

## Emerging soil-borne problems for pea growers

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The soil-borne fungus *Aphanomyces* can decimate pea seedling establishment - with 70% of the pea growing area now affected, according to latest research. Growers will need to learn new techniques to tackle the disease.

**Despite being identified in the UK, in Scotland, only around 30 years ago, the root rot fungus, *Aphanomyces*, is now endemic across most pea growing areas. Nearly 70% of fields tested when showing foot rot, had *Aphanomyces* present.**

Brian Ó Loinsigh of Nottingham University reported yield losses of pea crops on foot rot affected field patches were typically 40 to 85%, but could result in total crop failure.

Focusing on field areas displaying foot rot problems, his PhD project found that 50% of them had infection levels indicating peas should not realistically be grown in the rotation for the next 10 years.



Brian Ó Loinsigh was speaking at *The PGRO Roadshow series*, run in association with Syngenta. The meetings have been working their way across the country offering an insight into the crops' latest market outlook and agronomy developments to over 250 growers and agronomists.

For a soil borne fungus that is not spread by wind or rain splash it's a remarkable movement, possibly with infected soil carried on machinery between fields and farms, he believed.

*Aphanomyces euteiches* appears capable of surviving as oospores for up to 10 years in the soil, aided by a wide number of weed species that will host and perpetuate infection. There is no evidence that the infection can be spread on seed, he pointed out.

The impact can be further compounded in compacted soils, in part because they are typically wetter and conducive to the fungus, but also because peas tend to put out more side roots in such conditions - which are particularly targeted by the pathogen. Infection also makes crops susceptible to nutrient and drought stresses, as well as other complex diseases such as Fusarium or Botrytis (below), for example.



With no treatment or varietal resistance available, Mr Ó Loinsigh advised the current best option is to improve soil conditions and establishment techniques, so that peas can quickly develop faster, bigger root structures, and longer rotation intervals. Healthy growing plants can withstand low to moderate infections of *Aphanomyces*, he pointed out.

The Nottingham University project, supported by the PGRO, could also see the development of soil testing bioassay techniques to identify and quantify the level of *Aphanomyces* soil infection, to enable better informed decisions on rotations and cropping options.

**Tags:**

Combining peas

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soils