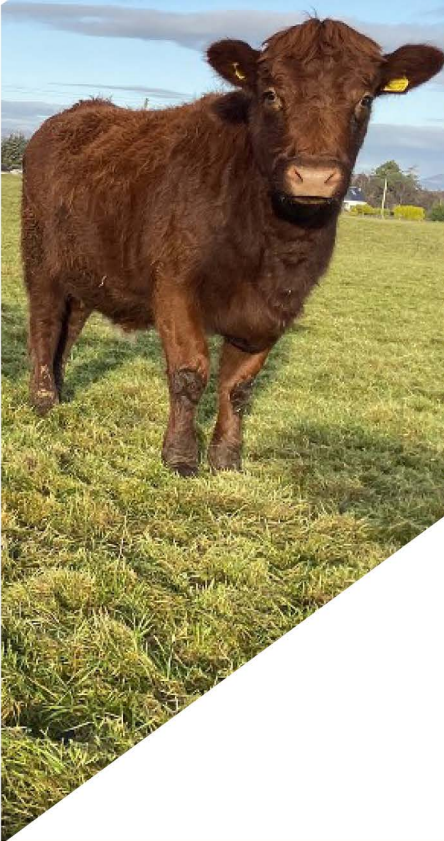




Farm
Advisory
Service

Beef Cattle



The UK reference
for farm business
management



Part of Scotland's
Rural College (SRUC)

Introduction

Markets and price drivers

The dynamic of the UK beef herd is altering, with BCMS cattle population data showing, annual decreases in the suckler breeding herd, however, it shows growth in production of beef from the dairy. Data from December 2023 shows the UK beef herd at 1.33 million head, a decrease of 4.4% since 2022. The dairy herd is also decreasing at 1.84 million head, a decrease of 0.5% since 2022. In 2023, there was a year-on-year decrease of beef sired calves registered by 66,100 head (2.5%), which is the largest decrease in five years. It is noticeable in this data, that beef sired calves being registered from dairy dams has increased.

The reduction in the national herd has largely happened due to low profitability in beef enterprises, due to high production costs. These have come around due to volatility of global markets due to world conflict and extreme weather events making inputs at a premium price. In addition, the cull beef price has been at a premium, which has allowed many producers to look at the efficiency of individual animals, which has resulted in culls of older and non-efficient animals.

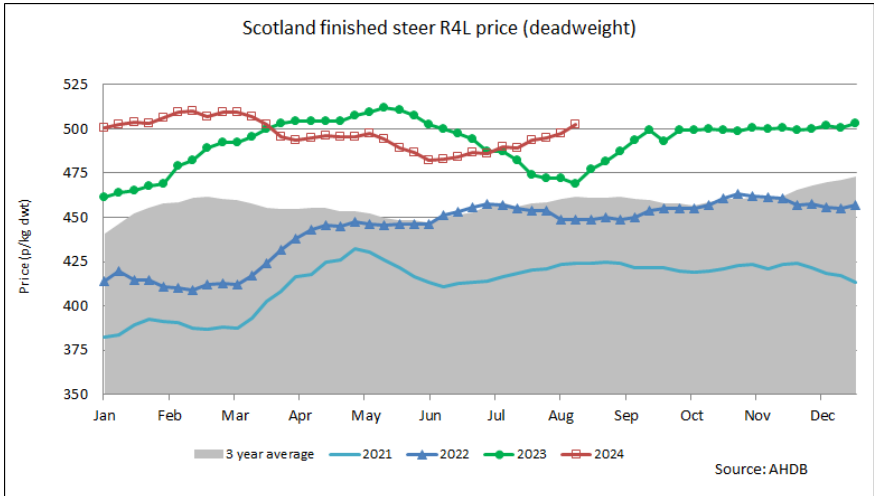
The beef price is largely dictated by domestic and global demand, supply and the price point, and how competitive our product is against other countries.

With this in mind, Scottish prices fluctuated through 2023. Prices were at a high level of 515-520p/kg in late spring / early summer 2023 then fell to a low of 460-470p/kg during August. Carcase weights fell in the first quarter of the year - a reflection on the dry weather and inflated feed and fertiliser costs. The increasing influence of dairy beef bred animals – registrations for beef calves out of the dairy herd have increased by 1.7% - will contribute to lower weights and cattle killing out lighter. To illustrate the rise of dairy beef, registrations of these calves has increased 77% in the last 10 years. In the prime market (12-30 months old), dairy beef cattle contributed to 35% of the slaughter in 2023; this accounted for 28% in 2019. The majority of Scottish processing capacity is now controlled by Irish companies.

The UK is still heavily reliant on imports of beef, particularly from Ireland. However, imports from Australia and New Zealand have also risen during 2023. The Irish and UK have aligned closer together, making our price competitive. The volume of beef imported to the UK has a major effect on the UK price. The UK also exports beef and has seen increasing levels to countries such as Hong Kong, Canada and the Philippines.

Volatility and lack of certainty impacts producer confidence especially considering beef production's long lead-time. Meeting carcase specification of the intended market is essential, and a short finishing period is likely to be most cost effective. Carcase balance issues also influence the producer price, for example, demand for higher value

steaks over the BBQ season can lift whole carcase value. Beef demand is equally sensitive to inflation, the competitiveness of beef imports and alternative proteins such as chicken.



In 2023, cull cow slaughter prices started ahead of 2022 levels, with an increase in demand for mince and a global shortage of manufacturing beef, the cull cow trade reached unprecedented levels. Many markets reported cull cow trade exceeding £2,500/head. Cow prices in 2024 have returned to more normal levels relative to prime cattle prices.

