

## “Normal” And Sub-Fertility In Bulls

With more bulls being examined routinely pre-breeding by vets the debate on what constitutes “normal” bull fertility often is raised. Bull fertility is influenced by a host of factors which can influence the ability of a bull to deposit a healthy dose of semen within the vaginal cavity at the correct time. If we are trying to achieve the target of 65% cows calved in 1<sup>st</sup> 3 weeks of calving then there are two critical components:

1. All cows should be cyclic **prior** to start of mating to ensure each cow has at least one service opportunity in 1<sup>st</sup> 3 weeks of mating
2. Bulls must be capable of delivering conception rates of around 70% per service to have any chance of final pregnancy/calving rate of 65%

Breeding trials with bull:cow ratios of 1:30 – 40 have demonstrated that with healthy cyclic cows and breeding soundness checked bulls, pregnancy rates of 70%+ can be achieved so this should be the benchmark for “normal” bull fertility.

To achieve this level of performance bulls must be physically sound to allow them to serve 30 – 40 cows in 21 days. They must have adequate semen reserves (related to scrotal circumference) and semen quality (measured by progressive motility and morphology) and have good libido.

The purpose of pre-breeding bull checks is to try and identify bulls that are **deficient** in any of the above factors that could limit their ability to deliver “normal” fertility. By assessing physical soundness, scrotal circumference and semen quality it is possible to identify bulls that would clearly fail to deliver the performance required to get 65% cows calving in 1<sup>st</sup> 3 weeks. Libido is very hard to assess pre-breeding therefore it is important that bulls are carefully observed during start of mating period to ensure they are “doing the job”.

The value of veterinary pre-breeding bull checks is simply a risk-reduction strategy to reduce the chance of using bulls that are not fit for purpose. Any bull that is lame, has penile/preputial abnormalities, small scrotal circumference or sub-standard semen quality is potentially “subfertile” when asked to deliver pregnancy rates of 65-70% in the first 3 weeks of mating.

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