



AHDB Diss Monitor Farm

Summer Meeting, 15 June 2021

The summer Monitor Farm walk hosted by Richard Ling, covered the trials taking place on-farm this year, including topics such as nitrogen use efficiency, nutrition, CSFB control in OSR, use of disease forecasting, as well as discussions around reducing carbon emissions and markets.

Harvest 2021 Cropping

- | | |
|-------------------------|----------------------|
| ▪ Winter wheat: 160ha | ▪ Spring beans: 15ha |
| ▪ Winter barley: 40ha | ▪ Winter beans: 48ha |
| ▪ OSR: 45ha | ▪ Spring wheat: 17ha |
| ▪ Spring barley: 40ha | |
| ▪ Spring triticale: 5ha | |

Companion cropping and FYM use for cabbage stem flea beetle control

Last autumn (2020), building on methods tried in the previous year, Richard has tested a variety of options of companion cropping across four fields, to see which might have the best effect on cabbage stem flea beetle (CSFB) control. These have included:

- Control (Blue)
- Berseem clover and buckwheat (Red)
- Berseem clover, buckwheat and fenugreek (Yellow)

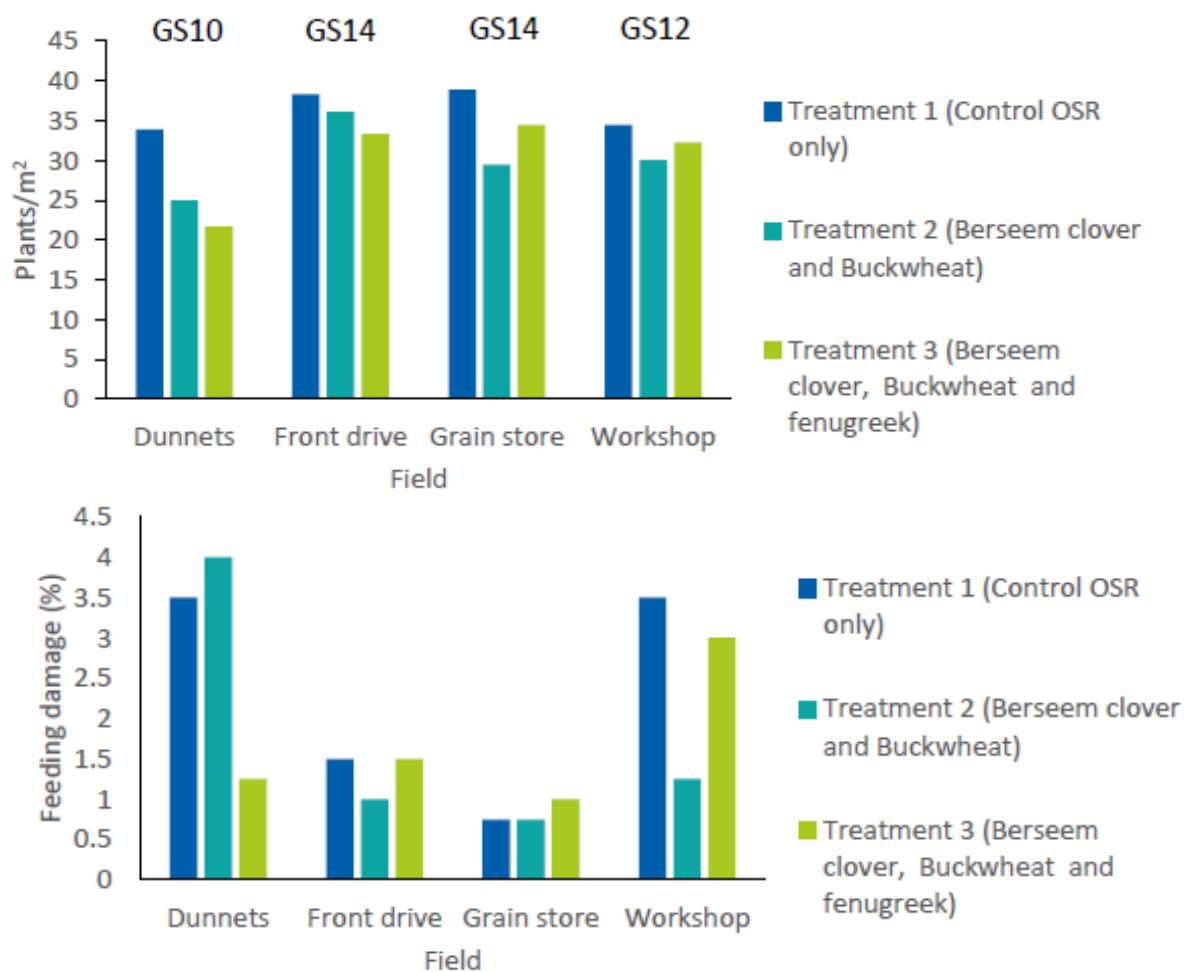


The results from the autumn on plant numbers and feeding damage can be seen in the graphs below.



