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SAOS
Developing co-operation in farming, food and rural scotland

Angus Arable Monitor Farm

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Report on Meeting held Monday 25th May 2009

Topics:
Spring update
Precision application Vari-spreader
Winter wheat and Oilseed rape low cost establishment trials
New strain foliar blight and PCN regulations update
Grain market outlook
Forecast crop margins 2009/10 and crop choices

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TOP TIPS FROM MEETING

The lesson from the wheat min till after potatoes trial is that you can establish a good crop in surprisingly poor conditions on the day of sowing if the machine does not overwork the soil (we want good soil/seed contact, not a fine seedbed), if it lifts at depth to allow good drainage and if the soil is dry enough at depth to allow tines to bring some dry material on to the surface.

INTRODUCTION

The meeting took place at Backboath and Newton of Carmyllie farms and then at Carmyllie Hall 9.30–1.00pm and was supported by 30 members.

Programme:

1. Spring update
2. Precision application Vari-spreader
3. Winter wheat and Oilseed rape low cost establishment trials
4. New strain foliar blight and PCN regulations update
5. Grain market outlook
6. Forecast crop margins 2009/10 and crop choices

1. Spring Update (Hugh Black)

See handout at Appendix 1 for 2009 versus 2008 cropping, key events since last meeting and average crop prices achieved for last season versus the previous 2 marketing years.

Key points:

- Excellent spring weather so spring barley all sown in good conditions. Small trial comparing Manganese treated seed with foliar applied Mn.
- Winter barley (mostly Pearl) all looking exceptionally good. Wheat OK bar one field very late sown.
- Tatties planted in good time. Used two separators this year – greatly speeded up planting to around 10 acres per day. Area down slightly simply due to difficulty and cost of securing rented land – an ongoing issue in this area.
- Auto-steer system now coming into its own and having implications for whole system – for example showed that ridger was not correctly set.
- Still 400t of ware in cold store for Bartletts. Much later than last year when it was all gone by first week of April.
- Trialling 36m sprayer (tatties at 36m tramlines, cereals currently 24m). Just finishing tattie herbicides.
- Prices achieved for last years crop (see table in Appendix 1) all down on 2007 harvest peak, but wheats and malting barley ahead of 2006.
- Renovation work: stripping a shed roof and renovating Slade grain store roof to eliminate drip problem. Newton bothy being stripped in readiness for builders with completion of 3 bed house with SRDP grant support. Slade farmhouse will be renovated for Hugh and his new bride, but the first happy weeks of post honeymoon life will be spent in a residential caravan!

2. Precision application Vari-spreader (Hugh Black).

- The recently purchased vari-spreader has allowed all crops to receive fertiliser on the basis of previous years yield and hence P and K removal. Is able to apply variable rates across field at speeds up to 15 km/hr. Farm now has 8 years of yield maps. Only vari rating P and K, not N.
- What iss the cost?

	£
Software	800
Laptop (off ebay!)	99
GPS aerial	120
Spreader extras approx	4,000
Approximate Total	**5,000**

- Will it pay? The business applies around £200,000 of fertiliser. Given a 5 year life for the investment - a simple annualised cost of around £1,000 - it only needs a 0.5% saving in fertiliser to cover the cost.
- Major payback is a better understanding of each field. Learnt a lot this year.
- Soil sampling every 6 years, but will need to move to 4/5 years to get full benefit of the system.
- Major topic of discussion; Andrew Moir described his system based on applications of fert on the basis of soil nutrient status maps – a contrast to Hugh's system based on yield maps. Which is correct? Apply less to low yielding parts because they have less potential or apply more fert to those parts to correct deficiencies? Key point: understand and map soil nutrient status.

