

long, driving in, sloping backward an angle of forty-five degrees. They are six inches apart in the first pair; five in the second, four in the third, and three in the last. This is not patented, and he says such a harrow can be made for from \$5 to \$10. From this description any workman in wood ought to know how to make one.

ORCHARD GRASS.

The following by L. F. Allen, of Black Rock, is copied from the *Tribune* :

We have known this grass constantly—not in large quantities, to be sure—for the past 30 years, and know its value for the various purposes we have mentioned; but for soiling stock in the summer season, we consider its qualities the most eminent. A few of its qualities will be stated :

1. It starts early in the spring, with a broad-oval leaf growing rapidly and arriving at its highest condition of excellence when in early bloom, which is about the time of the blossoming of the common red clover, and, if made into hay, fit to cut at the same time. Yet, for soiling purposes, it may be cut some days, or even some weeks, earlier. It is better, however, for the full amount of nutriment it will afford, to wait until the flower is fairly developed. Its qualities are sweet, nutritious, abundant in production, tall as ordinary oats in growth, and a heavy burden to the area on which it is produced. If suffered to stand long enough to mature its seeds, the stalk fibre becomes hardy harsh and unpalatable to stock: therefore it must be cut before it arrives at its seed-ripening condition, as is the case with most other grasses for dry forage purposes. No grass which we have ever grown has yielded so heavy swath as this, nor one from which so much cattle food to the acre can be grown, aside from Lucerne or Trefoil, which our American climates will not consecutively, year after year produce. No grass, not even red clover, springs up so rapidly after cutting as this. We have known it in showery weather start fully three inches within a week after cutting, and so continue for repeated cuttings throughout the season, retaining its verdure into the latest frosts, and then affording a pasturage sweet and nutritious inviting to all kinds of farm stock inclined to grazing.

2. As hay, its quality is good, when cut in its early flower, but inferior when gone to seed, attaining then a woody fibre, as before remarked, yet when cut and steamed, equal in nutritious quality to other late cut grasses. The steaming and cooking process reduces its fibrous stalk to comparative pulp, rendering it palatable to the taste of animals, and congenial to the action of the stomach for nutritious uses. As hay, it cures readily; its long growth renders it easy to rake and handle; it stores compactly in either stack or mow; cuts easily with the hay-knife in the mow when fed dry in winter, and is every way as convenient a long fodder as any other. Such are its qualities for hay.

3. As soiling stock through the summer month is now coming rapidly into practice, we can do no better service to the farmer more particularly to the dairymen—then to recommend the orchard grass for that purpose; and for the following reasons: It is early. It grows continuously throughout the summer and fall seasons. It is permanent in its

occupation of the soil, having a strong fibrous root; maintains its hold in clumps, or tussocks, against any and all grasses, even the blue grass—which crowds, out almost every other—making no inroads on its possession, when once fairly rooted. We have a field of it, on a strong clayed loam, which has stood for more than 30 years. It has been cut for soiling; it has been cut for hay; it has been pastured; it was first sown with red clover and timothy, which it long ago run out; and, although the white clover and blue grass venture their presence to a limited extent among it, the orchard grass retains its supremacy, and, breast high at maturity, lords it over its diminutive trespassers in a bounteous crop, while its humbler attendants good in their place, modestly fill up a great, nutritious undergrowth at the bottom.

It has been objected to the orchard grass that it grows too much in stools or tussocks. If it has a fault, that is one of them; but full seeding will measurably remedy that. It does not stool or spread so universally as the blue grass, or perhaps some others, but it forms a strong, compact root, and that root it holds firmly, enduringly, and, if given a moderate amount of fertilizing matter, its roots fill the surface, and there they stay, yielding to nothing but the utmost abuse by treading out in spring by heavy cattle—which should never be allowed on any grasses—or the plough itself.

The seed of the orchard grass, from its absence of general cultivation, is not found in abundant quantity at the seed stores of our towns and cities, and the price may be dear compared with timothy, and the clovers; yet not so dear as to prevent the farmers from obtaining it in sufficient quantity for trial, and from a small area of ground, to supply his own wants in seed hereafter. It yields bountifully, and when ripe, which is easily known by its assuming a yellowish colour, it may be cut and bound in sheaves like oats, or mowed cured and threshed out, like timothy. The entire process of its cultivation is as simple as any of our ordinary grasses.

HOW TO IMPROVE SANDY SOIL.—About twenty-five years since I came into possession of about nine acres of thin, sandy land. There had been, within say three or four years previous, two crops of corn taken from it that did not exceed ten bushels per acre. I had it ploughed deeply, and sowed heavily to oats. As soon as they began to ripen we ploughed them in, and applied about 70 bushels of lime-kiln ashes to the acre; we then seeded it with rye, and also sowed clover and timothy. We cut a splendid crop of rye, and for several years mowed a good swath of grass, since which we have kept up a rotation of corn, then wheat or rye, followed by grass which has been either mowed or pastured; two of the years potatoes have taken the place of corn. The corn has averaged from 50 to 60 bushels per acre of shelled corn, and the other crops have been above the average of the balance of a good farm. We have put little or no manure upon it, except a moderate amount with potatoes. I may add that a large portion of this lot is so sandy that it does well for building purposes.—*Cor. Country Gentleman.*

THE BUCKWHEAT CROP.—Judging from what we can learn, the culture of buckwheat is increasing