

ables it to keep a regular speed. Now, I feel sure there are plenty of farmers who have had experience with wind-power who will sanction what I have said.

Simcoe Co., Ont.

Ronald Chisholm, Clydesdale, Antigonishe Co., obtained similar results with peas. Chas. W. Maxwell, Mount Thom, Pictou County, came 20 miles and got a load of earth from a field on which we had grown several heavy crops of peas and vetches. Some of this soil was scattered thinly over the field on which peas were sown; some of the earth was put in a tub and mixed with water, and the water poured over peas, which were sown on a field which had previously positively refused to grow this crop. This experiment was on a field that, although some distance from, was in plain view of the main road leading from Truro to Pictou. The result was that, where the seed had been treated with this muddy water, there was a good thick crop of healthy plants, which kept a thrifty appearance throughout the season; while, on the portion of the field left untreated, although the seeds germinated, the plants remained sickly, and made so little growth as to give the field the appearance, from the road, of not having been seeded at all. I could cite many other instances of this kind, but this will suffice to show the possibilities of this treatment.

For the season of 1907, about seventy-five samples of the culture were sent out, the reports of which are still being received. From the forty reports now in, we now have twenty-five reporting splendid results, eight fair results, and seven state that they could see no benefit from the use of the cultures. Many instances of marked results were reported. Quite a number have also expressed their conviction that the use of nitro-cultures is a feature in farm economy, and have avowed their intention of treating all their legume seeds in future.

A close observation of these returns reveals the fact that in every instance where culture was used on alfalfa good results were reported. We have also found out by inquiry that, on other crops, where no difference between treated and untreated plots was noticeable, there was invariably a splendid crop. This leads to the conclusion that it is unnecessary to treat seeds to be sown on fields which have already grown good crops of the particular kind you wish to sow. It also indicates that it would be wise to use cultures on fields on which we intend to sow any leguminous crop which has not already grown well on that field.

As an effort is being made to introduce alfalfa, it would certainly be a wise precaution to treat all such seed.

Regarding these cultures, I may say that arrangements are being completed to have them prepared at the Agricultural College, Truro, and

that they will be sent free of charge to any student of the College, or to anybody who has reported regularly in the past.

STILL ANOTHER BARN PLAN.

Editor "The Farmer's Advocate":

I am sending the plan of my barn, built last summer. It is 40 x 100, with posts 18 ft. 9 x 9 inches square; purline posts, 30 ft. 9 x 9 inches square. There are 6 bents, beams 12 ft. 9 x 9, frame all hemlock, and cedar sleepers. Roof close-boarded, and covered with the Pedlar roofing, galvanized, 28-gauge, and also galvanized eavestroughing. It is sided with first-class hemlock, and has dressed-spruce doors. Long rafters 18 feet, short ones 10 feet; west mow 20 feet, floor 14 feet, center mow 32 feet, floor 14 feet, east mow 20 feet; stone wall 22 inches thick; ventilators 10 x 12 inches, from cellar to roof. I worked in my old barn, and had some timber out of my own bush. There are several small things I have not put on the drawing, as I have water in the stable, meal boxes in each alley, and so on; water pumped by windmill. I have it fixed so as we only go up in the barn to throw down feed once a day. Accommodates 38 cattle and 7 horses, with three box stalls.

Durham Co., Ont.

W. J. LANGMAID.

ANOTHER YEAR'S EXPERIENCE WITH ALFALFA.

Editor "The Farmer's Advocate":

ALFALFA CULTURE BUT BEGINNING.

From the many inquiries regarding alfalfa, it is quite evident that there will be more of it sown this year than last, and more next year than this. As Mr. Joseph E. Wing, Expert Agriculturist, of Ohio, speaks of it, "Alfalfa-growing is only just begun. In the Eastern States, one farmer in ten in favored regions is growing it, and he is growing only half, or, it may be, one-tenth, of what he will some day. The other nine farmers will learn—they must—or else be crowded out by their more favorable competitors." What surprises me is that the farmer is so slow in growing it. Enough has been said in the columns of "The Farmer's Advocate" to persuade every farmer to have at least one-fourth of his farm seeded with it. I have spoken to many of the possibilities of growing it, but so few seem to "catch on." In days gone by, when swindlers travelling the country were more common than now, I used to think that farmers, as a class, were not cautious enough. I am beginning to

EXPERIENCE WITH NITRO-CULTURES IN THE MARITIME PROVINCES.

