FBS
Farm Business Survey

Department
for Environment
Food & Rural Affairs

FARM BUSINESS SURVEY

Dairy Production in England 2023/24

Farm Business Survey 2023/24

Dairy Farming in England

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It is important to note that all surveys are subject to sampling error as they are not measuring the whole population, the FBS is no exception. It is common practice to publish 95% confidence intervals and error bars alongside any published estimated figures to give the reader an indication of the size of the sampling error. These signify that we are 95% confident that this range contains the true value. For simplicity within these reports, the confidence intervals have not always been published. Readers should be aware that the figures calculated from the FBS data have a level of uncertainty around them and that all figures are estimates. Generally, the smaller the sample size the greater the sampling error and the less confidence we have in the estimates. For details on the FBS confidence intervals, please refer to Defra FBS publications;

https://www.gov.uk/government/collections/farm-business-survey

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Summary: Key Findings

The Dairying Sector

- During 2023/24, average milk prices in the UK decreased by 9.2 pence per litre (ppl), with a yearly average price of 37.5ppl. Milk prices remained relatively static throughout the year, reaching a low of 35.7ppl in July 2023 before increasing to 38.84ppl in March 2024; average price was still considerably higher than the average for 2021/22. (Figure 1.1).

- Alongside the reduction in milk price, key input prices of feed, fertiliser and energy also reduced; veterinary costs marginally increased (Figure 1.2).

- Average UK milk yield remained fairly static in 2023/24, increasing by only 13 litres to 8,148 litres per cow (lpc), returning to the high average yields observed in 2020/21 (Figure 1.4).

- The UK national herd size for 2023/24 reduced by approximately 6,000 cows to 1,839,000 cows (Figure 1.4).

- 306 English and Welsh producers left the industry from October 2023 to October 2024, a small reduction on the 332 producers that left the industry in the previous 12 months (Figure 1.5).

Farm level results – FBS England, Dairy Farms

- Farm Business Survey data for England from 2023/24 shows that the average Farm Business Income (FBI) from dairying was £409/ha, which at the average farm size equates to a FBI in the region of £64,622, representing a decrease in total FBI of almost 70% from 2022/23.

- Average FBI on conventional dairy farms in 2023/24 was £430/ha (£68,800 per farm), whilst on organic farms average FBI was £129/ha (£17,673 per farm), resulting in a decrease in total FBI per farm of almost 70% for conventional farms and over 76% for organic farms. This year saw a considerable narrowing in the gap between conventional and organic farms' FBI; at £430/ha, FBI/ha on conventional farms was only £301/ha higher than on organic farms.

- Management and Investment Income (MII) across all dairy farms decreased by £935/ha to £119/ha in 2023/24. This equates to an average MII of £18,802 per farm, compared with £164,424 in 2022/23.

Dairy Enterprise Results - FBS England, Dairy Farms

- Enterprise-level analysis shows that in 2023/24 the conventional herds' total dairy output decreased by £472/cow to £3,385/cow, with the large increase in yield (+608lpc) more than offset by a decrease in milk price of 8.8ppl. Organic herds' total dairy output reduced by £76/cow taking the figure to £2,302/cow; average yield increased by 183lpc but there was a decrease in milk price of 1.9ppl.

- Lowland and LFA herds saw a decrease in average milk price of 8.7ppl and 8.6ppl respectively; GM/cow decreased by £488 for lowland and £537 for LFA herds. Lowland herd yield per cow increased by 737 litres; the lower milk price coupled with higher variable costs resulted in the lower GM/cow. LFA herds saw a minimal decrease in yield (-19l); despite variable costs being slightly lower (down £27/cow) the decrease in milk price accounted for the lower GM/cow. In 2023/24, at the average herd sizes, the total farm GM for lowland herds saw a decrease to £413,574 compared with £525,326 in 2022/23, whilst the total LFA herd GM reduced to £237,183 compared with £320,544 in 2022/23 (Table 3.8).

Chapter 1: The Dairying Sector

1.1: Overview

- During 2023/24, average milk prices in the UK decreased by 9.2 pence per litre (ppl), with a yearly average price of 37.5ppl. Prices declined between April 2023 (39.44ppl) and July 2023 (35.7ppl), before seeing a gradual increase throughout the rest of the year to 38.84ppl in March 2024. Average prices remained considerably higher than the average for 2021/22 of 32.8ppl (Figure 1.1 - Average Annual Milk Prices (UK)).

- 2023/24 saw an overall decrease in input expenditure, with the exception of veterinary costs which rose marginally. Fertiliser expenditure saw a steep drop following the exceptionally high costs seen in 2022/23 (Figure 1.2 - Milk and Input Prices (UK)).

- UK annual milk production in 2023/24 decreased by 11 million litres to 14,890 million litres; the third consecutive decrease in annual milk production (Figure 1.3 - Annual Milk Production (UK)).

- Average UK milk yield increased by 13 litres in 2023/24 to 8,148 litres per cow (lpc), returning to the high average yield seen in 2020/21of 8147 litres per cow (lpc) (Figure 1.4 - Herd Size and Average Milk Yield (UK)).

- The UK national herd size reduced by 6,000 cows to 1,839,000 cows, continuing the downward trend seen since 2014/15 (Figure 1.4 - Herd Size and Average Milk Yield (UK)).

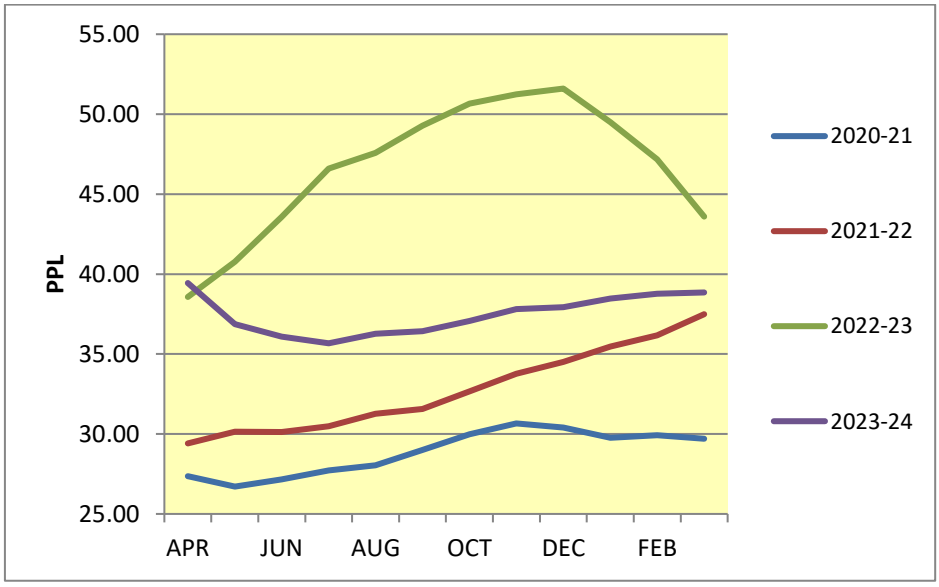
- In October 2024 there were approximately 306 fewer milk producers in England and Wales than a year earlier. Since October 2015, numbers have fallen by 2,601, a decrease of almost 27% (Figure 1.5 - Number of Milk Producers (England & Wales)).

