

Guidelines for successful use

Sexed semen allows you to select your best performing, highest genetic merit cows and heifers to breed replacement heifer calves. Also, using sexed semen increases the number of high value beef calves produced in the herd.

Sexed semen straws are on average 90% purity. This means that for every 10 calves born on average 9 will be female. Sexed semen straws have a lower number of sperm than conventional semen straws.

Sexed semen is a vulnerable product: it has undergone a sorting process in a laboratory. The process also leads to a very uniform dose of sperm cells – they are at a similar stage of development.

This means that they will travel to the fertilisation site together which decreases the window for fertilisation and therefore timing of AI must be much more precise. Sexed semen trials in Ireland have demonstrated a relative conception rate of 80% - if achieving 60% conception in cows with conventional, on average 48% will be achieved with sexed semen. While successful use of sexed semen is a challenge, excellent performance can be achieved by following some simple rules.

Stacking the odds in your favour

HEIFER SELECTION

- ▶ Your heifers will have higher conception rates than your cows making them better candidates for sexed semen.
- ▶ You will be breeding more replacements from your highest genetic merit stock.
- ▶ Heifer calves will also be easier calved – further reducing calving difficulty for your maidens.
- ▶ Cycling regularly – Avoid its use on heifers on their 1st or 2nd cycle.
- ▶ Heifers need to be above their target weight and in good body condition.
- ▶ Nutrition – maximise intakes during breeding and for the following month.

COW SELECTION

- ▶ Cows need to be at least 60 days calved at AI and should be clean and cycling regularly beforehand.
- ▶ Younger cows have higher conception (1st to 4th calvers) - Careful with some 1st calvers if BCS is low and they have not coated off yet.
- ▶ Body condition is critical - 3.0 or greater is ideal.
- ▶ Cows with no issues at calving or since calving – difficult calving, milk fever, retained afterbirth, uterine infection, ketosis, lameness, mastitis etc
- ▶ Energy balance is crucial – watch the bulk tank for any drop in % protein & volume. Ensure cows are fully fed particularly during periods of bad weather.

ONLY USE SEXED SEMEN EARLY IN THE BREEDING SEASON

Use sexed semen early in the breeding season, within the first three weeks and preferably for the first 10 days. Consider starting the breeding season a week earlier to accommodate any repeats early in the mating season and maintain a high six week calving rate.

USE AN ADEQUATE SIZE TEAM OF BULLS

Field fertility can vary between bulls following the sexing process and it is advisable to use a team of sexed bulls.

HEAT DETECTION AND TIMING OF AI

- ▶ The window for fertilisation by sexed semen is narrow compared to conventional. The recommendation for sexed semen is that animals should be inseminated 14-20 hours after the start of standing heat.
- ▶ If your technician is coming before lunch – cows need to be in standing heat the previous evening after milking.
- ▶ Accurate heat detection is critical to achieving best results and good heat detection aids (tail paint, scratch cards) are essential to aid this process. Use two methods in heifers – scratch cards and crayons.
- ▶ Always use conventional semen if unsure of the heat.
- ▶ Synchronisation and sexed – Modern synchronisation programmes that end in fixed time AI have an important role to play as they synchronise ovulation to the time of insemination (no need for heat detection). It also allows a group of heifers or cows to be inseminated early in the season, increasing the submission rate. Repeats will have more opportunities to go in calf.

SEXED SEMEN HANDLING – Munster Bovine technicians are trained in sexed semen handling.

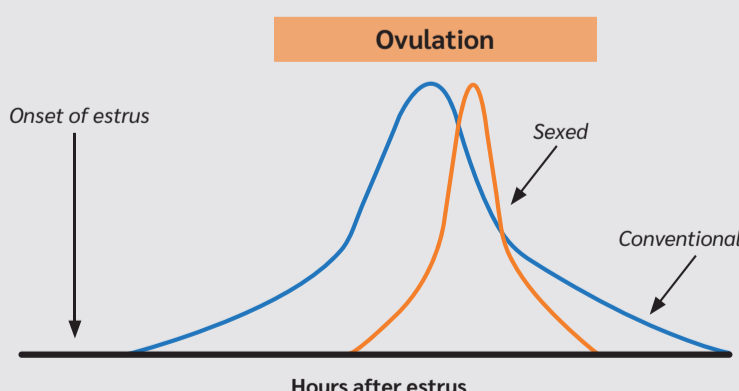
GUIDANCE FOR DIY CUSTOMERS

- Ensure straws are thawed in a **clean descaled temperature regulated electronic flask** filled with cooled boiled water that is changed daily.
- Straws need to be thawed immediately at **35 to 37°C** for a minimum of **45 seconds**. Use a thermometer to check that the electronic flask is working properly.
- Only thaw a max of 2 straws at the time. Complete inseminations within **5 minutes** of loading the gun. Keep guns warm when loading and until the cow is inseminated.

FLEXIBILITY REQUIRED TO MAINTAIN FERTILITY OF THE HERD:

- ▶ If you are unsure of a heat or timing – switch to conventional.
- ▶ Synchronisation – If your experienced AI Technician informs you that the animals do not feel right, something may have gone wrong with the programme - switch to conventional.
- ▶ Spray mark those heifers and cows that have lost their CIDR/PRID prior to removal during the synchronisation protocol and use conventional semen on these animals.
- ▶ If the cows or heifers are under nutritional pressure, as indicated by low bulk tank proteins and volumes or loss in BCS, or during periods of bad weather, consider switching to conventional.

Semen Viability and Timing – Conventional vs Sexed



TIMING OF AI CONVENTIONAL VS SEXED

