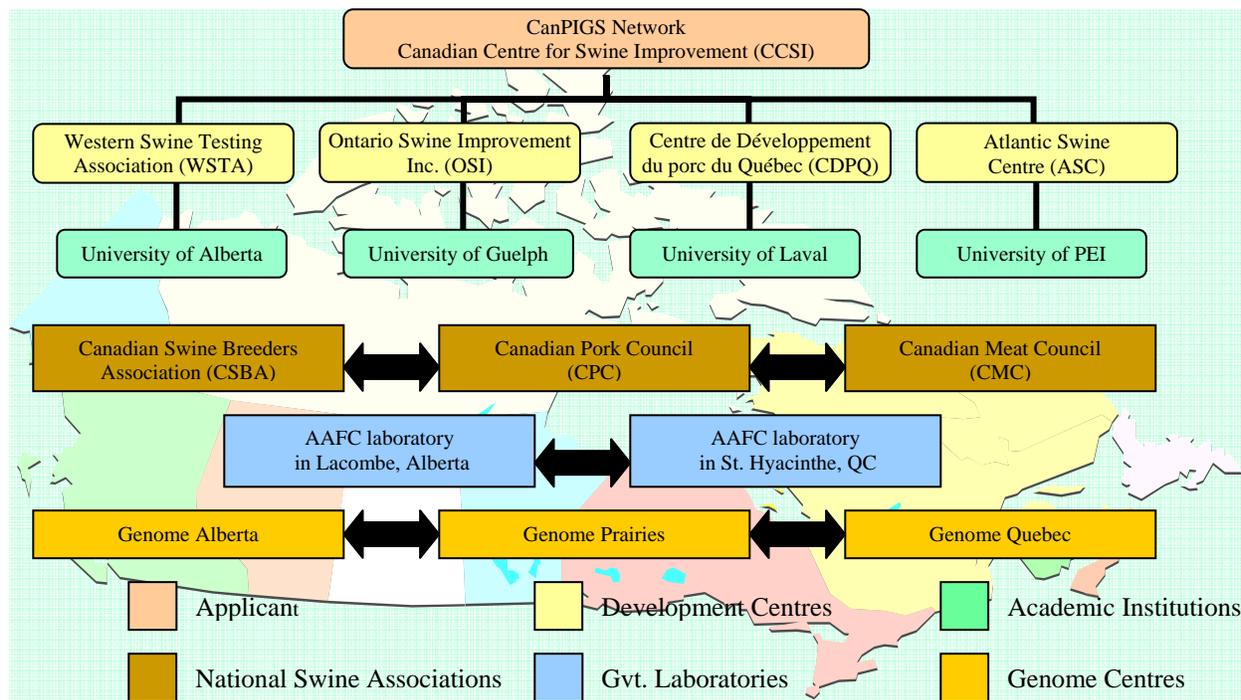


Canadian Pig Improvement through Genomic Science Network

CanPIGS Network

Summary

CCSI has recently submitted a proposal for the Business led Network Centres of Excellence Competition. The goal of the proposed Canadian Pig Improvement through Genomic Science (CanPIGS) network is to conduct research into strategic priority areas identified by the Canadian Pork Value Chain Roundtable and the swine genomics community to strengthen the competitive position of the Canadian swine industry.



The goal of the proposed network is to create a critical mass of Canadian genomics research able to work with industry to help address its strategic research priorities. These priority areas have been identified by the Canadian Pork Value Chain Roundtable and genomics provides one of the best opportunities to strengthen the competitive position of the Canadian swine industry. Canada has been a world leader in swine genetics for more than 20 years, and Canadian genetics has been a fundamental driver in the Canadian pork industry becoming one of the largest exporters in the world. This has been achieved through advances in leanness, meat quality, growth rate, feed efficiency and litter size. Canada also has natural advantages (lower hog densities and a climate that provides a healthier production environment, larger tracts of arable land). It should continue to be a world leader in pig genetic improvement if it is innovative and embraces new technology such as genomics.

World markets are now demanding new advances in these and other traits that are not easily addressed by traditional approaches. These are difficult and expensive to measure traits, traits that can best be managed by identifying the gene variants that, in turn, explain variation in them, and then harnessing their diagnostic capability to provide industry with the means to develop options for product development. Genomic technologies are developing at a rapid rate; however, there is a worldwide need to develop phenotypic information for these new demand traits in order to exploit the power of the technology. This requires large numbers of animals in commercial environments in order to provide the necessary experimental power. The proposed network addresses this need by bringing together the Canadian animal genomics community with industry in order to create a unique partnership with the potential to take the next step in swine genomics. The timely creation of this new approach is critical if Canada is to remain competitive in pig and pork production. It offers the potential to make Canada the world leading centre for swine genomics and genetics in the next decade.