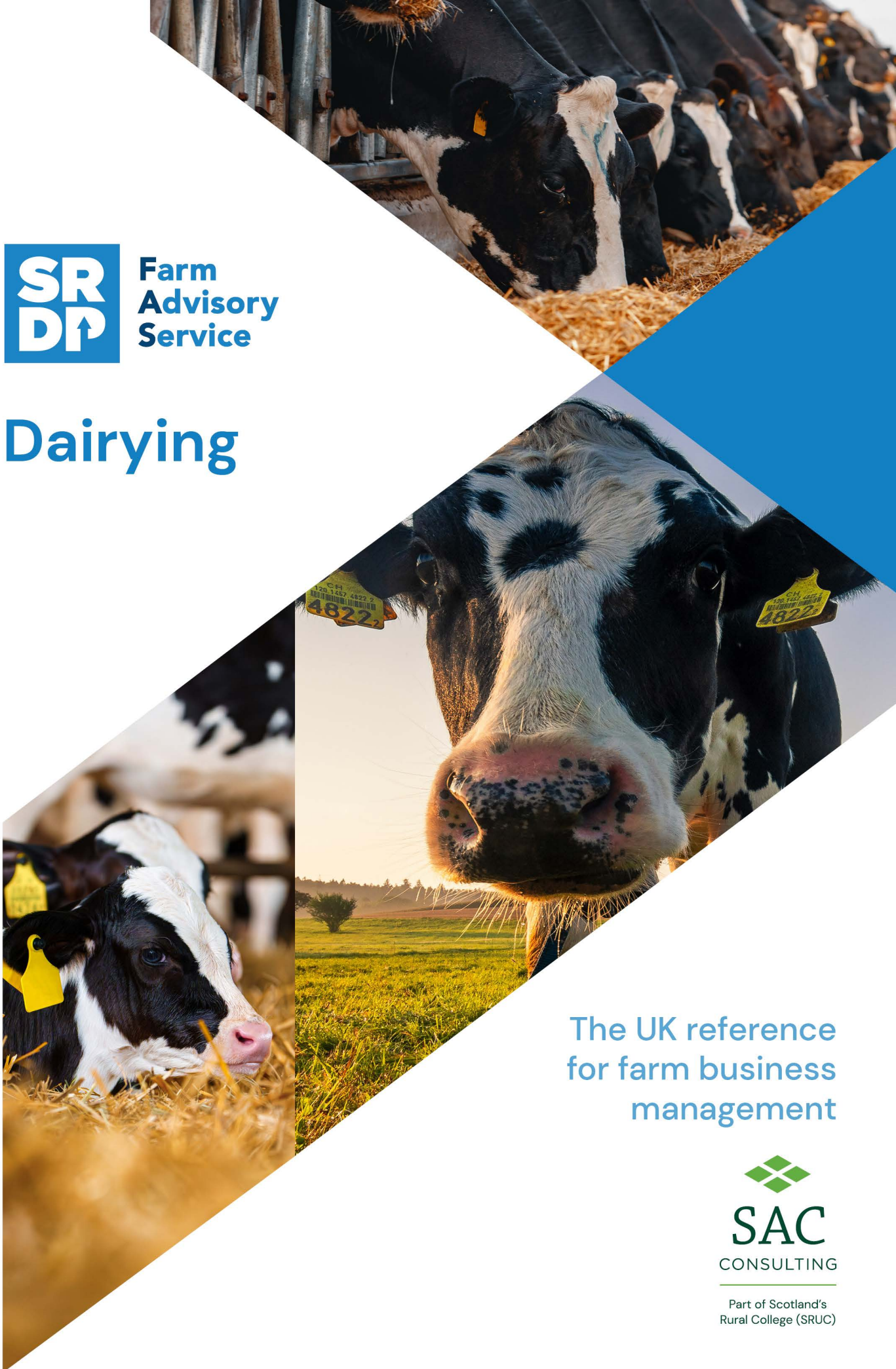




Farm  
Advisory  
Service

# Dairying



The UK reference  
for farm business  
management

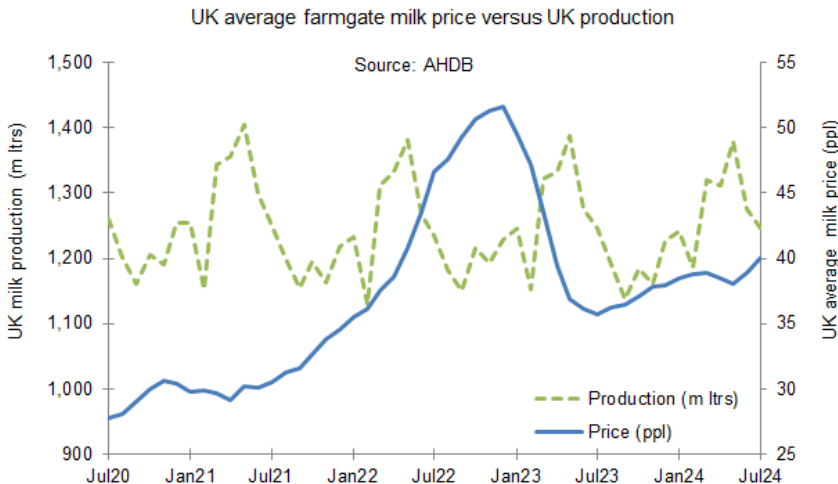


Part of Scotland's  
Rural College (SRUC)

# Introduction

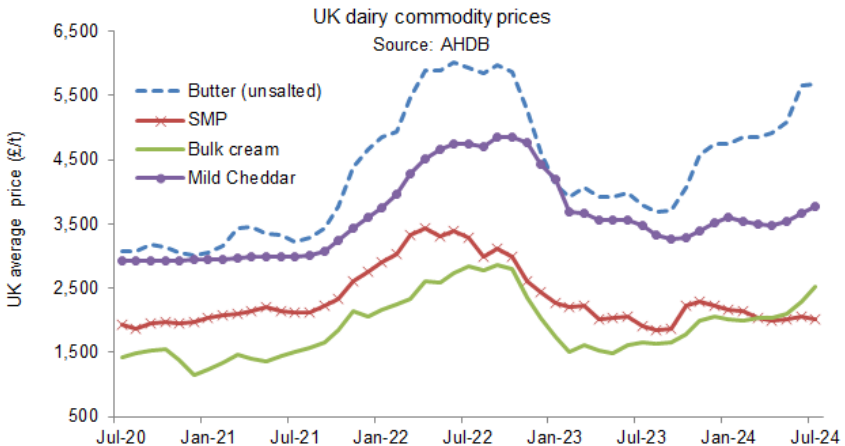
## Farm-gate milk prices and price drivers

The UK average farm-gate milk price has slowly risen from 36.43ppl in September 2023 to 41.06ppl in August 2024, a rise of 4.63ppl over the 12 month period. For the start of the 2024/25 milk year, UK milk production has been below the previous year on the back of a very wet spring, with cold weather lasting well into June, meaning a late turnout and poorer grass growth than normal. As a result, the spring flush was subdued, peaking at 44.99 million litres/day compared to 45.35 million litres/day in the previous year, helping keep milk prices firm and rising slightly into the summer months. UK milk supply for the 2023/24 milk year was 14,890 million litres, down 17 million litres from the previous year. The UK average farm-gate milk price declined initially at the start of the 2023/24 milk production year with a high of 39.45ppl in April 2023, and finishing the milk year at 38.84ppl for March 2024.



The UK farm-gate milk price is mainly driven by the commodities market. Dairy fats (butter and cream) have increased significantly in price over the 12-month period from July 2023 to July 2024, due to lower milk volumes in the autumn of 2023, both in the UK and on the continent, and overall lower global production. During this period butter has increased from £3,790/t in July 2023 to £5,680/t in July 2024. Cream has followed the butter trend, from a low of £1,644 in July 2023 to a high of £2,528/t in July 2024. The market for cheddar also increased, reaching £3,770/t in July 2024, from a low of £3,260/t in September 2023. Going into 2024, cheese prices started to rise as stocks became tight and there was a significant drop in Irish milk production on the back of low milk prices, poor weather for grazing conditions and new nitrate regulations. At the time of writing August 2024), the skim milk powder (SMP) price (July

2024) was £2,010/t, back £160/t from the start of 2024. The increase in commodity prices over the last 12 months has mainly been due to lower milk output, tightening stocks and increased consumer demand as inflation started to fall.



