The Farm Management Handbook

Farm Advisory Service

Arable

The UK reference for farm business management

SAC CONSULTING

Part of Scotland's Rural College (SRUC)

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Introduction

Markets and price drivers

Early 2025 saw the focus very much on S. American weather and Trump's decisions on tariffs that will affect the maize and soya markets. Wheat is in a 'wait and see' position as falling Black Sea supplies have not yet permeated through to stimulate EU export demand.

The USDA report in mid-January came in well below trader expectations for both maize and soybeans stocks. The major maize exporters Brazil, Argentina, US and Ukraine seemingly holding 13% less stock compared to last year. Having previously been expected to produce record crops, the tightening of stock reported took both maize and soybean prices strongly up.

Financial and commodity markets considered Trump's early administration as bullish in the expectation that there will be a gradual implementation of tariffs followed by negotiations. The very first US decisions have been bearish for the dollar, as Trump tries to fight inflation and boost US crude oil production and supportive for financial markets which are now all trading close to record levels.

Closer to home, EU wheat export demand (down 36% year on year) remains very sluggish despite falling Black Sea supplies. Russia and Ukraine will export at least 3Mt less wheat every month, from January to June. This is significant and should logically attract more demand out of EU ports. The full effect is yet to kick in although European prices have started to firm. As a backdrop to this, the value of the pound seems to have steadied from the declines seen through January around concerns over the Government's borrowing and might now give some resistance to higher prices.

From the start of the current marketing year, UK barley exports have been at a significantly low level, down 43% year on year. The key reason for this is falling demand from EU countries, on the back of stronger sterling and increased production in the EU. Slightly lower nitrogen levels in the domestic crop this season have also limited export potential in some cases. New crop markets continue to track futures one-for-one, with limited news to drive the feed barley market independently.

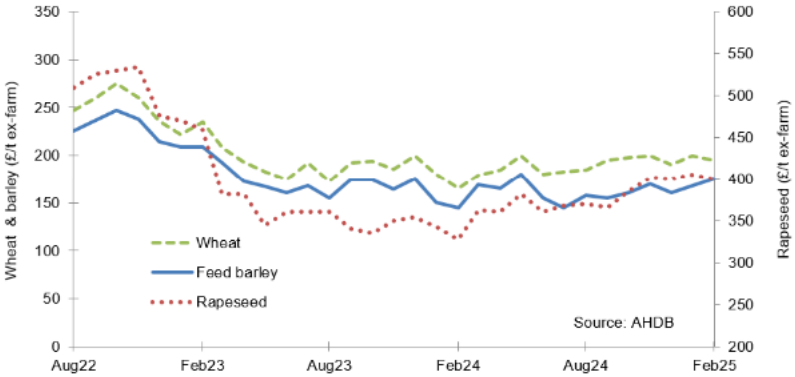
Rapeseed prices remain volatile as ever, now coming back from highs which has again slowed down farmer selling, especially here in the UK with prices static around £400/t. The EUR/USD is not helping EU prices as recent strength in the Euro (due to dollar weakness) has been keeping prices pressured. Weather patterns look positive in Europe for rapeseed crop production through the early spring.

Milling oat bid and offers remain wide apart with neither side pushing hard to compromise as millers are reporting to be covered for Q1 but some demand remaining for Q2 and Q3. Feed oat demand remains minimal also

with Spain reporting to be covered with recent imports. New crop prospects remain fair; however, spring crops still need to be planted before we gain a greater confidence in UK production.

Despite a large carry in stock of wheat (3Mt), the UK will need to import large quantities of higher protein wheat in 2024/25 to offset the anticipated lower 2024 harvest output, estimated at 11-12Mt. This scenario will likely stimulate higher domestic wheat prices (figure 2) to attract imports. On the other hand, with the largest ending stocks of feed barley in several years, the UK will continue to be a net exporter of feed barley. Therefore, UK barley prices must remain low enough to stay competitive in the export market, particularly to Spain and Portugal.

Figure 2 – UK grain and oilseed prices (£/t ex-farm)



The EU-27+UK 2024 rapeseed crop is now estimated at 18.1Mt down from last year's rapeseed crop of 21.3Mt. Of that, the UK is expecting to have produced 0.824Mt, less than half the annual UK crush requirement of 2Mt.

Main UK markets for wheat and barley

Livestock feed followed by milling, malting, distilling and exports are the main UK markets for wheat and barley. In Scotland, the whisky sector uses around half of total Scottish grain output.

