

It's time to tackle antibiotic resistance

Antibiotic use on farm has been hitting the headlines recently. Vet *Peter Edmondson* of the Shepton Vet Group explains what changes are taking place

Antibiotic resistance has come to the fore in recent months. The reason is the belief antibiotic use on farm is increasing antibiotic resistance in humans, plus the fact there are few antibiotics on the horizon for human or animal use.

CHANGES

Change is being driven by governments, regulatory agencies and consumer pressure such as supermarkets. In 2010, the Dutch Ministry of Agriculture announced they wanted a 20% reduction in antibiotics used on farm by 2011 and a 50% reduction by 2013.

They wanted to reduce the use of all third and fourth-generation cephalosporins, fluoroquinolones and any other antibiotics used for treating multi-resistant human infections.

In Holland all treatments are recorded in a national database, so it's easy to see what's happening on a farm-by-farm basis and what specific antibiotics are being used.

SCANDINAVIAN COUNTRIES

Dutch livestock farmers are obliged to implement and adhere to a herd health plan that includes a herd level treatment protocol that has to be reviewed on an annual basis by their vet.

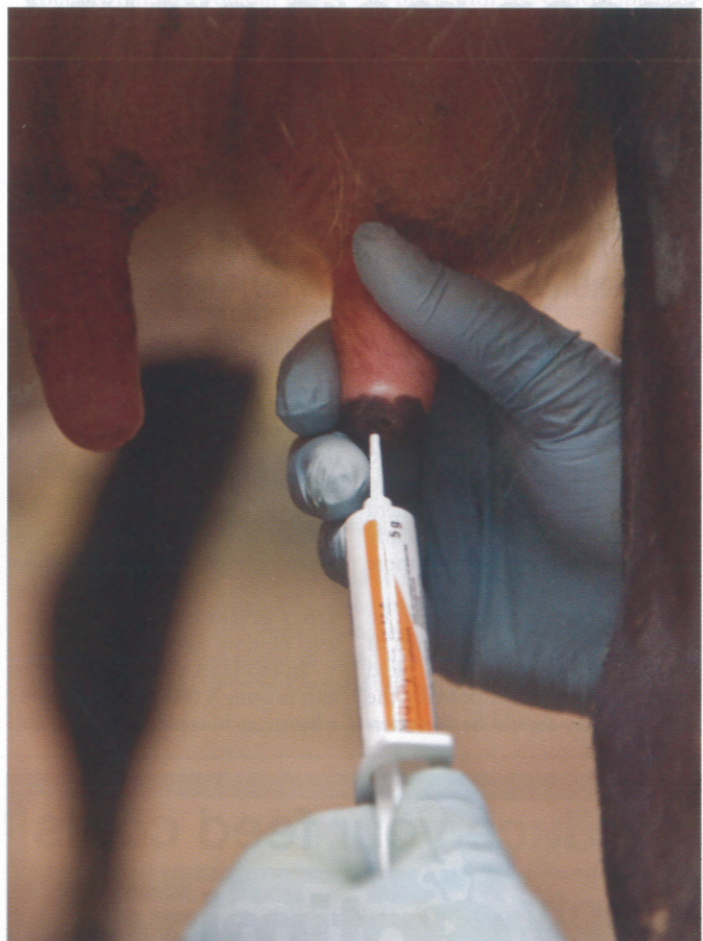
There is a clear onus on the farmers and vets. The USA is now restricting "off-label use" of third-generation cephalosporins. Other countries are doing the same.

In Scandinavia a vet has to examine every animal prior to any antibiotic treatment.

This is expensive and so these countries have been focusing on reducing disease for years to minimise the need for treatments.

The aim is to reduce antibiotic use by preventing disease through improved management and use of effective vaccines where appropriate.

Where antibiotic treatments are required, the correct antibiotic should be used for the correct treatment, starting with the most basic antibiotic, using the correct dose rates and route of administration for the recommended period



Responsible antibiotic use is even more critical in light of increased interest in the link between animal and human resistance.

ALY BALSOM'S ANTIBIOTIC USE OVERVIEW

Get up-to-date on antibiotics

- Pressure is building from Brussels to reduce the amount of antibiotics used in animals and minimise the use of critical groups of antibiotics that are used to treat the "hospital bug" MRSA.
- These groups include fluoroquinolones (used for treatment of respiratory infections and mastitis), macrolides (used for treatment of Bovine Respiratory Disease), and third and fourth-generation cephalosporins (commonly used in intra-mammary tubes or in drugs used for treatment of pneumonia or metritis).
- In human medicine these are only used in hospitals rather than as a first-line treatment for a simple foot infection or metritis.
- The EU commission will review the success of antibiotic reduction strategies in Holland, Denmark and France and is likely to recommend other member states to adopt the policy which has resulted in the greatest reduction of antibiotics.

WHAT COULD A WORST-CASE SCENARIO BE FOR THE UK?

- The legal reduction in the amount of antibiotics used on farm.
- Banning of certain classes of antibiotics.
- Banning preventative use.
- Banning vets from selling antibiotics they prescribe.
- Banning the advertising of antibiotics to farmers.

Thanks to Maarten Boers from the Livestock Partnership.

of time, as advised by your vet.

The most potent antibiotics should be used where there is a lack of response to treatment and not as a first treatment.

DRY COW THERAPY

The use of "blanket" medicines is hard to justify. Take antibiotic dry cow therapy as an example.

Teats can now be sealed during the dry period to stop new infections, so there is no justification for using antibiotic dry cow therapy on cows which are free from infection at the end of lactation.

Dry cow therapy should only be used where there is a proven need based on individual cow cell count data and clinical mastitis records.

Antibiotics should be used for treatment only. Some newer antibiotics are widely used due to attractive properties, such as a short or zero withdrawal period, but this does not mean these are the best treatments.

They might have significant

financial benefits to the farmer, but this does not necessarily constitute best practice.

SO WHAT DO WE NEED TO DO?

Firstly, a complete review of antibiotic use on every farm is the starting point – Tesco is already doing this on its direct supply milk producers. And ask what are the common diseases treated and how can their incidence be reduced?

Individual treatment regimes need to be reviewed to cover the specific antibiotics that are used, dose rates, frequency and duration of treatment.

Written treatment protocols should always be given so there is no doubt about what has to be administered and when. There will be significant changes to antibiotic use over the next few years.

The onus for responsible use has to be on the farmer and vet and they have to be able to prove due diligence and justification for any treatments that are administered.