World milk supplies for April 2024 were 0.5% below the same month in 2023, with average daily deliveries of 832.5 million litres. According to Rabobank, recovery of global milk prices has been slower than expected as inflation remains above target in many countries and high interest rates are still impacting consumer spending. Global demand has still been weak and with increasing domestic production in China, their import demand has been reducing, particularly for SMP. China’s dairy imports are expected to be 8% lower than they were in 2023.

The US and South America have seen their dairy herd numbers decline due to low margins, and adverse weather conditions have impacted milk output in the EU (excess rain) and New Zealand (drought). It is predicted that global milk production from the key exporting regions will start to show some modest growth during the second half of 2024, after production being slightly below the previous year for the first half of 2024 because of sluggish global demand. Growth is expected to be driven by improved margins as the year progresses, with feed costs expected to reduce.

**Milk supply contracts**

All UK dairy farmers are contracted to supply milk to an individual milk purchaser/processor. A select number of dairy farmers are on retailer-aligned contracts. Farmers on these contracts receive a milk price based on a cost of production formula used by the individual retailer. As of July 2024, aligned milk contracts were in the region of 40ppl–43ppl for a liquid standard litre. The majority of non-aligned farm-gate milk prices are in the region of 37ppl-40ppl for a liquid standard litre, based on 4% butterfat

and 3.3% protein (as at June 2023) and are likely to remain firm into the autumn of 2024.

The price paid for milk sold for manufacturing purposes places more emphasis on compositional quality, with a standard manufacturing litre being based on 4.2% butterfat and 3.4% protein. These contracts typically pay around 1.3pppl more than the liquid standard litre. Depending on the contract, bonuses and penalties are awarded with milk composition and hygiene quality being either above or below the standard litre respectively. For hygiene quality, a standard litre is based on a bactoscan of 30,000/ml, somatic cell count (SCC) of 200,000/ml and thermodurics of 500/ml.

Additional bonuses for milk collections may include every other day collections, volume bonuses and flexible collection times.

### **Fixed price contracts**

From time to time, some milk purchasers offer fixed contracts, allowing producers to fix a certain proportion of their milk volume at a given price for a period of time. 'Futures contracts' allow farmers to reduce their exposure to market volatility with regards milk price and to plan ahead with purchasing key inputs such as feed and fertiliser. Futures broker StoneX Group Inc. calculates regular forward milk prices based on European milk futures contracts and currency exchange rates.

### **Cost of production**

For the 2023/24 milk year the cost of production was estimated at 43.4pppl by The Dairy Group. Despite variable costs easing over the last two years, fixed costs have continued to increase, due to higher labour costs, interest rates, and inflation. It is unlikely that the cost of production will fall below 40pppl anytime soon, meaning margins are extremely tight given that milk price is around 40pppl.

### **Outlook**

Domestic milk production (for GB) is predicted to reach 12.20 billion litres for the 2024/25 season, which is 1% lower than 2023/24 (AHDB Dairy). While farmgate prices have been rising slightly throughout the summer of 2024, input costs are still at historically high levels although inflation on input costs has eased recently. However, forage quality is in question, given the very wet spring and summer, and concerns around forage shortages and high prices for straw mean that winter feeding could be costly to maintain current levels of production. More milk price rises are needed to incentivise production, given that cost of production is currently higher than the price being paid by many processors. The extent of a return to positive margins (and when) is always difficult to predict, with increasing volatility in dairy markets from both domestic and global supply, as well as demand fluctuations, adverse weather patterns, and geopolitical events which can impact greatly on input costs.



## Lactation Curves

The table below is an example of a lactation curve for a cow yielding 7,000 litres and can be used for budgeting purposes.