The UK produces about 1 million tonnes of oats annually with usage dominated by the oat milling sector. Use as an animal feed depends on comparative barley price for ration inclusion. Oats have a high fibre content which is useful for ruminant diets and horses but not suitable for poultry.

Marketing

Achieving a satisfactory grain price is essential for profitable cereal production. Grain and oilseed producers benefit from well-developed futures markets which make for transparent pricing and enable crops to be bought and sold up to two years ahead of harvest. Given that prices readily swing by over £100/t between seasons, arable farmers should consider spreading sales to achieve a satisfactory average. It is essential that

arable farmers set their own target prices based on their costs and margin requirements.

Premium crops such as malting barley and milling oats are generally grown on contract as there can be little or no spot trade at harvest, particularly in Scotland. Contract conditions vary widely but will require that specific standards are attained such as moisture, germination, nitrogen levels and screenings. Many contracts offer growers flexibility in the pricing, through use of min-max or LIFFE wheat futures as a base.

Margins

Crop returns are highly sensitive to the yield and market price. Differences in fixed costs, particularly machinery, can have the greatest impact on profitability while variations in input costs such as fertiliser and sprays are relatively small between farms. Higher straw prices in the north and west can result in a good return from straw than in otherwise more marginal cereal cropping areas. Straw prices have been strong in recent years boosting returns across Scotland.

Variety choice

Crop varieties should be selected to match the farm conditions, the chosen agronomic strategy and intended end use. In Scotland for example, 90% of wheat grown is for distilling requiring soft endosperm characteristics. Feed markets are less demanding but may require some parameters to be met such as minimum specific weight. For home use other characteristics such as straw length can be important. Premium markets such as malting barley and milling wheat have very specific requirements and growers need to refer to the lists of approved varieties.

See links to relevant market and variety information:

Scottish varieties:
https://www.sruc.ac.uk/media/4qybv20b/sruc-cereals-recommended-list-2024-tables-winter-edition-w1.pdf

UK recommended lists:
https://ahdb.org.uk/knowledge-library/recommended-lists-for-cereals-and-oilseeds-rl

Malting requirements and varieties: www.ukmalt.com/

Milling requirements: www.nabim.org.uk/wheat/wheat-varieties/

Subsidies and support

For details of the latest subsidy arrangements see the Rural Aid Scheme section.

Wheat - Winter

PHYSICAL DATA

(a) Seed

Certified seed second generation (C2) sown at 230 kg/ha (1.83 cwt/acre).

(b) Fertiliser

200 : 67 : 83 kg/ha N : P_2O_5 : K_2O (160 : 54 : 66 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides Autumn residual herbicide to control annual meadow grass and broad leaved weeds and one herbicide in spring.

Fungicides Four fungicide applications at GS25-30, GS31-32, GS39 and GS59 to cover eyespot, septoria and head diseases, including growth regulation.

Additional treatments to the basic programme could include:

Take all	£180/t for seed treatment.
Mildew	£15.50/ha
Aphids	£6.51/ha
Wild oats	£32.50/ha
Slugs	£11.40/ha
Annual meadow grass	£27.74/ha per application.
Black grass	£52.00/ha (spring control).
Bromes	£41.50/ha
Desiccant	£6.80/ha

(d) Other crop expenses

For baling straw, costs for net wrap at £1.10/bale for large round straw bales average weight 220kg are included. Omit Other expenses costs if selling straw in the bout.

Additives can be used to preserve moist grain for feeding livestock. Cost will vary depending on product, length of storage period and moisture content at treatment. Alkaline grain treatments (for grain harvested at 16-22% moisture for long term storage), add £35/t. Propionic acid treatments (for grain harvested at 18-20% moisture for long term storage), add £15-20/t. Prices are subject to change at short notice. Treatment costs exclude grain processing and straw tubelining (see pages 380-381 for these costs).

Wheat - Winter

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	7.0	(2.8)	8.5	(3.4)	10.0	(4.0)
Straw yield: t/ha (t/acre)	3.2	(1.3)	4.2	(1.7)	5.2	(2.1)
OUTPUT			**£/ha (acre)**			
Grain @ £195/t*	1,365		1,658		1,950	
Straw @ £110/t	352		458		572	
	1,717	(695)	2,116	(856)	2,522	(1,021)
VARIABLE COSTS						
Seed @ £536/t	123		123		123	
Fertiliser	334		334		334	
Sprays	172		172		172	
Other expenses	16		21		26	
	645	(261)	650	(263)	655	(265)
GROSS MARGIN	1,072	(434)	1,466	(593)	1,867	(756)
GRAIN PRICE SENSITIVITY						
£175 /t	932	(377)	1,296	(524)	1,667	(675)
£210 /t	1,177	(476)	1,593	(645)	2,017	(816)
£225 /t	1,282	(519)	1,721	(696)	2,167	(877)

* Feed price (milling premium £15-40/t, biscuit premium £5-15/t)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm spot price at 15% moisture content and average quality. Straw sold baled, ex-farm price estimate for arable areas.

