds are buried too deep ever to see daylight again; whereas the opposite course, that of sowing on the surface of dry soil in spring about seeding time, and not covering the seed at all, causes much to perish when it sprouts on the surface, and before the roots are old enough to protect the young plant from the scorching sun. This year, of course, was an exceptional one for moisture, and might induce growth of seed which in other years would vegetate only to perish, if uncovered. Whether seed sown one way or another is capable of producing a fall crop is one point; but this by no means proves that if a better arrangement of seeding were practised, that seed now found to fail may not, by such improved mode of covering it, be much more likely to succeed than that sown in the ordinary way. I am not anxious to blame where blame is not due, but I am anxious to investigate the cause of such continued failure of clover to produce a thick handsome mat of grass the first autumn, or at least to know that all the seed is good and that the fault lies in other causes.

NOTE BY ED.—Some further light would have been thrown on the matter if "C" had told us what kind of soil he has and what degree of culture it was in. Clover does better sown on barley than any other crop, if not sown too early; but many farmers seed down on winter wheat after a thorough cleaning of the soil by a summer fallow, and fail to get a stand, we think, mainly from too thin sowing on a soil not in a state to give the young clover plants a fair chance to grow.

Bales of prairie grass are to be sent to England from the United States for the purpose of testing by experiment its value as paper material.

Experiments with Varieties of Oats.

Some interesting experiments with new varieties of oats have been made during the past season, on the farm of the Michigan State Agricultural College. Among the results reported, it is curious to note that in all the instances of foreign grain, the weight of the produce deteriorated in comparison with the seed. For example, in the Excelsior oats, a new variety imported from England, the seed sown weighed at the rate of 47 lbs. to the bushel, while the oats raised weighed 35 lbs. to the bushel. The Somerset oats, another English variety, weighed 44 lbs. to the bushel, the produce only 31 lbs. per bushel. Similar results are reported with varieties from Hamburg and Prince Edward's Island; while in the case of seed from Michigan, the weight, per bushel, of the produce exceeded that of the seed. The yields, nevertheless, are, in some cases, estimated extremely high; but it must be remembered that the area sown with each variety was very small, and a larger breadth, with perhaps less careful cultivation, would not have yielded up to the mark of the experimental patch.

The following is a brief summary of the results. Excelsior oats, from England, yielded at the rate of 60 bushels to the acre; Somerset oats, from England, 91 bushels to the acre; White Schonen oats, from Hamburg, 62 bushels to the acre; Black Swedish, also from Hamburg, 66 bushels an acre; Prince Edward Island oats, 62 bushels per acre; Brooks' oats, from Michigan, 68 bushels per acre; Norway oats, (the seed from Jones and Clark, New York) yielded 50 bushels; and the Surprise oats, at the rate of 38 bushels to the acre. The weight of the Norway oats was only 28 lbs. to the bushel, while the same measure of the last named variety weighed 46½ lbs.

Making Underdrains.

The winter is the time to do this work, when labour is plenty and cheap. Men who formerly spent the best part of the winter in clearing land or chopping cordwood, should, now that there is so little of that kind of work to do, be only too glad to work at ditching for moderate wages. The days are short, and if they put as much energy into the work of ditching, as they do in chopping, they need not work over six hours a day, and yet perform a good deal of work in a pleasanter manner than they could do in hot summer weather.

Joseph Harris has been trying the experiment last winter, on his farm near Rochester, and finds it quite successful. The line of the drain is marked out by stakes in the fall, and the first part of the work done before the ground freezes hard, by running a plough along the line of the drain, turning a furrow each way