New DNA (Deoxyribonucleic Acid)-based projects to boost fruit plant trade

News Release

From Canadian Food Inspection Agency

Technology to boost trade competitiveness by reducing quarantine time for fruit plants by over two years

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Canadian fruit growers need the best varieties of plants to be successful. In the case of Canadian strawberry growers, they grow the best varieties of plants, which foreign buyers demand. The import and export of fruit plants, however, must go through the Canadian Food Inspection Agency (CFIA) to test for potentially devastating plant viruses. Currently, this testing and quarantine process takes an average of three years to complete, significantly hampering the speed of trade.

Today, the Honourable Lawrence MacAulay, Minister of Agriculture and Agri-Food, announced that the CFIA (Canadian Food Inspection Agency) will lead two projects worth $500,000 that use new DNA (Deoxyribonucleic Acid)-based technologies to reduce the quarantine testing time, helping to boost trade and economic competitiveness in the $240 million Canadian fruit tree industry.

The first project will dramatically shorten the testing period of seeds, cuttings and bulbs imported into Canada to grow new varieties of plants. With this funding, scientists will use DNA (Deoxyribonucleic Acid) technology to test for all viruses associated with imported plants to get an early indication of any plant diseases present. This approach could reduce the quarantine testing time by up to two and a half years.

The second project streamlines the testing of strawberry plants. Traditionally, multiple tests for viruses are required before exporting strawberry plants to foreign markets. This project will test for multiple viruses in one single test, dramatically reducing the time and cost to get plants to market.

Funding for these projects is provided through a partnership between the CFIA (Canadian Food Inspection Agency), Genome British Columbia, Summerland Varieties Corporation, Phyto Diagnostics, the British Columbia Cherry Association, and Vineland Research and Innovations Centre.

Quotes

"Together with provincial partners and industry, our government is making the investments in innovative science that enables agriculture to be a leading growth sector of Canada's economy. Together we can help meet the world's growing demand for high-quality, sustainable food and help grow our middle class."

- The Honourable Lawrence MacAulay, Minister of Agriculture and Agri-Food

"Partnerships are essential to deliver real change for Canadians and to advance both science and the economy. The partnerships shown through these projects are a great example of how we can use science to create more efficient systems to boost our trade and continue providing high quality products to the world."

- The Honourable Jody Wilson-Raybould, Member of Parliament for Vancouver Granville, Minister of Justice and Attorney General of Canada

"Our government is pleased to have government scientists partnering with growers here in the Okanagan on innovative ways to bring new varieties of fruit to the region. This will help support growth in a vital sector of our local economy and will bring good new jobs to Kelowna, Lake Country, and across the Okanagan."

- Stephen Fuhr, Member of Parliament for Kelowna—Lake Country

"The CFIA (Canadian Food Inspection Agency) is committed to researching and implementing innovative DNA (Deoxyribonucleic Acid)-based technologies that improve the competitiveness of Canadian growers and safeguard Canada's plant resources."

- Dr. (Doctor) Michael Rott, Research Scientist at the Canadian Food Inspection Agency

"The ability to potentially evaluate new varieties with next generation sequencing methods will exponentially speed up the present evaluation system and allow Canadian growers to remain competitive by providing access to new varieties from around the world in a timely fashion."

- Nick Ibuki, Operations Manager at Summerland Varieties Corporation

"Canadian import/export markets will be stronger and more competitive because of these genomics-based tools. Early detection of pathogens and viruses is a vital outcome of genomics and it is being applied across many key economic sectors."
- Dr. (Doctor) Catalina Lopez-Correa, Chief Scientific Officer and Vice President, Genome British Columbia

Quick Facts

- The projects are one of two collaborative projects with Genome British Columbia looking at how DNA technologies can protect Canadian plants.
- The Canadian strawberry plant industry is valued at $17 million.
- Genomics is the science that studies genetic (DNA and RNA) sequences and the complexity of their multiple interactions, and allows scientists to identify DNA and RNA "fingerprints" specific to known organisms, such as plants and viruses.
- The genomic tests will look for ribonucleic acid (RNA), a molecule similar to DNA that most plant viruses use to hold their genetic information.
- Budget 2017 has committed to an $80 million investment to replace the Sidney Centre for Plant Health with a world-class research centre, supporting the economic growth of the agri-food industry through innovation in plant science.
- As part of the Government of Canada's new Innovation Agenda, Budget 2016 announced $30 million over six years to support advanced research in genomics to mitigate biological threats to agriculture.

Related Products

- Find out more about the CFIA's work in DNA-based technologies, known as genomics.

Associated Links

- Find out more about the CFIA's network of 13 laboratories
- Genome British Columbia website

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