

number of acres, but how much butter and cheese, or beef &c. he can make, and, more particularly, what net gain his stock gives him. One cow well fed, all it can eat clean, will generally give more net profit than three cows poorly fed.—My experience goes to show that, as a rule, farmers do not more than half feed their stock, thereby losing the largest part of their possible profits every year.

My advice, therefore, would be: Feed your stock highly, both winter and summer; make sure of an abundance of stock food for at least one year in advance,—and then increase your stock in proportion to your food supply. With high farming, and the purchase of some grain or cake for cattle food (instead of, or in connection with artificial manures), it is quite possible to keep forty head of cattle, of different ages, on one hundred acres, besides the horses and pigs you mention. However, a few sheep of the best breeds might replace some horned cattle with advantage, as sheep will feed comfortably on what horned cattle leave.

Taking it all in all, I suppose the cheapest and best top-dressing to pastures, is a little crushed grain, or cake, fed to stock regularly all the time. The next best is a slight coating of well made manure applied in the fall before winter frosts set in. If, to the above, you add a thorough harrowing, early in the spring, as soon as the horses can travel over it without sinking, also an application of, say, one hundred and fifty pounds of land plaster, and immediate rolling afterward, it should make the pastures as rich as possible. Where facilities exist for composting the cleanings of ditches with quick lime,—an application of three or four tons of air-slaked lime—besides the earth in the compost, would be generally of great benefit to most meadows and pastures, and should be applied before fall rains set in.

The next best plan of improving pastures is to grow green food of some sort to supplement the pasture food the whole season through—beginning with fall rye, then clover, then tares and oats, then Hungarian grass, then second crop of clover, then sweet-corn fodder.—Of course, any such superabundance of green food should all be saved for winter's supply. Two or three acres of such green food, grown quite close to the pasture, and most highly manured, will give as much food in a season as would six times the extent of good pasture. Clover, highly manured, can be cut four times.

You do not give me any inkling as to the rotation you now follow. I see by your letter that on your hundred acres of cleared land you have in pasture twenty-five acres; in hay hundred tons, equal to a fair crop on seventy acres, leaving only five acres for corn potatoes, and grain. I infer therefore that your hay crop has been more than a good average, which is one ton and a half per acre. I shall be glad to hear from you again on this and other points.

Again you speak of breaking up what I take to be your oldest meadow, about ten years old. This should require a cleaning crop—potatoes, corn, or roots, after the oats. Twenty-five Scotch cart-loads should suffice for this crop per acre.

Seeding here is most profitable with mixed clovers, principally alsike, red top and timothy. I know of no grasses to give better meadows. High land, however, might be sowed in June grass and orchard grass, besides clovers. This should be cut early, as they ripen before timothy. There is, moreover, an advantage in having early and late meadows to cut, one after the other, thus extending the haying season.

I see you keep your manure under a shed. This is excellent; on the condition that it be perfectly trodden and that the liquid manure from the stables be also collected and spread over the mass of solids, in order to prevent fire-fanging and also saturate the mass and cause perfect fermentation, without over-heating.

Meadow land would be greatly benefited by a top dressing

in the fall of ten good loads of manure, the effect of which would certainly last three or four years, especially when not overpastured in the fall.

I cannot advise with certainty respecting the application of two hundred pounds of superphosphate and an equal quantity of salt per acre as a top dressing on meadows. Salt is not always useful, and should be treated with care, on a small scale, under various circumstances. As to the superphosphate, I should prefer to use it in addition to the manure you intend to give to your root crops.

Allow me to suggest a slight change in your rotation, which I strongly recommend, viz:

First, oats; second, hoed crop with manure; third, barley and ten pounds mixed clovers; fourth, clover, with top dressing of superphosphate and plaster—(two crops) fifth, wheat with grass seeds (as above)—meadows thus made, in well cleaned soil, and top dressed every third year, should last ten years. Should your meadows prove foul, they would have to be broken up somewhat sooner.

I take it that your pastures are on the banks of a river and inundated from time to time. Such pastures, with the treatment suggested above should become excellent permanent pastures, and need not be broken up at all, with the exception, perhaps, of the small patch of two acres or so which I suggest to have in green food near the stables or the pasture, and which can also grow a rotation of green stuff in the same field; the clover alone being supplied from the clover fields in the rotation. But, to obtain an abundance of green food from the same field year after year, an abundant supply of the best manure would be required, that is, farm yard manure with an addition of, say, a hundred pounds of nitrate of soda and two hundred pounds of plaster.

I have advised feeding ground grain to your stock. Perhaps the young stock might do without it, but your cows should give you a fair profit, and plenty of rich manure for your pasture, were each cow supplied with, say, two dollars worth of crushed grain monthly, each, whilst on pasture. You might try the experiment on your young stock—say, on half your stock,—of feeding one dollar's worth of grain each, per month, taking girth measurements of all, every month, of those fed and unfed, and comparing results.

WINE-MAKING.

Many people in this province having planted vines on a more or less extended scale, we receive every year a quantity of letters, asking for a recipe for the manufacture of wine. As the plant is cultivated, here, under special conditions of growth, it follows that its fruit differs slightly in quality from the French grape, and, thence, it follows that the system of manufacture must be also slightly different.

This difference has necessitated a special study of the question, in our province, and it is only after many an experiment that I have succeeded in making a palatable wine. I must say, here, that after three years work, I have succeeded in obtaining a result more than satisfactory, since a French amateur has admitted, after tasting my wine, that it was the first American wine he had drunk which was at all comparable to a good ordinary French wine. Backed by this approval, I think I am now justified in laying down the following rules for the manufacture of wine:

Vintage—The grapes must not be gathered until they are perfectly ripe. It happens sometimes in our rigorous climate, that, for fear of an early frost, we are obliged to gather our grapes before every berry on the bunches is ripe. I think, in this case, it would be well to strip the bunches, and to throw aside the unripe grapes and the stalks.

When stripped, the berries must be crushed. This may be done by hand, but when great quantities are used, this