



Phase Feeding Research Offers Food for Thought

By Geoff Geddes, for Swine Innovation Porc

If you think teenagers eat you out of house and home, try feeding a pen of hungry hogs. As feed costs eat up an ever greater portion of producer budgets, finding ways to reduce that expense can help trim losses and shift the ink color from red to black. It's an issue that science has targeted repeatedly, often with great success, and a prime example is a project that found major benefits to parity-segregated phase feeding: limiting over-feeding of gestating sows while continuing to meet their needs for amino acids and energy.

These findings beg two key questions: Will producers on the farm yield the same results as scientists with computer models? What exactly is parity-segregated phase feeding?

Going through a phase

Parity-segregated phase feeding challenges conventional thinking in the industry that gestating sows should follow one diet throughout gestation. It recognizes that sows have different nutritional needs at various stages of gestation and parity, and provides them with two separate diets to meet those needs.

For pork producers, “seeing is believing”, so this approach was tested in a commercial setting, as parity-segregated phase feeding and a conventional feeding strategy went head to head.

While parities 1 and 2 consumed the same diet under both strategies, the project team altered the diets between the two approaches for parity 3 and above for the first 85 days of gestation. When the results were in, parity-segregated phase feeding saved \$5.69/sow/year versus a conventional program (based on average Quebec feed prices in 2017).

What goes up, must come down, and go up, and...

Of course, if you've spent any time in the pork business, you know that feed prices are subject to dramatic fluctuations over time. Using a sensitivity analysis - a financial model that determines how target variables are affected based on changes in other variables – the project team assessed the variation in corn and soybean meal prices over a five year period. Once again, parity-segregated



Installing two feed lines at Hog Tied Farms allowed two different feeds to be used simultaneously. Photo: John Van Engelen





Sows at Hog Tied Farms. Photo: John Van Engelen

phase feeding emerged the winner, showing annual savings over conventional feeding of \$1.66 to \$10.06 per sow.

Even at the low end of the range, multiplying the numbers by 10,000 sows takes a bite out of spiraling feed costs for producers. One such producer is John Van Engelen, who offered up his Hog Tied Farms operation in Ontario for running the test. He was already planning to install a second feeding line, but this project accelerated the process and produced no nutritional deficiencies during phase feeding.

“I’m still using the phase feeding strategy; however, I’m looking at size and condition of the animal rather than parity, then working with my feed supplier to tweak things until we get it just right,” said Van Engelen.

Though he would have liked a longer demonstration to properly gauge changes in body condition and performance, Van Engelen likes what he sees so far.

“Right now, my sows are in better condition than ever, and they’re not too fat or too skinny, but just right.”

Van Engelen is currently feeding different rations to different sized animals and varying their protein levels as well. He also assigns them condition scores, with 1 and 2 being too skinny, 4 and 5 too fat, and 3 representing the ideal. When animals stray from optimal condition, he enters their condition score into the feeder and a correction is made to their rations.

“With four different feeding programs and five condition scores, we can feed almost 20 different rations to our animals; technology is wonderful when it works.”

Going forward, Van Engelen hopes to learn more about the ins and outs of both phase feeding and precision feeding strategies. Once he knows his options and how to make the most of them, he can determine the best approach for his herd. As for the demonstration, he found it to be positive, enlightening and effective in reducing his sow diet costs. That sounds like a win-win-win, and these days, that’s rarer than a teenager losing their appetite. 🐷

For more information...

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This work was part of national on-farm demonstration project that took place in 2016-2018 titled *From Innovation to Adoption: On-Farm Demonstration of Swine Research*.

Click on the links below for further reading on phase feeding:

[Strategy to Cut Sow Feed Costs](#)
Better Pork Magazine, June 2019

[On-farm demonstration of parity-segregated phase feeding in group-housed sows](#)
Canadian Hog Journal, Summer 2019

The work presented in this article was part of Swine Innovation Porc’s Swine Cluster 2: Driving Results Through Innovation research program. Funding was provided by Agriculture and Agri-Food Canada’s AgriInnovation Program, provincial producer organizations and industry partners.