Cover crops for nutrient capture and improved soil structure

Farmer Experience 5
Summer 2016

AHDB
CEREALS & OILSEEDS

Tom Bradshaw

Fletchers Farm

Location:
Fordham, Essex

Soil type:
70% chalky boulder clay, remainder very variable

Rotation:
Very dependent on grass weed pressure, making flexibility key. Key crops include OSR, SWheat, WWheat, SBarley, WBarley, peas, beans and linseed

> ***"We are hopeful that cover crops will make the land more workable in the spring, resulting in more reliable spring crop performance."***

Trial different mixes to see what works best for your system.

Why did you start including cover crops in the rotation?

Cover crops are still in the trial stage but we are trying to create a more sustainable farming system where we reduce the amount of nutrients being leached over winter and maximise the amount of sunlight used.

The whole system should also be suited to reducing the amount of cultivation and increasing the percentage of the farm that can be direct-drilled.

What are you doing and how are you measuring the changes?

At this stage, we are trialling several different cover crop mixtures (see back page) across half fields so we can produce some relative costings and get the resultant yield data. This will inform future decisions about where to target the use of cover crops in the future and which mixtures are giving the best results.

As part of the AHDB Cereals & Oilseeds Monitor Farm programme, we established two fields with ten different mixtures in them to assess growth habits and nutrient capture.

At the moment, the main method of comparing any soil structural change is just a visual assessment and using earthworm numbers as a key indicator species of soil health.

The biggest unknown we have is what the correct timing of destruction of the cover crop should be. Where we know there may be black-grass in the cover crop, we are trying to spray it off two months before drilling so that another application of glyphosate can be made just before drilling, if required. I think this approach is also likely to result in a lower level of nitrogen lock-up when the cover crop is breaking down than if we leave destruction to a day or two before drilling.

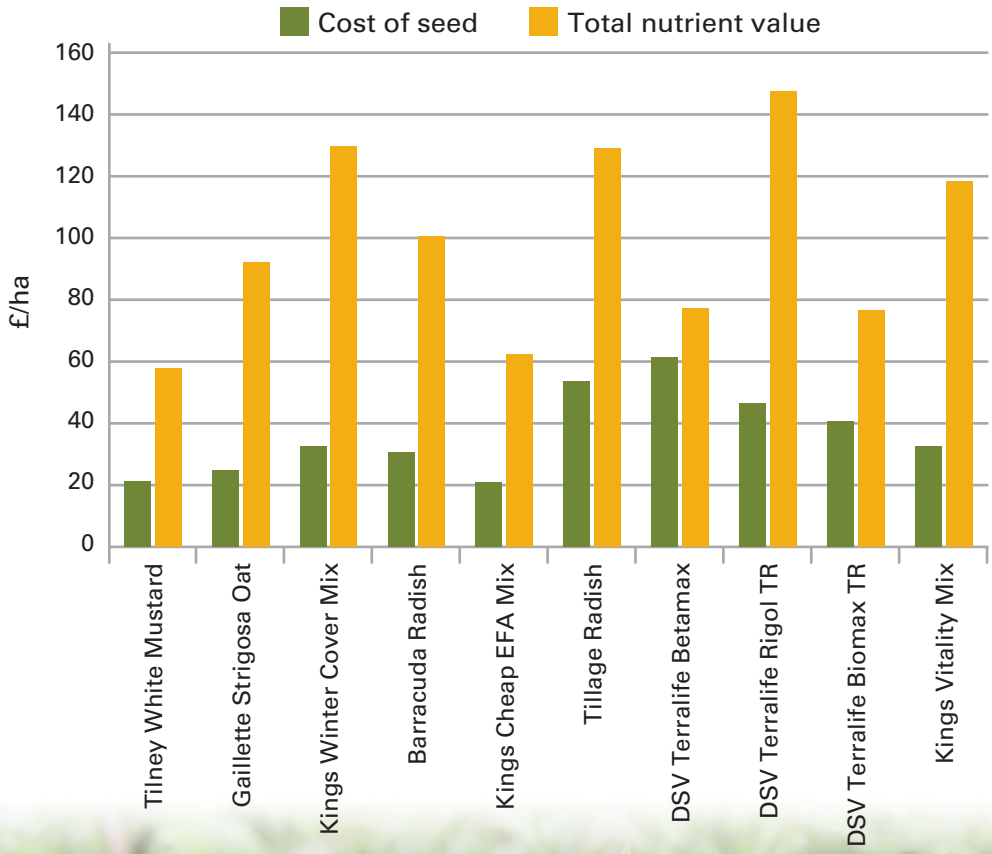
What has worked well?

Trials work to date suggests a reduction in the amount of nitrogen leached over winter where cover crops are being grown.

What hasn't worked?

We are convinced by the soil structural differences that we are seeing but these are yet to correlate through to increased yields and net margins, which is why we are still trying to work out where cover crops can be best targeted.

Soil structural differences between a control part of the field with no cover crops (left) and a cover crop mix of black oats and vetch (right).



Further information

Tom Bradshaw hosts the Colchester Monitor Farm. For more information, email the local AHDB Manager: **tim.isaac@ahdb.org.uk** or visit **cereals.ahdb.org.uk/monitorfarms**