

as ashes accumulate in the horse, and they remain in the casks till spring, when the casks are emptied, and the bones are found to be generally well pulverized, or so soft that they can easily be broken as fine as desired. The mixed bones and ashes are excellent manure for most crops, and especially for fruit crops.—[*Boston Cultivator*.

RELATIVE VALUE OF SUBSTANCES FOR PRODUCING MILK.—Several French and German chemists estimate the relative value of several kinds of food for milch cows according to the following table:

That 100 pounds of good hay are worth 200 pounds potatoes.

460	"	beetroot with the leaves.
350	"	Siberian Cabbage.
250	"	Beetroot without the the leaves.
250	"	Cartots.
80	"	Hay, clover, Spanish trefoil or vetches
60	"	Oil Cake, or colza.
250	"	Pea straw and vetches.
300	"	Barley or oat straw.
400	"	Rye or wheat straw.
25	"	Peas, beans, or vetch seed.
50	"	Oats.

BURNING CLAY SOIL.—Stiff olay soils are sometimes greatly improved by burning a portion of the surface. The burned clay loses its tenacity, and being mixed with that which is unburned, a more friable soil is produced—The burning of clay, however, deprives it of the power to retain fertilizing salts, which it naturally possesses in a high degree. This subject was alluded to in a late lecture by Mr. Holland before the Evesham Farmer's Club. He said :—"Professor Way had two large boxes made, one of which was filled with burnt, and the other with unburnt clay. In these a strong solution of salt and water was poured, holes being left in the lower part of the boxes for the solution, after percolating through the clay, to escape by. It was found that that which ran through the unburnt clay came out almost tasteless, whilst the burnt clay allowed the solution to come away almost as strongly impregnated with salt as when it was first poured into it. The advantage of burning clay was, that in doing so a very large portion of the ground was laid open to the action of the atmosphere, which was of great service, for a large amount of nitric acid and ammonia came down from the sky and strengthened the soil, if the earth was only open to receive it. That was one of the advantages of deep tillage and of burning the soil upon very heavy land."—*Ex.*

Late Pasturing.

Some farmers keep their cattle out as late as possible in the fall, and even into winter. The pastures are gnawed very close, and even the

after-math of mowing fields, as if they never expected to get another crop of grass from them. This is very bad husbandry upon any land, and especially upon that recently seeded with herds-grass. This grass, as is well known to all careful observers, has a bulbous root, and the fine roots that shoot out from the bottom are not as strong as the roots of most other grasses. It is, therefore exceedingly liable to be torn out by the roots by grazing cattle, especially if the grass is short. In a close cropped meadow where this grass has been sown, nothing is more common than to see thousands of these dried bulbs lying upon the surface. We doubt the economy of grazing a herds-grass meadow at any time. But if done at all, it should not be cropped after the first of November in this latitude.

The roots of all the grasses are designed to be covered with their own leaves and stalks during the winter. These and the snow protect them from the alternate freezings and thawings, and bring them out in good condition in the spring. The farmer who undertakes to thwart the designs of Nature in this respect, will find it a very expensive business. The little that he saves in feed now, he loses next season in the diminished yield of the pasture or the meadow. We ought always to manage so as to have nature working with us, instead of against us. This is one of the evils of overstocking farms. The farmer is afraid that he has not quite fodder enough for winter, so he pastures till the ground is frozen. He cuts less hay for the next season, and he is still more sorely tempted to pasture.

It is quite as bad for the cattle as it is for the land. If they have no fodder in the month of November, they lose rather than gain upon pasture, unless it is much better than the average. Every animal ought to go into the stable in a thriving condition—if not fat, at least in full flesh. They are then easily kept thriving upon good hay, or upon hay and roots, straw and meal. After several years' close observation directed to this particular point, we do not think any thing is gained by pasturing in this latitude, and north of it, after the first of this month. All the grasses must have time to cover their roots in order to make lush feed next season. Cattle foddered through a part of October, and brought to the stable about the first of November, in good flesh, are easily wintered. It is better management to buy hay or to sell stock, than to pinch the pastures by close feeding.—*Am. Agriculturist*.

Advantages of Deep Draining.

The following remarks were made at a late meeting of the Surrey (England) Agricultural Association, by an English agriculturist, Mr. Butcher, on receiving a prize for the best practical results of draining.

Entering upon an explanation of his plan of drainage, he avowed himself to be a deep drainer,