

Stillbirth In Beef Cattle, And How To Investigate A Stillbirth Problem

Stillbirths can occur due to infectious disease, trace element deficiency, management, or simply bad luck. Stillbirth is usually described as the production of a dead calf after 272 days gestation, however calves that die within 24 – 48 hours of birth are also sometimes described as stillborn. A single stillborn calf may not be regarded as significant, however where several stillbirths occur within the herd then investigation may well be warranted.

Causes of Stillbirth

Infectious Disease

- BVD – infection of cows during pregnancy can result in the development of calves with under-developed brains. These calves may not have the capacity to survive and can die during calving.
- Leptospirosis – this organism can cause abortion at any point during pregnancy. If this abortion occurs towards the end of pregnancy then a full-term stillborn calf is the result.
- Neospora – this organism can cause abortion from around 5 months gestation onwards. If the abortion occurs towards the end of pregnancy then a full-term stillborn calf is the result.

Trace Element Deficiency

- Iodine deficiency – Iodine is essential for the production of thyroid hormones. Thyroid hormones in turn are essential for successful calf development.
- Selenium/vitamin E deficiency – Calves born deficient in these trace elements are often weak and unable to rise with a poor suck reflex. They deteriorate rapidly and often die within a few hours of birth.

Management

- Slow Calving Syndrome (SCS) – Cows that are over fat prior to calving will often have problems utilising calcium during calving. Calcium is essential for contraction of the uterus. Cows affected with this syndrome are sometimes described as having “given up” during calving.
- Dystocia (Difficult calving) – Big calves or wrongly presented calves can suffer from stress and lack of oxygen during calving which can result in stillbirth.

Investigation of Stillbirths

1. Have a structured approach to reviewing your calving losses. Establish what proportion of your overall calf crop were stillborn, and then look at each stillbirth individually. Where a number of stillbirths have been experienced either throughout the year or during a specific calving period, it is important to investigate each case individually as well as

considering the problem as a whole. While it is possible that a number of stillbirths occur due to the same cause, it is also entirely possible to have stillbirths occurring due to different causes.

When investigating each stillbirth, there are a number of factors that it is important to record. By doing so, it may be possible to identify a common factor linking each stillbirth and thereby pinpoint the problem:

- Sire (breed, EBV);
 - Dam's feeding regime during pregnancy (at grass or housed);
 - Condition of dam at calving (fat cows are more prone to dystocia and SCS);
 - Speed of calving (prolonged calving can indicate dystocia, SCS or that the calf was dead before calving commenced);
 - Presence of any calf abnormalities (skeletal abnormalities can slow calving, while neck swelling can indicate goitre due to iodine deficiency);
 - Any assistance required (use of a calving jack can stress a weak calf to the point of death);
 - Cloudiness of eyes (clouding of the eyes indicates that the calf has been dead for several hours);
 - Problems in the living calf crop (weak, slow calves may suggest selenium/vitamin E deficiency, while "stupid" calves may indicate BVD).
2. Laboratory testing can have a valuable role in the investigation of a stillbirth problem. This can be both postmortem examination of stillborn calves and screening of blood samples from adult cows within the herd:
- Examination of calves can help to establish involvement of various causes including infectious diseases, iodine deficiency and dystocia.
 - Screening of blood samples from the breeding herd can identify infectious disease and trace element deficiencies.
 - It is also useful to blood sample any cows that produce stillborn calves immediately after calving. This can help to identify any abnormalities in calcium and magnesium levels as well as infectious disease or trace element deficiency.