

### Protecting Cattle Against Tuberculosis by Vaccination—An Interesting Report of Experiments Made in Pennsylvania.

Editor of The Progressive Farmer:

Please find enclosed a preliminary statement upon some experiments upon the protection of cattle against tuberculosis by vaccination. The work upon which this statement is based is so convincing that there remains no room to doubt that the procedure is effective; whether it may be applied practically remains to be determined.

The vast practical advantage of such a plan will be evident to you from the fact that tuberculosis of cattle now causes in Pennsylvania losses amounting to at least one million dollars annually and the losses in the other Eastern and in some Western States are in proportion.

Yours respectfully,

LEONARD PEARSON,  
State Veterinarian.

Harrisburg, Pa.

Some experiments on the vaccination of cattle against tuberculosis have recently been published by Dr. Leonard Pearson, State Veterinarian of Pennsylvania, and Dr. S. H. Gilliland. These experiments were conducted at the Veterinary School of the University of Pennsylvania, with the support of the State Live Stock Sanitary Board. The work has been in progress more than two years, thus antedating all other work along this line, for the German investigations of von Behring did not begin until July, 1901. No other investigations of this sort have been reported in any other country than in the United States and Germany. The process used was to inject into the vein of the animal to be protected a small quantity of a suspension of tubercle bacilli non virulent for cattle. This procedure, called vaccination, may be repeated several times with gradually ascending quantities. The immediate effect is to produce a passing fever following each injection, which does not annoy the animal enough to cause it to lose a single meal. The general health is not disturbed by the process of vaccination. When the series of vaccinations is completed the animal had an astonishingly high degree of immunity to tuberculosis. In the last experiments completed four young cattle were used. Two of them were vaccinated last March. All four were inoculated in July by injecting into the windpipe a quantity of culture of virulent tubercle bacilli. A large quantity was introduced and each of the four animals received exactly the same treatment. These animals were killed in October. It was found that the cattle that had not been vaccinated were extensively tubercular, showing alternations of this disease in the windpipe, lungs, throat and intestinal glands; while the two vaccinated animals, inoculated the same time, from the same material, and in the same way, were free from tubercular infection and were sound.

Dr. Pearson considers that this

principle of immunization as applied to vaccination against tuberculosis of cattle is proven, and it now remains only to work out the details of the method. This important work is being continued on a larger scale for the purpose of ascertaining the simplest and shortest practicable method of vaccination.

It is not yet known how long the immunity will last nor what the ultimate effect upon the animal will be. So far, however, as the few experiments here and in Germany show, no fear need be anticipated of unfavorable results in these particulars. What is needed now is the painstaking use of the method on a few tubercular herds kept under careful and continuous observation. A scrupulously careful trial on a limited scale under proper conditions will do more to furnish the information needed to answer the few remaining questions upon this discovery than any amount of general use under less careful supervision. In the estimation of the investigators it would be premature to apply this vaccination to herds until such further experiments are completed. An effort will be made to secure State aid for experiments on a scale large enough to solve this most important problem.

### EAST AFRICAN COTTON.

#### First Shipment Significant of Wide Possibilities of Future Growth.

The first shipment of cotton from East Africa, as well as the first successful crop of Egyptian cotton ever raised outside of Egypt has just arrived on German soil, says United States Consul Monaghan, in a report to the State Department from Chemnitz, the report reaching Washington last week. Although consisting of but four bales, the shipment is regarded as signifying the wide possibilities for the future cotton import trade of Germany, and should further efforts prove successful, German East Africa, says the consul, may become an important source of cotton for German mills. The product is of a brownish yellow color and has a long silky fibre. Credit for this achievement, the consul adds, is to be attributed to the skill of American agriculturists whom the German government engaged to go to East Africa and instruct the natives in the method of preparing the soil, planting the seed and harvesting the product. "This all goes to show," the report concludes, "that Germany's commercial policy includes an effort to make herself independent, as far as possible, of all foreign markets in the matter of raw materials."

Louisburg Times: Tobacco continues to roll in and our stemmies are kept busy day and night. Several hundred more stemmies could get employment here. All of the prizehouses are full up with tobacco, and the buyers would rent several more if they were here.

### The Buff Plymouth Rock.

Editor of The Progressive Farmer:

What kind of fowls, kind reader, do you intend to breed this spring—the common, mixed-up, mongrel stock you've bred for the past ten years, or stock of the thoroughbred class? Now, if you are satisfied with what you have and don't care to make a change, then to you I have nothing to say. But if you happen to be one of the progressive class, and believe in thoroughbred stock and want the best, then I can make a few suggestions that will be helpful.