Month	Yield each month for a cow yielding 7,000 litres											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
January	12.3	-	-	4.7	6.4	7.4	8.5	9.6	10.6	11.8	12.9	13.4
February	12.0	11.0	-	-	4.5	5.9	6.8	7.7	8.6	9.7	10.8	11.6
March	13.0	13.5	12.4	-	-	5.3	6.8	7.7	8.6	9.8	10.9	12.0
April	11.9	12.8	13.4	12.4	-	-	5.3	6.7	7.6	8.6	9.8	10.8
May	12.1	13.2	14.3	15.1	14.1	-	-	6.0	7.5	8.6	9.7	10.8
June	10.4	11.7	12.8	13.8	14.6	13.8	-	-	6.0	7.3	8.3	9.4
July	8.7	9.9	11.0	12.0	13.2	14.1	13.1	-	-	5.5	6.9	7.9
August	7.5	8.5	9.4	10.6	11.7	13.0	13.9	12.8	-	-	5.3	6.6
September	6.7	7.5	8.4	9.5	10.8	12.0	13.4	13.9	12.8	-	-	5.3
October	5.4	6.8	7.6	8.6	9.7	11.2	12.5	13.6	14.2	13.1	-	-
November	-	5.1	6.1	7.0	7.9	9.1	10.3	11.5	12.5	13.0	12.1	-
December	-	-	4.6	6.3	7.1	8.2	9.4	10.5	11.6	12.6	13.3	12.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

These figures are broadly applicable to other yield levels.

It should be noted that the figures are intended only as a general guide and that annual yield, milking frequency, lactation number, calving index, feeding regime and geographical area will all affect the actual curve obtained.

## Dairy Cow - Summary of Assumptions

### (a) Milk Price 2024

The following gross margins include four annual yield levels, based on average production of 1,000,000 litres per annum:

Litres /cow	Calving system	Contract type	Average price (ppl) *
5,000	Spring	Manufacturing	41.0
7,000	All year round	Manufacturing	41.0
8,500	All year round	Liquid	40.0
10,000	All year round	Liquid	40.0

\* Use price sensitivity to change gross margins to reflect current milk price.

Note that calving system and contract type are not specific to average yield per cow and it is not unusual for higher yielding herds to be on manufacturing contracts. Similarly, block calving herds (whether spring or autumn or both, are capable of much higher yields than 5,000 litres).

### (b) Feeding

The systems shown are all based on a grass silage feeding regime. As milk yield increases, forage quality becomes more critical. Although high milk yields can be achieved using conventional systems based on grass, grass silage and concentrates, the inclusion of a second forage, such as a wholecrop cereal or maize silage, will normally enhance intake and performance as will forage replacers such as draff or grainbeet along with other distillery by-products, fodder beet and potatoes. To avoid excessive concentrate use (target concentrate use per litre should be less than 0.4kg), good grassland management and well-preserved grass silage with high intake characteristics are key. Multi-cut silage, with 4 or 5 cuts/year can improve forage quality and reduce demand for purchased concentrates and protein sources.

Many different feeding systems exist. A TMR (Total Mixed Ration) is where cows receive 100% of their nutrition in a mixed ration fed in the feed trough. PMR (Partial Mixed Ration) is where cows are fed a base ration with additional concentrates fed at a rate depending on their level of milk production. Typically, feeding to yield is based on providing 0.45kg concentrate per litre over the base ration through the parlour, robot or out of parlour feeders.

Dairy farmers can replace part or all the purchased compound dairy cake or blends with home mixes using home-grown cereals and purchased straights. These mixes typically cost around £20/t less than purchased product, but they do, however, incur greater demand on labour and machinery and require more storage

capacity.

**(c) Other livestock expenses**

These are based on commercial dairy herds and include milk recording, sawdust, dairy detergents, and feeding straw.

# Dairy Cow - Spring Block Calving

## PHYSICAL DATA

Calving period	Spring
	<b>/cow</b>
Average annual yield (litres)	5,000
Herd life (years)	5.0
Calving interval (days)	370
Cow size (kg)	500
Feed requirements (kg):	
Silage	5,500
Concentrates	750
Concentrates fed (kg/litre)	0.15
Overall forage area (ha):	
Silage & aftermath grazing	0.11
Grazing	0.33
Total	<u>0.44</u>

### *Basis of data:*

1. A spring calving herd managed on a low input system. Calving between February and April. Maximum utilisation of grazed grass - 150 days winter feeding period.
2. A herd of 200 cows producing 1 million litres, assumed at 4.4% BF and 3.5% Protein.
3. The dry cow diet includes 165kg feeding straw (based on an inclusion of 3kg/hd/day over a 55 day dry period).
4. Calf sale/transfer value is an average of dairy heifers, males and beef cross calves at £164.75/hd then adjusted for calving interval and mortality. The calf value can be altered by £9.27 for each £10 difference in the sale/transfer price.
5. Cull cow sale price of £686.25/hd has been adjusted for herd life and mortality. The annual share can be altered by £1.95 for each £10 difference in cull cow price.
6. Heifer purchase/transfer price varies according to yield. A purchase price equating to 18ppl has been used. This has been adjusted for herd life and mortality. The annual share can be altered by £2.08 for each £10 difference in purchase/transfer price.



