

**Peter Cook  
P & L Cook and Partners**



## **Arable Monitor Farm (Angus)**

James & Hugh Black  
Backboath Farm  
Carmyllie  
By Arbroath  
DD8 2SS  
Tel 01241 860213

Report on Meeting held 16th July 2008

**CROPPING AND GROSS MARGINS 2009**

Facilitators: Peter Cook Tel 01467-642802 [cooknewton@btopenworld.com](mailto:cooknewton@btopenworld.com)  
Jim Booth Tel 01651-843607 [jim.booth@saos.co.uk](mailto:jim.booth@saos.co.uk)



## **TOP TIPS FROM MEETING**

1. At the current N fertiliser price (Nitram £370/t) relative to wheat price (£145/t) growers should consider reducing total N applications by 30-40Kg/ha. *See table in Appendix 1.* The crucial factor is knowing how much N is contributed from soils. Varies with previous cropping, reserves, soil type, temp and O.M.
2. Wheat straw will remove an estimated 10kg P and 62kg K per ha. At current prices (TSP @£680/T, MOP £650/t) this is worth £71.57/ha. So a 6t/ha straw crop removes £11.93/t. The Group thought if straw was worth less than £20/t better to chop and incorporate rather than bale. Has added benefit of improving soil structure and O.M.
3. Growers need to estimate next year's crop Gross Margins using their own assumptions. (A simple spreadsheet is available from the facilitators to assist). With the steep increase in fertiliser prices and other inputs, margins are being squeezed. Wheat, OSR and malting barley provide best GMs. While feed barley is marginal.
4. Calculating production costs per tonne is difficult particularly for mixed farms with livestock and other cash crops. However, its worthwhile to get a better understanding of costs, margins and the breakeven price. Those Group members who had done it were shocked how high it was.
5. Some form of Carbon Accounting seems inevitable in the future. Farmers need to prepare by understanding what their current carbon footprint is, where emissions occur, and what sensible actions can be taken to improve efficiency whilst also reducing their carbon footprint.

## **1. INTRODUCTION**

Attendance was down (25 farmers) with apologies (holidays / busy) received from many members. The meeting started at Backboath Farm and later moved to Carmyllie Hall.

### **Programme;**

1. Update from Monitor Farmer
2. Look round crops
3. Lunch
4. Market update and outlook
5. Planning for 2009 Cropping
6. Idiots guide to Carbon Footprints

## **2. Update from Monitor Farm (Hugh Black)**

Hugh gave an update of activities that occurred since the last meeting (26<sup>th</sup> May 08).

- Appointed a new member of staff. Had 18 replies and selected a local guy (23) who has had 6 years experience. – so there is folk keen to work on farms. Now have 2 employees. The aim is free Hugh to do more planning, management jobs. Recognition now running a business!

- Busy time on tattie front. Blight sprays been reduced to every 7-days. Irrigating on continuous basis although did receive a welcome 1 inch of rain last week. Roguing and inspections going well on seed tatties (32 ha). Crops clean so going well, second inspections nearly complete.
- Bought new front mounted haulm pulverisor. Considered a number of alternatives but selected a 3-row Standen, cost £15k.
- New Grimmie potato harvester currently being serviced and upgraded.
- Grain store getting cleaned out and prepared for harvest. A bit of roofing to repair. Dryer getting checked over.
- Purchased all next year's fertiliser – majority home in store. Believe pays to shop around early plus prospects are prices will rise. Now going to straights as opposed to compounds. With the new fertiliser vari-spreader will be operating a 'precision farming' system. Nitram bought at £335/t (current price £370/t). Didn't include sulphur this time with the Nitram – will apply in the sprayer.
- Reviewed combine situation. JD combine now 13 seasons old. Difficult to justify replacing so done deal with neighbour to share combine capacity which will secure some extra capacity.
- Using labour from Machinery Ring to repair tattie boxes (250)

### **3. Agronomy Review (with farm's agronomist, Allen Scobie)**

Field inspections were made to three fields (wheat, sp. barley, OSR) which the Group have been following. See Appendix 2 for field details.

#### **Main points from discussion:**

- At the current N fertiliser prices growers advised to consider Nitrogen to wheat ration. If wheat is £130 and ammonium nitrate is £370, a reduction of total N applications by 30-40kg / ha would be justified next year
- May be sensible to purchase N fertiliser for normal application rates then make decision next spring. If wheat is £180 + then a reduction in N rates would not be justified
- Variety choice crucial decision
- There are advantages for growing blends (yield & disease resistance). Variety choice for blends should consider similar maturity dates and crop heights.
- Optic still the mainstay variety for malting – Maltsters don't like change
- There is a continued move towards desiccation rather than swathing for OSR harvest. Lodged crops are better swathed but upright exposed crops are still better to be swathed
- Suspicion USDA and IGC figures on world crop stocks are influenced by political pressure to keep a lid of food prices EU begins 2008 harvest with no intervention stocks (14 million tonnes in store at commencement of 2007 harvest)

### **4 Market Outlook (Ian Keith)**

Ian Keith, Frontier Agriculture Ltd, provided the Group with a market overview.

