

LOTHIANS MONITOR FARM

Farm name	Prestonhall & Saughland, Pathhead, Midlothian
Meeting Number	15 – “Arable Focus”
Meeting Date	Tuesday 23 rd May 2019
Next Meeting	Friday 19 th July 2019

Prestonhall Farms and Saughland Farm independently run arable and livestock enterprises at Pathhead Midlothian. Pete Eccles is farm manager at Saughland and Bill Gray at Prestonhall. The businesses work collaboratively on arable operations. Livestock at Saughland; 65 AAX suckler cows running with Lim & Hereford bull plus 2,300 Chev, Lley, Aberfield, Mule ewes with Tex, NZsuff, Abermax lambs at foot on rotational grazing system. Arable at Prestonhall; Combinable Crops, WW 175ha, WB 80ha, SB 160ha, WOSR 65ha, WO 20ha, Grass 75ha.

The management group is chaired by Willie Thomson and includes Jill Bathgate, Russell Calder, Andrew Clark, Rob Forrest, James Hamilton, Ross King, Graham Lofthouse, James Logan and David Paul

Willie Thomson welcomed 60 Arable farmers to the Monitor Farm Spring meeting at Prestonhall. Willie explained that, the management group had decided to split the May meetings and run separate Livestock and Arable focussed meetings to allow more time to concentrate on the individual sectors. Willie welcomed our 4 speakers who have come up from the South to share their experiences with the group.

KEY MESSAGES

Clive Bailye- (@twbfarms)

- We Farm differently! Why? I have a desire for sustainability of my business both Financially and Environmentally
- Maximise Output/margin from primary resources (soil) and the season
- “I am a livestock farmer but my livestock are below the ground”
- Thriving Healthy Plants and Health Soils have natural inbuilt immunity to disease pressures
- Always want something growing – would you turn off a solar panel?
- Maximise diversity – Minimise Disturbance
- Zero-til – Much reduced Capex/ha 50% less capital employed
- Zero-til = 1ph/ha v Old Mintil High HP System 1.5hp/ha
- Labour cost reduced from £150/ha to £100/ha

Christina Clarke -

- Yen analysis 2013-18 – High Ear numbers – High Yields
- WW Growth Guide for 11t/ha – 460 ears/m²
- WW 22mm water needed for 1t of biomass
- WW 11t/ha grain yield is supported by 19t/ha above ground biomass requiring 380mm water
- OSR 2°C increased temp in October = yield increase 0.17t/ha



Harry Henderson -

- Tractors Sold 1970 27,000 total Horse Power 2m (Av 62.8hp)
- Tractors Sold 2018 12,000 Total Horse Power 2m (Av 166.6hp)
- AHDB Machinery Review Depreciation highest cost @ 33%
- 190-250hp tractor operating costs £15/ha to £24/ha
- Combining – cheapest cost £41/ha
- Average area cut by individual combine 545ha
- Rosemains has well-contained machinery and labour costs. A small range of machines are used efficiently.



Andy Newbold-

- Investigative work is critical – Dig soil pits
- Establish if you need to Subsoil?
- Subsoiler setup and having the correct machine is critical

AREAS OF DISCUSSION

Clive Bailye- (@twbfarms)

Clive gave a fascinating presentation on his Zero-til farming system and how he is actually a livestock farmer but his livestock are under the ground.

Clive talked about the importance of soil health, carbon, cover crops and companion crops on his farm and took the group on a journey demonstrating where he made savings on this system. He mentioned the radical fixed cost structure change where zero-til had reduced to 1hp/ha compared to the old mintil system at 1.5hp/ha. Labour had also reduced from £150/ha to £100/ha.

Clives presentation covered a huge amount of detail which can not be covered in this report.



My Farming principles

- Always want something growing – would you ever turn off a solar panel ?
- No bare soil – reduce water loss
- Maximize diversity – a varied diet is a healthy diet
- Minimize disturbance, allow biology to thrive and build strong networks
- Feed soil biology from fungi – understand you are already a livestock farmer !
- Improve water infiltration with [#rootsnotiron](#)

OSR World record vs TWB Farms

OSR @ £300/t	WR Farm Best 6.7t/ha	WR Farm Av 5.4t/ha		TWB Low input Best 5.2t/ha	TWB Low Input Av 4.1t/ha
Crop Output	£2010	£1610		£1557	£1230
Variable Costs	£700	£600		£287	£287
Gross Margin	£1310	£1020		£1270	£943
Fixed costs before rent and finance	£400	£400		£200	£200
Profit before rent and finance	£910	£620		£1070 (+17%)	£743 (19.8%)
Rent and finance	£500	£500		£500	£500
Nett Profit	£420	£120		£570	£243

Christina Clarke (Adas - @CClarke_91) - "Crop establishment and rooting for yield enhancement"

Christine Clarke from ADAS discussed the Yield Enhancement Network results and presented some of the key messages/data which have come through in the results since 2013. Christina also discussed some of her research findings and how important crop establishment and rooting is to yield enhancement.

Christina discussed cereals and the importance of knowing your soil water holding capacity to understand rooting depth requirements. Christina also discussed the importance of ear numbers per m² to be able to achieve 11t/ha WW crops. Oilseed Rape establishment was also discussed and some of the methods of improving rooting.

