

CGIL is an international leader in education, research and promotion of animal breeding, genetics and genomics of livestock.

Established in 1985, CGIL is located at the University of Guelph and involves faculty, post-graduates and students in a variety of areas of genetic improvement of livestock including cattle, swine, sheep, goats and poultry, among others.

CGIL has an updated central computing facility and expertise applying computationally intensive methodologies required for genetic and genomic research. CGIL's activities are also supported by several research stations located in Guelph's vicinity.



Centre for Genetic Improvement
of Livestock
Animal & Poultry Science
University of Guelph
Guelph, Ontario, Canada
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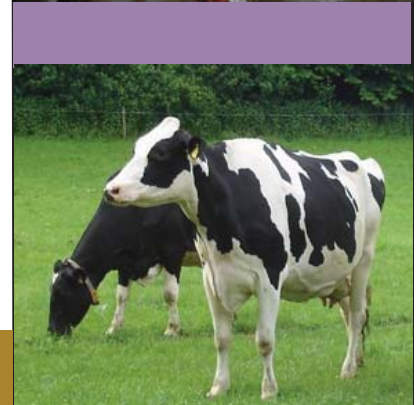
<http://cgil.uoguelph.ca/>

UNIVERSITY
of GUELPH

CHANGING LIVES
IMPROVING LIFE



Centre for Genetic Improvement of Livestock



Core Faculty Members

- Stephen Miller, Director
Associate Professor
Beef Cattle/Sheep/Turkeys
- Niel Karrow
Associate Professor
Dairy Cattle/Sheep
- Andy Robinson
Associate Professor
Swine/Fish
- Larry Schaeffer
Professor
Dairy Cattle
- Flavio Schenkel
Associate Professor
Dairy Cattle/Swine



Research

- Multi-species genetic and genomic research.
 - A strong history of computationally intensive research with large data sets.
- Current research topics include:*
- Statistical genetic and genomic analyses in all livestock species.
 - Detection of QTL and causative mutations underlying economically important traits.
 - Biotechnology for improving disease-resistance.
 - Genome-wide selection studies in beef and dairy cattle.

Services and Industry Impact

- CGIL members sit on different industry boards such as DairyGen, Beef Improvement Ontario and Canadian Centre for Swine Improvement, among others.
- CGIL has contributed to many developments in the field of genetic evaluation of livestock such as Canadian Test Day Model, MACE evaluation, selection indexes, SNP tests, genomic selection, etc.

Education

Undergraduate

8 undergraduate courses, including:

- Quantitative Genetics
- Animal Breeding Methods
- Applied Animal Genetics
- Genetics of Companion Animals
- Biotechnology in Animal Science
- Immune Mechanisms of Animals

Graduate

M.Sc. and Ph.D. Programs

9 graduate courses, including:

- Biometry for Animal Science
- Quantitative Genetics and Animal Models
- Principles of Selection in Animal Breeding
- QTL and Genetic Markers



CGIL Mission

To position our industry partners as global leaders in animal genetic products and genetic improvement technologies through world-leading research and training in quantitative genetics, animal breeding and animal genomics.