Wheat - Spring

PHYSICAL DATA

(a) Seed

Certified seed second generation (C2) sown at 220 kg/ha (1.75 cwt/acre).

(b) Fertiliser

150 : 52 : 71 kg/ha N : P_2O_5 : K_2O (136 : 42 : 57 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides One application for spring germinating broadleaved weeds.

Fungicides Two applications for leaf diseases at GS31-32 and GS39-49.

Additional sprays to the basic programme could include:

Mildew £15.50/ha

Wild oats £29.25/ha

Desiccant £6.80/ha

(d) Other crop expenses

For baling straw, costs for net wrap at £1.10/bale for large round straw bales average weight 220kg are included. Omit Other expenses costs if selling straw in the bout.

Additives can be used to preserve moist grain for feeding livestock. Cost will vary depending on product, length of storage period and moisture content at treatment. Alkaline grain treatments (for grain harvested at 16-22% moisture for long term storage), add £35/t. Propionic acid treatments (for grain harvested at 18-20% moisture for long term storage), add £15-20/t. Prices are subject to change at short notice. Treatment costs exclude grain processing and straw tubelining (see pages 380-381 for these costs).

Wheat - Spring

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	4.5	(1.8)	6.5	(2.6)	8.5	(3.4)
Straw yield: t/ha (t/acre)	2.5	(1.0)	3.6	(1.4)	4.7	(1.9)
OUTPUT			**£/ha (acre)**			
Grain @ £195/t*	878		1,268		1,658	
Straw @ £110/t	273		394		515	
	1,151	(466)	1,662	(673)	2,173	(879)
VARIABLE COSTS						
Seed @ £635/t	140		140		140	
Fertiliser	257		257		257	
Sprays	63		63		63	
Other expenses	12		18		23	
	472	(191)	478	(193)	483	(196)
GROSS MARGIN	679	(275)	1,184	(480)	1,690	(683)
GRAIN PRICE SENSITIVITY						
£175 /t	588	(238)	1,054	(427)	1,519	(615)
£210 /t	746	(302)	1,281	(518)	1,817	(735)
£225 /t	813	(329)	1,379	(558)	1,944	(787)

* Feed price (milling premium £15-40/t, biscuit premium £5-15/t)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm spot price at 15% moisture content and average quality. Straw sold baled, ex-farm price estimate for arable areas.

Barley - Winter

PHYSICAL DATA

(a) Seed

Certified seed second generation (C2) sown at 220 kg/ha (1.75 cwt/acre). Alternatively, hybrid 6 row sown at 145 kg/ha (1.16cwt/ac). Conventional seed price used.

(b) Fertiliser

180 : 67 : 83 kg/ha N : P_2O_5 : K_2O (144 : 54 : 66 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides Autumn residual herbicide to control annual meadow grass and broad leaved weeds and one herbicide in spring.

Fungicides Three fungicide applications at GS25-30, GS31 and GS49 for rhynchosporium, mildew and other leaf diseases.

Additional sprays to the basic programme could include:

Wild oats £32.67/ha

Aphids £6.51/ha

Desiccant £6.80/ha

(d) Other crop expenses

For baling straw, costs for net wrap at £1.10/bale for large round straw bales average weight 220kg are included. Omit Other expenses costs if selling straw in the bout.

Additives can be used to preserve moist grain for feeding livestock. Cost will vary depending on product, length of storage period and moisture content at treatment. Alkaline grain treatments (for grain harvested at 16-22% moisture for long term storage), add £35/t. Propionic acid treatments (for grain harvested at 18-20% moisture for long term storage), add £15-20/t. Prices are subject to change at short notice. Treatment costs exclude grain processing and straw tubelining (see pages 380-381 for these costs).

