

RAFT BREEDING

NEWS

Autumn 2015

A bit about us...



RAFT Solutions was originally set up by Bishopton Vets, North Yorkshire in 2010 to focus on the breeding and training work that had been going on at the practice for many years, and to do more practical research projects, to help answer some of the questions our farmers and vets had relating to better production. In 2014 RAFT merged with Synergy Farm Health, Dorset to add the nationwide coverage and joint expertise to the services RAFT has to offer. RAFT is an acronym for Research, Advanced breeding, Food futures consultancy and Training.

Bull Breeding Soundness Exams... A good idea or a load of Bull?!

As our Autumn calving herds commence calving, now is the time to think about ensuring you have adequate bull power for the breeding season ahead.

A fully **"fertile"** bull is defined as a bull that can get 90% of 50 cows incalf in 90 days (3 cow cycles), 60% of these cows should get incalf to the first service and should therefore calve in the first 21 days of the calving period.

It is estimated that **one in three** bulls fall into the **sub fertile** (can achieve a pregnancy but not at the rate achieved by fertile bulls) or **infertile** (bulls that are incapable of reproducing) category.

Signs of reduced bull fertility include:

1) Prolonged calving period

A compact calving period will deliver:

- More weight of calf per cow mated.
- More efficient use of labour
- Calves of uniform size
- Cows at a similar stage in the production cycle.

A prolonged calving period can increase the number of calves born, however these animals are younger and hence lighter at weaning. **Early calves are the most profitable.**

2) Increased numbers of barren cows.

A realistic target is 95 calves/100 cows/year.

3) Delayed calving to conception.

Delayed calving results in lost dairy production and reduced numbers of replacements.

A BBSE can give an indication as to how many cows are likely to be successfully covered by a bull, thus enabling a judgement to be made on the likely **'bull power'** needed prior to the service period.

A BBSE is a useful tool in the marketing and subsequent sale of bulls.

How long before the breeding window should bulls be tested?

Bulls should be tested at least 60 days before the service period. This is because the production and maturation of sperm takes two months. If necessary this time lag enables other arrangements to be made.



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What does the test involve?

A BBSE is carried out on farm. Good handling facilities are essential. The test is split up into;

1. History and disease status.
2. Physical examination (including palpation of testes and measurement of scrotal circumference)
3. Semen collection (electroejaculation) motility and morphology examination.

A BBSE can be used to identify the best performing bulls as well as the under performers, bull costs are a significant part of the variable costs of any suckler business. Testing bulls to maximise bull power makes good sense.

A bit about the team...



**Jonathan
Statham**



**Jon
Reader**



**Neil
Eastham**



**Mark
Spilman**



**Dr Andre
Northey**



**Andy
Adler**



**Rachel
Hayton**



**Dr Katie
Burton**



Becky Gage

Services we offer:

- Ovum Pick-Up (OPU)/IVF
- Bull Breeding Soundness Examinations
- SemenRate
- Deep Uterine Horn Flushes
- Semen Collection
- Semen and Embryo Storage
- Day Centre/ Livery for Bespoke Programmes
- Dye Testing
- Repeat Breeder
- Embryo Collection, Transfer and Embryology

For more information contact us on 01765 645893



**Mark
Spilman**

Mark was born and bred on a mixed farm in North Yorkshire and his interest in livestock led him to study veterinary science. Having qualified in 2006 Mark joined Bishopton Veterinary Group and very quickly got involved in the advanced breeding team and this has remained a big part of his workload through his time at Bishopton. Mark's specific interests are in bull and semen fertility evaluation and he is involved with the development of the semen evaluation service SemenRate, which utilises cutting edge technology. He is also part of the embryo transfer team Mark is utilising the ET skills he has developed in starting up a small pedigree Aberdeen Angus herd at his family farm.



**Neil
Eastham**

Neil joined Bishopton Veterinary Group in July 2007. An upbringing on a dairy and sheep farm in Lancashire played a large role in him deciding to specialise in farm animal work. Neil still enjoys helping out at home when possible. Neil is currently chairman of the North East Holstein breeders club.

