

# Huggate Monitor Farm

Meeting title: Yield Enhancement Network

Date: 15 January 2020

Speakers: Pete Berry (ADAS) and Richard Hinchcliffe (Rawcliffe Bridge)



## Spring barley management

### Adjusting N rates for expected yield

- Spring barley N rates should be adjusted up or down by 20kg N/ha per t/ha yield increase or decrease in expected yield from 5.5 t/ha (up to 10 t/ha)
- This is consistent with NVZ rules
- Need to be confident of achieving expected yield
- Same relationship found in Irish and Danish data

### Spring barley N timing

- No changes to RB209 due to lack of data

### Before March drilling

- 40kg N/ha in seed bed (3 leaf stage for light soils)
- Remainder at early stem extension (but not before early April)
- If total less than 70 kg N/ha apply all at early stem extension

### March and later drilling

- All N in seed bed
- More than 70kg N/ha on light soil: 40 kg N/ha in seed bed and rest at 3 leaf stage

## Take-home messages

- Review: high ratio of (SNS+fertN:Yield) correlates positively with grain N%
- Review: indication that optimum N timing depends on SNS and risk of lodging, delay N till GS30 where SNS high
- Experiments highlight importance of some seedbed N in a dry spring
- Experiments indicate that standard yield for RB209 yield adjustments need to be more than 5.5 t/ha
- Experiments indicate a reduction of 35 kg N/ha needed to reduce grain N by 0.1% Opt N rate gave 1.6%
- Varieties respond the same to N timing

## Further information

- [Wheat growth guide](#)
- [Barley growth guide](#)

## Strategy for YEN at Huggate Monitor Farm

- Seed number critical for yield
  - Target optimum canopy size at flowering
- High yielders tended to have greater soil and seed Mg and P
- High yielding crops had 11 extra days from flowering to desiccation
- Trends for high yielding crops to establish fewer plants and use more fungicides
- High yield seasons associated with dry December and dry/sunny April

### Take-home messages

- High yields are possible on most farms – yields strongly influenced by ‘farm factor’
- It’s less about what you spend and more about attention to detail
- High yields are associated with :
  - Wheat crops with more ears than average and high biomass
- Husbandry factors associated with high yields include:
  - Following a break crop
  - Narrow row widths
  - Applying slurry
  - Adequate use of N, fungicides and PGRs

### Further information

- [Webinar: Crop yields and how to maximise potential](#)
- [Yield Enhancement Network](#)
- [Farmbench](#)

## Richard Hinchcliffe

- Farming 560ha – all arable, family farm
- 2 distinct soil types, 2 meters above sea level (below high tide)
  - Blacktoft series silty clay loam
  - Foggathorpe series (Mg) clay
- Current cropping: winter wheat, oilseed rape, winter beans, spring barley, linseed
- Does own agronomy, BASIS and facts registered
- Annual rainfall 700mm
- 100% no till, apart from subsoil and mole drain as required
- 2016 Nuffield scholar
  - Weed smart big 6
    1. Rotate crops and pastures
    2. Mix and rotate herbicide modes of action
    3. Increase crop competition
    4. Use the double know
    5. Stop weed set
    6. Implement harvest weed seed control
- Nuffield recommendations
  - Herbicide boxes and labels should have the herbicide resistance committee classification group shown on them to aid herbicide rotation
  - The agrochemical industry should help educate farmers and agronomists about the HRAC classification system

- Industry recommendations for herbicide resistance needs to come from one voice similar to the weed smart initiative in Australia, with funding from growers, AHDB levy and the ag-chem. industry

### Take-home messages

- Herbicide resistance isn't going to go away, but with good planning and careful though it's manageable!

### Further information

- [Richard Hinchcliffe: Nuffield Scholar](#)

## AHDB resources

- Understand your business costs with AHDB's benchmarking tool Farmbench at [ahdb.org.uk/farmbench](https://ahdb.org.uk/farmbench)
- Monitoring tools are available at [ahdb.org.uk/tools](https://ahdb.org.uk/tools)
- Sign up to market information and research newsletters at [ahdb.org.uk/keeping-in-touch](https://ahdb.org.uk/keeping-in-touch)
- Find out what's going on at other Monitor Farms and Strategic Farms at [ahdb.org.uk/farm-excellence](https://ahdb.org.uk/farm-excellence)
- All AHDB events can be found at [ahdb.org.uk/events](https://ahdb.org.uk/events)
- For guidance on how Brexit will impact your business, see [ahdb.org.uk/brexit](https://ahdb.org.uk/brexit)

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