

one. The reason why ashes are not more highly valued—are not valued for what they are worth—is that they are too sparingly used. When sown on meadows, a few bushels to the acre are all that are used. As but a part is dissolved the first year, it will be readily seen that the effect must be small, less so than that of plaster, though plaster is one of the ingredients of ashes.

But there are not enough ashes to sow largely, and a large proportion of what we have are permitted to go to waste; particularly is this the case with leached ashes, yet they are nearly as good as unleached, and equally lasting. We ought to save every particle of our ashes, including the soot from the stovepipes and chimneys. We want them for special uses—to manure our grapevines and fruit trees, and to use in our gardens, dooryards and lawns. Each farmer or owner of land, if he burns wood, makes enough ashes for these purposes. The extent of land on which they are used being circumscribed, they may be used plentifully, in which case the effect will not fail to be highly satisfactory. I have used them on grapevines with the most gratifying results, applied mostly as a cover to the mulch, having the property to keep this moist as well as to impart fertility; hence they are particularly excellent in a drouth. Not only is the growth of the wood advanced, but that of the fruit also, and I have become convinced that by the use of ashes the flavor of fruit in general is improved. I know that in connection with thorough drainage this has proved to be the case. Particularly are lawns and dooryards in grass benefited by ashes. Apply at the rate of sixty to eighty bushels per acre, more or less, according to whether the ashes are made of hard or soft wood—hardwood ashes being the best. A coat applied once in three or four years will do. On grapevines, fruit trees, and the garden in general, I find yearly or biennial applications most satisfactory. Of course a less quantity is to be used at each application.—*Cor. Co. Gent.*

Sowing Grass Seed Where There is no Grain.

The notion is prevalent that it is essential to the life and growth of young grass to raise a crop of some kind of grain while the tender spears are becoming sufficiently rooted to endure the dry and hot weather. But the shading of the ground is not essential to the growth of clover or grass, unless the seed be sowed very late in the spring or summer, and where the soil is not rich and mellow. On moderately fertile and mellow soils, though no crop of grain be allowed to grow, clover or grass seed of any kind will ordinarily succeed much better than otherwise. If the soil be quite poor and likely to parch during the droughts, a small quantity of rye per acre will afford the young grass the benefit of some shade. Grass needs no shade, even in dry weather, after it has itself become large enough to shade the ground, but is benefited by the sun and air quite as much as other plants. Another consideration not to be overlooked is that any crop occupying the ground with the young grass withdraws both nutriment and moisture from the soil, which might essentially benefit the more important but feeble crop.

There is probably no better grain than rye to sow where a field is to be stocked down to clover or grass. Wheat is second to rye in this respect, and superior to oats and barley, which are quite objectionable, when the usual quantity is sown per acre, on account of the very large leaves and thick bottom growth, which is liable to choke the young grass, while rye shoots upward rapidly and does not grow thickly at the bottom. Were oats and barley sown thinner on the ground than usual for a full crop of grain, grass might grow quite as well as with a crop of rye. Another point in favor of rye is, it usually keeps erect better than either oats or barley. On light soils where there is so much humus or vegetable mould as to cause a large growth of straw if the grain lodges, as it often does, almost every grain of grass will be killed. As spring rye is often a good crop to grow in four or five years rotation, many farmers will find it profitable to arrange their rotation so as to raise spring in preference to winter rye when land is to be stocked down.

For farmers the following direction will be of little or no value, and may appear quite untimely, but many need the exhortation. As most of our grass is cut with horse mowers, it is quite important that the surface should be smooth, free from knolls, hollows, dead furrows, ridges and clods. Even if it be mowed by hand, the surface ought to be smooth, so that the grass may be cut close to the ground.

Where there are knolls and hollows the most expeditious way is to level the knolls with a team and dirt scraper either after or previous to plowing. When there are ridges formed by back furrowing repeatedly in one place, turn back furrows into hollows and finish off lands with dead furrows where the ridges are. By measuring the distance from ridges to furrows, even where they are not uniform, the dead furrows may be made in the desired place.

After the ground has been sufficiently harrowed, if there be loose sods and lumps of earth, throw them into the lowest places with manure forks, and make the surface as smooth as practicable. Then roll and sow grass seed. This will form not only a smooth surface to work on when harvesting the grain, but will be smooth for the mower, horse rake and loaded wagon or cart, when cutting and gathering the crops. A few hours spent in this manner will not only improve the appearance of the surface of a field, but be a source of much profit when harvesting the grain.

Sometimes driving storms occur just before grain is fit to harvest, which prostrates a large proportion of it. Then, especially if the surface of the ground be smooth, the grain can be cut much more advantageous than if covered with dirt, lumps and sods, or to be indented with numerous small hollows. When land is stocked down, it should be so mellow and fine that there will be no difficulty in making the surface quite even and smooth.—*N. Y. Herald.*

A Farm Experiment.

