

Potato Cyst Nematodes in Canada

Benjamin Mimee

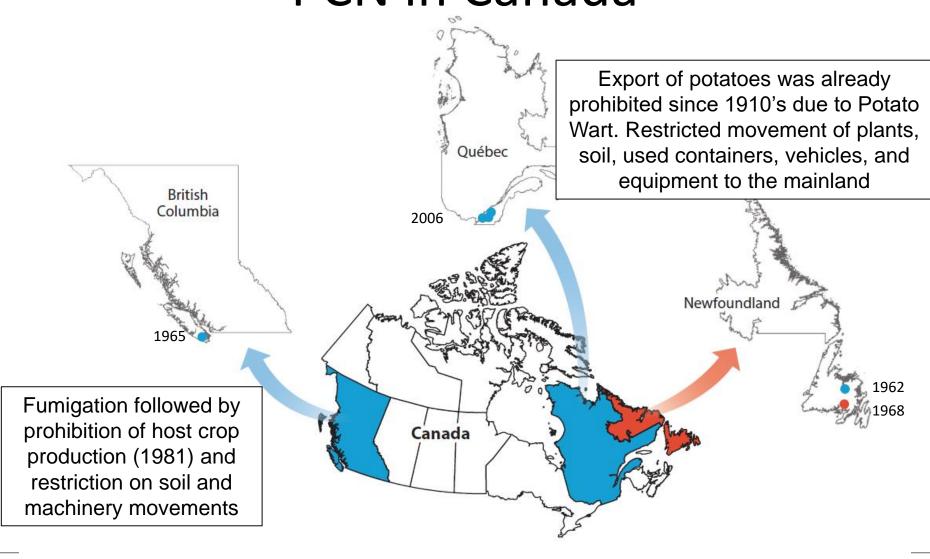
Agriculture and Agri-Food Canada

GLOBAL Annual Meeting October 23, 2019





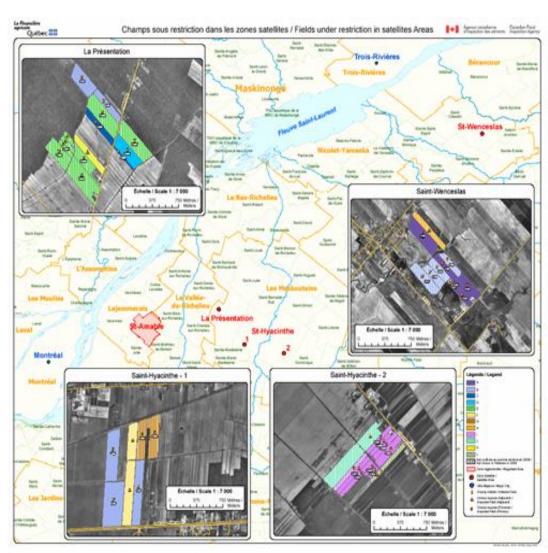
PCN in Canada



Golden nematode in Quebec, Canada

- Regulated pest with quarantine status
- Town of St-Amable
- Four satellite sites
- Overall regulated acreage :

4,750 hectares 12,000 acres



Golden nematode in Quebec, Canada

- No fumigation (proximity of residential area; high water table)
- Based on a "live with" philosophy
- Resistant cultivars (H1) and rotations with non-host are mandatory (at least 3 years)
- Tubers and other root vegetables need to be washed before packaging
- Equipment exiting an infested field need to be washed







Update

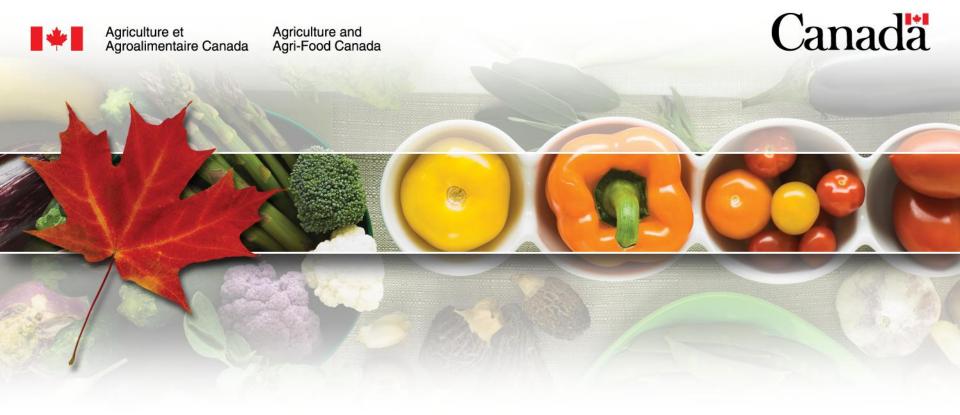
- No new detection in Canada since 2007
- Pathotype in QC = only G. rostochiensis Ro1
 - microplots with continuous (12 years) R cv (H1)
 - no sign of resistance breaking pathotype
- Poor viability 10 years after initial detection
 - 24 fields tested
 - only 2 fields still contain detectable viable eggs
 - very low number: 3 and 12 eggs/kg (qRT-PCR)
 - initial density was high in these fields

Update

- CFIA lab
 - continues to follow the recommendation of the current version of the Canada US Guidelines
 - test all export market samples
- CFIA considers removing BC from regulated area
- CFIA works to improve guidelines
 - discussion with USDA-APHIS over the past year
 - meeting in December
 - approval & consultation = long process

Update

- Breeding for resistant potatoes
 - new consortium in QC (CRPTQ) with funding
 - renewed interest in AAFC and private programs
 - new list of authorized R varieties





This project is funded by USDA National Institute of Food and Agriculture competitive grant no. 2015-69004-23634