## Dairy Cow - Spring Block Calving

### GROSS MARGIN DATA

Calving period	Spring <b>/cow</b>
Average annual yield (litres)	5,000
<b>OUTPUT</b>	
Spring milk @ 41 p/litre	2,050
Calf value	153
Cull cow (annual share)	137
	<hr/>
	2,340
Heifer replacement (annual share)	187
	<hr/>
	2,153
<b>VARIABLE COSTS</b>	
Concentrates @ £315/t	236
AI	50
Vet & medicines	55
Other livestock expenses	100
	<hr/>
	441
Gross Margin before forage	<hr/>
	1,712
Forage variable costs:	
silage @ £607/ha	67
grazing @ £321/ha	106
Total Variable Costs	<hr/>
	614
GROSS MARGIN £/cow	<hr/>
	1,539
GROSS MARGIN £/forage ha	<hr/>
	3,498

### **Sensitivity-Change ±**

1 p/litre in milk price

£10/t in concentrate price

### **Change in Gross Margin/head (£)**

50

8

## Dairy Cow – Moderate Input

### PHYSICAL DATA

Calving period	All year
	<b>/cow</b>
Average annual yield (litres)	7,000
Herd life (years)	4.2
Calving interval (days)	380
Cow size (kg)	600
Feed requirements (kg):	
Silage	8,700
Concentrates	1,800
Concentrates fed (kg/litre)	0.26
Overall forage area (ha):	
Silage & aftermath grazing	0.17
Grazing	0.24
Total	<u>0.41</u>

#### *Basis of data:*

1. A moderate input system calving all year round; 200 days winter feeding period with cows at grass day and night during the grazing period.
2. A herd of 143 cows producing 1 million litres, assumed at 4.2% BF and 3.4% Protein.
3. The dry cow diet includes 115kg feeding straw (based on an inclusion of 3kg/hd/day over a 52 day dry period).
4. Calf sale/transfer value is an average of dairy heifers, males and beef cross calves at £166.00/hd then adjusted for calving interval and mortality. The calf value can be altered by £8.93 for each £10 difference in the sale/transfer price.
5. Cull cow sale price of £823.50/hd has been adjusted for herd life and mortality. The annual share can be altered by £2.34 for each £10 difference in cull cow price.
6. Heifer purchase/transfer price varies according to yield. A purchase price equating to 18ppl has been used. This has been adjusted for herd life and mortality. The annual share can be altered by £2.50 for each £10 difference in purchase/transfer price.

## Dairy Cow – Moderate Input

### GROSS MARGIN DATA

Calving period	All year <b>/cow</b>
Average annual yield (litres)	7,000
<b>OUTPUT</b>	
All year milk @ 41 p/litre	2,870
Calf value	148
Cull cow (annual share)	197
	<hr/>
	3,215
Heifer replacement (annual share)	314
	<hr/>
	2,901
<b>VARIABLE COSTS</b>	
Concentrates @ £315/t	567
AI	55
Vet & medicines	89
Other livestock expenses	100
	<hr/>
	811
Gross Margin before forage	<hr/>
	2,089
<b>Forage variable costs:</b>	
silage @ £607/ha	103
grazing @ £321/ha	77
Total Variable Costs	<hr/>
	991
GROSS MARGIN £/cow	<hr/>
	1,909
GROSS MARGIN £/forage ha	<hr/>
	4,657

