

Don't forget about your canola roots!

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Clubroot is a well known disease of crucifer crops in the Western Cape. The disease is a fungal infection of the roots and root hairs of cabbage, cauliflower, broccoli, Brussels sprouts, radish and also oilseed rape.



Clubroot symptoms on crucifer crops



Young crucifer plants wilting and dying of clubroot infestation

The disease is initially difficult to detect, as an infected plant can survive the disease throughout its whole life span. The soil borne fungus, *Plasmodiophora brassicae* (various races occur worldwide), invades the root cells where it stimulates the plant cells to multiply rapidly, resulting in the formation of galls. Normal water and nutrient uptake of the plant is inhibited, resulting in a stunted, low-yielding plant. When this infection occurs at a very young stage, the plant may die, but older plants do survive, showing only wilt symptoms during water-stressed periods.

The fungus spreads by "swimming" in wet soils. Favourable conditions for disease development are acidic soils with temperatures between 12°C and 27°C.

The importance of monitoring this disease lies in the fact that the organism can remain dormant yet viable for at least seven years in infested soils!

In 2006 it was reported that this disease does indeed occur on canola in Alberta, Canada. A first report of clubroot on canola has just been published by the Department of Agriculture and Food, Western Australia (2012).

Producers of or visitors to local canola fields should be on the lookout for this disease when circumstances coincide with the following factors:

- short canola rotation systems
- low pH soils (below 7)
- very wet soils (close to saturation point)
- stunted growth
- wilting on dry days, but recovering afterwards
- fewer, smaller leaves
- galls on roots

Canola growers, researchers and interested parties can submit suspect samples for plant pathological examination by the Plant Pathology laboratory of the Institute for Plant Production at Elsenburg. Currently the tariff for such an examination will be R 94.60 per sample (10 plants).

However, Lizette Nowers should be contacted before sampling : 021 808 5269 or lizetten@elsenburg.com