Department of Primary Industries

International AMS KPI Project - Average farm information

August 2016

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 (#)	62	173	444	194	171	96	246
Heifers (%)	9%	25%	46%	20%	38%	29%	40%
Animals that calved (#)	0	45	225	50	110	0	46
Farm stocking rate (milking cows/ha)	1.3	2.5	4.6	2.6	1.3	2.9	2.5
Robot stocking rate (milking cows/robot)	32	52	78	51	57	50	62
DIM (#)	16	155	270	154	87	194	150

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)	1,086	3,724	12,711	4,413	2,540	2,331	3,397
Fat (%)	3.4	4.2	5.2	4.0	4.5	4.2	5.15
Protein (%)	3.1	3.5	3.9	3.3	3.8	3.6	3.86
Somatic cell count (x 1000)	75	172	372	188	204	128	84

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)	14.7	23.8	36.6	24.9	23.8	22.5	14.7
Daily milk production cows (kg/cow/day)	17.3	25.5	40.1	26.3	26.6	24.6	17.3
Daily milk production heifers (kg/cow/day)	10.8	18.5	30.8	19.4	19.4	17.2	10.8
Daily milk production heifers: cows (%)	61%	72%	93%	74%	72%	70%	62%
Milking frequency herd (#/cow/day)	1.8	2.2	2.6	2.2	2.0	2.2	2.0
Milking frequency cows (#/cow/day)	1.9	2.2	2.6	2.3	2.1	2.3	2.3
Milking frequency heifers (#/cow/day)	1.5	2.0	2.4	2.0	1.8	2.0	1.6
Concentrate ration (kg/cow/day)	0.4	5.5	9.7	6.8	2.1	3.8	3.1
Concentrate intake (kg/cow/day)	0.3	4.9	7.9	6.1	1.9	3.5	2.7

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)	7.1	10.9	15.0	11.2	11.7	10.4	7.1
Average time in robot (mm:ss/milking)	5:58	6:56	8:47	6:54	6:38	7:03	7:21
Average milk flow (kg milk/min in robot)	1.0	1.7	2.3	1.7	1.8	1.6	1.0

