

FARM PRACTICE NEWSLETTER

NOVEMBER 2011



Semen Handling & Storage

In the endless pursuit of better fertility, as well as reduced costs, a lot of farms have switched from AI technicians to DIY AI. A lot of you have proved very successful at this. However, there is a huge variation in conception rate, both between farms and between individual inseminators on farm. There are many factors that influence conception rate, with nutrition, infectious disease, heat detection and housing to name just a few. Semen storage and handling can play a part however. This should be the most easily controlled part of the whole process, but done incorrectly can ruin the chances of a successful service regardless of the investment in time and money that has been spent on the factors mentioned above. What is the point of purpose built transition cow accommodation, an expensive mixer wagon and heat detection collars to increase the likelihood of a cow to come bulling and be detected doing so, if a simple mistake in the 3 minute process of loading up a straw kills the sperm? To recap over the most important parts of the process therefore, you can split it up into 4 main areas:

Semen Storage

- The inner and outer flasks of the tank are only connected at the neck of the tank, so the tank must be handled carefully to avoid damage i.e. don't drag or roll them
- Keep the flask raised off the floor
- Measure and record the liquid nitrogen level on a weekly basis. Take notice of the rate of loss which only alters if there is a leak

Semen Removal

- Keep time spent removing semen from the flask to a minimum
- Even slightly raised temperatures damage semen and the effects are cumulative
- Temperatures in the neck of the flask increase dramatically from the -196°C it should be to -80°C 3 to 4 inches from the top (shown by the frost line). All straw manipulations therefore, should be carried out below the level of the frost line
- Always use **TWEEZERS** not fingers!!
- If the correct semen cannot be located within 10 seconds, the canister should be lowered back into the flask for 10 to 15 seconds before another attempt is made
- Keep a clear straw inventory to make location of the correct straws quick and simple. Keeping only one type of semen in each canister helps this

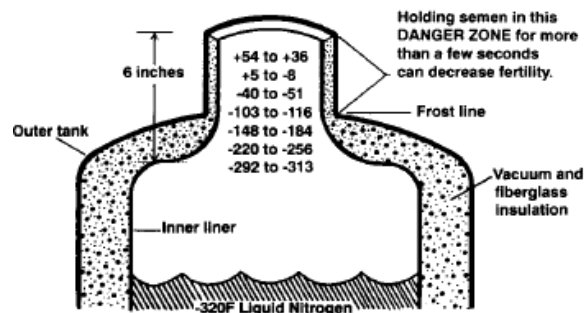


Diagram showing changes in temp in the neck of the flask

Semen Thawing

- Various recommended protocols for temperature and time, usually around 35 to

37°C for 30 to 40 seconds: check with your semen provider

- Great precision needed, so use a thermometer to check temperature is correct
- Use a clean, insulated flask to maintain a constant temperature
- Thawing in the pocket or in the cow reduces the numbers of viable sperm
- Ensure straws are completely dried (hold straw at bottom and wipe upwards) as water is highly toxic to sperm
- Check scissors are dry for the same reason
- Only thaw as many straws as can be used within 10 to 15 minutes. Too many will drop the temperature of the water bath and excessive delay between thawing and insemination will reduce sperm numbers

Insemination

- Load the thawed straw into a gun that has been warmed (but not excessively so!)
- Ensure that guns are not stored in direct sunlight as if too hot will also kill the sperm
- Having cut the straw at the crimped end and loaded it, a clean plastic sheath should be placed over the gun as soon as possible
- Wrapping the gun in a paper towel and storing it under clothing will help prevent cold shock
- Serve the cow as soon as possible



Just a reminder to those of you who use IBR vaccine: The data sheet for the Bovilis IBR Marker Live recommends boosters every 6 months. Many of you use it annually only and seem happy doing so, but if you have a high challenge (buying in stock, housing all year, previous clinical disease) then proper protection can only be achieved using the recommended 6 monthly regime. Housing is the time of greatest risk, so now is a good time to ensure that you are up to date with your booster.

Fluke Testing

With the dramatic increase in the incidence of liver fluke in recent years, many of you have introduced control plans on farm. Now is the ideal time of year to check bulk milk antibody levels to determine the exposure on your unit. Please bring samples to the practice or give them to your vet at a visit to get them tested.

Drug Collections

For those of you who use the Rowe vet surgery at Wotton-under-edge for collecting drugs, they are no longer open all weekend, so pick ups need to be made by 1.30 pm on a Saturday. Weekday collections remain the same.



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