TRADITIONAL BREEDS AI SCHEME

Guide to Artificial Insemination

Introduction

Artificial Insemination is an excellent means of introducing new blood to your herd, or as an alternative to owning a boar. It is cost effective compared to natural service, with a success rate that should almost be equal to that of the boar, with the added bonus that disease will be unlikely to enter your unit, which could happen if sharing a boar with someone else.

Heat Detection

This is obviously vital for successful artificial insemination. A typical sow cycle is shown in figure one. If inseminating a gilt watch out for her first heat, record it and watch for the second heat 21 days later. Keep recording heats until she is ready to be inseminated, usually at about 9 months. With a sow, heat detection is usually much easier because she will normally come on heat about 5 days after weaning.

Heat detection needs to be carried out twice a day to ensure it is not missed. The usual sign is a swelling and reddening of the vulva although this is more pronounced in some animals than others. She should also stand when pressure is applied to her back (see figures 2 & 3). Insemination should be performed about 24 hours after the sow stands to the 'back pressure test'.

If there is no boar available to be used as part of the heat detection process, Boar Pheromone Spray can be used. This simulates the smell of the boar and can be sprayed on the sows nose from an aerosol can.

Sows that have been weaned for some time and have not shown any signs of heat can be stimulated by hormone injections. You will need to discuss this process with your veterinary surgeon.

Method

When your sow or gilt shows signs of heat, order your semen, it will take 24 hours to arrive. The semen will be delivered in a polystyrene box; it should be left in this box and stored in a room temperature of about 15^{o} -20^{o} C until needed. Do not store in the fridge as this will be too cold and will damage the semen. The semen has been diluted with a special chemical extender that gives a shelf life of 3 – 5 days from collection. Each bottle or tube of semen will contain about 2 billion sperm. There will be three bottles or tubes so that the sow or gilt can be inseminated three times in total. This should help to ensure successful insemination. (See figure 3).

Semen will be supplied in a sealed tube or a plastic bottle with screw top. Gently mix the semen before insemination as it may have settled. Do not shake vigorously, a rocking motion is more appropriate. With either type of semen container place it in your pocket to warn the semen just before use. Cut the end of the bottle or tube ready to place it on the end of the catheter.

Apply a little liquid paraffin or KY jelly to the spiral end of a new catheter. Hold the catheter in the middle with a bend, so that when it is pushed into the sow the tendency is for it to travel upward and so miss the bladder entrance. (See figure 4).

Clean the sow's vulva with tissue paper. Hold the sow's tail with middle, forth, and little fingers, using the thumb and index figure to open the vulva. Insert the catheter firmly, but with care. It is necessary to maintain an upward angle as the catheter enters the vagina. This ensures the catheter does not enter the bladder. (See figure 4).

When the catheter reaches the entrance to the cervix an obstruction will be felt. Using the thumb and index finger to control the catheter, turn catheter in an anti-clockwise direction (towards left side of sow) until it is locked in the cervix. This means that if you let go of the catheter it would spring back. If you cannot gain a lock, gently remove the catheter by turning clockwise, and try again.

Hold catheter with thumb and index finger making sure that it is well locked into the cervix. This *lock* provides a seal, preventing the semen from flowing back to the vulva. Take the disposable insemination bottle from pocket and place on catheter. Apply GENTLE finger pressure until all the semen is discharged into the uterus. It might be necessary to remove the bottle and allow it to fill with air once or twice during insemination. If the semen flows back out of the vulva stop inseminating and try to reinsert the catheter with a better lock.

