

# Farm news



**Rose Jackson**

BVSc DBR Cert VBM MRCVS

## Stock Bull nutrition – from the uterus to the sale ring

**Genetics creates potential, management realises the potential and disease can destroy it.**

Amazingly, a bull's mother's nutrition at the time of conception can have an effect on the bull's subsequent fertility. Unsurprisingly, insufficient energy in the ration can have a negative effect but so can too much protein. The age of onset of puberty (usually at around 42 weeks) is moderately heritable but is also strongly influenced by nutrition. There is also a genetic link between a bull's scrotal circumference and heifer fertility so selecting for more fertile females will have a positive impact on any male progeny too.

Reducing the age of onset of puberty in bulls destined for AI stud will increase the rate of genetic gain, particularly when used alongside genomic technology so research into this area is very useful. Nutrition before 6 months of age has the biggest impact on age at puberty and sexual maturation – this is not correlated to body weight either so bigger bulls at any given age aren't necessarily the most fertile.

### Nutrition of the mature bull

The take home message is to avoid major fluctuations or extremes of nutrition; getting bulls in 'show condition' for the sale ring then expecting them to run with a herd on a very different ration straight away is not good for fertility. Sadly, fit bulls that are ready to work will not currently achieve their true value so attitudes do need to change. Stock bulls fed a TMR dairy ration are also being overfed which can lead to degenerative joint disease and poor fertility. Acute rumen acidosis can also lead to sperm abnormalities for up to 90 days.

Ideally, stock bulls (for any system) should be bought at least 2 months in advance so their concentrate ration can be gradually reduced down and to get them used to the new ration. This also gives us time to blood test, vaccinate and worm etc before running with the cows.



### Poisonous plant of the month: Foxglove

**Fay Pooley**

MA VetMB CertAVP (Cattle) MRCVS

Although very pretty, foxgloves are very dangerous to all livestock. They contain a toxin called 'digitalis' which affects the heart. It can cause changes in pulse rate and quality, but more frequently will present with sudden death.

All parts of the plant are poisonous. Poisoning often occurs from the fresh plant, but it remains poisonous when dried so feeding hay containing it is also dangerous.



