

Precision feeding for gestating sows - results of a commercial trial



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Do you plan on adapting your farm buildings for sow group housing? Do you have questions about which feeding system is the most appropriate? Are you wondering what advantages precision feeding may have? If so, read below to learn about our findings on this subject.

Recap of the results

As a reminder, the first part of the project consisted of simulating the nutritional and economic impacts of precision feeding in gestating sows in a group management context.

The main conclusions drawn about the effects of precision feeding were:

- That it would be beneficial for sows in late gestation and growing gilts, as lysine requirements are important during these periods of the sow's reproductive cycle, when conventional feeding struggles to meet these needs.
- That it would minimize distributed surpluses, particularly for multiparous sows, thus reducing the cost of feeding of around \$3/sow per year.

Trial on sows in a commercial setting

The second part of the project was to then validate the effects of precision feeding on growth performance, productivity and cost of feeding sows in a commercial setting. The on-farm trial was conducted at Coop Seigneurie's Ste-Catherine Nord farm and was designed to compare two dietary treatments during gestation, namely conventional feeding (0.53% standardized ileal digestible (SID) lysine (Lys) throughout gesta-



tion) and precision feeding (variable SID Lys depending on the day of gestation and the parity of each sow). Sows of four consecutive batches (weeks) were studied over two complete cycles, from breeding to weaning. The experimental period was when the sows were in groups, approximately from day 30 to day 110 of gestation. Data collected included live weight

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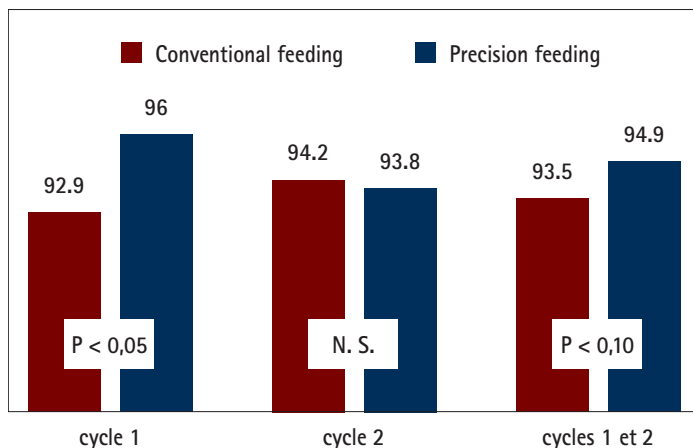
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Figure 1: Piglet survival rates at birth in gilts, %



and body condition measurements of sows before farrowing and at weaning, individual piglet birth weights and weaning weights, and finally, all data conventionally taken by pig farms. In total, 295 sows and 523 litters were analyzed.

Effects on multiparous sows

No impact on the condition of the sows or the performance of their piglets was observed. As a result of our simulations during the first part of the project, it was observed that multiparous

sows were fairly well fed with conventional feeding, so an improvement in performance was not necessarily expected. This result, however, confirms that it is possible to provide feed with a reduced lysine content to these sows, which reduces the cost of feeding without affecting performance.

Effects on gilts

Little if any impact was officially confirmed during the trial, but some promising effects were observed. Indeed, precision feeding could have a positive impact on the survival rate of piglets at birth because, during the first cycle, the gilts' piglets showed a significantly higher survival rate at birth, but this effect was not observed during the second cycle (Figure 1). Following the simulations, an improvement in gilt performance could be expected since precision feeding more adequately met the gilts' need for lysine than conventional feeding, especially in the last third of gestation. Thus, although no impact was clearly demonstrated during the on-farm trial, some areas for improvement in performance were highlighted. A project specifically targeting gilts should be initiated to validate targeted performance criteria.



Economic impact

From an economic point of view, the confirmed gain from precision feeding is therefore limited, for the moment, to the reduction of the feeding costs which would be of around \$3/ sow per year since the effect on the survival rate of gilts remains to be validated. However, if this effect is confirmed, it could greatly improve this economic gain.

In a few words

Precision feeding reduces feed costs while not affecting sow performance. However, it is possible that this feeding strategy improves performance of gilts, but this still needs validation.

Financial partners

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