(c) Mange in equines and pigg 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 pigg, 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 cattle possess great potentialities and there is a yearly increasing demand for all the resources of the Protean. The number of native-owned cattle are placed at the number of one sees of such cattle is the problem which confronts the industry. The writer has no hesitation in stating that the average animal is lower than the one seen of such cattle 13 years ago. A great proportion is obvious. It is submitted that the standard may be divided into two-breeding. In former times, interbreeding was one of the principal factors in constant interchange of blood, change amongst the villages of the extremely limited and the stock of stock related to an alarming extent.

4. The second reason is to be the standard of cattlemastership. The attraction of life in the vicinity caused an unprecedented exodus of cattle boys, supervision was exercised by now, to a great extent, lacking, a decrease in the welfare of the animal and a decrease in the ability to disease.

5. Much is heard to-day of the indigenous stock of Africa. It is the ultimate goal, but the writer is introdution of highly improved breeds and the introduction of sheltered kraals for young stock. Where the varying condition of all male animals except the segregation of immature heifers, and during the dry months of the year be the establishment of adequate disease.

6. The above measures, once in the general condition of the animals, will alter conditions which have once thought that the object lesson proves that farmers would follow good cattlemastership. In the
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THE AFRICAN NATIVE.

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3. In a territory such as Northern Rhodesia, the native-owned
bought possesses 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 realises 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 six-
teen years ago. A great proportion of weakly 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 in-
breeding. 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. Today, although there is inter-
change amongst the villages of the same tribe, the interchange is
extremely limited and the stock of certain districts is becoming in-
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 sus-
ceptibility 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 inoculation of the principles of good
cattlemastership, embodying the building of kraals in situations
where the maximum hygienic conditions can be obtained, the pro-
vision of sheltered kraals for young calves, the choosing of the best
grazing sites during the varying conditions of the year, the castra-
tion of all male animals except those used for stud purposes, 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 conserva-
tive 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 measure 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 save 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.

Power No. 38.

VETERINARY EDUCATION IN REFERENCE TO STATE SERVICES

By R. Duren, M.Sc., M.R.C.V.S.,
Research Officer and R. W. McFadyen, D.V.O.,
Veterinary Research Officers,
Kenya.

There is little doubt that in the veterinary education have not date
that special attention to which its
sional activity, most certainly, is possible to obtain, in at least two
England, short post-graduate courses
and in State veterinary medicine, the amount of practical laboratory work
subjects. These courses—in particular
McFadyen at the London College
of the colonial services, the home
and by candidates for such posts.
fees charged were inadequate to be given—at least at the London College
war disorganization it was found a
score of expense. Numerous (over
last few years, repeatedly drawn se
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of the Colonies, and the recent
services has further stressed the un
necessity for the provision of refres
officers, who will be given study le

It is of importance to decide in
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service to decide in what is now becoming the activities? One of us has recently
present graduate curriculum, with cl
ments in general training, in order
services. The alterations suggested
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 veterinary and pre-veterinary subje
 to fit in additional laboratory work
the present four-year course, and the
amount of practical work in pre-v
appreciated, and was discussed at len
to. Scientific knowledge is advanci
increasingly difficult, in the compar
life allotted to professional education
training in such a large group of go