

## ABOUT THIS MONITOR FARM

Farm name	Mill of Inverarity, Inverarity, Forfar, Angus, DD8 2JN
Meeting Number	12 – <b>Soil Health</b>
Meeting Date	Friday 24 <sup>th</sup> May
Next Meeting	Thursday 27 <sup>th</sup> June
Report date	4 <sup>th</sup> June 2019

The Mill of Inverarity Farm is run by The Stodarts and in total the business farms 358 hectares. The farm is a traditional mixed unit growing 130 hectares of cereals, with 100 spring calving suckler cows and an increasing breeding flock of 860 ewes. The business also annually buys in store cattle and lambs for finishing and has an operational laying hen enterprise on farm of 4,500 hens.

This monitor farm meeting investigated soil health with industry and research speakers focusing on minimum tillage, sub-soiler set up, machinery costing and rooting structure for maximum yields. The morning session was a presentation by Clive Bailye, TWB Farms and soil farmer of the year. Clive focused on his farming system using minimum tillage and zero tillage techniques. The afternoon session was then divided into 3 with Andy Newbold demonstrating how to find compaction issues and how to set up a sub-soiler for maximum effect. Christina Clark, ADAS, discussed crop rooting of both oilseed rape and cereals, how this relates to nutrient uptake and findings from the ongoing YEN project which 3 members of the management group are participating in. Harry Henderson, AHDB, presented key findings from the Monitor Farm machinery review, showing the differences in cutter bar length or spray boom per hectare of crop.

**Management Group:** Graeme Mather, Fiona Lawson, Ian Pattullo, Neil McGowan, Stuart Lawrie, Duncan Wilson, Graeme Neill, John Kidd, Robin Norrie, Sam Ruddell.

## KEY MESSAGES

- Clive Bailye – although his yields are not the highest in the country his costs are reduced as a result of different cultivation techniques, making his net margins very high.
- Andy Newbold – don't subsoil just because you think you need to! Investigate where the compaction is in the field and how deep it is. If you do need to subsoil, make sure the machine is set up correctly for maximum effect!
- Christine Clark – Rooting depth and density has huge implications for yield due to nutrient and water availability. Ensure the crop has ideal soil conditions to allow this to be maximised.
- Harry Henderson – There is no one solution when it comes to reducing machinery cost. Conventional or minimum tillage, costs depend on farm size, depreciation, utilisation and a number of other factors.

## AREAS OF DISCUSSION

- A key area of discussion throughout the day was whether or not a minimum tillage system could be effectively implemented this far north. This discussion was bolstered by the presence of a John Deere 750A drill from a local grower who has converted to low disturbance tillage and direct drilling. Not only was the season length and reliance on chemicals discussed but the presence of potatoes in the rotation in Angus was also a keen topic of interest, as potatoes provide significant income for many growers who attended the meeting. The integration of farming systems was also discussed in relation to different systems as Clive has recently introduced lambs onto his farm which he uses to graze cover crops and stubbles. The lambs are moved from Wales to his farm in Staffordshire and allow him to utilise his staff at less busy times of year. The use of video messaging between TWB Farms and the sheep owners in Wales was also discussed and was highlighted as one way technology can aid learning, knowledge transfer and facilitate collaboration. A keen area of interest was the importance of cover crops in minimum tillage and the development of plant species which are able to grow at lower temperatures found in Angus, so that a high quantity of biomass can still be produced between cash crops.
- Sub-soiler leg design was also discussed with Andy Newbold. A forward facing leg can increase compaction by forcing soil down and against the toe of the sub-soiler. Additionally, growers were interested in the wing design, and the length of foot. Differences in demonstration legs and the implement used were discussed to highlight the different fracture patterns and lift provided. This led to discussions on sub-soiler depth which was highlighted in two soil pits dug before the event. Given the mixed farming system at the Mill of Inverarity, the conversation moved onto grassland compaction and compaction after growing root crops. Andy also highlighted the compaction that can be caused by a sub-soiler at a depth which cannot be corrected. Getting the spade out and digging is the only way to really know if you have compaction and where it is.

## FARMERS UPDATE

- A key update from Rory was the development of the rotational grazing system which will be discussed at the next meeting.
- The egg round has been expanded by Alison and is proving a success, as is the egg box at the farm steading.
- The new, clean herd of cattle have performed well, however poor prices have raised questions about the finishing cattle viability.
- The Shearwell reader has provided very useful for recording at lambing and weight gains for store lambs bought in.
- Using a contractor for sowing the barley has worked well, with all crops in the ground by the last week of March.
- The fodder beet supplied much more feed than originally thought and as a result some neeps were lifted and sold. Ewe transition will be improved in the coming season to reduce mortality and illness through acidosis.
- Following the identification of high chemical costs for the arable crops, two fields of wheat have been given to an independent agronomist to try. These results will be compared after harvest.

## ACTIONS FROM LAST MEETING

- Rory will continue to measure grass growth with the plate meter.
- There will be a business group meeting on the 13<sup>th</sup> June investigating the costs of direct drilling and conventional establishment, in regards to spring barley.

## FACILITATOR CONTACT DETAILS

David Ross  
SAC Consulting  
Arduthie Business Centre,  
Kirkton Road,  
Stonehaven,  
AB39 2NQ  
Tel: 01569 762305  
Email: [fbsstonehaven@sac.co.uk](mailto:fbsstonehaven@sac.co.uk)

Zach Reilly  
SAC Consulting  
77 North Street,  
Forfar,  
DD8 3BL  
Tel: 01307 464033  
Email: [fbsforfar@sac.co.uk](mailto:fbsforfar@sac.co.uk)

