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Black-leg in cattle

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BLACK-LEG is still a serious disease of cattle in the South West coastal region, causing deaths in young cattle. The disease is characterised by hot swollen muscles, acute lameness and rapid death. Cattle affected are usually 6 to 12 months old, in fat condition, and grazing on lush pastures.

The disease can be prevented by vaccination. One injection of vaccine is usually sufficient to protect young cattle from infection during the period which they are most susceptible.

Causative bacteria have a long survival
Clostridium bacteria, which cause the disease, live for long periods in the soil as spores. These spores are resistant to extremes of temperature and can survive for many years. The spores are thought to be eaten during grazing and enter through the blood stream to the muscles where they can stay for considerable periods before they multiply and cause clinical signs of black-leg.

Symptoms in affected cattle
The onset of the disease is sudden, with fever and lameness the obvious signs. The affected cattle become depressed and are reluctant to move. Swellings may be seen in the muscles of the hind-quarters and the shoulder, neck or chest. These swellings are hot and painful to the touch and on pressure there is a distinct crackling sound due to gas in the underlying tissues. Death usually occurs within 48 hours of infection; thus in many instances the affected animals are found dead.

The carcasses of dead cattle quickly become distended with gas so that the uppermost limbs extend straight out from the body, and a dark frothy discharge exudes from the openings. If the affected muscles are cut, the muscle mass is seen to be very dark, swollen and full of gas bubbles while the surrounding muscle has watery yellow fluid between the muscle fibres.

All carcasses should be burnt to prevent contamination of pasture and soil as dead carcasses contain enormous numbers of infective spores.

Prevention is better than cure
Treatment with penicillin will prevent deaths if given early in the course of the disease but sick animals are rarely detected early enough. If routine vaccination is carried out the disease will be prevented.

One injection of 5 cc. of black-leg vaccine given beneath the skin results, after an interval of 14 days, in the development of a strong immunity which lasts for 12 to 18 months and therefore protects young animals from infection during the period when they are most susceptible to the disease.

In localities where the disease has a seasonal incidence, young stock should be vaccinated annually at least 14 days before the period when losses might be expected. Where the disease occurs irregularly, calves should be vaccinated upon reaching the age of four to six months. Vaccination can be carried out at the time of Strain 19 vaccination.
Black-leg vaccine is not a curative and is only of value for prevention of the disease. When, however, the disease makes its appearance on a property, the immediate vaccination of the animals which are still healthy followed by their removal to a fresh paddock for 14 days can be relied upon to check the losses.