



## INCREASING SOW MILK YIELD

# New feeding and management strategies for replacement gilts that will maximize future milk yield

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## Why is this project important?

Milk is essential for piglet growth, but sows do not produce enough milk to sustain optimal growth of their piglets. The use of hyperprolific sow lines in recent years has exacerbated the problem, making it vital to find methods to increase sow milk yield. To achieve that goal, mammary development, an often overlooked aspect, should be a focal point of research.

Nutrition, endocrine status and management can all impact mammary development, but little is known about the best feeding and management strategies for replacement and gestating gilts.

## What will researchers do?

Researchers will explore three critical areas for mammary development:

- Prepubertal feeding of gilts and future lactation performance.
- Increased prolactin secretion in growing gilts and future milk yield.
- Increased prolactin secretion in gestating and/or lactating sows.



*Sow mammary glands. Photo: AAFC Sherbrooke.*

## What will be the benefit of this research?

Findings from this project will support the development of feeding and management strategies specially designed to optimize mammary development of replacement gilts, while reducing the incidence of lameness and improving longevity. This emphasis on mammary development is unique, as current feeding recommendations are based mainly on growth rate, body condition, leg problems and puberty attainment.

The strategies from this study will lead to greater sow milk yield and growth rate of suckling piglets.

## What has been done so far?

As of 2021: The study is ongoing, though the gilt development phase is complete. The effects of feed restriction (10% or 20%) or feeding a high-fibre diet (25% crude fibre) ad libitum during the development period of gilts on body condition and future milk yield were determined.

The take-home message is that feeding a high-fibre diet to developing gilts is a potential means to provide ad libitum feed access in group housing, while limiting energy intake to control body weight gain and backfat depth prior to breeding and maintaining milk production.

The study where prolactin was increased in growing gilts is also complete. One important finding is that with the currently used genetic lines of gilts, showing faster growth rates than previously-used genetic lines, age seems more important than body weight for timing of mammary development. This finding is crucial for determining the ideal period to stimulate mammary development during prepuberty.

## Collaborators

Thierry Bertaim	CEVA
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## Project status

Currently in progress.  
Results expected in 2023.

## Additional resources and information about this project

### Farmscape interviews

- [Scientists Explore Role of Lysine in Sow Mammary Tissue Development](#)  
May 13, 2021
- [Stimulation of Sow Mammary Development Improves Performance of Piglets](#)  
May 4, 2021
- [Sucking Piglets Stimulate Sow Mammary Development](#)  
November 14, 2019
- [Scientists Examine Diet to Increase Sow Longevity While Preserving Mammary Development](#)  
November 12, 2019
- [Increase Sow Milk Yield Increases Piglet Growth Rate and Production Potential](#)  
November 7, 2019
- [Selection of Gilts for Breeding Should Begin Early in Life](#)  
April 2, 2019

### Financial support for this project

This project is part of the Swine Cluster 3 (2018-2023) research program, made possible through financial support from Agriculture and Agri-Food Canada's Canadian Agricultural Partnership, eight provincial pork producer organizations and over 30 industry partners. [Click here to learn more about the financial partners for Swine Cluster 3.](#)