Current Situation of Clubroot in Alberta: February 2012

Murray Hartman
Oilseed Specialist
Alberta Agriculture and Rural Development
2011 survey results:

U of A: 447 fields surveyed in 21 counties
  • 103 infested fields found
  • 2 new counties
  • 1 county changed from suspect
To date over 800 fields

County led surveys in 2011 identified 162 additional cases
Alberta Clubroot Management Plan

- Revised in 2010 to include use of resistant hybrids
- Best Management Practices:
  1. Use resistant hybrids
  2. Use long rotation – 1 in 4
  3. Control crucifer weeds
  4. Sanitation
  5. Use direct seeding/zero till
  6. Restrict traffic
  7. Create new field entrances
  8. Scout
  9. Avoid contaminated inputs
Municipal Clubroot Policies
April 2011

MAUREEN VADNAIS, B.SC.AG.
ACTING SUPERVISOR, ASB PROGRAM
PHONE: 780.644.4432
EMAIL: MAUREEN.VADNAIS@GOV.AB.CA
Notification of Infestation

Notice

12(1) When an inspector is of the opinion that land, property or livestock contains or is likely to contain a pest or should be protected against a pest, the inspector may issue a notice in writing directed to the owner or occupant of the land or property or to the owner or person in control of the livestock.
Issuance of Notices

- Notice issued automatically upon confirmation of clubroot
  - 25
- Management Plan/Work with Producer
  - 8
  - Notices issued if producer doesn’t comply
- Combination
Notices

• Cropping Restrictions
  – Follow the Clubroot Management Plan (7)
    • Three years out of canola, then plant a resistant variety
  – 4 years (10)
    • 4 years, then plant a resistant variety (2)
  – 5 years (7)
  – % Incidence of Disease (4)
    • <20% = 3 years, then resistant variety
    • ≥ 20% = 5 years, then resistant variety
      – One municipality more strict
        » Low incidence = 4 years; Moderate to high incidence = 7 years
Surveying

Inspections

Every Field Inspected: 7
Random Inspections: 30
Survey Techniques

Intensive Survey (4) Visual/Target Survey

- access
- 10 m
- 30 m
- 1st sample site
- 100 m
- continue to 10 sites
Next steps

- Revise guidelines for municipalities
  - actions to take with respect to degree of infestation in field and amount already present in county
- Pest Act revision in next 2 years
Alberta Clubroot Fact Sheet

- Revised 2011

Clubroot Disease of Canola and Mustard

Clubroot is a nematode (root-knot nematode) disease that infects Canola and Mustard plants, causing girdling and stunting. It is a significant crop disease in Europe and is now a concern in Canada. Alberta Agriculture and Rural Development has estimated that it could cause up to $10 million in losses to the oilseed industry.

The disease cycle

The disease cycle of clubroot is complex and involves three stages: infection, development, and spread. The disease cycle begins when the nematode infects the plant roots, causing girdling and stunting. The infected plant then releases the nematode, which can infect other plants in the field. The nematode then penetrates the plant roots, causing girdling and stunting.

Prevention and control

Prevention and control of clubroot are crucial to managing the disease. The best approach is to avoid planting clubroot-infected fields with susceptible varieties. Crop rotation and use of resistant varieties are also effective methods to manage clubroot. In addition, soil fumigation and chemical treatments can be used to control the disease.

For more information on clubroot and other soil-borne diseases, please contact your local Alberta Agriculture and Rural Development extension agent.