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### SHORT COMMUNICATION

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## An Overview on Various Reported Causes of Abortion and Still Birth in Dairy Cattle

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### ABSTRACT

*Abortion in dairy cattle is commonly defined as a loss of the fetus between the age of 42 days and approximately 260 days. Pregnancies lost before 42 days are usually referred to as early embryonic deaths, whereas a calf that is born dead between 260 days and full term is defined a stillbirth Each abortion leads to significant economic loss depending on such factors as the current value of replacement stock, feed and milk prices, and the stage of gestation when the abortion occurs.*

**Keywords:** Abortion, Still Birth, Pregnancy, Gestation and Dairy Cattle.

### INTRODUCTION

The diagnosis of abortions often presents a challenge to the herd owner and the herd veterinarian. Although a gradual increase in the abortion rate in a herd may be noted over a period of many years, a sudden and dramatic increase is more commonly seen. For this reason, prompt and thorough action is required when abortions do occur. Well kept records will often be of benefit during the

investigation of abortion problems (Forar *et al.*, 1996).

### Causes of abortion

The **infectious agents** represent the most commonly diagnosed cause of abortions in many laboratories. These etiologies are perhaps the most frequently thought of cause of bovine abortion.

Reports of abortions associated with aflatoxin appear to be situations where the health of the cow was also severely

compromised by the toxin. Some experimental studies have shown that **mycotoxins** such as zearalenone in very high levels can cause abortions in cattle, although these levels are not normally found in naturally contaminated feedstuff. Ergot alkaloids are toxins produced by the *Claviceps* fungus, which grows in the seeds of various grasses and small grains such as brome grass, wheat, oat, rye and fescue. These toxins have been associated with abortions in dairy cattle as well as other health problems (Forar *et al.*, 1996). There is some evidence to suggest that a very sudden increase in environmental temperature may result in abortions, there is little evidence to support heat stress as a common cause of abortions. **Heat stress** can affect reproductive performance in a dairy herd, although it will generally cause conception problems rather than abortions. Similarly, on rare occasions a cow that develops a very high fever due to an infection may abort her fetus (Kinsel, 1999).

**Genetic abnormalities** in the fetus that may result in abortion are not very frequently diagnosed, and these usually occur as an individual cow problem rather than as a herd outbreak. Genetic abnormalities may also cause obvious physical changes in the fetus, just as other infectious agents may. These abnormalities, which may not cause a change in the outward appearance of the fetus, may result in abortion because of the growing fetus' inability to develop properly in the uterus.

Cattle are susceptible to fertilizer nitrites and nitrates or the nitrates found in plants

under certain conditions (e.g. drought-stress). **Toxic agents** may also cause abortions or early embryonic deaths. If a cow is exposed to sufficiently high levels of nitrates/nitrites (~.55 % or greater nitrate in forage), abortions may occur, especially in late gestation (Forar *et al.*, 1996).

## CONCLUSION

A low rate of abortions is usually observed on farms and 3 to 5 abortions per 100 pregnancies per year is often considered as normal. However, the loss of any pregnancy can represent a significant loss of (potential) income to the producer and appropriate action should therefore be taken to prevent abortions and to investigate the cause of abortions that may occur.

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