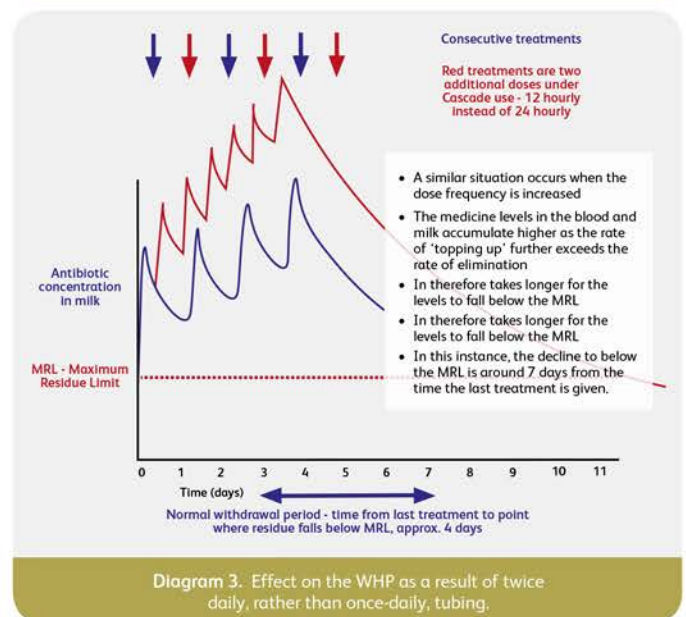
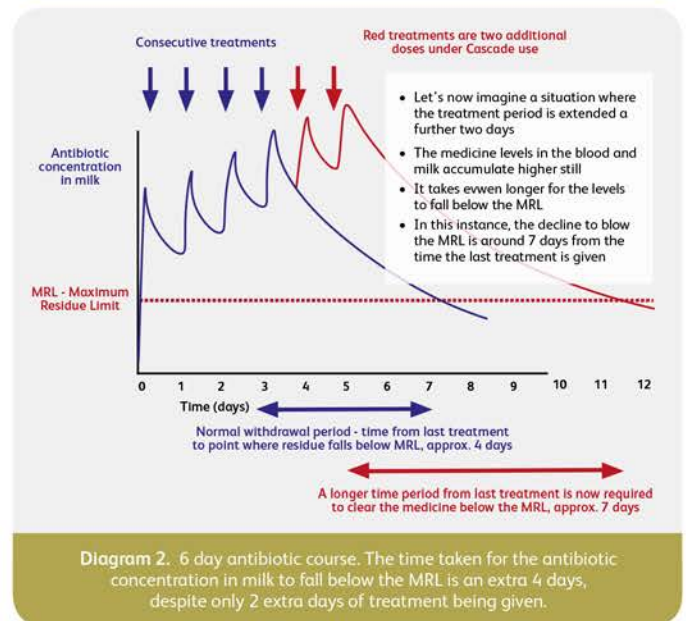
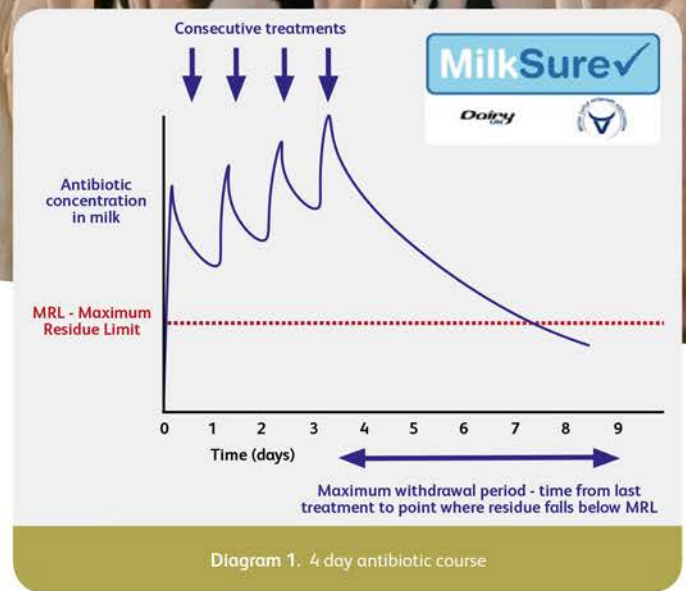
# What is an MRL and where does it fit in with meat and milk withdrawal periods?

Rose Jackson BVSc DBR Cert VBM MRCVS

MRL stands for Maximum Residue Limit which is the legally allowed maximum concentration of a veterinary medicine allowed in either milk or meat. All medicines have to be tested for safety before they can be licensed for use, and the withdrawal period for any given medicine is based on the MRL. These rules sometimes seem to be onerous, but we must remember that these exist ultimately to protect consumers.

Very occasionally, milk from animals that are out of their withdrawal periods may still test positive for antibiotics on an on-farm residue test such as the Delvo SP. There might be several possible reasons for this:

1. **If antibiotics are used 'off license'** (not exactly as stated on the data sheet), e.g. a 6 day course instead of 4 days (see diagrams 1 and 2), or tubing twice a day instead of once a day (see diagram 3). In this case, antibiotic levels in milk can build up to above the MRL so it is necessary to use a standard minimum 7 day milk and 30 day meat withdrawal period for these 'off license' protocols as the normal withdrawal will not be appropriate. Please note that only a vet can recommend off license treatment protocols so please speak to one of us if you are unsure.
2. **If two antibiotics of the same class but in different preparations (e.g. mastitis tubes plus injectable) are given together** and this is not recommended on the data sheet, MRLs may again be exceeded for longer so a standard minimum 7 day milk/30 day meat withdrawal should be applied.
3. **For some commonly used antibiotics** (including Betamox and Noroclav), the MRL is actually higher than the level detected by the Delvo SP test so an individual cow milk sample may occasionally fail for 24-48 hours after the end of the withdrawal period. If this occurs, it should be reported back to the drug company via your vet as it is technically an 'adverse reaction'. Our advice is to believe the Delvo test first as the dairies use the same technology as their first line test.



Farm and Equine Centre  
Markeaton Lane, Markeaton, Derby DE22 4NH  
01332 294929

Allstree  
01332 554422

Pride Veterinary Centre  
01332 678333

Duffield  
01332 841700

Shelton Lock  
01332 700321

Hilton  
01283 732999

Stapenhill  
01283 568162

Mickleover  
01332 518585

Stretton  
01283 565333

Oakwood  
01332 666500