A BPC funded project to develop effective integrated measures for the control of black dot

**Black Dot Control Measures**

Interim results of a collaborative project between
The Scottish Crop Research Institute, SAC Aberdeen,
Sutton Bridge Experimental Unit and ADAS

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**Pre-planting - Reducing Disease Risk**

**Diagnostics:**
- Levels of black dot soil inoculum can be determined using real-time PCR (Figure 1).
- Knowing how contaminated a particular field is can help with site selection and determining control strategies.

**Variety choice:**
- Large differences in disease development are found between varieties in accordance with their resistance rating.
- Choose a resistant variety where soil is contaminated.

**In-crop Management: Reducing Disease Development**

**Amistar:**
- In-furrow treatment should be used where soil is contaminated.
- In field trials, efficacy was better where soils were contaminated at low and moderate levels compared to high levels.

**Duration of Crop:**
- Results from a trial in 2005 (Figure 2) show that the extent of disease development (AUDPC) was significantly correlated with the length of time in the ground (i.e. days from 50% emergence to harvest)
- If soil is contaminated reduce crop duration by planting later or harvesting earlier

**In Storage - Effective storage management to reduce disease development**

- An experiment at SBEU in 2004/2005 demonstrated that black dot disease expression could be minimised if immediate temperature pull-down was applied rather than the application of curing (Figure 3).

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