Barley - Winter

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	6.0	(2.4)	7.5	(3.0)	9.0	(3.6)
Straw yield: t/ha (t/acre)	3.3	(1.3)	4.1	(1.7)	5.0	(2.0)
OUTPUT			**£/ha (acre)**			
Grain @ £175/t*	1,050		1,313		1,575	
Straw @ £120/t	396		496		594	
	1,446	(585)	1,809	(732)	2,169	(878)
VARIABLE COSTS						
Seed @ £503/t	111		111		111	
Fertiliser	312		312		312	
Sprays	113		113		113	
Other expenses	17		21		25	
	553	(224)	557	(225)	561	(227)
GROSS MARGIN	894	(361)	1,252	(507)	1,608	(651)
GRAIN PRICE SENSITIVITY						
£155 /t	774	(313)	1,102	(446)	1,428	(578)
£190 /t	984	(398)	1,364	(552)	1,743	(705)
£205 /t	1,074	(435)	1,477	(598)	1,878	(760)

* Feed price (malting price approx. £10-20/t higher)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm spot price at 15% moisture content and average quality. Straw sold baled, ex-farm price estimate for arable areas.

Barley - Spring

PHYSICAL DATA

(a) Seed

Certified seed second generation (C2) sown at 190 kg/ha (1.51 cwt/acre).

(b) Fertiliser

130 : 52 : 71 kg/ha N : P_2O_5 : K_2O (104 : 42 : 57 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides Post emergence herbicide to control broadleaved weeds.

Fungicides Two applications at GS31 and GS45 for rhynchosporium, mildew and other leaf diseases.

Additional sprays to the basic programme could include:

Mildew £14.50/ha

Wild oats £26.00/ha

Aphids £6.51/ha

Desiccant £6.80/ha

(d) Other crop expenses

For baling straw, costs for net wrap at £1.10/bale for large round straw bales average weight 220kg are included. Omit Other expenses costs if selling straw in the bout.

Additives can be used to preserve moist grain for feeding livestock. Cost will vary depending on product, length of storage period and moisture content at treatment. Alkaline grain treatments (for grain harvested at 16-22% moisture for long term storage), add £35/t. Propionic acid treatments (for grain harvested at 18-20% moisture for long term storage), add £15-20/t. Prices are subject to change at short notice. Treatment costs exclude grain processing and straw tubelining (see pages 380-381 for these costs).

Barley - Spring

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	4.0	(1.6)	5.5	(2.2)	7.5	(3.0)
Straw yield: t/ha (t/acre)	2.1	(0.8)	2.9	(1.2)	3.9	(1.6)
OUTPUT			**£/ha (acre)**			
Grain @ £175/t*	700		963		1,313	
Straw @ £120/t	250		343		468	
	950	(384)	1,306	(529)	1,781	(721)
VARIABLE COSTS						
Seed @ £543/t	103		103		103	
Fertiliser	235		235		235	
Sprays	65		65		65	
Other expenses	10		14		20	
	413	(167)	417	(169)	423	(171)
GROSS MARGIN	537	(217)	889	(360)	1,359	(550)
GRAIN PRICE SENSITIVITY						
£155 /t	457	(185)	778	(315)	1,208	(489)
£190 /t	597	(242)	971	(393)	1,471	(595)
£205 /t	657	(266)	1,053	(426)	1,583	(641)

* Feed price (malting price approx. £15-50/t higher)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm spot price at 15% moisture content and average quality. Straw sold baled, ex-farm price estimate for arable areas.

Oats - Winter

PHYSICAL DATA

(a) Seed

Certified seed second generation (C2) sown at 190 kg/ha (1.51 cwt/acre).

(b) Fertiliser

140 : 53 : 104 kg/ha N : P_2O_5 : K_2O (112 : 42 : 83 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides	Autumn residual herbicide to control annual meadow grass and broad leaved weeds and one herbicide in spring.
Fungicides	Two sprays for mildew and crown rust at GS31 and GS49 including growth regulation.

(d) Other crop expenses

For baling straw, costs for net wrap at £1.10/bale for large round straw bales average weight 220kg are included. Omit Other expenses costs if selling straw in the bout.

Additives can be used to preserve moist grain for feeding livestock. Cost will vary depending on product, length of storage period and moisture content at treatment. Alkaline grain treatments (for grain harvested at 16-22% moisture for long term storage), add £35/t. Propionic acid treatments (for grain harvested at 18-20% moisture for long term storage), add £15-20/t. Prices are subject to change at short notice. Treatment costs exclude grain processing and straw tubelining (see pages 380-381 for these costs).