3. Oilseed Rape Establishment trial (Tommy Pate).

- See previous meeting reports for full description of min till versus plough/drill techniques used for this trial. Basically compared conventional system with three machines which have combinations of sub-soil/ cultivation tools direct on to stubble.
- All plots looking visually equally as good. Plant counts and root depth measurements have been done. Results will be combined along with yields post-harvest.
- Feedback from SMART Farm is that subsoiler and sowing in bands has looked best – allows light into the rows of plants. Now putting some P in with seed to assist young plant growth.
- Other group members are trialling these methods. One has done it successfully for several years, but had poor results this year – went into wet soils which would not have tackled with plough/drill system. Perhaps over confident from success in range of conditions in previous years! Lesson: all systems have limitations.

4. Wheat Establishment trial (Robert Galloway).

- See previous meeting reports for details of min till techniques used. Basically comparison of post potato wheat establishment using conventional plough/drill

versus range of Horsch and Vaderstad cultivation/ disc /drill units. Aims; speed of establishment after late potato harvest, reduce potato groundkeepers.

- The trial was done in very poor conditions with rain and the site becoming progressively wetter as the trial progressed.
- Subsoiler and Cultis spring loaded tines improved the seedbed in these wet conditions by taking some fresh soil to the surface.
- Weight is important – a Rabi drill proved too heavy and did too much cultivation turning the wet soil to plasticine.
- Despite these terrible sowing conditions the establishment has been very good. Plant numbers are only slightly better than the conventionally established area which was sown 8 days later in much better conditions.
- Seed needs good soil contact, it doesn't need a fine seedbed. The cultivation/drill combinations seem to have achieved this in this trial.
- The lifting of the soil by tine or subsoiler leg is critical as it allows drainage.
- This trial probably would only be successful with wheat. It shows however that with the right machine non plough techniques can work well after potatoes.

5. Potato Blight Update (Eric Anderson, Scottish Agronomy).

- Refer to Eric's full presentation attached.
- Major foliar blight problem in last few years. New genotypes accounting for 90% of Scottish blight were only discovered in the UK for the first time in 2005. It is very aggressive, even in previously resilient varieties and is resistant to some common fungicides (the phenyl amides).
- Disease has a faster life cycle (3 or 4 days rather than 7) so more frequent spraying required.
- Need to use available chemicals correctly as are effective at different stages. Very expensive part of potato growing so essential to do it right.

6. 2007 EU PCN Directive – Implementation in Scotland (Eric Anderson, Scottish Agronomy).

- See Eric's presentation attached. Very important topic as consultation on how this directive might be implemented ends 29 May.
- Directive comes into play 1 July 2010, so affects 2011 crop.
- Proposal is very simply stated to greatly increase the volume of soil to be tested per unit area for PCN. This is likely to result in more failures and hence more problems in securing "clean" seed growing land.
- Key point; Have your say in the consultation.

7. Grain Market Outlook (Keith Headridge, Scotgrain).

- See Keith presentation attached. Some key points as follows;
- Price drivers at moment are; the lower level of autumn plantings due to poor weather conditions; the shift in currency which has allowed a 20% to 30% rise in UK prices, helping old crop exports; dry weather in eastern Europe and S America and wet in USA pushing up prices.

- For this year Spring Barley area is expected to be 300,000 Ha compared to normal level of 265,000 Ha. Supply this year will be well out of balance with demand.
- Market values; old crop wheat £115, old crop barley £95, new crop wheat £128, new crop barley £100, new crop OSR £270 + bonuses.
- Since the meeting price prospects have fallen on the back of better than expected harvests elsewhere and strengthening of Sterling.
- Advice would have been to sell some grain forward at that time – given the price fall since, it was good advice!! Keith's advice is to sell some grain when fluctuations give you a price which leaves a margin over costs.
- Additional market drivers for next year: Ethanol plant comes on stream in N.England. Will need to pull in foreign wheat? Distilling usage limited – literally no space to handle any more spirit as they have filled all their casks.
- Better prospects for 2010? Current cost of wheat production is £134/t compared to selling price of £128/t. For harvest 2010 however, with some cost reductions e.g. fert price, cost of production could be £118/t compared to market price of £130/t. Should we fix some wheat for 2010 at this price?

