Using Pharmaceutical Farrowing Aids for Pigs

Farrowing can be a stressful process for both caretaker and the sow. Understanding how to use pharmaceuticals for farrowing will aid you and your veterinarian in reducing farrowing stress.

Image by G. Raymond, Penn State

Farrowing can be a stressful process for both pig caretaker and sow involved. The practice of induction reduces some of that stress for both parties by allowing the caretaker to properly supervise the sow and the piglets during farrowing hours. Supervision and the ability to provide timely assistance is the primary way to reduce piglet mortality around farrowing. Proper use of induction can improve the chances that the caretaker will be available when farrowing does happen.

When considering induction on your farm, it is advantageous for producers to consult with their veterinarian to gain some knowledge of the compounds that are used for induction and a recommended application protocol. Induction of farrowing utilizes prostaglandin and oxytocin; for many swine facilities, prostaglandin is the main inducer used during farrowing, and oxytocin is used in addition to prostaglandin as needed. Gathering some knowledge of these compounds will aid you in discussing an induction protocol with your herd veterinarian.

Prostaglandin

Prostaglandin is one of the hormones that is produced naturally by the sow to end pregnancy and start the farrowing process. The use of exogenous (not produced by the sow) prostaglandin allows the caretaker to synchronize farrowing across multiple sows or to a preferred time of day for attendance purposes. Timing of prostaglandin administration should be determined based on the expected farrowing dates for the efficacy of prostaglandin and safety of the sow and piglets. Most farms administer an injection of prostaglandin on day 114 of gestation, allowing sows with shorter gestation periods times to farrow spontaneously and sows with longer gestation times to farrow slightly early. Administering prostaglandin on days 112-114 generally causes no adverse effects, reduces gestation length and reduces variation in farrowing timing across a group of sows due within this range. Prostaglandin administration on or before day 111 is considered too early. Farrowing typically starts within 12-24 hours post administration of prostaglandin. When applied properly and in consultation with your herd veterinarian, the use of prostaglandin for induction can decrease the incidence of stillbirth piglets and improve live-born survival rates due to the benefits of caretaker attendance at farrowing.

Oxytocin

Exogenous use of oxytocin stimulates uterine contractions and milk let down. The primary goal of oxytocin use is to shorten the farrowing time and the intervals between each piglet being born. Oxytocin can be used without first using prostaglandin, however, oxytocin should only be administered after the cervix is fully dilated. It is important to recognize that prostaglandin will bring a sow to parturition, but oxytocin primarily aids the farrowing process after parturition has started.

Timing of administration of oxytocin is important. Typically, oxytocin is administered during the farrowing process. If using in conjunction with prostaglandin, oxytocin can be given as early as 20-24 hours post prostaglandin administration - however it is best to discuss this plan with your veterinarian and be aware that dilation may not have occurred by this time. Gilts in particular are less predictable for farrowing timing when utilizing a synchronization protocol. The use of oxytocin should be limited, in most cases it is recommended to keep use of oxytocin to 2 doses per sow. Again, this emphasizes the need
to be strategic and cautious when using oxytocin to aid farrowing.

As previously mentioned, always consult a veterinarian to develop a plan for using any pharmaceuticals on your sows, particularly the use of oxytocin. Misuse of oxytocin can lead to increased instances of dystocia during farrowing. This can also lead to increased number of stillbirths or ruptured umbilical cords. Knowing your sow herd, and working with your veterinarian on an induction protocol can help minimize these issues.

**Conclusion**

The use of inducing hormones for farrowing should always be carefully administered. The general recommendations for the hormones are, administering prostaglandin on or after day 114 and administering oxytocin only after the cervix is fully dilated. Although there are advantages to using prostaglandin and oxytocin, there are still risks associated with the use of these hormones. To minimize the risks associated with difficult farrowing, continual supervision is strongly recommended. Ensuring the safety of the sow and the piglets is the primary objective of proving assistance during farrowing.

For additional resources on prostaglandin and oxytocin use during farrowing and reproductive management, visit these resources:

- Pork Gateway: **How to Monitor and Assist Difficult Farrowing**
- Pork Gateway: **A Review of Oxytocin Use for Gilts and Sows**
- **Understanding the Estrous Cycle**
- **Swine Reproductive Herd Management**

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