With few exceptions, beef is traded on the commodity spot market and therefore most producers cannot use forward contracts or other price levelling mechanisms as a risk management tool. There is now a great deal of interest in shortening supply chains and dealing with or close to the end consumer. While the whole beef industry can't do this, there are opportunities for some businesses to deal directly with their consumer and ensure both profitability and business resilience.

Marketing

The vast majority of prime cattle marketed in Scotland are marketed direct to the slaughterhouse and sold deadweight. However, a large proportion will be traded at some stage in their lives through the auction system. The live cattle auction provides a valued service, bringing many buyers and sellers together and creating genuine, healthy competition to buy livestock.

While some farmers sell all their cattle on one day, many seek to spread their risk by targeting several large sales per year. Price can be influenced by gaining feedback from buyers and selling the right type of cattle at the appropriate sales. Similarly, when selling direct to processors, a higher price might be achievable if a large number of in-

specification cattle can be delivered at pre-arranged times and/or agreed to be spread throughout the year.

Margins

The bottom-line contribution of cattle is highly sensitive to the sales price. With the current market system, farmers have very limited options to influence the price they receive. For most farmers, efficiency savings are the key to improving financial performance. Efficiency savings also bring about a reduction to the carbon footprint for individual farm businesses.

The most profitable suckler cow enterprises make a positive net margin before subsidy. Top performing suckler beef systems tend to rear more calves per cow, to heavier weights, using less purchased feed. To achieve this, grassland management is key. Furthermore, while fixed costs may be lower, they are also diluted by selling more kilos of beef. The best farmers target investment in infrastructure and equipment towards things that lead to cost savings.

Suckler cow margins were under pressure going into the 2022/23 winter with high fertiliser and feed costs. From early 2023 onwards, the prices paid for store cattle rose to a point where many sales averaged over 300p/kg. This increase in output will have helped the margins on many suckler enterprises.

The high cull cow price resulted in large numbers of cows being culled. Scotland now has less than 400,000 suckler cows, sitting at 394,709, which is a fall of 3.5% in the year.

This contraction of the breeding herd will continue to have ramifications for both store cattle availability and the supply of finished cattle to maintain critical mass in the country. Numbers look to tighten in the autumn as the reduced 2023 spring calf crop starts to dominate slaughtering. Finisher's margins have been under pressure this year, with prices behind 2023 levels. The high price of store cattle has reduced any possible improvement in the margin.

Other benefits

It is important to remember that the cows form part of a business. How the enterprise complements other parts of the business is also important. For example, the share and spread of demand for labour and machinery will affect the success of the enterprise mix in a business. Furthermore, well managed multiple enterprises can spread risk and improve cash flow, having additional and multiple sale dates.

Suckler cows play a vital role in managing upland grazings, providing benefit to biodiversity, landscape management and grazing quality. Mixed livestock grazing systems also contribute to reduced worm burdens for both cattle and sheep. Their manure is also an important source of nutrients for arable cropping as part of a crop rotation. Consequently, any enterprise should not be viewed in isolation.

Subsidies and support

The Scottish Suckler Beef Support Scheme (SSBSS), commenced in 2015. Payment is made on male and female calves, which are at least 75% beef bred, born on your holding and have been kept there for at least 30 days. For the 2023 Scheme year, the net payment rate per eligible calf on the mainland was £105.24 and £151.24 on the islands. Actual payment rates are determined by the number of calves claimed each year and the exchange rate for that year. In 2023, there were 76 fewer claims than in 2022, and 4% fewer calves, making the payment rate per calf increase. Payments are confirmed once applications are validated in the spring following the year of claim. From 2025 onwards, calves will only be eligible for a SSBSS payment if their dam has a calving interval of 410 days or less. Heifers' calves will be eligible provided they meet the other conditions of the scheme as for first calvers, no calving interval is established.

For further details on payments and the requirements of the SSBSS see Rural Aid Schemes section.

General Reference Data

Store cattle valuations

The sale value of store cattle can vary depending on time of sale. This variation has been removed for the gross margins.

The age and weight of calves at sale varies depending on season or month of calving - *be cautious when comparing spring and autumn calving herds.*

Note that an increasing share of fixed costs are attributable as the length of time trading stock spend on farm increases – this is true where other breeding or trading stock could have made use of the farm resources.

Foster calves

To reduce risk of disease, it is assumed that no foster calves are bought to replace dead calves. No cost for replacement calves has been included in the margins thus, if foster calves are bought, the appropriate adjustment should be made to the gross margin.

Liveweight to deadweight-price conversion

In order to calculate the deadweight price, divide the liveweight price by the killing out percentage (KO %). For example: 200 p/kg / 0.52 = 385 p/kg deadweight.

See quick reference table overleaf:

Liveweight Price (p/kg)	Killing out %					
	50%	52%	54%	56%	58%	60%
	Deadweight price (p/kg)					
200	400	385	370	357	345	333
202	404	388	374	361	348	337
204	408	392	378	364	352	340
206	412	396	381	368	355	343
208	416	400	385	371	359	347
210	420	404	389	375	362	350
212	424	408	393	379	366	353
214	428	412	396	382	369	357
216	432	415	400	386	372	360
218	436	419	404	389	376	363
220	440	423	407	393	379	367
222	444	427	411	396	383	370
224	448	431	415	400	386	373
226	452	435	419	404	390	377
228	456	438	422	407	393	380
230	460	442	426	411	397	383
232	464	446	430	414	400	387
234	468	450	433	418	403	390
236	472	454	437	421	407	393
238	476	458	441	425	410	397
240	480	462	444	429	414	400
242	484	465	448	432	417	403
244	488	469	452	436	421	407
246	492	473	456	439	424	410
248	496	477	459	443	428	413
250	500	481	463	446	431	417