Oats - Winter

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	5.0	(2.0)	7.5	(3.0)	9.0	(3.6)
Straw yield: t/ha (t/acre)	3.2	(1.3)	4.7	(1.9)	5.7	(2.3)
OUTPUT			**£/ha (acre)**			
Grain @ £175/t*	875		1,313		1,575	
Straw @ £100/t	315		473		567	
	1,190	(482)	1,786	(723)	2,142	(867)
VARIABLE COSTS						
Seed @ £559/t	106		106		106	
Fertiliser	265		265		265	
Sprays	74		74		74	
Other expenses	16		24		28	
	461	(186)	469	(190)	473	(192)
GROSS MARGIN	729	(296)	1,317	(533)	1,669	(675)
GRAIN PRICE SENSITIVITY						
£155 /t	629	(255)	1,167	(472)	1,489	(603)
£190 /t	804	(325)	1,429	(578)	1,804	(730)
£205 /t	879	(356)	1,542	(624)	1,939	(785)

* Milling price

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm spot price at 15% moisture content and average quality. Straw sold baled, ex-farm price estimate for arable areas.

Oats - Spring

PHYSICAL DATA

(a) Seed

Certified seed second generation (C2) sown at 190 kg/ha (1.51 cwt/acre).

(b) Fertiliser

100 : 53 : 104 kg/ha N : P_2O_5 : K_2O (80 : 42 : 83 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides	Typical weed control for annual broadleaved weeds.
Fungicides	Two sprays at GS25-30 and GS49 for mildew and crown rust including growth regulator.

(d) Other crop expenses

For baling straw, costs for net wrap at £1.10/bale for large round straw bales average weight 220kg are included. Omit Other expenses costs if selling straw in the bout.

Additives can be used to preserve moist grain for feeding livestock. Cost will vary depending on product, length of storage period and moisture content at treatment. Alkaline grain treatments (for grain harvested at 16-22% moisture for long term storage), add £35/t. Propionic acid treatments (for grain harvested at 18-20% moisture for long term storage), add £15-20/t. Prices are subject to change at short notice. Treatment costs exclude grain processing and straw tubelining (see pages 380-381 for these costs).

Oats - Spring

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	4.0	(1.6)	5.5	(2.2)	7.5	(3.0)
Straw yield: t/ha (t/acre)	2.1	(0.8)	3.0	(1.2)	3.9	(1.6)
OUTPUT			**£/ha (acre)**			
Grain @ £175/t*	700		963		1,313	
Straw @ £100/t	210		300		390	
	910	(368)	1,263	(511)	1,703	(689)
VARIABLE COSTS						
Seed @ £580/t	110		110		110	
Fertiliser	222		222		222	
Sprays	61		61		61	
Other expenses	11		15		20	
	404	(163)	408	(165)	413	(167)
GROSS MARGIN	507	(205)	855	(346)	1,291	(522)
GRAIN PRICE SENSITIVITY						
£155 /t	427	(173)	745	(301)	1,140	(461)
£190 /t	567	(229)	937	(379)	1,403	(568)
£205 /t	627	(254)	1,020	(413)	1,515	(613)

* Milling price

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm spot price at 15% moisture content and average quality. Straw sold baled, ex-farm price estimate for arable areas.

Triticale

PHYSICAL DATA

(a) Seed
230 kg/ha (1.83 cwt/acre).

(b) Fertiliser
180 : 52 : 71 kg/ha N : P_2O_5 : K_2O (144 : 42 : 57 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides	Pre-emergence application.
Fungicides	Two sprays at GS31 and GS39-45 including growth regulation.

(d) Other crop expenses
For baling straw, costs for net wrap at £1.10/bale for large round straw bales average weight 220kg are included. Omit Other expenses costs if selling straw in the bout.

Triticale

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	4.0	(1.6)	6.0	(2.4)	8.0	(3.2)
Straw yield: t/ha (t/acre)	2.6	(1.1)	3.9	(1.6)	5.2	(2.1)
OUTPUT			**£/ha (acre)**			
Grain @ £185/t	740		1,110		1,480	
Straw @ £100/t	260		390		520	
	1,000	(405)	1,500	(607)	2,000	(809)
VARIABLE COSTS						
Seed @ £595/t	137		137		137	
Fertiliser	290		290		290	
Sprays	65		65		65	
Other expenses	13		20		26	
	505	(204)	512	(207)	518	(210)
GROSS MARGIN	495	(201)	989	(400)	1,482	(599)
GRAIN PRICE SENSITIVITY						
£165 /t	415	(168)	869	(352)	1,322	(535)
£200 /t	555	(225)	1,079	(437)	1,602	(648)
£215 /t	615	(249)	1,169	(473)	1,722	(697)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm spot price at 15% moisture content and average quality. Straw sold baled, ex-farm price estimate for arable areas.

Oilseed Rape - Winter

PHYSICAL DATA

(a) Seed

Oil	45%
Seed rate	Hybrid - 4kg/ha : Conventional - 5kg/ha Conventional seed price used.

