



Farm Home of G. R. Cottrelle, Halton County, Ont.

lived, since its hold upon public favor gradually weakens with its use. Up to the present it has principally been tried on the cattle classes at winter fairs, and is unsatisfactory, for the reasons that many of our best judges are not orators, and would shrink from a public exhibition of their ability in that line; that few have courage to proclaim the alleged faults of the losers, or are gifted with a voice sufficiently strong to cope with the bellowing of bulls, or to be heard by more than a small percentage of the people, unless supplied with a megaphone. Giving reasons is not required, so far as we know, by the rules of leading shows in Britain or the United States; but, on the contrary, one of the regulations in some Scottish shows advises judges not to give reasons, presumably for the preservation of peace, especially in the horse classes, where kicking is a liability.

I have due respect for the opinion held by not a few up-to-date stockmen, that the safest system is that of three judges, one of whom remains out of the ring alternately to act as referee in case of a tie, but I have noticed that under this plan the tie very rarely materializes, and the referee is seldom required, which probably means that compromises prevail, the principal advantage of the system being that the men get a rest occasionally. And, by the way, the principal objection to the single-judge plan is that, with such extensive classification as is in vogue in America, too hard a day's work is often imposed upon a judge who needs to be a very strong man to go through the work without becoming weary and incapable of doing his best; hence, I would have the work in large classes divided, say, one man judging the males, and another the females, as is the custom at some of the Scottish shows, or else give one man two days for his task, if required.

In my humble opinion, based upon experience and observation, two judges are as liable to make mistakes as one, and the best of men are liable to be influenced to some extent by a gifted talker, and feel less the responsibility of the position when it is divided and shared by two or more. A man will naturally be more careful to avoid mistakes when he realizes that the trust rests solely upon himself. For this reason, together with the fact that time and expense is economized, I favor the single-judge system, a competent arbiter, placed upon his honor. As a distinguished Scottish judge is reported to have said, "I am willing to take the responsibility of any decision that is my own, but I don't like to be held responsible for an award when two other judges outvote me." It seems to me unfair to the judges, to exhibitors, and the spectators, to appoint two or three judges, whose awards must often represent a compromise, and, therefore, be inconsistent.

J. C. S.

Human and Bovine Tuberculosis.

The Royal Commission's final report on tuberculosis in animals and man has just been published, giving the conclusions arrived at by the commissioners. This recent investigation is the result of a statement made by Dr. Koch, before a scientific congress, held in London, England, almost ten years ago. His statement was made with such confidence and strength that a Royal Commission was appointed, with the following questions to answer:

1. Whether the disease in animals and man is one and the same?
2. Whether animals and man can be reciprocally infected with it?
3. Under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances, favorable or unfavorable, to such transmission?

Three types of tubercle bacilli were dealt with—human, bovine, and avian. The human type is not the only one found in cases of tuberculosis in man. It is the organism present in the majority of such cases, but in some cases of the human disease the bacilli present are of the bovine type, and in others the bacilli have special characters distinguishing them from each of the three principal types. In natural cases of tuberculosis in cattle, the only type of bacillus present is the bovine type. Similarly, in cases of natural tuberculosis occurring in poultry, the bacillus belongs to the avian type. Of a total of 108 cases of human tuberculosis investigated, eighty-four yielded human tubercle bacilli only, nineteen yielded bovine tubercle only, and five both bovine and human tubercle bacilli.

