

Strategic Farm East project overview

Varietal performance under reduced input regimes 2018-2019

Background

Over recent years fungicides have become less effective against certain diseases in crops, requiring a change in the way growers use them. AHDB is currently developing anti-resistance strategies, including more resistant crops, by monitoring and researching crop diseases. The AHDB Recommended List continues to be an excellent resource for checking disease resistance.

Aim

The aim of this demonstration is to determine the effect of reduced fungicide applications and cost of production on varieties with different resistance ratings for disease control under high, medium and low fungicide strategies, to promote fungicide stewardship and raise awareness of practical anti-resistance measures.

Methodology

Field site and treatments

Location: Strategic Farm East, Lodge Farm, Westhorpe, Suffolk IP14 4SZ

This demonstration will quantify disease control of five varieties with different resistance ratings under high, medium and low input strategies.

Field site:

- Area: 18.01 ha
- 2018 harvest crop: linseed
- 2019 harvest crop: winter wheat
- Varieties to be grown for 2019 harvest: Siskin, Shabras, Graham, Santiago, Silverstone
- Number of plots: 20

Assessments

Disease assessments

- All varieties will be assessed for foliar disease and GLA at:
 - T0 timing, to determine over winter disease pressure
 - T1 = Leaf 3 emerged (GS32) on the majority of shoots.
 - T2 = Flag leaf emergence (GS37-39)
 - T2 + three weeks (=T1 + six weeks)
 - T2 + six weeks
- Stem base disease at GS31-32 and GS75
- Ear diseases at GS85

Crop assessments

- Monthly plant counts from emergence to harvest
- Record of growth stage on each assessment date
- Normalised Difference Vegetation Index (NDVI)



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More information

- AHDB develops practical tools for disease forecasting and fungicide performance. More information is available [online](https://cereals.ahdb.org.uk/research/disease-research) at cereals.ahdb.org.uk/research/disease-research
- The encyclopaedia of cereal diseases is the definitive guide to cereal diseases in the UK and contains full colour photographs for identification plus information on hosts, symptoms and life cycles ([online](#)).
- Fungicide futures is a joint initiative led by AHDB and FRAG-UK to help put good anti-resistance practice at the heart of fungicide programmes ([online](#)).

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