

Supplemental Table S1. Least squares means (\pm SD) for measured farm physical and financial characteristics for a sample of seasonal spring-calving, pasture based dairy farms (n=20,132) during the years 2010 to 2018, inclusive.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	SE ¹	<i>P</i> value
Number of farms	2,116	3,372	1,842	1,753	1,674	2,009	2,686	2,523	2,157		
Total area farmed (ha)	62.8 (32.57)	62.3 (32.64)	63.5 (35.18)	65.6 (36.87)	66.4 (36.00)	67.4 (37.53)	67.4 (37.17)	69.6 (39.24)	70.6 (41.17)	1.21	<0.001
Pasture area farmed (ha)	60.1 (30.18)	60.0 (31.04)	61.1 (33.77)	63.1 (35.39)	63.8 (34.24)	65.3 (36.31)	65.4 (36.03)	67.7 (38.26)	68.9 (40.23)	1.16	<0.001
Stocking rate (LU/ha)	2.02 (0.459)	2.04 (0.449)	2.08 (0.449)	2.11 (0.452)	2.13 (0.445)	2.16 (0.449)	2.18 (0.461)	2.22 (0.452)	2.19 (0.459)	0.015	<0.001
Pasture utilised (T DM/ha)	7.6 (2.00)	7.9 (2.02)	7.8 (2.03)	7.7 (2.01)	8.3 (2.00)	8.9 (2.22)	8.8 (2.24)	8.9 (2.24)	8.1 (1.93)	0.07	<0.001
Dairy herd size (cow no.)	78 (47.1)	78 (44.8)	79 (53.1)	83 (55.8)	87 (55.6)	93 (62.9)	96 (64.3)	102 (71.3)	106 (76.3)	2.0	<0.001
Dairy LU (as a % of total LU)	65.0 (12.91)	64.9 (12.16)	63.9 (12.04)	64.1 (11.56)	65.5 (11.24)	66.9 (11.64)	67.6 (11.62)	68.1 (11.55)	70.1 (11.49)	0.39	<0.001
Milk yield (litres/cow)	5,077 (732.4)	5,049 (731.4)	4,991 (738.9)	5,078 (713.2)	5,109 (704.8)	5,417 (700.1)	5,282 (743.7)	5,462 (727.8)	5,548 (755.3)	24.3	<0.001
Meal fed (kg/cow)	911 (387.2)	823 (380.0)	964 (389.7)	1,068 (395.3)	870 (387.0)	885 (360.6)	919 (359.5)	1,040 (379.7)	1,339 (394.4)	12.6	<0.001
Litres milk/kg meal fed	6.6 (2.46)	7.9 (3.17)	6.2 (2.57)	5.5 (1.95)	7.2 (3.07)	7.2 (2.79)	6.8 (2.54)	6.1 (2.25)	4.5 (1.34)	0.18	<0.001
Milk fat content (%)	3.90 (0.170)	3.94 (0.179)	3.99 (0.203)	4.00 (0.209)	4.06 (0.231)	4.10 (0.228)	4.14 (0.223)	4.13 (0.229)	4.18 (0.230)	0.007	<0.01
Milk protein content (%)	3.39 (0.105)	3.41 (0.108)	3.41 (0.126)	3.42 (0.126)	3.48 (0.129)	3.54 (0.143)	3.49 (0.139)	3.51 (0.141)	3.51 (0.139)	0.004	<0.001
Milk solids (kg/ha)	773 (220.7)	779 (209.3)	793 (217.7)	821 (221.4)	848 (213.3)	923 (241.0)	910 (249.8)	960 (251.9)	971 (264.7)	7.7	<0.001
Farm gross output (€/ha)	2,425 (780.7)	2,795 (840.7)	2,739 (838.0)	3,181 (1,000.1)	3,185 (944.3)	2,981 (865.8)	2,751 (824.6)	3,574 (1,089.8)	3,529 (1,105.0)	30.1	<0.001
Total variable costs (€/ha)	1,009 (327.7)	1,094 (340.7)	1,232 (396.2)	1,431 (471.4)	1,285 (407.5)	1,272 (381.1)	1,236 (386.5)	1,349 (410.9)	1,620 (519.1)	13.4	<0.001
Farm gross margin (€/ha)	1,416 (583.5)	1,701 (636.6)	1,507 (606.3)	1,749 (698.5)	1,900 (684.3)	1,709 (626.2)	1,514 (583.3)	2,224 (837.8)	1,909 (740.4)	21.7	<0.001

