

# Setting new benchmarks for efficient gilt development: 1) Gilt selection and pre-breeding management

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The overall objective of this major collaborative study was to demonstrate the critical role of efficient gilt pool management in meeting overall production targets. The project was carried out in a modern 3200 farrow-to-wean sow farm, incorporating a purpose-built "Gilt Development Unit" (GDU) that accommodates all aspects of gilt development after entry into "hot" isolation rooms at 8 to 12 weeks of age. The production goal of the farm is to provide 1,300 weaned pigs on a weekly basis to company shareholders.

Specific targets and protocols developed for the GDU were: 1) Effective use of boar stimulation to identify 80% of gilts as "**select**" on the basis of a recorded natural heat-no-serve (HNS) within 28 days of initiating daily stimulation with high-libido boars; 2) Remixing gilts not in heat at d14 to maintain the flow of natural HNS records; 3) Inducing HNS with PG600 in available "**opportunity**" gilts to create a pool (110% of gilt breeding needs) of "**eligible**" (recorded HNS) gilts within 28 d of starting stimulation; 4) 100% of gilts bred at  $\geq 2^{\text{nd}}$  estrus; 5) 100% of gilts bred at a target weight range of 135 to 150 kg (300 to 350 lbs). Preliminary results confirm that all these targets can be met, with less labor input per gilt bred than before the GDU project commenced. Additional benefits are expected to be increased first litter size, reduced annual replacement rates and as more consistent flow of weaned pigs to shareholders.

## **Implications:**

Improved gilt pool management is a practical, cost effective and necessary step to improve the efficiency and sustainability Canadian pork production. This can become one of the competitive benchmarks of Canadian pork production.