Hill Suckler Cows

PHYSICAL DATA

	Spring Feb-Apr	Autumn Sep-Nov
Calving period		
Calves weaned per 100 cows put to the bull	90%	90%
Month of weaning	October	July
Days to weaning	220	270
Month of sale	October	October
Lwt of calves: at weaning (kg)	235	270
Lwt of calves: at sale/transfer (kg)	235	335
Herd life of cows (years)	7	7
Herd life of bulls (years)	4	4
Cow mortality (%)	1	1
Calf mortality (%)	4.5	4.5
Cow:bull ratio (:1)	35	35
Feeding/cow and calf (winter days):	210	210
silage (t)	5.5	7.5
straw (kg)	-	-
creep feed (kg) (incl. pre sale)	-	250
cow concentrates (kg)	50	200
cow cobs (kg)	50	50
grazing (hill/rough pasture)	>0.5	>0.6
Silage fertiliser (kg N/ha)	125	125
Silage:		
yield (t/ha from 1-cut)	20	20
DM quality (g/kg)	300	300
ME quality (MJ/kg DM)	10	10
Rough grazing (ha)	>0.6	>0.5
Silage & aftermath grazing (ha)	0.28	0.375
Housing system:		
Straw for general use incl. calving pens	0.33	0.42
Straw bedding (if in bedded courts) (t)	1.25	1.50

Based on bought-in straw.

* Amend bedding costs for cows outwintered or housed on straw.

Assumptions:

1. Grazing is assumed to be hill grazing with some improvements, carrying a maintenance charge of £50/grazing livestock unit.
2. SSBSS value is based on mainland payments, adjusted for living calves at 30 days of age. For further detail on this scheme see page 5 and Rural Aid Schemes section.

Hill Suckler Cows

GROSS MARGIN DATA

	Spring	Autumn
Calving period	Feb-Apr	Sep-Nov
OUTPUT	£/cow	£/cow
Calf sales (lwt)		
Steers		
350 kg @ 300 p	-	905
250 kg @ 300 p	635	-
Heifers		
320 kg @ 300 p		
220 kg @ 300 p		
Scottish Suckler Beef Support Scheme	97	97
	<hr/> 732	<hr/> 1002
<i>Less:</i> Replacement - cow	26	26
bull	26	26
	<hr/> 680	<hr/> 950
VARIABLE COSTS		
Cow concentrates @ £274/t	14	55
Cow cobs @ £326/t	16	16
Creep feed @ £260/t	-	65
Vet & medicines	37	37
Straw bedding @ £125/t (bought-in)	41	53
Commission, haulage & tags	49	60
	<hr/> 157	<hr/> 286
Gross Margin before forage	523	664
Forage variable costs:		
silage @ £207/ha	57	78
grazing @ £10/grazing livestock unit	11	15
	<hr/> 68	<hr/> 93
Total Variable Costs	225	379
GROSS MARGIN £/cow	<hr/> 455	<hr/> 571

Sensitivity-Change ±

10 p/kg in lwt sale price

Sale weight ± 10kg

Herd life ± 1 year

Change in Gross Margin/head (£)

21 30

27 27

12 12

Replacement Cost prices:

Cull cow £1,150

Cull bull £1,400

In-calf heifer (purch.)

Replacement bull

£1,250

£5,000

Upland Suckler Cows - Mainly Silage Diets

PHYSICAL DATA

Breed: Commercial cows bred to a range of bulls, mostly continental.

Calving period	Feb-Apr	May-Jun	Aug-Oct
Calves weaned	92%	92%	92%
Month of weaning	October	December	July
Days to weaning	220	200	300
Month of sale	October	April	October
Lwt of calves: at weaning (kg)	275	260	330
Lwt of calves: at sale/transfer (kg)	275	350	400
Herd life of cows (years)	7	7	7
Herd life of bulls (years)	4	4	4
Cow mortality (%)	1	1	1
Calf mortality (%)	4.5	4.5	4.5
Cow:bull ratio (:1)	35	35	35
Feeding/cow and calf (winter days):	180	180	200
silage (t)	4.8	6.9	7.5
straw (t)	0.3	0.2	0.35
calf concentrates (kg)	100	280	365
cow concentrates (kg)	100	150	200
Grazing fertiliser (kg N/ha)	125	125	125
Silage & aftermath fertiliser (kgN/ha)	200	200	200
Silage:			
yield (t/ha from 1-cut)	23	23	23
DM quality (g/kg)	300	300	300
ME quality (MJ/kg DM)	10.5	10.5	10.5
Overall forage area (ha):			
silage and aftermath grazing	0.24	0.25	0.38
grazing	0.30	0.30	0.34
	<u>0.54</u>	<u>0.55</u>	<u>0.72</u>

Housing system: In cubicles*

Straw for general use incl. calving pens	0.33	0.33	0.42
Straw bedding (if in bedded courts) (t)	1.25	1.75	1.50

Based on bought-in straw, adjust if home-grown.

* Amend bedding costs for cows overwintered or housed on straw.

Assumptions:

1. Mainly grass farm either buying in all straw and concentrates or growing small amount of cereals. May/June calves weaned in February when on silage diets.
2. SSBSS value is based on mainland payments, adjusted for living calves at 30 days of age. For further detail on this scheme see page 5 and Rural Aid Schemes section.

