Basingstoke Monitor Farm meeting report

Meeting 6: Summer meeting: past, present & planning for the future

Date: 6 June 2018

Speakers: George Hosier (Wexcombe Manor Farm), David Miller (Wheatsheaf Farming)

Location: Whitchurch Longmeadow Sports Club, Whitchurch, RG28 7RB

For more information, visit: cereals.ahdb.org.uk/basingstoke

Meeting summary – key messages

- Define your objectives for the short / medium / long term; don't try and chase all of these at the same time
- Do your homework: observe what other farmers in similar circumstances are doing and information sources (cereals.ahdb.org.uk/covered) to inform and guide decisions
- Have a plan: how to establish and destroy the CC, how you will gauge progress, know your overall cost for CC (include machinery operations), and over what period will this cost be returned (e.g budgeted over a full rotation cycle)
- Fit for Farm: there isn't one scenario that fits everybody; whatever CC species you use needs to fit in with your rotational requirements, soil type, availability of suitable equipment, labour time etc
- Mixtures or straights: mixes are popular and can help provide a range of nutrients and can help increase soil biology: decide what species suit your objectives (costs can be cut by mixing your own) however, you need to consider the management of variable seed size, potential rotational conflicts (brassica's before OSR).; in certain situations, a single species can be a useful option (eg soil erosion)
- Research suggests that not all CC responses will be seen in the following crop or first time use; therefore, some long-term commitment will be required in order to see the benefits
- CC can be utilised within your options for EFA's and Countryside Stewardship agreements and can provide additional returns
- Learning curve: accept you are not going to get everything right straight away as you will be on a learning curve; try a range of approaches so to identify which one suits your situation
- Evaluate, learn and go again

Cover Crops – Are they beneficial? (David Miller / George Hosier)

Potential benefits: (highlighted by David and George)

- Can help in reducing general variable and fixed costs eg
  - 10% for fertiliser, red diesel >30%
- Helps reduce CO_2 emissions ~60%
- Adds organic matter

- Improve yields by enhancing soil health
- Reduces the need for herbicides and other pesticides (nematicide)
- Prevent soil erosion
- Can help suppress black-grass and other grass weeds returning to the seed bank as part of an IPM strategy.
- Some cover crops (e.g Clovers, Oats, Rye) can have allopathic effects, inhibiting the germination of other weeds.
- CC can encourage beneficial insects through habitat creation
- Conserve soil moisture
- Protect water quality
- CC can be used as a “trap crop” to catch / divert pests from main cash crop
- Can help to increase yield (>0.25t/ha) following legume /brassica CC
- Offers possibilities as forage for grazing / winter forage

More diversity = more biomass, and more benefit to soil biology

Species	N (nitrogen)	P (phosphate)	K (potash)
Balsam clover		✓✓✓	
Buckwheat	✓	✓✓✓	✓
Fodder radish	✓✓✓	✓✓	✓✓
Oats (catch crop)			
Phacelia (catch crop)	✓	✓	✓✓✓
Triticale			
Sunflower (fallow crop)	✓	✓	✓
Vetch (catch crop)		✓✓✓	

Biostimulants

Andrew Linscott (Alltech) spoke of how biostimulants were previously reviewed in a report by the AHDB, where 11 types of biostimulants had been identified.

We have more focus on soil health, agronomy practices and recent decisions by the EU have meant that the traditional “tool box” for agronomy is shrinking.

Biostimulants are currently used commercially on over 60 different crops in 29 countries and increasingly forming part of the solution for improved crop production and margins for farmers and growers.

Biostimulants used have four different functional groups:
- Soil biostimulants
- Plant performance biostimulants
- Nutritional biostimulants
- Protectant biostimulants

These multiple functionalities allow them to be useful to the plant in various biotic and abiotic stress causing situations.

Practical use of biostimulants

At drilling our primary goal is to make sure that we have good germination and strong early plant growth with vigorous rooting. Some practical examples where biostimulants.

Late drilled wheat's and oilseeds where abiotic stresses such as cold weather are heavily present.

Soil Set Aid promotes a soil environment helping germination and strong root growth. Any stresses later in the season, then have less of an effect on final yield.

Pro Crop ISR stimulates the plants natural defence system to respond for a period as if there was a disease present. The plant is then better able to resist a disease impact.

These products are registered for use on organic systems and can prove useful in systems where farmers are looking to reduce their reliance on conventional pesticide chemistry. In many crops the most effective agronomy programme includes biostimulants and conventional pesticides

Q&A from the meeting

Can biostimulants be used to help less disease resistant varieties?
Pro-Crop ISR stimulates the plants own defence mechanism itself gives plants. It is not disease specific. For the varieties most susceptible to disease a biostimulants plus fungicide programme may be the most effective.

Does Soil Set Aid help with root development in oilseed rape?
Yes, we see improved root development and structure in most plants where Soil Set Aid is used at planting/drilling. Soya was also mentioned as a crop has proven benefits of a biostimulant application.

There is a crowded market for biostimulants. When European parliaments will introduce standards to remove of the unreliable products on the market? It is unknown exactly when this will happen, but predictions are from 2019–2021.

What is the return on investment in cereals?
It largely depends on your market and which biostimulants are used. 23 Independent trials carried out with specific Biostimulants on cereals (2001 to 2017) showed yield improvements averaging 10.9% with a range of 2-24%. The results varied depending on the programme, location and season. The best margins are possible when the farmer is also able to make reduction of other inputs and this

Find out more – Links to AHDB information sheets or research

[Basic payment scheme: rules for 2018 (including cover crop information)]

[Crop biostimulants]

For more information on cover crops visit cereals.ahdb.org.uk/covered

Next meeting

- 31 October 2018: Reducing costs without compromising yield
- 27 November 2018: Sustainable farming – what is it and can it benefit my business?
- 16 January 2019: Collaboration ventures
- 27 February 2019: Drilling into your fixed costs to sow a profit

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