Table 1.1: Average Annual Milk Prices (UK)

	2020/21	2021/22	2022/23	2023/24
Average annual price (ppl) (excluding bonus')	28.9	32.8	46.7	37.5

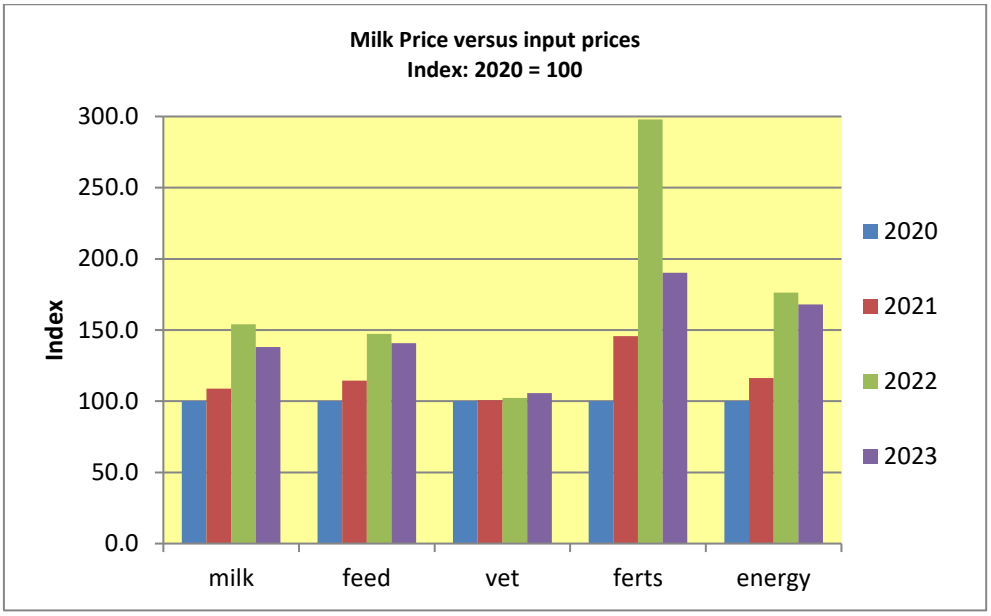
Source: Defra (2025a); Milk Price Surveys

Figure 1.1: Average Farmgate Milk Prices (UK)



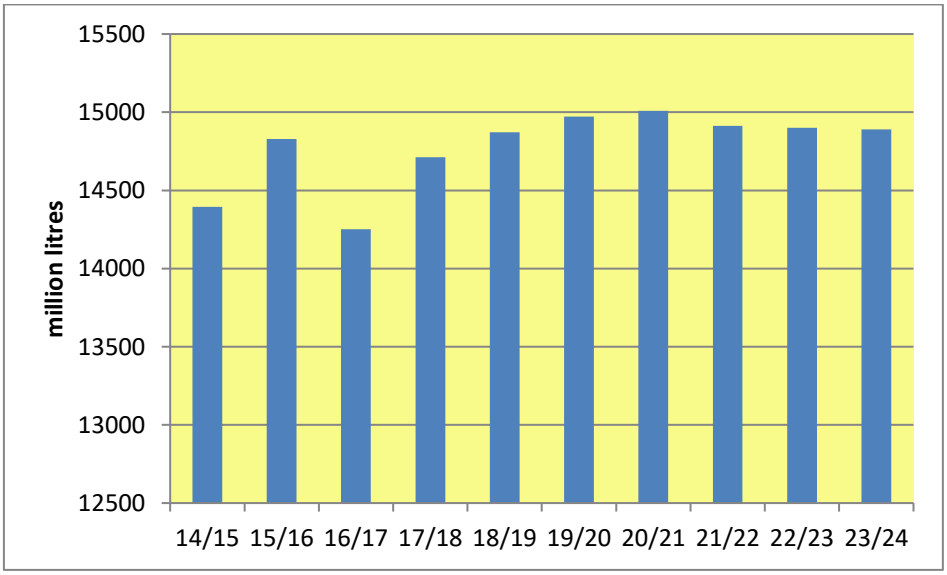
Source: Defra (2025b); Milk Price Surveys

Figure 1.2: Milk and Input Prices (UK)



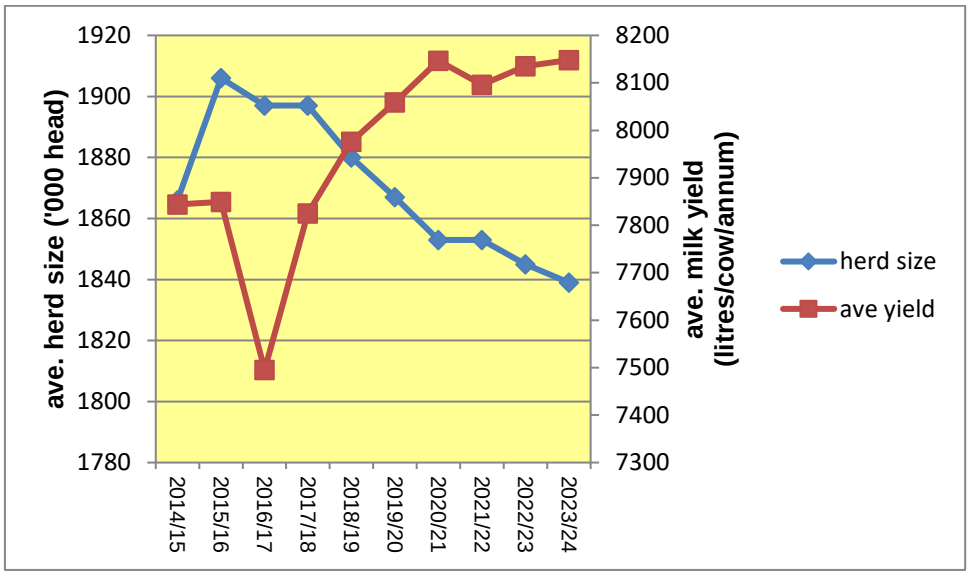
Source: Defra (2025c); Agriculture in the UK 2023

Figure 1.3: Annual Milk Production (UK)