Upland Suckler Cows - Mainly Silage Diets

GROSS MARGIN DATA

Calving period	Feb-Apr	May-Jun	Aug-Oct
OUTPUT	£/cow	£/cow	£/cow
Calf sales (lwt - 92% crop)			
Steers			
290 kg @ 300 p	759	-	-
370 kg @ 300 p	-	966	-
420 kg @ 300 p	-	-	1104
Heifers			
330 kg @ 300 p			
380 kg @ 300 p			
Scottish Suckler Beef Support Scheme	99	99	99
	<u>858</u>	<u>1065</u>	<u>1203</u>
Less: Replacement - cow	41	41	41
bull	32	32	32
	<u>785</u>	<u>992</u>	<u>1130</u>
VARIABLE COSTS			
Cow concentrates @ £274/t	27	41	55
Calf concentrates @ £260/t	26	73	95
Vet & medicines	39	39	39
Feeding straw @ £125/t (bought-in)	38	25	44
Bedding straw @ £125/t (bought-in)	41	41	53
Commission, haulage, tags & levies	54	63	68
	<u>225</u>	<u>282</u>	<u>354</u>
Gross Margin before forage	<u>560</u>	<u>710</u>	<u>776</u>
Forage variable costs:			
silage @ £207/ha	50	52	79
grazing @ £177/ha	53	53	60
	<u>103</u>	<u>105</u>	<u>139</u>
Total Variable Costs	<u>328</u>	<u>387</u>	<u>493</u>
GROSS MARGIN £/cow	<u>457</u>	<u>605</u>	<u>637</u>
GROSS MARGIN £/ha	<u>846</u>	<u>1099</u>	<u>884</u>

Sensitivity-Change ±

	Change in Gross Margin/head (£)		
10 p/kg in lwt sale price	25	32	37
Sale weight ± 10kg	28	28	28
Herd life ± 1 year	16	16	16

Replacement cost prices:

Cull cow	£1,360	In-calf heifer (purch.)	£1,550
Cull bull	£1,575	Replacement bull	£6,000

Suckler Cows - Mainly Straw Diets

PHYSICAL DATA

Breed: Dairy-beef cross cows bred to range of bulls, mostly continental.

Calving period	Feb-Apr	May-Jun	Aug-Oct
Calves weaned (%)	92%	92%	92%
Month of weaning	October	December	July
Days to weaning	220	200	300
Month of sale	October	April	October
Lwt of calves: at weaning (kg)	275	260	330
Lwt of calves: at sale/transfer (kg)	275	350	400
Herd life of cows (years)	7	7	7
Herd life of bulls (years)	4	4	4
Cow mortality (%)	1	1	1
Calf mortality (%)	4.5	4.5	4.5
Cow:bull ratio (:1)	35	35	35
Feeding/cow and calf (winter days):	180	180	200
silage (t)	1.5	-	-
straw (t)	1.5	2.2	1.3
calf concentrates (kg)	100	330	415
cow concentrates (kg)	600	550	1,500
Grazing fertiliser (kg N/ha)	125	125	125
Silage & aftermath fertiliser (kg N/ha)	175	-	-
Silage:			
yield (t/ha from 1-cut)	23	23	23
DM quality (g/kg)	300	300	300
ME quality (MJ/kg DM)	10.5	10.5	10.5
Overall forage area (ha):			
silage and aftermath grazing	0.07	-	-
grazing	0.34	0.38	0.40
	<u>0.41</u>	<u>0.38</u>	<u>0.40</u>

Housing system: Straw bedding assumed*

Straw bedding (t)	0.75	1.05	0.90
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Based on home-grown straw, adjust if bought-in.

* Amend bedding costs for cows outwintered or housed elsewhere.

Assumptions:

1. Mixed farm growing sufficient grain to cover concentrate and straw feeding/bedding requirements. Only purchasing protein and minerals. May/June calves weaned earlier to reduce cow wintering costs. Small amount of silage made to cover extra grass growth in early season.
2. SSBSS value is based on mainland payments, adjusted for living calves at 30 days of age. For further detail on this scheme see page 5 and Rural Aid Schemes section.

Suckler Cows - Mainly Straw Diets

GROSS MARGIN DATA

Calving period	Feb-Apr	May-Jun	Aug-Oct
OUTPUT	£/cow	£/cow	£/cow
Calf sales (lwt - 92% crop)			
Steers			
290 kg @ 300 p	759	-	-
370 kg @ 300 p	-	966	-
420 kg @ 300 p	-	-	1090
Heifers			
260 kg @ 300 p			
330 kg @ 300 p			
370 kg @ 300 p			
Scottish Suckler Beef Support Scheme	99	99	99
	<u>858</u>	<u>1065</u>	<u>1189</u>
Less: Replacement - cow	41	41	41
bull	32	32	32
	<u>785</u>	<u>992</u>	<u>1116</u>
VARIABLE COSTS			
Cow concentrates @ £304/t (home-mix)	182	167	456
Calf concentrates @ £416/t (home-mix)	42	137	173
Feeding straw @ £100/t (home-grown)	150	220	130
Bedding straw @ £100/t (home-grown)	75	105	90
Vet & medicines	39	39	39
Commission, haulage & tags	54	63	68
	<u>542</u>	<u>731</u>	<u>956</u>
Gross Margin before forage	<u>243</u>	<u>261</u>	<u>160</u>
Forage variable costs:			
silage @ £207/ha	14	-	-
grazing @ £233/ha	79	89	93
	<u>93</u>	<u>89</u>	<u>93</u>
Total Variable Costs	<u>635</u>	<u>820</u>	<u>1049</u>
GROSS MARGIN £/cow	<u>150</u>	<u>172</u>	<u>67</u>
GROSS MARGIN £/ha	<u>369</u>	<u>452</u>	<u>167</u>

Sensitivity-Change ±	Change in Gross Margin/head (£)		
10 p/kg in lwt sale price	25	32	37
Sale weight ± 10kg	28	28	28
Herd life ± 1 year	16	16	16