The following article, by F. L. Fuller, formerly Agriculturist on the Agricultural College Farm at Truro, has been prepared for the annual report of the Nova Scotia Department of Agriculture, shortly to be issued. Published by the courtesy of Prof. M. Cumming, Secretary for Agriculture, and Principal N. S. Agricultural College.

We are living in a progressive age. Wonderful discoveries of to-day will be household words a few years hence. In fact, great scientific revelations have followed one another in such quick succession that people have ceased to be incredulous. A few years ago, when it was proclaimed that it was possible to increase the power of a family of plants to fix the free nitrogen of the air, by inoculating the seeds with certain bacteria, people were not surprised. While the fact that certain plants had power to collect nitrogen in some unknown manner had long been recognized, it was not until very recently that anything definite concerning the matter was generally understood. It is now generally accepted that this ability to fix nitrogen is due to the action of certain bacteria in connection with nodules which appear on the roots of a family of plants, such as beans, peas, alfalfa, and all our common clovers, known as the legumes. It is further accepted that this power is superinduced by inoculating the seeds of these plants with a culture prepared for this purpose. As there is a constant loss of nitrogen from the soil in many ways, it would appear that the continuation of agriculture depends on the existence of some means of reclaiming it out of the atmosphere. As farmers became more convinced of the great importance of and the constant loss of this element, they became more interested in the so-called theories as to its sources of supply; hence their willingness to try nitro-cultures.

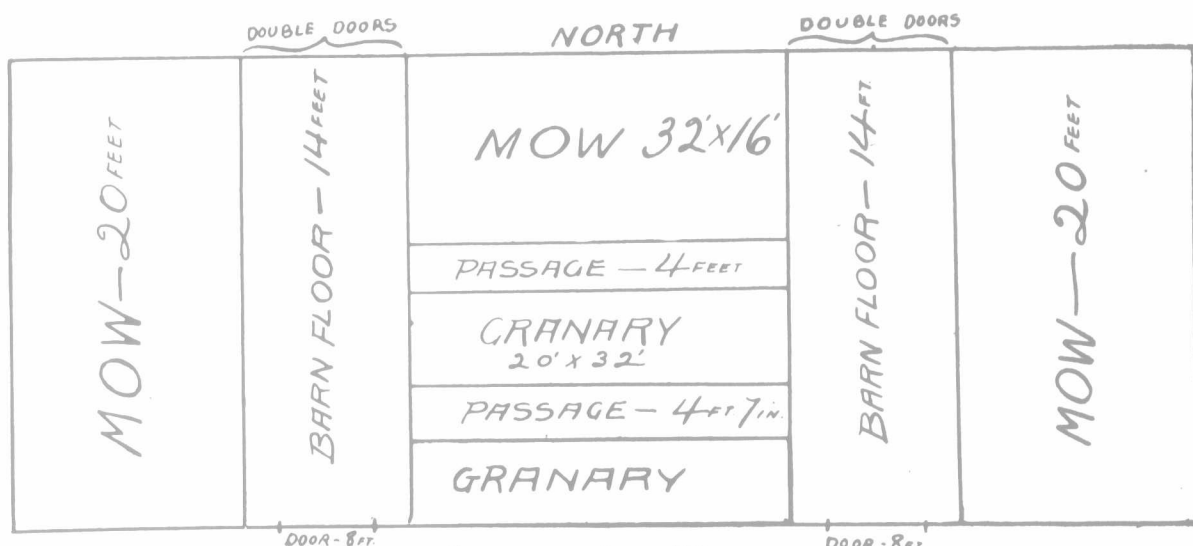
NITRO-CULTURES—GOOD AND BAD.

