Department of Primary Industries

International AMS KPI Project - Average farm information

March 2017

The First International Automatic Milking Systems' KPI Project provides the International Dairy Industry community 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.

A total of 19 farms are being monitored: 12 from Australia, 2 from New Zealand, 4 from Ireland and 1 from Chile.

Table 1: Herd information

	ALL AMS Farms						
	Minimum	**Average**	**Maximum**	**Australian AMS Farms**	**New Zealand AMS Farms**	**Irish AMS Farms**	**Chilean AMS Farm**
Cows in milk (#)	57	176	427	201	186	90	208
Heifers (%)	3%	27%	39%	25%	31%	28%	35%
Animals that calved (#)	0	19	71	15	8	25	71
Farm stocking rate (milking cows/ha)	1.3	2.5	3.9	2.7	1.4	2.8	2.1
Robot stocking rate (milking cows/robot)	38	52	66	51	62	47	52
DIM (#)	37	175	280	201	207	90	149

Table 2: Daily milk production and quality

	ALL AMS Farms						
	Minimum	**Average**	**Maximum**	**Australian AMS Farms**	**New Zealand AMS Farms**	**Irish AMS Farms**	**Chilean AMS Farm**
Daily milk production (kg/day)	1,421	3,767	10,531	4,310	4,204	2,347	2,049
Fat (%)	3.5	4.3	5.3	4.3	4.5	4.1	5.28
Protein (%)	3.2	3.5	4.0	3.4	3.9	3.3	3.93
Somatic cell count (x 1000)	63	174	353	192	205	115	158

Table 3: Daily milk information

	ALL AMS Farms						
	Minimum	Average	Maximum	Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
Daily milk production herd (kg/cow/day)	14.4	22.9	30.6	21.5	21.3	29.9	14.4
Daily milk production cows (kg/cow/day)	16.0	24.3	34.1	22.3	23.0	33.0	16.4
Daily milk production heifers (kg/cow/day)	10.5	18.6	26.1	18.4	17.1	21.8	10.5
Daily milk production heifers: cows (%)	61%	77%	107%	83%	73%	66%	64%
Milking frequency herd (#/cow/day)	1.7	2.2	3.0	2.2	1.8	2.6	2.2
Milking frequency cows (#/cow/day)	1.7	2.3	3.1	2.2	1.8	2.7	2.3
Milking frequency heifers (#/cow/day)	1.4	2.1	2.7	2.2	1.6	2.3	1.9
Concentrate ration (kg/cow/day)	0.3	5.8	8.9	6.7	1.8	5.9	2.7
Concentrate intake (kg/cow/day)	0.3	5.2	8.4	6.0	1.6	5.1	2.5

Table 4: Milking cow information

	ALL AMS Farms						
	Minimum	Average	Maximum	Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
Milk production (kg/cow/milking)	6.6	10.2	13.0	9.7	12.2	11.7	6.6
Average time in robot (mm:ss/milking)	5:04	6:31	7:56	6:09	6:27	7:43	6:21
Average milk flow (kg milk/min in robot)	0.9	1.6	2.6	1.6	2.0	1.6	0.9