8. Using Crop Margins to Plan Cropping (Jim Booth).

- Jim presented the estimate of crop Gross Margins and Fixed Costs for Backboath for 2010. This includes per Ha/Acre and per tonne figures. See the table in the appendices.
- Every crop has a positive gross margin and so at least contributes to covering overheads. Wheat and winter barley look best for 2010 on the projected yields and prices.
- The total production cost per tonne (including fixed costs) for all cereal crops is above the market price per tonne. However, the figures suggest rape will have a positive net margin.
- Backboaths fixed costs look higher than English averages. Is the allocation between potatoes and cereals correct? Why are the English costs lower? The no plough establishment trials are an attempt to look at lower cost systems, but would need the purchase of new machines, pushing up depreciation costs. Is the answer groups? For example several members combining their cereals area (and hence rationalising machines and even labour), but retaining independence in potato production, or simply sharing min till kit?
- A spreadsheet is available for members to apply their own figures.

Date of next meeting;
Thursday 23 July, which will be the Arable Monitor Farm Open Evening, 6pm

APPENDIX 1

Angus Monitor Farm

Background

Farmed by James and Hugh Black with two full-time men and casual help.
The business comprises three adjoining units at Backboath, Slade and Newton of Carmyllie. All arable system, land owned 356 ha (880ac). No livestock.

2009 Cropping

Crop	2009 (ha)	2008 (ha)	Varieties
W. Wheat	96	104	Alchemy, Robigus, & Viscount (20ha)
W. Barley	53	43	Pearl & Amarena (5ha)
Sp Barley	119	115	Optic & Oxbridge
OSR	16	22	Catana & Cuillin
Grass, etc	2	4	
Land rented out (veg)	15	19	
Potatoes - home	53	53	Rooster, M. Piper, Kestrel, Osprey
Potatoes – rented land	61	69	Rooster, M. Piper, Saxone
TOTAL	**415**	**429**	

Rotation

Pots WH WB OSR/veg WH SB Pots

Update of events since last meeting

Still 400t of potatoes to dress – in cold store. Last yr all finished by 1st week April

Sp Barley sown in good conditions 16 – 25th March (last yr finished 14 April).
Trial comparing Mn treated seed. Herbicide applied 25th Apr.

W. Barley looking well. 2nd year of Pearl, v. pleased.

W. Wheat looking well apart from very late sown.

Backboath's Average Crop Prices

	2008/09	2007/08	2006/08
Wheat	£123	£173	£100
Malting Barley	£	£164	£87
Feed Barley	£90	£145	£93
OSR			£

Slide 1

Market Update

Keith Headridge
Commercial Director
Scotgrain Agriculture Ltd

Market values

Old Crop
- •Wheat - £115
- •Feed Barley - £95

New Crop
- •Wheat - £128
- •Feed Barley - £100
- •Oilseed Rape - £270 + bonuses

Slide 2

Market Update

2009/10 marketing year
- • Set aside reduced to zero
- •Poor autumn reduces autumn plantings
  - •Wheat 88k Ha's (last year 114k)
  - •Oilseed Rape 29K Ha's (last year 33k)
  - •Winter Barley 53k Ha's (last year 59k)
  - •Grass sown 41k Ha's (last year 46k)
  - •Winter Oats 7k Ha's - static

Drivers

- •Selling a portion into a rising market with a value above cost of production
- •If you sell you secure margin
- •Remember last year £160 downwards – margin would have been good, old crop at £175+ prevented many from doing so.
- •Ethanol production in Northern England comes on stream
- •Distilling usage – increasing ?

Slide 3

Drivers

- •Currency – $/£ 1.54
  - •€ / £ 1.14
- •This has helped old crop exports
- • From autumn 08 currency has added 20 -30% to cereal values in the U.K
- •Dry weather in Eastern Europe & wet weather in the U.S lifts wheat values (£10 in the month)
- •Dry weather in South America lifts oilseeds (£30 in the month)
- •Next stop ?