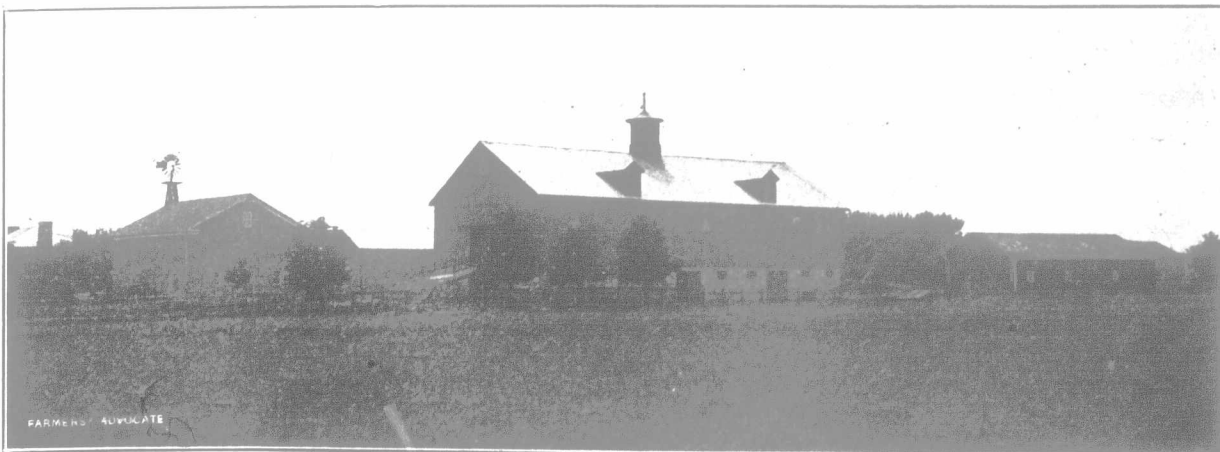
The first question asked is obviously difficult to answer. Infection of animals with the human tubercle bacilli has been experimented with, and results go to show that these produce the same reactions as where bovine tubercle bacilli were introduced into similar healthy animals. But

the other phase of the question has been much more difficult to investigate, as no direct infection of a healthy human being could be made. However, the commission has been permitted to examine and observe many cases of human tuberculosis, believed to have been accidentally contracted from animals, and nothing else. The lesions from such cases have been compared with those obtained from parallel cases of fatal tuberculosis, in which the human tubercle bacilli alone were discovered, and, except for the difference in the type of bacilli found in them, these two groups of cases presented similar features. The clinical histories of the patients were alike, the cases all terminated fatally, and the lesions examined after death were found to be anatomically indistinguishable. Man must, therefore be added to the list of animals notably susceptible to bovine tubercle bacilli.

There is an aspect in which tuberculosis in men and in cattle must unquestionably be pronounced one and the same disease. Whether one prefers to regard bovine tuberculosis and the cases of tuberculosis in man which are caused by the human type of bacilli as varieties of the same disease, or as independent diseases, there can be no question that human tuberculosis is in part identical with bovine tuberculosis. Researches have proved that, in a considerable proportion of cases of the human disease, the lesions contain and are caused by bacilli which are in every respect indistinguishable from the bacilli which are the cause of tuberculosis in cattle. In all such cases the disease, therefore, is the same disease as bovine tuberculosis.

The second question for investigation was whether man and animals can be reciprocally infected with tuberculosis. While the human tubercle bacillus could be introduced into the bodies of healthy animals, a similar experiment could not be made by introducing the bovine tubercle bacillus into the body of man. Certain instances have, it is true, been reported in which suspicion had arisen that man had become infected through contact with tubercular cattle, but the evidence afforded by these cases, notwithstanding that they had been carefully investigated, could not be accepted as unequivocally positive in character. The transmissibility of tuberculosis of the three several types have had to be judged of by the behavior of the bacilli representing them when introduced each in separate series into the bodies of a variety of animals. By various tests the human type has been found transmissible in some degree to many different species of animals, but for most of them transmission has been effected only by the employment of large doses. Moreover, the lesions introduced into some species of animals were either locally or sparsely distributed, and non-progressive in character. The animals that have been found to be especially refractory to the human tubercle bacillus, administered by injection, are cattle, pigs and fowls, and these are often more refractory, or are indeed practically immune when the bacilli are administered even in large amounts with their food. Corroboration of this high degree of resistance to human tubercle bacilli on the part of cattle, pigs and fowls is afforded by the circumstance that, so far as the commission's investigation of tuberculosis naturally occurring in the lower animals has gone, they have not in a single instance detected the human type of tubercle bacillus in cattle or in fowls, and but rarely in pigs.

The conclusion is that mammals and man can be reciprocally infected with tuberculosis. The possible danger to man is, of course, the more important question, and it has been conclusively shown that many cases of fatal tuberculosis in the human being have been produced by the bacillus known to cause the disease in cattle; the possibility of such infection cannot be denied. The importance of this conclusion is not diminished by the fact that the majority of such cases examined occurred in young children, or by the merely local results following the administration of the human type of bacillus to bovine animals.



Barn on Farm of G. R. Cottrelle.