

# Downpatrick Monitor Farm meeting report

Meeting 4: Labour and Machinery Review

Speaker: Sebastian Murray (Strutt & Parker) and Harry Henderson (AHDB)

Date: 19 Feb 2019

Location: The Quoile Bar & Bistro, 2b Strangford Road, Downpatrick, BT30 6SL

For more information, visit: [cereals.ahdb.org.uk/downpatrick](http://cereals.ahdb.org.uk/downpatrick)

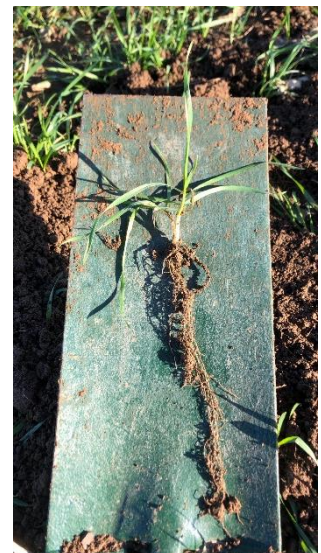


## Meeting summary – key messages

- The characteristics of the lowest cost 25% of farms from the review are:
  - Depreciation below £63/ha
  - Low repairs through tactical hiring and experience
  - Diesel use below 100 Litres/ha
  - Size (500-1000 hectares)
- When calculating drilling costs across the group costs ranged from £11.30 to £17.00
- There is not one right answer, it has to be what is right for you on your farm, but understanding costs helps you to make informed decisions

## Update on Downpatrick Monitor Farm

- Crops looking good, checked root structures whilst taking soil samples and was happy
- Soil samples are being analysed and the results back for the field entered in the [YEN competition](#) look good
- Looking at using Skippy Scout, a drone app, to take photos of fields during the season to reduce the time spent crop walking
- Small area of early potatoes has been planted, fleece and netting has been put on
- Last load of grain has been delivered, sold earlier than normal due to reduced storage
- CAFRE visit to Scotland to look at potato storage
- Silage analysis back – it was good to get an understanding of what they want to see in the results



- Recent purchases on the farm include: George Moate Tillerstar, Herron trailer, cultivator and a drill
- Farm Machinery:
  - MF 7499
  - MF 6490
  - MF 6290
  - Self-propelled sprayer
- 2018 Establishment costs/ha:



5ft Plough	£26.20
Power-harrow	£26.00
Contractor drilling	£37.00
Cambridge roll	£3.60
<b>TOTAL</b>	<b>£92.80</b>

- New establishment costs/ha:

Kverneland cultivation	£27.10
Horsch disc drill	£16.14
Cambridge roll	£3.60
<b>TOTAL</b>	<b>£46.84 – a saving of £45.96/ha or £4.30/ton</b>

- Review of the establishment costs of the farm cultivation try out plots:

		Cultivation	£27.10	Ploughing	£39.79
Clayton tine	£45.12	Horsch disc	£32.71	Kuhn One pass	£44.82
Rolling	£3.60	Rolling	£3.60	Rolling	£3.60
Establishment	£48.72	Establishment	£63.41	Establishment	£88.21
	£44.08 ha		£29.39 ha		£4.59 ha
	£4.12 ton		£2.75 ton		£0.43 ton

Costs based on buying new kit to be kept for 10 years.

## Why carry out a review?

- To understand the cost of production which helps you to make business decisions
- Help with understanding the impact of the loss of BPS (phased out to £0 by 2028)
- Allows you to know where you stand if you benchmark against comparable businesses
- Highlights opportunities for cost saving, collaboration and diversification
- Currently £1.3 billion is spent on new machinery a year.

