

Grasses and Forage Plants.

Grasses for Partially-Cleared Lands.

EDITOR CANADA FARMER:—What is the best mixture of grass seed for securing a permanent pasture on land partially cleared of its timber?

Darham, Ont.

AMATEUR.

Orchard grass is by far the best grass for growing in situations where the soil is shaded. With the Orchard grass can be mixed White Clover, Red-top, Timothy, June or Blue-grass, and rough-stalked Meadow grass; but the Orchard grass should form the bulk of the seed sown.

Ribbon Grass.—"Phalaris Arundinacea."

EDITOR CANADA FARMER.—What is the name of the grass which is grown in the gardens as an ornament? I have seen it for the last ten years back, but I never heard it called anything but "Striped Grass," and I never heard of its being analysed, to see whether it contained good qualities as a pasture grass or not. There is one good thing about it:—Frost does not kill it out. I have noticed it at various stages of its growth and from its appearance it gives me reason to suspect that it might be made of use in some of our pasture fields that look so bare. It grows nearly as high as timothy, but it acts quite differently. After the seed is ripe, two or three inches below the seed, the stalk shorts and keeps green. That is as much as to say that, if in a field, it would keep green all the summer round. It grows a nice firm stalk, well-covered with leaves. A grass which ripens its seeds and keeps its stalks and leaves green and branching seems as though it might be useful for more than its looks in a garden.

Oncida, Ont.

J. E.

The grass enquired about is the *Phalaris Arundinacea*, Ribbon Grass, improved by transplantation into gardens and cultivation in a good, dry soil. Its natural habitat is swamps and wet borders of streams. If replanted in marshes, it would revert to its original type, and as an agent in reclaiming a marsh its mass of thickly interlaced roots would give it great value.

In Sweden it is extensively used for fodder, being mown twice a year. An analysis of its constituents gave:—water, 68.9; protein, 1.9; fat, 0.4; heat producers, 12.6; woody fibre, 13.5; ashes, 2.6. The famous Woburn experiments indicated this grass to be superior to Timothy for breeding purposes. From an acre of *Phalaris* grown on strong, tenacious clay, and cut flowering, 34,031 pounds of grass were grown. On being dried, this lost 17,015, and yielded 2,126 pounds of nutritive matter. Timothy, cut when flowering, yielded to the acre 40,837 pounds, lost 23,481 pounds in drying, and gave but 1,595 pounds of nutritive matter. Though the chemical tests show the *Phalaris* to be superior to Timothy, cattle, here, do not thrive on it, either as pasture or hay, and will not eat it unless they can get nothing better. The roots are relished by pigs, and are probably nutritious. It would be exceedingly difficult to eradicate the *Phalaris* when once it got established, so, if our correspondent feels inclined to give it a trial, we advise him to use care in selecting its location. The seeds run about forty-eight pounds to the bushel. Half a bushel to the acre would be sufficient. It is usually propagated by cuttings of the root, laid about a foot apart in early spring, in well prepared ground.

The Prickly Comfrey.

The plant illustrated on this page is the Prickly Comfrey, a new forage plant, a native of the Caucasus. It has been grown in Ireland for some years, and in Leicestershire and some other parts of England. A Leicestershire grower says of it, that it is likely before long to supersede many of the forage plants now in cultivation. The advantages which are claimed for it over other plants are these:—It affords a cutting earlier, and lasts longer than almost any other. If cultivated upon a good deep soil, it will yield a heavier crop than any other plant; and, when once planted, it will last for ever. It is very hardy, and found to produce heavy crops upon any dry soil, although poor and unsheltered. It is much relished by horses, cows, sheep, pigs, rabbits and poultry. Horses are found to work well upon it, and are not "soft" as they are when they are fed

on other green food. Spring is the best time to plant it, but no time comes amiss to it, except that severe frost might kill newly-planted roots.

The Leicestershire grower above alluded to, Mr. Kinard B Edwards, gives these details as to the mode of growth:—Procure root cuttings, and mark out your ground, and dig good sized holes over the entire piece, each being two feet apart every way. Into each of these holes throw a good shovelful of dung, and on the top of this place a root-cutting, drawing the earth over it, leaving the crown about two inches under ground. Keep the ground clean and free from weeds, and in a few weeks a large quantity of leaves (something similar to the Foxglove, or Wild Comfrey) will be thrown up by each plant. These should be cut when they have grown to a height of two to three feet, and before the blossom opens. In about six weeks a second cutting may be obtained, and so on throughout the summer; each time affording from ten to fifteen tons of fodder to the acre.—The first year as much as 20 tons may be obtained; the second year 50; and every year after, 80 to 100 tons. But to do this, it will be necessary to lay on a heavy amount of manure, as, in this respect, Comfrey is no exception to the rule which demands an equivalent being returned to the soil to keep up its fertility.

Mr Edwards has, during the last four years, cut from 80 to 100 tons to the acre, some plants rising to a height



of 5 feet, each plant averaging 10 lb. to 12 lb. to the cut. It may be cut with a hook, tied up in bundles, and so carried to the stall or farmstead, as required, day by day. For amateurs and cottagers having a horse, cow, or pig, few crops will be found so useful or more easily cultivated. A few hundreds of root-cuttings will suffice to make a start, as every spring the roots may be raised and divided into twelve parts, and twelve times the area of ground planted.

The Virtues of Red-Top.

