

Northampton Monitor Farm

Meeting title: What can we learn from organics and CTF?

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Speakers: John Pawsey, Shimpling Park Farm



Lessons from organics

- A huge range of crops is grown at Shimpling Park Farm, some doing certain things for weed control, but tending to grow crops that bring a good income
- Rotation is by field
- The current rotation is simple but the system is complex in order to deal with problems (weeds)
- It includes a two-year grass/clover ley which has many different rooting structures and also helps to build soil fertility
- Red clover structures the soil really well and adds large amounts of nitrogen
- The ley provides a truly regenerative phase in the rotation – during the two/three years huge numbers of deep burrowing worms build up
- Some crops are not grown because of the difficulty of dealing with some pests, e.g. gout fly in spring wheat, and it is unlikely oilseed rape could be grown if it were in the rotation
- Other strategies are used to aid disease control
- Winter oats are inter-row sown between winter beans to try to disrupt chocolate spot – this produces good yields but you are left with the problem of taking the beans out after harvest
- Strategies for weed control include smothering and inter-row hoeing
- Another crop is planted when hoeing to smother the weeds because hoeing makes weed seeds germinate
- Hoeing with the same machine you drill with is very important
- No one weed dominates because of all the steps taken but there is mechanical weeding to fall back on
- Rogueing is the preferred option
- Good drainage is essential – everything is checked
- Heritage wheat is good because it is tall and smothers everything but tends to lodge
- Crop architecture is very important
- Sheep reduce black-grass heads by 20% which is a very important contribution to the black-grass control strategy
- Sheep also fit in with extending the grass ley
- New Zealand Romneys were chosen because, at the time, they had the biggest data set of breeding values
 - the criteria were the sheep should be good mothers, and have good feet and worm resistance (not large daily weight gain)
 - the only downside of NZ Romneys is they need shearing twice a year
- other weed control strategies under investigation include keeping the soil covered
- some of the pioneers trying this are using crimper rollers to destroy cover crops
- It is very important to do bird surveys – in order to demonstrate you are providing “Public Goods” etc. it is likely you will need to know the base point for biodiversity on your farm
- Other surveys used at Shimpling include butterfly, botanical, dragonfly, ponds, bees and wasps

Take-home messages

- The whole rotation is driven by the need to grow high income crops whilst at the same time controlling weeds, pests and diseases
- The two/three year grass/clover ley provides a regenerative phase in the rotation, building worm numbers, soil nutrients and soil structure
- The inter-row hoe is very important, playing a huge role in weed control and giving many opportunities through the ability to grow other crops
- Sheep are an important part of the strategy to control black-grass
- It is likely to become important to do wildlife surveys on your farm so you have a record of its biodiversity which eventually you might be required to demonstrate

Further information

- [Crop biostimulants](#)
- [Livestock and the arable rotation](#)
- [Opportunities for cover crops in conventional arable rotations](#)
- [Maxi-cover crop research project](#)

Controlled traffic farming

- Data on loss of yields by trafficking are significant
- In the organic system the effects were large due to the large number of passes
- The RTK aerial already in place allowed avoidance of overlaps but also allows controlled traffic farming
- It is particularly important where you are growing crops which rely on good soil structure and if you are growing spring crops
- Prior to CTF, crops that were grown widely, such as barley and oats, had to be reduced substantially
- Unused equipment was sold which generated cash for making the change
- The CTF is done on 8.8 m, with 4.4 m for the heaviest machinery
- This has restructured the soils – the penetrometer goes in easily now
- One of the difficulties is how to match up the grain trailer wheelings with the combine wheelings – in the traffic lanes different wheel widths are flattening several metres of soil
- A tool bar is now used behind the tractor for soil remediation – it takes out everything
- Tramlines are drilled to create shade (weed control)
- It is important to get tyre pressures sorted out
- CTF is probably not ideal if you are in a no-till system but it is if you are conventional
- Managed CTF might be the best approach in some years – “We must never be slaves to it.”

Take-home messages

- Trafficking leads to reduced yields and spring crops are especially affected
- The change to CTF has brought a huge improvement in soil structure

AHDB resources

- Understand your business costs with AHDB's benchmarking tool Farmbench at ahdb.org.uk/farmbench
- Monitoring tools are available at ahdb.org.uk/tools

- Sign up to market information and research newsletters at 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
- All AHDB events can be found at ahdb.org.uk/events
- For guidance on how Brexit will impact your business, see ahdb.org.uk/brexit

Contact details

For more information contact: Judith Stafford

E: judith.stafford@ahdb.org.uk

M: 07891 556623

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