Neil is actively involved in the delivery of specialist advanced breeding techniques (ET and OPU/IVF) and is an Advanced Breeding director for RAFT Solutions Ltd. Neil has just achieved his Diploma in Bovine Reproduction from University of Liverpool.



**Dr Andre
Northey**

Andre studied in Germany and South Africa and graduated in 2005 from the Ludwig-Maximilians-University in Munich.

He worked as a clinician and researcher on bovine mastitis at the Clinic for Ruminants with Ambulatory and Herd Health Services of the University of Munich, he's published articles in scientific journals and given lectures at international congresses. In 2010 he was awarded with a doctoral degree.

Andre has worked in cattle practices in Germany, England and Wales and established the embryo collection and transfer service for Synergy Farm Health where he also delivers DIY AI courses and RVC student training.



**Dr Katie
Burton**

Katie joined the RAFT Solutions team in April 2015 as a Reproduction Technician and Researcher. Her main roles are to assist the vets on farm when carrying out embryo transfer, embryo collections and on farm semen collections. She is also the main contact for the SemenRate Service launched this summer; completing the analysis using our flow cytometer and Computer Assisted Semen Analysis (CASA) machine. Katie graduated with a Masters and PhD in Cellular and Molecular Physiology from the University of Liverpool, following an undergraduate degree in Bioveterinary Science.



**Becky
Gage**

Becky first saw practice at the age of 12 with the local vet. She continued to work alongside him for 6 years, gaining a huge amount of experience working within a mixed practice. From there she worked as a veterinary nursing assistant at an equine hospital and went on to work as a zoo keeper. Becky joined Synergy in 2011 and is a clinical veterinary technician. Her main focus is on breeding and reproduction, assisting with bull testing, semen collection, deep horn flushes, embryo transfer and embryology. Becky lives on a small holding on the edge of the Blackdown Hills, Somerset with partner George and a variety of fur, fin and feathered friends.

Recipient Management at Housing



As we progress through the autumn and approach the housing period those of you who have frozen embryos in store or are wanting to transfer some embryos fresh into recipients this winter it is essential that recipients are managed as well as possible to maximise the chance of success.

Achieving consistency of management from six weeks prior to six weeks post transfer is the key to success and this is often easiest achieved when animals are housed. However housing can be a stressful process and there can be a lot of husbandry tasks associated with housing which can enhance this stress. It is therefore advisable to get all of these tasks done in advance of housing or at housing so that once housed there are no further disturbances to routine.

Nutrition

Having the forage that you will be using for the base of your winter ration analysed is advisable so that this can be factored into deciding levels of supplementary feeding. You will also require the forage to be of consistent quality for six weeks pre and post transfer i.e. 12 weeks' worth of the same forage. Ensuring that the forage has a good fibre content is important and therefore big bale silage/ haylage can be most appropriate feed.

Any supplementation can usually be supplied by feeding a combination sugarbeet pulp/ cereal/ rape:soya mix or a low protein coarse mix, which will be dependent on the quality and type of forage you are feeding.

It is important that recipients are supplemented with trace elements and minerals, as deficiencies in certain elements can impact on fertility e.g. Copper, Selenium. Supplying these in the form of boluses e.g. Cosecure ensures that they will get a constant supply of the important trace elements. Alternatively if you are feeding recipients daily then incorporating appropriate amounts of good quality powdered mineral into the ration is also appropriate.

Parasites

Performing parasite treatments as early as is appropriate post housing will minimise risk of parasites having a negative impact on animal health. If you are a fluke infected farm then treatment is essential to ensure efficient utilisation of the nutrition you are providing. Controlling external parasites (Mites and lice) will minimise the stress associated with these. In heifer recipients a housing dose of a wormer will also be appropriate. Dependent on the parasite burden on your farm there will be an appropriate product/s to use.

