

(c) *Mange* in equines and pigs has not yet received serious attention. But goat scab (sarcoptic mange) has been dealt with in the same way as sheep scab. One of the reasons why more progress has not been made in the eradication of goat scab is that the sarcoptic infection has been kept alive on horses and pigs.

To eradicate the disease in horses, dipping at certain intervals will have to be considered, since hand-dressing of clinically affected animals alone is not likely to lead to success. Owing to the difficulty of dipping pigs, and their low value in native areas, slaughter of well-developed cases is indicated.

(d) *Anthrax* is very prevalent in some native areas, and I have already pointed out that one of the main reasons is the cutting open of carcasses of animals that have died of the disease.

For controlling the disease the only thing to do is to enforce compulsory annual inoculation of all susceptible animals in the infected areas. A start has already been made with this and thousands of animals have been inoculated annually during the past few years. It is hoped to organize the work of our staff in such a way that all the necessary assistance will be available to carry out the inoculations at certain times of the year.

It should be stated that the Union Government makes free issues of anthrax vaccine to all stock-owners in the Union, and, as far as possible, allows its inspectors to assist with the inoculations, also free of charge. In the case of native owners, it stands to reason that the work of inoculation has to be done for them.

With an efficient free vaccine and other Government assistance, there is no reason why anthrax should not be kept under perfect control in the Union and eventually eradicated.

Paper No. 37.

VETERINARY PROBLEMS OF THE AFRICAN NATIVE.

By J. SMITH, M.R.C.V.S., D.V.H., Chief Veterinary Officer and Acting Secretary for Agriculture, Northern Rhodesia.

In the note which I submit for the information of delegates attending the Conference, I propose to give only a résumé of the very wide problem which confronts those who are, in any way, engaged in the education of the native of Africa. The issues are so great that it would be quite impossible to treat the subject fully in a paper of this description.

2. The native of Africa is essentially a pastoral individual. In many tribes, cattle constitute the sole wealth of the individual and the community, and in Northern Rhodesia there is a strong prejudice against offering for sale more animals than will suffice to bring in funds to meet immediate requirements. The number sold is increasing year by year in proportion to the wants of the owners. One of the results of civilization is to cause a desire amongst natives for many things of which, formerly, they were unaware. Whether all the commodities which are now available are for the ultimate benefit of the native is a debatable point, but the fact remains that the average individual will go to great lengths to obtain them.

3. In a territory such as Northern Rhodesia, the native-owned cattle possess great potentialities. The mining development has caused a yearly increasing demand for meat, a demand which will tax all the resources of the Protectorate to meet. Many thousands of native-owned cattle are placed upon the market each year and the more one sees of such cattle the more one realizes how great is the problem which confronts those who are responsible for the industry. The writer has no hesitation in saying that the quality of the average animal is lower than that which obtained some sixteen years ago. A great proportion of weedy and unthrifty animals is obvious. It is submitted that the causes of this lowering of the standard may be divided into two main heads. The first is inbreeding. In former times, inter-tribal wars, in which cattle always constituted one of the principal forms of booty, were responsible for constant interchange of blood. To-day, although there is interchange amongst the villages of the same tribe, the interchange is extremely limited and the stock of certain districts is becoming inter-related to an alarming extent.

4. The second reason is to be found in the gradual lowering of the standard of cattlemastership. The demand for labour, and the attraction of life in the vicinity of the larger settlements, have caused an unprecedented exodus of adult males from the villages. Although the actual care of cattle was always in the hands of the boys, supervision was exercised by the adults. That supervision is now, to a great extent, lacking, and the result is a corresponding decrease in the welfare of the animals and an increase in the susceptibility to disease.

5. Much is heard to-day of the need for "grading up" the indigenous stock of Africa. It is not contended that such is not the ultimate goal, but the writer is firmly of the opinion that if the introduction of highly improved bulls be resorted to before general conditions are changed, disaster will follow. It is submitted that the first steps should be the inculcation of the principles of good cattlemastership, embodying the building of kraals in situations where the maximum hygienic conditions can be obtained, the provision of sheltered kraals for young calves, the choosing of the best grazing sites during the varying conditions of the year, the castration of all male animals except those used for stud purposes, the segregation of immature heifers, and the provision of extra foodstuffs during the dry months of the year. Concomitant with this should be the establishment of adequate dipping facilities.

6. The above measures, once instituted, will not only improve the general condition of the animals, but are essential for combating disease. When once conditions approximating those outlined above have been obtained the time will have arrived for the introduction of improved blood. It is comparatively simple to enumerate the conditions for the improvement of native-owned herds. To establish the conditions is another matter. The average native is a conservative being. He is apt to look with suspicion upon anything which will alter conditions which have obtained for generations. It was thought that the object lesson provided by European ranchers and farmers would have caused the native to realize the benefits which follow good cattlemastership. In only too few cases is it obvious

that the lesson has been learned. It is equally obvious that compulsion will not attain the object in view. The change must be gradual and slow and it is to the present day boys that we must look for ultimate success.

7. Every effort should be made by all ranks of veterinary departments to instil into the minds of natives the benefits which will follow greater care in the management of their herds. Such officers have a unique opportunity of gaining the confidence of natives. The use of prophylactic vaccines in lowering the incidence of disease demonstrates to the native mind that actual pecuniary benefits are to be obtained by following the advice which is tendered. The African native is no less appreciative of such benefits that his more enlightened neighbours.

8. The control of disease becomes a comparatively simple problem in well cared-for herds. The native who has become really interested in the welfare of his animals will no longer attempt to conceal, rather than report, sickness amongst his stock. To-day, the native is apt to fear the measures which may be taken when disease appears. When once he is convinced that the presence of a veterinary officer is followed by measures which will tend to lower his losses a great step forward will have been taken.

9. In a territory such as Northern Rhodesia the wastage in such commodities as hides is very great. Thousands of good hides are destroyed because the native does not realize the necessity for careful removal and drying. Instruction in such matters would cause him to benefit considerably.

10. It has been said that we must look to the young natives to effect the greatest improvement. General agriculture and animal husbandry should be compulsory subjects in the curricula of all schools. Governments could make the grants made to missionary societies, and other educating bodies, dependent upon such subjects being taught by persons qualified to do so. The Government of Northern Rhodesia is already making grants to those missions which include a trained agriculturist on their staff. Selected students could continue their training at institutions controlled by Government until such time as they are fit to be posted to a district as demonstrators. If, however, these demonstrators are to be successful they must be adequately supervised and receive a remuneration equal to that given to village teachers, native clerks, and others in similar employment. Every effort must be made to remove the feeling that a native agricultural or animal husbandry demonstrator occupies a position subordinate to that enjoyed by a native teacher or clerk.

11. In all the above the staffs of veterinary departments can, and must, play an increasing part. It is daily becoming more evident that if the work of the veterinary officer be limited solely to the control of disease only a portion of his usefulness to all sections of the community will be utilized. If, however, he is enabled to devote a portion of his time to endeavouring to establish more satisfactory conditions of animal husbandry, which, after all, are the surest preventative of disease, the greatest good will follow. The work in connection with the native cattle industry will be difficult and, oftentimes, disappointing. The results which may be seen by many of us may be negligible. Nevertheless, a sure foundation for the future must be laid and unless each does his share in the laying of that foundation he will have failed in his duty.