

Artificial insemination

Part 1: Heat detection

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Artificial insemination (AI) is a process by which sperm is collected from bulls, processed, stored and artificially introduced into the cow's reproductive tract for the purpose of conception.

Using AI instead of bulls to get your cows in calf, is a very effective way of improving the standard of your cattle. It has been most widely used for breeding dairy cattle and has made the best bulls in the world available to all.

Advantages

- Using the best genetic material available in the world
- It limits the spread of venereal diseases, because you are using clinically tested semen
- You will know what to expect from your calves based on how fast they will grow and how much milk they will give
- You will be able to decide when you want your cows to become pregnant, so that you can expect the calf at a time that suits you
- You can choose the semen of bulls which will give you the traits you want in your herd in terms of butterfat, protein, volume, solids and udders
- Limit the introduction of unwanted factors in your herd
- It is much cheaper to buy semen than to keep a bull, considering the quality of semen you can buy compared to the quality of the bull you can afford.

Disadvantages

- If you buy semen from an unreliable source, you can introduce venereal diseases into your herd
- You will have to do heat observation yourself. There is no bull to do it for you
- The management of your herd is going to be more demanding
- You will have to be trained in how to do AI, or you will have to hire someone to do it for you.

Heat cycle of a cow

Cows come in heat every 21 days. This means that they are ready to receive a bull every three weeks, if they are not pregnant. During her heat, which lasts one to two days, she has fertile eggs for 10-12 hours. Insemination has to take place during this time.

How do you spot a cow that is in heat?

A cow that is in heat displays very particular behaviour. She will be mounting other cows, her vulva will be red and swollen, she will be restless and bellowing all the time and there will be a clear or turbid "bull string" hanging from her vagina.

It is a good practice to do heat spotting twice a day. If you detect a cow in heat in the morning, inseminate her in the afternoon. If you detect the heat in the afternoon, inseminate her in the morning. The ideal is to inseminate 12 hours after the first heat detection. **UM**