RESEARCH TEAM

RESEARCH PROFESSIONALS

1. Chaouki Benchaar, PhD ..... chaouki.benchaar@agr.gc.ca
2. Daniel Massé, PhD..... daniel.masse@agr.gc.ca
3. Lucie Masse, PhD..... lucie.masse@agr.gc.ca
4. Guylaine Talbot, PhD..... guylaine.talbot@agr.gc.ca

- Qualified research technicians
- Undergraduate, graduate and postgraduate students
- Post-doctoral researchers

KEY PARTNERS

PUBLIC SECTOR

- Canadian federal and provincial departments of agriculture and environment
- International government organizations (United States, European Union, South America)

ECONOMIC SECTOR

- National and provincial producers' federations
- Industry associations
- Private industry

MILIEU UNIVERSITAIRE

- Canadian, U.S. and international universities

Legend: Bird's eye view of the Dairy and Swine Research and Development Centre

AAFC No. 12293E

Paru également en français sous le titre
L'équipe environnement

For more information, reach us at www.agr.gc.ca or call us toll-free at 1-855-773-0241.

Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada

Canada

ENVIRONMENT TEAM

Dairy and swine research and development centre

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http://www.agr.gc.ca/eng/science-and-innovation/research-centres

VISION

Conducting research aimed at developing a better understanding of environmental issues and implementing new environmentally sound management practices are what guide the approach of the Environment team at the Dairy and Swine Research and Development Centre.

Guided by this vision, the scientific specialists combine their expertise to advance science and innovation in fields of importance to animal production:

- reduction of gas emissions (odours, ammonia, greenhouse gases) and biological contaminants (pathogens) from production activities;
- treatment of and energy recovery from agricultural and agri-food waste;
- alternative renewable energy production; and
- on-farm potable water production.

KEY AREAS OF RESEARCH

EFFLUENT MANAGEMENT AND TREATMENT

Reduce the impact of livestock operations on natural resources through the development of biotechnology for bioenergy production, biological contaminant reduction, and capture and reduction of greenhouse gases, ammonia and odours from farm buildings, manure pits and manure spreading operations.

❖ Daniel Massé, PhD

Promote nutrient reuse (nitrogen, phosphorus, potassium, trace elements) and minimize drinking water use through the treatment of liquid manure and agri-food industry waste.

❖ Lucie Masse, PhD

MOLECULAR MICROBIOLOGY

Study microbial communities to reduce pathogen survival, including antibiotic resistance genes, and emissions of methane (a greenhouse gas) from manure storage pits.

❖ Guylaine Talbot, PhD

METABOLISM AND NUTRITION

Develop feeding and nutritional strategies to reduce enteric methane emissions and nitrogen excretion in order to lower production costs and reduce the environmental footprint of milk production.

❖ Chaouki Benchaar, PhD

SPECIALIZED FACILITIES

- Environmental laboratory
    - Models and technologies of various sizes (laboratory, semi-industrial or industrial scale) for research and development on production of bioenergy and value-added by-products
    - Models and technologies of various sizes (laboratory or semi-commercial scale) for water treatment and energy production from nutrients (fermenters, membrane filtration, UV irradiation, flocculator, ozonator)
- Respiration chambers for accurately quantifying enteric methane emissions from dairy cows
- Olfactometry laboratory for studies on odours
- Molecular biology laboratory (genetic sequencer and analyzer, quantitative PCR)