

inclement weather, extremes of heat or cold, etc. Protection or immunity is established in from twelve to twenty days after the administration of the vaccine. During this interval from the administration of the vaccine until immunity is established, vaccinated animals should be kept from grazing on infected pastures, and no hay from infected lands should be used for feeding.

Vaccine used on an animal already affected with black-leg will not protect such an animal, nor will it prevent its death. The use of black-leg vaccine during or immediately after the occurrence of an outbreak of black-leg may be followed by death, in some instances due to the stimulation of the black-leg germs already in the system of the animal, and such accidents cannot be prevented. In the use of black-leg vaccine it is well to take the temperature immediately before inoculating and, in the event of the temperature being elevated, vaccination should be deferred until the temperature of the animal is again normal.

EACH THREAD CONSTITUTES A SINGLE DOSE AND IS READY FOR USE AS SUPPLIED.

*The threads should be handled with the needle only.*

*Method of application.*—By using the vaccine prepared at the Biological Laboratory, together with the vaccinating outfit supplied by the department, the method of introducing the vaccine beneath the skin of the animal is very simple. (See special instructions for the use of the outfit.) The site of inoculation should be prepared by clipping away the hair and washing with alcohol or boiled water.

With the needle properly placed in the needle holder and the braided silk thread of impregnated vaccine on the needle, a fold of skin is grasped with the left hand, while the right forces the needle carrying the braided silk through the skin until the silk is lost from sight, when the needle is immediately withdrawn and the impregnated silk is left behind.

The most convenient point for inoculating is behind the shoulder; however, any point where the thread may be introduced beneath the skin into the cellular tissue of the animal to be vaccinated is suitable.

Cattle over four years of age are not, as a rule, susceptible to the disease. Calves under six months are not fully immunized by vaccination, and if vaccinated prior to this age should be revaccinated in three months. It is preferable to use the vaccine in the spring before the animals are allowed access to infected areas, for at this time of the year they are usually less resistant to a natural infection than at other periods, and, unless vaccinated, they are more liable to a fatal infection.

In the manufacture of black-leg vaccine at the Biological Laboratory every possible precaution during its preparation and subsequent testing is taken, but the department can assume no responsibility for untoward effects following its use.

The price of black-leg vaccine is 5 cents per dose, a dose consisting of a single thread of vaccine.

The price of the vaccination outfit is 50 cents.

Black-leg vaccine and vaccinating outfits may be procured by applying to the Veterinary Director General, Ottawa, Canada.

F. TORRANCE,  
*Veterinary Director General.*

March 10, 1915.

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