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GenomeCanada

Application of Genomics to Improve Swine Health and Welfare

Status	Approved
Competition	2010 Large-Scale Applied Research Project Competition
Sector	Agriculture
Genome Centre	Genome Alberta
Project Leaders	Graham Plastow, University of Alberta; John Harding, University of Saskatchewan, and Bob Kemp, PigGen Canada Inc.

Project Description

Maintaining healthy and more profitable pig production. With the mapping of the pig genome, scientists now have an opportunity to apply genomic-based tools to the pork industry. Similar tools have already revolutionized the dairy industry, providing annual benefits of over \$180 million to Canada. With funding from Genome Canada, researchers are applying genomics to help reduce the impact of two of the most common diseases in commercial pig production - Porcine Circovirus Associated Disease and Porcine Respiratory and Reproductive Syndrome. Scientists are studying mechanisms in pigs that make them genetically less susceptible to these diseases, providing important new diagnostic tools for breeders and expanding our understanding of disease control mechanisms. This work will lead to new strategies for disease control in addition to new drugs, improved vaccines, and a safer food chain by reducing the use of antibiotics.

Researchers are also studying public perceptions about the use of genomic technologies to prevent disease in pork production.