#### **Sensitivity-Change ±**

1 p/litre in milk price  
£10/t in concentrate price

#### **Change in Gross Margin/head (£)**

70  
18

# Dairy Cow – Moderate/High Output

## PHYSICAL DATA

Calving period	All year
	<b>/cow</b>
Average annual yield (litres)	8,500
Herd life (years)	3.6
Calving interval (days)	390
Cow size (kg)	650
Feed requirements (kg):	
Silage	11,200
Concentrates	2,800
Concentrates fed (kg/litre)	0.33
Overall forage area (ha):	
Silage & aftermath grazing	0.22
Grazing	0.24
Total	<u>0.46</u>

### *Basis of data:*

1. A moderate input system calving all year round; 230 days winter feeding period. During the grazing period cows are housed at night and grazed during the day.
2. A herd of 118 cows producing 1 million litres assumed at 4.1% BF and 3.3% Protein.
3. The dry cow diet includes 160kg feeding straw (based on an inclusion of 4kg/hd/day over a 51 day dry period).
4. Calf sale/transfer value is an average of dairy heifers, males and beef cross calves at £203/hd then adjusted for calving interval and mortality. The calf value can be altered by £8.70 for each £10 difference in the sale/transfer price.
5. Cull cow sale price of £785/hd has been adjusted for herd life and mortality. The annual share can be altered by £2.71 for each £10 difference in cull cow price.
6. Heifer purchase/transfer price varies according to yield. A purchase price equating to 18ppl has been used. This has been adjusted for herd life and mortality. The annual share can be altered by £2.94 for each £10 difference in purchase/transfer price.

## Dairy Cow – Moderate/High Output

### GROSS MARGIN DATA

Calving period	All year <b>/cow</b>
Average annual yield (litres)	8,500
<b>OUTPUT</b>	
All year milk @ 40 p/litre	3,400
Calf value	135
Cull cow (annual share)	220
	<hr/>
	3,755
Heifer replacement (annual share)	450
	<hr/>
	3,305
<b>VARIABLE COSTS</b>	
Concentrates @ £315/t	882
AI	65
Vet & medicines	108
Other livestock expenses	116
	<hr/>
	1,171
Gross Margin before forage	<hr/>
	2,134
Forage variable costs:	
silage @ £607/ha	134
grazing @ £321/ha	77
Total Variable Costs	<hr/>
	1,382
GROSS MARGIN £/cow	<hr/>
	1,923
GROSS MARGIN £/forage ha	<hr/>
	4,181
 <b>Sensitivity-Change ±</b>	
1 p/litre in milk price	<b>Change in Gross Margin/head (£)</b> 85
£10/t in concentrate price	28

# Dairy Cow - High Output

## PHYSICAL DATA

Calving period	All year
	<b>/cow</b>
Average annual yield (litres)	10,000
Herd life (years)	3.0
Calving interval (days)	400
Cow size (kg)	650
Feed requirements (kg):	
Silage	12,600
Concentrates	3,800
Concentrates fed (kg/litre)	0.38
Overall forage area (ha):	
Silage & aftermath grazing	0.24
Grazing	0.00
Total	<u>0.24</u>

### *Basis of data:*

1. A high input, high output system calving all year round and housed for 365 days on a complete winter ration (assumes no access to grass or zero grazing).
2. A herd of 100 cows producing 1 million litres assumed at 4.0% BF and 3.2% Protein.
3. The dry cow diet includes 245kg feeding straw (based on an inclusion of 5kg/hd/day over a 49 day dry period).
4. Calf sale/transfer value is an average of dairy heifers, males and beef cross calves at £213/hd then adjusted for calving interval and mortality. The calf value can be altered by £8.49 for each £10 difference in the sale/transfer price.
5. Cull cow sale price of £785.07/hd has been adjusted for herd life and mortality. The annual share can be altered by £3.11 for each £10 difference in cull cow price.
6. Heifer purchase/transfer price varies according to yield. A purchase price equating to 18ppl has been used. This has been adjusted for herd life and mortality. The annual share can be altered by £3.15 for each £10 difference in purchase/transfer price.

