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Farm news

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The Power of Data: Conception and Pregnancy Rates

The next step after heat detection, and getting cows served in a timely manner, is conception i.e., successful mating and creating an embryo.

Getting cows back in calf efficiently can be a real struggle, so if your numbers aren't quite hitting the target, we need to look at the major influences. Firstly, we look at the data, and for that we need good records – when cows calved, when they were served and by which method (bull details, AI sire, technician). If you don't have any computer software, we can still use diary recorded information for analysis.

We discussed factors affecting heat detection (Submission Rate) in part 1. Areas that impact Conception Rate (CR) include:

- Endemic disease – for example, BVD, Leptospirosis, IBR, Neospora and Johne's Disease
 - Lameness, ketosis (Figure 1) and mastitis
 - Diet – particularly energy levels and protein levels (needed in early lactation, especially for growing heifers, but too much will lead to excess urea which is toxic to embryos at high levels); mycotoxins
 - Semen factors – Storage and AI technique; stock bull fertility
- Investing in these areas can yield huge benefits not only for fertility. Changes often will also result in increased milk yield, reduced vet bills and culling rates and reduced workload and stress levels from dealing with unhealthy cows. We can collaborate with your nutritionist and foot trimmer if needed to come up with an effective intervention plan that works for everyone. Seasonal issues such as nutrition at grass, heat stress or stocking densities and cow comfort may also play a role.

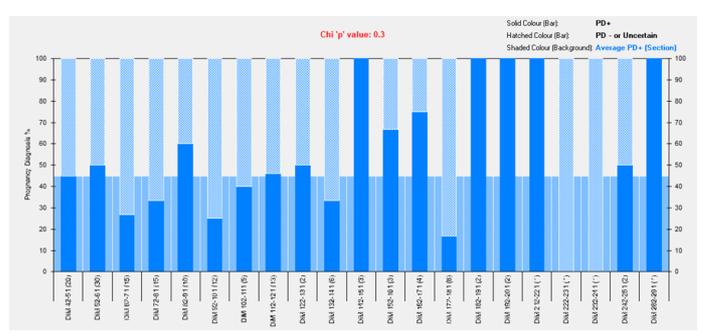


Figure 1. We often use a farm data analysis software programme called TotalVet. We can use it to see how conception rate varies by bull, month of service, day of the week... all sorts of things. Here we're looking at conception rate (or 'Pregnancy Diagnosis %'; y axis) by days in milk (DiM; x axis), starting at 42 DiM when cows first start to be served and going up in 10 day intervals. This herd's conception rate is good at 42-61 DiM (the two blue bars at the far left) but then drops between 62 and 81DiM (third and fourth blue bars) before increasing again. This pattern can signal problems with the transition period, since the follicles releasing the eggs at this time were formed 60 days earlier, around calving. From this data, we'd then start looking closely at how well these cows transition, including the incidence of ketosis, as well as what's going on with the peak lactation cows themselves.

Pregnancy Rates

Pregnancy Rate (PR) is a combination of Submission Rate and Conception Rate. It is considered a good overall indicator of your herd reproductive performance as it measures the ultimate goal – pregnant cows.

When looking at data, PR is the proportion of eligible cows that become pregnant in a 21-day period, i.e. one cycle. This tells us how efficiently the cows are getting in-calf after the voluntary waiting period. Cows are most productive at peak lactation, so we aim to have as many cows in the first half of lactation as possible. To do this they need to get back in calf quickly, so they spend less time stale and have an appropriate length of lactation without a long, low yield tail end. Days not in calf are expensive and ultimately lead to culls. So, the higher the PR, the higher the productivity of the herd. We aim for a pregnancy rate above 20% (figure 2), with many farms achieving 25% and some over 30%.



Summer Sheep Services



Lucy Johnson MA VetMB MRCVS



Although it may feel like lambing has just finished and perhaps some of us would rather forget all about it until next year, now is the time to start preparing for the next one! We provide several services which aim to make your next lambing smoother – sometimes a little forward planning can make all the difference. If you haven't used these before, here are some of the details and benefits but please phone the office if you'd like to discuss further with a vet.

Tup Fertility Testing

We recommend testing your tups 8 weeks ahead of every breeding season. Around 30% of tups in the UK are estimated to be sub-fertile. Finding out that one of your tups is sub-fertile or infertile before breeding gives you a chance to treat any problems or source a replacement and avoid a shock at scanning. A lot can happen in a year – last year's fertility is not a predictor of this year's, so better to get him tested.

Vasectomies

A 'teaser tup' can be very useful for advancing the breeding season and tightening the lambing period. The surgery is relatively fast and simple, usually performed after a light sedation, and teasers are ready for use 6-8 weeks after the op. They work best when introduced to ewes which have been away from rams for at least 4 weeks. The teaser(s) should then run with the ewes for 14 days which will encourage them to start cycling before introducing fertile rams. A fit, young ram with strong libido is a good candidate.

CIDRs

CIDRs or progesterone sponges can also be used to advance and tighten the breeding season even more successfully than teasers. A CIDR is placed in the vagina for 12 days before tupping. When it is removed, the ewe will ovulate 1-2 days later. So long as plenty of fertile tups are provided (1 tup per 10 ewes) this can result in a very tight breeding and lambing period. For many flocks, this allows easier planning of labour around lambing time and a much more even crop of lambs at weaning.

Barren Ewe Bloods & Abortion Vaccines

Abortion and infertility in ewes can be very costly and demoralising. Fortunately, the two main causes of ovine abortion in the UK, Enzootic Abortion of Ewes (EAE) and Toxoplasmosis, can be prevented with vaccination. To find out if these diseases are affecting your flock, MSD provide funded blood sampling for 6-8 barren or aborted ewes, as long as these are submitted before the end of June. If you require abortion vaccines, such as Toxovac or Cevac, remember to order these as early as possible to avoid disappointment.

Compulsory Post-Movement TB Testing



Carolyn Baguley MA VetMB
CertAVP(Cattle) MRCVS



Don't forget that from 1st August 2023 compulsory post-movement TB testing will be introduced for cattle moved to herds in the annual surveillance testing parts of the Edge Area if they are moving from:

- Six monthly surveillance testing parts of the Edge Area of England
- High Risk Area (HRA) of England
- Wales

A small number of specific exemptions to post-movement testing will apply, mirroring those that already apply in the Low Risk Area. Cattle keepers will be responsible for arranging and paying for a post-movement test although a government funded whole herd surveillance test can be used as a post-movement test if the timing works.

APHA will be writing to all cattle keepers in annual surveillance testing parts of the Edge Area advising them of this upcoming policy change.

Further details and 'Frequently Asked Questions' can be found on the TB Hub –(<https://tbhub.co.uk/tb-policy/england/post-movement-testing-in-annual-surveillance-testing-parts-of-the-edge-area/>).

You can find out which TB risk area your herd, or a herd you are moving cattle from, is located by using Defra's TB testing interval search tool (apha.defra.gov.uk/tb-test/index.asp). You will need to have the county and parish number (the first two parts) of the CPH number of the herd to hand.

Farm and Equine Centre Markeaton Lane, Markeaton, Derby DE22 4NH 01332 294929	Alfreton	Allestree	Hilton	Langley Mill	Mickleover	Oakwood
	01773 304900	01332 554422	01283 732999	01773 304914	01332 518585	01332 666500
	Pride Veterinary Centre 01332 678333	Shelton Lock	Stapenhill	Stretton		
		01332 700321	01283 568162	01283 565333		