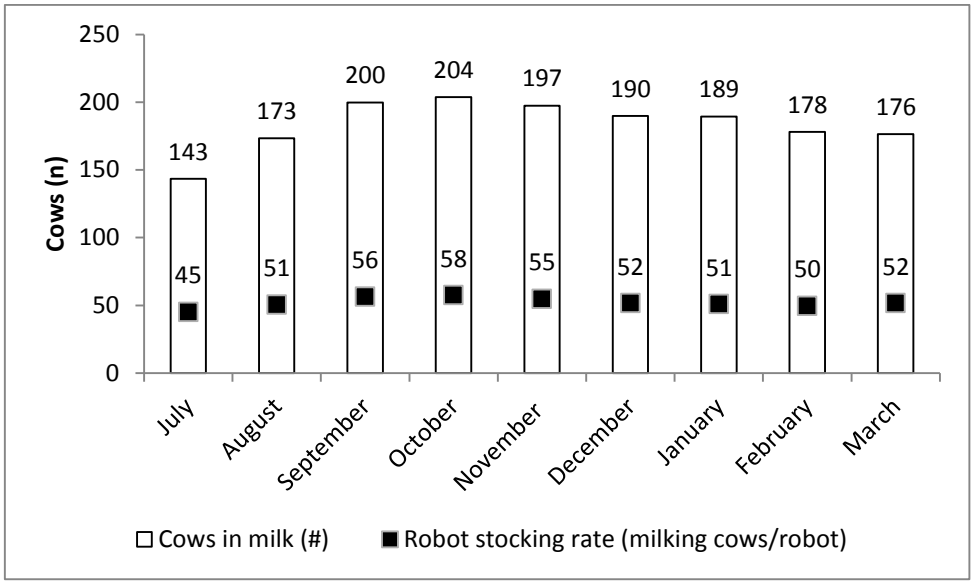
Table 5: Robot performance information

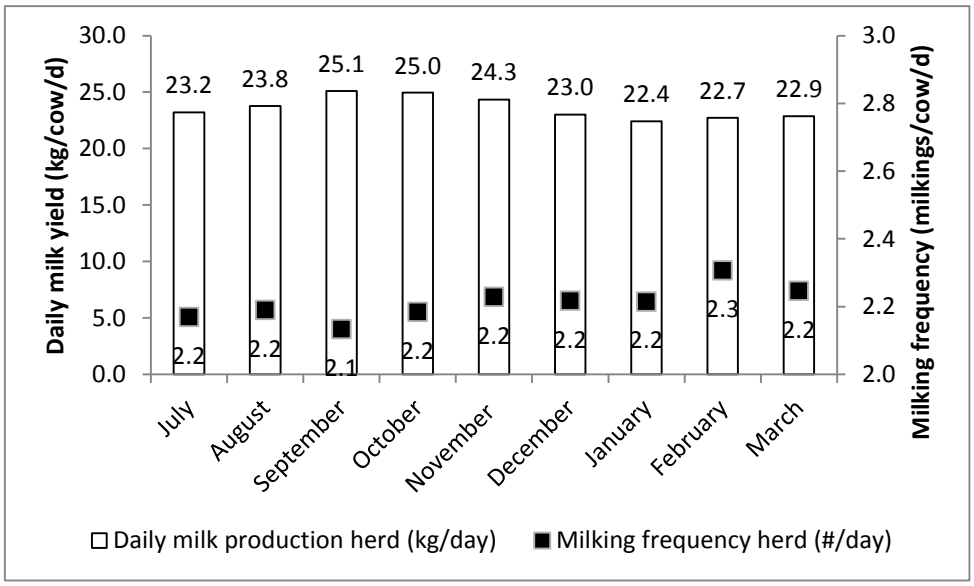
	ALL AMS Farms						
	Minimum	Average	Maximum	Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
Milking events (number/robot/day)	87	113	146	116	104	116	93
Milking time (hours/robot/day)	9:40	13:13	17:09	13:03	11:49	14:49	11:20
Milk harvested (kg/robot/day)	512	1,118	1,595	1,103	1,304	1,218	512
Incomplete milkings (%)	2%	7%	18%	8%	3%	4%	18%

Table 6: Animal health

	ALL AMS Farms						
	Minimum	Average	Maximum	Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
Lameness (cases every 100 cows)	0	1	3	1	0	1	-
Mastitis (cases every 100 cows)	0	2	9	3	1	1	1.4

