

# Focus on Profit

Kerry Agribusiness / Teagasc

Monitor Farm Review 2015





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## “FOCUS ON PROFIT” Mission Statement:

Will empower our client farmers with:

- up-to-date technical advice
- financial expertise to set and achieve financial goals
- blueprint for profitable and environmentally sustainable farming
- an enhanced quality of life

## Foreword

The Joint Kerry Agribusiness/Teagasc “Focus on Profit” Programme has concentrated on improving the technical and financial performance of dairy farms in the catchment area. Consistent with the Mission Statement the programme aims to provide Kerry Agribusiness suppliers with tools to increase profit by focusing on sustainable improvements in farm productivity.

Kerry Agribusiness and Teagasc wish to thank all of the programme participants for their co-operation and goodwill throughout the year and all those who open up their farms for events. In particular we appreciate the great support and co-operation received from the group of 14 monitor farmers who have actively participated in the programme since 2011.

## Key findings from the programme

1. Adopt practices that lead to high farm efficiency before considering expansion
2. Improvement in key performance indicators as measured by 6 week calving rate, tonnes of grass utilised per hectare and costs of production, are fundamental to increasing farm profit.



Table 10: Monitor Farm Progress

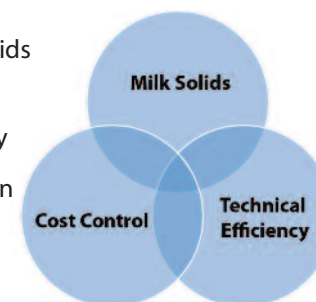
INDICATOR	2011	2015
EBI (€)	90	160
6 Week calving rate (%)	67	77
Grass Utilisation (t DM/ha)	9	10
Milking area stocking rate (Lu/ha)	2.43	2.66
Milk Solids Production	36096	47824
Milk Protein (%)	3.43	3.63
Milk Butterfat (%)	3.9	4.21
Total costs (c/l)	19.65	20.69

Great commitment and skills are needed at farm level to generate a sustainable income from the dairy enterprise.

The Monitor Group's success in achieving continuous business improvement over a range of profit indicators is shown in Table 10.

## Formula for Success

1. Increasing Milk Solids
2. High levels of Technical Efficiency
3. Ongoing evaluation and control of all Farm Expenditure



## How do you compare!

Technical Component	€ Value* (Teagasc)	Value proposition for your farm €
Change in herd EBI	€2 increased profit/cow for each €1 increase	€ change _____ X €2 X no. of cows _____
6 wk calving rate	€8.22 per cow/year for each addition 1% increase	% increase _____ X €8.22 X no. of cows _____
Days at grass	€2.70/day for each additional day at grass	Additional days _____ X €2.70 X no. of cows _____
Pasture Grown t DM/ha	€161 for each additional tonne of dry matter utilised per hectare	Extra t DM utilised _____ X €161 x No. Hectares _____
Milk Protein SCC '000	.64c/l for each additional .1% milk protein. Milk Price @30c/l	Change in milk protein % _____ .64 X _____ Total Litres
	<b>SCC Band</b> <100 = 0 101 – 200 = 0.6c/l 201 – 300 = 2.1c/l 301 – 400 = 2.6c/l >401 = 3.6c/l	Change in SCC _____ c/l X _____ Total Litres

Note: \*values are not cumulative

## Key Performance Indicator (KPI) - Monitor Farms 2011-2015

Table 9 shows the impact of changes in key performance indicators (KPI) on dairy enterprise profitability 2011-2015 (standardised milk price comparison).

**Table 9:**

Table 9: Change in KPI's between 2011 and 2015				
	2011	2015	Change	
Farm SR (Lu/ha)	2.05	2.11		
Milking Platform stocking rate (Lu/ha)	2.43	2.66		
Farm area (ha)	66.2	73.7	11%	
Milking platform area (ha)	42.4	46.4		
Cows	94	112	19%	
Litres/Cow	5075	5286	4%	
B/Fat %	3.90	4.21		
Protein %	3.43	3.63		
Milk Solids/cow (kg's)	384	427	11%	
Milk Solids/ha (kg's)	933	1132	21%	
Milk produced (litres total)	477050	591819	24%	
Milk Solids produced (Kg's)	36096	47824	32%	
Total Costs c/l **	19.65	20.69	5%	
Total Costs (€)	93,740	122,491		€28,751 extra costs
Solids adj milk Price (30c/l)*	31.5	33.82		
Milk value €	€150,271	€199,988	33%	€49,718 extra revenue
Margin (milk value – total costs)	€56,530	€77,497	37%	€20,967 Extra margin

\*\*Total costs excl. own labour, DP's

\*Base 30 c/l gross @ 3.3% Protein & 3.60% B/fat (both years)

In this analysis stock sales and value of inventory change are omitted to allow clearer comparison of the technical progress.

