

# Colostrum quality focus critical to neonatal survival

**D**espite recent focus on reducing calf mortality and the importance of effective colostrum management, vet Bill May says losses to weaning on dairy units remain at alarmingly high levels.

Mr May, of Shropshire-based Lambert, Leonard and May, says typical mortality from birth to weaning is 10 to 15 per cent, yet some units achieve very low levels of loss, with consistently low incidences of the common calf diseases.

Mr May adds there are no new research findings to make neonatal care and the maintenance of health an easy job, and the basic management principles required for calf rearing remain the same as they were 50 years ago.

## Critical aspects

However, he says the critical aspects of calf rearing required for the maintenance of health clearly require revisiting.

"Immunity from colostrum is especially important in the first three weeks of life when calves are challenged by environmental pathogens which are present on every farm, such as E.coli, rotavirus and cryptosporidiosis.

"Controlled exposure to these pathogens over a period of time is necessary to develop natural immunity, whereas a big challenge in the face of insufficient colostrum immunity will result in disease, commonly manifested as septicaemia, scours, joint ill and navel ill, and possibly death."

Mr May says many calves in modern dairy management systems receive insufficient antibodies through colostrum to protect them from the challenges they will face in the neonatal period.

"A recent field survey showed 50 per cent of colostrum samples would fail to provide the recommended 100g of immunoglobulin G antibody even when four litres is fed in the first six hours of life.

"There are many factors which influence colostrum quality and a visual appraisal based on colour

**A simple, and cheap, colostrometer can quickly and easily be used on-farm to assess colostrum quality**  
BILL MAY

and/or thickness is not reliable in terms of assessing immunity levels - this underlines the need to assess colostrum quality more objectively and take this into account when calculating the minimum quantity which a calf may require."

Mr May says four litres is a 'minimum' starting recommendation for a 40kg calf receiving 'good quality' colostrum.

## Colostrum quality

"A simple, and cheap, colostrometer can quickly and easily be used on-farm to assess colostrum quality, so either a greater volume can be given or a supplemental source of either frozen colostrum or commercially available powdered supplement can be administered."

Mr May adds colostrum provides immunity for well beyond the neonatal period. A failure of colostrum antibody provision has been shown to increase levels of disease, reduce average daily weight gain and increase mortality throughout the rearing period. It also negatively influences culling rates, milk fat production and even milk yield in the first two lactations of an animal's life.

"Investment of time in the first few hours of a calf's life is more than repaid when all of these things are taken into account."

**A colostrometer can be used to assess colostrum quality prior to assisted feeding by teat bottle feeder or stomach tube.**

## Good colostrum management

- Feed a minimum of 10 per cent of the calf's bodyweight (four litres in the first six hours of life for a 40kg calf, as long as quality is good). Poorer quality colostrum will require greater volumes and may require assisted bottle feeding or stomach tubing
- Milk the dam as soon as possible after calving to collect colostrum and feed only first milking colostrum. The concentration of antibodies

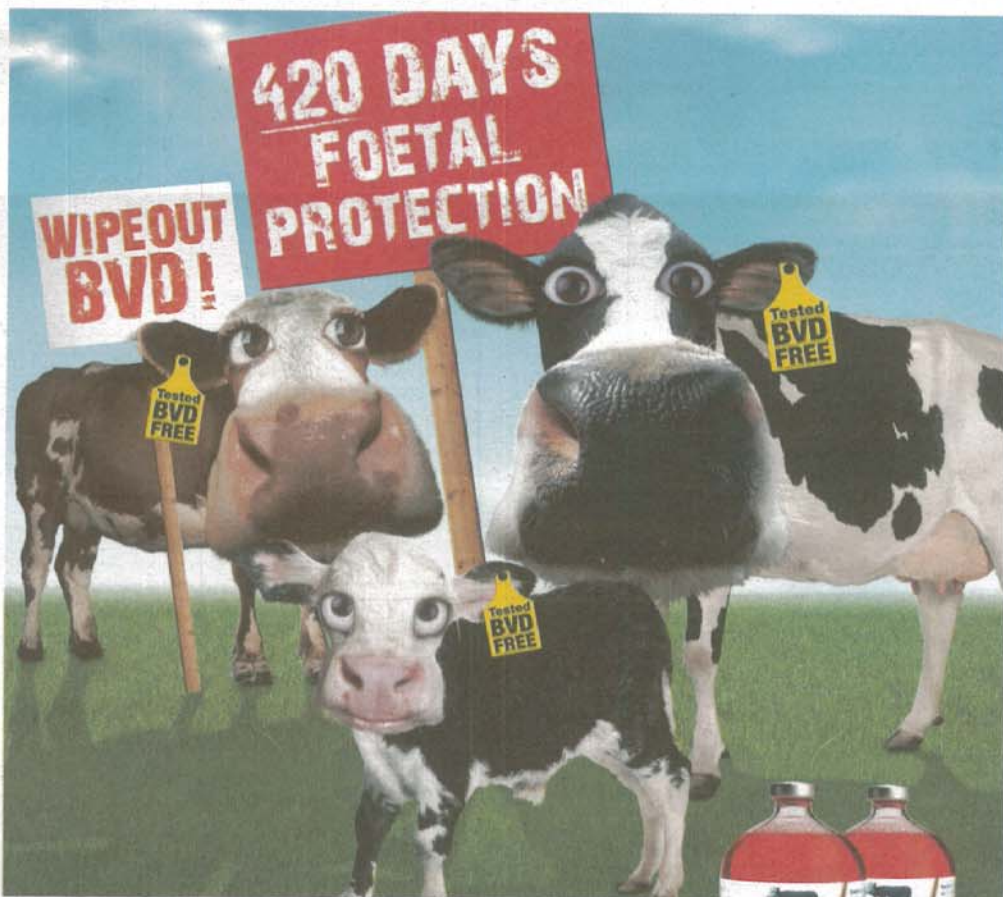
declines by about 50 per cent for each milking thereafter

- Use a colostrometer to determine good from poor colostrum. Freeze only good colostrum from health-screened mature cows as a supplemental colostrum source
- Supplement but do not replace natural colostrum with commercially available artificial powdered products
- Do not share or pool colostrum,

especially for dairy replacement heifers due to the risks of spreading Johnes and/or increasing the risks for 'bleeding calf syndrome'

- Identify 'high risk' calves - difficult calvings; calf from a heifer; first colostrum feed more than six hours old; dam in poor health; calf is a twin; calf is weak; calf is not breathing normally
- Assess calf immunity regularly in conjunction with your vet

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