Antimicrobials should be the last resort

Antimicrobials may be very good for tackling calf scour and pneumonia but their use is not without risk, says Keith Cutler of the Wiltshire-based Endell Veterinary Group.

"Antibiotics are perhaps best known but not the only antimicrobials," he says, explaining all antimicrobials kill bacteria or suppress their growth/multiplication.

They do this in a variety of ways, says Mr Cutler, such as altering or weakening the cell wall, preventing cell replication by interrupting the synthesis of DNA or RNA, or interfering with cell metabolism.

But, despite their efficient action against harmful bacteria and their good safety profile in mammals, over-use is a danger.

"Bacteria are constantly evolving and the more exposure they have to antimicrobials, the more likely they are to develop methods of protecting themselves against antimicrobial action," he says.

"This is called resistance and is an increasing problem, not only in veterinary medicine but also in human medicine, for example MRSA is recognised with increasing frequency as a hospital-acquired infection.

"It is therefore important that antimicrobial use is carefully considered, that they are only used when necessary and when they are used, it is at appropriate dose rates and frequencies given via the optimum route of administration for an appropriate length of time."

Mr Cutler says the industry has to take this issue seriously, as the misuse and unnecessary 'blanket' treatment of animal groups has led to calls to ban the use of antimicrobials in farm animals.

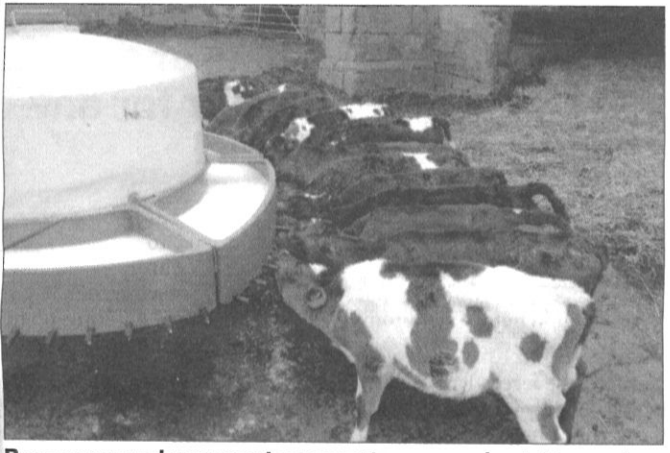
To avoid this scenario, the British Veterinary Association has produced a poster giving guidance on the responsible use of antimicrobials. This recommends, in no uncertain terms, that farmers and vets should work together to:

- Avoid the need to use antimicrobials, where possible.
- Avoid inappropriate use of antimicrobials.
- Minimise prophylactic use of antimicrobials.
- Record any deviations from standard protocols.
- Monitor suspected treatment failures and reported them to the Veterinary Medicines Directorate.

"In short, this says the blanket in-feed or in-milk medication of calves with an antimicrobial is bad practice," says Mr Cutler.

"Treatment for specific problems may be necessary in certain situations but disease control should not rely on this. Instead good husbandry, including an early and adequate intake of good quality colostrum for all calves, keeping calves in a clean, dry and well ventilated environment, feeding them well and using appropriate vaccination strategies should be employed in an effort to prevent disease.

"Where treatment is necessary, it should be targeted and used appropriately, its performance should be monitored and 'the right drug' should be chosen for 'the right bug'."



Base scour and pneumonia prevention on good nutrition and management, not blanket treatment with antimicrobials.

> **Blanket in-feed or in-milk medication of whole groups of calves with an antimicrobial is bad practice**
> KEITH CUTLER

Seven point plan to prevent pneumonia

ADOPTING preventative measures will 'greatly reduce' the need to introduce blanket in-feed or in-milk medication to groups of calves, says Maggie Gould, Volac's calf technical specialist.

"By adopting this responsible policy to calf management, the risk of disease resistance developing in is reduced and the potential for lifelong performance will be maximised," she says.

- Ensure an early and adequate intake of good quality colostrum – a minimum three litres in the first six hours of life. A calf requires about 20 minutes of continuous suckling to consume those three litres
- Group-rear with an all-in, all-out policy, cleaning and disinfecting between batches
- Avoid mixing established groups and keeping animals of different ages in the same airspace
- Keep calf pens clean, dry and well bedded with good quality, barn-stored straw. This straw will also provide all the long fibre a growing calf needs to supplement milk and concentrates without over-filling the rumen
- Provide adequate ventilation but avoid draughts. The minimum ventilation rate is six air changes per hour
- Give calves high quality nutrition in the form of milk replacer, concentrates and fresh water
- Employ appropriate vaccination strategies, as advised by your vet