I have bred, during the past ten years, many different kinds of fowls—Brown Leghorns, Buff Leghorns, Black Minorcas, Barred Plymouth Rocks, Silver-Spangled Hamburgs, Silver-Laced Wyandottes, Black Langshans, etc., but none that I like as well as the Buff Plymouth Rocks. As an all-round, general-purpose fowl the Buffs cannot be surpassed, and are rapidly coming to the front as the peer of the Plymouth Rock family.

To meet the market requirements, the bird must be plump in all stages of its growth, with rich yellow skin and shanks, no dark pin-feathers, rich yellow meat, and sufficiently large so that one bird will make a good square meal for the average family. The Buff Rocks fill every one of these requirements without a single exception, and are the only fowl that I know of that does. The Barred Rocks, no doubt, would be equally as good as the Buffs, but for the fact that when picked their flesh contains black pin-feathers, which is very much against them when shipped as broilers or when used as a table fowl at home. The White Rocks, while they pick clean, are not so large as either the Buff or Barred, nor are they near so hardy or do they lay as well. As an all-round egg-producing fowl the Buff Rocks are as good, perhaps, as can be found, and as a table fowl they cannot be excelled. They are fine winter layers, under favorable circumstances, and in this respect have but one superior—the Black Langshans; but take them the year round they will leave the Langshans far in the rear. Their color is a beautiful golden buff, and a yard full of them is as pretty a sight as one would wish to see. Try them, and we will venture to say you will stick to them for all time to come.

I will say, however, by way of parenthesis, that this article is not intended as an advertisement of my stock, for I have neither fowls nor eggs for sale, but simply to help some brother who is undecided what fowl to breed this spring to choose one that will undoubtedly give satisfaction under all circumstances.

WALTER L. WOMBLE.

Wake Co., N. C.

The T. T. Loftis farm, nine miles southeast of Brevard, has been sold to B. G. Estes, of Buffalo, N. Y. Mr. Estes contemplates stocking this farm with Angora goats.—Asheville Citizens.

### Bermuda, Johnson and Other Grasses.

I want to ask the readers of The Progressive Farmer for information on Bermuda and Johnson grasses, as I have a rough, thin-soiled place on a mountain apart from my home place and joining no one else, and can find none of our grasses here that will make a permanent stand on this thin-soiled, hot, southwest land.

Does Bermuda grass produce seed, and if so, where can the seed be bought, and what would be the price? If propagated from the root, where and how could it be bought. What kind of grazing does it make for all kinds of stock? And is it very bad to spread to land where it would not be wanted? And would it be hard to kill on cultivated land? What height does it grow and will it make a permanent stand on thin, rough, mountain lands?

Also whether it would be advisable to risk the trial of Johnson grass on the above named land, as it is not likely to ever be used for anything but grazing for many years to come. Could the Johnson grass be kept grazed down so as to keep it from producing seed, so as to prevent it from spreading by the stock or by birds or washing down streams?

I earnestly desire the above information from you or some reader of The Progressive Farmer.

W. K. RHODARNUR.

Haywood Co., N. C.

(Answer by Prof. W. F. Massey, of the North Carolina Agricultural Experiment Station.)

I would say to your Haywood County correspondent that he had better let alone both Bermuda and Johnson grasses. Bermuda is the finest possible pasture grass for the warm soil of the cotton belt, but can never be anything but a nuisance in the mountain country of Haywood. Johnson grass, while a valuable hay grass in low moist land, becomes a nuisance by spreading throughout the whole country and would not do so well on the land which your correspondent describes, and would be a means of scattering it all over the country where it is not wanted. Down here, where Johnson grass is all over the country, I would not hesitate to use it on a low piece of ground, but the man who introduces it into a section where it is not already planted should be prosecuted for a nuisance.

I would think that if the land he mentioned is well broken and fertilized he could grow a mixture of orchard grass and tall meadow oats grass more successfully than either of the grasses he names. Johnson grass is not a pasture grass at best, for about the only thing that will kill it out is hard pasturing.

Last year the Journal announced that Mrs. W. A. Thomson, of Faison, had a lemon to grow at her home to the size of 22 ounces. This year she is the owner of one from the same tree that weighs 39 ounces.—Duplin Journal.