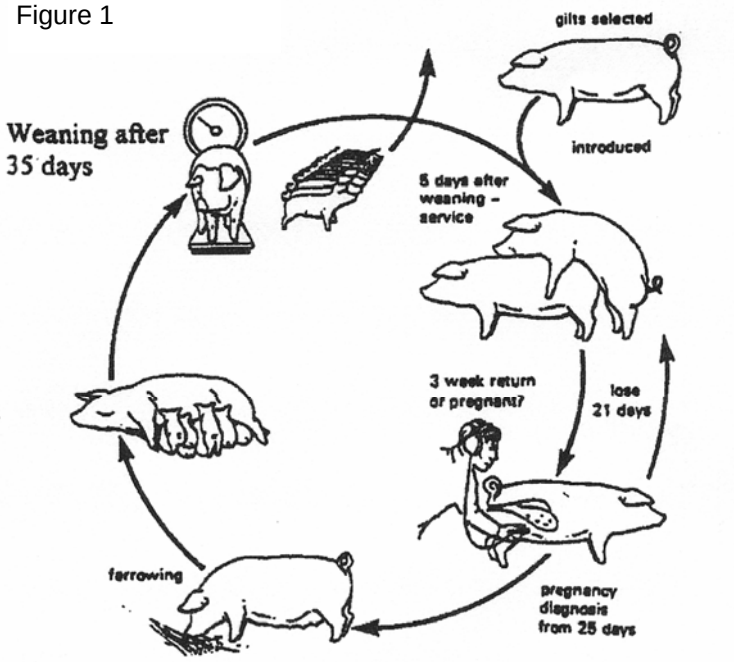
When the bottle and catheter are empty first remove the bottle from the catheter, then wait a few seconds before removing the catheter from the sow. Remove the catheter from the sow by turning it in a clockwise direction. A suitable method of environmentally friendly disposal should be adopted for discarded disposable catheters and plastic insemination bottles.

Never use disinfectant, soap or detergent to lubricate the catheter before insertion in the sow, as this may effect the viability of the semen. Remember to watch the sow for return to service 21 days after insemination. If this does not happen, you may assume that the insemination has been successful.

Any unused semen should be disposed of by washing it down a drain, it should not be kept for the next sow that needs serving. The shelf life at room temperature us usually about 5 days. Refrigeration will not increase this shelf life.

The two most important keys to success with AI are the timing of the insemination which is achieved through careful heat detection and the placement of the semen in the cervix. If the semen is flowing out onto your boots the sow is not going to get pregnant.

