

Results of these tests led to the belief that *P. bovisseptica* was not the primary etiological agent responsible for enzootic bronchopneumonia of calves.

EXPOSURE OF CALVES TO DISEASED TISSUES

Experiment 2.—It seemed important to determine if enzootic bronchopneumonia as encountered in these studies could be transmitted by exposing calves to diseased lung tissue, bronchial and tracheal exudate and nasal secretions of calves suffering from the disease. Material for this purpose was secured from infected calves which were presented for observation during the course of the investigation. Diseased tissues representing acute and chronic stages of infection were obtained from calves in different herds. Diseased portions of the lung tissues and contents were removed from the carcass and minced in saline solution. The edematous tracheal or bronchial exudate and nasal secretions often present were incorporated with the minced lung in saline solution. Immediately after preparation the material was administered as a drench to young, healthy calves. During the course of these investigations 20 calves were exposed in this manner in an effort to reproduce the disease. In addition five calves were exposed by means of nasal sprays to bacteria-free filtrates of diseased tissues prepared from animals during various stages of pneumonia.

Neither enzootic bronchopneumonia nor any other unfavorable sequelae developed in the test calves as a result of these exposure tests.

EXPOSURE OF CALVES BY BLOOD INOCULATIONS

Experiment 3.—The following test was conducted to determine if enzootic bronchopneumonia could be transmitted by inoculating healthy calves with blood of infected animals. Twenty cubic centimeter samples of jugular blood were secured from each of 10 cases of enzootic bronchopneumonia encountered in the field. The blood was collected in sterile tubes containing sodium citrate solution and injected into the jugular vein of young test calves that were secured from premises where the disease did not occur. These blood collections were made from calves representing various stages of enzootic bronchopneumonia.

No evidence of transmission was obtained in any of the healthy calves thus inoculated with blood from affected animals.