Teagasc National Farm Survey 2020

Dairy
Enterprise Factsheet

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Irish Dairy Farming Factsheet 2020
Average Performance

Milk Sales per ha
11,296 litres (down 1.3%)

Days at Grass
233 days (down 3 days)

Milk Production per cow
5,647 litres (up 1%)

Stocking Rate
2.06 lu/ha (down 2%)

Milk price actual fat/protein
35.02 cent per litre (up 1%)

Dairy Enterprise* area
41 ha (up 7%)

Average Dairy Herd Size
84 dairy cows (up 4%)

Milk Fat Content
average 4.11% (up 0.03 points)

Concentrates Fed/Dairy Cow
average 1,131 kg (up 1%)

Milk Protein Content
average 3.48% (up 0.01 point)

Concentrates fed/litre of milk
average 0.20 kg (down 3%)

Milk Solids per Cow
average 434 kg (up 2%)

Nitrogen per ha of grassland
184 kg (unchanged)

Basic Payment Scheme
per farm € 16,449 (unchanged)

Total Production Costs
24.31 cent per litre (down 3%)
€2,826 per hectare (down 4%)

Somatic Cell Count
159,000 cells/ml (down 4%)

Gross Margin Dairy Enterprise
21.9 cent per litre (up 5%)
€2,565 per hectare (up 2%)

Net Margin Dairy Enterprise
11.54 cent per litre (up 15%)
€1,367 per hectare (up 9%)

Source: Teagasc National Farm Survey 2020
Note: Percentage changes are relative to 2019
*Dairy Enterprise area refers to area for dairy cows only

Teagasc
Agriculture and Food Development Authority

Background

The 2020 Teagasc National Farm Survey (NFS) recorded data on 836 farms representative of over 93,000 dairy, beef, sheep and tillage farms nationally. This analysis summarises the results of dairy enterprises, excluding farms supplying mostly liquid milk and herds of 10 cows or less. The results below relate to over 300 surveyed dairy farms, representative of 16,146 dairy farms nationally.

1. Analysis of Financial Performance

Data from the Teagasc NFS indicates that the average milk price increased marginally (1%) in 2020 resulting in a 2% rise in gross output per litre. In addition, due to a general decline in input prices and relatively stable usage, there was a 2% decrease in total direct costs for the average dairy enterprise. This is reflected in, amongst other things, the 4% average decline in concentrate feed costs and 5% reduction in pasture and forage. There was also a marked decline in total fixed costs, which were on average, down 5% compared to 2019. This was primarily due to reduced depreciation costs (14%) for both machinery and buildings, and lower expenditure on energy and fuel. There was some variation in other fixed costs but overall the direction was downwards. On average, total production costs decreased by 3%, to approximately 24.31 cent per litre of milk. Margin figures reported include hired labour costs, but the methodology does not treat farm family labour as a cost (see Box 1). Decoupled payments are also excluded.

Table 1: Average gross margin and average net margin 2019 and 2020

	2019	2020	2020/2019
	cent/litre		% change
Milk Price	34.55	35.02	+1
Total Gross Output	**35.10**	**35.84**	+2
Concentrate Costs	5.87	5.65	-4
Pasture and Forage Costs	4.81	4.59	-5
Other Direct Costs	3.50	3.70	+6
Total Direct Costs	14.18	13.94	-2
Gross Margin	**20.92**	**21.90**	**+5**
Energy and Fuel	2.23	2.06	-8
Hired Labour	0.61	0.56	-8
Rent/Leasing of Land	0.97	1.04	+6
Machinery Depreciation	1.88	1.61	-14
Buildings Depreciation	1.35	1.17	-14
Remaining Fixed Costs	3.83	3.92	+2
Total Fixed Costs	10.86	10.36	-5
Total Costs	25.01	24.31	-3
Net Margin	**10.05**	**11.54**	**15**

Source: Teagasc National Farm Survey 2020

Box 1: The cost of on-farm family labour

Net margin represents the returns to family labour, farm management, owned land and capital. It is very difficult to segregate the returns to each of these components with an acceptable level of accuracy. Allowing for an approximation of the value of on-farm family labour input, would place a value on own labour input, equivalent to 11 cent per litre. This estimate is based on the self-reported labour input of respondents and an assumed wage of €15 per hour. This figure does not have the accuracy associated with the estimates of costs for other farm inputs. Own labour costs for smaller herds, with low yielding cows, a less desirable farm layout and inferior yard and parlour facilities would be expected to be several cents higher than the average. By contrast the most labour efficient farms would be expected to have substantially lower family labour costs.

