

7. Whatever commercial relations may exist between the Dominion and the United States, or the more distant powers, this one point is very certain, that the fruit growers of Ontario have the fullest confidence to plant and produce good, marketable fruits to the greatest extent of means and ability, that it will prove not only a safe, but profitable investment.

A. NERSE.

Lincoln County, Ont.

Agricultural.

Renewing Meadows.

Mr. D. A. Compton, Wayne County, Penn., has a meadow from which hay has been cut for 30 odd years, by which time "it had become unprofitable and was plowed up after the last crop of hay was mowed," and now he wishes to get the land into grass that will make him good hay, and he says the local custom is to sow grass seed with early spring grains, but that it happens that the grain, by its excessive shade, kills the grass and should the grass chance to survive the shade when the inevitable drouth comes, the grain, having the longer roots, appropriates so much moisture that the grass must succumb," and he asks: "Would it be advisable and, in the end, profitable to sow grass seed alone?"

Generally, "local custom" is founded on experience and will be found to be the best policy to follow. So true is this, that I am very careful not to advise any great departure therefrom except in the way of experiment, and in the case before me, not knowing how the soil is made up and nothing of its present condition, except what may be guessed from the fact that spring grain is apt to grow so rank as to smother the grass, I shall not venture to advise any essential variation from the usual customs of experienced farmers living near the meadow. On our own farm, last spring, we had a case somewhat like the one under consideration, and we sowed spring wheat, mixed with oats, about half a bushel of wheat and two bushels of oats to the acre. This is here considered very light seeding of grain. As the grain was sown, by use of the drill, timothy seed was also sown, at the rate of six quarts to the acre, and immediately after the ground was seeded to clover (the medium kind), at the rate of six quarts of seed to the acre. Soon after the grain was fairly above the ground, the whole field was rolled. The roller leveled down the drill marks, leveling the ground smooth, and pressed the timothy and covered seeds into the ground so as to aid in their growth.

The crop was very heavy, the soil being of very strong bottom land that had been made in centuries of deposit from a lime stone spring brook. The immense growth of straw fell down, and at harvest the show of grass was very little and appeared to be a failure. But no animals were allowed on the field during the whole of the rest of the growing part of the season, and gradual improvement went on during an uncommon dry fall until the whole appearance was changed, so that when the cold weather came, the ground was well covered with a thick growth of timothy and red clover that now promise to make more than two tons of hay to the acre next season. This field passed through both the perils named by Mr. Compton and came out safe, and this safety perhaps is principally due to the rich cultivation of the soil and the fact that the very small and feeble plants that lived through the smothering were not trampled under foot by animals, even to save the scattering grain that was left on the stubble. The drouth, though nearly continuous from the time of the oat harvest till about the middle of September, did not kill these grass plants, as it probably would had a flock of sheep been allowed to assist.

In several cases, I have, in a small way, tried quite a different method of seeding down land that may be applicable to the case of some of my readers, if not Mr. Compton: In the early spring, sow grass and clover seeds on a surface made ready the fall before, and with the grass seeds sow oats (very thin). Brush in the seeds and allow the whole crop to grow up until it begins to show signs of falling; then mow, leaving a tall stubble, high enough to shade the ground some, but not so tall as to be likely to fall down. This mowing could be done with a self-raking reaping machine, such as we have now, to great advantage. The crop thus cut would be of great advantage for soiling purposes, and if the season should be a growing one, several crops could be cut that perhaps would be as profitable as would a matured crop of the oats.

We have on hand for next summer a still worse case than the one described as coming in this last season's experience. A swamp on this same limestone spring brook has this year been thoroughly drained. Within the enclosure is good pasture on the slopes of hard land that bound the low lands, and part of the low lands are well seeded with meadow grasses. The raw surface, made in draining, and the places that last March were so soft that the drains could only be cut by giving each man a wide and long plank to stand on and keep them from miring while they opened a ditch alongside, using long handled shovels, and the places covered with aquatic plants as high as a man's head; all these places must be made into good pasture, and pastured while the process of substituting valuable plants in the place of useless ones is going on.

The plan we propose to follow is substantially this: Early next spring seed down all these places with timothy, red top, orchard grass, blue grass and red clover, and with these forage plants sow oats, at the rate of a bushel to the acre. If we mix our grass seeds in the proportion of eight quarts of timothy, eight quarts red top, eight quarts orchard, four quarts blue grass, and four quarts red clover, we shall have these seeds at the rate of a bushel to the acre. Let these grasses get a little start in the spring, and then turn on so many sheep as may be found equal to feeding off the crop judiciously. The sheep will eat off the grass on the side slopes and the older part of the field, and give but little attention to the ground lately covered with aquatic plants, and probably a considerable mowing will be required to conquer such plants, and thus make place for the tame grasses. This field, of uneven soil and uneven surface, is intended for permanent pasture, as it is but the entrance from which opens several others. The brook waters all these fields, as required, and the side hills and soft brook margins make it unsuitable for general cultivation, so it is given up to permanent pasture, and all the grasses I have named will be sown that the fittest may survive.

