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

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Report on Meeting held 4th November 2008

OSR TRIALS AND OPTIONS FOR SPRING

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## **TOP TIPS FROM MEETING**

1. With sp. barley prices likely to be below production cost, it may be best to maximise w. wheat area - so continue sowing as long as conditions allow.
2. Leaving fields fallow is not an option unless you can slash overheads. Growing a crop at least will make a contribution to overheads. Could consider going for 'low cost' sp. barley or trying to let land for vining peas, tatties, etc
3. The cheapest and simplest OSR establishment method – subsoiling + drill unit – looked surprisingly good. (Will follow crop through the season till harvest.)
4. OSR has the potential to yield 6-7 t/ha. Growers need to give the crop more attention. Sow by thousand seed weight (TSW). Target plant population 50 plants /M<sup>2</sup>, hybrids 30-40 plants/ M<sup>2</sup>

## **1. INTRODUCTION**

For the first time, the meeting took place in the morning 9.30–1.00pm. The Management Group were keen to make it easier for members to attend and still get time to catch up on farm work. There was a good turnout of over 30 members at the meeting. Sarah Nightingale from HGCA was also welcomed to the meeting.

### **Programme;**

1. Update from Monitor Farmer
2. OSR establishment trials  
Carmyllie Hall, coffee
3. Planning for spring 2009
4. Update on OSR developments
5. Lunch

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

Hugh gave an update of activities that occurred since the last meeting (16<sup>th</sup> July 08).

- Harvest was later this year (w. barley 8 days later) but generally easy particularly compared to other areas of the country. The farms combine (JD 13 yrs old, 14 ft header) was used to help a neighbour (WB) who later returned to help combine (20 ft header) wheat. Finished harvesting wheat at the end of September then started potato harvest the next day. Hugh's view; use a contractor when the crop is dry – don't wait till it's a salvage job.
- Cereal yields are provided in following table. The farm has a weighbridge.
- Tried to be patient and not combine anything very wet – nothing cut above 22% mc. Only had to dry 60t of the sp barley, all the rest away for malting below 19% mc. Bought fan spears to condition the grain (6 tubes + 3 fans @ £100 each), they were a great success. Dried grain (350t) on contract for a neighbour.
- All the malting barley (600t) grown on contract @ £175/t, all met specification and went away. Have sold 500t wheat (150t at £133/t and 350t @ £110/t) may

get premium (£14/t?) if biscuit making quality. Balance of 400t wheat to sell. The Pearl w. barley went away for brewing at £117/t. Some winter barley to sell for feed. All the OSR sold on pool to United Oilseeds.

- Started potato harvest on 1<sup>st</sup> Oct, had 121 ha to lift. The Grimmie harvester bought last year working well. These last 3 days, hired in another harvester to get finished. Currently lifting from the farthest away rented land (12 miles). Hope to finish lifting tomorrow 5<sup>th</sup> Nov. Logistics and efficient materials movement is now more critical.
- Employing the new man has worked out better than expected. Farm has now 2 full-time men. Will free Hugh up to allow more time for more management and planning.

### 2008 Harvest results (at 15% mc)

Crop	Av Yield (t/ac) and variation	Varieties
W. Wheat	3.6 (2.9 – 4.3)	Alchemy, Consort, & Robigus
W. Barley	3.8 (3.3 – 4.5)	Amarena & Sequel
	4.2	Pearl
Sp Barley	2.6 (1.9-3.5)	Optic
	2.7 (2.6 –3.1)	Oxbridge
OSR	1.4	Grace and others. Catana and Bravura did best.

### 3. OSR establishment trials (Tommy Pate)

The Management Group have been heavily involved in deciding what trials to look at and helping Hugh get them organised. Tommy Pate described the OSR trials which were undertaken at The Slade. The background to the trials was as follows:

#### Main Issues:

#### 1. Lower yields than expected.

3.3t/ha average over last 4 years. See table below.  
Yield potential of WOSR is supposedly nearer 7t/ha!  
What is the regional average?

Year	t/ha	Variety	Average date sown.
2008	3.65	Grace/Catana/Bravour/RNX3105	2 September
2007	4.2	Grace/Lioness	25 August
2006	2.62	Ontario/Winner	26 August
2005	2.96	Expert/Winner	?

#### 2. Need to reduce costs.

Reducing establishment costs current focus.  
Currently traditional establishment with plough followed by one-pass drill. Using Machinery Ring rates this equates to £52.50/ha for the plough and £44.79 for One Pass. Total £97.29/ha.