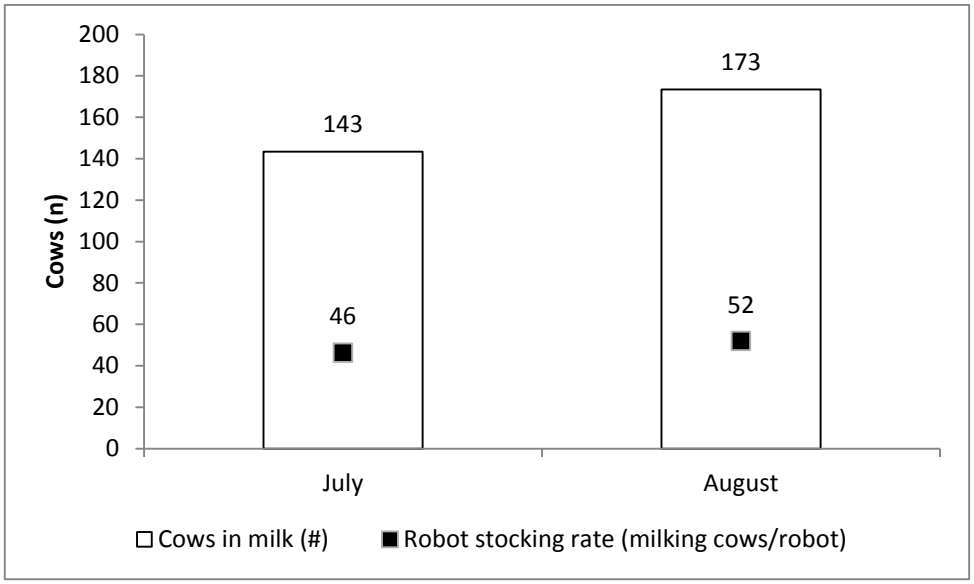
Table 5: Robot performance information

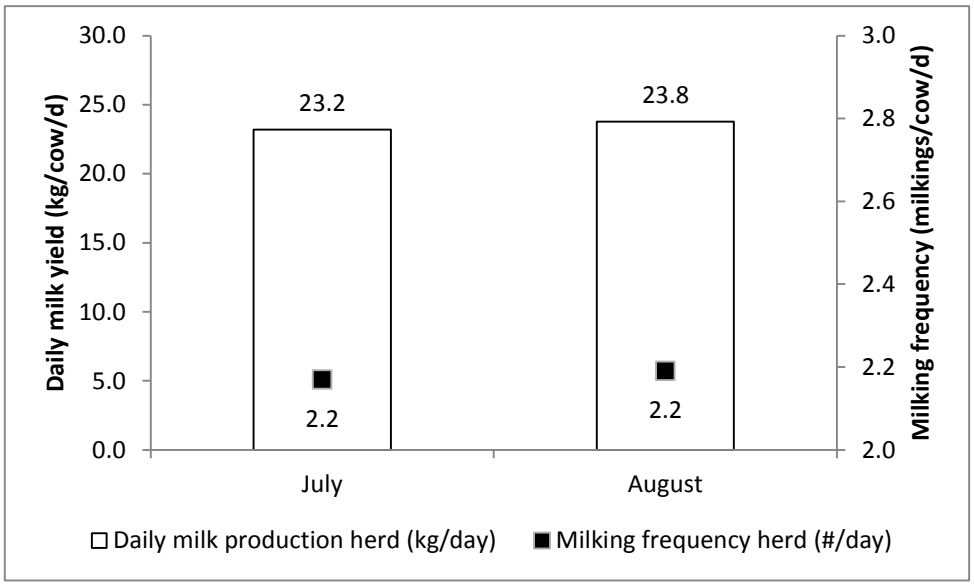
	ALL AMS Farms						
	Minimum	**Average**	**Maximum**	**Australian AMS Farms**	**New Zealand AMS Farms**	**Irish AMS Farms**	**Chilean AMS Farm**
Milking events (number/robot/day)	41	100	156	97	75	113	121
Milking time (hours/robot/day)	6:21	12:09	18:07	11:55	9:00	13:27	15:55
Milk harvested (kg/robot/day)	362	1,067	2,204	1,071	863	1,213	849

Table 6: Animal health

	ALL AMS Farms						
	Minimum	**Average**	**Maximum**	**Australian AMS Farms**	**New Zealand AMS Farms**	**Irish AMS Farms**	**Chilean AMS Farm**
Lameness (cows detected or treated)	0	2	6	2	1	1	-
Mastitis (cows detected or treated)	0	5	16	6	7	1	4