Figure 1: International AMS KPI Project – Evolution





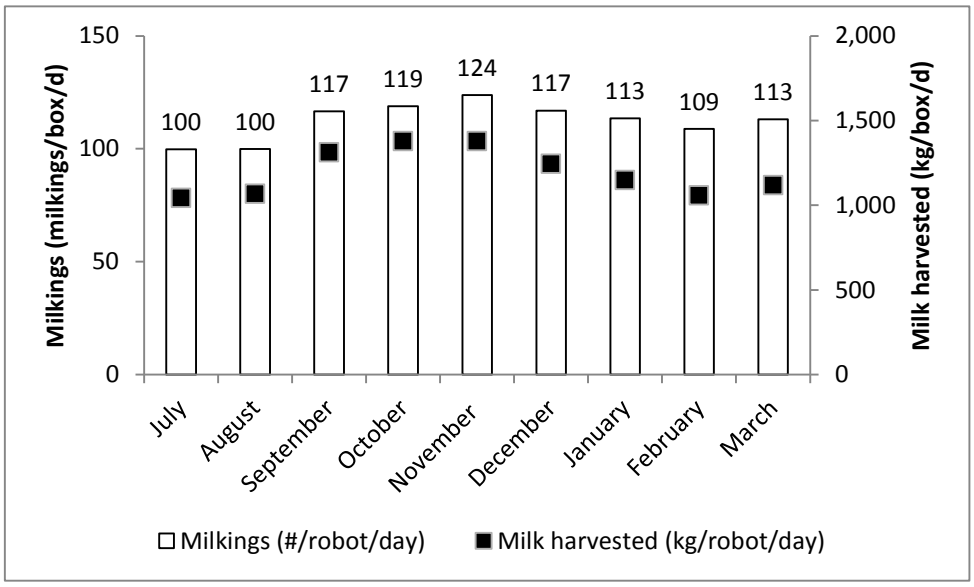


Figure 2: Herd information

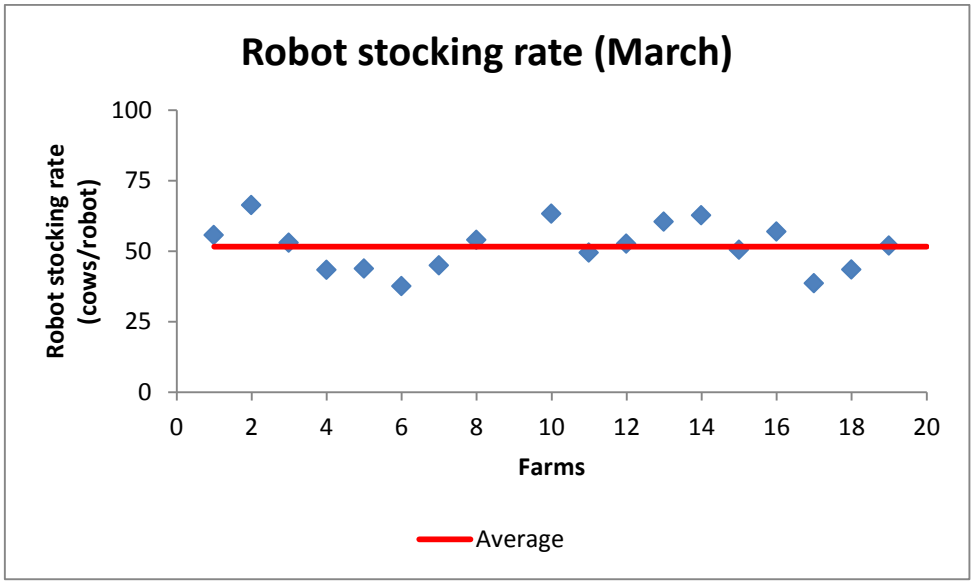
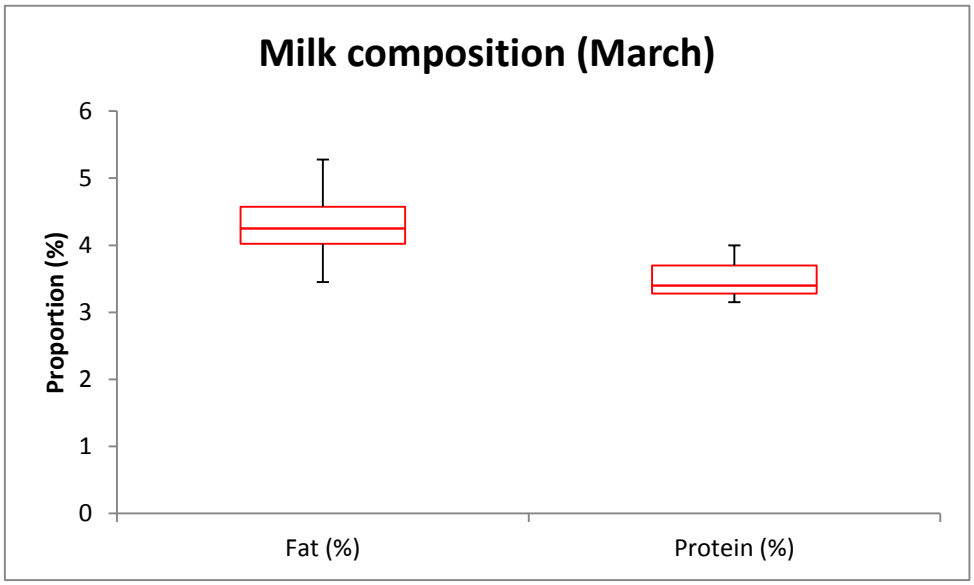