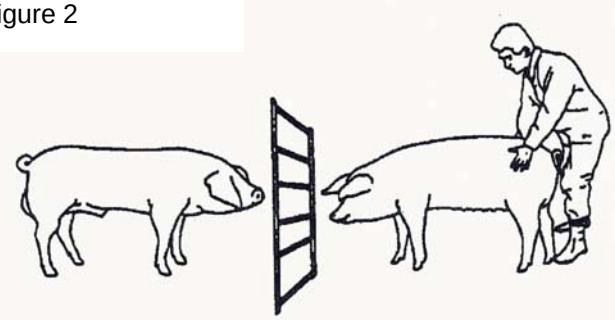
Figure 1



The Sow Cycle 156 Days

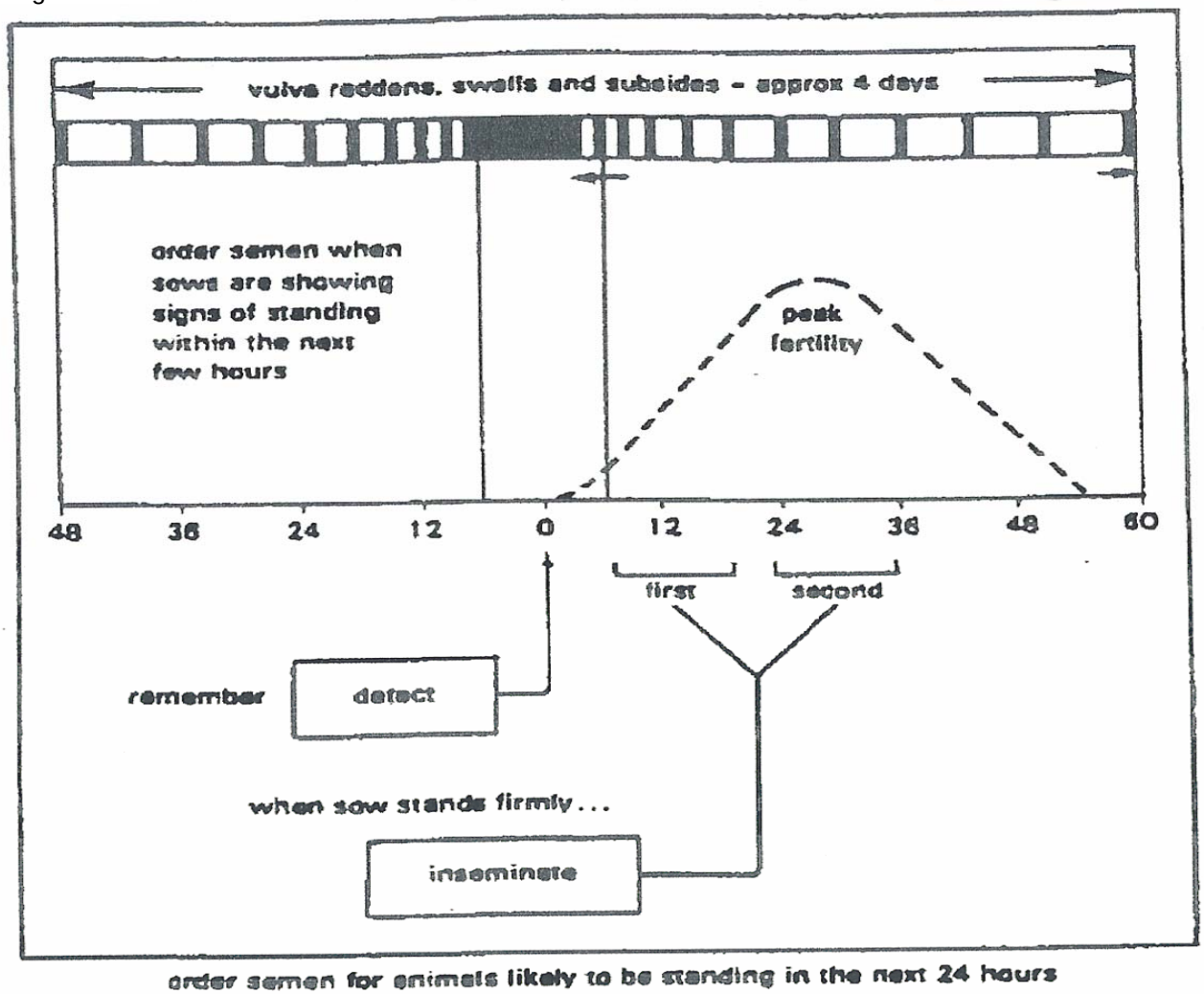
The sow cycle will obviously vary according to how long the piglets are left on the sow.

Figure 2



Standing to back pressure within sight, smell and sound of a boar. (Source: Pig Genetics.)