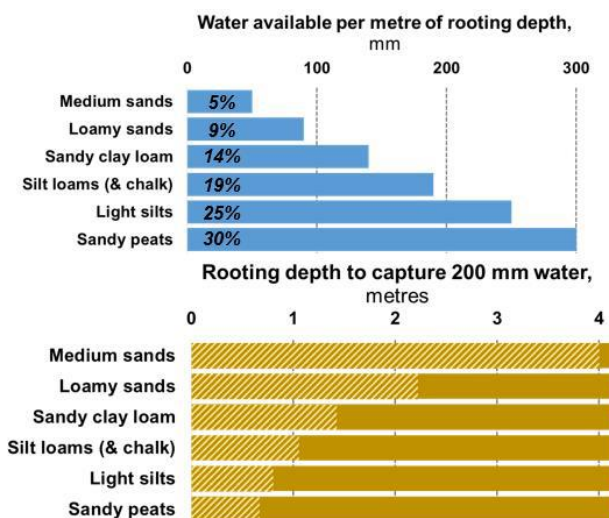
Christina's handout can be found on the Monitor farm Hub

Harry Henderson (AHDB) Machinery Costs

Harry Henderson from AHDB discussed the recent countrywide Monitor Farm machinery review and presented the key findings. There were some very interesting statistics on various bits of machinery and the operating costs across individual businesses.

Harry also discussed the machinery review at Prestonhall and the results suggested that the busienss had a small range of well maintained machinery. Bill pointed out that there had been investment in machinery since the review was under taken and the decisions had been discussed at the MF meetings.

- Rosemains has well-contained machinery and labour costs. A small range of machines are used efficiently.
- A comparison of combining costs amongst the Scottish farms will be more indicative of performance than across the whole of the UK.
- Fuel consumption is high compared to the group and reflects the greater use of ploughing for crop establishment. It may be possible to make more use of min-till methods.
- Machinery repair costs are low and machines are kept for relatively long periods. Staff should be commended on good care and maintenance of farm kit.
- The drill covers a relatively large area per metre width of drill.
- Replacement with a wider model could save time in future.



Average operation costs across the Monitor Farm network.



Description	Min	Lowest 25%	25-50%	Mean	50-75%	Highest 25%
Drilling (average) (£/ha)	£16	£21	£28	£32	£40	£63
Ploughing (£/ha)	£40	£46	£49	£57	£57	£97
Pressing (£/ha)	£13	£15	£18	£20	£22	£33
Cultivating (disc/tine/pack) (£/ha)	£16	£24	£28	£29	£29	£49
Subsoiling (£/ha)	£27	£31	£39	£41	£49	£60
Rolling (£/ha)	£4	£7	£8	£9	£11	£21
Spraying (£/ha)	£3	£5	£6	£6	£7	£11
Fertilising (solid) (£/ha)	£2	£3	£4	£5	£5	£11
Combining (£/ha)	£41	£56	£65	£66	£78	£97
Carting (£/ha)	£13	£22	£27	£31	£38	£66

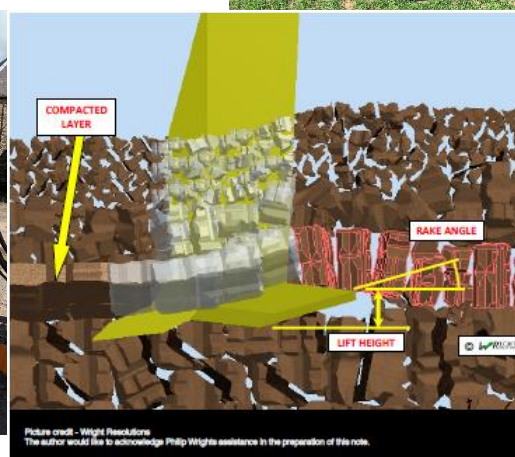
Andy Newbold – Farm-smart “subsoiling – mechanical soil restructuring”

Andy Newbold from Farm-smart discussed and demonstrated the importance of making the correct subsoiling and soil restructuring decisions. Andy showed the individual groups how to best assess the soil structure by digging holes and investigating what is below the ground. He pointed out that subsoiling is effectively a last resort as it is another cost and the conditions have to be right for it to work. Subsoiling in the wrong conditions can do more damage than good and takes years to remediate.



Andy covered all of the following points listed below.

1. Do you need to Subsoil
2. When should you subsoil?
3. But My Soils self-structure
4. Where Should I Subsoil?
5. Pre-cultivation
6. Machine Set-up
7. Leg Spacing
8. Wind Angles
9. Depth of Operation
10. Speed of Operation
11. Check Effectiveness after loosening
12. Tyre Pressure
13. Weights



FARMERS UPDATE

Bill gave an update on the progress since the last monitor farm meeting and then talked the group through the grain store design and progress to date.

FACTS & FIGURES DISCUSSED

All facts and figures are on the Monitor Farm Hub

OPPORTUNITIES/CHALLENGES

Agri-environment Scheme implementation and future menu LMO type menu schemes

ACTIONS

Next Meeting : 19th July 2019

FACILITATOR CONTACT DETAILS

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