research of the new farm that there is under the old one, and bring it into culture, their business would pay them better, and be pursued more pleasantly. For deep ploughing saves labor, while it increases land. As a living writer on agriculture observes:—"If a farmer who has commonly ploughed his field six inches deep, will plough, the present year, to the depth of seven inches, and will put on seven loads of manure where he had previously put on six, he will, with the same labor, get seven bushels of roots or of corn, where he has commonly got only six. If then, the next year, he will plough eight inches deep instead of seven, and apply eight loads of manure instead of seven, he will find his crops increased in that proportion, upon the same land, and with no more labor. The next year or at the beginning of the next rotation, he may on the same principal, plough to the depth of nine or ten inches." While deep ploughing is beneficial to all crops, it is especially necessary in the cultivation of deep tap-rooted crops, like turnips, mangolds, carrots and parsnips.

## About Barley.

*(From the Country Gentleman, 20th March.)*

I frequently go to the New York exchange—the great grain market—where I have learned that the barley in greatest demand and which will command the highest price per bushel, is the four rowed Canadian barley. Last week the price of our State barley was easy at ninety-five cents per bushel; while Canada barley was held firmly at $1.25. Canada barley is clean, bright and often shiny, all of one variety, and so free from foul seed and other grain that one must search a long time before he can find a single kernal of any seed, whereas most of the State barley offered consists of a mixture of two rowed, four rowed and six rowed grain, much of it having a dark, weather beaten color, and with the mass is mingled more or less oats, wheat, buck-wheat, and seeds of noxious weeds. All such grain and seeds will make no malt. Hence they detract greatly from the market value of the grain, as the small quantity found in every bushel will prove a dead loss to the maltsters. Besides this, when a quantity of two rowed, four rowed, and six rowed grain is mixed together, one variety will be thoroughly sprouted before the remainder has grown sufficiently to have the germinating process arrested. Here, then, will occur another loss to the maltsters.

I sincerely wish that the standard of excellence in barley was not regulated by malt and beer, for immense quantities of this kind of grain are employed for purposes which are not antagonistic to virtue and temperance. But as this standard is established, let the tillers of the soil put forth a united effort for improving the quality of their barley to such an extent that the standard of excellence at the corn exchange shall be grain that shall yield the largest per-centage of barley meal for loaves and for cakes.

The first step will be to procure an excellent quality of clean and pure seed. The seed must not only be free from wheat, oats, buckwheat, and the seeds of weeds, but it must be the product of careful and judicious selection and superior culture for four or five successive seasons. We want the Simon pure four rowed barley, which, when sowed on good land of fair fertility, will produce the genuine horedum vulgare with the same unerring certainty that a herd of Durham cattle is raised up from thorough-bred animals.

Then the seed must be kept pure with as much care as good farmers exercise in selecting their seed for a crop of Indian corn. If they were careful to do this, State barley would soon command as much per bushel as Canada barley. A goodly number of State farmers, who raise bountiful crops of superior wheat, produce just as good and clean barley as is shipped from Canada. The best farmers never sow barley after barley or buckwheat, except when the crop is designed for feed. If practicable, barley is cultivated on the best loamy soils of which there is a generous supply of silica and phosphoric acid. Generous top dressings of unleached ashes or caustic lime, will always aid materially in producing grain of a semi-translucent appearance; whereas the barley that is produced on a soil in which carbon preponderates in the form of muck, will usually be of an inferior quality.

A point of transcendent importance in the cultivation of barley is to have the grain ripen with the utmost practicable uniformity. To accomplish this object the seed must be buried at a uniform depth. If the seed is scattered broadcast and harrowed in, the feet of heavy teams will bury much of it so deep, that many of the ears will be only half filled when most of the grain is fit to be harvested. Here will be a loss to the producer as well as the maltster. If the soil is heavy the seed should be buried not over one or two inches. But on light land the seed should be put at least three inches deep. With a good seed drill this object can be attained, but when the seed is covered with harrows the barley will grow unevenly; and will never mature with a crop of very uniformity. Besides this, more than half a bushel of seed per acre will be saved when a drill is employed, and the yield will often be ten bushels per acre larger than if the seed had been harrowed in.

## Cows on Pasture.

In a paper read by H. C. Drake, of Lake Mills, Wis., he said in regard to

### Pastures:

I am inclined to favor one large pasture and not two or three small ones, as is the practice of some to have. Cows, it is true, like a variety of grasses, but that should be all in the same field. If a pasture is allowed to lay a week or over with no stock upon it, some places obtain a rank growth, and cattle when turned upon it will not rest until they have explored the whole field, and I think more grass is destroyed and trod down than when they range all the time in one field. A restless, uneasy disposition, I think, is cultivated by a change of pastures, which, with irregular feeding, is sure to affect the flow of milk unfavorably. Much less fence is required, and expense in that way saved by one pasture.

Cows should not only have a variety, but such a combination of grasses as will afford them some one or more kinds in maturity or approaching maturity continuously during as long a season as possible. This may be done by learning the nature of different grasses and sowing those which will mature in different parts of the season, as we may wish. If pastures be so arranged that they can be provided with shade, cows will show their appreciation of them by an appropriation of their cooling effects during a few hours of the sultry midsummer days.

