



National Agronomy Centre

STAR Open Day

Friday 6th June 2014, 10.30 - 12.30

Stanaway Farm, Otley, Suffolk

The **Sustainability Trial in Arable Rotations (STAR)** is a long-term fully replicated field-based study which started in 2005.

- The research examines the interaction between four different cultivation methods and four crop rotations on a heavy Hanslope soil type.
- The project uses farm scale equipment on large field plots.
- Long-term rotation studies are rare in our industry but they provide powerful agronomic and financial information for UK farmers.
- Come along to this open event to see this unique study for yourself and find out a bit more about some of the changes we have seen to weeds, soils, yield and margins as a direct result of the specific system used.

FREE
and open to ALL.
BOOKING ESSENTIAL
Register online at
www.niab.com



Registration options:

- Online at www.niab.com and go to Future Events
- Email nac@niab.com, phone 01953 713200 or fax 01953 605811.
- Scan the QR code with your smartphone or tablet



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STAR Treatments

The study has a total of sixteen treatments and three replicates.

Four rotations, four cultivation systems

Winter cropping

Spring cropping

Continuous winter wheat

Alternate fallow



Annual plough

Managed approach

Shallow tillage

Deep tillage

Topics will include:

Soil management: research being carried out within the STAR project is showing some interesting changes in soil characteristics between the differing cultivation approaches. Nathan Morris (NIAB Soils and Farming Systems Specialist) will highlight some of the changes we have seen and outline the impacts on crop performance.

Selecting break crops: this year the STAR project is in a 'break crop' year with winter oilseed rape and spring oats alongside the continuous wheat treatments. Research being conducted between NIAB, IBERS and Senova is looking at improving the performance of spring oats particularly for disease management; some of the key outputs of this project will be discussed at this event.

Management of grass weeds: both cultural and chemical control of grass-weeds is becoming increasingly important in the rotational management of black-grass and other pernicious weeds. NIAB weed specialist John Cussans will discuss how both crop choice and 'in crop' management can be used within grass weed management strategies highlighting some of the lessons learned from the STAR project.

STAR results: within NIAB TAG we are very lucky to have both the STAR and New Farming Systems (NFS) long term rotational projects. These studies are now providing some very revealing cross site and season data on crop performance in relation to cultivation systems for both yield and margin. Ron Stobart (NIAB Head of Agronomy Training and Knowledge Transfer) will present further detail on the findings here.

STAR Project Overview

- The STAR project is a long term rotational systems study examining the interaction between four different rotations and four different cultivation methods.
- The impact of rotation and cultivation on weed burden, soil condition and mycotoxin risks are becoming increasingly apparent as the study progresses.
- With regard to cultivation system the highest margins are associated with a managed approach.
- With regard to rotation the highest margins are associated with winter cropping systems.
- Changes in gross margin ranking are being seen as the study progresses.



The STAR project is supported through the Chadacre Agricultural Trust and The Felix Thornley Cobbold Trust. The STAR project contributes to the AHDB (HGCA) funded 'Platforms to test and demonstrate sustainable soil management'; a collaborative project delivered through NIAB TAG and the James Hutton Institute.

This open event is provided through NIAB TAG's National Agronomy Centre (NAC) initiative, an independent, charitably funded programme, supported by The Morley Agricultural Foundation. NAC Initiative events facilitate open access to research and practical information; helping to promote best practice and informed choices on key arable decisions.



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