(b) Fertiliser

200 : 49 : 38 + 75 kg/ha N : P_2O_5 : K_2O + SO_3
(160 : 39 : 30 + 60 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides	Pre-emergence herbicide to control annual meadow grass and broadleaved weeds.
Fungicides	Autumn and spring fungicides for sclerotinia, light leaf spot or phoma.
Desiccation	Desiccation, including the use of a pod-sealant, has largely replaced swathing. If swathing is used over desiccation, reduce spray costs by £14.00/ha. For swathing costs see page 380.

Additional sprays to the basic programme could include:

Slugs	£11.40/ha per application.
Sclerotinia	£55.69/ha (high risk situations)
Rape winter stem weevil and pollen beetle	£7.75/ha
Volunteer cereals	£10.68/ha
Mayweed	£28.35/ha

(d) Other crop expenses

Assuming straw has been chopped. If baling, include costs for net wrap at £1.10/bale for round straw bales, average weight 220 kg.

Oilseed Rape - Winter

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	3.0	(1.2)	4.0	(1.6)	5.0	(2.0)
Straw yield: t/ha (t/acre)	-	(0.0)	-	(0.0)	-	(0.0)
OUTPUT			**£/ha (acre)**			
Grain @ £400/t	1,200		1,600		2,000	
Straw @ £0/t	-		-		-	
	1,200	(486)	1,600	(648)	2,000	(809)
VARIABLE COSTS						
Seed @ £16/kg	80		80		80	
Fertiliser	290		290		290	
Sprays	164		164		164	
Other expenses	-		-		-	
	534	(216)	534	(216)	534	(216)
GROSS MARGIN	666	(270)	1,066	(432)	1,466	(593)
GRAIN PRICE SENSITIVITY						
£350 /t	516	(209)	866	(350)	1,216	(492)
£450 /t	816	(330)	1,266	(512)	1,716	(694)
£500 /t	966	(391)	1,466	(593)	1,966	(796)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm price including oil bonus. An average oil content of 43% has been assumed resulting in a bonus of 4.5% above the base price. The oil bonus comprises a 1.5% increase in the price for every 1% rise in oil content above 40%.

Oilseed Rape - Spring

PHYSICAL DATA

(a) Seed

Oil	45%
Seed rate	5 kg/ha

(b) Fertiliser

100 : 28 : 22 + 40 kg/ha N : P_2O_5 : K_2O + SO_3
(80 : 22 : 18 + 32 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides	Pre-emergence herbicide for problem weeds such as shepherds' purse.
Fungicides	One spray to control pollen beetle.
Desiccation	Desiccation has largely replaced swathing. If swathing is used over desiccation, reduce spray costs by £14.00/ha. For swathing costs see page 380.

Additional sprays to the basic programme could include:

Volunteer cereals	£10.68/ha
Sclerotinia	£48.40/ha
Pod sticker	£8.40/ha

(d) Other crop expenses

Assuming straw has been chopped. If baling, include costs for net wrap at £1.10/bale for round straw bales, average weight 220 kg.

Oilseed Rape - Spring

GROSS MARGIN DATA

GROSS MARGIN DATA						
Grain yield: t/ha (t/acre)	1.8	(0.7)	2.5	(1.0)	3.0	(1.2)
Straw yield: t/ha (t/acre)	-	(0.0)	-	(0.0)	-	(0.0)
OUTPUT			**£/ha (acre)**			
Grain @ £400/t	720		1,000		1,200	
Straw @ £0/t	-		-		-	
	720	(291)	1,000	(405)	1,200	(486)
VARIABLE COSTS						
Seed @ £27/kg	135		135		135	
Fertiliser	150		150		150	
Sprays	59		59		59	
Other expenses	-		-		-	
	344	(139)	344	(139)	344	(139)
GROSS MARGIN	376	(152)	656	(266)	856	(347)
GRAIN PRICE SENSITIVITY						
£350 /t	286	(116)	531	(215)	706	(286)
£450 /t	466	(189)	781	(316)	1,006	(407)
£500 /t	556	(225)	906	(367)	1,156	(468)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm price including oil bonus. An average oil content of 43% has been assumed resulting in a bonus of 4.5% above the base price. The oil bonus comprises a 1.5% increase in the price for every 1% rise in oil content above 40%.

Spring Field Beans

PHYSICAL DATA

(a) Seed
250 kg/ha (1.99 cwt/acre).

(b) Fertiliser
0 : 40 : 40 kg/ha N : P_2O_5 : K_2O (0 : 32 : 32 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides	Pre-emergence herbicide and control of annual meadow grass and broadleaved weeds.
Fungicide	Two applications to control chocolate spot and downy mildew.
Desiccation	Cost included.