#### 3. Timeliness of establishment.

Especially relevant after wet year.  
Also implications on rotations. OSR after Spring or Winter barley.  
Busy time of year.

▪ **Other considerations**

1. **Seed varieties.**
2. **Seed Rate.**
3. **Agronomy of growing crop.**
4. **Harvest techniques. Spray Vs. Dessicate.**

**The trials**

Establishment was identified as a key area for investigation. Hopefully improved establishment techniques would improve yields, reduce costs and improve timeliness.

Four different establishment techniques were trialled within the same field. OSR variety Catana used throughout the trial sown at 4.5kg/ha (TGW 6.2g/ 73plants/m<sup>3</sup>). The previous crop was w. barley. All plots were treated for slugs twice.

**The Four Different establishment methods (2ha plots)**

1. On the 27<sup>th</sup> of August HEVA arrived with a 5 leg subsoiler and Opico fan seed unit sowing the OSR in rows behind each leg. It was 2.5m wide and had a packer roller on behind. It was set at a depth of 12 inches.
2. Also on the same day was the HEVA (6 leg subsoiler with two rows of discs and a packer roller). It too had an Opico fan seed unit but the seed was applied in a band the full width of the machine -3m. This machine was set at 10 inches deep with the 6 legs and the discs incorporating soil and trash. The seed dropped after the discs and before the roller.
3. 3<sup>rd</sup> plot in the field was the Sumo Trio on the 29<sup>th</sup> of August. It had 4 subsoiler legs (with big wings), two rows of discs and a big packer roller. On top was a Stocks fan seed unit. This too was 2.5m wide. The first half of the Sumo plot was at 12 inches and the second at 10 inches. The seed dropped after the discs and before the roller. -- Note the Trio had very wide feet on the legs.
4. 30<sup>th</sup> August ploughed at 10 inches deep and 17 inches wide, After a day of sitting to dry out the new ploughed ground, the combined 3m Kuhn power harrow and Accord seeder unit was used to finish off the rest of the field. This plot was nearest the Slade steading.

**Fuel Use**

During the establishment trials fuel use was monitored (Results below). Unfortunately it was not possible to use the same tractor for all operations however the results do give a good indication of power requirement.

Machine	Speed (km/hr)	Tractor	L/ha	£/ha @ 61p/l
HEVA 5 leg	8	JD 7530	23	14.03
HEVA discs	10	JD 7530	17.5	10.68
Sumo Trio	8	JD 6910	17	10.37
Plough (One Pass)	8 (8)	JD 7530 (6920)	20+14.2=34.2	12.20+8.66=20.86

All plots were rolled afterwards.

### **Monitoring the trials**

The 4 different plots will now be monitored by Soil Essentials with their Crop Circle system to measure the green leaf area. The first reading to be carried out once barley volunteers killed off.

The combine's yield monitor will be utilised to compare the 4 plots.

### **Limitations of trials**

Aim to create a practical field scale study accurate to the best of the resources and skills available.

It is acknowledged the trials are not replicated, never-the-less they should help improve understanding and help the Blacks identify reliable OSR establishment systems.

## **4 Planning for next spring 2009.**

The aim of this session was to get the Group to consider what the Monitor Farm should do next spring. With cereal prices currently below the cost of production, should they continue sowing sp barley as planned or are there alternatives?

As yet there are no indication of contract prices for malting barley next year. The Group thought they would be in the range £120-£140/t. Current production costs for spring barley are nearer £160/t.

The meeting was split into groups to consider the options. Feedback was as follows;

- Just bite the bullet and plant the barley. Market prices are volatile, so hope for a rise in price by next harvest. Blacks have bought the fert already so that cost is "sunk".
- Go for low cost spring barley; min till, home saved seed.
- Have a P & K holiday if status is high or moderate. Risky, so can only be one year.
- Beans considered, but not a good option – clash with potato harvest and cannot dry through Blacks equipment
- Go for all Optic, so at least best chance of making malting.
- Keep planting wheat, even through until February if conditions OK. Plenty marketing time to fix a better price than current.

- If contract malting price no better than £140/t, go for vining pea lets at £130/acre instead. Gives a good winter wheat entry, frees up time for other work, gives legume fertility boost, return is low risk, helps with limited combine capacity. Risks; sclerotinia build up, field damage in a bad year.
- Plant spring milling oats. Only worth it if have fixed price contract, but probably only around £115/t. Risk if dont hit milling quality.
- Plant a forage crop and rent to lamb finisher, etc. For example red clover mix – cheap to grow, good for finishing lambs and puts fertility back in the land.