Harvest 2009 / 10

Opportunities Wheat

- •Input costs higher – mainly fertiliser / agrochemicals
  - •Cost of production around £134? per tonne
  - •Harvest 09 around £128 ex farm
- •Harvest 2010 – fertiliser costs reducing
  - •Cost of production £118? per tonne
  - •Harvest 10 around £130 ex farm
- •Timing is crucial

Slide 7

Summary

- Harvest 2009 – we should see autumn plantings return to normal
  - Wheat 115 – 120k Hectares
  - Oilseed Rape – 35 – 40k Hectares
  - Winter barley – static around 55k Hectares
  - Winter Oats – 7k Hectares (limited room for more)
- By doing this the spring barley area should reduce to around 265k Hectares (assume 5.5t / Ha = 1.5 million tonnes), use 75-% malting varieties & 75% acceptance, consumption around 800k tonnes

Estimated Crop GM and growing costs for 2010

Yield (t / ac)	3.8	2.5	2.6	3.6	1.5
	Wheat	Sp B (Malt)	Sp B (Feed)	W.Barley	OSR
Output					
Grain Yield (t/ha)	9.5	6.2	6.5	9.0	3.6
Price grain	130	140	110	110	270
Total	£1,235	£868	£715	£990	£972
Straw yield	5	4	4	5	
Price	15	20	20	20	
Total straw	£75	£80	£80	£100	£0
Total	**£1,310**	**£948**	**£795**	**£1,090**	**£972**
Variable Costs					
Seed	55	47	43	55	28
Fertiliser	217	152	158	217	188
share lime	8	8	8	8	8
Sprays	125	80	80	95	110
Contractor					
Other crop exps	10	8	8	12	15
Total	**415**	**295**	**297**	**387**	**349**
Gross Margin /ha	**£895**	**£653**	**£498**	**£703**	**£623**
GM per Ac	**362**	**264**	**202**	**285**	**252**
Assumptions					
Seed (£/t)	**250**	**260**	**240**	**250**	**7000**
Seed rate (KG/Ha)	220	180	180	220	4
Total seed (£/Ha)	55	47	43	55	28
AN 34.5% (£/t)	**200**	**200**	**200**	**200**	**200**
N (KG/Ha)	180	110	120	180	200
N (£/Ha)	104	64	70	104	116
TSP 47% (£/t)	**340**	**340**	**340**	**340**	**340**
P (KG/Ha)	70	55	55	70	45
P (£/Ha)	51	40	40	51	33
Potash 60% (£/t)	**530**	**530**	**530**	**530**	**530**
K (KG/Ha)	70	55	55	70	45
K (£/Ha)	62	49	49	62	40
Total fert	217	152	158	217	188
Chemicals	**125**	**80**	**80**	**95**	**110**
Sundries	**10**	**8**	**8**	**12**	**15**
Total VC's	**407**	**287**	**289**	**379**	**341**
Variable cost / t	**43**	**46**	**44**	**42**	**95**

						National (English)	
Fixed Costs						**Wheat**	**Barley (Malt)**
Labour	18	19	19	18	45	13.4	16.6
Power	38	36	36	38	36	28.4	33.3
Property	5	8	8	5	8	4.4	6.7
General Exps	6	9	9	6	9	4.3	6.2
Rent	21	31	31	21	31	15.4	25.2
Finance	5	8	8	5	14	5.0	8.4
Production cost / to	**£136**	**£157**	**£155**	**£135**	**£238**	**£114**	**£142**

Notes:

1 The table shows the estimated gross margin and production costs for a range of combinable crops
2. Growers should enter their own figures for yields, prices and costs to estimate their own GMs
3. Seed costs are based on 50% farm saved, the balance new seed
4. The allocation of fixed costs to combinable crops is notoriously difficult.
   In this case, the Fixed Costs are based on two Benchmarking Grps
5. Labour is paid labour and a notional value of family labour at £25k per unit
6. Power is machinery repairs, depreciation, fuel and contractor costs
7. Rent was a notional at £200/ha for owned or rented
8. The single farm payment (SFP) is not included
9. The National (English) fixed costs are shown for wheat & malting barley for comparison