See appendix 3 for copy of Ian's presentation.

**Key points:**

- Defra estimate UK cereal crop will be largest since 2000. Wheat up 3MT from last year.
- UK surplus available to export 2.7MT.
- Key will be the quality of the English wheats – if poor – puts pressure on feed wheat markets.
- Two new UK biofuel plants get go ahead – will require 2.2 MT wheat which will soak up most of the surplus in the future. Wheat will then trade nearer import price rather than export price at present.
- Waiting on Scottish census data but believe sp barley area up 11% to 250k ha – could be higher. Estimate up to 70% malting varieties.
- Demand for malting barley in Scotland estimated at 725K tonnes so expect shortfall - all malting barley will be required. In 2008 Scotland will import 100k tonnes of malt.
- World markets: main issue floods in mid-west USA affecting maize crops
- Currently USA use 45MT maize for bioethanol
- Experiencing increased Fund (\$50bn) activity in agricultural commodity markets
- Market bearish but still very volatile – increased risks. How growers market their crop will have major impact on final prices and margins.
- Conclusion? Less downside risk than downside potential. If you can store grain looks like it will pay but need to take position when prices rise.

**5 2009 Gross Margins and cropping plans.**

The meeting was split into groups who then had to estimate the gross margins (GM) for next years crops. This exercise stimulated a lot of discussion.

**Key points:**

- The GM estimated by the groups varied largely due to assumed yield and prices – this stresses the importance of these two variables.
- Wheat, OSR and malting spring barley showed good gross margins. Feed barleys looked marginal.
- The value of straw was discussed. Straw removes an estimated 10kg of P and 62kg of K per ha, worth £71.57 per ha. The Group thought if baled straw was worth less than £20/t better to chop.
- There was a huge variation on what each group thought the production costs per tonne was. It clearly varied considerable between farms. Mixed farms with a range of enterprises found it difficult to allocate fixed costs to combinable crops.
- Growers who had started looking a production costs with CropBench were surprised how high the costs were. Clearly needs more work and investigation.
- Although relative crop GMs influenced cropping decisions other factors included rotations, spreading workloads, dryer & storage limitations.
- Feeling was winter barley less attractive, only grown in some cases as entry for W. OSR.

- The current strong price for OSR have encouraged some growers to expand where possible.
- Generally many folk still undecided what they plant this autumn.

## 6 Calculating Carbon Footprint from farms (Jim Booth)

Jim Booth presented an overview of carbon footprints to the Group. He also estimated the carbon footprint of the Monitor Farm.

### Key points

- Carbon footprinting is at an early stage however, the agriculture industry needs to be involved in the debate how applied.
- Some form of carbon accounting is inevitable in the future.
- Main drivers are government policy (New Scottish Climate Change Bill) and the major Supermarkets (green labelling)
- Estimating a farm's carbon footprint is not easy, complex and a lot of uncertainty.
- Main greenhouse gas (GHG) emissions from farms are from methane and nitrous oxide, carbon dioxide less important.
- There are 2 free websites for farmers to use to estimate their carbon footprint
  - [www.cpaln.org.uk](http://www.cpaln.org.uk)
  - [www.cla.org.uk](http://www.cla.org.uk)
- Backboath's carbon footprint (2007) was **1,143t CO<sub>2</sub>e** (this doesn't include Hugh's trip to South America last winter!)
- Backboath's sources of GHG include: energy 37%, fertiliser 35%, crops 21% land use 7% (loss of 50ac grass to crops) and livestock 0%.
- Backboath's carbon footprint is **2.9t CO<sub>2</sub>e /ha** – higher than typical arable farms but explained by large tattie enterprise. However, still lower than a livestock farm.
- Possible mitigation options include; monitor and target, accurate nutrient balances, precision farming, autosteer, min till?, renewable energy, service and maintain all machinery & grain dryer, electricity efficiency, co-operation, and staff training
- By improving efficiency and saving costs, a farm will also lower its carbon footprint
- **Important to put in perspective, a farm's first priority is to create a sustainable profitable business.**

A Farmers' Guide on reducing GHG emissions from farms was circulated.

### New Management Committee

The following members have agreed to serve on the Management Committee for the coming year.

- Robert Galloway
- Euan Grewar
- John McWilliam
- Thomas Pate
- Robert Ramsay
- Alastair Reid
- Mark Wilken

This is a farmer led project so important farmers take a lead role. The main role of the Management Group is to represent the Group and advise on any aspect of the project. Members can contact them to raise any issue on their behalf.