Table 9 highlights the financial benefit of increases in technical performance (EBI, 6 week calving rate, grass utilisation and increased milk output & quality) accruing to the monitor farmer group, independent of changes in milk price over the period.

Taking volatility out of the equation by using a base milk price of 30c/l (3.60/3.30) milk values increased by 33% and margin increased by 37% giving a profit increase of €20,967. Total costs increased by 31%, largely associated with the extra milk volume produced with costs per litre increasing by 5% over this 5 year period.

## The joint programme “Focus on Profit” has the following components:

- Monitor farm programme comprising of 14 farms and incorporating the Teagasc Heavy soils Research/Advisory programme.
- Discussion group programme with 48 participating groups in 2015.
- Monitoring of grass growth across the Kerry Agribusiness catchment area.
- Targeted campaigns on key technical elements ie. soil fertility, animal breeding etc.
- Targeted supplier initiative to enhance programme participation among all suppliers

All suppliers are invited to participate in a range of meetings, farm walks, heavy soils events, information meetings and workshops throughout the year.

## Kerry Agribusiness/Teagasc Joint Programme Review 2015

Farms on the Kerry Agribusiness/Teagasc monitor farm programme in 2015 showed an increase in milk production (Table 2) with costs of production reducing by 1.62 c/l compared to 2014 (Table 6).

### Key factors which impacted on the income generated on these farms were:

- Abolition of Milk Quotas led to a 9.8 % increase in milk supply compared to 2014.
- An improvement in 6 week calving rate to 77% (up from 72% in 2014)
- Annual grass growth of 12.5 tonnes dry matter per hectare.
- Exceptionally good April and October weather conditions allowing more grass in the herd diet which impacted strongly on milk supply, composition and costs.
- A combination of an effective breeding programme and good grazing management delivered 3.63% milk protein. As a result, average monitor farm milk value was 31.26c/l or 1.16 c/l above the Kerry Agribusiness average.
- Mid-summer, however, proved difficult on many heavy soils farms with poor grass growth & grazing conditions impacting on production costs.
- A declining base milk price reflecting difficult market conditions and resulted in a 17.5% decline in Gross Output v 2014.

## PHYSICAL PERFORMANCE - MONITOR FARMS 2015

Table 1:

Physical Data	Average		Range 2015
	2014	2015	
Cow Numbers	106	112	160 - 87
Milking Block (MB) (ha)	44.8	46.4	93 - 26
Stocking Rate-MB (Lu/ha)	2.58	2.66	3.73 - 1.55

Average herd size on monitor farms was 112 cows in 2015 with a stocking rate of 2.66 Lu/ha on the milking block (MB) area. The wide range in stocking rate was influenced by the quantity of winter fodder harvested from the milking block.

Table 2: Physical Performance

Production	Average		Range 2015
	2014	2015	
Total Milk solids/cow (kgs)	400	427	467 - 360
Total Milk solids/ha (kgs)	1033	1132	1996 - 714
Milk yield/cow (litres)	5076	5286	6086 - 4555
Milk Production per farm (Litres)	538,977	591,819	
Milk Solids/farm/(kgs)	42,400	47,824	
% Protein	3.55	3.63	3.78 - 3.46
% B/fat	4.11	4.21	4.54 - 3.94
SCC '000	201	177	240 - 116
TBC, 000	22	20	8 - 37
Grass grown (t DM/ha)	12.4	12.5	15.5 - 9.6
Concentrate /cow (kgs)	634	678	970 - 364

Overall Milk Solids production increased by 12.8 % compared to 2014. (Table 2)

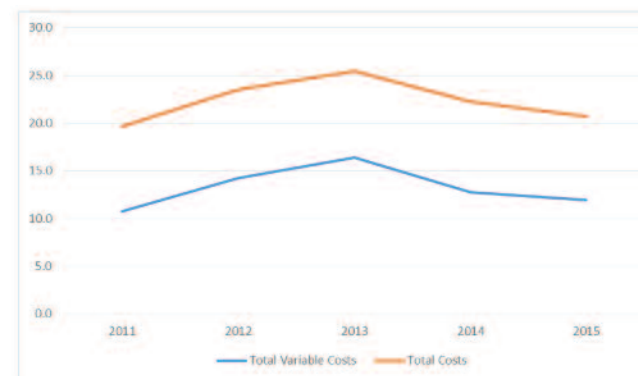
## HERD PERFORMANCE - MONITOR FARMS 2015

Table 3: Calving

	Average	Range
Start date calving	02-Feb-15	25 Jan 15 - 9 Feb 15
Finish date calving	08-May-15	16 April 15 - 16 June 15
Median calving date	26-Feb-15	14 Feb 15 - 11 Mar 15
6 week calving rate %	77	91 - 62
Calving Interval (days)	371	409 - 358

Monitor farmer experience indicates that reducing the interval between calving and access to grass is an important factor in maintaining herd body condition, reducing expensive concentrate usage and decreasing reliance on grass silage. A number of monitor farms with compact calving, have successfully delayed calving start date to Feb 7-9th while maintaining the average days in milk of the herd.