¹ Pooled standard error

Total fixed costs (€/ha)	786 (293.2)	845 (316.0)	851 (327.8)	876 (324.5)	889 (329.2)	917 (329.9)	886 (339.0)	938 (349.8)	988 (369.6)	11.1	<0.001
Farm net profit (€/ha)	630 (521.0)	855 (569.1)	656 (541.3)	873 (604.9)	1,011 (581.6)	791 (541.5)	629 (510.9)	1,286 (720.0)	922 (638.1)	19.0	<0.001

Supplemental Table S2. Least squares means (\pm SD) for measured farm physical characteristics for a sample of seasonal spring-calving, pasture based dairy farms categorized by frequency of use of Profit Monitor during the years 2010 to 2018, inclusive (n=20,132).

	Frequent PM users (av. 7.44 PM)	Infrequent PM users (av. 4.34 PM)	Low PM users (av. 1.59 PM)	Non users of PM (av. 0.0 PM)	SE ²	<i>P</i> value
Number of farms	7,973	6,472	4,971	716		
Total area farmed (ha)	72.0 ^a (37.56)	66.3 ^b (36.13)	66.5 ^b (35.73)	59.9 ^c (31.50)	0.93	<0.001
Pasture area farmed (ha)	71.1 ^a (36.52)	65.3 ^b (34.61)	64.9 ^b (34.01)	54.5 ^c (28.12)	0.88	<0.001
Stocking rate (LU/ha)	2.22 ^a (0.44)	2.11 ^b (0.46)	2.08 ^b (0.47)	2.09 ^b (0.49)	0.011	<0.001
Pasture utilised (T DM/ha)	9.0 ^a (2.09)	8.2 ^b (2.12)	8.0 ^c (2.10)	7.7 ^d (2.10)	0.05	<0.001
Dairy herd size (cow no.)	109 ^a (68.3)	90 ^b (54.6)	88 ^b (54.6)	70 ^c (35.8)	1.4	<0.001
Dairy LU (as a % of total LU)	68.9 ^a (10.70)	66.5 ^b (12.26)	65.7 ^c (13.15)	63.8 ^d (12.47)	0.31	<0.001
Milk yield (litres/cow)	5,307 ^a (705.9)	5,187 ^b (759.1)	5,194 ^b (802.8)	5,208 ^b (921.9)	18.3	<0.001
Meal fed (kg/cow)	886 ^a (396.3)	968 ^b (417.1)	1,011 ^c (429.9)	1,054 ^d (437.1)	8.7	<0.001
Litres milk/kg meal fed	7.0 ^a (6.78)	6.3 ^b (4.21)	6.0 ^c (4.71)	5.8 ^c (2.84)	0.04	<0.001
Milk fat content (%)	4.13 ^a (0.240)	4.05 ^b (0.230)	4.03 ^c (0.214)	3.98 ^d (0.196)	0.005	<0.001
Milk protein content (%)	3.51 ^a	3.46 ^b	3.45 ^c	3.43 ^d	0.003	<0.001

² Pooled standard error

	(0.139)	(0.135)	(0.137)	(0.140)		
Milk solids (kg/ha)	931 ^a	852 ^b	838 ^c	836 ^{bc}	5.7	<0.001
	(239.0)	(245.9)	(244.8)	(262.4)		

^{a-d} Means within a row with different superscripts differ ($P < 0.05$).

Supplemental Table S3. Least squares means (\pm SD) for measured farm financial characteristics for a sample of seasonal spring-calving, pasture based dairy farms categorized by frequency of use of Profit Monitor during the years 2010 to 2018, inclusive (n=20,132).

	Frequent PM users (av. 7.44 PM)	Infrequent PM users (av. 4.34 PM)	Low PM users (av. 1.59 PM)	Non (av
Number of farms	7,973	6,472	4,971	
Farm gross output (€/ha)	3,367 ^a (980.8)	3,033 ^b (1010.8)	2,935 ^c (972.7)	
Total variable costs (€/ha)	1,349 ^a (442.4)	1,269 ^b (439.6)	1,258 ^b (444.0)	
Farm gross margin (€/ha)	2,018 ^a (702.2)	1,764 ^b (729.6)	1,677 ^c (688.0)	
Total fixed costs (€/ha)	926 ^a (325.8)	895 ^b (339.3)	894 ^b (348.4)	
Farm net profit (€/ha)	1,091 ^a (600.7)	869 ^b (641.0)	783 ^c (609.5)	

^{a-d} Means within a row with different superscripts differ ($P < 0.05$).

³ Pooled standard error