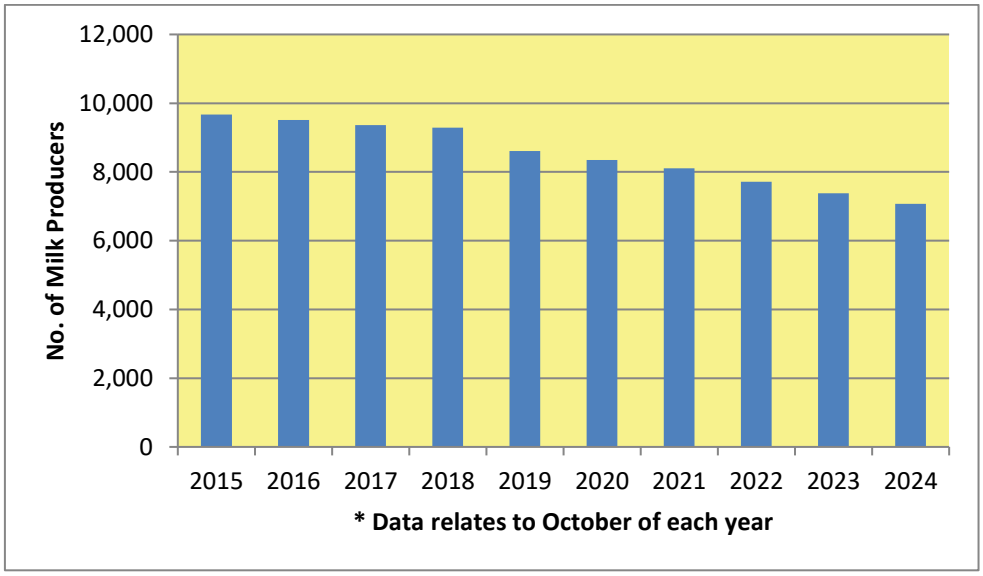
Source: AHDB Dairy (2024a)

Figure 1.4: Herd Size and Average Milk Yield (UK)



Source: AHDB Dairy (2024b) – based on milk year

Figure 1.5: Number of Milk Producers (England & Wales)



Source: AHDB Dairy (2024c)

1.2: Structure of Report

The above sections have described the market environment in which the dairy sector has been operating during the 2023/24 financial year, whilst making reference to the economic and market conditions over recent years. The remaining chapters of this report are as follows:

- Chapter 2 details the data source and data analysis undertaken
- Chapter 3 provides the results of the data analysis

Chapter 2: Data and Methodology

2.1: Data

The data used in this report are derived from the Farm Business Survey returns for England for those farms classed as Dairy Farms[1] and relate to the outputs, inputs and returns to each farm, together with total farm area and farm size data. The accounting period covered includes farms with a year end between 31st December 2023 and 30th April 2024. Table 2.1 below details the number of observations for the per hectare farm results, in each category by farm type (All, Lowland Conventional, Less Favoured Area (LFA) Conventional and Organic), by farm size categories and by lower and upper performance quartiles. Table 2.2 details the number of observations for the enterprise level results, in each category by farm type (All, Lowland Conventional, LFA Conventional and Organic), by herd size categories and by lower and upper performance quartiles.

From 2023/24, the classification of farms is based on 2017 standard output coefficients. The results published here are therefore not directly comparable with those published in earlier years which are based on previous standard output coefficients. For more information please see https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/365564/fbs-uk-farmclassification-2014-21oct14.pdf"

Table 2.1: Observations by Category: FBS Farm-Level Data 2023/24***

Category		All	Lowland Conventional	LFA Conventional[1]	Fully Organic [2]
Number of farms		243	175	44	24
Farm Size	<60 hectares		10*	**	
	60-120 hectares		54	16	
	>120 hectares		111	24	
Performance by ratio output:costs	Lower quartile		37	15*	
	Upper quartile		48	7*	

1.Farms on which dairy cows account for more than two thirds of the total Standard Output for the farm. A farm is classified as a Less Favoured Area (LFA) farm if 50 percent or more of its total area is in the LFA and a lowland farm if less than 50 per cent of its total area is in the LFA.

2. In-conversion organic farms are included in the conventional groups.

*Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures

** Insufficient data to publish results

*** farms with an area of less than 2.2ha have been excluded from the data set

Table 2.2: Observations by Category: Enterprise-Level Data 2023/24

Category		All	Lowland Conventional	LFA Conventional [1]	Fully Organic [2]
Number of farms		242	177	43	22
Farm Size	<80 cows		13*	6*	
	80-130 cows		33	12	
	>130 cows		131	25	
Performance by GM/cow	Lower quartile		39	8*	
	Upper quartile		49	17	

1. Farms on which dairy cows account for more than two thirds of the total Standard Output for the farm. A farm is classified as a Less Favoured Area (LFA) farm if 50 percent or more of its total area is in the LFA and a lowland farm if less than 50 per cent of its total area is in the LFA.

2. In-conversion organic farms are included in the conventional groups.
*Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures

2.2: Methodology

The farm and enterprise level data were weighted using the Farm Business Survey weights and the subsequent results presented per hectare (farm level analysis) or per cow (gross margin analysis) basis. Descriptive results with the mean (average) for each category are reported as detailed in Chapter 3. Farms with an area of less than 2.2ha have been excluded from the data set.

From 2023/24, the classification of farms is based on 2017 standard output (SO) coefficients. The results published here are therefore not directly comparable with those published in reports in earlier years which are based on previous SO coefficients. For more information please see https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/365564/fbs-uk-farmclassification-2014-21oct14.pdf"

Chapter 3: Results

3.1: Farm Level Results – FBS England, Dairy farms

- Farm Business Survey data from 2023/24 shows that the average Farm Business Income (FBI) from dairying was £409/ha, which at the average farm size equates to a FBI in the region of £64,622, representing a decrease in total FBI of almost 70% from 2022/23 whereby the estimated average FBI equated to £212,940 (Table 3.1).

- Average FBI on conventional dairy farms in 2023/24 was £430/ha (£68,800 per farm), whilst on organic farms average FBI was £129/ha (£17,673 per farm), resulting in a decrease in total FBI per farm of almost 70% for conventional farms and of over 76% for organic farms total FBI per farm (Table 3.1).

- 2023/24 saw a narrowing in the gap between conventional and organic farms FBI; at £430/ha, FBI/ha on conventional farms was £301/ha higher than on organic farms (£129/ha), compared with 2022/23 when FBI on conventional farms was £846/ha higher than organic farms (Table 3.1).

- Management and Investment Income (MII) across all dairy farms substantially decreased from £1,054/ha in 2022/23 to £119/ha in 2023/24. This equates to an average MII of £18,802 per farm, compared with £164,424 in 2022/23 (Table 3.1).

- Average MII on conventional dairy farms decreased from £1,116/ha in 2022/23 to £149/ha (£23,840 per farm) in 2023/24; on organic farms average MII decreased by more than £491/ha, from £206/ha to -£285/ha (-£39,045 per farm) (Table 3.1).

