

have sometimes approached these figures, just as yields of 40 bushels per acre are occasionally found in every good wheat-growing section of the country, while the average for entire areas in a series of years may be but 12 bushels, which in the present average for the country at large—just as John Prout, of England, claims to have obtained from one field 65 bushels per acre, when his whole crop averaged about half as much. Such statements, even if true, lead to utterly erroneous conclusions. The average for five years prior to 1860, according to the reports of the California Agricultural Society, was very nearly 20 bushels; almost exactly 14, which is only one-sixth greater than the general average for the United States. The Department of Agriculture has made independent estimates for nine years, making the average yield 1,366,100; the Assessor's returns for the same period, 1,393,100 bushels. The following table gives the State returns for nine years:—

1868, 17.56; 1869, 15.07; 1870, 11.69; 1871, 9.72; 1872, 14.99; 1873, 13.52; 1874, 14.03; 1875, 13.93; 1876, 15.04; total 13.93.

The year 1877 will reduce this average, but half to two thirds of a full crop having been obtained. As soon as the first freshness or virgin fertility is spent in California, as elsewhere, the rate of yield declines to a common level. And then come insects, blights, and other incidents of decay, which are already beginning to appear on the Pacific coast. As to the preparation for market, the main peculiarity is the very general use of "headers" in cutting, by which the quantity of straw to be stacked is greatly reduced. Horse-power threshers, capable of delivering 1,000 bushels of wheat, and 1,200 or more of barley, are increasingly numerous. They require twelve to fifteen hands, and ten to fourteen horses. The average cost of threshing is six cents in addition to board of threshers, making the real cost about eight cents per bushel. The price of cutting and stacking varies from \$1.28 to \$2.25 per acre—the lower price in the larger countries.

#### Orchard Grass for Sowing.

The extensive value of orchard grass (Cocksfoot) is indicated by the great attention now paid to it by agriculturists. It was but little known a few years ago in America, though highly prized in Europe for hay, soiling and pasture. Now there is no other variety of grass more highly esteemed. A writer in a recent number of the *Country Gentleman* gives his opinion of it as follows from his own experience:—

The value of rye sown in the fall is, I believe, admitted by all. It is a rich feed, and the earliest, and without great enrichment of the soil produces well. After this would follow orchard grass. That this has not been recommended as a soiling plant is a mystery to me, as it meets all the requirements. It is early; it is a rapid grower; it is rich in all the elements, particularly the principal ones; will grow till late in the season, and endures the drouth excellently. Still more satisfactory it is a grass—one of our pasture grasses, and cannot therefore be objected to as a single feed. It may be used the whole season, or prefaced a few weeks by rye. It is earlier than clover, a better feed, and richer in general nutriment. Although it may not produce quite as much milk as clover (scarcely any other plant does), yet the quality is better, as it imparts the true grass flavor; and this flavor may be secured through the whole season. Being a rapid grower, it keeps fresh throughout the season, including midsummer with its drouths. This also favors frequent cutting—some four or five times in a season—which further implies an abundance of seed, and this in its turn means a strong soil. It is what is wanted to produce a great deal in a small space, say a ton per acre to each cutting. To try to do this on ordinary good soil with this grass, is to meet with disappointment. Make it as rich as possible, and make it deeply rich. Then the grass will be permanent, if occasional top-dressings of some strong manure are given. Plaster may be used advantageously every spring. The phosphates may be tried. A sure thing is a compost of stable manure with earth, applied when well mixed and decomposed. Fall is the best time for applying.

Here all the advantages of pasturing are fully realized, with the addition of shade for the stock in hot weather and the saving of manure, which, during the season may be put into the compost heap. Nothing can be simpler than this, and nothing secure more benefit. Those who insist on

variety may add a little meal. The seeds of this grass may be sown early in the spring (without grain crop accompanying), and it will afford two cuttings the same season, with sufficient growth after for winter protection, which should never be omitted. The great objection to this grass is, that it requires so rich a soil. But when it is considered that it returns, in the best of material, what has been given to it with a good profit upon it, and the advantage, therefore, of doing it on less land, which the increase in amount of feed and profit implies, it will at once be seen what advantage this grass has over other soiling materials. Besides, it will do well in an orchard, being a grass adapted to shade, as its name implies; and as the ground must be rich, it will not harm the trees. It is a grass also that the frost will not lift. Thus, a little land may be made to go a great ways, and do it permanently. But do not attempt it with a poor or ordinarily rich soil.

To prepare the land, the best way is to turn down sod somewhat early in the fall. If a heavy sod, and if largely composed of clover, all the better. Plow pretty deep, and cover at once with a heavy coat of good manure. Leave till spring, when plow again, cultivate and harrow till the whole surface is well mixed and mellow, and then sow. Do not apply less than 2½ bushels per acre, and be sure to get it on evenly, and then cover at once with roller or, better, smoothing harrow. Finish with a coat plaster. If stubble is turned down instead of sod, double the amount of manure is used, unless the land is rich. Plow it earlier so as to turn down the first coat of manure after it has been well washed out, and then apply the second coat of manure. Heavy and even sowing is required, so as to get a close set, this grass growing in tussocks. If this is accomplished, nothing can be better. It is not expected that this will be the case the first year, though two good crops may be realized. Give a good coat of compost in the fall. Remember that manure is the rough material on which to realize, and the more that can be turned into grass the better. Frequent cutting will give the feed the character of aftermath, a form of fodder the excellence of which is well established. Let me add another word. Orchard grass is somewhat tender—the portion above ground—and should have protection against the cold west winds in winter. An evergreen screen, a wood, or hill, will protect it. This will prevent the snow from drifting away, or if there is no snow, arrest the severe dry winds. See that the seed is fresh as well as sound and clean, and spare no pains to put the crop in well. A good start is indispensable. It will then do well at once, and is a crop that will answer for full soiling. Should the season be moist, favoring the growth of pasture, the grass may be cut and cured for winter feed of cows or growing stock. It should be cut three or four times. It is then tender, which the stock would not be, but hard and unfit for feed, if it is suffered to approach maturity. Always cut it when it bears the appearance of advanced aftermath.