Vaccination and infectious disease

All recipients should be vaccinated against BVD to provide protection of the embryo/ foetus. This primary course should be completed six weeks prior to transfer.

Dependent on the status of your farm IBR/Lepto vaccination may also be appropriate and again should be completed six weeks prior to transfer.

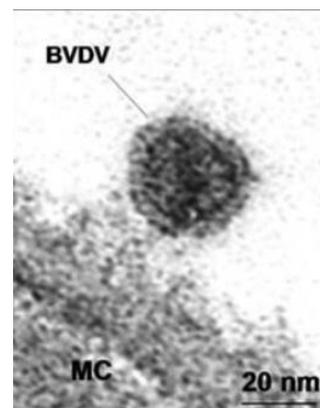
Depending on your location and risk assessment vaccination against Schmallenburg should also be considered.

Screening recipients for Neospora may also be advisable as any positive animals are more likely to abort a pregnancy, and therefore make them less suitable for transferring valuable embryos into.

Grouping

Keeping groups consistent is also important so decide on your groups and then keep them in those groups for the entire 12 week period as mixing will create social stress!

Speak to your
vet for
further
information
on the
management
of your
recipients



Deep Uterine Horn Flush for Repeat Breeders

Failing to conceive is one of the most frequent reasons for culling animals from modern beef and dairy herds. Financial loss and genetic waste are the consequences of involuntary culling of repeat breeders.

A chronic, low-grade endometritis is the most common cause of repeat breeders. The hostile uterine environment found in such animals created by bacteria and/or inflammation is detrimental to embryo survival and implantation. A significant number of those animals appear clean on ultrasound examination, come regularly bulling and may even show a clear bulling string. They just don't get in calf! Very often neither different hormonal treatments nor antibiotic therapy seem to have any positive effect on repeat breeders to increase the chance of conception.

In some cases the fallopian tube, (the connection between the ovary and the uterine horn) is just blocked, so that neither sperm from one end, nor the egg from the other end can travel unobstructed to 'meet'. Not even a hundred AI straws could get such an animal in calf!

Often, after various unsuccessful attempts by the farmer-vet team to get a particular animal in calf the sad decision is made to make her barren. But there is still another option.....

The Deep Uterine Horn Flush

Apart from just transferring so-called "repeat breeder embryos" into such animals and hoping for the best (without knowing what is actually going on in their uterus) there is a technique available that could be considered as a step prior to that: The Deep Uterine Horn Flush.

For many decades a well established uterine flush technique has been used for recovering embryos within embryo collection and transfer programmes. However, a very similar technique can be used as a therapeutic aid in the treatment of repeat breeders.

In a technique similar to the collection of bovine embryos, a catheter is introduced into the uterus and placed deep into each horn to its tip. A sterile flush of fluid is applied and a continuous flow in and out flushes the entire uterine horn and "washes out" bacteria and other contaminants. The same procedure is repeated for the other horn. From each horn, liquid is collected for microbiological examination and a specific antibiotic is applied right at the tip of each horn.

The whole procedure is cost-effective, quick, non-invasive and relatively stress-free for the animal.

Since RAFT launched its Embryo Collection and Transfer Service we have been offering the "Deep Uterine Horn Flush" for repeat breeders with very good results.

If you are interested in using this successful technique on one of your problem breeder animals please talk to your routine vet or telephone the office.



Specimen of recovered uterine content

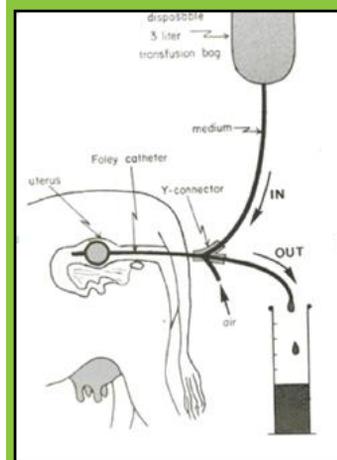


Diagram of the deep uterine horn flush



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