

## Pythium root rots of Apiaceae and other vegetables

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## Life cycle of Pythium

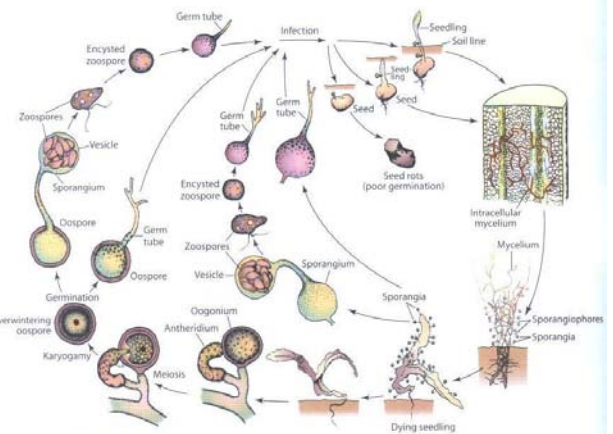


FIGURE 11-18 Disease cycle of damping-off and seed decay caused by *Pythium* sp.

## Pythium

Pythium found in all environments – soil and surface water

Fast growing, reproduce quickly, survive as oospores, root exudates

Favoured by wet soil conditions – temperature effects depend on species

pH and soil nutrients?

Biological control?

Varieties?

Chemical control – metalaxyl

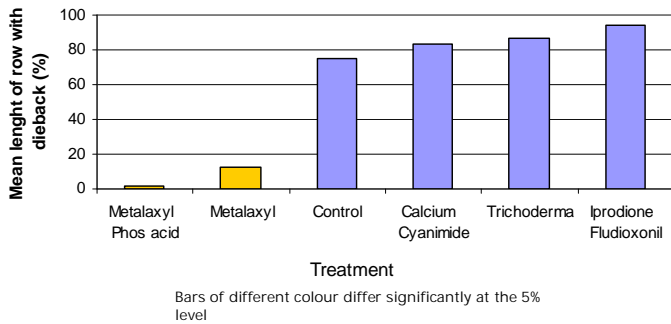
Rotation – broccoli in rotation reduces root rot and cavity spot in carrot

## Parsley Field Trial: Autumn - Winter 2005 - Week 16



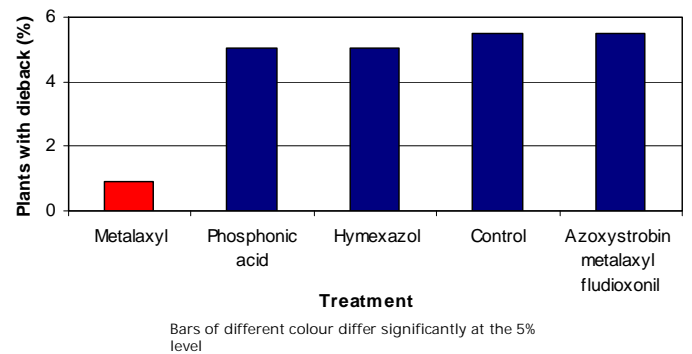
## Parsley Field Trial: Autumn - Winter 2005

Effect of treatments on mean percentage of parsley lost to dieback at week 16

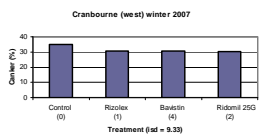


## Parsley Field Trial: Spring - Summer 2005

Effect of chemicals on parsley dieback week 11

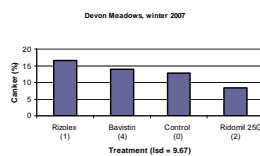


## Winter Trials - parsnip



Cranbourne West: no sig. difference  
Devon Meadows: no sig. difference (BUT reduced 25%)

Rosebud: metalaxyl-m reduced canker by 75%

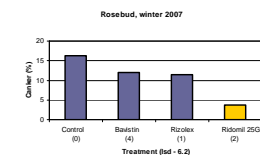


Rosebud: soil fumigated and seed coated (Apron XL)

Fumigation removes competitors?

Water moulds re-enter?

No effect with Bavistin or Rizolex demonstrates neither *Fusarium* nor *Rhizoctonia* solely responsible for canker



## Parsnip Canker

*Itersonilia perplexans*

*Phoma* spp.

*Fusarium* spp.

*Acremonium* spp.

*Cylindrocarpon* spp.

*Mycocentrospora* spp.

*Microdochium* spp.

*Rhizoctonia* spp.



## Field trials 09

Parsnip - 2 trial sites in Cranbourne area

- Untreated control
- Metalaxyl - 1 & 8 weeks after sowing\*
- Metalaxyl - 8 weeks after sowing
- Metalaxyl - 15 & 21 weeks after sowing
- Metalaxyl - 1, 8, 15 & 21 weeks after sowing
- Strobilurin - 8, 15 & 21 weeks after sowing
- *Streptomyces lydicus* - monthly

Weather station - soil temperature and moisture

Monthly sampling of parsnip plants to monitor root colonising micro-organisms

Disease and yield assessments