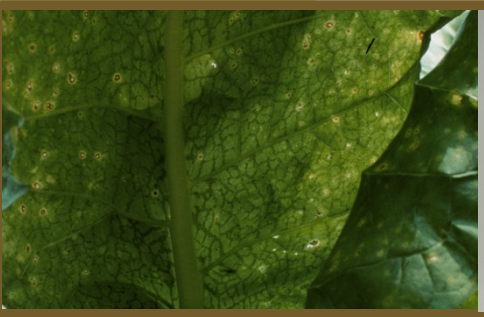
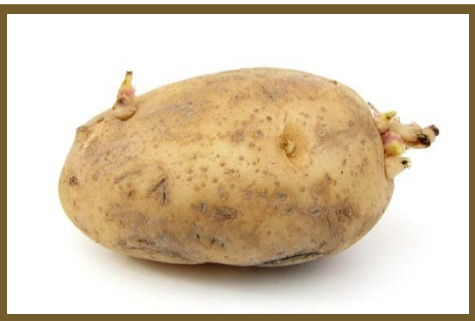
Ringtest for improved Potato virus Y strain detection

08/2016-06/2018





Funding

Non-competitive funding mechanism. Each funder only pays for the participation of their own national researchers. Total funding € 58 000

Research consortium

EVPM (EE), AGES (AT), ANSES (FR), AFBINI (GB), CREA (IT), FN3PT (FR), NAK (NL)

Contact information

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Key outputs and results

The project shall propose and test a common method for the detection of Potato Virus Y and its associated strains leading to an EPPO wide approach for the detection of PVY. A validated detection protocol for different PVY strains will be developed.

Goals

Several strains of *Potato virus Y* (PVY) have been identified that differ by the symptoms they cause. PVYO the common strain, causes mosaic symptoms. PVYC causes stipple streak. PVYN, the necrotic strain, causes mild foliage symptoms, but necrosis in susceptible potato varieties. Mixed infections of common strains and necrotic strains are common, and genomes can mix, producing hybrid strains. PVYNTN strains can cause tuber necrosis, and are of increasing importance in European seed stocks. Diagnosis can be difficult, as immunological methods (ELISA) can‘t distinguish PVYNTN from other PVY strains. Symptoms alone cannot distinguish these virus strains. Recent emergence of genetically recombinant and serologically different strains of *Potato virus Y* has led to the development of several diagnostic procedures to determine strain identity and to detect mixed strain infections including simplex and multiplex PCR assays. Other approaches include a combination of immunological and molecular methods, though, no common method for the detection of Potato Virus Y and its strains has been adopted by the pathogen detection industries within Europe.