The fields also received different organic matter additions to them, including cattle FYM on two fields (Dunnets and Workshop), chicken FYM on Front Drive and organic liquid material on Grain Store.

These amendments had a varying effect on OSR and companion crop establishment, CSFB levels in the autumn and larvae levels seen in the winter.

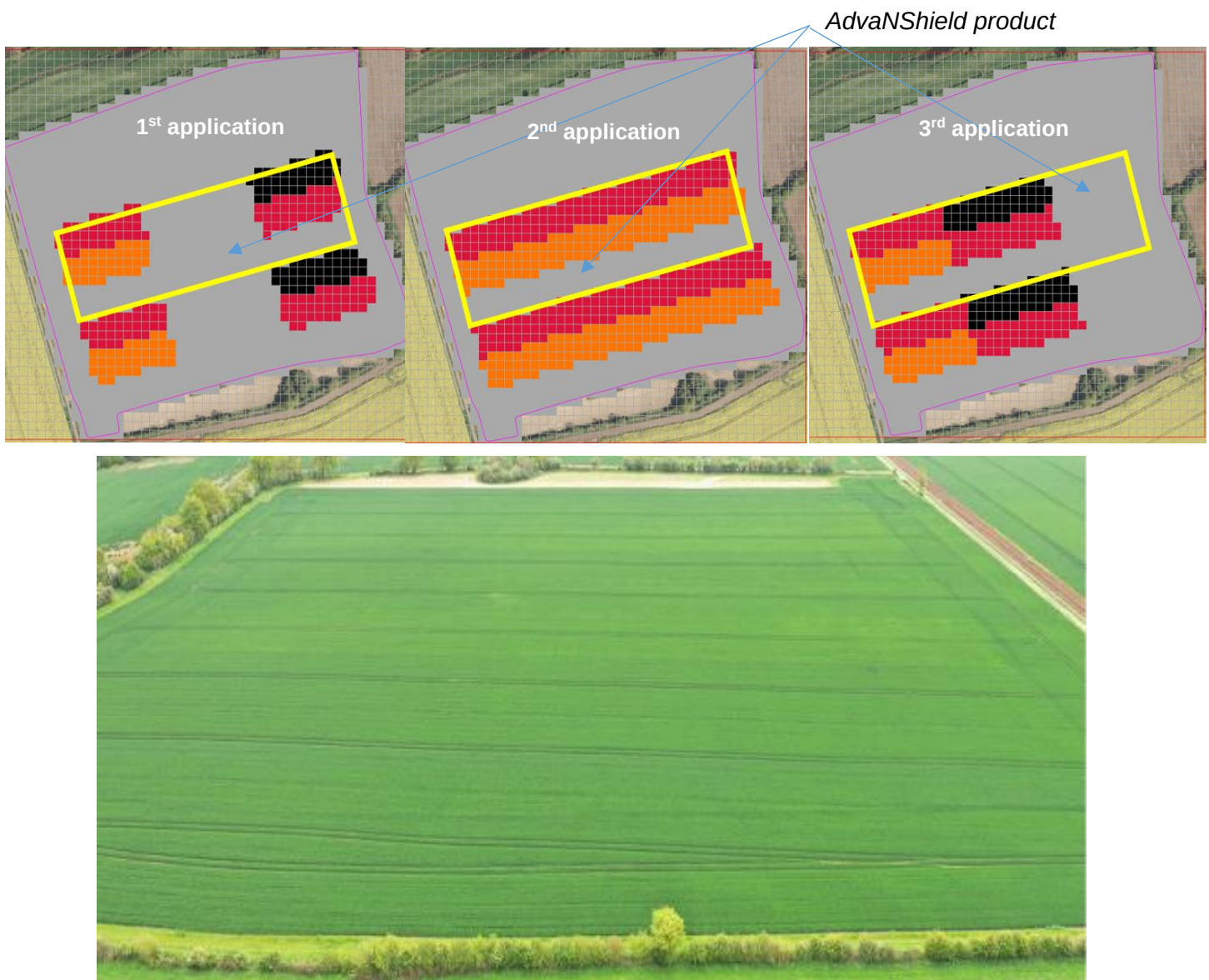


Nitrogen use efficiency try-out

With an aim to look at improving nitrogen use efficiency on-farm, Richard has been trialling one option of a nitrification inhibitor, AdvanShield, this season, with a few different treatment options.