Figure 3: Daily milk information



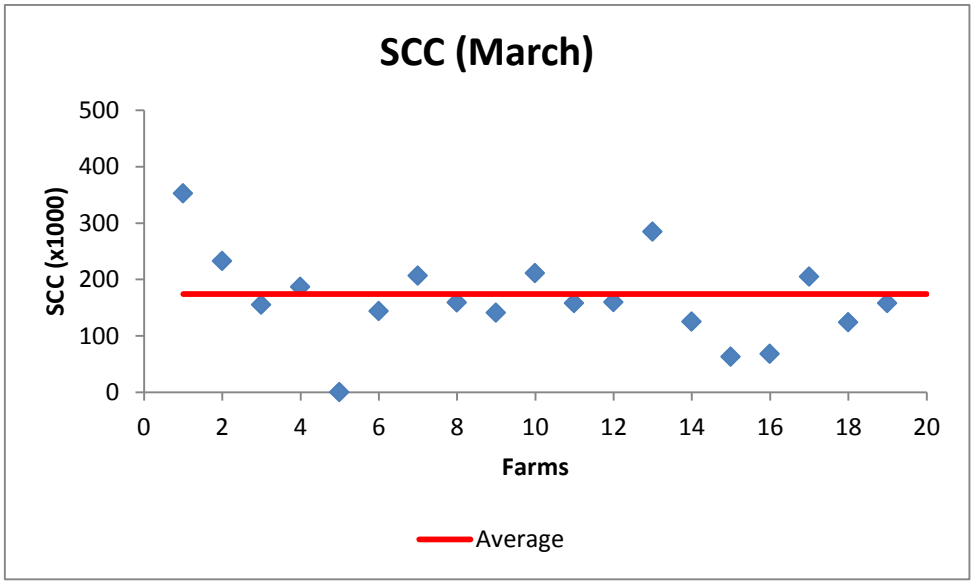
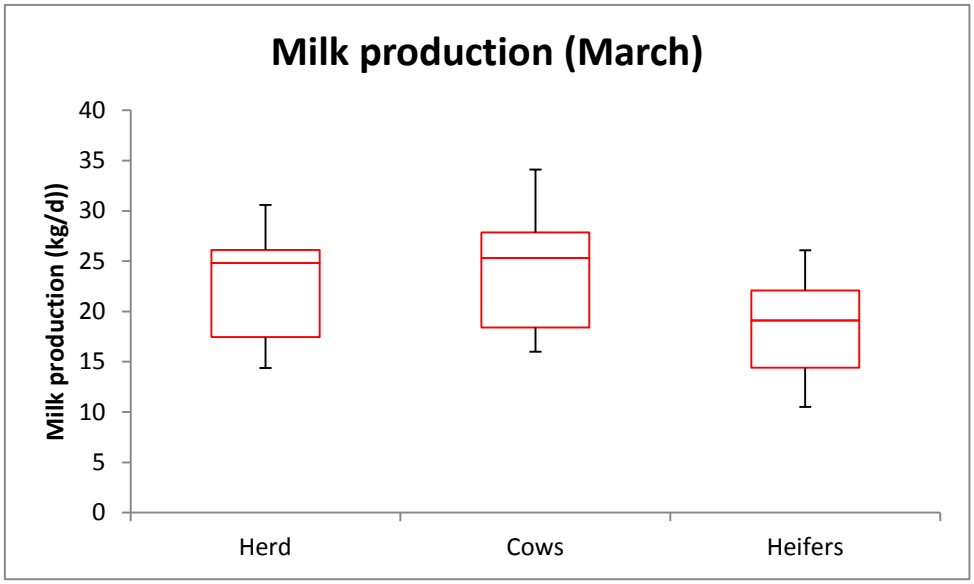