Mr. C. asks: "What varieties and in what proportion should the seed be for hay?" I am fully aware that the seeds I have named produce plants that do not ripen at the same time, and for that reason are objected to for making hay. But I think that there are so many advantages in a great variety of grasses for permanent pastures or meadows, that I should put all of them in and mow the meadow at such a time in the season as would give me the best hay. The orchard grass, blue grass, and medium red clover will be at their best at about the same time, and so much of the timothy and red top as is not then mature will nevertheless help make up the yield, and will be very much relished by cattle next winter, and as years go on the grass really best adapted to the soil and the climate will become the prevailing one. At first two crops will be cut in a season, afterward perhaps only one, but this will depend on manure and treatment generally, modified by the local influences.—George Geddes, in N. Y. Tribune.

Destroying Weeds.

Every once and a while we read that the way to destroy noxious weeds is to haul loads of earth, and cover the places where the weeds grow, a half a foot or so deep. Sometimes these instructions are varied by rubbish instead of earth, and then again rubbish is defined as straw, cornstalks, or even brush. Now, we have no doubt in the world that weeds can be destroyed in that way. We know that weeds are to be fed on air, and all that sort of thing, and if they are smothered they can't breathe, and if they cannot breathe they die. All this is so plain to the thickest skull that one may feel perfectly safe in recommending it as something that will surely do. And yet we would like to know how many who recommend it have ever done so, or seen their plan tried by others? We very much doubt whether it was ever done. Some one may have noticed that under a brush-heap everything was killed, and that after remaining a year the brush heap's removal would show the spot bare of all vegetation. If the recommendation ever had any ground at all it was surely this.

Our remedy for noxious weeds is thorough cultivation. If a piece of ground is full of briars, milkweed, couch-grass, sodom-apples, Canada-thistles, sorrel, toad-flax, or other miserable stuff that so often tries the mettle of our good farmers, let them put the ground in corn for a couple of years or so, keeping the cultivator going continually, and especially going in the early part of the season, and toughest character among these weeds will fail to

stand the ordeal. If the hand-hoe can be spared to go in among the hills of corn occasionally, where the teeth of the harrow cannot reach, or to cut off here and there one which the harrow may miss, a bad case may be cured in a single season. But if this cannot be done, a couple of successive years with a sharp-toothed cultivator among the corn-crop will generally do the business for the worst case that ever was.

Let anyone who has a weedy field before him, resolve the coming season to put the whole tract in corn and keep clean, and he will soon give up all the common ideas of smothering-out with deep layers of earth, cutting up in the full of the moon, putting salt upon their tops, or the many other recommendations stated in the interest, as it is believed, of laziness; but which really calls for more trouble and hard work than a thorough and systematic cleaning, such as we have indicated, does.—Germantown Telegraph.

Brains and Practical Knowledge Necessary to make Farming what it Ought to be.

From a report of the Agricultural and Horticultural Conference at Bedford, P. Q. We take the following extract from an address by the Hon. Judge Dunkin:

There is need of funds, there is need of co-operation, and it is a very small business indeed that can be carried on without money. In farming, money is wanted as well as in other industries. The more money, the larger their operations will be and the larger their operations the better for the farmer, if he understands how to carry it on. It is not enough for a farmer to see that the waste is stopped, that when he has taken off a crop he leaves the soil no better and no worse than before. No; he wants to leave it better. There are quick wasters, who slash, and burn; whose land goes on successfully as long as they have the accumulation of years to work upon; and there is a slower process of cropping without enriching a field, but the successful farmer goes on year after year knowing that each year makes his farm better than it was last year. Brains and practical knowledge are necessary to make farming what it ought to be. All other callings have a comparative narrow field of operation. A carpenter after he has learned to make a panel door or a window sash, has not much more to learn, and the latter years of his life are not devoted to learning. But the farmer has never done learning. A knowledge of chemistry is needed; a knowledge of soils, of climate, of weather—are not these needed? A farmer should understand something about botany, how plants grow, how much stirring of the soil, and what kind of manure will help the plants to surpass the weeds if possible,—all these are necessary to the successful farmer. Then there is the study of insects; we are sometimes troubled by the depredations of insects, flies,—potato bugs, &c., and a knowledge of the habits of these may be of value in effecting their removal. Knowledge of natural history is also required in the selection of animals for breeding, and in the care of them in sickness and in health. We may not require to know the names of all the bones in a horse's body, but we cannot know too much. We should know the effect of food; different animals are kept for different purposes, and therefore require different kinds of food. The animal kept for butter requires different food from that to be devoted to beef, and so on. This knowledge can only be obtained by being communicated by one farmer to another—an interchange of ideas on the subject of telling what each has learned. There are other things which must be learned, in regard to breeding, laying out buildings and barn yards, and the manufacture of manure; but you must understand the soil before you make the manure. One field requires lime, and another does not; one requires heat, and another does not. A great amount of planning is required in fencing, laying out of roads and fields, and discovering what crops are suitable for certain fields. Draining cannot be learned from books, it depends upon the slope of the land. Orchards and gardens should be understood, and labor must be considered; whether man, horse, cattle or mules will work to great advantage under certain circumstances; man should know what tools are most suitable. High priced labor forces us to employ more machinery, and when anything goes out of order we should understand how to mend it. Then there is the making of butter and cheese. All these things need brains, and practical knowledge. Planning