

AMS KPI Project - General farm information – Australian Farms

August 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, Cross cows, Red Holstein	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	6:00, 13:00 & 20:00	1:00, 7:30, 11:00 & 18:00	7:30 (feedpad), 8:30, 14:30 (feedpad), 16:30 & 22:00	Barn with free cow traffic	4:00; 13:00 & 18:30	4:00, 14:00 & 20:30	1:30, 9:00 & 16:30	2:30 & 11:00	3:00, 10:15, 16:45 & 20:00	2:00, 10:00 & 15:30	1:00, 10:30 & 16:30	6:00, 13:00 & 22:00

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 (#)	191	97	125	182	245	126	154	129	444	285	191	155
Heifers (%)	23%	9%	27%	38%	12%	11%	16%	35%	17%	13%	27%	14%
Animals that calved (#)	24	97	1	7	14	35	89	14	225	22	20	47
Farm stocking rate (milking cows/ha)	3.5	1.6	1.3	4.6	2.5	2.9	1.7	2.6	2.8	4.4	1.7	1.9
Robot stocking rate (milking cows/robot)	64	32	42	61	41	42	39	43	444	71	48	78
DIM (#)	161	16	204	162	270	192	71	214	79	149	189	135

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)	4,305	1086	3,432	6,612	4,392	2,508	2,227	2,560	12,711	5,867	3,869	3,389
Fat (%)	3.94	4	4.09	3.42	4.22	3.79	4.36	4.3	4.2	3.81	4.11	4.13
Protein (%)	3.32	4	3.34	3.12	3.38	3.41	3.42	3.25	3.55	3.21	3.21	3.2
Somatic cell count (x 1000)	235	372	138	145	263	135	189	172	128	116	259	107

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	25	27.6	36.6	20.1	27.6	19.8	21.6	29.8	21.0	19.1	27.4
Daily milk production cows (kg/cow/day)	25.5	25	28.7	40.1	21.0	28.8	20.6	22.2	31.7	22.0	21.4	27.8
Daily milk production heifers (kg/cow/day)	17.8	18	24.6	30.8	13.7	17.9	15.5	20.5	20.9	14.5	13.0	25.0
Daily milk production heifers:cows (%)	70%	73%	86%	77%	65%	62%	76%	93%	66%	66%	61%	90%
Milking frequency herd (#/cow/day)	2.2	3	2.1	2.5	2.2	2.4	2.4	2.1	2.3	2.0	1.8	2.3
Milking frequency cows (#/cow/day)	2.2	3	2.1	2.5	2.2	2.5	2.4	2.0	2.3	2.1	1.9	2.3
Milking frequency heifers (#/cow/day)	2.0	2	2.2	2.4	1.8	1.9	2.0	2.3	2.1	1.7	1.5	2.4
Concentrate ration (kg/cow/day)	6.9	7	7.6	4.4	6.5	7.6	3.5	7.4	8.1	6.0	6.8	9.7
Concentrate intake (kg/cow/day)	6.5	7	7.4	4.3	5.7	6.9	2.8	6.7	7.9	4.4	5.9	7.5

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)	10.8	10	13.2	15.0	9.3	11.4	8.3	10.4	13.2	10.3	10.7	11.9
Average time in robot (mm:ss/milking)	6:36	0	6:37	7:00	8:05	6:21	8:19	6:13	5:58	6:12	6:10	8:47
Average milk flow (kg milk/min in robot)	1.6	1	1.9	2.2	1.1	2.1	1.1	1.7	2.3	1.7	1.8	1.8

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)	134	41	87	156	77	82	87	89	954	143	81	95
Milking time (hours/robot/day)	16:01	6:21	11:09	18:07	12:09	8:10	10:02	9:21	12:36	17:30	8:56	13:22
Milk harvested (kg/robot/day)	1,435	362	1,144	2,204	732	884	611	846	12,711	1,467	966	1,130

Table 7: Animal health

	Farm 1	Farm 2	Farm 3	Farm 4	Farm 5	Farm 6	Farm 7	Farm 8	Farm 9	Farm 10	Farm 11	Farm 12
Lameness (cows detected or treated)	0	1	2	3	6	2	1	1	6	0	4	3
Mastitis (cows detected or treated)	4	5	3	10	6	5	3	10	16	10	2	3

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

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