- Average FBI on lowland dairy farms in 2023/24 was £426/ha, a decrease of over 70% from £1,460/ha in 2022/23. For LFA dairy farms, average FBI decreased by almost 65% to £445/ha (from £1,271/ha in 2022/23) (Table 3.2). At average size, this equates to a FBI on a farm level for lowland dairy farms of £69,864 and LFA dairy farms of £64,970 in 2023/24.

- Table 3.3 illustrates the reliance on Farmer / Spouse labour typically found on the smaller lowland dairy farms, i.e. less than 60 hectares, resulting in a familiar, substantially lower MII than was achieved for the two larger size groups presented. The smaller size group achieved a MII of -£724/ha, compared with -£66/ha and £256/ha for the 60 to 120 hectares and greater than 120 hectares groups respectively.

- As previously reported, a regular feature of LFA income results shows that LFA dairy farms within the largest size group operated less intensive systems, achieving a lower total farm output per hectare, whilst incurring the lowest variable and fixed costs per ha. The respective FBIs at farm level for the 60 to 120 hectares and the greater than 120 hectares size groups are £55,845 and £80,047; there are insufficient farm numbers to present the less than 60ha group data (Table 3.4).

- Profitability analysis for lowland farms reveals a narrowing in the gap for FBI between the upper and lower quartiles in 2023/24; FBI for the upper quartile of lowland dairy farms was £1,185/ha (£2,426/ha in 2022/23) compared with -£817/ha (£325/ha in 2022/23) for the lower quartile. The upper quartile group has a larger average farm size at 188ha, compared to 119ha for the lower quartile, with the upper quartile showing a decrease in farmed area this year, whilst there was an increase for the lower quartile (Table 3.5).

- An analysis of FBI by LFA quartile groupings reveals a further narrowing in the gap in milk output, with the upper quartile achieving a milk output greater than the lower quartile by £923/ha (in comparison with £1095/ha greater in 2022/23). Variable costs for the lower quartile decreased by over 9% to £1,365/ha, whilst the upper quartile variable costs increased by almost 7% to £1,495/ha. The lower quartile group farm a substantially smaller average area and at the average farm size, the lower and upper quartiles achieved FBI returns of £1,900 and £188,100 respectively (Table 3.6), narrowing the gap in FBI compared with last year's figures of £45,720 and £337,060.

Table 3.1: Outputs, Inputs and Margins for All Farms, Conventional and Organic***

	All		Conventional		Organic	
	22/23	23/24	*22/23*	23/24	*22/23*	23/24
Number of farms	*259*	243	*230*	219	*29*	24
Area (ha)#	*156*	158	*158*	160	*130*	137
	£/ha		£/ha		£/ha	
Output						
Milk	*4784*	4115	*4975*	4274	*2172*	1963
Calf	*207*	221	*213*	229	*130*	117
Other Dairy	*0*	1	*0*	1	*2*	1
Herd Replacement	*-286*	-252	*-294*	-256	*-174*	-200
Total Dairy Output	***4706***	**4085**	***4894***	**4247**	***2131***	**1881**
Other Livestock	*680*	637	*693*	654	*511*	399
Other	*591*	496	*595*	490	*527*	582
Total Farm Output	***5976***	**5218**	***6182***	**5391**	***3168***	**2863**
Variable Costs						
Home-grown Concentrates	*82*	72	*79*	69	*129*	115
Purchased Concentrates	*1406*	1430	*1462*	1491	*634*	608
Coarse Fodder	*165*	130	*171*	133	*79*	87
Other Livestock Concentrates	*17*	22	*18*	23	*6*	5
Vet and Medicine	*122*	138	*127*	144	*57*	60
Other Livestock Costs	*366*	376	*376*	386	*234*	247
Seed	*41*	43	*43*	45	*21*	19
Fertiliser	*208*	188	*223*	200	*10*	21
Crop Protection	*39*	35	*41*	38	*0*	0
Other Crop Costs	*25*	30	*26*	32	*12*	9
Total Variable Costs	***2472***	**2464**	***2567***	**2560**	***1183***	**1173**
Fixed Costs						
Labour	*562*	609	*579*	626	*331*	373
Contract	*261*	278	*268*	285	*166*	175
Machinery Depreciation	*216*	257	*223*	266	*130*	139
Other Machinery	*340*	330	*350*	336	*206*	240
Miscellaneous	*454*	517	*463*	526	*331*	397
Rent and Rental Equivalent	*366*	394	*371*	399	*299*	321
Total Fixed Costs	***2201***	**2384**	***2255***	**2439**	***1462***	**1645**
Net Farm Income	***1303***	**369**	***1361***	**393**	***523***	**45**
Farmer / Spouse Labour	*249*	249	*244*	243	*316*	330
Management and Investment Income (MII)	***1054***	**119**	***1116***	**149**	***206***	**-285**
Farm Business Income (FBI)	***1365***	**409**	***1423***	**430**	***577***	**129**

The area used is the total farm area including woodland, roads, water, area not used for agriculture

*** farms with an area of less than 2.2ha have been excluded from the data set

Table 3.2: Outputs, Inputs and Margins: Lowland and LFA Farms***

	Lowland		LFA	
	22/23	23/24	*22/23*	23/24
Number of farms	*181*	175	*49*	44
Area (ha)#	*160*	164	*149*	146
	£/ha		£/ha	
Output				
Milk	*5281*	4529	*3696*	3186
Calf	*218*	236	*193*	196
Other Dairy	*0*	2	*0*	0
Herd Replacement	*-303*	-267	*-259*	-211
Total Dairy Output	*5196*	**4500**	***3630***	**3171**
Other Livestock	*702*	659	*654*	633
Other	*657*	536	*335*	292
Total Farm Output	***6555***	**5696**	***4619***	**4096**
Variable Costs				
Home-grown Concentrates	*85*	71	*53*	59
Purchased Concentrates	*1541*	1567	*1132*	1165
Coarse Fodder	*191*	140	*90*	106
Other Livestock Concentrates	*22*	29	*0*	0
Vet and Medicine	*135*	154	*94*	100
Other Livestock Costs	*398*	407	*283*	296
Seed	*50*	53	*14*	12
Fertiliser	*233*	203	*183*	189
Crop Protection	*48*	44	*14*	13
Other Crop Costs	*29*	35	*14*	19
Total Variable Costs	***2732***	**2701**	***1876***	**1958**
Fixed Costs				
Labour	*621*	666	*406*	456
Contract	*298*	316	*143*	152
Machinery Depreciation	*239*	284	*153*	192
Other Machinery	*374*	353	*250*	265
Miscellaneous	*492*	560	*340*	379
Rent and Rental Equivalent	*383*	415	*321*	332
Total Fixed Costs	***2408***	**2594**	***1614***	**1776**
Net Farm Income	***1416***	**400**	***1128***	**362**
Farmer / Spouse Labour	*241*	233	*260*	284
Management and Investment Income (MII)	***1175***	**166**	***869***	**77**
Farm Business Income (FBI)	***1460***	**426**	***1271***	**445**