Replacement cost prices:

Cull cow	£1,360	In-calf heifer (purch.)	£1,550
Cull bull	£1,575	Replacement bull	£6,000

Spring Calving Cows Producing 18 - 20 Month Finished Cattle

PHYSICAL DATA

Breed: Commercial cows bred to a range of bulls, mostly continental

	Steers	Heifers
Calving period	Feb-Apr	Feb-Apr
Calves weaned (%)	92%	92%
Month of weaning	October	October
Calves sold finished (%)	91%	91%
Sale weight (kg lwt)	650	600
Dead weight (kg dwt)	365	340
Weaning weight (kg lwt)	290	260
Herd life of cows (years)	7	7
Herd life of bulls (years)	4	4
Cow:bull ratio (:1)	35	35
Feeding/cow and calf (winter days):	180	180
silage (t)	5.0	5.0
straw bedding (t)	2.0	2.0
calf concentrates (kg) pre-weaning	100	100
cow concentrates (kg)	100	100
Forage area (ha):		
silage + aftermath	0.16	0.16
grazing	0.30	0.30
Overwintered calves:		
Feeding period 180 days, October-April		
Liveweight gain (kg)	144	144
Average daily liveweight gain (kg)	0.8	0.8
Feeding: barley/protein/minerals (t)	0.42	0.35
silage (t)	3.5	3.0
Silage area (ha)	0.11	0.10
Finishing cattle:		
Feeding period (days): at grass	145	145
housed	60	60
Liveweight gain	216	196
Daily liveweight gain: at grass	1	0.9
housed	1.2	1.1
Feeding: concentrates at grass (t)	0.20	0.25
barley/protein/minerals in house (t)	0.70	0.70
straw fed in house (t)	0.1	0.1
Grazing area (ha)	0.23	0.20

Housing system: Straw bedding assumed, home-grown*

* Amend bedding costs for cows overwintered or on slurry systems.

Assumption: SSBSS value as per note on page 12.

Spring Calving Cows Producing 18 - 20 Month Finished Cattle

GROSS MARGIN DATA

OUTPUT	Spring born	
	Steer £/cow	Heifer £/cow
Calf sales (dwt - 91% crop)		
365 kg @ 485 p	1,611	-
340 kg @ 485 p	-	1,501
Scottish Suckler Beef Support Scheme	98	98
	<u>1,709</u>	<u>1,599</u>
Less: Replacement - cow	41	41
bull	32	32
	<u>1,636</u>	<u>1,526</u>
VARIABLE COSTS		
Cow concentrates @ £274/t	27	27
Calf concentrates @ £260/t	26	26
Barley, protein & minerals @ £250/t housed	280	263
Barley, protein & minerals @ £250/t at grass	50	63
Feeding straw @ £100/t (home-grown)	10	10
Bedding straw @ £100/t (home-grown)	200	200
Vet & medicines	78	78
Commission, levies & haulage	106	102
	<u>777</u>	<u>769</u>
Gross Margin before forage	<u>859</u>	<u>757</u>
Forage variable costs:		
silage @ £317/ha	86	82
grazing @ £177/ha	94	89
	<u>180</u>	<u>171</u>
Total Variable Costs	<u>957</u>	<u>940</u>
GROSS MARGIN £/cow	<u>679</u>	<u>586</u>
GROSS MARGIN £/ha (acre)	<u>849</u> (344)	<u>771</u> (312)

Sensitivity-Change ±

10 p/kg in dwt sale price
Not bedded on straw
£10/t in straw price

Change in Gross Margin/head (£)

33 31
200 200
21 21

Replacement cost prices:

Cull cow £1,360
Cull bull £1,575

In-calf heifer (purch.) £1,550
Replacement bull £6,000

Overwintering Spring-Born Suckled Calves

PHYSICAL DATA

	Spring-born		Spring-born	
	Steer		Heifer	
Purchase/transfer date	October		October	
Sale/transfer date	April		April	
Feeding period (days)	180		180	
Liveweight: at purchase/transfer (kg)	290		260	
at sale/transfer (kg)	420		386	
Average daily liveweight gain (kg/day)	0.7		0.7	
Mortality (%)	1		1	
Feeding:				
diet basis	silage	straw	silage	straw
barley/protein/minerals (t)	0.30	0.75	0.25	0.75
silage (t)	3.5	-	3.0	-
straw (t) ME 6.5 MJ/kg DM	-	0.8	-	0.8
Silage area (ha)	0.11	-	0.10	-
Silage: yield (t/ha)	31	31	31	31
DM quality (g/kg)	300	300	300	300
ME quality (MJ/kg DM)	10.6	10.6	10.6	10.6
N-fertiliser (kg/ha)	220	220	220	220
Housing system: Straw bedding assumed*.				
Straw bedding (t)	0.5	0.3	0.5	0.3
Cost @ £100/t based on home grown straw - adjust if bought in.				
* Amend bedding costs if outwintered or on slurry systems.				

Assumptions:

1. Silage diet concentrates phased out by 4 weeks to turnout.
2. Silage could be costed on a per tonne basis for clamp silage instead of a per hectare basis to reflect the true cost of growing, making, storing and handling silage.