Figure 4: Trend in Total and Variable costs



## Analysis of Cash Flow:

Analysis of the cash position (all cash in and out of the business) of the monitor farms showed that for every €100 coming into the farm (milk/stock/direct payments) €52 went out in cash costs with €48 retained to meet drawings/taxation/capital repayments and cash capital investments. A change of 5c/litre in milk price or in of production costs is the equivalent of €29,600 in net cash flow for the monitor group. Given the volatility in milk price and feed costs, high cost structures, especially high fixed costs, are unsustainable as it exposes the farm business to a high level of risk. Monitor farmers have completed a cash flow budget for 2016 targeting reductions in feed and other input costs.

Large opportunities exist for many suppliers to reduce feed costs through better grass growth & utilisation. Expansion of the farm business should only take place when the core business costs are under control and adequate provision is in place to mitigate against future risks to the business such as lower milk price, poor climatic conditions or high input prices.

**Message: All farm businesses need to establish the breakeven farm expenditure\* that allows critical cash commitments to be met. (see Example Table 8)**

Table 8:

Example: 100 cow Spring Calving dairy herd 2015	(€)
Farm receipts (incl. €35,950 non-milk sales/direct payments)	181,500
<i>Less:</i>	
Household Expenses	44,000
Taxation	11,500
Capital repayments	18,500
<b>*Breakeven Farm Expenditure</b>	<b>107,500</b>



**Figure 3: Allocation of Gross Output**



Variable costs fell to 11.91 c/l (Table 7) and were therefore 6.5% lower in 2015 compared to 2014. The dilution effect of extra milk supply combined with lower energy prices resulted in fixed costs declining by 8.2%. Total costs per litre fell by 1.62 c/l compared to 2014.

### Cost Analysis 2011 v 2015

Variable costs increased by 1.18 c/l compared to 2011 (Table 7). Despite higher feed and fertiliser costs per litre, increases in farm efficiency e.g. grass utilisation and animal breeding have helped offset the worst effects of the continuing price cost squeeze. Fluctuation in feed cost alone over the period was 4.33c/l, with the fodder crisis in 2013 causing the greatest impact on concentrate costs.

Subsequently concentrate costs reduced to 3.26c/l in 2015.

**Table 7: Breakdown of Costs (2011- 2015)**

Year	Gross Output	Feed Costs	Fertiliser	Vet & A.I.	Contractor	Other Variable Costs	Total Variable Costs	Total Fixed Costs	Total Costs
2015	32.72	3.26	3.01	2.00	1.78	1.87	11.91	8.77	20.68
2014	39.68	3.66	3.18	1.94	1.9	2.06	12.74	9.55	22.29
2013	39.99	7.32	3.26	2.09	1.76	1.97	16.39	9.04	25.43
2012	35.18	5.94	2.65	2.18	1.49	1.99	14.25	9.26	23.51
2011	35.92	2.99	2.45	1.92	1.56	1.86	10.73	8.87	19.65

**The targets for a grass based seasonal calving system are that 90% of the herd is calved in the first six weeks of the calving season and that a 365 day calving interval is maintained**

**To achieve these targets attention must be focussed on the following:**

1. Breeding: Aim for a fertility sub-index of €140.
2. Management: A 90% submission rate, conception rate of 50%+ and calving all heifers in the first six weeks.

**Table 4: Breeding and Replacements**

BREEDING	AVERAGE	RANGE
		HIGH LOW
Herd EBI €	160	197 - 136
Fertility sub-index €	87	105 - 78
Repl 0-1 EBI €	214	240 - 175
Repl 1-2 EBI €	195	224 - 158
Repl 0-1 as % of herd	28	53 - 14
Repl 1-2 as % of herd	25	56 - 10
Yearly EBI gain -2015 €	8.9	13.8 - 7.04



### FEED MANAGEMENT - MONITOR FARMS 2015

#### Grass Growth and Utilisation

Increased grass growth is highly dependent on good soil fertility, however in recent years a trend of poorer soil fertility is evident across the catchment area. Continuous monitoring of grass supply and demand gives farmers valuable decision making information on a timely basis and an accurate measurement of the total tonnage of grass grown in each paddock and its contribution to the herd feed budget.