The area used is the total farm area including woodland, roads, water, area not used for agriculture

*** farms with an area of less than 2.2ha have been excluded from the data set

Table 3.3: Outputs, Inputs and Margins: Lowland by Farm Size***

Lowland	< 60 ha [small]		60 – 120 ha [medium]		>120 ha [large]	
	*22/23**	23/24*	*22/23*	23/24	*22/23*	23/24
Number of farms	*11**	10*	*56*	54	*114*	111
Area (ha) #	*49*	47	*86*	85	*231*	239
	£/ha		£/ha		£/ha	
Output						
Milk	*3920*	2521	*5195*	4560	*5354*	4605
Calf	*214*	208	*239*	268	*212*	230
Other Dairy	*0*	0	*2*	1	*0*	2
Herd Replacement	*-255*	-130	*-331*	-297	*-297*	-265
Total Dairy Output	***3879***	**2599**	***5106***	**4532**	***5269***	**4572**
Other Livestock	*634*	500	*618*	587	*726*	682
Other	*351*	292	*681*	691	*663*	511
Total Farm Output	***4864***	**3392**	***6405***	**5811**	***6658***	**5765**
Variable Costs						
Home-grown Concentrates	*44*	38	*83*	71	*87*	72
Purchased Concentrates	*1179*	770	*1566*	1603	*1549*	1593
Coarse Fodder	*195*	203	*174*	114	*195*	143
Other Livestock	*0*	0	*0*	0	*29*	36
Vet and Medicine	*117*	114	*135*	148	*136*	157
Other Livestock Costs	*373*	380	*373*	394	*406*	411
Seed	*10*	11	*37*	40	*55*	57
Fertiliser	*110*	99	*197*	209	*246*	205
Crop Protection	*3*	4	*28*	27	*55*	49
Other Crop Costs	*15*	17	*34*	41	*28*	34
Total Variable Costs	***2047***	**1635**	***2627***	**2647**	***2785***	**2757**
Fixed Costs						
Labour	*398*	256	*647*	696	*622*	677
Contract	*220*	227	*238*	298	*317*	324
Machinery Depreciation	*179*	178	*291*	355	*228*	272
Other Machinery	*246*	185	*414*	381	*369*	354
Miscellaneous	*474*	570	*598*	657	*466*	538
Rent and Rental Equivalent	*307*	288	*359*	383	*392*	427
Total Fixed Costs	***1824***	**1704**	***2546***	**2770**	***2393***	**2592**
Net Farm Income	***993***	**53**	***1232***	**393**	***1480***	**417**
Farmer / Spouse Labour	*902*	778	*431*	459	*166*	159
Management and Investment Income (MII)	***91***	**-724**	***801***	**-66**	***1313***	**256**
Farm Business Income (FBI)	***1211***	**297**	***1384***	**484**	***1489***	**418**

The area used is the total farm area including woodland, roads, water, area not used for agriculture

* Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures

*** farms with an area of less than 2.2ha have been excluded from the data set

Table 3.4: Outputs, Inputs and Margins: LFA by Farm Size***

LFA	< 60 ha [small]		60 – 120 ha [medium]		>120 ha [large]	
	*22/23**	23/24**	*22/23*	23/24	*22/23*	23/24
Number of farms					*26*	24
Area (ha)#	*Ins data*	Ins data	*84*	85	*223*	209
	£/ha		£/ha		£/ha	
Output						
Milk			*4088*	3380	*3499*	3109
Calf			*225*	205	*177*	191
Other Dairy			*0*	0	*0*	0
Herd Replacement			*-218*	-160	*-259*	-226
Total Dairy Output			***4096***	**3425**	***3417***	**3074**
Other Livestock			*635*	608	*672*	650
Other			*363*	300	*318*	289
Total Farm Output			***5093***	**4333**	***4407***	**4013**
Variable Costs						
Home-grown Concentrates			*56*	37	*47*	62
Purchased Concentrates			*1376*	1307	*1022*	1116
Coarse Fodder			*117*	93	*74*	112
Other Livestock Concentrates			*0*	0	*0*	0
Vet and Medicine			*114*	119	*87*	95
Other Livestock Costs			*301*	349	*278*	281
Seed			*7*	8	*17*	13
Fertiliser			*230*	196	*165*	190
Crop Protection			*10*	14	*16*	12
Other Crop Costs			*19*	21	*13*	18
Total Variable Costs			***2230***	**2143**	***1717***	**1899**
Fixed Costs						
Labour			*431*	450	*395*	455
Contract			*156*	160	*143*	149
Machinery Depreciation			*207*	244	*130*	171
Other Machinery			*284*	287	*235*	250
Miscellaneous			*414*	416	*307*	360
Rent and Rental Equivalent			*387*	405	*301*	311
Total Fixed Costs			***1879***	**1963**	***1511***	**1697**
Net Farm Income			***984***	**228**	***1178***	**417**
Farmer / Spouse Labour			*469*	526	*172*	188
Management and Investment Income (MII)			***515***	**-298**	***1005***	**228**
Farm Business Income (FBI)			***1423***	**657**	***1218***	**383**

The area used is the total farm area including woodland, roads, water, area not used for agriculture

*Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures **Ins. data = Insufficient data available (<5 observations)

*** farms with an area of less than 2.2ha have been excluded from the data set

Table 3.5: Outputs, Inputs and Margins: Lowland by Profitability Quartiles***

Lowland	Lower quartile		Upper quartile	
	22/23	23/24	*22/23*	23/24
Number of farms	*40*	37	*50*	48
Area (ha)[#]	*105*	119	*190*	188
	£/ha		£/ha	
Output				
Milk	*3651*	4189	*6415*	4904
Calf	*168*	216	*268*	223
Other Dairy	*0*	0	*0*	4
Herd Replacement	*-268*	-355	*-310*	-236
Total Dairy Output	***3551***	**4051**	***6373***	**4895**
Other Livestock	*535*	457	*869*	760
Other	*587*	287	*546*	544
Total Farm Output	***4673***	**4794**	***7788***	**6199**
Variable Costs				
Home-grown Concentrates	*102*	53	*100*	80
Purchased Concentrates	*1280*	1774	*1588*	1479
Coarse Fodder	*107*	94	*245*	202
Other Livestock Concentrates	*1*	0	*15*	21
Vet and Medicine	*111*	160	*159*	146
Other Livestock Costs	*466*	520	*436*	399
Seed	*41*	47	*41*	45
Fertiliser	*156*	180	*270*	176
Crop Protection	*33*	32	*38*	42
Other Crop Costs	*21*	27	*31*	30
Total Variable Costs	***2317***	**2886**	***2922***	**2621**
Fixed Costs				
Labour	*551*	633	*715*	683
Contract	*265*	337	*321*	274
Machinery Depreciation	*215*	305	*225*	251
Other Machinery	*349*	329	*335*	348
Miscellaneous	*477*	617	*488*	502
Rent and Rental Equivalent	*306*	374	*419*	435
Total Fixed Costs	***2163***	**2594**	***2503***	**2492**
Net Farm Income	***194***	**-686**	***2363***	**1086**
Farmer / Spouse Labour	*408*	372	*206*	161
Management and Investment Income (MII)	***-214***	**-1059**	***2157***	**922**
Farm Business Income (FBI)	***325***	**-817**	***2426***	**1185**

The area used is the total farm area including woodland, roads, water, area not used for agriculture. The upper and lower quartiles represent the top and bottom 25% of the total population, which can produce sample numbers per quartile that are not equal.

