

GOVERNMENT NOTIFICATION.—No. 295.

The following is published.

By Command,

J. G. T. BUCKLE,
for the Colonial Secretary.

Colonial Secretary's Office, Hongkong, 18th May, 1899.

BILE INOCULATION FOR RINDERPEST.

The GOVERNMENT VETERINARY SURGEON to the Hon. the COLONIAL SECRETARY.

No. 286.

Colombo, October 10, 1898.

SIR,—WITH reference to annexed extract from my diary—*re* inoculation of bulls—I have the honour to state, for the information of His Excellency the Governor, that Mr. Jeffery reports that all the bulls have done well and have had no disease. No cases of rinderpest have occurred for the last month. The yard is now free from the disease.

I am, &c.,

G. W. STURGESS,
Government Veterinary Surgeon.

Annexure.

EXTRACT FROM THE DIARY OF THE GOVERNMENT VETERINARY SURGEON.

VISIT to dairy. All satisfactory.

The four inoculated bulls in Lipton's yard have been tied now for a week by the side of a sick animal—in infected sheds (the sheds where all the cases have been kept)—and will be washed and removed to-day. None of them have been ill, and none have contracted rinderpest; consequently the bile experiments may be said to be very satisfactory, and I shall go on with the inoculation wherever possible. I am quite prepared to inoculate any herd amongst which rinderpest breaks out, as long as good bile can be obtained from those that die or are destroyed for the purpose, and there should be no difficulty about that. In a good many cases the bile is yellow and unfit for use (it must be quite liquid, dark green in colour, and devoid of smell), but in a good percentage of the fatal cases the bile is quite fit for use.

One thing, I am satisfied that if the inoculation is carried out with proper precautions it does no harm, even if it does no good.

Not one of the animals I inoculated has developed an abscess or sore of any kind at the seat of inoculation, and there has been no appreciable illness. Mr. Jeffery, to whom I am greatly indebted for so kindly allowing me to carry out the experiments with his cattle and for the ready assistance he has given to me, expresses his satisfaction with the results, and should the disease break out again in the yard (it has apparently disappeared now) the remainder of the bulls will be inoculated. I shall write a special report of the procedure, &c., adopted in inoculating with the bile in the course of a few days, as the Government of Madras has asked for information of any experiments and results.

REPORT ON BILE INOCULATION FOR THE PREVENTION OF RINDERPEST.

DURING the recent outbreak of rinderpest in the town the disease appeared amongst a herd of 150 cart bullocks belonging to Messrs. Lipton, Limited.

Altogether 80 cases occurred: 50 yielded to treatment and recovered, 30 died. I obtained permission to try the bile inoculation method discovered by Dr. Koch in South Africa. He found that the contents of the gall-bladder in cattle dead from rinderpest possesses the property of protecting healthy cattle against the disease. The method of using it is by subcutaneous injection, and protection is given after ten days have elapsed.

The method is of no use for diseased cattle; it is only effective when the cattle have not had the disease.

I opened several bullocks after death, but the bile was unfit for use for inoculation purposes. However, on 23rd August a large Indian bull died, and on post-mortem examination I found the bile in proper condition for use.

The Bile.

In a good percentage of fatal cases of rinderpest the bile will be found good for the purpose of inoculation. It should be dark green in colour, perfectly fluid, free from shreds of the lining membrane of the gall-bladder and from any odour of decomposition.

A good number of instances occur where the bile is unfit for use, being yellow or dark brown in colour,ropy in consistency, and containing shreds of the mucous lining of the gall-bladder. Such bile is poisonous and useless. The best bile is that obtained from an animal that has suffered severely from rinderpest for some days, or, better, if it has succumbed to the disease. It must be taken before decomposition of the body commences.

In instances where it has been good I have noticed it was usually very abundant, a half to one pint being easily obtained.

Method of taking the Bile.

Great care must be taken in removing the bile in order to avoid contamination by blood, or contents of the intestines, or by fluid of any kind in the abdominal cavity.

The carcase should be placed on the left side and the abdominal cavity opened by cutting along the median line from the extremity of the sternum to the pubis and behind the last rib down to the backbone. An assistant can then raise the flap, and the liver and gall-bladder lying underneath the ribs are well exposed.

The gall-bladder should be slightly raised with the hand, and if dirty washed with a weak solution of bichloride of mercury in water (1 in 2,000). An assistant holds a glass jar against the gall-bladder (taking care not to allow any blood or any extraneous matter to enter it), which is then punctured with a sharp knife and the bile allowed to flow into the jar. A glass cover should be placed over the jar as soon as the operation is finished.

My hands, jars, and instruments were well washed and rinsed with a bichloride of mercury solution (1 in 2,000) and dried.

As previously mentioned, I obtained in this manner from an Indian bullock half a pint of bile fit for use. The animal died from the disease after suffering for a week.

At once four healthy bulls were inoculated.

Method of Inoculation.

The animals were cast and the legs tied, and 10 cubic centimetres (about 3 drams) of bile gently injected under the loose skin in front of the chest.

As the needle of the syringe is withdrawn, the skin should be pinched between the finger and thumb at the point of insertion, to prevent any of the bile coming out again and to close the wound. The part should be gently manipulated to insure distribution of the bile in the subcutaneous tissue.

Particulars of Experiments.

I.

August 23.—Four bulls received an injection of 10 cubic centimetres of bile into the dewlap. They had not had rinderpest.

August 25.—All eating and looking well. Swelling commencing at the seat of inoculation.

August 26.—All well. All four had a fairly hard swelling, the size of a man's fist, at the seat of inoculation.

August 28.—All well. Swelling decreasing.

August 30.—All well. Hardly any swelling at all.

September 4.—The ten days in which protection is said to be given having elapsed, the four bulls were tied in the infected sheds along with animals suffering from rinderpest, in order to see if they contracted the disease.

September 10.—The four bulls having been exposed to infection for a week were washed with a disinfectant solution and sent back to work the following Monday, 12th. None of them were ill in the slightest degree.

II.

August 28.—Two bulls died, and on post-mortem examination I found the bile good in one case and unfit for use in the other. In the former the bull had suffered badly and died after three days. I inoculated six healthy bulls and a calf.

August 30.—All eating and looking well. A large swelling at the seat of inoculation, the size of a football.

September 6.—All well. The swelling at the chest has been gradually decreasing for some days. All the six were sent back to work again.

October 6.—After a month none have been ill in any way. None of them had sores or abscesses at the chest, or suffered in the slightest degree from the inoculation.

Experiments will be continued when the opportunity arises. The method is very simple and quite harmless, if properly carried out.

G. W. STURGESS,
Government Veterinary Surgeon.