**Table 5: Grass Growth & Utilisation**

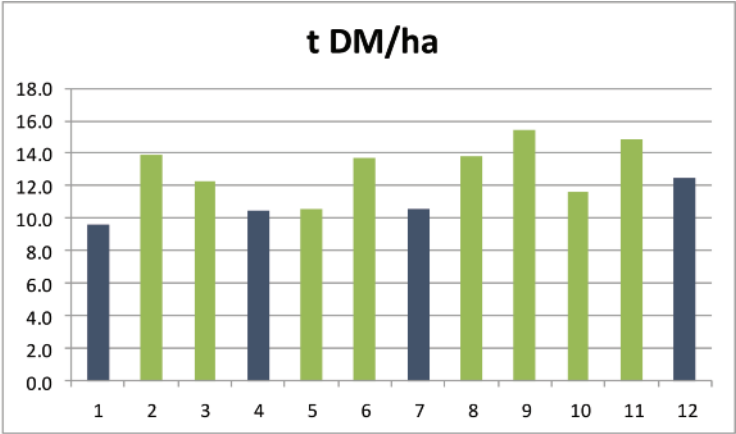
	Average	Range
Grass grown (t DM/ha)	12.5	15.5 - 9.6
Number grass measurements/year	36	47 - 27
Grass Utilised (t DM/ha)	9.9	12.3 - 8

Grass production from individual paddocks within farms range from 3 to 16.5t DM/ha with the best paddocks being grazed over 10 times during the season. The mainstay of productive grassland revolves around soil fertility, reseeding, field infrastructure and drainage.

High grass utilisation is the cornerstone of a profitable dairy system. Each additional tonne of grass dry matter utilised per hectare is worth €161/t DM, or more if it simply replaces concentrates.

Figure 1: Grass grown on Monitor Farm milking block 2015

Note: Farms 1,4,7,12 are part of Heavy Soils Programme



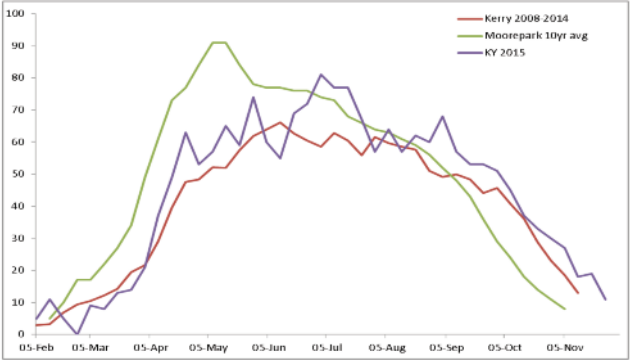
The farms with highest grass utilisation, Table 5, were characterised by higher milking block stocking rates, high 6 week calving rate, grass silage imported from outside the milking block and lower concentrate use per cow.

Grassland which performed best was characterised by:

- 1. Good levels of soil fertility with both Phosphorus and Potassium levels at Index 3.
- 2. Liming to achieve a target PH of 6.3. Many soils below PH of 6 are inefficiently utilising applied fertilisers and slurry.
- 3. A reseeding policy targeted to reseed 10% of the farm each year. Paddocks targeted for reseeding were those growing less than 8t DM/ha per annum.
- 4. A good farm infrastructure, e.g. farm roadways, water etc.
- 5. Attention to drainage works where required.
- 6. Implementation of good grazing management practices.



Figure 2: Grass growth curve



The Grass growth curve for 2015 (Figure 2, purple line) shows the exceptional grass growth pattern in both summer and autumn compared to the 5 year average. Spring growth up to early April was lower than both the Kerry and Moorepark averages.

FINANCIAL PERFORMANCE - MONITOR FARMS 2015

Financial information for the monitor farms is outlined in Table 6. Net profit fell to 12.04c/l (17.4 c/l in 2014). Total costs decreased by 1.62 c/l to 20.68.

Table 6: Financial information for the monitor farms

	Average		Range 2015
	2014	2015	
Gross Output* c/l	39.7	32.72	35.11 - 30.20
Variable costs c/l	12.9	11.91	13.93 - 8.63
Fixed Costs c/l	9.41	8.77	11.46 - 6.44
Total Costs c/l	22.3	20.68	24.54 - 17.33
Net Profit c/l	17.4	12.04	16.54 - 8.52

Note: Costs exclude own labour, capital repayments and taxation .Gross output excludes all direct payments.)

\* Gross output is defined as milk & stock sales +/- replacement transfers & cow purchases +/- change in stock inventory

