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Brucellosis
Can cause Contagious Abortion in Cattle
and Undulant Fever in Man

By F. WILKINSON, B.V.Sc., Veterinary Surgeon

WHEN the cow, shown in the accompanying photograph, was purchased it had a small fluid-filled lump on the left knee. The swelling did not appear to be painful but gradually increased in size until it assumed the proportions shown in the picture. It was a typical case of "big-knee," one of the less common manifestations of Brucellosis—the disease commonly known as contagious abortion—and a blood test of the animal confirmed the diagnosis.

The introduction of this Brucellosis-infected cow into his herd was a serious matter for the owner. Several other cows in the herd became infected and aborted their calves. This caused a serious drop in milk production and he had to purchase more cows in milk to maintain his quota supplies. Affected cows proved difficult to get into calf again.

Cows usually become infected through eating pasture contaminated with Brucellosis organisms. An infected cow, such as that pictured, passes out vast numbers of Brucellosis germs in the afterbirth at calving and in the discharges after calving. Even the dung and urine may carry the germs.

When a "clean" cow picks up the infection by eating the germ-laden pasture the germs tend to localise in the udder, in the uterus or womb if the animal is pregnant, or in the glands or joints.

In the case of a pregnant cow, the germs become concentrated in the unborn calf and the membranes which surround it, usually leading to the death of the foetus and its expulsion so that the cow aborts or "slips its calf." This usually occurs about three months before the expected calving date.

After aborting, the cows often fail to clean properly. Retained afterbirth is a common trouble, and often there are secondary infections which result in offensive discharges continuing for some weeks. There is usually difficulty in getting such cows into calf again.

The initial introduction of Brucella infection into a "clean" herd can lead to a costly "abortion storm" which involves heavy losses in calves and milk production and a high incidence of temporary infertility.

Infected cows tend to build up an immunity and seldom abort a second time, but they remain carriers of the disease and can readily infect any "clean" animals in the herd.

Although there is no cure for the disease, once it gains a footing in the herd, it is possible to protect the "clean" animals—particularly the young heifers—by vaccination with Strain 19 vaccine. Vaccination of all heifers before they mature—usually between six and nine months of age—will, in most cases give a lifetime immunity.

The Department of Agriculture undertakes the vaccination of heifers throughout the dairying areas and is prepared to
make officers available to carry out the work. A fee of 2s. per head is charged for all cattle vaccinated in order to defray the cost of the vaccines used.

**DANGER TO HUMAN HEALTH**

For many years, the British garrisons in the island of Malta were subject to a form of fever in which the temperatures of the patients fluctuated greatly and they suffered severe pains and swellings. The cause was eventually traced to a Brucella infection in the goats which were the main source of the island's milk supply.

Although this particular organism, *Brucella melitensis*, is not known to be present in Australia, there have been a number of cases of the so-called "undulant fever" resulting from infection of human beings with *Brucella abortus*, the organism which causes Brucellosis or contagious abortion in cattle.

Unless it is boiled or pasteurised, milk containing Brucellosis germs can infect humans with this painful disease which is a serious menace to health as it does not respond readily to treatment and the infection endures for several weeks or even months.

The infection may be contracted directly from infected material such as afterbirths and discharges from aborted cows. Workers handling such animals should use disinfectants freely.

Brucellosis is a serious disease and if it is suspected in your herd, you should seek veterinary advice immediately.