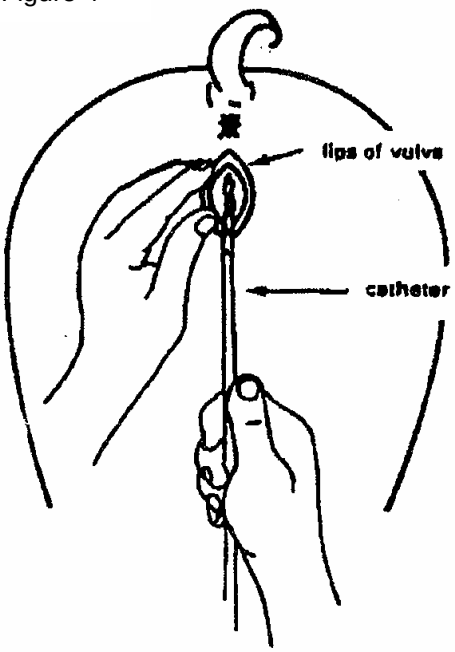
Figure 3



order semen for animals likely to be standing in the next 24 hours

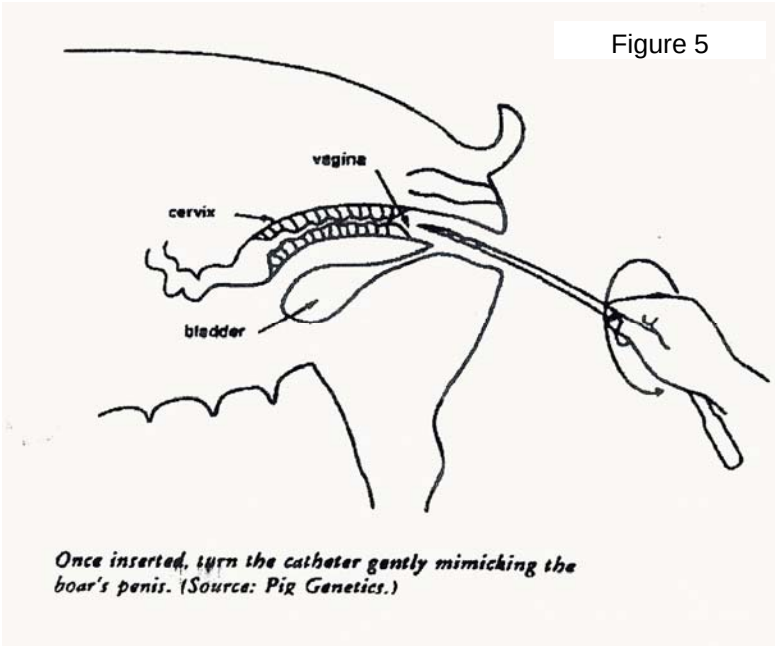
Detecting heat, ordering the semen and timing the insemination. (Source: Pig Genetics.)

Figure 4



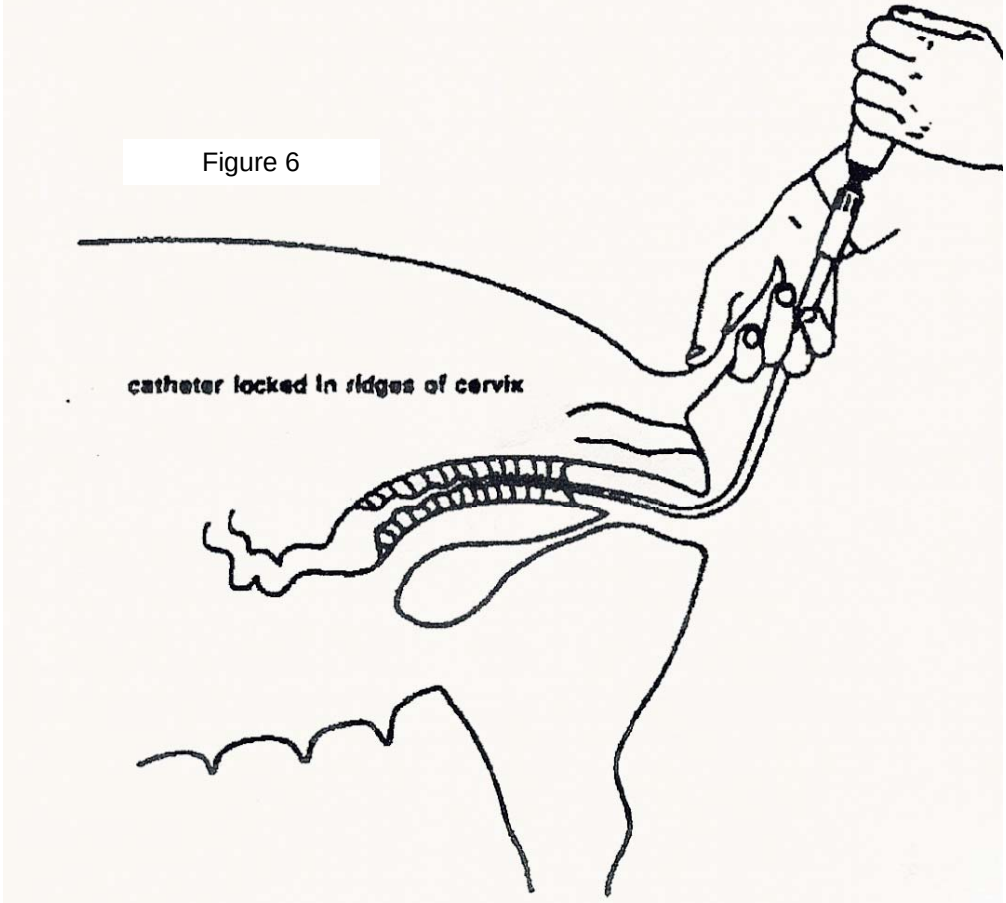
Before insertion the catheter should be lubricated. (Source: Pig Genetics.)

Figure 5



Once inserted, turn the catheter gently mimicking the boar's penis. (Source: Pig Genetics.)

Figure 6



Bend the catheter shank up so that the bottle containing the semen is held higher than the vagina. (Source: Pig Genetics.)