**Arable Business Groups**

Arable Business Groups (ABG) have now formed and are working to benchmark growing and production costs using HGCA's CropBench tool. It is not too late to join an ABG, please contact either the facilitators or anyone on the Management Group if you wish to join an ABG.

**Date of next meeting**

The next meeting will take place after harvest and tattie lifting – probably late Oct, early Nov. Further details later.

## APPENDIX 1

### Adjustments to Optimum N rates (kgN/ha) - Winter Wheat

		FERTILISER PRICE (£ PER TONNE)										
		£150	£175	£200	£225	£250	£275	£300	£325	£350	£375	£400
Crop Price	£80	212	-12	-24	-36	-49	-61	-73	-85	-97	-109	-121
	£100	15	5	-5	-15	-24	-34	-44	-53	-63	-73	-83
	£120	24	16	8	0	-8	-16	-24	-32	-40	-49	-57
	£140	31	24	17	10	3	-3	-10	-17	-24	-31	-38
	£160	36	30	24	18	12	6	-17	24	31	-18	-24
	£180	40	35	30	24	19	13	8	3	-3	-8	-13

Source: YARA

## APPENDIX 2 – CROP RECORDS

**Field**                    **Front of Farm House**  
**Area (ha)**                **11.37**  
**Crop**                      **Winter wheat**  
**Variety**                 **Robicus / Alchemy**  
**Date sown**              **01/10/2008**  
**Seed Rate (kg/ha)**      **200**

<b>Fungisides + insecticides</b>			<b>Herbicides + insecticides</b>			<b>l/ha</b>
16/04/2008	Opus	0.3				
	Flexity	0.25	26/10/2007	Hurricane		0.06
	Manganese	3		Arelon 500		1.5
				Trifluralin		1
				Hallmark Zeon		0.03
17/05/2008	Splice	0.5				
	Bravo	1				
	Moddus	0.2				
	Chlormequat 3C	1.7				
10/06/2008	Mantra	0.5				
	Flexity	0.25				
	Bravo	1				
02/07/2008	Amistar Opti	1				
	Proline	0.3				
	Cypermethrin	0.25				

<b>Fertilisers</b>		<b>kg/ha</b>	<b>kg N/ha</b>	<b>kg P/ha</b>	<b>kg K/ha</b>
30/10/2007	0/24/24	316	0	75.84	75.84
28/02/2008	30%N + 19So3	123	36.9	0	0
25/03/2008	30%N + 19So3	263	78.9	0	0
01/06/2008	34.5%n	222	66		
		<b>Totals</b>	<b>181.8</b>	<b>75.84</b>	<b>75.84</b>

<b>Field</b>	<b>Cottages</b>
<b>Area (ha)</b>	<b>19.28</b>
<b>Crop</b>	<b>Spring barley</b>
<b>Variety</b>	<b>Optic</b>
<b>Date sown</b>	<b>03/03/2008</b>
<b>Seed Rate (kg/ha)</b>	<b>165</b>

<b>Herbicides</b>		l/ha
19/05/2008	Harmony MSX	0.06
	Corbel	0.1
	Manganese	2
29/06/2008	Fandango	0.75
	Bravo	1.5

<b>Fertilisers</b>		kg/ha	kg N/ha	kg P/ha	kg K/ha
28/09/2008	0/24/24	270	0	64.8	64.8
27/02/2008	30%N + 19So3	421	126.3	0	0
		Totals	126.3	64.8	64.8

**Field** Pumphouse  
**Area** 22 ha  
**Crop** Winter OSR  
**Variety** Grace, RNX 3504, Catana, Bravour, Celebration  
**Date sown** 02/09/2007  
**Seed Rate** 4.5 kg/ha

**Herbicides** l/ha  
 05/09/2007 Katamaran 2

**Fungicides + insecticides**  
 19/10/2007 Cypermethrin EC 0.25  
                   Proline 0.35  
  
 14/04/2008 Proline 0.5  
                   Folicur 0.4  
  
 17/05/2008 Hallmark Zeon 0.03  
                   Proline 0.5  
                   Delsene Flo 0.5

<b>Fertilisers</b>	kg/ha	kg N/ha	kg P/ha	kg K/ha
28/09/2008 8/24/24	391	31.28	93.84	93.84
27/02/2008 30%N + 19So3	259	77.7	0	0
25/03/2008 30%N + 19So3	247	74.1	0	0
<b>Totals</b>	<b>183.08</b>	<b>183.08</b>	<b>93.84</b>	<b>93.84</b>

Average  
 pH 6  
 Phosphate 12.4  
 Potassium 147.7  
 Magnesium 164  
 Calcium 1210  
 Sodium 11.6