

Basingstoke Monitor Farm meeting report

Meeting 3: Cover, companion and inter-cropping

Date: 28 November 2017

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

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



Meeting summary – key messages

- Companion cropping and intercropping has the potential to produce up to 30% more crop yield while also allowing for a reduction of off-farm inputs
- To achieve success you need good planning: it is a management and knowledge-intensive approach to farming
- Every farm, soil type and climate will lend itself to different cropping combinations. There is no one blueprint that will suit everyone.

Cover crops:

- Know what your objectives are and select species accordingly, e.g. grazing, soil health, soil structure, nutrient capture and retention, ecological focus area (EFA) compliance and biodiversity etc
- Plant early and into a moist seedbed or post rain in order to achieve successful germination and establishment
- Beware of using cover crops from related families to your next cash crop
- Ensure soil contact is made
- Brassicas can provide allelopathic protection which may assist in weed and pest control but this will depend on how they are managed
- If grazing brassicas, be aware that they can cause iodine and copper deficiency which in turn can affect fertility, especially in breeding ewes

Benefits of cover crops

Cover crops can affect many agronomic factors simultaneously, including:

- Suppress weeds
- Suppress nematodes
- Suppress diseases
- Reduce erosion
- Increase water infiltration
- Decrease nutrient loss
- Attract beneficial insects
- Add organic matter
- Feed livestock
- Enhance mycorrhizal numbers
- Add nitrogen (if a legume is planted)
- Alleviate subsoil compaction

Cover crop try-out

Current situation

50 ha of stubble turnips are grown every year as a break crop and to fatten lambs. This field has historically caused Hugh concerns due to decrease in cash crop yields. Soil analysis has since been unable to explain this.

Objectives of the try-out

- Improve soil structure and build the nutrient content, particularly on thin chalk soils
- Fattening forage for the farm's lambs
- Suppress weeds, especially black-grass

The try-out

- Six mixes were sown on 26 August 2017 using a Horsch Sprinter drill
- Then they were rolled and 30kg of nitrogen was applied



Growth of the different mixes on 28 October 2017

	Name on label	Recipe	Bag weight (kg)	Amount for 0.5ha	Approx. cost (£/ha) *	
1	Simple EFA	80% oat 20% mustard	15	10kg	14	Cheap Modest benefit mix
2	Complex EFA	56% rye – Humbolt 20% radish – Barracuda 4% phacelia 20% vetch	20	10kg	40	Deep roots and soil vitality
3	Short catch non-EFA	15% black oat 20% linseed 20% buckwheat 10% mustard 15% radish – Compass 20% UK peas	15	10kg	32	Quick mix – after rape, before wheat
4	Long cover	35% rye – Humbolt 5% phacelia 25% vetch 15% Jupiter turnip rape	20	15kg	45	Long mix – right through in front of maize etc.
5	Grazing	70% UK winter oat 15% Jupiter rape 15% Barkant stubble turnips	15	12kg	25	Grazing a key objective Good plan to switch this into black oats/vetch
6	Multi-mix	20% winter oats 20% rye – Humbolt	15	12kg	35	Maximum enhancement of soil health with good

*based on about 40ha

		15% radish – Siletta Nova 5% phacelia 10% buckwheat 5% crimson clover 5% berseem clover 10% linseed 10% sunflowers				rooting
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As all the cover crops have established well, it is hoped that this will aid the following cash crop of spring barley. This will be followed closely, recording tiller establishment, nutrition, chemical and yield, and then compared against the part of the other part of the field which was used as the ‘control’.

Find out more

- [Opportunities for cover crops in conventional arable rotations](#)
- [RR90: A review of the benefits, optimal crop management practices and knowledge gaps associated with different cover crop species](#)
- [Cover crops, drainage and targeted cultivation for improved soil structure](#)
- [Judging a crop by its cover](#)
- [The potential for companion cropping and intercropping on UK arable farms \(Andy Howard, Nuffield Scholar\)](#)



For more information on cover crops and case studies, visit cereals.ahdb.org.uk/covered

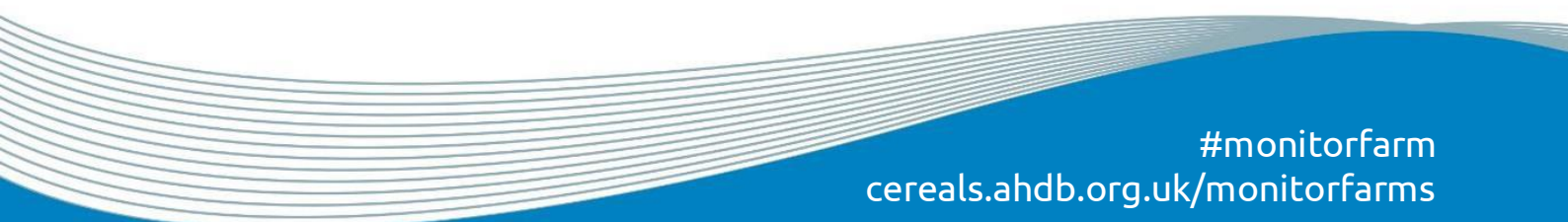
Next meeting

Date: 6 February 2018
Topic: Soils and machinery investment ([register to attend](#))
Time: 10.00–13.30
Location: Whitchurch Longmeadow Sports Club, Whitchurch RG28 7RB

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To find out more about Farmbench, AHDB’s benchmarking tool, contact: Emma Nankervis
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MONITOR FARM PROGRAMME



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