



**NSERC Industrial Research Chair in the Sustainable Life of Dairy Cattle
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Sustainable agriculture is frequently defined as "ecologically sound, economically viable, and socially just". When one considers sustainable animal farming, the animal itself becomes the center of the system, and should, therefore, be the focus of the definition. This research proposal builds on that animal-centered definition in the context of dairy cattle, while the complex interactions among the different components of the definition will be addressed under the major research themes of: i) Cow comfort and management, ii) Cow longevity, and iii) Environment and Society. Together, these themes form the rationale for a research program in the "Sustainable Life of Dairy Cattle".

Theme 1: Cow comfort and management

The first research theme will focus on producers' needs to provide a suitable environment for future compliance requirements; another goal is to better understand the needs for animal comfort. As current research on comfort is mostly with free stall systems, it is relevant, to optimize recommendations, to carry out projects with tie-stall systems which are predominant in Quebec and in Canadian dairies. An example of research question is: Could some farming practices compensate for deficient stall configuration?

Theme 2: Cow longevity

The second research theme will focus on the sustainability of the industry in terms of long-term measures of profitability and survival of animals in the herds. Replacement animals and cows in production will be under scrutiny. Projects of this theme will benefit from data collected on the commercial farms and Valacta database. An example of research question is: What is the relationship between rearing and cow cow longevity?

Theme 3: Environment and Society

The third research theme will broaden the perspective on international standards, life cycle analyses, and consumer acceptability. We will validate that the measures to improve cow welfare and longevity are not in contradiction with the overall sustainability (environmental, economic and social) of dairy farming. An example of research question is: Could improving comfort may conflict with improving the environmental footprint?

For more information, visit Dr. Elsa Vasseur's web page:

<https://www.mcgill.ca/animal/staff/elsa-vasseur>