Production conditions in 2020 were generally benign and total milk production nationally continued to grow. However, due to an increase in the land area dedicated to dairy production, there was a 2 % decline in milk produced per hectare compared to 2019. In general, the production cost savings detailed above, led to a reduction in total costs per hectare of 4% resulting in the average dairy enterprise net margin, increasing by 9%, on a per hectare basis, in 2020.

Table 2: Average net margin 2019 and 2020: Dairy Farms

		2019	2020	2020/2019 % change
Milk Produced*	litres/hectare	11,890	11,698	-2
Total Costs	€/hectare	2,941	2,826	-4
Net Margin	€ /hectare	1,251	1,367	+9

Source: Teagasc National Farm Survey 2020
*Milk Produced includes milk fed to calves as well as milk delivered to dairies

2. Variation in Financial Performance

Beyond the average, it is useful to also explore the performance of the better and less well performing cohorts. Splitting the population into three groups on the basis of gross margin per hectare, Table 3 shows dairy enterprise results for the best performing one-third (Top), the middle third (Middle) and bottom third (Bottom). A wide variation across some cost components continues to be observed, with input expenditure typically higher for the bottom cohort. Similarly, a comparatively lower gross output on average, results in a reduced net margin overall.

Table 3: Output, costs and net margin Top, Middle and Bottom thirds 2020: Dairy Farm

	Top	Middle	Bottom	Average
		cent/litre		
Gross Output	37.08	35.54	34.92	35.84
Concentrate Feeds	5.06	5.35	6.53	5.65
Pasture & Forage	4.35	4.37	5.03	4.59
Other Direct Costs	3.52	3.69	3.90	3.70
Energy & Fuel	1.71	2.04	2.43	2.06
Hired Labour	0.90	0.34	0.46	0.56
Other Fixed Costs	7.53	7.75	7.95	7.74
Total Costs	23.06	23.54	26.29	24.31
Net Margin	14.02	11.99	8.63	11.54

Source: Teagasc National Farm Survey 2020

Relative to 2019, concentrate feed expenditure decreased in 2020 for all three cohorts, remaining highest for the bottom group, for whom pasture and forage costs were also highest. Costs relating to hired labour were highest for the top group, higher output farms. A wide variation in net margin is reported across the three groups varying from 14.02 cent per litre on top performing farms to 8.63 cent per litre for the bottom group. Relative to 2019, this reflected an increase of 1.48 cent per litre, on average. Across groupings, this represented an increase of 0.58 cent per litre for the top group with more substantial increases for the middle (1.87 cent) and bottom groups (1.99 cent).

Table 4 presents the variation in output and gross margin per hectare for the Top, Middle and Bottom groups in 2020. Gross margin per hectare declined slightly for the top cohort (down €17) with increases for the middle and bottom groups (€91 and €62 respectively). In 2020 the gap between the top and bottom groups in terms of gross margin was just over €2,041 per hectare, a slight reduction on the previous year.

Table 4: Output and profit for Top, Middle and Bottom one-thirds 2020: Dairy Farms

		Top	Middle	Bottom	Average
Stocking Rate	cows per hectare	2.49	2.08	1.63	2.06
Milk Sold	litres per hectare	15,128	11,746	8,265	11,698
Concentrates fed	kg per cow	1,126	1,104	1,162	1,131
Concentrates fed	kg per litre milk produced	0.18	0.19	0.22	0.20
Gross Output	€ per hectare	5,590	4,150	2,857	4,193
Direct Costs	€ per hectare	1,984	1,612	1,292	1,628
Gross Margin	€ per hectare	3,606	2,537	1,565	2,565

Source: Teagasc National Farm Survey 2020

3. Variation in Technical Performance

Table 5 presents a selection of technical performance indicators for dairy farms in 2020. Generally good production conditions resulted in an improvement in these metrics year-on-year. Milk production per cow remained relatively unchanged in 2020. An improvement in milk solids per cow is evident (+2%), and there was also a decrease in somatic cell count (down 4%), both indicators consistently performing well in recent years. Concentrate feed use fell marginally in 2020, and was on a par with levels prior to 2018 where usage increased substantially due to difficult weather. Overall, grazing days in 2020 were typically in line with the previous year.

Table 5: Technical Performance Indicators 2019 and 2020: Dairy Farms

		Average 2019	Average 2020	% change
Milk production	litres per cow	5,608	5,647	-
Milk produced	litres per hectare	11,917	11,698	-2
Milk solids	kg per cow	427	434	+2
Somatic Cell Count	'000 cells/ml	165	159	-4
Concentrate feed usage	kg per cow	1,144	1,131	-1
Grazing Season	days	233	233	-

Source: Teagasc National Farm Survey 2020

Table 6 shows Teagasc Dairying Road Map Targets for 2025 and the percentage of dairy farms achieving each of these performance indicators in 2020. These figures are reflective of improvements across all metrics compared to 2019, with the exception of milk yield and concentrates per cow which remained unchanged.