Overwintering Spring-Born Suckled Calves

GROSS MARGIN DATA

OUTPUT	Spring-born			
	Steer £/head		Heifer £/head	
Sale value (lwt - 1% mortality):				
420 kg @ 300 p	1247		-	
386 kg @ 300 p	-		1146	
Less: Weaned calf (lwt):				
290 kg @ 300 p	870		-	
260 kg @ 300 p	-		780	
	<u>377</u>		<u>366</u>	
VARIABLE COSTS				
<i>Diet basis</i>	<i>silage</i>	<i>straw</i>	<i>silage</i>	<i>straw</i>
Barley, protein & minerals @ £250/t	75	-	63	-
Barley, protein & minerals @ £250/t	-	188	-	188
Feeding straw @ £100/t (home-grown)	-	80	-	80
Bedding straw @ £100/t (home-grown)	50	30	50	30
Vet & medicines	34	34	34	34
Commission, levies & haulage	61	61	57	57
	<u>220</u>	<u>393</u>	<u>204</u>	<u>389</u>
Gross Margin before forage	<u>157</u>	<u>- 16</u>	<u>162</u>	<u>- 23</u>
Forage variable costs:				
silage @ £317/ha	35	-	32	-
Total Variable Costs	<u>255</u>	<u>393</u>	<u>235</u>	<u>389</u>
GROSS MARGIN £/head	<u>122</u>	<u>- 16</u>	<u>131</u>	<u>- 23</u>
GROSS MARGIN £/ha (acre)	<u>1,112 (450)</u>	<u>-</u>	<u>1,305 (528)</u>	<u>-</u>
Sensitivity-Change ±	Change in Gross Margin/head (£)			
10 p/kg in lwt sale price	42	42	39	39
10 p/kg in lwt purchase price	29	29	26	26
Not bedded on straw	50	30	50	30
£10/t in straw price	5	11	5	11

Finishing Spring-Born Suckled Calves Intensively at 13 Months

PHYSICAL DATA

	Spring-born	
	Steer	Bull
Purchase/transfer date	October	October
Sale date	June	May
Feeding period (days)	247	225
Liveweight: at purchase/transfer (kg lwt)	290	300
at sale (kg lwt)	612	630
Deadweight at sale (kg dwt)	337	353
Average daily liveweight gain (kg/day)	1.30	1.47
Mortality (%)	1	1
Feeding:		
barley/protein/minerals (t)	2.4	2.5
straw (t) ME 6.5 MJ/kg DM	0.3	0.3
Housing system: Straw bedding assumed*.		
Straw bedding (t)	0.50	0.45

Based on home-grown straw, adjust if bought-in.

* Amend bedding costs if on slurry based systems.

Finishing Spring-Born Suckled Calves Intensively at 13 Months

GROSS MARGIN DATA

OUTPUT	Steer £/head	Bull £/head
Sale value (dwt - 1% mortality):		
337 kg @ 485 p (612 kg lwt)	1,616	-
353 kg @ 475 p (630 kg lwt)	-	1,659
Less: Store purchase (lwt):		
290 kg @ 300 p	870	-
300 kg @ 270 p	-	810
	<u>746</u>	<u>849</u>
VARIABLE COSTS		
Barley, protein & minerals @ £260/t	624	650
Feeding straw @ £100/t (home-grown)	30	30
Bedding straw @ £100/t (home-grown)	50	45
Vet & medicines	34	34
Commission, levies & haulage	73	74
Total Variable Costs	<u>811</u>	<u>833</u>
GROSS MARGIN £/head	<u>-65</u>	<u>16</u>

Sensitivity-Change ±	Change in Gross Margin/head (£)	
10 p/kg in dwt sale price	34	35
10 p/kg in lwt purchase price	29	30
Not bedded on straw	50	45
£10/t in straw price	8	8

Finishing Year Old Autumn-Born Suckled Calves at 18 Months

PHYSICAL DATA

	Autumn-born	
	Steer	Heifer
Purchase/transfer date	October	October
Sale date	April	April
Feeding period (days)	180	180
Liveweight: at purchase/transfer (kg lwt)	420	380
Liveweight: at sale (kg lwt)	650	600
Deadweight at sale (kg dwt)	360	340
Average daily liveweight gain (kg/day)	1.3	1.2
Mortality (%)	1	1
Feeding:		
barley/protein/minerals (t)	0.96	0.67
kg/day	3.9	3.7
silage (t)	4.5	4.5
kg/day	25.1	25.1
Silage area (ha)	0.15	0.15
Silage: yield	31	31
DM quality (g/kg)	300	300
ME quality (MJ/kg DM)	10.6	10.6
Silage fertiliser (kg N/ha)	220	220
Housing system: Straw bedding assumed*.		
Straw bedding (t)	0.75	0.70

Based on home-grown straw, adjust if bought-in.

* For slatted court omit bedding costs.

Assumptions:

1. Calves from Upland/Lowground Suckler Cows – silage or straw diet.
2. Silage could be costed on a per tonne basis for clamp silage instead of a per hectare basis to reflect the true cost of growing, making, storing and handling silage.

Finishing Year Old Autumn-Born Suckled Calves at 18 Months

GROSS MARGIN DATA

	Steer £/head	Heifer £/head	
OUTPUT			
Sale value (dwt - 1% mortality):			
360 kg @ 485 p (650 kg lwt)	1,729	-	
340 kg @ 485 p (600 kg lwt)	-	1,633	
Less: Weaned calf (lwt):			
420 kg @ 300 p	1,260	-	
380 kg @ 300 p	-	1,140	
	469	493	
VARIABLE COSTS			
Barley, protein & minerals @ £260/t	250	174	
Bedding straw @ £100/t (home-grown)	75	70	
Vet & medicines	26	26	
Commission, levies & haulage	76	74	
	427	344	
Gross Margin before forage	42	149	
Forage variable costs:			
silage @ £317/ha	48	48	
Total Variable costs	475	392	
GROSS MARGIN £/head	- 6	101	
GROSS MARGIN £/ha (acre)	- 37	676	(274)
Sensitivity-Change ±	Change in Gross Margin/head (£)		
10 p/kg in dwt sale price	35	33	
10 p/kg in lwt purchase price	42	38	
Not bedded on straw	75	70	
£10/t in straw price	8	7	

