

Swine Brucellosis

coöperative investigation by State and University indicates feasibility of eradication program

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Swine brucellosis could be eradicated from California which is not a large swine-breeding state. It is relatively isolated and imports very few breeding stock.

There are 36 herds in California—owned by breeders who are interested in the selling of purebred brood stock—which are certified as being free from swine brucellosis.

A coöperative certification project was initiated by the California State Department of Agriculture at the suggestion of the Department of Veterinary Science of the University, when investigations on swine brucellosis were carried into the field to determine the efficacy of the unit segregation system.

The Division of Animal Industry, Department of Agriculture, officially certifies herds that are free from swine brucellosis as proved by two consecutive negative blood tests on all brood stock on the ranch.

Plan of Agreement

Any herd may participate in the project and the Division of Animal Industry, State Department of Agriculture, drew up the following plan of agreement:

1. A herd may be designated as brucellosis-free when it has passed two successive negative agglutination tests conducted not less than 30 days apart.

2. A certificate to this effect will be issued to the owner by the Division of Animal Industry and shall be valid for a period of 12 months from date of issue. Certificate renewable on a subsequent negative test after 12 months.

3. Blood samples are to be taken by a veterinarian selected by the owner and shall be submitted to the Animal Pathology Laboratory for the standard tube agglutination test. The tests shall include all sows and breeding gilts over eight months of age and all boars over six months of age.

4. All animals shall be properly identified by ear tag or other means of identification satisfactory to the veterinarian.

5. Replacement breeding swine produced directly from other brucellosis-free herds may be added to the herd without additional tests. All other replacement breeding animals shall be accompanied by a certificate showing them to have passed

a negative agglutination test and thereafter shall be isolated from the remainder of the herd until they have passed a second brucellosis test. Such retests are to be made not less than thirty days after arrival on the premises. Bred gilts and sows from noncertified herds should be isolated until they have farrowed.

6. When replacement breeding animals are added to a brucellosis-free herd, the Division of Animal Industry, State Department of Agriculture, Sacramento, shall be notified in writing. Such notification shall include the number and class of animals purchased, name of seller, and the ear tag numbers or other satisfactory identifications of the individual animals involved.

7. Owners shall not allow the use of any biological product for the prevention or treatment of brucellosis in the herd, unless authorized by the Department.

8. When positive animals are disposed of for purposes other than immediate slaughter, the owner shall notify the purchaser that the animals are positive to the agglutination test for brucellosis.

9. In consideration of assistance rendered by the State Division of Animal Industry, the owner agrees to undertake the eradication of swine brucellosis and to maintain a brucellosis-free herd in accordance with the foregoing plan.

Infection Reintroduced

Of the State's original 37 certified herds, only one has lost the certificate through infection being reintroduced.

This was a large herd consisting of some 400 sows and gilts.

The first test in the herd showed about 60% reactors. The unit segregation system was adopted and a clean unit established from the progeny of the positive unit.

The positive unit was disposed of as replacements became available and the size of the herd considerably reduced. The herd was eventually certified following two consecutive negative tests.

The recertification test six months later showed about 70% reactors in the herd. There are two possible sources of infection in this case:

1. The exhibiting of animals at a large fair.

2. The presence of latent infection in some of the negative animals remaining in the positive unit. When the positive unit was disposed of, some negative animals were retained. This is a practice which is not now recommended.

4-H and FF Groups

The first plan of agreement—that a herd consists of not less than five animals—ruled out many 4-H Club and Future Farmer chapter boys, who usually had less than five.

The project was modified to include an entire 4-H Club which is usually on a county basis. A member of the Agricultural Extension Service—as the leader of the club—is responsible for maintaining the plan of agreement and the club as a whole was certified as free from brucellosis.

The same situation prevailed with the Future Farmer chapter. These chapters are usually lead by the vocational agricultural teacher in the high school. He is responsible for maintaining the plan of agreement and the chapter attached to the high school is certified as free from brucellosis.

Program Expanding

The program is gradually expanding and it is considered feasible that California could be designated as an area free from swine brucellosis.

Around fair season—when health regulations are involved—interest in the eradication program is stimulated as certification automatically permits entrance without additional test.

A stumbling block in a state-free program of eradication is the large garbage-feeding units. Where thousands of breeding sows and gilts are involved, concentrated in a relatively small area, the unit segregation system, which is practical in the normal herd, is highly impractical in those large garbage-feeding units.

Such units do not sell brood stock, but nevertheless they remain as foci of infection. It is in these herds that vaccination or chemotherapy may be the answer.

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