

at one operation on the low wagon and drawing about a ton at a time. One of the small Ross power cutters (No. 11), driven by the two horses, which are taken from the wagon, will cut a ton in twenty minutes, but when briskly driven it has been done in less than ten minutes.

I find this mode of preparing fodder to possess several advantages, and on the whole I prefer it to any other. The stalks may be cut, drawn in and chopped in any weather except a pouring rain. The labor of chopping the fresh, succulent stalks is only half as much as cutting fodder; the space they occupy in the silo is several times less than in the common way of storing in barns, and my neighbors are often astonished at the large amount packed solid in so small a space.

The cows prefer the ensilage to dry food, keep in better condition and give rather more milk. An important saving of labor is effected by entirely avoiding placing the stalks in shocks, and then there is no danger of the fodder spoiling in heavy rains.

I have not made a rigid estimate of the cost of ensilage by the ton. On rich soil twenty tons of green fodder may be raised on an acre in the average of seasons.

The past wet summer gave me twenty-eight tons. In very dry summers I have had only fourteen or fifteen tons.

But much depends on the richness of soil, and it is much cheaper to raise heavy crops with plenty of manure. The southern sweet corn, the seed of which I obtain yearly from Burrell & Whitman, Little Falls, N. Y., yields nearly one-half more than our small northern varieties. The cost of the fodder ready to cut ought, therefore, not to be more than one dollar a ton; drawing and filling in would not be greater, probably a little less.

I have found by experiment that cutting dry fodder half and inch or less in length doubles its value for feeding as compared with the common mode of feeding it uncut, and had adopted this mode before employing the silo. The latter is a still further improvement.

An important additional advantage is gained by either mode, besides economy in feeding, by the increased value of the manure, which is short, ready to spread at any time, and is free from the long fibre so troublesome in common cornstalk manure.

Feeding Value of Good Ensilage.

Dr H. M. HOWE of Ferrycliffe Farm, Bristol, R. I., contributes an interesting letter, from which we make the following extract:

The process of preserving fodder by putting it into a silo and promptly applying heavy weight, is, in fact, accomplishing on a large scale what is done in canning vegetables. It is too late now for any one to pronounce canning a failure, because a certain lot of tomatoes sealed up twenty-four hours after filling, are found spoiled upon subsequent opening.

The construction of the silo may be ever so simple, and its sides may be made of any convenient material, but its walls must be plumb, smooth, and be air and water-tight, and strong enough to withstand the side-thrust which results from the weight of the fodder, and that which is put upon it to produce pressure. In most cases it will be, in the end, cheaper to build the silo walls of stone, or brick, or concrete, cementing smoothly the sides and the bottom, not forgetting to drain the ground when that is necessary. It is a very common mistake to make the silo too large. It is better to build several small ones rather than one as large as all combined. The largest silo should have no greater capacity than can be filled and weighted within two days. Beside the absolute certainty of saving fodder put away with this promptness when sufficiently weighted, there is the added advantage of taking off the daily allowance from the entire upper surface rather than cutting

down at one end of a large silo. In the former case, there is no part of the fodder exposed long before it is used.

A silo filled with corn cut immediately upon being brought from the field, and trodden as the filling progresses, which is topped off and weighted with 300 pounds to the square foot, within thirty six hours after the filling has begun, will turn out good, juicy, bright, healthful fodder with absolute certainty. I will not say that good ensilage has not been made, that has had different treatment, but to proceed in this manner is sound theoretical hay, and the results may be confidently relied upon.

It is not remarkable that a food so easily prepared in large quantities which nine cows out of ten will in winter time eat in preference to the best June cut hay that can be put before them, should be given with a free hand. I believe that to the abuse of ensilage more than anything else is due the opposition that some give to this method of feeding. As an exclusive diet it is probably no better for a cow than *sau-krout* and beer would be for a man, but fed in small quantities it supplies a useful variety of diet, and provides a succulent food at a season when such food is scarce, and very useful. In this respect it fills very much the same place that roots occupy. Theoretically the chemist may tell us that well-cured hay differs from grass in that its moisture (water) has been evaporated. Were this strictly true from the herdsman's standpoint, it would only be necessary to add moisture to the hay at the time of feeding to make it equivalent to June grass, and yet any practical man knows this is not the case, and that butter and milk made from hay differ most essentially, both in color and quality, from that made when the cow is fed on grass. The difference between the feeding value of dried corn fodder, and corn preserved in a silo, is probably greater than that known to exist between hay and grass. Practically it is very difficult to cure corn fodder, out before the grain has ripened, when much of the succulence and nutrition ultimately to go with the ripened grain, is still in the stalk and must be put to the credit of the silo, that it takes the plant at the root and preserves it with certainty for future use. This process of preparing ensilage; however, has an improving effect upon the plant. The fodder thus treated, owing to the fermentation which has taken place, has been rendered more digestible, and the feeding value of any nutrient is in proportion to the ease and the rapidity with which it can be appropriated to the needs of the body. A degree of acidity is not incompatible with the good quality and digestibility of the ensilage.

THE POTATO BEETLE IN NEW-ENGLAND.

EDS. COUNTRY GENTLEMAN.—Whatever else may fail, it is quite safe to count on an abundant crop of potato bugs, or Colorado beetles. They came out early this season, and are now found in unusually large numbers for this time of the year. Referring to my memorandum book I find that in 1882 they were first seen on my farm on June 2d. In 1883 they were first seen on May 24th. This year I found quite a number creeping about on May 17th, and on June 1st I found they were depositing eggs on the leaves of my early potatoes. On June 7th I picked 263 beetles from 100 hills of early potatoes.

When they attack young potato plants so early and in such numbers, I think hand-picking is the best way of managing them for the following few weeks. If left to themselves, they retard the growth of the young plants, and do them great damage, and if Paris green is used while the plants are so tender, it, too, will injure them. But if the old beetle can be kept in check until the potatoes get a good start, at about the time the young larvae appear, Paris green can be used to good purpose, and with little or no injury to the crop. I do not like the plan of mixing the Paris green with flour, ashes