Finishing Year Old Spring-Born Suckled Calves at 18 - 20 Months

PHYSICAL DATA

	Spring-born	
	Yearling steer	Yearling heifer
Purchase/transfer date	April	April
Sale date	December	December
Feeding period (days): at grass	140	140
housed	100	100
Liveweight: at purchase/transfer (kg lwt)	420	380
at housing (kg lwt)	532	492
at sale (kg lwt)	650	600
Deadweight at sale (kg dwt)	370	340
Average daily lwt gain: at grass (kg/day)	0.8	0.8
housed (kg/day)	1.2	1.1
Mortality (%)	0.3	0.3
Feeding:		
concentrates at grass (t)	0.20	0.25
barley/protein/minerals in house (t)	1.1	1.0
straw fed in house (t) ME 6.5 MJ/kg DM	0.1	0.1
Housing system: Straw bedding assumed*		
Straw bedding (t)**	0.25	0.20
Grazing area (ha)	0.23	0.20
Grazing fertiliser (kg N/ha)	125	125
Stocking rate at grass (animals/ha)	4.2	5.0

* Amend bedding costs if on slurry based systems.

** Based on home-grown straw, adjust if bought-in.

Finishing Year Old Spring-Born Suckled Calves at 18 - 20 Months

GROSS MARGIN DATA

	Steer £/head	Heifer £/head
OUTPUT		
Sale value (dwt - 0.3% mortality):		
370 kg @ 485 p (650 kg lwt)	1,789	-
340 kg @ 485 p (600 kg lwt)	-	1,644
Less: Yearling calf (lwt):		
420 kg @ 300 p	1260	-
380 kg @ 300 p	-	1140
	<u>529</u>	<u>504</u>
VARIABLE COSTS		
Barley, protein & minerals @ £250/t (at grass)	50	63
Barley, protein & minerals @ £250/t (housed)	265	250
Feeding straw @ £100/t (home-grown)	10	10
Bedding straw @ £100/t (home-grown)	25	20
Vet & medicines	19	19
Commission, levies & haulage	77	74
	<u>446</u>	<u>436</u>
Gross Margin before forage	<u>83</u>	<u>68</u>
Forage variable costs:		
grazing @ £233/ha	54	47
Total Variable costs	<u>500</u>	<u>483</u>
GROSS MARGIN £/head	<u>29</u>	<u>21</u>
GROSS MARGIN £/ha (acre)	<u>128</u> (52)	<u>107</u> (43)
Sensitivity-Change ±		
	Change in Gross Margin/head (£)	
10 p/kg in dwt sale price	37	34
10 p/kg in lwt purchase price	42	38
Not bedded on straw	25	20
£10/t in straw price	4	-

Beef Cattle Summer Finishing

PHYSICAL DATA

	Steer	Heifer
Liveweight at purchase (kg)	450	420
Liveweight at slaughter (kg lwt)	600	570
(kg dwt)	330	310
Cattle bought	mid-April	mid-April
Cattle sold	mid-September	mid-September
Mortality (%)	0.15	0.15
Finishing period (days)	150	150
Liveweight gain (kg)	150	150
Daily liveweight gain (kg)	1.0	1.0
Supplementary feed:		
barley, proteins & minerals (kg)	308	250
Grazing area (ha)	0.23	0.20
Grazing fertiliser N (kg/ha)	175	175
Feed levels per day:		
first 8 weeks (kg)	0	0
next 6 weeks (kg)	3	2
next 4 weeks (kg)	4	3

* Feed at this level to finish by mid-September. Many will house by this time if finishing later.

Assumptions:

In practice, a proportion of the following cattle may be sold as forward stores or housed for autumn finishing at heavier weights. If so, additional concentrate feeding will be required.

Beef Cattle Summer Finishing

GROSS MARGIN DATA

OUTPUT	Steer £/head	Heifer £/head
Sale value (dwt):		
330 kg @ 485 p (600 kg lwt)	1,601	-
310 kg @ 485 p (570 kg lwt)	-	1,504
Less: Purchased store calf in April (lwt):		
450 kg @ 300 p	1,350	
420 kg @ 300 p	-	1260
	<u>251</u>	<u>244</u>
VARIABLE COSTS		
Barley, protein & minerals @ £250/t	77	63
Vet & medicines	19	19
Commission, levies & haulage	73	70
	<u>169</u>	<u>152</u>
Gross Margin before forage	<u>82</u>	<u>92</u>
Forage variable costs:		
grazing @ £233/ha	54	47
Total Variable costs	<u>223</u>	<u>199</u>
GROSS MARGIN £/head	<u>28</u>	<u>45</u>
GROSS MARGIN £/ha (acre)	<u>123 (50)</u>	<u>227 (92)</u>

Sensitivity-Change ±

10 p/kg in dwt sale price	33	31
10 p/kg in lwt purchase price	45	42

Change in Gross Margin/head (£)

33	31
45	42

Calf Rearing Costs to 3 Months

PHYSICAL DATA

	Bucket fed	<i>Ad-lib</i> fed
Liveweight (kg): at birth	40	40
at sale, 3 months	110	115
Liveweight gain (kg/day)	0.78	0.83
Feeding period (days)	90	90
Mortality (%)	5	4
	kg	kg
Feeding*: Milk substitute	28	42
Calf concentrates	160	150
Hay	35	30
Bedding (straw)	0.2	0.2

* Homebred calves receive colostrum followed by whole milk up to 10 days of age.

