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FILE UNDER:

ANIMAL HUSBANDRY -- Animal Diseases

Calf-hood Vaccination and Some General Statements about the Disease. --

H. P. Searles, Extension Dairyman

Dr. John R. Mohler, chief of the Federal Bureau of Animal Industry, in an address before the United States Livestock Sanitary Association has made some proposals regarding the use of calf-hood vaccination in the Bang's control program. He proposes that calf-hood vaccination be used with the present test and slaughter plan. It cannot, of course, be a part of the plan in Minnesota until accepted by the State Livestock Sanitary Board, and is, of course, subject to revision by the State Board. This proposal is being given to the press, however, and farmers will be asking about it.

Dr. Mohler's proposal:

"1. All animals over 6 months of age in a herd under cooperative supervision, where the owner elects to adopt the vaccinal procedure, should be subjected to a blood agglutination test prior to the inauguration of such a program, and at least one test annually should be applied thereafter.

"2. To facilitate matters in connection with the movement of animals in such herds, in addition to protection of the purchaser, a record of each herd is absolutely necessary.

"3. The vaccination of all animals should be confined to calves between 4 and 8 months of age and this should be accomplished as nearly as possible during the sixth month of the animal's life.

"4. The age of the animal and date of vaccination should be properly recorded and the identity of each animal should be properly established in each instance.

"5. An animal in a herd where vaccination is practiced should not be disposed of for any purpose other than immediate slaughter while revealing a positive titer, except upon written permission by the cooperating state or bureau officials.

"6. A herd under the vaccinal plan may be certified as a **HERD FREE OF BRUCELLOSIS** for a period of one year when all animals in the herd over two years of age reveal at least two negative reactions to official blood agglutination tests properly spaced.

"7. The subject of the point payment of indemnity to owners of adult cattle that reveal a positive reaction to the blood agglutination test in a herd under the vaccinal procedure, is a matter that should depend upon the circumstances within a state. However, in instances where vaccinated animals over $2\frac{1}{2}$ years of age (that were vaccinated between 4 and 8 months of age) disclose a positive reaction and the owner desires to dispose of such animals, a joint payment of indemnity is recommended. (Remember this is subject to the rules of the Minnesota Livestock Sanitary Board.)

"8. Owing to a variation of conditions in different states it appears, except for a general operative plan of procedure, that minor details in a program of this character are matters which should be delegated to the cooperating state and federal officials in each of the various states.

"9. It must be appreciated that one method by itself may not be applicable to all types of herds. In some herds the disease must be eradicated as soon as possible in order that the herd may be maintained on a paying basis. In other herds, another method may be considered a more profitable and therefore a preferable procedure. In still other herds, a combination of methods may work as the best solution of the Bang's disease problem. The livestock officials in the individual states, governed by the desire of individual stock owners, should assume the responsibility of determining the manner in which their respective interests could best be served. Naturally these officials have the privilege of (1) continuing the test-and-slaughter method, (2) adopting calf-hood vaccination as herein outlined, or (3) using the latter as an aid by integrating it with (1), the test-and-slaughter method. In other words, those who are two-fisted may prefer to use both fists and not have one handcuffed. When the bureau is acquainted with the desires of the various states, its duty will be to cooperate to its fullest extent with those that express a desire to suppress this malady in their respective domains along any of the three lines mentioned."

Some Statements About Bang's Disease

Several things to keep in mind:

1. The disease does not cause sickness--there is nothing to indicate infection unless an abortion occurs. All losses and sickness are the after-effect of this abortion.
2. Only a part of the infected cows abort.
3. It is a disease of young cows. More 2, 3 and 4-year-olds lose calves than old cows.
4. Usually after the first, second or third abortion the cow carries calves, if she is still breeding.
5. The infected animals that do not abort are as dangerous in spreading the disease as aborting cows.
6. Calves can be infected and will react to the test; but they usually clear up a few weeks after the source of infection is removed--such as infected milk.
7. Apparently some immunity is developed in the calves exposed to infection.

8. The vaccination program is based on this immunity--calves are vaccinated with the (strain 19) organism. Most animals will show up negative by breeding time, yet retain some immunity to the disease.

Dr. Mohler, U.S.D.A., reports 13,240 vaccinated calves in 260 herds in 24 states. Records on 2,943 of these animals which have ended their first period of pregnancy show that 2,826 produced normal calves and 117 aborted. Not all of these abortions were due to Bang's. Only about 2 per cent were infected with abortion bacillus.

This is the first report we have had on the government experiments with calf-hood vaccination.

Things to remember about vaccination as it is now practiced:

1. It is successful only in calves. It has no value in the older animals of an infected herd.

2. It is inconceivable that every herd will vaccinate calves every year; therefore area testing is still necessary if the disease is to be eliminated.

It would seem then that vaccination may be most useful when used in conjunction with area testing:

1. To soften the loss in a valuable herd by allowing the herd to be cleaned up gradually (vaccinating the calves).

2. To prevent serious outbreak in breeding herds that are clean by vaccinating the calves until the area is free from infection.

Some statements made above are somewhat over-simplified for the sake of brevity. It is the picture at the present time. You will be informed of the Livestock Sanitary Board's regulations when any change is made. These statements should be of some help to you in your discussion of individual problems with your breeders.

You have had a report on the area testing in the state from Dr. Fretz. There are several very encouraging facts in that report. First, the per cent of infection in the one southern county (Watonwan) where testing is under way is lower than expected by 5 per cent. Second, the drop in percentage of infection on the second test in the counties of northern Minnesota. The one thing that is clear, it seems, is that different treatments on different herds may be of advantage. But most important of all is the realization that vaccination must go with testing if it is to prove of real value--that it must be done only under the careful supervision of a qualified veterinarian.