

# TERN VETS LTD

*"Supporting British Farming"*



SEPTEMBER 2014

## RESPONSIBLE USE OF MEDICINES

As you probably have seen in the news in recent months, the development of antibiotic resistance and the need for responsible use of medicines has risen to the top of the agenda for governments and health organisations worldwide. The Chief Medical Officer Prof Dame Sally Davies has been quoted saying "the apocalyptic scenario is that when I need a new hip in 20 years I'll die from a routine infection because we've run out of antibiotics". The World Health Organisation has warned the world is heading for a "post-antibiotic era" unless action is taken. It paints a future in which "many common infections will no longer have a cure and, once again, can kill".

### How does this relate to us?

There is only a small amount of evidence directly linking transfer of resistance in animals to humans, but it is a massive risk. Small segments of bacterial DNA called plasmids are able to transfer genes freely between different bacteria, so development of resistant genes on farm could cross into human gut bacteria for example.

The development of resistance to antibiotics is an inevitable consequence of over use. The more a particular antibiotic is used, the more selection pressure is applied for bacteria which are resistant to it. Often, it is not the bacteria causing the infection itself which are the problem, but normal gut bacteria which are exposed to the antibiotic at the same time in which antibiotic resistance develops. E. coli would be a classic example, as many of you who have submitted mastitis samples for bacteriology will know. Lots of the E. coli samples we grow for you show multiple antibiotic resistance, and the majority of E. coli exposure to antibiotics is in the gut. Environmental contamination from manure then gives the opportunity for resistant bacteria to then infect the udder.



### What can we do about resistance on farm?

It is inevitable that the majority of antibiotics on farm are used by farmers. It is therefore our responsibility as vets to try and ensure that the **smallest quantity** of the **correct antibiotic for each** condition is used at the **correct dose rate** and for the **correct period of time**.

*Over the coming months we will be trying to review medicines usage on each farm and produce tailored protocols for all of the common conditions encountered. This should make sure that your animals receive the best possible treatment with the fewest possible effects on resistance. This will save money on farm (nothing more pointless and expensive than an inappropriate course of treatment) and improve the health, welfare and productivity of your animals.*

### Should I be doing anything in the meantime?

If you have a sick animal you wish to treat and are unsure which medicine to use, please call us! We are always happy to give advice, and one of the things that set us apart from other professions is that we don't charge for the advice! Regular communication with your designated vet is really important for keeping everybody abreast of what is happening on farm.

**We are available for advice 24/7  
on 01630 656300.**



### **Are there any medicines I should particularly avoid?**

The World Health Organisation is particularly keen to preserve certain classes of antibiotic which are crucial for use in human infections. On the farm side, this means minimising use of antibiotics such as some cephalosporins and fluoroquinolones. Some milk buyers such as Tesco and Sainsburys have already imposed restrictions on farmers who supply them with milk, so that Ceftiof, Readycef, Naxcel and Marbox can only be used in specific cows where a vet has recommended it. For 99% of all conditions there are perfectly good alternatives. These products tend to be overused as people reach for what they believe to be the "strongest" antibiotic. In fact, there is no such thing. It is a bit like asking what is the "best" car, when different models suit different situations. A Ferrari is not much use on the farm, and a Land Rover leaves something to be desired on a race track. Most of the antibiotics we stock have particular strengths and weaknesses, and this is why treatment protocols are so important.

It is likely that restrictions on these particular antibiotics will be more widely adopted by milk buyers in the future, so it is worth seeking alternative treatment strategies now.

### **Should I change my mastitis treatment?**

Using antibiotics locally (e.g. Infusing tubes into an udder rather than injecting the cow) is less of a resistance risk. Happily, this coincides with research showing that a course of intramammary tubes is still as effective a treatment as any. The longer the course, the more effective it is, so duration of treatment will be dependent on a balance of cow and farm history and cost.

Use of blanket dry cow therapy is now discouraged. Low cell count cows should not need antibiotic therapy, but should receive a teat sealant only. Organic farms have been doing this successfully for years. Research shows uninfected cows given antibiotic dry cow therapy are 12 times more likely to get E. coli mastitis early in the next lactation, as you are killing normal bugs in the udder which usually have a protective effect.



### **This all sounds pretty boring. What happens if I just ignore it?**

The medical profession and government bodies are taking all this very seriously. Other countries in Europe are way ahead of us on this issue. The Dutch are on target to reduce antibiotic use in the livestock sector by 50%, with no negative impacts on cow health parameters. Use of antibiotics is monitored centrally on the basis of number of treatments per cow per year. Farms that have unacceptably high antibiotic usage are made to implement an action plan with their vet, and both farmers and vets can be fined for failure to comply.

In some other European countries, vets are no longer able to supply medicines directly to their clients. Instead, they must issue a prescription for medicines which the farmer then has to buy elsewhere, potentially delaying necessary treatments.

If we fail to take this seriously and show that we are actively trying to reduce inappropriate antibiotics use then we can expect to have stringent restrictions imposed on us from the Government and the EU.

### **A WARM WELCOME!**

We've got a new member of the team on the farm reception. Danielle Murray starts in the farm office on Monday 8th September - she has been doing an apprenticeship at the NFU and is from Market Drayton so knows the local area well. She's looking forward to learning the ropes and getting to know you all!

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