The best chemists agree that a chemical analysis of the soil of a field is not a sure and reliable guide in determining the state of fertility of the soil, or its fitness to produce a crop of any specified kind, whereas the farmer, however unskilled in science, has at command, in carefully conducted experiments, a certain indication of the wants of the soil. An analysis might show the presence of an abundance of the elements of fertility in a soil which would fail to yield any crop at all, because the elements were so locked up in insoluble compounds that vegetation could receive no benefit from them. On the other hand, the farmer may readily find out for himself what the chemists cannot determine for him. If farmers would experiment, determine the results with accuracy, and give their discoveries to the public, the agriculture of the country would be greatly benefited. In this view I have made and now report the following experiment, hoping that other readers will do likewise:—

Last spring I planted potatoes in a field which bore a small crop of beans last year. The soil is gravelly loam, and has, I presume, never received a load of manure, while year after year the elements of fertility, particularly the phosphates, have been withdrawn in the shape of beef, cheese and grain. The soil was of uniform quality, and, as shown by the bean crop of last year, in a uniform condition of unproductiveness. At planting time it was in a fine condition of tilth. Through the field I took a strip wide enough for thirty-six rows for experiment. Twelve rows I planted without fertilizers, on twelve rows I put a small handful of ashes in each hill, and twelve rows I manured in the hill with superphosphate, at the rate of 200 pounds per acre. The unmanured portion yielded at the rate of 64½ bushels per acre; that treated with ashes, 77 bushels; and that treated with superphosphate, 147½ bushels. Ashes increased the yield 12½, superphosphate 82½ bushels. The cost of the superphosphate was \$5; the value of the surplus crop at market price was \$41½; net gain, \$36½. I suppose the benefit to the next year's crop will pay for the labor of applying the fertilizer and handling the increase of crop. I think this experiment shows that superphosphate may be profitably used upon the field.—*Cor. Rural Home.*

Orchard Grass.

This grass, though of comparatively recent introduction to North America, is becoming widely known and highly appreciated. We have many enquiries for it—some from parties who have grown it in Britain; and from our exchanges we find it fast winning its way to popular favor. We append two extracts, one from Indiana and one from the Province of Quebec:—

Crooked Creek, Ind., March 1, '75.
To the Editor of the Michigan Farmer.

DEAR SIR,—Noticing an inquiry in your issue of February 16, in regard to orchard grass, my experience may be of some value to your readers.

My farm lies within a mile of Michigan State line. The soil is sand and gravel, and during the past three dry summers the new seeding of clover has been killed by drouth. Two years ago I tried on a five acre lot orchard grass, four quarts per acre, and same of red clover, sowed on after my oats were drilled in, then rolled the ground smooth. The orchard grass and clover came up finely, but the very dry summer killed nearly all the clover, but the orchard grass stood the drouth very well, and last spring it came up very early and matured the same time as the clover, so that I cut a good burthen of grass from the field. It grows about the same height as timothy. When sown too thin it is rank, but when thick enough is as fine and tender as one could wish.

I am so well pleased with it that I intend seeding down twenty acres in wheat, with six quarts orchard grass and four quarts clover, mixed in 50 lbs. plaster, per acre. I shall drag the wheat as soon as the ground is dry enough, then sow the seed from a plaster sower, and finish with a roller.

When sown with clover I consider it superior to timothy, as it can be cut much earlier, and it starts immediately, so on rich land a second crop may be obtained, or more pasture than from any other grass I am acquainted with.

I cut a portion of the field and fed green to a span of work horses and milch cows. I consider it a superior soiling crop, it affording a ranker growth earlier than clover. The seed is similar to red top, and 14 lbs. is a bushel.

GUSTAVUS CROSS.

"Mr. A. P. Ball, of Stanstead county, Province of Quebec, has been experimenting with orchard grass. In 1872, a friend of his residing in North-Vermont, persuaded him to try it. He did so, and sowed four acres of barley. It took well, and after barley harvest it covered the ground as with a heavy green mat. It was cut for hay, June 30, 1873, but only yielded a ton per acre. Mr. Ball was satisfied, however, believing that he had seeded too sparsely. In the fall it was heavy enough to cut again, but was left untouched. The succeeding winter killed out patches of it, but notwithstanding this, the summer of 1874 it gave a ton and a half per acre. A second crop of a ton per acre was taken off in the fall. A seeding down of another field of nine acres of spring wheat was made at the rate of a bushel of orchard grass, with the addition of ten pounds of it like clover per acre in 1873. This also took well, making a fine growth after the renewal of the wheat. Two cuttings were had in 1874. The first crop was principally clover; the second had a large proportion of orchard grass. After the second cutting it had made growth enough to cover the ground completely.

Mr. Ball thinks he used too little orchard grass seed in both cases. He is of opinion that two bushels per acre is none too much. It is, however, inclined to thicken with successive cuttings. He is well satisfied with the results of his trial so far. The hay is relished by stock of all kinds, quite as much as that made from timothy or clover. The autumn cutting makes the best of feed for calves; they seem to prefer it to every other sort of hay.

We are of opinion that this variety of grass is worthy of far more extensive cultivation than it gets. Whether it is more liable to winter-kill than the grasses usually grown we are unable to say. It may be that as the snow lies more steadily on the ground in the Eastern Townships than it does in Ontario. It may do better in the sister Province than here, but at any rate it is worthy of receiving as full a trial here as there.

Price of Wheat.

The Mark Lane *Express* says the price of wheat is at present too low to afford adequate remuneration to the grower. This is attributed to the large importations which for the eleven months up to November 30, amounted to 44,557,178 cwts; including both wheat and flour, this being 32,463 cwts. more than was imported during the same period a year ago. Of this large amount the United States sent more than half. The United States and British North America together sent to Great Britain in eleven months of 1874 more breadstuffs than all other countries together by five and a-half million hundred weights.

True scientific farming consists largely of the exercise of common sense. No amount of mere knowledge will enable us to dispense with system, order, judicious planning, and economical work.