Potato Cyst Nematodes in Canada

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Export of potatoes was already prohibited since 1910’s due to Potato Wart. Restricted movement of plants, soil, used containers, vehicles, and equipment to the mainland.

Fumigation followed by prohibition of host crop production (1981) and restriction on soil and machinery movements.
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
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