PROCEDURE FOR SUCCESSFUL A.I. BREEDING OF SOWS
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When addressing the subject of Artificial Insemination in swine, one must look at three separate areas: heat detection, timing of insemination, and insemination procedure. When great care is taken in each of these three areas, conception rates and litter size will be optimized, with results that will most often surpass those of natural matings. Some producers are achieving conception rates of over 90%, with average litter size exceeding 12 piglets.

HEAT DETECTION

Immediately after weaning, the sows should be housed in individual stalls or pens. This will keep stress at a minimum and help to induce a return to estrus in a timely manner. There need not be any boar contact during this time although some producers feel that it is beneficial.

Starting on the morning of the fourth day, the sow should be checked to determine the start of standing heat. This is done by applying the back pressure test while in the presence of a boar. Either move the sow to the area where the boar is now being housed or bring the boar directly in front of the sow. Apply firm, steady pressure to her back. Because she has not been in constant contact with the boar, the new stimulus of the smell of the boar will greatly enhance her response to this test. If she is in standing heat she will respond to the back pressure test by “locking up” and allow the producer to sit on her. In most cases she will also flip her ears up slightly in a repeated manner. A sow exhibiting these actions can be bred at this time or returned to her own stall and be bred in the afternoon of the same day. If the sow is not standing, she should be returned to her own stall or pen and this procedure should be repeated early the next morning.

TIMING OF INSEMINATION

A sow detected in heat in the morning should be mated at that time or between 3 and 6 p.m. that afternoon and again first thing the next morning. Breeding again on the third day is not recommended. This schedule of breeding ensures good coverage of the ovulation period of the sow and is in the normal working hours for most barn staff members.

A.I. BREEDING PROCEDURE

Sows should be in the presence of a boar when being mated artificially. It is best to remove the sow from her stall or pen and bring her to the boar. The new stimuli of sight, sound, and smell of the boar along with back pressure being applied by the stockman will trigger a strong “lock up” response in the sow. Once the sow is standing the following steps should be followed:

- use a paper towel to wipe off any filth from the sow’s vulva
- insert the catheter at a 30 to 45 degree angle upwards
- insert catheter until it locks into the cervix. (usually about ¾ of the catheter is in the sow)
- twist the tip off of the semen tube, attach it to the catheter, and raise it vertically to allow the semen to flow out
- gently squeeze the tube to remove the air in the catheter
- maintain back pressure on the sow, stimulating her to draw the semen out of the tube
- if after 1 or 2 minutes the sow has not started to draw the semen, make a slight adjustment to the location of the catheter
- allow the sow to draw all the semen out of the tube on her own. This will usually take 1 to 3 minutes but can take up to 5 minutes in some sows
- continue to stimulate the sow for 1 or 2 minutes after the tube is empty *
- remove catheter by pulling gently
- return the sow to her stall or pen

* Semen must travel up to 5 feet from the spot where it is deposited in the cervix. It is impossible for sperm cells to swim this far, so it is crucial to stimulate the sow so that her uterine contractions will move the semen this distance.