



# Early Identification of At-Risk Sows in the Farrowing House

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## TAKE HOME MESSAGES:

1. Finding health risks early in sows is crucial as a sow only produces approximately two litters per year.
2. Sow health is most at risk during the period around farrowing.
3. Daily observations and recording of changes in behavior of a sow within a farm should be standard practice.

## Role of the Sow During Farrowing?

Farrowing is the process of birthing a litter of pigs. Farrowing occurs approximately 115 days after a sow has been bred. Once the sow has given birth, it is the sow's job to raise the piglets with the help of the farm staff for approximately 3 weeks or around 21 days. Once the piglets are born, the sow has access to ad-libitum feed and water, meaning she can eat and drink as little or as much at any point in a day to ensure she can provide adequate milk for her piglets. These piglets will encounter routine procedures to ensure their health and welfare, such as vaccination and the daily occurrence of farm staff intervening with the sow.

Figure 1: Nursing Piglets in Farrowing.  
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## Indicators of Parturition

When the sow is moved to the farrowing room from gestation, she is ready to start the parturition process or the process of giving birth. Sows will begin to demonstrate labor signs that indicate to workers when she will start farrowing. These signs include:

- Reduced feed intake
- Fluctuations in body temperature
- Clear vaginal discharge
- Swelling of the vulva
- Acting restless

Females that are housed in open housing can be more prone to show these signs rather than sows in confinement. Sometimes experienced sows that have had multiple litters will farrow without showing any prior signs. Farrowing typically begins 3-6 hours after the presentation of these signs. Multiparous sows tend to have a shorter parturition duration than gilts; this could range from 3-6 hours. When a sow begins farrowing, piglets should be born within 30-60 minutes of each other. If they are not born within this time frame, there could be a possibility of dystocia (difficulty farrowing). This could mean a piglet is stuck in the birth canal and needs assistance to allow it and the remaining piglets to be delivered. A caretaker may need to intervene with a technique called 'sleeving', where the caretaker will insert their gloved and lubricated hand into the vaginal canal to check for a piglet or any abnormal birth presentations. Piglets that are stuck or have an abnormal birth presentation should be extracted from the birth canal. At the end of the farrowing process, the sow will deliver her placenta about 30 minutes after delivering her last piglet.

## Detection of At-Risk Sows in Farrowing

There are multiple factors that are important to look at while the sow is actively farrowing to determine her health status.

These predictors include:

- Stall fit
- Feed refusals
- Locomotion score
- The timing of when sows enter the farrowing rooms compared to when they farrow.

A study done by Vargovic et al. in 2022 provides a pre-farrowing assessment of these animals to better anticipate the actions that come with at-risk predictors. From this study, it is concluded that the following predictors showed the greatest impact.

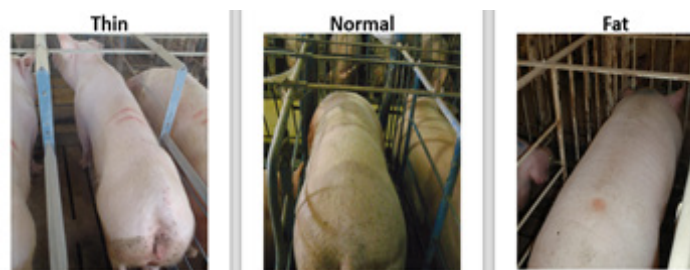
- Stall size
- Feed/Nutrition
- Locomotor scores
- Body Condition scores



Figure 2: Sow in Farrowing Stall.  
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Feed refusals that are observed in any growing animal are a key indication of poor health. Feed refusals that were observed in this study had more challenges during farrowing and an increase in stillborn piglets. Sows with locomotion issues showed a higher risk of mummified piglets, increased stillborn piglets, and a decrease in the number of piglets born alive. During this study, the sows body condition scores were recorded using a caliper. This study didn't show any connection between body condition and farrowing.

Figure 3: Comparison of Body Condition Scores  
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## Importance of Finding At-Risk Sows in Farrowing

The period around farrowing has the most risk of health issues for sows. At-risk sows could result in an increase in stillborn piglets, decreased number of piglets weaned, and eventually, the premature removal of these sows from the herd. Extensive monitoring of sows during farrowing leads to management interventions to ultimately improve the welfare and productivity of these animals and detect at-risk sows. It is important to record these predictors as a part of the farm's standard practice.

REVIEWER: Dr. Jason Ross

### REFERENCES:

Vargovic L, Athorn RZ, Hermes S, Bunter KL. Improving sow welfare and outcomes in the farrowing house by identifying early indicators from pre-farrowing assessment. *J Anim Sci.* 2022 Nov 1;100(11):skac294. doi: 10.1093/jas/skac294. PMID: 36062853; PMCID: PMC9667975.

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