(d) Other crop expenses
Additives can be used to preserve pulses for feeding livestock. Cost will vary depending on product used, length of storage period and moisture of pulses at treatment. For pulses harvested at 20% moisture for long term storage, add £9-13/t grain treated with propionic acid, excluding processing (see page 380 for processing costs).

Spring Field Beans

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	2.5	(1.0)	4.5	(1.8)	5.5	(2.2)
OUTPUT			**£/ha (acre)**			
Grain @ £225/t	563		1,013		1,238	
	563	(228)	1,013	(410)	1,238	(501)
VARIABLE COSTS						
Seed @ £600/t	150		150		150	
Fertiliser	70		70		70	
Sprays	157		157		157	
Other expenses	-		-		-	
	377	(153)	377	(153)	377	(153)
GROSS MARGIN	186	(75)	636	(257)	861	(348)
GRAIN PRICE SENSITIVITY						
£195 /t	111	(45)	501	(203)	696	(282)
£240 /t	223	(90)	703	(285)	943	(382)
£255 /t	261	(106)	771	(312)	1,026	(415)

Basis of data:

Sale price estimate 2025 harvest, November ex-farm price. Deductions for field beans, which do not meet minimum quality standards, can reduce the price considerably.

Spring Peas

PHYSICAL DATA

(a) Seed

250 kg/ha (1.99 cwt/acre).
White/Large Blue Compounding Pea

(b) Fertiliser

0 : 20 : 30 kg/ha N : P_2O_5 : K_2O (0 : 16 : 24 units/acre). See page 4 for more information on nutrient planning.

(c) Sprays

Herbicides	A pre-emergence herbicide to control annual and broadleaved weeds.
Fungicide	Two sprays at flowering for downy mildew and botrytis control.
Insecticide	Aphid control.
Desiccation	A desiccant is included.

(d) Other crop expenses

Additives can be used to preserve pulses for feeding livestock. Cost will vary depending on product used, length of storage period and moisture of pulses at treatment. For pulses harvested at 20% moisture for long term storage, add £9-13/t grain treated with propionic acid, excluding processing (see page 380 for processing costs).

Spring Peas

GROSS MARGIN DATA

Grain yield: t/ha (t/acre)	2.5	(1.0)	4.0	(1.6)	5.5	(2.2)
OUTPUT			**£/ha (acre)**			
Grain @ £245/t	613		980		1,348	
	613	(248)	980	(397)	1,348	(546)
VARIABLE COSTS						
Seed @ £640/t	160		160		160	
Fertiliser	38		38		38	
Sprays	120		120		120	
Other expenses	-		-		-	
	318	(129)	318	(129)	318	(129)
GROSS MARGIN	295	(119)	662	(268)	1,030	(417)
GRAIN PRICE SENSITIVITY						
£215 /t	220	(89)	542	(219)	865	(350)
£260 /t	332	(134)	722	(292)	1,112	(450)
£275 /t	370	(150)	782	(316)	1,195	(484)

Basis of data:

Sale price estimate for 2025 harvest, November ex-farm price. Deductions for protein peas, which do not meet minimum quality standards, can reduce the price considerably. Bad weather at harvest can result in very high loss levels.

Timothy - Hay, Greencut

PHYSICAL DATA

(a) System

As practised on the Carses of Stirling and Clackmannan.

(b) Yield

Average between 7 t/ha (2.8 t/acre) and 8 t/ha (3.2 t/acre) with some aftermath grazing (or alternatively round bale silage).

Price rises usually as the season progresses but hay also loses weight with storage - as much as 15% over a winter, depending upon the conditions of storage.

(c) Seed

Annual charge: assumes a 10-year sward life and that 'Basic' seed will be sown to keep open the option of a seed crop.

Seed rate: 13-18 kg/ha.

(d) Fertiliser

Standard practice would see only N applied annually, usually as sulphate of ammonia, supported by periodic dressings of phosphate and potash.

The fertiliser costs overleaf consider an application of the rates below.

See page 4 for more information on nutrient planning.

kg/ha (units/acre)	Average		Premium	
N	80	(64)	120	(96)
P_2O_5 (annual allocation)	40	(32)	50	(40)
K_2O	48	(38)	60	(48)

(e) Sprays

Annual nominal charge to cover a range of circumstances.

(f) Other crop expenses

Net wrap cost is costed on the basis of 5-6 round bales/t and assuming one roll of net will wrap 410 bales.