Calf Rearing Costs to 3 Months

VARIABLE COST DATA

	Bucket fed	Ad-lib
VARIABLE COSTS		
Feed:		
milk substitute @ £2200/t	62	92
calf concentrate @ £360/t	58	54
hay (purchased) @ £105/t	4	3
	<hr/>	<hr/>
	124	149
Vet & medicines & tags	25	25
Bedding straw @ £100/t (home-grown)	20	20
	<hr/>	<hr/>
	45	45
	<hr/>	<hr/>
Total Variable Costs	169	194

Sensitivity-Change ±	Change in costs/head (£)	
£100/t in milk substitute price	2.80	4.20
£10/t in calf concentrate price	1.60	1.50

Assumptions:

1. Dairy calves do not receive SSBSS payments – eligible calves have to be 75% beef genetics.
2. Adjust straw cost if bought-in.

Intensive Finishing of Dairy Bred Bulls

PHYSICAL DATA

	Extensive	Intensive
Breed		
Liveweight at start (kg)	120	120
Feeding period (days)	440	340
Liveweight at slaughter (kg lwt)	600	600
Deadweight at slaughter (kg dwt)	312	312
Killing out percentage (%)	52	52
Overall daily liveweight gain (kg/day)	1.1	1.4
Mortality (%)	2	2
Feeding ¹ :		
110-120 kg liveweight/purchase to slaughter:		
concentrates at grass (t)	0.2	
barley/protein/minerals in house (t)	1.30	2.60
straw (t)	0.1	0.4
silage (t)	5.1	-

- ¹ For home bred calves see '*Calf rearing costs to 3 months*' for cost of feeding to 12-14 weeks (or 110-115kg lwt).
- ² If housed on slurry based systems omit bedding costs.
- ³ Adjust straw cost if bought-in.

Intensive Finishing of Dairy Bred Bulls

GROSS MARGIN DATA

	Extensive	Intensive
OUTPUT	£/head	£/head
Sale value (dwt - adj 3% mortality):		
312 kg @ 460 p	1,392	-
312 kg @ 460 p	-	1,392
<i>Less: Calf purchase (3 months):</i>		
@ £460	460	-
@ £460	-	460
	<u>932</u>	<u>932</u>
VARIABLE COSTS		
Concentrates @ £260/t	338	676
Feeding straw @ £100/t (home-grown)	10	40
Bedding straw @ £100/t (home-grown)	30	60
Vet & medicines	21	21
Commission, haulage & levies, etc.	68	68
Total Variable costs	<u>467</u>	<u>865</u>
GROSS MARGIN £/head (before forage)	<u>465</u>	<u>67</u>
Forage variable costs:		
Silage @£352/ha	34	-
Grazing @£252/ha	116	-
Total Variable costs	<u>617</u>	
GROSS MARGIN £/head	<u>315</u>	<u>67</u>
Sensitivity-Change ±	Change in Gross Margin/head (£)	
£10/t in concentrate price	13	26
10 p/kg in dwt sale price	30	30

Forage Based Finishing Dairy Steers at 24 Months

PHYSICAL DATA

	Beef
Breed	Cross
Liveweight at start (kg) ¹	120
Feeding period (days)	659
Liveweight at slaughter (kg lwt)	632
Deadweight at slaughter (kg dwt)	316
Killing out percentage (%)	50
Overall daily liveweight gain (kg/day)	0.8
Mortality (%)	3
Feeding:	
110-125 kg liveweight/purchase to slaughter:	
concentrates (2nd stage calf mix) (t)	0.15
concentrates (barley/protein/minerals) (t)	0.68
silage (t) - over two housing periods	6.4
Grazing area - over two summers (ha)	0.42
Silage area - for two housing periods (ha)	0.32
Silage:	
yield	20
DM quality (g/kg)	300
ME quality (MJ/kg DM)	10.6
Silage fertiliser (kg N/ha)	125
Housing system: Straw bedding assumed ² .	
Straw bedding ³ (t)	0.0

¹ For home bred calves see '*Calf rearing costs to 3 months*' for cost of feeding to 12-14 weeks (or 110-115kg lwt).

² If housed on slurry based systems omit bedding costs.

³ Adjust straw cost if bought-in.

Forage Based Finishing Dairy Steers at 24 Months

GROSS MARGIN DATA

	Beef Cross ³ £/head
OUTPUT	
Sale value (dwt - adj 3% mortality):	
316 kg @ 455 p	1,395
Less: Calf purchase :	
@ £460	<u>460</u>
	<u>935</u>
VARIABLE COSTS	
Concentrate calf mix @ £330/t	39
Concentrate barley blend @ £260/t	177
Bedding straw @ £100/t (home grown)	-
Vet & medicines	37
Commission, haulage & levies, etc.	<u>68</u>
Total Variable costs	<u>321</u>
Gross Margin before forage	<u>614</u>
Forage variable costs:	
silage @ £207/ha	66
grazing @ £177/ha	<u>74</u>
	<u>140</u>
Total Variable costs	<u>461</u>
GROSS MARGIN £/head ¹	<u>474</u>
GROSS MARGIN £/ha (acre) ²	<u>320</u>
 Sensitivity-Change ± Change in Gross Margin/head (£) (130)	
£10/t in concentrate price	7
10 p/kg in dwt sale price	30

* Unlike other beef finishing enterprises featured in the Farm

¹ Unlike other beef finishing enterprises featured in the Farm Management Handbook, spanning over two years effectively incurs double the fixed cost share, which is not included above.

² This enterprise produces a strong gross margin per head but the extensive nature of this enterprise dilutes its return per hectare.