

### THE HEALTH OF CANADIAN LIVE STOCK, AND ITS PRESERVATION.

Address by Dr. A. G. Hopkins, before the National Live-stock Convention, Ottawa, February, 1908.

Diseases affecting animals of the farm may be broadly divided into two classes, contagious and non-contagious, the latter, in the majority of cases, being due to a neglect of Nature's laws, by the care taken of the live stock, either from irregularity in feeding, lack of exercise, insufficient water, too close confinement, or a diet made up of inferior-quality forage or grain. These, however, may be dismissed from our minds at present, because they present problems easily solved by the individual breeder or feeder, who will only remove the cause. It is a different and more serious matter when the contagious diseases are considered, for here the individual can do little, and must co-operate with others to form a community of interest, if effective work is to be done. Co-operation should, therefore, be the battle-cry of all interested in the welfare of the Canadian live-stock trade. I use the word "trade" advisedly, because, unfortunately, some people never recognize danger, never feel the need of public spirit, unless their own pockets are affected. Who must co-operate to obtain the object desired? The farmers, the breeders of live stock, and the Government of Canada, the latter represented by the Minister of Agriculture and his coadjutor, the Veterinary Director-General and Live-stock Commissioner.

These premises being established and understood, it will not be difficult for each party to get the other's point of view, and regulation will become less irksome, because of the confidence each will have in the other, the object being, as is well understood and already mentioned, the prevention of any possible hindrance on the score of disease, to the development and welfare of the live-stock trade of the Dominion.

In order to maintain the welfare of the trade, two objects must be kept in view all the time, (a) the prevention of the ingress of contagious diseases, new or old, through the gateways into Canada; (b) to prevent the egress, the shipping out of diseased animals, which would be fatal to our trade in other countries, Great Britain and elsewhere. The two objects cannot be separated, for the one is dependent upon the other. What machinery is employed to obtain the desired ends, and what contagious diseases are the efforts of the Department directed against?

The machinery consists of (a) Acts of Parliament, viz., the Animal Contagious Diseases Act, 1903, and the Meat and Canned Foods Act of 1907, and the regulations thereof; (b) the technical and lay members of the Health of Animals Branch of the Department of Agriculture charged with the administration, under the direction of the Minister of Agriculture, through the Veterinary Director-General.

Previous to 1902, the administrative work of quarantine and disease control was carried on by the lay officers of the Department of Agriculture, with the assistance of a non-resident veterinary inspector. In that year, however, the Minister, having in view the establishment of a comprehensive and effective veterinary service, appointed the present Veterinary Director-General at the head of a Health of Animals Branch, as a result of which the control of animal diseases in Canada is now centralized at Ottawa. It is only justice to say that the new conditions have rendered it possible to deal with the diseases of live stock in Canada in an effective manner, and in such a way as to inspire the confidence not only of the taxpayers of the Dominion, but also of our neighbors to the South, and the skilled agriculturists and scientific men in other parts of the world, a confidence which is of material benefit in connection with the live-stock trade with other countries.

Under (a) we have given us the legal powers of the branch, the duties of owners of animals, including the penalties for concealing, or failing to notify the proper authorities of the existence of contagious or infectious diseases in animals, the power to order diseased animals slaughtered, and the amount of compensation that may be paid; the power given to the Minister to prohibit importations, to determine and declare the limits of an infected place; to enforce disinfection by common carriers, and, as well, the powers of inspectors.

Under (b) comes the personnel of the staff of the Health of Animals Branch, which consists of the Veterinary Director-General, who is also Live-stock Commissioner; a corps of veterinary inspectors, some engaged in field work, some as port inspectors, and others as investigators of diseases, the nature of which may be only partially understood; there is also a clerical staff, engaged in keeping and tabulating the results of the work done. The technical force is recruited, as the needs warrant, from the ranks of graduate veterinarians, who must pass a stiff examination before they can become eligible for appointment. The value of Canada's live stock and trade in live-stock products is large, and is increasing rapidly, and more than warrants the expenditures made to date, which are very small in comparison

with that of other countries doing similar but no more effective work.

