

Alfalfa or Lucerne.

We have had another enquiry about alfalfa. We spoke before now of the nature and valuable qualities of this forage plant, and treated of its cultivation and of its profitable adaptability to our soil and climate, but as every year adds to our readers so many subscribers, who have not had an opportunity of reading the back numbers of the *Advocate*, we give, as a reply, the following article, in which a correspondent of the *Rural World* relates his experience in raising alfalfa. The State of Missouri, where he made the experiment, differs, it is true, from that of Canada; but there, too, the winter brings its severe frosts, and plants grown in a warm climate, as that of Missouri, are less hardy, and consequently less able to bear the rigours of winter than if grown in the seed bed in our Canadian climate. If our correspondent would sow on a small scale, as an experiment, he might, at the approach of winter, spread over it some litter, as it would protect it from the freezing and thawing that sometimes winter-kill our hardiest plants, and it would nourish the young plants when the winter has passed away.

"Something over a year ago, I ordered one hundred pounds of alfalfa seed from a dealer at Marysville, Cal., to be certain of getting true seed, as I had heard of common red clover seed being sold for alfalfa. I paid 19 cents per pound, gold; and after paying exchange, freight, &c., my seed cost me about 30 cents per pound. I sowed it very evenly with the timothy sower of my Buckeye wheat drill; had the ground well plowed and harrowed; it was again harrowed by the drill teeth, during the sowing; then rolled the land; sowed sixty pounds on eight acres, and forty pounds on three acres; secured a good catch in each case. But the eight-acre lot was a very foul piece of land (bottom), that had for a long time been in the hands of a bad tenant. The season of 1875 was the wettest known here for many years, and the weeds grew twelve feet high, and very thick, but were cut off and removed, when the tops of the alfalfa were found bleached and dead, but the new shoots were appearing around the crowns, and both fields are now (March, 1876) giving promise of a good crop (perhaps two or three) this season. I sowed the seed on the 1st and 6th of April, 1875, and after it came up, but before it made much growth beyond the second or third leaf, we had several severe frosts which did it no harm, although friends in California had warned me not to sow it, as it would come up before the frosts ceased, and frosts would injure or kill it while young. It has stood the winter well. The crowns are shooting out wonderfully, some having twenty to forty shoots. I pulled up a couple of roots yesterday to show to a friend (small sized ones, where there was a thick stand), and they measured two feet nine inches each, going straight down—evidently hunting the level of the mineral fork. As seeing is believing, I send you one with this. I think you will agree that it bids fair to stand frost, drouth or grazing, and that is what is wanted in a forage plant for this region. I can tell better after trying it a few years, but present appearances indicate that two acres well set in alfalfa will furnish more pasturage than two hundred of common wood pasture. N.W.B."

We would add that the seed of lucerne is large—twice the size of red clover—and a greater number of pounds of seed will be required to the acre of clover seed. Another reason in favor of thick seeding is that the stalks are inclined to grow strong, and cattle do not or cannot eat very strong stalks. For this largeness of the stalks the best remedy is thick seeding. Sow not less than 20 pounds of lucerne seed to the acre. If the plants live through the first winter, you need have no fear of its perishing afterwards. It is perennial, and will give three heavy cuttings in the season.

NOVA SCOTIA claims the honor of possessing the first piece of railroad laid down on the American continent. It is the coal road from the Albion Mines in Pictou County to their shipping wharf. When first built the rail was flat with a groove in the centre in which ran the beveled wheels of the engine and cars. The modern rail has since been substituted. There may yet be seen daily plying on this road, the third steam engine that was ever manufactured. It was built by Stephenson in England. His first was an open cylinder boiler, his second was an experiment in introducing tubes into the boiler to get more heat, his third was a perfect machine, after this manner, and was purchased by the Coal Company and sent to Pictou, Nova Scotia, where it may yet be seen in splendid working order.—*Col. Standard*.

Correspondence.

BEANS FOR FEEDING STOCK.—It has long been a study with our scientific farmers as to what kind of food will produce the most beneficial results with respect to particular kinds of stock. If you will give the following detail a space in your valuable columns, it may be the means of suggesting new thoughts to some of your numerous readers.

Last year I had a quantity of beans so badly injured by the early frost as to render them almost worthless for the market I intended them, and feeling rather "blue" over the loss, I mentioned the matter to a friend (an American gentleman well versed in agricultural and horticultural pursuits). He told me that if I would boil or steam the beans until they were thoroughly cooked and then feed them to milch cows, I would be satisfied with the results. I accordingly did so, and, Mr. Editor, the results are as follows:—The cows fed with the beans began rapidly to increase their flow of milk, and up to the present time continue to give a good supply, although some of them will calve in April. One cow gives more milk daily than at any time last summer.

These cows are not stabled, and are fed at present on hay, but during the greater part of the winter were fed with straw. The quantity of beans given each cow daily equals about two quarts of dry beans. Allow me to add that although the quantity of milk produced has amply repaid both trouble and expense, the cows are also in good condition, some of them almost fit for the butcher's stall.

I believe if the beans had been ground, and the meal given instead of the cooked food, the result would have been still more satisfactory.

Although bean haulm produces an inferior quantity of manure in comparison with the straw of wheat, oats, &c., it should be remembered that the beans grown exhaust the soil much less, the succulent stems and leaves absorb much nourishment from the atmosphere, and both carbon and mucilage are restored to the soil by the leaves falling off and decaying.