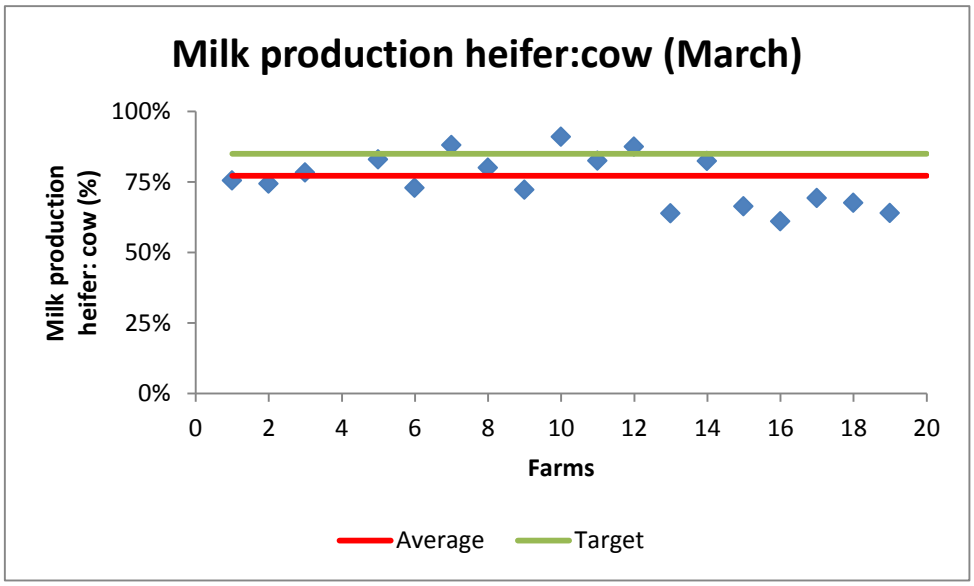
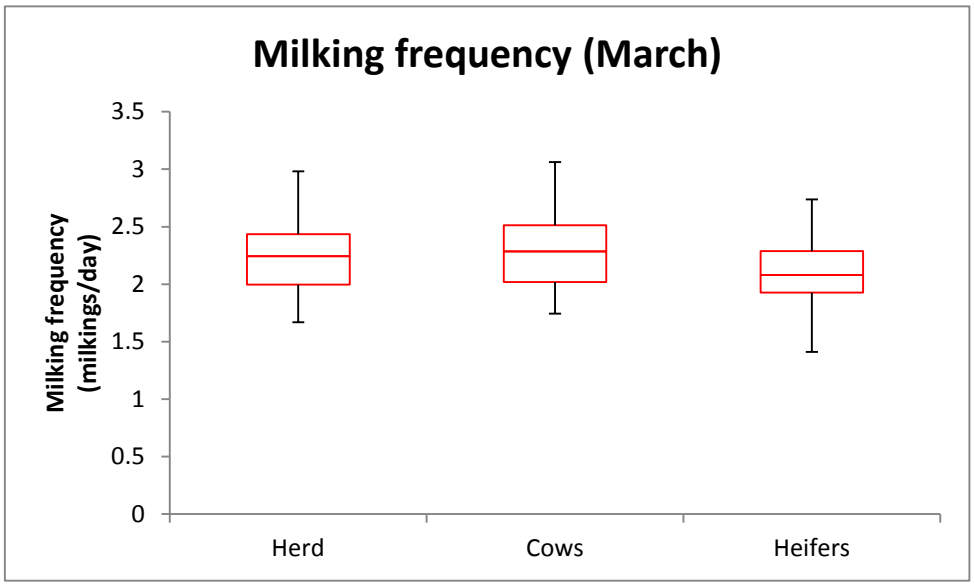


