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United States Department of Agriculture,

BUREAU OF ANIMAL INDUSTRY.

PREVENTIVE VACCINATION AGAINST BLACKLEG.

For several years frequent reports have come to this Bureau concerning the great mortality from blackleg among young stock in many widely separated districts of the United States. In some of the Southern and Western States especially, the annual losses from this fatal disease have been so great as to equal or exceed the losses of cattle from all other causes combined. These losses have been particularly felt by the progressive stock owners, as by far the largest percentage of the calves which became affected were either full blood or highly graded animals, which seem to be more susceptible to this disease than the ordinary common-bred stock. As the continued existence of this disease has a very detrimental effect upon the cattle industry in general, and especially upon those stock-owners who, through untiring efforts and great expense, have endeavored to improve their herds, an investigation has been made by this Bureau with a view to devising some measure through which the steadily increasing losses might be arrested, or reduced as much as possible.

In Europe, where this disease has long prevailed, the annual losses in certain badly infected districts became so disastrous that cattle raising had to be abandoned. About fifteen years ago, three French scientists, Arloing, Cornevin and Thomas, succeeded in producing a vaccine against blackleg, which is now extensively used in many countries where the disease prevails to a serious extent. The method consists in injecting into each calf two doses of highly attenuated blackleg virus, with an interval of ten days between the two inoculations. The first inoculation is made with a very mild vaccine, the so-called "First Lymph," and the subsequent one with a stronger virus, the "Second Lymph," and in each case the vaccine is introduced by means of a hyprodermic syringe under the skin of the lower part of the tail. This method, which is very inconvenient, especially where a large number of animals are to be treated, was later modified by a German scientist, Kitt, who reduced the process to a single injection with less attenuated virus, and who chose the loose skin on the side of the chest, just behind the shoulder, for the point of inoculation. Kitt's method has been adopted to a very large extent in Eastern Europe and Northern Africa with very satisfactory results, and it has, for that reason and on account of its simplicity, been taken as the foundation for the investigations made by this Bureau.

A "single vaccine" has been prepared in the pathological laboratory, and subsequently tested on a large number of calves in Texas, both common and high-grade stock, and the results warrant the conclusion that this vaccine is in every way satisfactory. It is desired, however, before distributing the vaccine to stock owners in general, to obtain a record of several thousand successful vaccinations. For this purpose a quantity of vaccine will be distributed to such parties as may desire to make preliminary vaccinations and report the results to this Bureau. Those stockowners will be preferred who already have experience in vaccinating stock for blackleg, and are in possession of a vaccinating outfit. Explicit instructions will, however, be sent with the vaccine to secure uniformity of operation and to assist those without previous experience in the vaccinations. Persons lacking the necessary outfit should procure one if they propose to test the vaccine. It consists of a graduated 5 c. c. syringe with detachable needles, a small porcelain mortar and pestle, a glass funnel and some filters. This outfit cannot be supplied by the Department, but must be purchased of some house which supplies such articles.*

Upon applying for vaccine please answer the following questions:

1. To what extent does blackleg prevail in your part of the country, and how great is your annual loss from this disease?
2. What experience have you had in vaccinating calves against blackleg?
3. How many head do you wish to vaccinate, and what class of cattle are they, common, graded, or full blood?
4. What is your express office?

* A complete vaccinating outfit, including hypodermic syringe, can be obtained from Z. D. Gilman, 627 Pennsylvania avenue N. W., Washington, D. C., for the sum of \$4.00. The outfit is prepared by the firm named in accordance with the plans of this Bureau, to meet the temporary demand that may arise in introducing this vaccine. If vaccination should be extensively adopted as a preventive of this disease, similar outfits will, no doubt, be for sale by other dealers furnishing this class of supplies. Until this may be the case, the unusual course of mentioning a dealer by name in a Department publication is followed.

Name,

P. O. Address,

D. E. SALMON,
Chief of Bureau of Animal Industry.

Approved:

James Wilson

Secretary of Agriculture.

WASHINGTON, D. C., June 22, 1897.