*** farms with an area of less than 2.2ha have been excluded from the data set

Table 3.6: Outputs, Inputs and Margins: LFA by Profitability Quartiles***

LFA	Lower quartile		Upper quartile	
	*22/23**	23/24*	*22/23**	23/24*
Number of farms	*8**	7*	*13**	15*
Area (ha)#	*90*	95	*190*	171
	£/ha		£/ha	
Output				
Milk	*2473*	1883	*3568*	2806
Calf	*167*	137	*164*	144
Other Dairy	*0*	0	*0*	0
Herd Replacement	*-240*	-136	*-229*	-132
Total Dairy Output	***2400***	**1884**	***3503***	**2818**
Other Livestock	*357*	400	*531*	590
Other	*298*	207	*365*	347
Total Farm Output	***3055***	**2492**	***4399***	**3755**
Variable Costs				
Home-grown Concentrates	*48*	27	*46*	27
Purchased Concentrates	*898*	790	*899*	920
Coarse Fodder	*125*	46	*23*	48
Other Livestock Concentrates	*0*	0	*0*	0
Vet and Medicine	*68*	73	*63*	77
Other Livestock Costs	*180*	207	*193*	239
Seed	*6*	6	*14*	15
Fertiliser	*158*	191	*136*	145
Crop Protection	*3*	9	*12*	11
Other Crop Costs	*16*	16	*13*	14
Total Variable Costs	***1502***	**1365**	***1400***	**1495**
Fixed Costs				
Labour	*315*	390	*350*	330
Contract	*94*	118	*113*	150
Machinery Depreciation	*150*	161	*110*	131
Other Machinery	*222*	219	*176*	171
Miscellaneous	*319*	303	*288*	286
Rent and Rental Equivalent	*209*	190	*363*	270
Total Fixed Costs	***1308***	**1382**	***1400***	**1338**
Net Farm Income	***245***	**-255**	***1599***	**922**
Farmer / Spouse Labour	*485*	497	*204*	222
Management and Investment Income (MII)	***-241***	**-752**	***1394***	**700**
Farm Business Income (FBI)	***508***	**20**	***1774***	**1100**

The area used is the total farm area including woodland, roads, water, area not used for agriculture. The upper and lower quartiles represent the top and bottom 25% of the total population, which can produce sample numbers per quartile that are not equal.

*Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures

*** farms with an area of less than 2.2ha have been excluded from the data set

3.2: Dairy Enterprise Results: Gross Margins – FBS England. Dairy farms

- Enterprise-level analysis in 2023/24 shows that the conventional herd total dairy output exceeded organic total dairy output by £1,083/cow. Conventional herd total dairy output decreased by £472/cow, with an increase in yield (+608lpc) being offset by a substantially lower milk price (-8.8ppl). Organic herds' total dairy output decreased by £76/cow; the small increase in milk yield (+183lpc) was more than offset by a lower milk price (-1.9ppl). The average number of cows per herd stayed relatively static for both the conventional and organic herd (Table 3.7).

- Despite lower variable costs than the conventional herds, the lower organic dairy output resulted in a gross margin of £1,203/cow compared with £1,736/cow for the conventional dairy herds. The difference between the organic and conventional dairy herd gross margins is narrower than in the previous year, with a difference of only £533/cow compared with £852/cow in 2022/23 (Table 3.7).

- Concentrate feed costs which were substantially lower for the organic herds, coupled with the higher milk price achieved, resulted in organic herds achieving a margin over concentrate performance that exceeded that of conventional herds by 6.41ppl, a considerably higher figure than the previous year's excess of only 0.28ppl (Figure 3.1).

- Lowland herds saw a decrease in average milk price of 8.7ppl, whilst LFA herds saw a decrease of 8.6ppl; together with the small increase in variable costs for the lowland herd and despite the small decrease for the LFA dairy herd, this resulted in decreases in GM/cow of £488 for lowland and £537 for LFA herds. In 2023/24, at the average herd sizes, the total farm GM for lowland herds was £413,574 compared with £525,326 in 2022/23, whilst the total LFA herd GM decreased to £237,183 compared with £320,544 in 2022/23 (Table 3.8).

- At 229 cows, the average number of cows per herd for lowland herds in 2023/24 remained the same as in 2022/23. Gross margins per cow for the less than 80 cows, the 80 to 130 cows and the greater than 130 cows groups were £1,053, £1,592 and £1,858 respectively. All groups saw a drop in output and with an increase in variable costs for the smallest and largest groups, this led to a drop in total gross margin across all three size categories. (Table 3.9).

- For LFA dairy herds in 2023/24, milk price is lowest in the fewer than 80 cows group, with the highest dairy output and gross margin per cow being achieved by the more than 130 cows group. 2023/24 saw a decrease in average milk price of 8.8ppl, 6.3ppl and 9.2ppl for the less than 80 cows, 80 – 130 cows and the more than 130 cows groups respectively. Each group saw a decrease in GM/cow; down £454/cow (less than 80 cows), £257/cow (80 – 130 cows) and £633/cow (more than 130 cows). The GMs for the LFA herd exceeded that of the lowland herd for the less than 80 cows by £45/cow this year; for the 80 – 130 cows and the more than 130 cows groups the GMs for the conventional herds was greater than the LFA herds by £294/cow and £443/cow respectively (Table 3.10).

- In 2023/24, lowland dairy farms in the upper quartile (based on GM/cow) produced on average 2,844lpc more than those in the lower quartile, with average milk prices for the upper quartile exceeding those of the lower quartile by 8.3ppl (Table 3.11).