### What is the financial impact of not growing spring barley?

<b>Saving In Costs</b>	<b>£/acre</b>
Seed	26
Fertiliser	100
Sprays	26
Sundries	5
Interest	6
Fuel and repairs	35
<b>Total Costs Saved</b>	<b>197</b>
<b>Income Foregone</b>	
2.5t/acre @ £110/t	275
<b>Margin Lost by not growing the crop</b>	<b>£78</b>

Some group members felt that the benefits of not growing the crop were underestimated e.g. early entry for a winter cereal or rape. The Margin Lost might be closer to £40.

**The critical point;** Can't substantially reduce your fixed costs if decide not to grow spring barley next year. If there is a positive margin over the costs you could drop, then the crop is still making a contribution to covering your overheads, and you would be better to grow it. Of course that is a one-year view.

Note someone using a lot of contractors could shed much more cost and their decision could therefore be different.

### Overall advice for Hugh?

First see what malting contract prices are available, review price prospects. If low as expected, grow some SB, but maximise wheat and look for alternatives such as vining pea lets (to reduce risk and give fertility/ entry benefits) to replace part of the area.

The contrast between margins expected for 2009 and those achieved in 2008 (see Hugh's actual GM's for 2008 below) is stark.

## Backboath's Actual Crop Gross Margins 2008

Yield (t / ac)	3.6	2.6	4.0	1.4
	Wheat	Sp B (Malt)	W.Barley	OSR
<b>Output</b>				
Grain Yield (t/ha)	8.9	6.4	10.0	3.5
Price grain	120	176	100	250
Total	£1,068	£1,126	£1,000	£875
Straw yield	5	4	5	
Price				
Total straw	£0	£0	£0	£0
<b>Total</b>	<b>£1,068</b>	<b>£1,126</b>	<b>£1,000</b>	<b>£875</b>
<b>Variable Costs</b>				
Seed	38	51	36	34
Fertiliser	148	124	135	166
Sprays	109.5	64.4	113.8	98.4
- herbicide	8	12.6	8.4	43.6
- fungicide	89.4	51	61.3	51.3
- other	3.9	0.8	5.7	2.8
- GR + dessicant	8.2	0	38.4	0.7
Other crop exps	10	8	12	0
<b>Total</b>	<b>306</b>	<b>247</b>	<b>297</b>	<b>298</b>
<b>Gross Margin /ha</b>	<b>763</b>	<b>879</b>	<b>703</b>	<b>577</b>
<b>GM per Ac</b>	<b>309</b>	<b>356</b>	<b>285</b>	<b>233</b>

## 5 Update on OSR Developments

Robert Plaice from Monsanto travelled up from the North of England to present an update on OSR agronomy and developments to the Group. Monsanto are the largest plant breeders in the world.

### New OSR Hybrid varieties are important – why?

- Very high yielding
- More vigorous
- Provide a buffer– more able to compensate following any problems / damage
- Good for late drilling, difficult seedbed conditions, high disease pressure
- Useful in areas where pigeons are a problem

OSR has the potential to produce yields of 6-7 t/ha.

What is limiting us? Are growers giving the crop enough attention?

### Variety choice is critical

- Varieties have different ideal sowing dates – need to know
- The variety needs to suit the situation
- Really it is emergence date rather than sowing date that is critical.

Plant populations important. Target: pure line varieties 50 plants /M<sup>2</sup>, hybrids 30-40 plants/ M<sup>2</sup>

Growers need to base seed rate on thousand seed weight (TSW).  
The following table shows why TSW is better than a standard seed rate.

### **Seeds per M<sup>2</sup> drilled**

TSW (g)	Seed rate Kg/ha		
	4	5	6
3	133	167	200
4	100	125	150
5	80	100	120
6	67	83	100
7	57	71	86

Plant nutrient important. Not just N P K but sulphur and other trace elements.

Robert's full presentation is available – contact facilitators for copy

## **6 Project Business**

Prior to the close of the meeting for lunch the following project details were intimated.

### **Date of next meeting**

The next meeting will take place on Tuesday 9<sup>th</sup> December, again in the morning, starting at 9.30am.

### **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. **The next meeting will take place on Tuesday 2<sup>nd</sup> December 7pm at the Carmyllie Hall.**

### **The Management Committee**

The following members will serve on the Management Committee for the coming year.

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

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.