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APRIL 18, 1907

THE FARMER'S ADVOCATE.

665

WASTING MONEY ON ROADS.

We have given enough time in investigating the value of the road drag, says Wallace's Farmer, to be absolutely convinced that, after the road is first drained and graded, an expenditure of five dollars a mile in the use of the drag will keep the roads in better condition than any living man has ever expected to see them, or that nine men out of ten believe they can be kept. We simply throw money away in allowing the roads to go un-drained and ungraded and wash out, and then get men and teams together, use an expensive grader, pile up a lot of loose dirt, and, with grass and weeds galore in the middle of the road, rendering it something to be avoided until necessity compels us to use it. This is simply folly unspeakable, and a waste of good money.

It is equally folly for us to put in wooden culverts. The time has gone by when any culverts should be made of wood. It is equal folly to undertake to build stone abutments for bridges, even though the stone were quarried and lying on the ground. These stone foundations for bridges will just as surely crumble as the years come. Twenty years ago road supervisors ceased to build stone bridges, but, instead, put in piling in iron tubes. These will stand for two or three generations. It has been perfectly clearly demonstrated that cement is cheaper than the stone quarried and lying ready to put in. Therefore, if we are to save our money, we must discard these bridges with stone foundation, put in cement; discard all the wooden culverts, using cement instead, and then, when the road is once drained by tiling or otherwise, and graded, use simply the road drag.

There is not much to the road question where the rainfall is less than twenty inches; but where the rainfall is from thirty to forty inches, we must have mud and misery three or four months of the year, unless we learn how to use our money, collected in the shape of taxes, intelligently. The great trouble is to get road supervisors to quit patching up roads or bridges or culverts and put in permanent culverts and bridges, using cement, costly as it may seem at first, but with the confidence that it will stand until their grandchildren are ready to vote. Having done this, quit patching up the roads. Drain the roads if they need draining, and grade them if they need grading, and then make it to the interest of the farmers to get out after every rain and drag the roads, using the cheapest and lightest drag that they can possibly make.

FREE ADVICE ON LAYING OUT DRAINAGE SYSTEM.

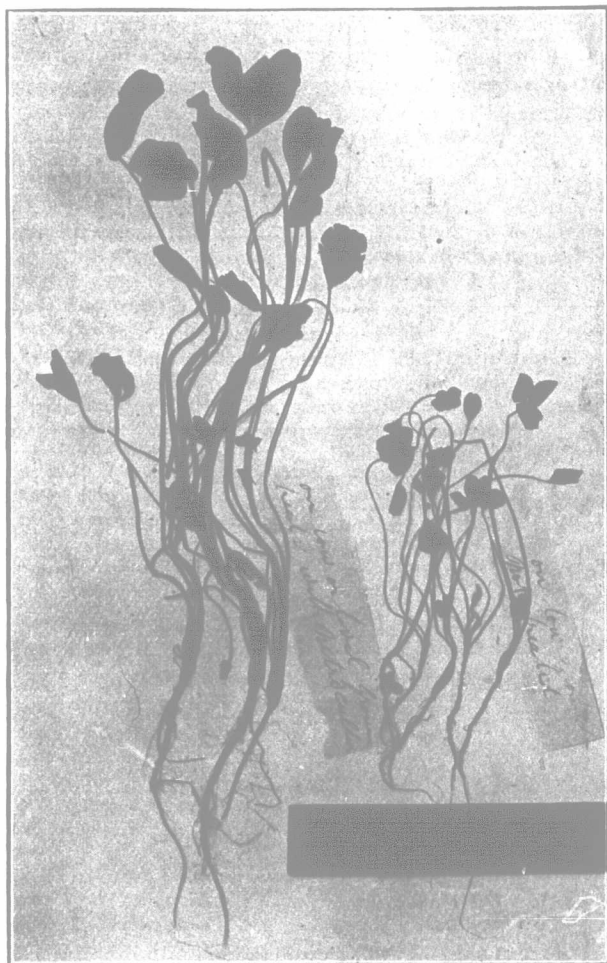
For the past two years the Department of Physics of the Ontario Agricultural College, Guelph, has been authorized by the Provincial Minister of Agriculture to go out among farmers who requested its services and take the levels of their land for drainage purposes, locate the drains for them, and give information generally on the subject of farm drainage. The only expense entailed on the applicant for aid is the travelling expenses from Guelph to the place of operation. Several in one vicinity may make arrangements to have their work done at the same time, and by each man paying only his proportionate share, the expense to each is very small. We are requested to announce that Mr. W. H. Day, B. A., the Lecturer in Physics, will be again available this summer for the purpose of laying out drainage systems, and one fact that should still further increase the demand for his services is that President Creelman has made arrangements by which members of the College staff travel at a rate of one cent per mile each way. A person living, say, 50 miles from Guelph would have an outlay of only \$1.00 for railway fare, and 25 or 50 cents for cartage of instruments, and the services of the expert will be at his disposal long enough to survey his land, advise him as to the best course of his drains, and provide him with a map showing the same. Our readers will remember the recent series of most acceptable articles by Mr. Day on the subject of "Practical Farm Drainage," and we trust that this summer, as last, a large number of our subscribers may avail themselves of this extraordinary opportunity. Apply to W. H. Day, Lecturer in Physics, O. A. C., Guelph, Ont.

