

Section 1 Herd Health

Strategies that improve herd health will improve feed efficiency. Converting to a specific pathogen free herd health status can improve feed efficiency by an almost estimated 10 percent, causing a 10 percent decrease in nitrogen excretion in the manure⁵.

Use Genetic Selection to Improve Nutrient Utilization

Greenhouse Gas Benefit

Genetic selection can contribute to reducing GHG emissions by:

- Selecting animals with high feed efficiency genetically improves production efficiency and reduces the amounts of nutrients excreted in urine and feces; therefore reducing GHG emissions. An improvement of 0.1 percentage points of feed efficiency results in a 3.3 percent reduction in nutrient excretion in swine, assuming a similar growth rate and nutrient retention is maintained throughout the pig's life⁶.

- Studies with cattle have shown that genetics influence the amount of GHG emissions directly from livestock and the chemical composition of feces⁷.

Improving the efficiency of nutrient utilization through genetics reduces total nutrient output from the swine operation leading to an increase in production efficiency. Genetic improvement can also be an economical choice over time, because improved feed efficiency will be passed on to successive generations.



Credit: Alberta Agriculture, Food and Rural Development