Action Taken In Greenview

The following protocol will be followed in Greenview:

- Clubroot awareness and education is top priority.
- Surveying and monitoring Canola crops within Greenview for presence of clubroot may be performed.
- Informing landowners and occupants if clubroot is found.
- The owner and occupant of the infected land will be asked to voluntarily adopt a 1 in 4 canola rotation involving at least three years of non-susceptible plant crops between clubroot susceptible crops and to adopt disease prevention measures into their production routine including the use of resistant varieties (Alberta Clubroot Management Plan).
- As a last resort, if landowners choose not to adopt this management plan, Greenview may issue an enforceable notice under Alberta's *Agriculture Pest Act* (Chapter A-8).

For information about

Clubroot and your crop

Contact Agriculture Services
Phone: 780-524-7621
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beverly.spence@mdgreenview.ab.ca

TO CONTACT THE MD OF GREENVIEW:

PHONE: 780-524-7600
TOLL FREE: 1-888-524-7601
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Box 1079 Valleyview, AB T0H 3N0

MUNICIPAL DISTRICT OF GREENVIEW No. 16

Clubroot and your crop

Agriculture Services

Working Towards a Solution

Greenview, Alberta, Canada

Expand your vision.

www.mdgreenview.ab.ca

Clubroot...Can You Afford The Loss?

What is Clubroot?

Clubroot is a soil borne disease that infects the roots of cruciferous crops such as canola, mustard and vegetables in the cabbage family. The disease can be spread by any form of soil movement, however, the primary method of spread is by soil attached to agriculture equipment.

The end result from clubroot is an increase in crop yield loss.

The disease causes galls or 'clubs' to form on the root of infected plants, which limit the flow of water and nutrients to the rest of the plant.

Severe case of Clubroot

At the end of the growing season, the galls on the roots break down into soil, releasing new spores and perpetuating the cycle. Clubroot spores remain viable in the soil for up to 20 years or more.

Forage species such as orchard grass and red clover may also act as a weak hosts for the disease.

There are resistant canola varieties available.

WHAT CAN YOU DO...?

Implementation of the following preventative measures is absolutely essential:

- Scout fields regularly,
- Look for abnormalities such as: crop ripening prematurely and/or wilting, and galls developing on roots, ranging in size and shape, (inspect roots thoroughly).
- Implement long crop rotations, plant canola no more than once in a 4 year rotation,
- Remove any soil that remains on equipment before exiting fields, this precaution may be supplemented by pressure washing and if necessary, disinfect machinery with bleach.
- Control volunteer canola and any other weeds that can be hosts to clubroot (stink weed, mustard, dock, hoary cress).
- Avoid the movement of straw or manure from areas with known infestations, and
- Avoid the use of common, untreated seeds as earth tags may carry clubroot spores.

Moderate case of club root

Clubroot in the Area

Clubroot, although a problem in Europe, Ontario, Saskatchewan, Manitoba and British Columbia for many years, was first discovered in Alberta in 2003. Since then, many infested fields have been identified in municipalities throughout Alberta.

Healthy canola root system

A Declared Pest

In April 2007, clubroot was officially declared a pest under the Alberta *Agricultural Pests Act* (APA). This gives municipalities the responsibility and authority to enforce pest control measures within their boundaries. A pest inspector has the power to enter private land at a reasonable hour, without permission, to inspect for and collect samples of clubroot and other pests.

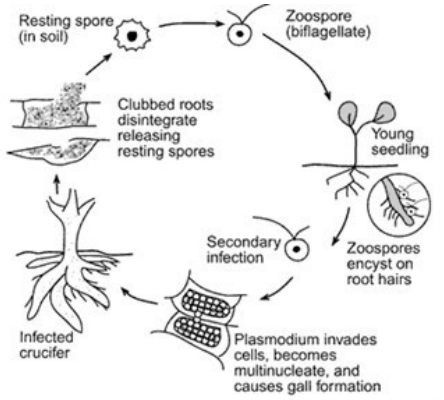

Figure 1.Life cycle of plasmodiophora brassicae (pathogen that causes clubroot -source: Ohio State University).