Figure 4: Daily cow information







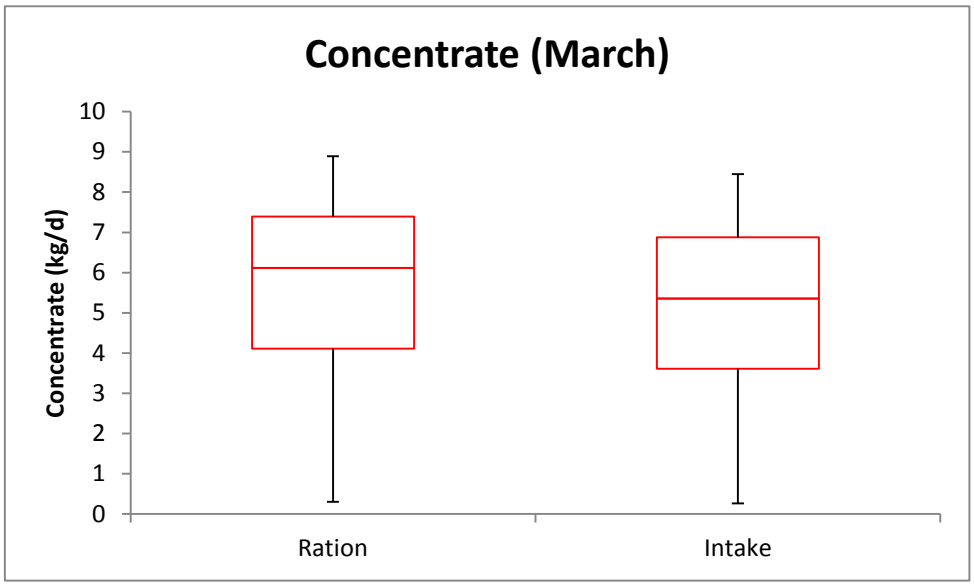
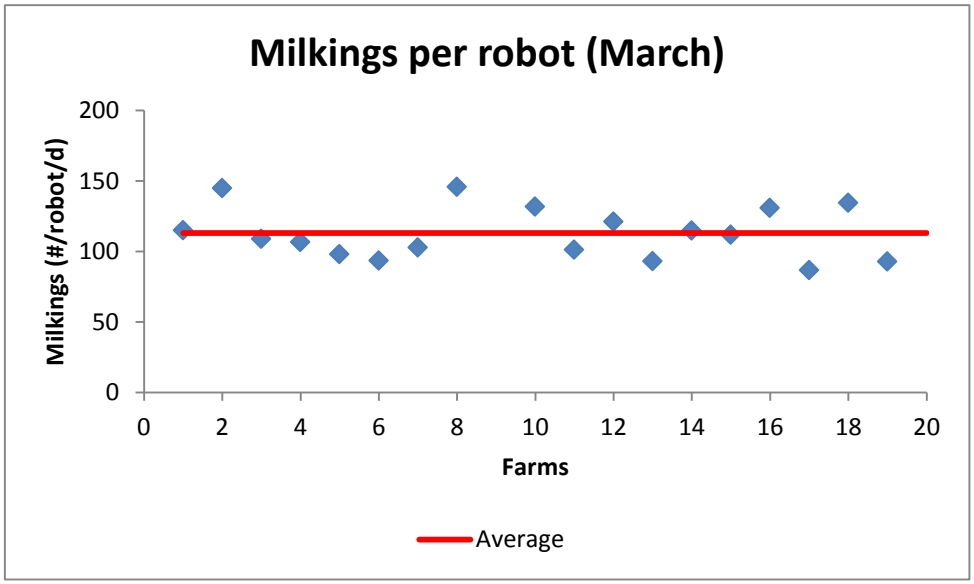
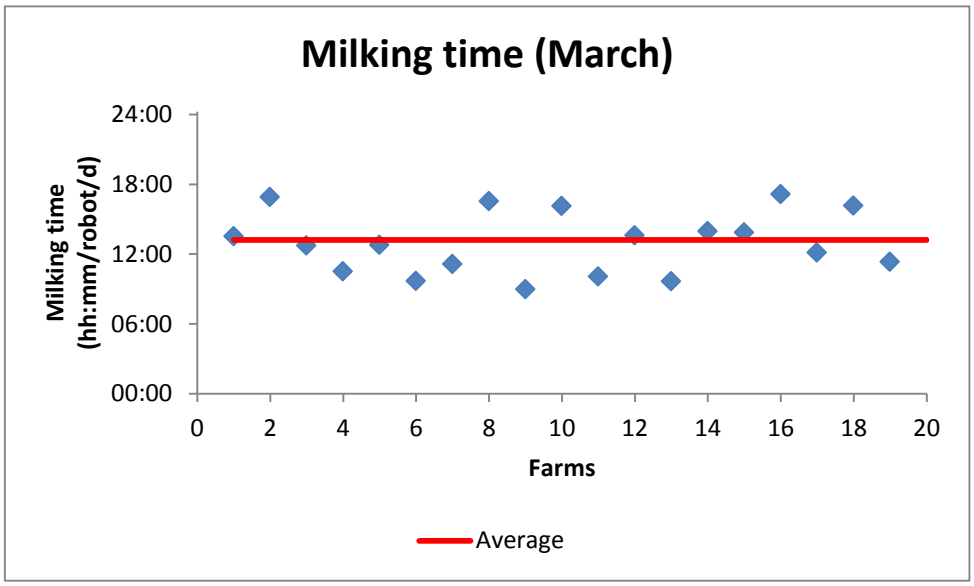
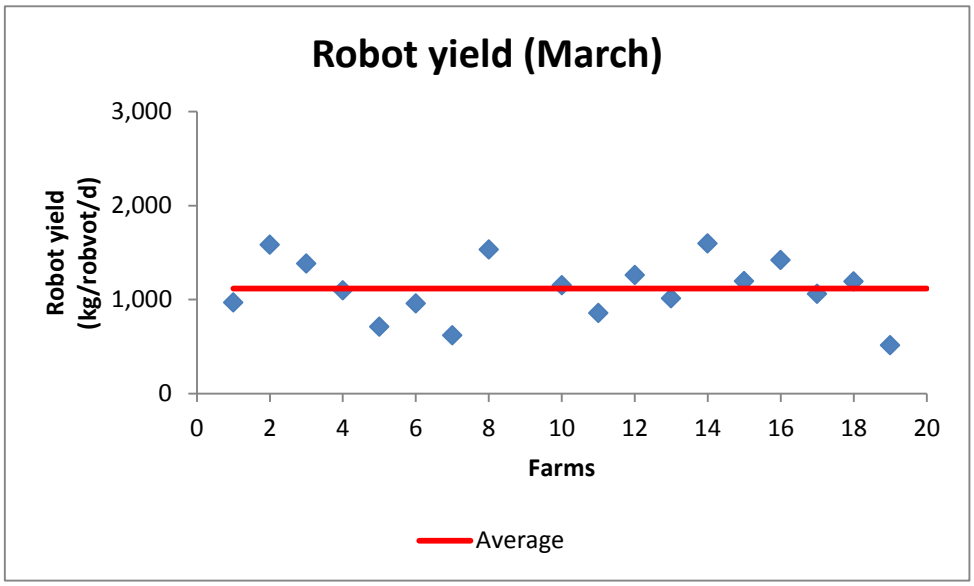
