

Semen hygiene – Increase semen quality



Focusing on hygiene will increase semen quality

Hygiene is fundamental to ensuring semen quality. The introduction of clearly defined hygiene protocols that maintain a focus on hygiene during collection will increase quality as well as shelf-life.

How to avoid contamination when collecting semen

As artificial insemination (AI) has become more of a standard practice, especially amongst modern farms working with as higher quality genetics as DanBred, the quality of the semen is of the highest importance to unlock of full genetic potential of the DanBred boars and meet production targets. Hygiene in particular is fundamental when reviewing semen quality- the introduction of a clearly defined hygiene protocol when working with on-farm boar collection will not only decrease the risk of contamination but will also increase shelf-life. This is vital to achieve the full value of the extraordinary potential for reproductive performance within the DanBred breeding animals.

The importance of hygiene during semen collection

When collecting semen, hygiene should be a focal point as bacterial contamination of semen doses can have a major influence on semen quality in relation to both shelf-life and semen fertility, consequently affecting farrowing rate (Romero, 2010).

Bacterial contamination of a semen dose can kill the sperm cells, but a high number of pathogenic bacteria in a semen dose can also lead to a genital infection within the sows, causing reduced farrowing rate and subsequently increasing the herd sow replacement rate. Therefore, it is imperative to maintain a maximum level of sterile hygiene during collection to prevent contamination of the ejaculate. Review the on-farm protocols periodically to continuously improve and sustain semen quality (Weitze, 2008).



Several important aspects should be considered when collecting semen.

Firstly, boar health: Ensure only semen from healthy boars is collected. Diseased boars may lead to a rapid transmission of pathogens and disease outbreaks, which is why the herd veterinarian should introduce a protocol health surveillance in the boar unit (Weitze, 2008).

Secondly, ensure the tasks of cleaning the pens, brushing the boars down and trimming the preputial hairs are carried out on a regular basis. Clean and dry the boars underside with a towel if needed. The preputial area should be always cleaned and the preputial sac should be emptied by carefully squeezing the preputial fluids from the prepuce before collection- this will reduce the risk of dirt and bacteria from the preputial area entering into the collection cup (Weitze, 2008).

Thirdly, use the double gloved method when collecting. Two commercially available gloves for semen collection are worn on top of each other, on the hand which is to be used when collecting. Be aware that using a non-approved glove for collection can impair semen quality.

Gently reach to the prepuce and help evacuate preputial fluids with the double gloved hand. The boar will start to thrust and extend the penis from the sheath. This is when the external vinyl glove can be removed. Once the penis is extended from the prepuce, the corkscrew-shaped penile tip can be held with the fingers applying uniform pressure. Ensure that the internal glove only touches the penis, any contact with the prepuce or anything else should be avoided (Weitze, 2008).

The penis should be held in a horizontal position, if extending the little finger, preputial liquids can be diverted away from the collection cup.

The ejaculate consists of 4 fractions:

- Pre-sperm,
- sperm,
- Post-sperm
- gelatinous (boar plug).

Do not collect the pre-sperm, a clear liquid which contain urine as well as many bacteria, but start collection when the sperm fraction comes, continuing until the ejaculation is complete, within typically 8-10 minutes (Weitze, 2008).





12 easy steps for improving hygiene during collection

1. Clean the pens and brush down the boars regularly.
2. Clean and dry the boars underside and trim the preputial hair.
3. Prepare the collection cup with a double layer of gauze as filter
4. Use the double gloved method – use commercial available gloves for semen collection.
5. Clean the preputial area and empty the preputial sac prior to collection.
6. Remove the external glove and ensure the internal glove only touches the penis.
7. Discard the first, clear ejaculate fraction.
8. Be patient and collect the until the boar plug is ejaculated (8-10 minutes).
9. Ensure the collection cup does not touch the floor or interior after collection.
10. Ensure efficient delivery of the ejaculate from boar unit to the laboratory entrance zone.
11. Dispose of rubber band and filter before decanting the semen to a sterile cup.
12. Never squeeze the filter gauze when decanting the semen dose.

References

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