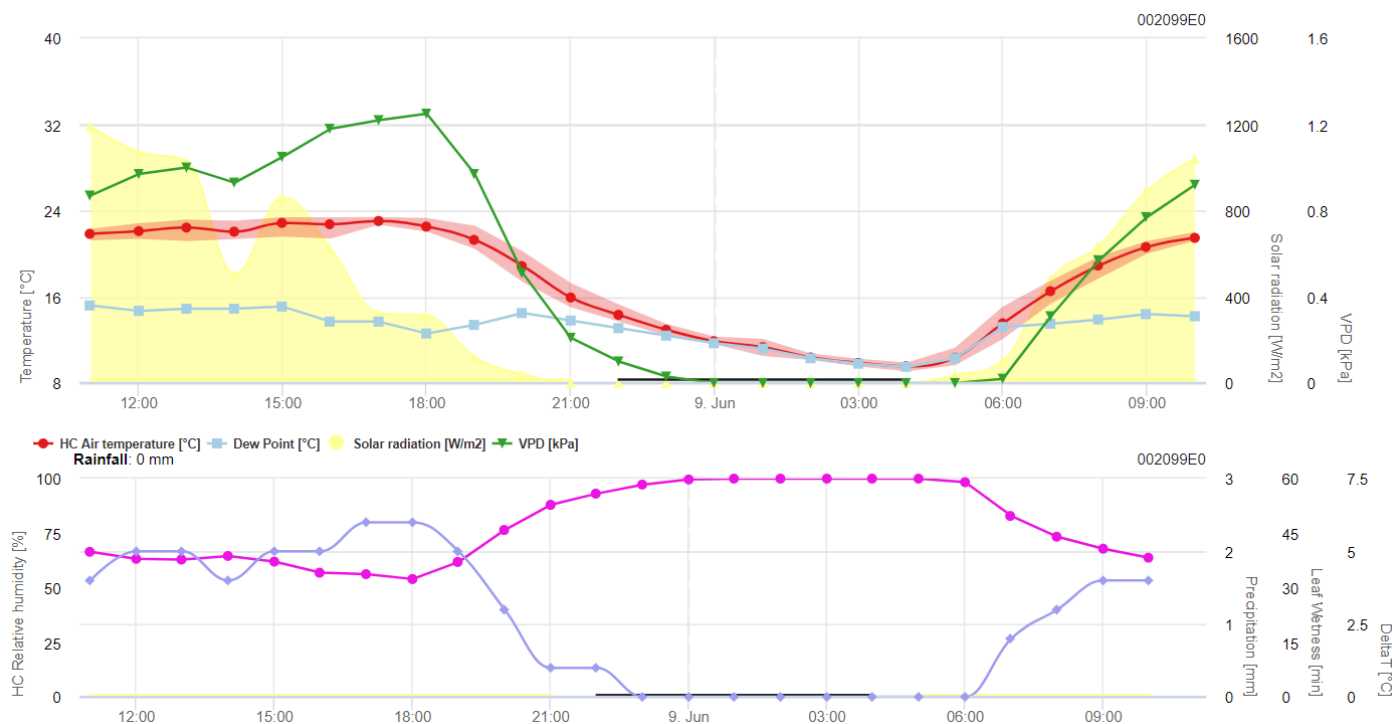
AdvanShield is an itaconic copolymer, typically applied with UAN fertiliser and is not known to affect soil bacteria. The aim is a 4% yield increase compared to using standard UAN/AN, up to a 24% reduction in nitrate leaching and a 54% average reduction in nitrous oxide emissions.

All of the area has received the farm standard of 210kg N/ha in 3 applications, with one tramline 15% less (180kgN/ha) and one 30% less (150kgN/ha). In addition, half the plots have received the AdvanShield product and this has been tested in different areas at the three different application timings.



Disease forecasting

With a new disease forecasting module on his weather station, Richard has been looking to see if this can provide an additional tool to use for targeting inputs and spray applications through the season.



Example output from FieldClimate dashboard

Winter wheat establishment

In autumn 2020, Richard carried out a try-out looking at the establishment of winter wheat between two systems. Using two fields, Rookery 30 and Rookery 36, they were established using the systems in the table below.

Rookery 30 is a crop of Saki winter wheat, drilled on 20th October 2020 at 200kg/ha. Rookery 36 is a crop of Gleam winter wheat, drilled on 20th October 2020 at 200kg/ha.

The crops will both be taken to yield and assessed for both yield and cost.

Rookery 30		Rookery 36	
Cat + Grange	£30.19/ha	Fendt 724 + Carrier	£15.14/ha
John Deere + Vaderstad RDA 600	£23.08/ha	Fendt 724 + Tined Direct Drill	£21.22/ha
Total	£53.27/ha		£36.36/ha

Further information

Please visit: <https://ahdb.org.uk/farm-excellence/diss>

Follow Richard on Twitter: @TheRookeryFarm