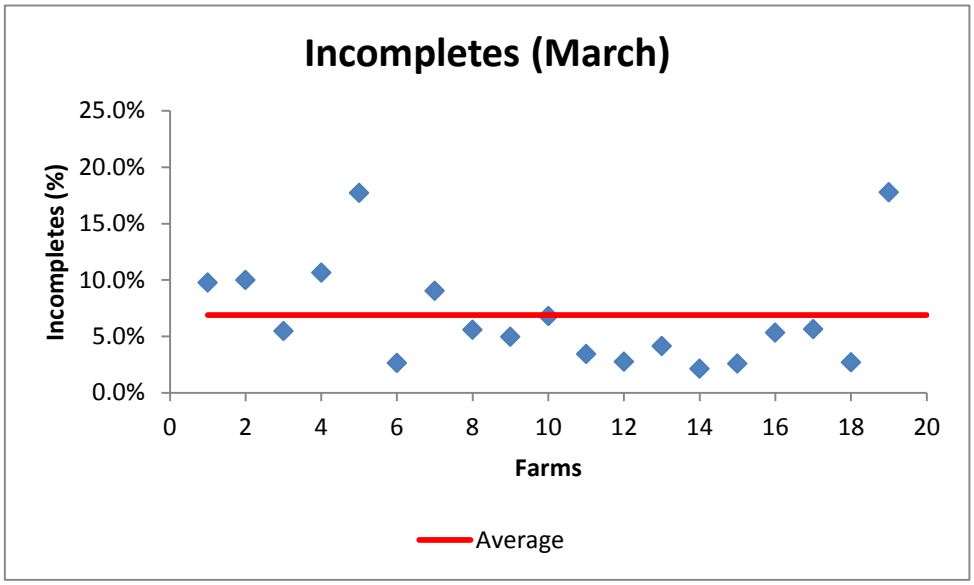


Figure 5: Robot performance









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

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