## Dairy Cow - High Output

### GROSS MARGIN DATA

Calving period	All year <b>/cow</b>
Average annual yield (litres)	10,000
<b>OUTPUT</b>	
All year milk @ 40 p/litre	4,000
Calf value	172
Cull cow (annual share)	262
	<hr/> 4,434
Heifer replacement (annual share)	567
	<hr/> 3,867
<b>VARIABLE COSTS</b>	
Concentrates @ £315/t	1,197
AI	71
Vet & medicines	127
Other livestock expenses	132
	<hr/> 1,527
Gross Margin before forage	<hr/> 2,340
Forage variable costs:	
silage @ £607/ha	146
grazing @ £321/ha	-
Total Variable Costs	<hr/> 1,673
GROSS MARGIN £/cow	<hr/> 2,194
GROSS MARGIN £/forage ha	<hr/> 9,142

#### **Sensitivity-Change ±**

1 p/litre in milk price  
£10/t in concentrate price

#### **Change in Gross Margin/head (£)**

100  
38



## Replacement Heifer Rearing

### Fodder requirements of Holstein Friesian heifers

The following tables provide forage data to budget for the cost of replacement heifers.

		Approx. closing lwt (kg)	Heifer grazing (days)	Mainly silage ration		
				Conc (kg)	Straw (kg)	Silage (kg)
<b>Early autumn</b>						
<b>(1st Sept)/24 months</b>						
Birth		40	-	-	-	-
0-3	S-N	110	-	140	45	-
4-8	D-A	220	-	410	135	800
9-14	My-O	355	123	125	-	1,160
15-20	N-A	490	-	275	-	4,290
21-24	My-A	585	102	42	85	440
Total			<u>225</u>	<u>992</u>	<u>265</u>	<u>6,690</u>
<b>Forage (ha)</b>			0.21	-	-	0.13

<b>Early spring</b>						
<b>(1st April)/24 months</b>						
Birth		40	-	-	-	-
0-3	A-J	110	-	140	45	-
4-8	J-N	220	-	415	140	800
9-14	D-My	355	-	275	-	3,150
15-20	J-N	490	61	185	-	2,890
21-24	D-M	585	-	205	170	2,910
Total			<u>61</u>	<u>1,220</u>	<u>355</u>	<u>9,750</u>
<b>Forage (ha)</b>			0.06	-	-	0.19

		Approx. closing lwt (kg)	Heifer grazing (days)	Mainly silage ration		
				Conc (kg)	Straw (kg)	Silage (kg)
<b>Early autumn</b>						
<b>(1st Sept)/27 months</b>						
Birth		40	-	-	-	-
0-3	S-N	100	-	170	45	-
4-8	D-A	205	-	330	180	820
9-14	My-O	335	153	47	-	560
15-20	N-A	455	-	275	-	4,100
21-27	My-N	600	153	60	185	1,735
Total		-	306	882	410	7,215

**Forage (ha)**                      0.29                      -                      -                      0.18

<b>Early spring</b>						
<b>(1st April)/27 months</b>						
Birth		40		-	-	
0-3	A-J	100	-	170	45	-
4-8	J-N	205	-	335	185	820
9-14	D-My	335	50	200	-	1,980
15-20	J-N	455	122	60	-	1,630
21-27	D-M	600	60	155	63	4,565
Total			232	920	293	8,995

**Forage (ha)**                      0.23                      -                      -                      0.22

## Replacement Heifer Rearing

### PHYSICAL DATA

Time of birth	Early autumn	Early spring	Early autumn	Early spring
<b>Age at calving</b>	<b>24 months</b>	<b>24 months</b>	<b>27 months</b>	<b>27 months</b>
Ration type	Mainly silage	Mainly silage	Mainly silage	Mainly silage
Milk, whole	litre 0	0	0	0
Milk, substitute	kg 45	45	45	45
Concentrates:				
starter (proprietary)	kg 90	90	110	110
rearer	kg 360	360	325	325
cereal mix	kg 542	770	447	485
straw	kg 265	355	410	293
Forage: silage	kg 6,690	9,750	7,215	8,895
silage	ha 0.13	0.19	0.18	0.22
grazing	ha 0.21	0.06	0.29	0.23
Total forage	ha 0.34	0.25	0.47	0.45

*Basis of data:*

(a) Quality of forage:	ME (MJ/kg DM)	DM (g/kg)	'Substitution Rate'
Silage - 24m calving	11.0	300	3 - 3.5
Silage - 27m calving	10.5	300	3 - 3.5
Straw	6.3	850	1

- (b) The forage hectares shown are derived from the Grassland section for silage (310 kgN, 3 cuts for heifers calving at 24 months; 220 kgN, 2 cuts for heifers calving at 27 months and grazing (175 kgN). The hectares for silage include a proportion of aftermath grazing, which in turn has been deducted from the grazing requirement.
- (c) Intensification of grazing can save up to 25% of the area allocated.