The following are the contagious or infectious diseases which occupy the attention of the Branch: Glanders, hog cholera, dourine or maladie du coit, sheep scab, rabies, mange, by the field force; also the disposal of carcasses and the disinfection of the premises on which anthrax has occurred, and the prevention of the exportation of lumpy-jaws (actinomycosis) and mange-infected stock. Actinomycosis and tuberculosis being exempted from certain clauses of the Act, are not dealt with by the inspectors of the Department of Agriculture, beyond preventing the exportation of affected stock. Other diseases, Pictou cattle disease, blackleg and red water, are given attention by the inspectors and pathologists of the Branch. As a result of the experiments carried out during the last four years, under the guidance of the Veterinary Director-General, it has been settled that the former disease properly comes under the non-contagious diseases, being of dietetic origin, the result of the ingestion of the ragwort or stinking Willie (Senecio Jacobea); blackleg or blackquarter (unfortunately, termed by some members of the profession symptomatic anthrax), this disease is combated by a vaccine prepared and supplied by the Department of Agriculture, in a form easily administered (the cord form), and at a moderate price (5 cents per dose, in any quantity), to all and sundry who ask for it and remit the money. Red water in cattle, a disease which has caused considerable losses in some sections of British Columbia, is now being investigated, with a view to determining the casual factor, which, when once thoroughly understood, it is hoped methods may be devised to overcome.

It will be noticed that there are six main diseases occupying the attention of the officers of the Department, and of the first three of that number, affected animals are ordered slaughtered, and compensation paid, when the conditions laid down in the regulations are complied with. The sextette will be considered briefly seriatim, so that a general idea may be had of the procedure followed.

Glanders or Farcy.—An owner suspects one or more of his horses as affected with the disease, for one of the following reasons: Chronic discharge from the nostrils, or contact with horses or mules afterwards found to be glandered, or on the limbs or other parts of the body are seen farcy buds, small abscesses, which form, break, and discharge pus. The case is reported to headquarters, or to an inspector of the Department (preferably the former); an inspector is then sent, who examines all the horses on the premises and submits them to the mallein test. Reactors are ordered destroyed, and the non-reactors, apparently healthy ones, are, if one of the reactors has shown clinical symptoms, discharge from the nose, etc., held for a retest in from 15 to 30 days, when, if found healthy, and the premises

properly cleansed and disinfected, are released. The object of the retest after the fortnight interval, is to catch any of the non-reactors to the first test which may have become infected, yet not sufficiently so to react at that time.

The method described sounds extremely simple, but calls for an extraordinary amount of tact and scientific use of the diagnostic agent, and, when the disease is very prevalent, a lot of money, which will not be grudged by the taxpayer when the danger to human life and the whole agricultural industry is considered.

Dourine or Maladie du Coit.—A disease difficult to detect, and therefore hard to stamp out. This disease is communicated naturally at coition; the cause is known, but hard to demonstrate. One of the pathologists of this Branch was the first man on the American Continent to find the cause, the blood parasite trypanosoma equiperdum. It is hoped that some quick and reliable diagnostic agent similar to mallein, or a protective serum, may now be elaborated, so that this insidious and fatal disease, with its disastrous effects on the horse-breeding industry, may be overcome. At present, when cases are found, the infected animals are ordered slaughtered and compensation paid. It may be found that, in order to more quickly stamp out dourine, more stringent regulations must be formulated, perhaps in limiting the running at large of stallions or of male colts over one year on the range, unless altered. This disease has existed in South Dakota, Nebraska and Iowa, but in the report of the Chief of the Bureau of Animal Husbandry it is stated that, as a result of several years' vigilant work, it has been practically eradicated.

Hog Cholera.—Fortunately, the Canadian climate and methods of feeding pigs do not seem as favorable to this expensive disease as in other climes, where corn is the staple diet. The stamping ground of this disease in Canada has been certain counties in Western Ontario, one reason for it being their geographical relation to our neighbors, and the fact that some railroads running in and out of Canada, over which hog trains were drawn, were factors in distributing the disease. However, a constant watch is kept by our inspectors; foreign-transit hogs are not permitted to be unloaded in Canada, and the cars used have boards to prevent the distribution of infected manure along the right of way. The disease is well under control in Canada, the number of outbreaks being materially reduced year by year, as a result of the policy of the Department. A similar principle to that employed with glanders, in the matter of compensation, is observed. When an outbreak occurs, an inspector of the Department has all the hogs slaughtered, both affected and contact, which are valued, and compensation paid after the premises have been cleansed and disinfected to the satisfaction of the inspector, who also, in all cases, endeavors to trace the source of the infection.



Ardlethen Goldsmith (imp.) (11588).

Clydesdale stallion, bay, foaled 1900; sire Gold Mine (9540); dam Mary Garden, by McCamon.