#### "Does Farming Pay?"

At the present time, as never before, within my remembrance, the question is being discussed in public and private "Does Farming Pay?" In the *Ploughman* of Feb. 16th one writer presented some reasons in his opinion why it does not pay. In the following number, Feb. 23rd, another writer says in his experience "It pays." I am inclined to endorse the latter opinion, provided it is judiciously and understandingly prosecuted. I once heard the Hon. Durfee, now deceased, who established the plant house at Massachusetts State Agricultural College, make the following remark:—"No class of men, neither commercial, mechanical, professional, nor any practical enterprise whatever, entered upon their business so literally blindfold as did farmers." Farming is one of the greatest trades to be learned. We hear the remark made that if one fails in his profession, he can resort to farming for a living. I ask in all candor if a man would not be more likely to achieve success by retiring from farming to a profession, providing he ever had a call to either. "Ever learning but never coming to a knowledge of the truth" will apply equally as well to agriculture as moral training. Books are often resorted to; they may be called an aid, but the question arises whether they do not lead the student astray unless he has practical experience to balance the book theory.

There are those, I doubt not, who will bear me witness that they have learned more the last half of forty years' experience by far than they did the

first half, as regards the principles of cultivating the soil, the application of manures, raising stock, &c. My experience has been little by little, step by step, making experiments and noting the same, much to my benefit and enjoyment as well. Men are daily manifesting a desire to farm. To such there is encouragement. I venture the opinion that in the last forty years there has not been a time when a young man could enlist in farming with brighter prospects of success than the present. "How is that?" some one says; "prices are low." I maintain that prices are more than an average on produce, as a whole, when compared within the above mentioned time (forty years).

Many, very many, have learned to their sorrow that extravagance does not pay in any business, much less in farming. But for extravagance many a young man, with his "confiding, loving companion," to-day might be in possession of the beautiful residence which they have been compelled to surrender. Many of our learned agriculturists are doing much to diffuse information—much to their commendation—in aid of young men who desire to live by farming. Young men, let me remind you that the basis of all successful farming depends largely on the manure heap, animal and vegetable. Beware how you sow your money broadcast. Start right, keep right and you will come out right.—A Farmer, in *Massachusetts Ploughman*.

#### Salt for the Corn Grub.

The corn crop has several formidable enemies to contend with, and among them is the white grub, which sometimes literally destroys whole fields, or damages the crop seriously. One of the best and most convenient remedies—perhaps the very best ever suggested—is the application of salt as soon as the plant makes its appearance above ground, prepared and used in this way: Take one part common salt and three parts plaster or gypsum, and apply about a tablespoonful around each hill. It will be found to be a sure protection. The mixture should not come in contact with the young plants, as it may destroy them. This method has been tried over and over again by some of the best farmers of Pennsylvania, Delaware and Jersey, and when properly applied has never failed to be perfectly successful. We hope our farmers, who have reason to fear the depredations of the grub, the present season, will try this mixture, leaving a few alternate rows of corn without the salt, and communicate to us the result. The application also acts as a first-rate fertilizer, and will more than pay for itself in benefiting the crop.

#### Orchard Grass on "Muck Ground."

A correspondent asks if orchard grass would do well sown on mucky ground without plowing—merely dragging in. I have noticed in several different pieces that I have had that where it was most inclined to muck the grass was the rankest, but I think it of just as much importance to have a good seed-bed prepared for it as for any grain crop. In fact, it is quite a delicate seed about getting started properly, but after it once obtains a start it grows the strongest and lasts the longest of any of the grasses. As the middle of August is decidedly the best and safest time of any to sow it, I would advise the inquirer to plow early in the summer, to give time for subduing and making the land (muck) into fine tilth before seeding it down. But I have found it the best practice for me, in seeding orchard grass, to plant the ground in spring to early potatoes, and the tilling and growing and digging of this crop give time and tillage sufficient for the land, and the ground can be cleared of this crop in good season for the seeding to orchard grass.—H. Ives, in *N. Y. Tribune*.

The *Hanoverian Agricultural Gazette* states that the steward of an estate at Wienhausen has communicated a very simple remedy against the destruction of cabbage and other plants by caterpillars, which, if effective, is worth trying. He, it appears, noticed that one bed of cabbages had not been touched by caterpillars, whereas the cabbages on all the other beds had been all but entirely destroyed. On examining into the matter, he found that on the bed where the cabbages had not been eaten up by the caterpillars, the common dill (*Anethum graveolens*) had grown among them. Insects cannot stand the smell of dill, and its seed is poisonous to birds. As dill will grow almost on any soil, and thrives even on light sandy ground, it might be worth while to make some experiments with it.