### Water.

It is perhaps unnecessary to say anything here of the necessity of providing cows with pure water. Yet it is so very important and so much neglected that this appears to be one of the truths that need a frequent repetition. When we consider that 87-100 of milk is water, and 31-100 of all good, soft, mellow cheese is water, we at once see the impossibility of the production of pure milk without pure water. It should not only be pure, but it should be in abundance, and in convenient places, to avoid too much exercise by the cow in obtaining it, as that tends to hurt the milk, and it comes into the hands of the dairyman carrying more animal heat and odor, which if not destroyed, just so much helps the milk on in its decomposition.

### Meadows.

In speaking of meadows Mr. D. said: I think we have always overlooked the importance of a variety of feed—at least we are very much behind our English neighbors, who have for many years been noted for their fine pastures and meadows. In England, some 30 or 35 different kinds of grasses are in general use, many of them imparting a desirable fragrance to their hay, causing it to be eaten by their cows with a peculiar relish. In this country not more than six or eight are common, and cows are often kept through an entire winter on one kind of hay alone, which should be avoided.

Roots have been too much neglected, perhaps, mainly on account of the amount of labor required in raising them. Most of them are most relished by stock in consequence of their freshness and furnishing a variety, and some of them rank high in nutritive virtues. The total nutritive per-centage in 100 pounds, as given by good authority, is, of potatoes, 20; sugar beet, 14; mangold wurtzel, 13; while carrots are only 7, and common white turnips only 4.

Another reason for sowing a variety of grasses is, that individual plants of the same species will not thrive in close proximity to each other, but intermediate plants will soon decay, as all are drawing heavily upon the same elements of the soil. But if different kinds of grasses are sown, the roots will interlock and thrive close to each other, and thus we get a good turf, in which no weeds can grow, and we have a clean crop of hay. The prevention of the growth of weeds is quite important, as many of them are eaten by the cows, and a bad flavor given to butter and cheese.

## Silver-hull Buckwheat.

In answer to your inquiry concerning the merits of this new variety of buckwheat, permit me to say that I have looked into its history somewhat, and find that it probably originated in France, and a small quantity has been sent out by the Department of Agriculture. The grain is of a beautiful silver grey, varying slightly in shade, and the corners are less pronounced than in the ordinary variety, while the husk is thinner. Messrs. Platt & Barnes, proprietors of the large buckwheat mills in this State, to whom I have sent a sample, write:—"We would say, in regard to the silver-hull buckwheat, that it is altogether the best we have ever seen, and should judge it will make from three to five pounds of flour per measured bushel more than the ordinary buckwheat, and of better quality. We trust you will distribute the seed in the country from which we draw our supplies."

The Iowa correspondent of the Department speaks of its "wonderful yield—seven pounds of seed yielding thirty-five bushels of beautiful buckwheat, the weight of which is considerably greater than that of the ordinary." I believe that the weight of the ordinary long-cornered black or grayish buckwheat is from forty to forty-five pounds—seldom more than the latter figures. The silver-hull weighed with me last year from fifty-eight to sixty pounds per measured bushel—an important difference! Have weighed none this year, but it looks to be full as heavy.

Concerning the yield:—I have grown it for two years, also the common kind, in adjoining fields, and find the difference to be surprisingly in favor of the silver-hull, perhaps yielding—I have made no accurate experiment with it—two or three times as much, under the same conditions of soil and culture. Many who saw it growing, estimated the yield at fifty bushels per acre. At any rate, it has been awarded the first premium in our county agricultural societies as a field crop, for the two years I have grown it, and the agricultural committee this year not only adjudge it the heaviest crop in the county, but say it was the plumpest and best filled buckwheat they ever saw. Unfortunately, an early frost cut a considerable portion of my crop on low-lying ground. There can be no doubt that it should, and eventually will, entirely supersede the old variety.—*H. S. Goodale, Berkshire Co., Mass.*

## Cut-Worms and Corn.

Put the seed corn into a tight tub or barrel, and pour in enough water to keep it well covered after it swells. For each bushel of corn add a pound or a pound and a half of copperas, dissolved in warm water. Stir well, and allow the corn to remain in the copperas-water twenty-four or thirty hours. Stir several times while soaking. When the corn has remained in the water as directed, take it out and sprinkle a small quantity of land-plaster over it—enough to prevent the grain from sticking together—and plant. Corn treated in this manner will not be troubled by cut-worms, and it will be out of their reach before the effect of the copperas is destroyed. This remedy has been tried by my father for the last twelve years, and always with success. He has tried it repeatedly, in the same field with corn planted without any preparation, and the result was that his corn required no replanting, while in some instances the other corn required replanting two or three times. Other farmers in this portion of the country have tried this remedy, and always with success.—*Cor. Country Gentleman.*

## Shaving the Meadows.

A correspondent of the *Country Gentleman* discusses the question why the hay crop is growing lighter from year to year. Among other things, he says: Another reason has been whispered, which is this: That on account of the great competition among the different mowing machine manufacturers, as to which machine shall shave—yes, literally *shave*—the surface of our meadows the closest, the roots of the grass are really and permanently injured in leaving them bare, and thus very liable to be frozen out absolutely. We believe a good deal of clover is killed out in this way, the crowns being sliced off to the very roots. Close mowing of grass, like close cropping of the human hair, is a very senseless practice. The "velvet cut," as it is called, which makes men with dark brown hair look for all the world like monkeys, deprives the head, to all intents and purposes, of its natural protection. So "shaving" the meadows deprives them of that natural mulching which is such a protection against the droughts of summer and the rigors of winter.