### Average Operation Costs across the Monitor Farm Network compared to CAAV and NAAC Costs

Description	Min	Lowest 25%	25-50%	Mean	50-75%	Highest 25%	CAAV Cost	NAAC Charge
Drilling (average) (£/ha)	£16	£21	£27	£30	£35	£63	£37	£49
Ploughing (£/ha)	£28	£41	£46	£53	£55	£97	£62	£63
Pressing (£/ha)	£13	£15	£18	£20	£22	£33	£27	£36
Cultivating (disc/tine/pack) (£/ha)	£16	£24	£29	£29	£30	£49	£41	£65
Subsoiling (£/ha)	£27	£32	£43	£42	£46	£60	£50	£59
Rolling (£/ha)	£4	£6	£8	£8	£9	£21	£15	£20
Spraying (£/ha)	£2	£4	£5	£6	£7	£11	£7	£12
Fertilising (solid) (£/ha)	£2	£3	£4	£4	£5	£11	£9	£12
Combining (£/ha)	£41	£52	£66	£66	£78	£97	£79	£87
Carting (£/ha)	£13	£23	£33	£33	£39	£66	£24	£34

CAAV – The Central Association of Agricultural Valuers

NAAC – The National Association of Agricultural Contractors

## Data collection and methodology

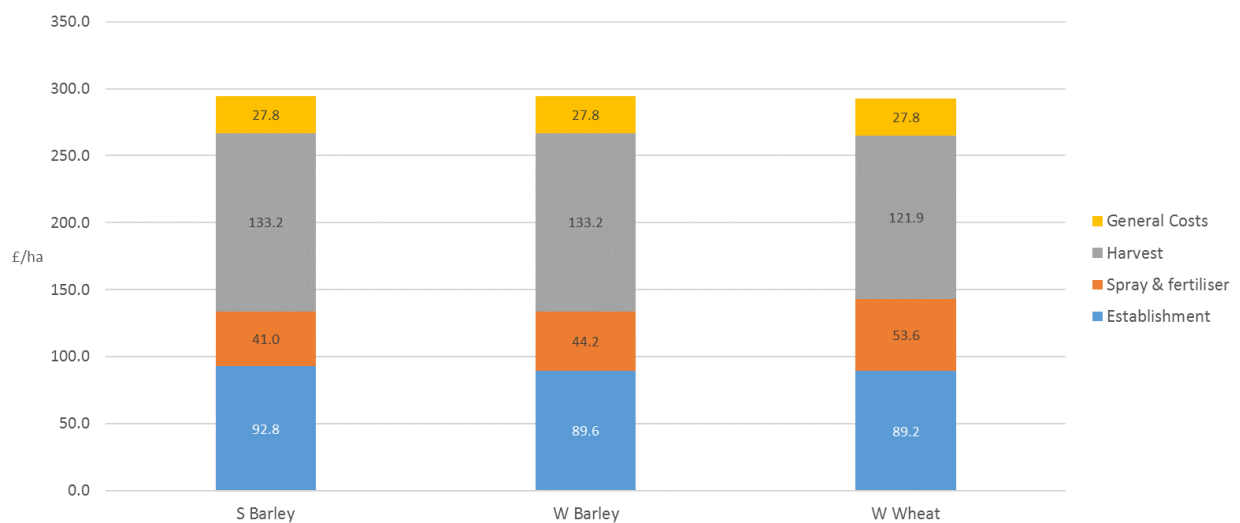
- General information including arable cropping and yields
- Non-arable enterprises (livestock/diversification) separated out by % time spent by labour and machinery
- Detailed labour information – average cost per hour calculated inc. NI/pension, housing etc
- Unpaid labour including at standard hourly rates
- Machines and implements inventory – hours, age, value, fuel, repairs, insurance, depreciation (straight line)
- Create machine cost in £ per hour (based on annual hours)
- Create implement cost in £ per hectare (based on annual hectares covered).

## Costs at Downpatrick

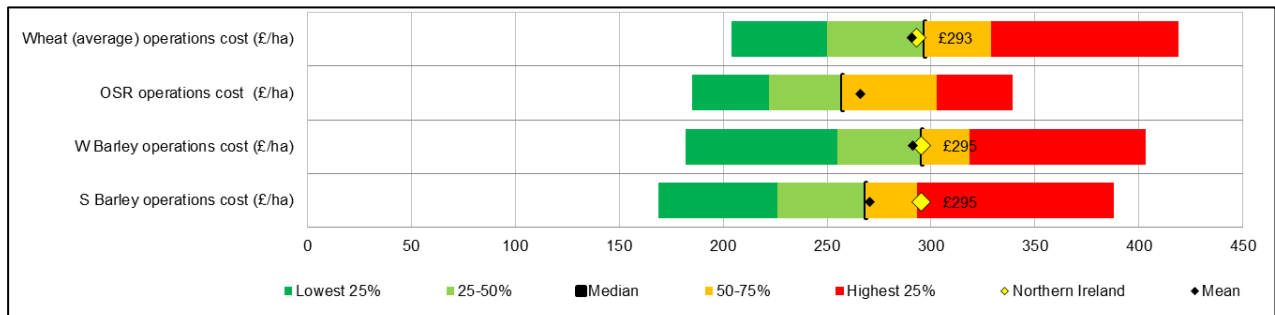
Headline operation costs for the Downpatrick Monitor Farm, compared to the Monitor Farm Average, CAAV and NAAC