Prof. Welch, Agricultural editor of the *Chicago Times*, points out some of the weak points of Herd's-Grass or Timothy, and then proceeds to compare with it the Red-Top, thus:

Red-top is the reverse of timothy in almost every essential particular. It comes into the soil easily, and goes out hard. It seems to be as naturally adapted to our soil as the native grasses of the prairie. It is very tenacious of life, enduring heat and cold, drouth and flood. It forms a firm, compact sod, uninjured by the feet of animals, or the flow of water. It produces a succession of rich foliage, from early Spring till late Autumn. It will bear close cropping, and not suffer from the effects of it. It occupies the whole of the ground, leaving little chance for weeds to grow. It spreads from the roots, and therefore does not require to be re-seeded every few years, as in the case of timothy.

Red top is admirably adapted to withstand heat and cold. Its roots are spreading, so they take firm hold of the soil. It produces foliage immediately on the surface of the ground, so that the roots are protected from the heat of the sun and the cold of winter. They also serve as a sort of mulch, which prevents injury in time of severe and long continued dryness. There is little danger in cutting red top too close to the ground, as it springs up immediately when pared to the very surface of the soil. When the late

frosts bite the leaves of red top, they lie close over the roots, and afford protection during the winter.

Red top, when green, is not the equal of blue grass, and when dry is not the equal of some sorts of hay. But in either case it is above the average of our wild or cultivated grasses. Unless it grows unusually rank, is injured in curing, or cut when too ripe, it is relished by all kinds of stock, and is eaten very clean. Unless rains are when in curing and stacking it, there is danger of its becoming musty. On rich lands it may usually be mown twice in a season, and the second crop will make excellent food for young cattle. On rich pasture lands it is well to mow it after it goes to seed, as by so doing, a fine crop of foliage immediately springs up after the scythe.

Red top does best on rather cold, moist soils, and may be grown with the best economy on lands that will not produce good crops of corn, grain and potatoes, in ordinary seasons. An excellent location for this grass is at the foot of hills and banks, from which water oozes a considerable portion of the year, or where water remains late in the spring. Undrained meadows, where timothy and other grasses do not flourish well, will produce good crops of red top. The character of this grass varies much, from the soil and situation where it is produced. On dry, gravelly soils it is short, and has hard, wiry stalks that are little relished by stock, either as grass or hay.

As an example of the endurance and productiveness of this grass, the writer of this has an acre of well sown red top, which has been mown sixteen years, and never received any manure. Last year it produced over two tons of excellent hay, and was afterward, as in previous seasons, pastured in the fall. A small amount of red clover for years has maintained itself in this patch of red top, and has apparently been protected by it, as it has died out in other portions of the same field, where it was sown with timothy and other grasses.

HARRIS LEWIS says he has cut eight feet of Orchard grass in one season—four mowings.

SOWING GRASS SEED.—A correspondent of the *Ohio Farmer* says:—Our experience of twenty-five years may be worth something, and we will give it for the benefit of your thousands of readers. We try to sow on the last snow of winter. Eight quarts of timothy and four quarts of clover will give a good seed. Never failed to have the clover do well but twice in twenty-five years. Last year we sowed a little too early, and lost most of the clover on all but four acres, which we sowed a week later and had a splendid catch. Late years I put in, say two quarts of red top, which will hang on and come in when the other grasses fail. It makes a better sod also.

EXPERIENCE IN PLASTER WITH CLOVER.—In the spring of 1873 I sowed one field of eight acres to oats, thoroughly harrowed one way, then sowed on clover seed and cross-harrowed the field. I then put on about three pecks of plaster to the acre, and the result was a good yield of oats and a fine catch of clover, which grew finely through the summer, and last season produced a large burden of number one clover hay. This I am now feeding to my calves, for I prefer it to any other, when properly cured, for calves should have the best. The same week in which I seeded the eight acre lot, I seeded one of four acres, and in precisely the same manner, save that I sowed plaster on two acres of it. The other two acres went without plaster. Now for the result. Where the plaster was sown, the clover grew as finely as in the eight acre lot, and produced as much hay last season; while on that without plaster the yield of oats was much lighter, and what clover seed sprouted, or nearly all, died from the effects of the drouth, so much so that it would not pay for harvesting. The soil was sandy, what we term here sand knolls, and poor at that.—*Cor. Western Rural.*

PEA-VINE CLOVER.—An *Ohio Farmer* correspondent advises an enquirer to sow pea-vine clover for pasture. He says:—My plan is to seed with timothy, in the fall, with wheat, then sow one bushel of pea-vine clover to eight acres. This will produce about twice as much pasture as the common clover, and if you have good soil, and it seeds well, you will have a heavy layer of clover, tramped down to rot on the ground. In this way you can enrich your soil and keep more stock than by sowing common clover.

I have been cultivating this clover for the last six years, and would pay twice the price of common seed rather than to do without it. I usually pasture two years, and then follow with corn, but the cut worms were so bad, that in July, '73, I changed my plan. I ploughed a field of pea-vine clover that had been pastured in '72, and from eight and one-fourth acres, without manure, I raised 250 bushels of wheat. I had to harrow down the clover and ride the harrow before I could plough it, and the plough would then choke. I shall follow the wheat with corn. Pea-vine is nearly two weeks later than common clover, and should not be pastured too soon. To save seed, pasture till the middle of June, after which it will fill well, and yield more than the common clover. I made four tons of hay last year, from a field that had been pastured all summer, and it was as good hay as ever I saw, but it was so dry that it cured very quickly.