

# MICHIGAN AGRICULTURAL COLLEGE EXPERIMENT STATION

PRESS BULLETIN NO. 41

To the Editor:

The notice below will be of value to many of your readers. We, therefore, ask you to cooperate with us in calling attention to this timely matter.

R. S. SHAW,  
Director.

## Foot and Mouth Disease

About the middle of September a disease of cattle characterized by sore mouth and feet was reported to exist in a few herds near Niles, Michigan. Investigation revealed the fact that the state was confronted with another outbreak of foot and mouth disease or apthous fever.

The reappearance of this disease in Michigan after its eradication six years ago has given rise to a demand for information concerning it and this circular is written in an effort to supply that demand.

Previous outbreaks of this disease have occurred in North America in 1870, 1880, 1884, 1902 and 1908. This is the second time that Michigan has become involved in an outbreak of foot and mouth disease.

Foot and mouth disease or apthous fever is a very contagious disease of cattle, sheep, goats, deer (ruminants) and swine and occasionally human beings. It is characterized by fever, loss of appetite, reduction of milk flow, in milch cows, and later by the appearance of vesicles or blisters on the mucous membrane of the lips, dental pad or tongue and on the heels or between the toes and frequently on the teets and udder. In from a few hours to one or two days the blisters break, peeling off and leaving a reddish, slightly depressed raw surface which usually heals in one or two weeks but which may remain sore for a longer time as a result of complications due to other disease-producing organisms. At the beginning of the disease the animal is greatly depressed and as the mouth becomes involved there may be profuse salivation and frequently a smacking of the lips which produces a clicking sound. Lameness usually results from the very painful condition produced by the diseased feet.

The disease is spread by contact with affected animals or by their milk directly or indirectly through creameries or cheese factories, by manure, grain or any fodder contaminated by their discharges; also by their transportation over public highways and stock yards.

It may also be carried by an apparently healthy recovered animal for several months after recovery. It may be carried on the feet or clothes of parties from affected farms, or who have visited infected stock yards. It may also be carried by other animals as horses, dogs, cats, birds, etc.

Foot and mouth disease is usually not fatal, complete recovery being the rule. Over 20 per cent. mortality has been recorded under usual conditions. Young animals furnish the largest number of fatal cases. The rule is that under favorable conditions all affected animals recover.

The disease must be differentiated from non-contagious affections such as occasional injuries to the mouth and feet, ergotism and mycotic stomatitis, and from an infectious lip and leg ulcerations due to *B. necrophorus*. Foot and mouth disease is to be differentiated from the above affections by the appearance of the conditions already described, by its acuteness and extreme contagiousness as evidenced not only by the involvement of practically all the animals in the affected herd in a very short time, but also by its rapid spread to neighboring farms.

In the presence of an outbreak of foot and mouth disease all suspicious cases should be reported without delay to the authorities having the matter in charge. Only in this way can the spread of the disease be

prevented. Previous experience with five outbreaks of this disease in this country conclusively proves that its immediate eradication is not only possible but practicable. The importance of immediate eradication can be seen from a consideration of the losses sustained by some of the European countries in the past and its almost constant presence in some of these countries at the present time. It has been estimated that the pecuniary loss in cattle in those countries where the disease is prevalent amounts to 10 to 40 dollars per head and since practically none of the animals in a herd escape the disease its total losses are enormous. It was estimated that the losses from the disease in England in 1883 amounted to \$5,000,000; in France in 1871 the losses were \$7,500,000; and in the same year in Switzerland \$2,500,000; it is said that in Germany from 1889 to 1894, seven million animals were affected; and from 1897 to 1899 one million animals were affected in Holland. Every American stock owner is so familiar with the comparative area of this country and those European countries cited, and with the vastness of our live stock industry as compared with that of these countries that we can quickly conceive of the stupendous figures that would represent our losses if the disease were allowed to spread. Failure to adopt immediate and vigorous measures to eradicate foot and mouth disease while it is confined to a limited area would result in such a widespread condition of the disease that in a very short time its eradication would be impossible and the consequent losses would impose an annual drain on the live stock industry of inconceivable enormity, compared with which the total cost of its immediate eradication sinks into insignificance.

In the eradication of this plague the U. S. Department of Agriculture through its Bureau of Animal Industry has always actively cooperated with the State authorities. In addition to furnishing an army of well-trained veterinary experts the U. S. Government always stands more than half the total expense. Fortunately Michigan is in a position to actively cooperate with the Federal authorities and it is much to the credit of the State Live Stock Sanitary Commission that the work of eradication was begun without delay.

The farmers of Michigan have already shown a commendable willingness to accept the gravity of the situation and to heartily cooperate with their Live Stock Sanitary Commission and the representatives of the Bureau of Animal Industry of the U. S. Department of Agriculture. We are sure that this spirit of cooperation will continue with the result that the early and economical eradication of the disease will be accomplished, thus dissipating this cloud which temporarily hangs over the live stock industry of a small portion of our state.

Veterinarians and stock owners should immediately report all suspicious cases and address all communications relative to foot and mouth disease to

H. H. HALLADAY,  
PRES. LIVE STOCK SANITARY COMMISSION,  
LANSING, MICHIGAN  
or to  
DR. U. G. HOUGH,  
INSPECTOR IN CHARGE, B. A. I.,  
NILES, MICHIGAN,  
ADRIAN, MICHIGAN, or  
COLDWATER, MICHIGAN.