Operation	Machine	Implement	Northern Ireland Cost £/ha	Monitor Farm Average Cost £/ha	CAAV <sup>8</sup> Cost £/ha	NAAC <sup>9</sup> Charge £/ha
Drilling	Contractor		<b>37.0<sup>10</sup></b>	30.3	32.85	58.68
Ploughing	MF 7499	Kvermland 5f Plough	<b>26.2</b>	51.9	62.7	63.6
Cultivation	-	-	-	28.7	41.5	65.5
Rolling	MF 6490	Contractors Rolls	<b>3.6</b>	8.2	14.8	19.8
Spraying	Knight 24m		<b>9.5</b>	5.7	7.4	11.9
Fertilising (solid)	MF 6490	KRM Spread	<b>1.6</b>	4.2	8.6	12.4
Combining	Contractor		<b>86.4</b>	67.2	79.4	86.5
Carting grain to store	MF 6490	Herron 16t Trailer McCauley 10t Trailer	<b>19.3</b>	32.0	23.6	33.6 <sup>11</sup>

### Downpatrick Monitor Farm cost per crop



## Downpatrick Monitor Farm Cost per Crop compared to the Monitor Farm Average



## Observations and recommendations

- A diverse farm with a productive arable enterprise that effectively utilises contractors to control fuel, depreciation and repair costs
- The farm operates at very low capacity on key machines and performs poorly on management benchmarks (sprayer boom m/ha, and horsepower per cropped hectare) without negative financial performance due to the second hand purchasing strategy. This enables the farm to benefit from the low capacity through timeliness of operations, which enables it to push crop yields.
- The use of contractors avoids investment in high depreciation machinery and implements, such as a combine and drill, enabling the farm to achieve total operation costs per crop that closely align with the Monitor Farm Group Averages
- The farm labour profile is reliant on unpaid involvement from both partners. As part of future proofing the business, it may prove more cost effective employing an apprentice in advance which can be trained into the role rather than employing a fully qualified operator at the point when either partner wishes to step back or give greater attention to other enterprises
- Be aware that the low operating capacity (sprayer boom m/ha) is only affordable due to the second hand purchasing strategy, shifting toward higher depreciation purchases of newer kit of the same operating width will rapidly increase the total machinery cost per hectare
- Review the possibility of taking on further contracting work, in particular for the sprayer, as there is capacity with the machinery.

## Outcomes from the review at the Downpatrick Monitor Farm

- Work that was previously being contracted has now been brought “in-house”
- Looking at liquid fertiliser options which would increase use of sprayer.

## Find out more – Links to AHDB information sheets or research

[AHDB Cereals & Oilseeds Machinery Cost Calculator](#)

[Horizon - Preparing for change: The characteristics of top performing farms](#)

[Blog - Is it worth the move to liquid fertiliser?](#)

[Machinery for farming or farming for machinery webinar](#)

## Next meeting

**Date:** 5 March 2019

**Topic:** Soil Health – structure and cultivations ([register to attend](#))

*During the next Downpatrick Monitor Farm meeting, we'll be going out into the field with Philip Wright (Independent Consultant, Wright Resolutions) to discuss the efficiency and effectiveness of the cultivation and drilling strategies with regards to promoting good soil structure and health.*

**Time:** 10:30

**Location:** Bright Community Hall, 74-72 Ballynoe Rd, Downpatrick BT30 8AJ

**For more information or to find out more about Farmbench, AHDB's benchmarking tool,**

**contact:** Michelle Nuttall

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