It is frequently advocated that the soil upon which beans are to be grown should be worn out, but if the advocates of this theory will manure the ground well before planting, and take the trouble to keep their ground well cultivated and free from weeds until the vines begin to blossom, they will find the crop not only greatly augmented, but after the crop is removed, the land will be in excellent condition to receive fall wheat. In fact, some of our "American Cousins" prefer this preparation to a fallow.

According to Einhoff, the proportionate amount of nutriment matter, in comparison with other grain, is as follows:—Wheat, 47; rye, 39; barley, 33; oats, 23; beans, 45; and peas, 49. This calculation is based on equal measurement.

Thus whilst raising a kind of grain highly nutritious, the grower is not heavily taxing the soil, and, by judicious cultivation, the land is made free of weeds, and fitted to receive other grain.

I did not intend to say anything with respect to the growth of beans when I commenced writing, my object being merely to write about them as food for milch cows. Yours, &c., ECONOMIST.

Aylmer, March 22.

We had purposed to include an article on the cultivation of beans as a field crop in the contents of the next number, feeling assured that its value was not sufficiently appreciated. Would our Aylmer correspondent let us have an article descriptive of his mode of culture.

WINTER FEED FOR HORSES.—I feed my horses sheaf oats, cut with the straw-cutter. It makes a cheap and wholesome feed for horses working on the farm. One good sized sheaf makes a good feed for each horse. The oats should be sowed on clean ground, and more seed to the acre than if sowed for other purposes; they should be cut on the green side. The manger should be made close, and the bottom eighteen inches higher than the floor. I use no other feed for my horses from the time the fall ploughing commences until the month of March, and they always look and feel well. It is also excellent for calves.

C.W.R., Markdale.

We endorse C. W. R.'s recommendation of sheaf oats as provender for horses. We used it for that purpose for years. Oats for this use should always be cut when the grain is merely commencing to change color. The grain having then been fully grown, possesses its nutritive properties, and

the straw retains its succulence. Oats so treated, is hay and oats combined. A span of horses that got no other feed, we saw come into this town, heavily laden, and their spirit and excellent condition were clear demonstration of the value of sheaf oats for horse feed.

ILLNESS IN JUVENILE SWINE.—I have for some years back lost several young pigs by some disease that I do not understand. When from two to four weeks old they gant up in the belly, their ears hang, their breathing is quick and short, and they die in one or two days. If you can tell me the disease and what will prevent it, you will greatly oblige. My pigs are the Improved Berkshire breed. In '73 I fed pea meal, and last spring I fed shorts, but with no better result. SAMUEL STAPLES.

Cavan, March 22.

The disease of young pigs may be caused by confining them to too great a sameness of diet. Were you to give them some other food, it might have a good effect. Cooked potatoes might be of service. It would be a great change, and especially if they be in any way costive, cooked roots would serve them. Or the cause might originate from the sow. Young pigs sometimes die in consequence of their dams being in too high condition. We would thank any of our readers, who have experience in the matter, to write to us about it.

ON THE MODE OF TREATING COWS.—Kindly give me some information on the treatment of cows a short time before and after calving. What is to be done if they do not "clean," as the term is with us farmers, and much oblige, etc., S. F. HUNTINGTON.

[The best advice or information we can give on the above subject is to take good care of your cows before and after calving. Keep them in a healthy, thriving condition up to the time of calving as well as after. There is a heavy strain on the system of the cow in calf for two or three months prior to calving, and hence the necessity of great care and good feed, with a warm stable or tight enclosed shed, which will protect them from the cold and storms. Give them plenty of good hay, with some roots and bran or meal. Cows treated in this way are seldom any trouble. At the time of calving, keep them as quiet as possible, and give them warm bran mashies, with luke warm water. On no condition allow them to drink cold water for a couple of days. Some dairymen give their cows a half-dozen or more ears of corn that have been scorched or smoked slightly over the fire, or a sheaf of oats that has been treated in the same way. But should the after-birth not come away properly, the best thing to be done is to let nature take its course, giving the cow warm feed, with some boiled flax seed and a little salt-petre. Being disturbed and worried at the time of calving, and allowing them to drink ice cold water is the frequent cause of trouble.]

ROTATION OF CROPS.—I wish you to publish in your paper a regular rotation of crops for general farming purposes. ALBERT E. MENTHORN.

Oakwood, March 22.

ROTATION of crops has been already fully treated in our columns; but as there is a numerous addition to the list of our subscribers, they who have been reading our paper but a comparatively short time may need information on some topics that we had previously written of. We will, therefore, take up the question in the May number. Meanwhile Mr. M. may, as a commencement of the rotation system, sow a plot with peas and oats mixed. They make a very good cattle feed before corn can be sufficiently grown for cutting. We have not found a better summer feed for the farm stock, and, more than others, for milch cows. The varieties of both that give most fodder should be selected if they can be had. The earliest sowing in the season is fall rye, but any one commencing in spring or summer, without previous fall preparation, cannot have the profits of sowing earlier than the oats and peas are grown.

ODESSA WHEAT.—In your last *Advocate* you speak of the Odessa wheat. Last year I procured four ounces of it from the northern part of Wisconsin, I sowed in a field with other wheats, it stood up first-rate, it filled well, did not rust, the quality I believe to be excellent, it yielded considerable better than other wheats in the same field, I cannot say exactly how much more as I did not measure the land sown by either variety, but the four ounces of Odessa yielded five pounds of as good spring wheat as I ever saw; every one that has seen it tries to get a few grains, in fact I would not have a grain to sow if I had not put on the breaks pretty strong. JAMES SHERLOCK, Thamesford.