Table 6: Percentage of farms reaching Teagasc 2020 & 2025 Dairying Road Map Targets in 2020

		2025 Target	Farms Achieving Target
			%
Milk yield per cow	litres per cow	≥ 5,573	54
Milk solids per cow	kg per cow	≥ 448	43
Protein	%	≥ 3.56	48
Fat	%	≥ 4.25	35
Somatic Cell Count	cells / ml	≤ 180	67
Concentrates per cow	kgs	≤ 750	20

Source: Teagasc National Farm Survey 2020

There has been a steady increase in average herd size in preparation for and in the aftermath of milk quota abolition. In 2020, the average herd size was 84 cows, a 28% increase compared to 2014. In 2020, smaller herds, with less than 40 cows, accounted for 15% and 5% of the total milk pool. On the other hand, more than a quarter of herds comprised at least 100 cows, accounting for more than half of total milk production in 2020.

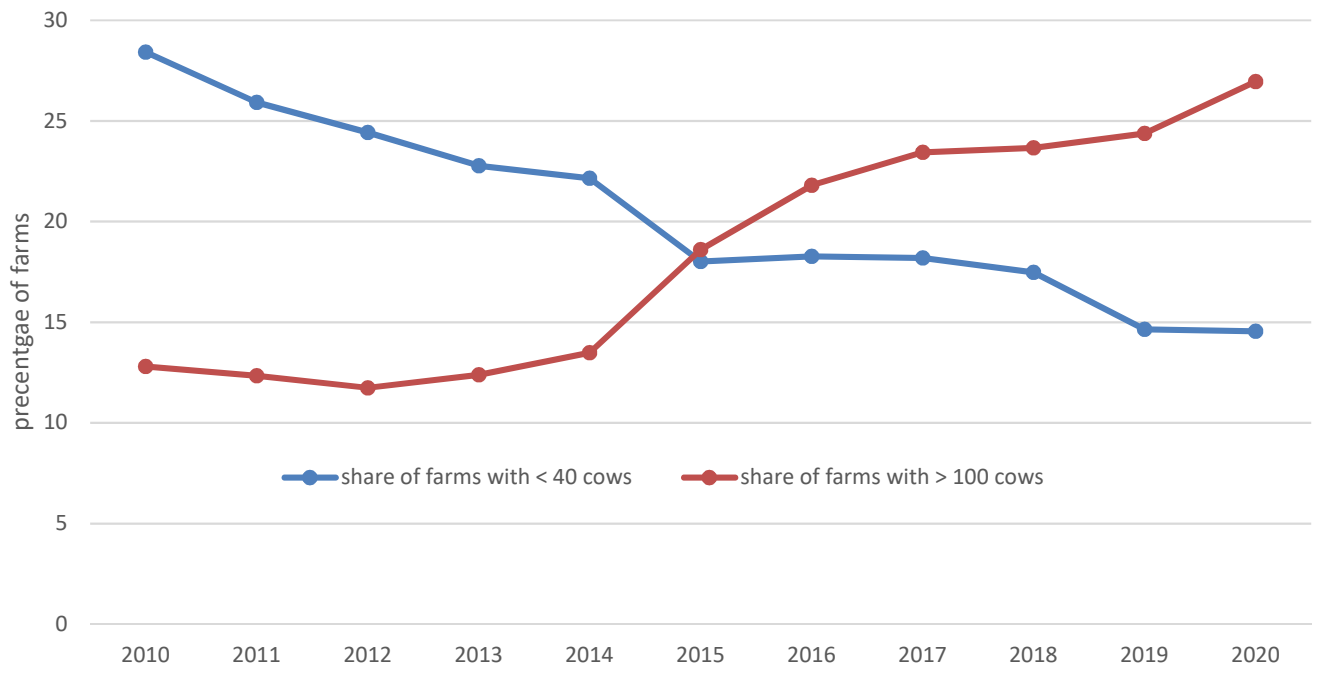
Table 7: Herd Size distribution 2020

Herd Size	% of Farms	% of Milk production
<40	15	5
40-60	21	11
60-100	38	33
>100	27	51
Total	100	100

Source: Teagasc National Farm Survey 2020

The increase in dairy farm scale, represented by farms with at least 100 cows since 2010 is reflected in Figure 1. The data indicates that this cohort has more than doubled over the period, from 13% in 2010 to 27% in 2020.

Figure 1: Structural change in Irish Dairy Farm Size 2010-2020



Source: Teagasc National Farm Survey 2020

For further information on this publication or other Teagasc National Farm Survey Publications please contact NFS@teagasc.ie