

New tools to enable effective genomic selection for disease resilience

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The main objective of this project is to deliver genomic tools to enable the selection of more resilient commercial pigs while maintaining competitive reproductive and production performance in Canada.

Summary

Health is an important component of the cost of production; however, it also represents a potential competitive advantage for Canadian pork.

Health is one of the most difficult traits to measure. It is therefore very challenging to breed for improved health using traditional approaches. Genomics offers the opportunity to increase the effectiveness of such efforts and to eventually be able to select for animals that are more resilient to disease.

To deliver new tools, the main activities of this project are:

- Identification of new targets for improving the resilience of commercial pigs using samples and data from PigGen Canada, Canadian Swine Health Board, and Genome Alberta projects on swine health challenges. These last-mentioned include Porcine Reproductive and Respiratory Syndrome (PRRS) and Porcine Circovirus Associated Diseases (PCVAD).
- Creation of additional commercial herd datasets to support the validation of genomic tools and the impact of selection for increased resilience.

Collaborators

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