

Colibacillosis

Colibacillosis (white calf scours) can cause serious disease in young calves exposed to unhygienic conditions and stress, particularly when colostrum intake is inadequate. Vaccinating cows and heifers protects calves against colibacillosis via the consumption of antibodies in colostrum. There is a relatively low risk of outbreak of this disease in Queensland.

Cause

- The bacterium, *Escherichia coli* (*E. coli*), is the primary cause of diarrhoea in calves one to two days old.
- Usually associated with inadequate intake of the mother's colostrum, unhygienic conditions and stress.
- It may also occur in older calves subjected to stress.

Signs of the disease

- Profuse, foul-smelling, yellow-to-white diarrhoea
- May infect the lungs, navel or joints with affected calves being dull and emaciated
- May cause sudden death in calves under two weeks of age due to septicaemia or toxæmia

Potential economic losses

- High numbers of calves usually affected within a herd
- The cost of treatment of diseased calves
- Long-term ill-thrift in chronically affected calves
- The cost of losing potential replacement heifer calves (often underestimated)

Prevention and control

Ensure newborn calves get adequate colostrum and are kept in hygienic conditions with minimal stress.

- Vaccinate heifers at 6 to 8 weeks and 2 to 3 weeks prior to calving
- Give cows an annual booster 2 to 3 weeks prior to calving (vaccinating pregnant cattle ensures high levels of immunity are transferred to the newborn calves via colostrum)

Vaccination costs

It is important to compare the different brands and various retailers to ensure you get the most economical vaccination program.

These costs are based on 2003 prices for a 100-cow herd (100 cows, 3 bulls, 25 heifers and 40 replacement heifer calves) and do not include labour, materials or facility costs:

- \$2.25 per dose
- in a 100-cow herd, vaccinate cows annually and heifers twice a year 150 doses @ \$2.25 costs \$337.50 annually.

Therefore the program would break-even, if the equivalent of one cow (valued at \$1000) was saved every three years by colibacillosis vaccination.

Vaccination tips

- Follow the manufacturer's instructions.
- Store and handle vaccines correctly to ensure their effectiveness is not reduced.
- Adhere to safety precautions for workers handling vaccines and associated equipment.
- Ensure safe disposal of used equipment, avoiding environmental contamination.

- Make sure animals are in good health to optimise immunity.
- Vaccination does not provide instant protection - generally full protection doesn't occur until up to four weeks after the initial doses.

Source: Queensland Department of Agriculture, Fisheries and Forestry; 2009