

AMS KPI Project - General farm information – Australian Farms

July 2016

The Automatic Milking Systems' KPI Project provides the Dairy Industry with key information of what is achievable under commercial conditions. Information about milk production, AMS utilisation and farm demographics will help understand how these farms 'behave' over a 12 month period.

Table 1: General farm information

	Farm 1	Farm 2	Farm 3	Farm 4	Farm 5	Farm 6	Farm 7	Farm 8	Farm 9	Farm 10	Farm 11	Farm 12
Breed of cows	Holstein, Red Holstein & Cross breeds	Holstein	Holstein	Holstein and Brown Swiss (5%)	Holstein	Holstein	Friesian x Jersey	Holstein	Holstein	50% Holstein, 45% Cross cows & 5% Jersey cows	Holstein	Holstein
Calving system	Year round	Seasonal	Split (3 batches)	Year round	Year round	Split (2 batches)	Seasonal	Seasonal	Split (2 batches)	Year round	Split	Split
Milking area (ha)	55	60	100	40	100	43	90	50	157	65	112	80
Type of robots	Single box	Single box	Single box	Single box	Single box	Single box	Single box	Single box	Robotic rotary	Single box	Single box	Single box
Number of robots (#)	3	3	3	3	6	3	4	3	-	4	4	3
Feed stations (#)	0	6	4	0	6	3	2	2	16 (2 feeds)	0	4	2
Gate time changes	5:00, 13:00 & 20:00	-	2:00, 8:00 & 16:00	Barn with free cow traffic	2:00, 13:00 & 18:30	5:00, 13:00 & 20:00	1:30, 9:00 & 16:30	2:30, 11:00 & 16:30	3:00 & 13:00	2:00, 10:00 & 15:00	1:00, 10:00 & 15:00	5:00, 13:00 & 23:00

Table 2: Herd information

	Farm 1	Farm 2	Farm 3	Farm 4	Farm 5	Farm 6	Farm 7	Farm 8	Farm 9	Farm 10	Farm 11	Farm 12
Cows in milk (#)	184	-	128	185	249	87	76	118	214	286	177	111
Heifers (%)	25%	-	21%	40%	12%	3%	14%	40%	29%	16%	19%	21%
Animals that calved (#)	18	-	4	17	9	0	5	3	12	33	1	6
Farm stocking rate (milking cows/ha)	3.3	-	1.3	4.6	2.5	2.0	0.8	2.4	1.4	4.4	1.6	1.4
Robot stocking rate (milking cows/robot)	61	-	43	62	42	29	19	39	214	72	44	56
DIM (#)	165		224	145	269	258	99	222	117	145	189	157

Table 3: Daily milk production and quality

	Farm 1	Farm 2	Farm 3	Farm 4	Farm 5	Farm 6	Farm 7	Farm 8	Farm 9	Farm 10	Farm 11	Farm 12
Daily milk production (kg/day)	4,048	-	3,449	6,427	4,303	2,035	1,358	2,666	6,332	5,353	4,647	2,694
Fat (%)	3.98	-	3.98	3.56	4.46	4.01	4.24	-	4.3	3.77	3.88	4.03
Protein (%)	3.35	-	3.15	3.18	3.23	3.2	3.33	-	3.2	3.22	3.22	3.3
Somatic cell count (x 1000)	140	-	213	153	286	146	175	-	127	137	200	136

Table 4: Daily milk information

	Farm 1	Farm 2	Farm 3	Farm 4	Farm 5	Farm 6	Farm 7	Farm 8	Farm 9	Farm 10	Farm 11	Farm 12
Daily milk production herd (kg/cow/day)	23.8	-	26.4	35.3	16.6	23.1	18.7	21.4	30.7	19.7	25.4	25.3
Daily milk production cows (kg/cow/day)	25.8	-	27.6	39.2	17.3	23.3	19.4	22.9	33.5	20.9	27.2	25.5
Daily milk production heifers (kg/cow/day)	17.5	-	21.9	29.4	11.6	17.9	14.4	19.0	23.9	13.5	17.6	24.5
Daily milk production heifers:cows (%)	68%	-	79%	75%	67%	77%	74%	83%	71%	64%	65%	96%
Milking frequency herd (#/cow/day)	2.3	-	2.2	2.5	1.7	2.4	2.8	2.3	2.0	2.0	1.9	2.1
Milking frequency cows (#/cow/day)	2.3	-	2.2	2.6	1.8	2.4	2.8	2.2	2.0	2.1	1.9	2.0
Milking frequency heifers (#/cow/day)	2.1	-	2.3	2.4	1.6	2.0	2.4	2.4	2.0	1.8	1.8	2.3
Concentrate ration (kg/cow/day)	7.1	-	7.2	4.4	6.3	8.8	3.6	7.8	8.6	5.7	6.9	9.6
Concentrate intake (kg/cow/day)	6.1	-	7.2	4.3	4.6	6.5	3.2	7.0	8.0	4.1	6.0	8.1

Table 5: Milking cow information

	Farm 1	Farm 2	Farm 3	Farm 4	Farm 5	Farm 6	Farm 7	Farm 8	Farm 9	Farm 10	Farm 11	Farm 12
Milk production (kg/cow/milking)	10.3	-	11.8	14.1	9.6	9.8	6.7	9.3	15.3	8.0	13.2	12.2
Average time in robot (mm:ss/milking)	6:44	-	6:23	7:22	7:36	5:15	6:27	5:19	6:26	6:11	7:37	8:43
Average milk flow (kg milk/min in robot)	1.7	-	1.7	2.2	1.1	1.9	1.1	1.6	2.4	1.6	2.2	1.4

Table 6: Robot performance information

	Farm 1	Farm 2	Farm 3	Farm 4	Farm 5	Farm 6	Farm 7	Farm 8	Farm 9	Farm 10	Farm 11	Farm 12
Milking events (number/robot/day)	137	-	100	162	79	71	57	104	394	147	90	76
Milking time (hours/robot/day)	15:50	-	12:22	17:51	11:46	6:47	5:25	10:47	-	17:54	10:20	11:36
Milk harvested (kg/robot/day)	1,349	-	1,150	2,142	717	678	340	898	6,332	1,338	1,160	896

For updates go to www.dpi.nsw.gov.au/agriculture/livestock/dairy-cattle/robotic-milking-systems

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