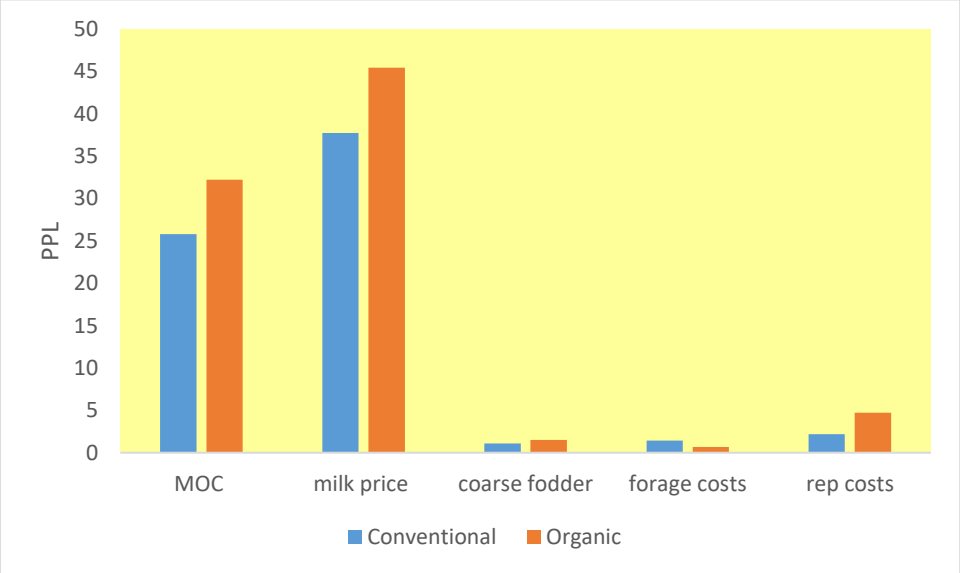
- Feed concentrate to milk conversion rates decreased to 11.9ppl for the GM lowland upper quartile and to 11.5ppl for the lower quartile farms (from 12.8ppl for the upper quartile and 12.4ppl for the lower quartile in 2022/23); the upper quartile decrease was principally due to a higher average yield (+911lpc), whilst for the lower quartile the higher concentrate cost was more than offset by an increase in yield. Gross margin per litre results decreased to 20.7ppl (upper quartile) and to 11.0ppl (lower quartile) compared to 27.2ppl (upper quartile) and 20.7ppl (lower quartile) in 2022/23 (Table 3.11), in part due to substantially lower average milk prices.

- Gross margin performance quartile analysis of LFA dairy farms reveals that the better performers have substantially larger herds and achieve considerably higher yields (+3,028lpc) as well as receiving higher milk prices (+5.3 ppl) than the lowest quartile, leading to a disparity of £1,230 between the two quartile's relative gross margin per cow performances (compared with £1,771 in 2022/23) (Table 3.12).

Table 3.7: Gross Margin Results for All Farms, Conventional and Organic

	All		Conventional		Organic	
	22/23	23/24	*22/23*	23/24	*22/23*	23/24
Number of farms	*257*	242	*228*	220	*29*	22
Average number cows	*209*	210	*217*	218	*117*	114
Average yield (litres)	*8265*	8874	*8415*	9023	*5122*	5305
Milk price (ppl)	*46.5*	37.9	*46.5*	37.7	*47.3*	45.4
	£/cow		£/cow		£/cow	
Output						
Milk	*3841*	3365	*3909*	3405	*2424*	2409
Calf	*164*	175	*164*	176	*145*	143
Other Dairy	*0*	1	*0*	1	*2*	1
Herd Replacement	*-215*	-199	*-216*	-197	*-194*	-250
Total Dairy Output	***3790***	**3342**	***3857***	**3385**	***2378***	**2302**
Variable costs						
Concentrates	*1018*	1061	*1036*	1076	*657*	701
Coarse Fodder	*129*	97	*132*	98	*71*	81
Vet and Medicine	*80*	91	*81*	93	*50*	60
Other Livestock Costs	*239*	253	*242*	254	*191*	220
Forage Costs	*129*	126	*134*	129	*28*	36
Total Variable Costs	***1595***	**1627**	***1624***	**1649**	***997***	**1099**
Total Gross Margin	***2194***	**1714**	***2233***	**1736**	***1381***	**1203**

Figure 3.1: Key Gross Margin Components by Conventional and Organic Herds



MOC = margin over concentrates rep costs = replacement costs

Table 3.8: Gross Margin Results: Conventional Lowland and LFA Farms

	Lowland		LFA	
	22/23	23/24	*22/23*	23/24
Number of farms	*179*	177	*49*	43
Average number cows	*229*	229	*168*	173
Average yield (litres)	*8695*	9432	*6919*	6900
Milk price (ppl)	*46.3*	37.6	*47.5*	38.9
	£/cow		£/cow	
Output				
Milk	*4026*	3544	*3285*	2684
Calf	*163*	178	*171*	167
Other Dairy	*0*	1	*0*	0
Herd Replacement	*-214*	-199	*-231*	-189
Total Dairy Output	***3975***	**3524**	***3226***	**2662**
Variable costs				
Concentrates	*1069*	1120	*858*	845
Coarse Fodder	*144*	103	*63*	72
Vet and Medicine	*83*	98	*68*	68
Other Livestock Costs	*249*	268	*201*	182
Forage Costs	*135*	130	*128*	124
Total Variable Costs	***1681***	**1719**	***1318***	**1291**
Total Gross Margin	***2294***	**1806**	***1908***	**1371**

Table 3.9: Gross Margin Results: Conventional Lowland by Herd Size

Lowland	< 80 cows [small]		80 – 130 cows [medium]		>130 cows [large]	
	22/23	23/24*	*22/23*	23/24	*22/23*	23/24
Number of farms	*13**	13*	*33*	33	*133*	131
Average number cows	*54*	48	*105*	107	*304*	313
Average yield (litres)	*5191*	5574	*7546*	7723	*8947*	9768
Milk price (ppl)	*44.6*	38.0	*45.8*	40.1	*46.4*	37.3
	£/cow		£/cow		£/cow	
Output						
Milk	*2316*	2119	*3455*	3093	*4150*	3648
Calf	*150*	180	*161*	174	*164*	178
Other Dairy	*0*	0	*3*	1	*0*	1
Herd Replacement	*-190*	-129	*-230*	-198	*-213*	-202
Total Dairy Output	***2276***	**2169**	***3390***	**3070**	***4101***	**3626**
Variable costs						
Concentrates	*606*	579	*1000*	991	*1093*	1155
Coarse Fodder	*59*	82	*45*	53	*158*	109
Vet and Medicine	*51*	78	*90*	93	*84*	99
Other Livestock Costs	*210*	289	*217*	203	*254*	275
Forage Costs	*99*	89	*131*	137	*137*	131
Total Variable Costs	***1026***	**1117**	***1483***	**1478**	***1727***	**1768**
Total Gross Margin	***1251***	**1053**	***1907***	**1592**	***2374***	**1858**

*Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures

Table 3.10: Gross Margin Results: Conventional LFA by Herd Size

LFA	< 80 cows [small]		80 – 130 cows [medium]		>130 cows [large]	
	*22/23**	23/24*	*22/23*	23/24	*22/23*	23/24
Number of farms	*6**	6*	*15*	12*	*28*	25
Average number cows	*52*	55	*108*	100	*266*	278
Average yield (litres)	*5809*	5735	*6711*	6670	*7083*	7070
Milk price (ppl)	*46.5*	37.7	*45.1*	38.8	*48.2*	39.0
	£/cow		£/cow		£/cow	
Output						
Milk	*2698*	2165	*3030*	2588	*3416*	2758
Calf	*210*	197	*168*	169	*169*	163
Other Dairy	*0*	0	*0*	0	*0*	0
Herd Replacement	*-144*	-161	*-249*	-162	*-233*	-197
Total Dairy Output	***2764***	**2201**	***2949***	**2595**	***3353***	**2724**
Variable costs						
Concentrates	*646*	618	*1001*	929	*834*	853
Coarse Fodder	*123*	67	*64*	46	*58*	77
Vet and Medicine	*76*	78	*56*	57	*71*	69
Other Livestock Costs	*183*	170	*160*	171	*215*	185
Forage Costs	*184*	170	*112*	93	*127*	125
Total Variable Costs	***1212***	**1103**	***1393***	**1297**	***1305***	**1309**
Total Gross Margin	***1552***	**1098**	***1555***	**1298**	***2048***	**1415**

*Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures

Table 3.11: Gross Margin Results: Conventional Lowland by Performance Quartiles

Lowland	Lower Quartile		Upper Quartile	
	22/23	23/24	*22/23*	23/24
Number of farms	*39*	39	*50*	49
Average number cows	*132*	177	*340*	363
Average yield (litres)	*5852*	8629	*10562*	11473
Milk price (ppl)	*44.9*	30.2	*46.6*	38.5
	£/cow		£/cow	
Output				
Milk	*2630*	2610	*4918*	4417
Calf	*149*	151	*181*	199
Other Dairy	*1*	0	*0*	2
Herd Replacement	*-263*	-260	*-170*	-180
Total Dairy Output	***2516***	**2501**	***4928***	**4439**
Variable costs				
Concentrates	*724*	996	*1352*	1363
Coarse Fodder	*82*	49	*220*	173
Vet and Medicine	*64*	91	*98*	109
Other Livestock Costs	*307*	295	*268*	297
Forage Costs	*127*	119	*122*	123
Total Variable Costs	***1303***	**1550**	***2060***	**2065**
Total Gross Margin	***1214***	**951**	***2868***	**2373**

Table 3.12: Gross Margin Results: Conventional LFA by Performance Quartiles

LFA	Lower Quartile		Upper Quartile	
	*22/23**	23/24*	*22/23**	23/24
Number of farms	*9**	8*	*17*	17
Average number cows	*152*	90	*191*	177
Average yield (litres)	*4530*	5525	*8769*	8553
Milk price (ppl)	*42.4*	35.5	*49.5*	40.8
	£/cow		£/cow	
Output				
Milk	*1922*	1961	*4342*	3488
Calf	*141*	159	*191*	192
Other Dairy	*0*	0	*0*	0
Herd Replacement	*-320*	-204	*-198*	-184
Total Dairy Output	***1742***	**1915**	***4335***	**3496**
Variable costs				
Concentrates	*472*	770	*1098*	1064
Coarse Fodder	*54*	67	*31*	29
Vet and Medicine	*37*	72	*82*	81
Other Livestock Costs	*102*	155	*214*	202
Forage Costs	*86*	104	*147*	141
Total Variable Costs	***751***	**1167**	***1573***	**1518**
Total Gross Margin	***991***	**748**	***2762***	**1978**

*Data are derived from a modest sample size and thus there is a lower degree of confidence in the figures

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Glossary

Output: Other Livestock is comprised of sales of non-dairy livestock and livestock products adjusted for valuation changes plus the value of produce used on the farm and consumed in the farmhouse or by the workers, less livestock purchases. Miscellaneous livestock receipts are also included.

Output: Other is the sales of crops adjusted for valuation changes, plus the value of produce used on the farm (other than forage crops and straw) and produce consumed in the farmhouse or by the workers. Income from land let and buildings let, hirework, non-allocated grants e.g. for environmental schemes, single farm payment, profit on resale of purchased agricultural produce and other miscellaneous farm income including the change in valuation of cultivations is also included.

Other livestock costs include livestock haulage, marketing charges, AI charges, straw and wood shavings for bedding and dairy sundries.

Other crop costs include silage bags, twine, all marketing costs including crop haulage, purchase of standing crops, soil analysis and potato sacks.

Labour is comprised of the gross cost of regular paid employees including an allowance for perquisites together with unpaid family labour (other than the farmer and spouse) manual labour.

Machinery depreciation is calculated using the current cost accounting method whereby each item of equipment is revalued by an index prior to the depreciation calculation.

Rent and Rental Equivalent consist of gross rent, imputed rent on the net cost of the tenant's own improvements, drainage rates and for owner-occupied land a rental value based on what a tenant would be paying for similar land with an equal length of occupancy.

Miscellaneous costs include water charges, vehicle tax, insurance, professional fees, bank commission, telephone charges, subscriptions, office expenses and pest control, general repairs.

Net Farm Income (NFI) is total output less total inputs as defined above. It represents the reward to the farmer and spouse for their own manual labour, management and a return on tenant's capital.

Farmer's and spouse's manual labour is the estimated value of their manual labour.

Management and Investment Income (MII) is Net Farm Income less the allowance made for the farmer's and spouse's manual labour. It represents the reward for management and a return on tenant's capital. MII therefore represents the return to management after all costs have been deducted, including the imputed cost of all unpaid manual labour and a notional rent on owner occupied land and buildings.

Farm Business Income (FBI) represents the return to all unpaid labour (farmers, spouses and others with an entrepreneurial interest in the farm business) and to all their capital invested in the farm business including land and farm buildings. It is defined as Total Farm Output (TFO) minus cost (C): where TFO is defined as the sum of output from: crop enterprises, adjustment for disposal of previous crops, livestock enterprises, separable non-agricultural diversification, single farm payment, agri-environmental payments, other grants and subsidies, miscellaneous receipts; C is defined as variable costs plus fixed costs. [*For 2006/07 the definition of FBI included the profit / loss on sale of assets as part of the total farm output*]

Total Gross Margin, presented for the dairy enterprise results, is total dairy output minus total variable costs.

Appendix 1: Reports in Series

Reports in this series:

Crop Production in England

Dairy Farming in England

Pig Production in England

Horticulture Production in England (Horticultural Business Data)

Lowland Grazing Livestock Production in England

Poultry Production in England

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