## Replacement Heifer Rearing

### GROSS MARGIN DATA

Time of birth	Early autumn	Early spring	Early autumn	Early spring
<b>Age at calving</b>	<b>24 months</b>	<b>24 months</b>	<b>27 months</b>	<b>27 months</b>
Ration type	Mainly silage	Mainly silage	Mainly silage	Mainly silage
OUTPUT - Heifer at calving	1,480	1,480	1,480	1,480
Less heifer calf	163	163	163	163
	<u>1,317</u>	<u>1,317</u>	<u>1,317</u>	<u>1,317</u>
<b>VARIABLE COSTS</b>				
Milk, whole @ 40.5 p/litre	0	0	0	0
Milk, substitute @ £2200/t	99	99	99	99
Concentrates starters @ £360/t rearing @ £330/t	32	32	40	40
mainly cereal mix @ £260/t	119	119	107	107
straw @ £100/t	141	200	116	126
Vet & medicines	27	36	41	29
AI & other livestock expenses	47	47	47	47
	74	74	74	74
	<u>539</u>	<u>607</u>	<u>524</u>	<u>522</u>
	779	711	794	796
Gross margin before forage				
Forage variable costs:				
silage @ £607/ha, silage @ £486/ha,	79	115	88	108
grazing @ £233/ha	49	14	68	54
	<u>667</u>	<u>736</u>	<u>680</u>	<u>684</u>
Total Variable costs	667	736	680	684
GROSS MARGIN (birth to calving)	<u>651</u>	<u>582</u>	<u>638</u>	<u>634</u>
GROSS MARGIN/forage ha (acre)	1,913 (774)	2,326 (941)	1,355 (548)	1400 (567)

Note: The calf price of £200 and value of heifer sold of £1600 have been adjusted to allow for mortality (5-10%) and barren and reject heifers (5-10%) respectively.

## Contract Dairy Heifer Rearing

Contract rearing dairy heifers by a dedicated rearer allows the farmer to focus purely on the milking herd and reduces time and resources previously allocated to youngstock.

As achieving target body weight at different stages throughout the rearing process is the basis of efficient heifer rearing programmes, contracts are often based on certain targets being met, such as growth rate, age at first service and age at first calving. The aim should be for heifers calving at 22-24 months to reach 85-90% of mature body weight at calving.

Contract rearers tend to take delivery of heifers from between 2 to 4 months of age, returning them to the dairy farmer at 4 to 6 weeks before calving.

There are various types of contract:

- *Contract payment based on per animal per day.* This is where the farmer pays a flat rate fee per head per day based on the actual rearing costs.
- *Weight gain on a per kilogram basis contract.* The difference between the delivery weight to the rearer and the return weight to the farmer is divided by the number of days to determine the growth rate per day. The danger with this type of contract is that the rearer must avoid producing heifers that are over-conditioned.
- *Sell and buy-back contract.* The rearer buys the calves at an agreed price, with the farmer retaining the right to buy back the heifers 4 to 6 weeks prior to calving. The rearer retains control of the system but is responsible for all costs and losses incurred. The farmer runs the risk of buying back heifers at an age or weight that is not desirable in their system.
- *Labour and facilities only contract.* A contract where the farmer stipulates the rearing policy and covers all costs such as feed, semen, veterinary medicines, and transport costs (as well as any losses). The rearer only provides the labour and facilities.

Care must be taken to ensure that both the rearer and the dairy farmer's responsibilities are clearly defined, including performance targets and who covers what costs. The rearer should have insurance to cover any third-party claims involving the heifers in his care.

A summary of charges is given below. These are based on the rearer paying all costs associated with the heifers in their care, excluding transport.

	<b>Charge</b>	
	<b>£/day</b>	<b>£/month</b>
From 14 days to 3 months of age	1.88	56.50
From 3 months to pre-calving (at 22 months of age)	2.18	65.40

These are based on the requirements for a spring born heifer calving at 24 months.