Timothy - Hay, Greencut

GROSS MARGIN DATA

Average yield: t/ha (acre)	7.0	(2.8)	8.0	(3.2)
OUTPUT		**£/ha (acre)**		
Hay (ex-field or early store) @ £150/t	1,050		1,200	
Aftermath grazing let @ £40/ha	40		40	
	1,090	(441)	1,240	(502)
VARIABLE COSTS				
Seed (annual charge)	13		13	
Fertiliser	156		216	
Sprays (annual charge)	6		6	
Other expenses	13		15	
	188	(76)	250	(101)
GROSS MARGIN	902	(365)	990	(401)

Stubble to Stubble Arable Operations

The costs of stubble to stubble operations for winter wheat, winter barley, spring barley and winter oilseed rape are illustrated below. These calculations should be adapted and adjusted for site specific circumstances.

Assumptions:

- Yield data taken from crop gross margins on pages 21, 25, 27 and 35.
- All straw is assumed to be baled.
- Contractors assumed to undertake all cultivation, sowing, crop maintenance, harvesting and carting to store. See pages 379-382 for contractor costs.
- Fuel cost itemised separately to contractors charges. Machinery fuel use (l/ha) and fuel cost on page 376-377.
- Drying costs based on costs on pages 382-383.

	Winter wheat	**Winter barley**	**Spring barley**	**Winter OSR**
Yield - grain (t /ha)	8.0	7.5	5.5	4.0
Yield - straw (t /ha)	4.2	4.1	2.9	-
Grain MC at harvest (%)	18	17	15	10
		£/ha		
Cultivation costs				
Plough and cultivate	138	138	138	138
Sow	42	42	42	42
Roll and destone	23	23	23	23
Spray	77	61	46	61
Fertilise	37	25	25	25
Fuel	53	51	50	51
	370	340	323	340
Harvest costs				
Harvest	109	109	109	101
Bale/stack	83	81	57	-
Carting	8	12	8	4
Dry grain	61	43	10	15
Fuel	17	15	13	9
	277	259	198	129
Total cost (£/ha)	**647**	**599**	**521**	**469**
Total cost (£/ac)	**262**	**242**	**211**	**190**
Cost per t grain (£/t)	**81**	**80**	**95**	**117**

Equivalent Grain Weights at Varying Moisture Contents

The formula for converting wet grain weight to dry grain weight is:

$$\text{Weight loss} = \frac{W_1 (M_1 - M_2)}{100 - M_2}$$

where: W_1 = starting weight of grain.
M_1 = starting moisture of grain.
M_2 = final moisture of grain.

This formula accounts only for weight change due to moisture loss only.

100t at	**Final moisture content %**								
Moisture Content %	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**
	Dried grain - t								
35	81.25	80.25	79.27	78.31	77.38	76.47	75.58	74.71	73.86
33	83.75	82.72	81.71	80.72	79.76	78.82	77.91	77.01	76.14
31	86.25	85.18	84.15	83.13	82.14	81.18	80.23	79.31	78.41
29	88.75	87.65	86.59	85.54	84.52	83.53	82.56	81.41	80.68
27	91.25	90.12	89.02	87.95	86.90	85.88	84.88	83.91	82.95
25	93.75	92.59	91.46	90.36	89.29	88.24	87.21	86.21	85.22
23	96.25	95.06	93.90	92.77	91.67	90.59	89.53	88.51	87.50
21	98.75	97.53	96.34	95.18	94.05	92.94	91.86	90.80	89.77
19	-	100.00	98.78	97.59	96.43	95.30	94.19	93.10	92.41
17	-	-	-	100.00	98.81	97.65	96.51	95.40	94.32
15	-	-	-	-	-	100.00	98.84	97.70	96.59

Further information on storage requirements for grain can be found on page 407, costs of grain storage are found on page 405, and costs of grain drying on page 382-383.

Futures and Options Markets

The futures markets offer a means to manage price risk in a wide range of agricultural commodities. In the UK, the most relevant markets are the UK LIFFE feed wheat futures (www.theice.com) and the Paris European Rapeseed futures and Milling Wheat futures (www.euronext.com). Contracts for futures (forward prices) and options (price insurance) are available in both of these markets. Further details on the market, lists of registered brokers and how to trade can be found at the website above.

On a global basis, the most important agricultural futures market is the Chicago Board of Trade which offers contracts on wheat, maize, oats, soyabeans, soyameal and others, see www.cmegroup.com. AHDB Cereals and Oilseeds has detailed market information on their website and also provides a guide to price risk management, futures and options.

See: https://ahdb.org.uk/cereals-oilseeds-markets