NEW VARIETY OF CLOVER.

Bulletin 45, Bureau of Plant Industry, Department of Agriculture, Washington, U. S. A., describes one or two types of red clover brought from the black soil of Russia. The variety considered most promising is called Orel, and one advantage claimed for it is that it is hairless, like alsike clover, hence is expected to make less dusty hay than common red or Mammoth clover. It is said to yield well and produce much leafage, but is two weeks later than common red, coming in about the same time as Mammoth. It is not recommended as a substitute for either of these, but as a supplement to one or the other.

AN EXAMPLE OF INOCULATION.

Following the ample information published by "The Farmer's Advocate" of late on the subject of artificial inoculation of legumes, the accompanying engraving will be of especial interest. The cut shows two plants of red clover grown in the Province of Saskatchewan, one from seed that had been treated with nitro-culture, the other from untreated seed. We are not very fully in-



The Results of Inoculation in Saskatchewan.

formed about the conditions under which these clover plants were grown, except that the soil was rather low. It is, however, a safe guess that it was on a farm where clover had not been grown heretofore. Had this crop been grown on adjacent fields that were pastured by stock kept on the farm, the soil of this field would probably have been more or less supplied with the nitrogen-gathering bacteria, hence nitro-culture would not have given such marked results as it did.

One other fact that may be safely deduced from the illustration: The soil, even though low, could not have been very sour or very poor in the mineral elements, else no amount of inoculation would insure a vigorous growth. To grow clover or alfalfa successfully, all the conditions must be right, and the presence of the nitrogen-

gathering bacteria is only one of these conditions.

The practical point impressed by the picture is this: If sowing clover on a farm where clover has not been grown recently, or if sowing alfalfa on a farm where neither alfalfa nor sweet clover has ever grown before, it will, in all probability, pay to scatter over the field one load per acre of surface loam from an old-established clover or alfalfa field. If this is not practicable, send to the Ontario Agricultural College, Guelph, for a bottle of nitro-culture for the particular clover or other legume you wish to grow, and treat the seed with this. If, besides, you will make sure the soil is sweet, by applying 30 to 50 bushels of lime per acre, you have done a very great deal to insure a successful catch and a profitable crop.

THE DAIRY.

A SYSTEMATIC RECORD.

Editor "The Farmer's Advocate":

Below find record of 14 cows for 1906. Milk weighed and recorded twice daily; scales, sheets and pencil in stables. Time required for weighing and recording, about 15 minutes for 14 cows. This is our first year weighing. Milk recorded under any circumstance is to a decided advantage. Every cow every day tells her tale. It is for him who feeds and milks to take heed.

Our cows are mostly Shorthorn grades, of milking strain. Milk tested twice during season, average 3.84 butter-fat. Milk recorded as follows: Fourteen cows, 69,272 pounds; average, 4,948 pounds per cow; average test, 190 pounds butter-fat, equals 226 pounds butter each.

Cash returns as follows: Returns from factory for cream, \$626.44; for veal calves, \$25.50; kept nine calves, estimated to average ten days' each whole milk, \$25.60; 80 per cent. of whole milk (making 55,417 pounds skim milk, at 15c.), \$82; two families, using four quarts daily, for 10c. per family, for 365 days, \$36.50; gross amount, \$795.44. An average of \$56.78 per cow.

Westmoreland, N. B. ALEX. L. WRIGHT.

NOT "WORKING IN THE DARK" HERE.

Editor "The Farmer's Advocate":

Starting from January 1st, 1907, our books will show a record of each individual cow, from the date of freshening throughout the year. At the present moment we have only seven record cows, but this number will shortly be greatly augmented, until we reach fifty—our limit for the next twelve months. We shall keep a strict record of our cows, because we wish to establish a dairy herd of the greatest possible excellence, capable of giving us the highest returns; and it is impossible to know the value of a dairy cow by any other means.

The extra time required is not more than three minutes for each cow. The cows are numbered. A lad receives the milk from the milker in a pail kept for the purpose, which has been weighed. He carries it to the scales and weighs it, enters the weight on the record sheet corresponding with the number of the cow, and with a tiny dipper takes a sample of milk from the pail for the test bottle,



The Results of Inoculation.

Showing two plots of alfalfa seedling on the Agricultural College Farm, Truro, N. S. The plot on the left was grown from untreated seed; that on the right from seed that had been treated with nitro-culture. Mark on stake, 10 inches from ground, shows height of alfalfa plants in inoculated plot; same stake is to be seen in uninoculated plot.