Recognizing this demand, dealers have put several brands of this article on the market. They are widely advertised, their virtues greatly exaggerated, and their value, in many cases, very doubtful. In order to get all the information possible, we began some experiments on the College Farm in the season of 1905. The results justified a broader investigation, and arrangements were made by which we have had the co-operation of farmers from all parts of the Maritime Provinces during the last two years, the result of which is herewith given:

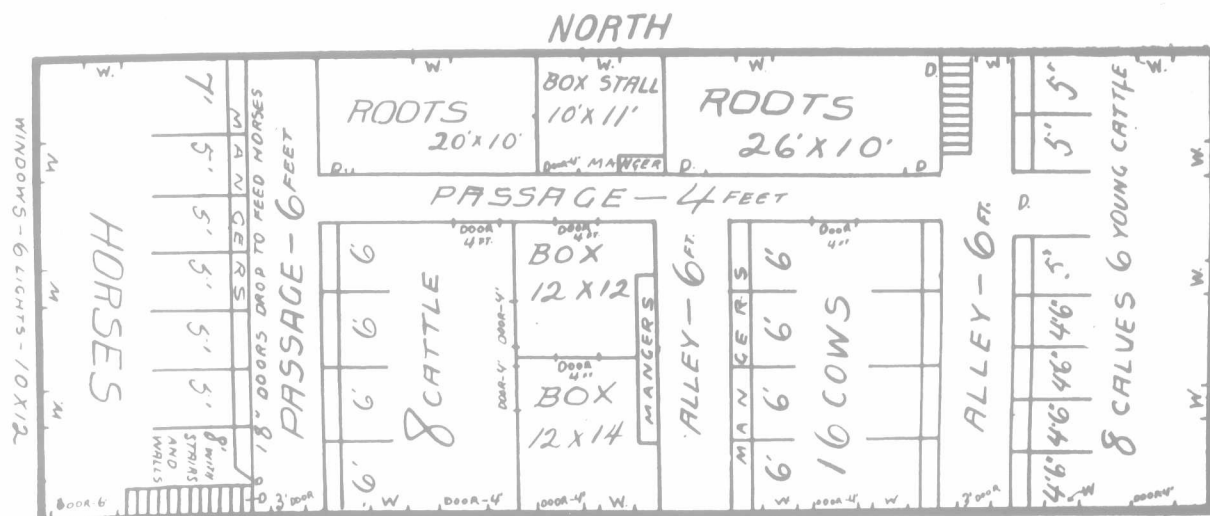
In the spring of 1905, nitro-cultures prepared by the United States Department of Agriculture, and those prepared by the Ontario Agricultural College, Guelph, were tried under similar conditions. These cultures were used on peas, vetches, red clover and alfalfa. In every instance plots with treated and untreated seed were sown side by side. On peas, vetches and red clover I could see no difference between the treated and the untreated plots. I may say, however, that these trials were on fields which had previously grown these crops abundantly, and produced a heavy growth during that season. On the alfalfa, however, while I could notice little or no difference between the plots which had been treated with the United States culture and untreated plots, there was a marked difference in favor of Ontario Agricultural College cultures. This difference increased as the season advanced, until, at the end of September, when the second crop was about a foot high, the difference in the plots was noticeable from the College windows, a distance of at least 40 rods. Furthermore, when the roots were examined, while some nodules were found on the roots of untreated plots, the roots of the treated plots were literally covered with them. Similar results were obtained on different fields on the Farm, and on plots sown at different dates. When it was decided to enlarge our scope of work for next season, arrangements were made with the O. A. C. to send cultures, free of charge, to the names forwarded. In the season of 1906 about fifty farmers availed themselves of this privilege, and, from the reports received, one-half claim excellent results, one-third fair results, and the balance, or one-sixth, could see no difference.

STRIKING RESULTS FROM INOCULATION.

Some of the most careful experimenters report wonderful results. Alex. McDonald, of Sylvan Valley, Antigonishe County, reports that in the spring of 1906 he sowed a plot of alfalfa, about twelve rods square, using culture, and a plot adjoining without culture. The first of August it was cut, when it was about twenty-eight inches high. It was cut a second time on September 15th, when it was about twenty inches high. The roots of the treated plots were loaded with nodules, while the untreated made a poor growth, and the roots contained no nodules.



Second Floor Plan.



Basement Plan

PLAN OF W.J. LANGMAID'S BARN
DURHAM CO. ONT.