

Smaller Producers Pig Health Course

The Farrowing Process

Mark White BVSc LLB DPM MRCVS

The normal gestation length of a sow or gilt is typically 115 days (three months, three weeks and three days) measured from the first day of service, although a range of 113 – 117 days is quite normal. The trigger for farrowing (parturition) to start comes from the piglets, not the sow. As the foetuses start to outgrow their nutrient supply from the placenta, stress hormones are released which set off a hormonal cascade leading to the start of farrowing. As such, delayed farrowing can occur where very small litters exist, whereas very large litters will have a tendency to farrow slightly early. (A sow expelling pigs before 109 days should be classed as an abortion and between 109 and 113 days as a premature farrowing.) Pharmaceutical preparations (Prostaglandins) are available to induce farrowing within 36 hours of administration.

Preparation

As the sow approaches term there are a number of considerations for the pig-keeper to address.

- **Nutrition.** The demands of the unborn litter are such that feed levels should increase by 50-100% from day 90 but must be reduced four to five days before farrowing to avoid excessive udder development and congestion and to reduce farrowing complications. The provision of high levels of fibre in the form of barley straw or bran is highly beneficial during these last few days before farrowing. The day before the sow is due to farrow, hard feed levels should be no more than 50% maintenance levels. Water should be unrestricted at all times.



Fig 1: Udder development should not be excessive prior to farrowing

- **Housing.** For the individually kept sow it is likely that she will remain in the same pen or area to farrow, in which case plenty of bedding should be provided at least a week in anticipation of farrowing to enable a nest to be made, but avoid having a lot of long straw present at farrowing as

this can impede the piglets' movement when first born.

If a dedicated farrowing area exists (e.g. with farrowing crates) the sow or gilt should be placed within it five to seven days before expected farrowing. (It is illegal to crate sows more than seven days before farrowing.) Bedding material should be provided for environmental enrichment.

- **Hygiene.** Where sows are farrowed in separate dedicated accommodation, it is vital that this is thoroughly cleaned and disinfected prior to use. Application of detergents prior to washing is a great benefit. Ensure the disinfectant is rinsed off and allow the pens to thoroughly dry prior to use. If sows farrow in their home pen their own behaviour is usually such that they keep this area free of urine and faeces.



Fig 2: As the sow or gilt approaches farrowing the vulva becomes swollen.

Normal Farrowing Patterns

The normal farrowing of a sow or gilt takes between two and four hours to complete foetal delivery, with placental expulsion occurring up to four hours later. As she approaches second stage of labour (i.e. the delivery phase) she will become quite restless but as the process starts she will lie down on her side and the expulsion of a piglet is accompanied by marked tail swishing and fluid expulsion with mild straining.

Piglets will be delivered at intervals of approximately fifteen minutes and may be delivered either head or tail first, quite normally. However, this average interval hides the true pattern seen quite normally in many sows. Observations suggest that sows will deliver a small number of piglets (say two to four) at ten to twenty minute intervals before appearing to stop for up to sixty to ninety minutes. They then start again with normal delivery intervals. There does not appear to be any problem here but if such delays occur in the second half of the farrowing process, stillbirths are likely to result.



Fig 3: Piglet delivery can be head or tail first – here the latter

Many piglets are born with the cord intact but the placenta is usually expelled in two or three masses during farrowing, with the majority occurring up to four hours after completion of piglet delivery. Occasionally piglets will be born retained within their own placenta (cleansing) and a failure to release them will result in death.

If permitted, many sows will consume the placenta after farrowing.

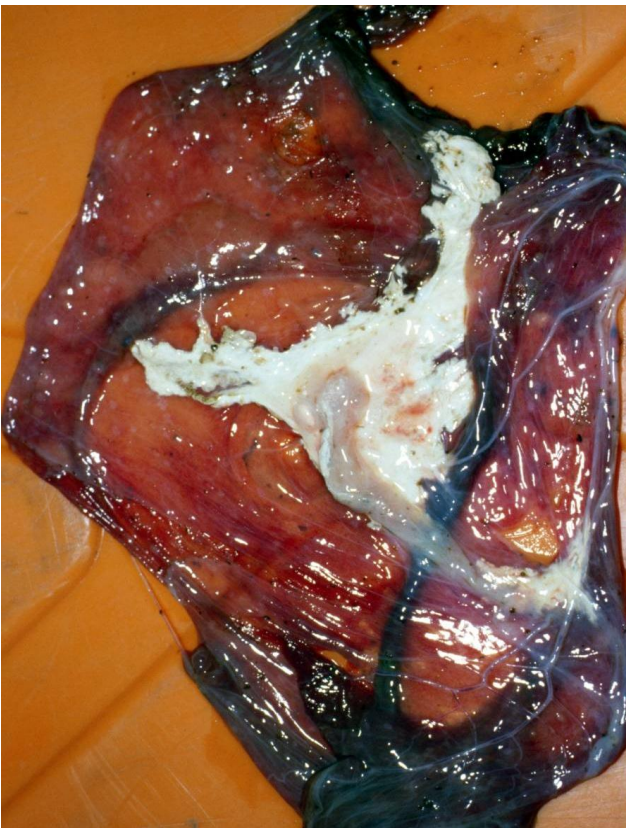


Fig 4: The placenta will occasionally be stained with uric acid – this is entirely normal

