

# Induced Farrowings: Are You In Control?

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## ■ Introduction

Induction of farrowing is practised widely on many sow farms. The adaptation of this management tool has been so widespread that in many units an overwhelming majority of sows are routinely induced to farrow. While the advantages of parturition induction are clear, managing and monitoring the induction process to ensure it is still accomplishing its objectives can be difficult. Over time, changes in management procedures or personnel can lead to significant but not easily detected changes in the success and results of the induction program. Some considerations, for knowing if your induction practices are achieving desired results, are discussed below:

## ■ Why induce farrowings?

The reasons for farrowing induction include:

- Direct supervision of farrowings to:
  - reduce stillborns
  - limit the number of pigs born which have been hypoxic during a prolonged farrowing process (and tend to be less viable)
  - supervise and enhance colostrum uptake.
- Scheduling of farrowings so they can be attended when staffing levels are optimum (avoiding weekends and other periods of activity in the farrowing house when staff are less focused on attending farrowings).
- Reducing the variation in the day of farrowing among sows within rooms will reduce age variation in weaned piglets to enhance cross-fostering and facilitate *All In/ All Out* farrowing room management.

## ■ Determining the Average Gestation Length

Determining the average gestation length is difficult when most of the sows are being induced because true average gestation lengths from naturally farrowed sows are no longer being generated.

It is important to re-establish gestation length occasionally. Gestation length can vary over time for a couple of reasons. These reasons include:

- **True variation** of the gestation length of the herd over time due to a different parity structure of the herd from when the gestation length was first established. Changes in productivity of the breeding herd (such as improved litter size) can also have an effect on the true gestation length.
- **Artificial variation** in gestation length over time due to changes in breeding herd practices. An example of this is the shift in Wean-to Service Interval (WSI) which can occur if sows are bred a day earlier in their heat cycle than previously (if this is a function of timing of mating and not an actual decrease in WSI) (Kirkwood et al., 1996). Gestation length is determined from the date of first mating and so, PigCHAMP™ will show an artificially extended gestation length. As well, the method by which the date of farrowing has been recorded can also artificially but effectively change the gestation length. The date of farrowing should be recorded on the date that the sow began farrowing, rather than when she has finished. If farrowing data recording procedures change inadvertently in this way, the gestation length will be affected.

It may be necessary to stop inducing for a period to re-establish the average gestation length. This temporary cessation of inducing can also give good comparative information on the effects of induction on stillborn rates and low viability piglets.

## ■ Data Capture

Assessing the induction program through analysis of herd records is not possible without being able to differentiate induced sows from non-induced sows. In PigCHAMP™, entering whether a sow has been induced or not is done easily when the farrowing event is entered. This is critical data for any understanding and analysis of the induction program.

The true date of farrowing, as discussed above, can also be a source of error. Ensure all staff enter the farrow date consistently and accurately.

If necessary, on a temporary basis, a more detailed data collection beyond routine data collection can be undertaken to better understand the response rate of induced sows.

## ■ Is Induction Working?

There are two quite different questions to consider here:

- Is induction helping to save piglets? (Is there a difference between induced vs. non-induced sows with respect to stillborn rate or PWM.)
- Are sows farrowing predictably and within expected ranges after inducing?

Determining the influence of induction on farrowing house parameters is difficult when all or most sows have been induced. The contribution of induction does need to be considered when assessing, monitoring or troubleshooting PWM or stillborn rates.

Certain aspects of the efficacy of induction can be analyzed through data, which is routinely collected for PigCHAMP™. Parameters of interest (stillbirths, PWM) can be compared for induced vs. non-induced sows. Close scrutiny of the effects of induction on a parity basis should also be undertaken, particularly with respect to gilts.

Farrowing parameters can also be analyzed by day of the week farrowed. This can yield clues as to the response rate of sows to induction and the efficacy of staff interventions.

Case studies will be presented which illustrate some considerations involving assessment of the induction process, which can be done with routinely collected herd data.

## ■ Ensuring Consistent Procedures

One of the most overlooked components of farrowing induction is the injection procedure itself. Intramuscular, perivaginal, submucosal and perianal routes have all been described with various dosing regimens (Kirkwood, 1999).

From this data and previous experiences, Standard Operating Procedures (SOP's) have been developed. As with all SOP's, there must be a commitment to use them and keep them current. New staff must be introduced and trained with the SOP front and center. Some level of monitoring or auditing of induction procedures is necessary to ensure they are used consistently and as intended. Accuracy of needle placement, needle size and volume injected should not be

taken for granted and should be demonstrated by those staff who are responsible for injecting the prostaglandin.

Gestation day of induction and hour of injection should also be reviewed to ensure compliance to procedure.

In spite of attempts to establish and monitor procedures, changes can occur over time that can impact the induction process.

Staff can respond to a real or perceived reduction in the response rate of the induction program. A classic response to having too many sows farrowing during the first night (or a well-intentioned desire to have more sows farrow during the next day) is to move the time of induction forward from the morning to the afternoon. This action often has the untoward effect of shifting daytime farrowing sows to the following evening and seldom reduces the number of sows farrowing during the first night.

The next response is then to try to induce sows a day earlier. This can have subtle or not-do-subtle effects on pre-wean mortality, stillborn rates, incidence of splay or piglet quality that can be directly attributed to this induction change.

## ■ Conclusion

Farrowing induction has proven its worth as a management tool in optimizing farrowing performance. Knowing its effects, both good and bad, on farrowing parameters are important but not easily determined. Consistent procedure, accurate data capture and awareness and monitoring of potential pitfalls are important parts of keeping control of farrowing induction.

## ■ References:

- Kirkwood, R et al. (1996) The effect of dose and route of administration of prostaglandin F<sub>2α</sub>. *Swine Health Prod*, 4(3): 123-126.  
Kirkwood, RN (1999) Pharmacological intervention in swine reproduction. *Swine Health Prod*, 7(1): 29–35.