

Saltburn Monitor Farm meeting report

Meeting 10: Summer meeting

Speaker: Steve Townswend (Soil First Farming, Monitor Farm steering group member)

Date: 6 June 2019

Location: Barns Farm, Skelton

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



Review of the year

- First wheats generally looking ok and continuous wheats are quite moderate in comparison
- Mustard drilled in bare patches of the winter beans – beans looking well
- Concerns drilling with the Horch as doesn't follow the contours of the field – increased seed rates and drilling deeper saw a more even establishment
- Some brome emerging – questioned latest safe date to apply graminicide
- Cropping to continue as planned – winter beans, winter wheat, spring barley, cover cropping

Soil management

Steve Townsend

Aims at the outset

- Improve the soil structure and nutrient content of the block of land previously in continuous wheat
- Deal with a serious brome problem
- Do this by moving to direct drilling and changing the rotation

Simba Horch tine drill discussion

- Working on 10' row spaces and direct drilling
- Do tines create tilth? Can discs create compaction from angles worked at? But no drills work in the wet or need to be expensive
- Tines do seem to handle straw whereas discs can tend to push it to 'hair pin' into the ground
- Advantages of wide rows were discussed – reduced soil movement, preventing weed establishment.
- Has the increasing size of machinery and traffic created resistant black-grass?
- Ploughing is a short term fix as well as stale seed beds. Rotation and machinery is primary, as well as being cheaper and quicker than the conventional methods
- Imperative to have a good understanding of bad practise i.e. drilling too late after too much rain. Concluded direct drilling gives you a wider window to drill earlier

- Beans also giving assistance in good brome control and a break crop in the rotation – discussed if winter linseed would be a possibility or not

Cultivations and soil organic matter

- Cautious of getting silty soils too fine as can then easily slump
- High magnesium soils give a negative effect by destructuring the soil. By using calcium it can counter balance this. It's important to mimic nature in soil management
- Slugs damage is minimal this year, probably due to earlier drilling and good plant establishment
- Drill timing is important with no till systems. September and April are suggested as the key drilling times. The no till system can maintain water in the soil and aid in spring crops getting away
- Frequent deep cultivation leads to loss of carbon from the soil through oxidation
- It is good farming practice to build organic matter in soils – this builds carbon = organic matter
- Photosynthesis in the plant is vital – 60% of the sugar made in the plant goes back into the soil to feed the biology. This highlights the importance of variety resistance to disease
- The fields min tilled have a shallow pass to create tilth; then drill at a higher seed rate (375seed/m²) in mid-September
- The root left in the soil from min till will also aid in the organic matter within the soil
- Mustard is used in the cover crop for its root architecture and numbers per m² to aid structure
- The beans pulled are pushing nodules out from the roots – positive sign of a happy plant
- Discussed that a cation exchange test is a better option for showing a more accurate pH reading. A pH of 6.5 is still ideal – pH measures the potential hydrogen not calcium
- Recommended potash scores be twice the mag scores as in mg/l on a conventional soil test, of which spring application is best for potash with the largest up take in early July

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- soil research <https://cereals.ahdb.org.uk/research/soil-research.aspx>
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