Attention and Assistance

Contraction of the uterus to expel the piglets is achieved by way of release of Oxytocin in pulses from the sow. Adrenalin blocks the effect of Oxytocin and as such during parturition the sow should not be disturbed or interfered with unnecessarily. All attention given must be calm and quiet.

Observation of piglet delivery will enable the stockman to assist the piglets as needed. This may involve:

- a) Releasing piglets from within their placenta.
- b) Drying piglets off with paper towels to reduce chilling.
- c) Umbilical cord separation. It is usually better to leave the cord to break naturally but if wished, blood should be milked back into the piglet from the cord before it is broken and either tied on itself or clamped with a human naval clamp.
- d) Draining of fluids by gently swinging the piglet by its back legs or sucking out with a pooter (fig 5).



Fig 5: A pooter is a makeshift vacuum device for clearing foetal fluids from the upper respiratory tract.

- e) Mouth to mouth assistance to breath or simply rubbing the chest.

Occasionally, delivery of pigs will be arrested. There are two main reasons:

1. Inertia – a failure of the uterus to contract. This can be primary, but more commonly secondary, occurring part way through farrowing and is more likely to occur in older sows or sows/gilts in extreme body condition – either too fat or too thin. There will be no signs other than a failure to deliver a piglet beyond the normal intervals. Intervention is necessary to avoid subsequent stillbirth (see below).
2. Obstruction. This can result from foetal oversize (particularly in gilts), malpresentation (e.g. sideways), dual presentation (two attempting to pass simultaneously) and foetal abnormalities (monsters).

In such cases the sow will strain excessively with expulsion of small amounts of fluid but no piglet. If straining continues unproductively for more than fifteen minutes then manual interference is necessary.

Interference

Where farrowing is failing, manual, vaginal examination is needed. The overriding principles to be followed are to be clean and gentle.



Fig 6: Clean and gentle – but wear a glove – as much to protect you from infection as protecting the sow

The sow's vulval lips should be thoroughly washed with soap and water. A full arm length glove should be worn, liberally covered in sterile obstetric lubricant, which should also be placed inside the vulval lips. Soap is a drying agent and is not appropriate as a lubricant. Compressing the hand to a point (Fig 7), it should be introduced in an upward direction at an angle of 45 degrees and gently slid into the vagina until a piglet is felt.



Fig 7: Using a full length glove the hand should be compressed to a point before vaginal insertion in an upwards direction.

Piglets can be removed by grasping legs between your fingers, by placing a finger in the mouth with the thumb under the lower jaw or, if sufficient room is available, by grasping the piglets head within the whole hand.

Gently and slowly withdraw the piglet.

If no obstruction is found inertia is likely and if piglets cannot be reached (common in big sows) strategic use of Oxytocin is appropriate under veterinary direction. It should be applied in small doses (0.25ml at a time) given by intramuscular injection and repeated at regular intervals (fifteen to twenty minutes) as needed. Large doses will induce uterine spasm which, whilst it may initially deliver a piglet, is more likely to lead to even longer delays for the rest with fatal consequences for the unborn piglets. (Very high doses – 4ml – can rupture the uterus.)

Following normal interference, always wash arms and hands thoroughly with soap and water.

NB: A slow release Oxytocin-like preparation Carbetocin (Reprocine : Vetoquinol) is available which can be given early in farrowing as a single dose. Again, overdosing must be avoided. The veterinary surgeon will advise.

Aftercare

Once farrowing is complete the sow will stand, urinate and lie down to suckle the piglets to provide the vital colostrum.

If manual interference was required the veterinary surgeon may prescribe a course of antibiotic injections to minimise the risk of infection and Oxytocin can be given to accelerate uterine involution (close down). Due to the enormous difference in size between sow and piglet, farrowing is not a particularly painful process for the sow and, as such, routine use of pain-killers (analgesics) is normally unnecessary. (These may be applied under veterinary direction in extreme cases.)

Copyright © NADIS 2012



Your Knowledge Transfer Partner

NADIS seeks to ensure that the information contained within this document is accurate at the time of printing. However, subject to the operation of law NADIS accepts no liability for loss, damage or injury howsoever caused or suffered directly or indirectly in relation to information and opinions contained in or omitted from this document.

To see the full range of NADIS livestock health bulletins please visit www.nadis.org.uk