Figure 1: International AMS KPI Project – Evolution





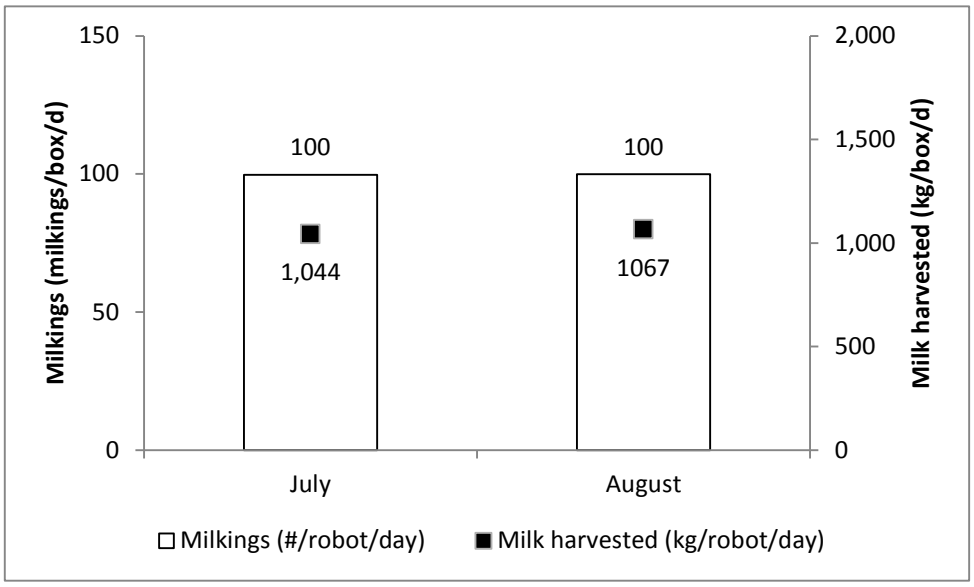


Figure 2: Herd information

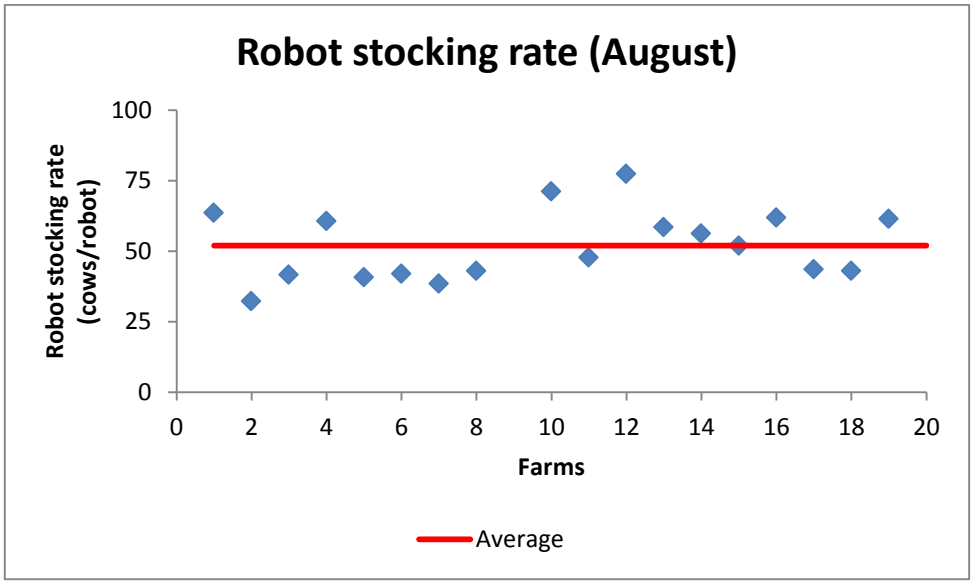
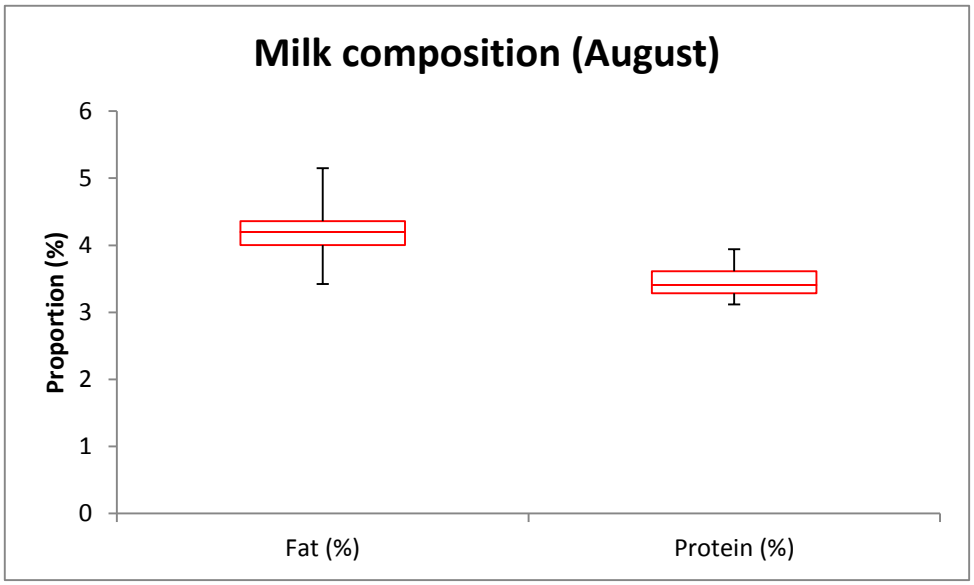


Figure 3: Dairy milk information



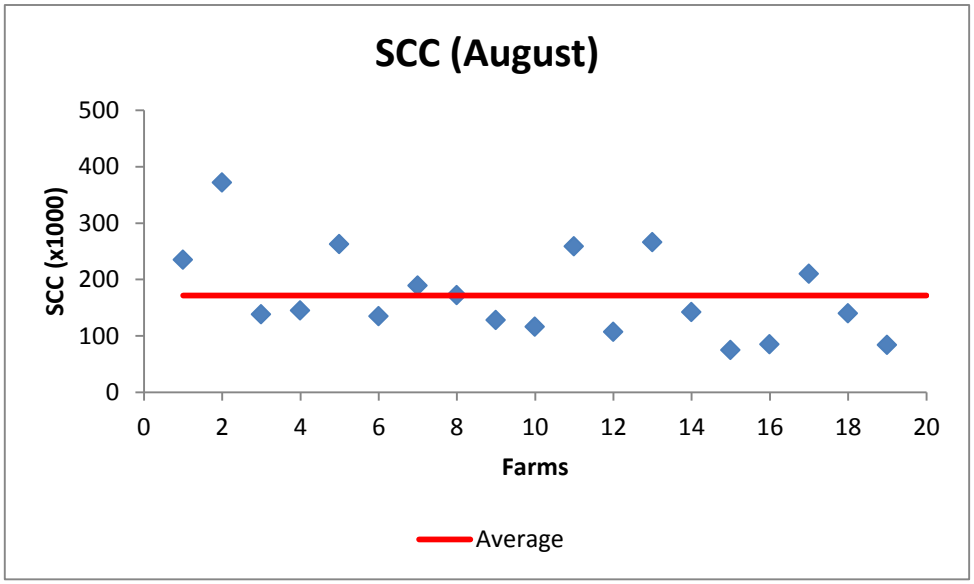
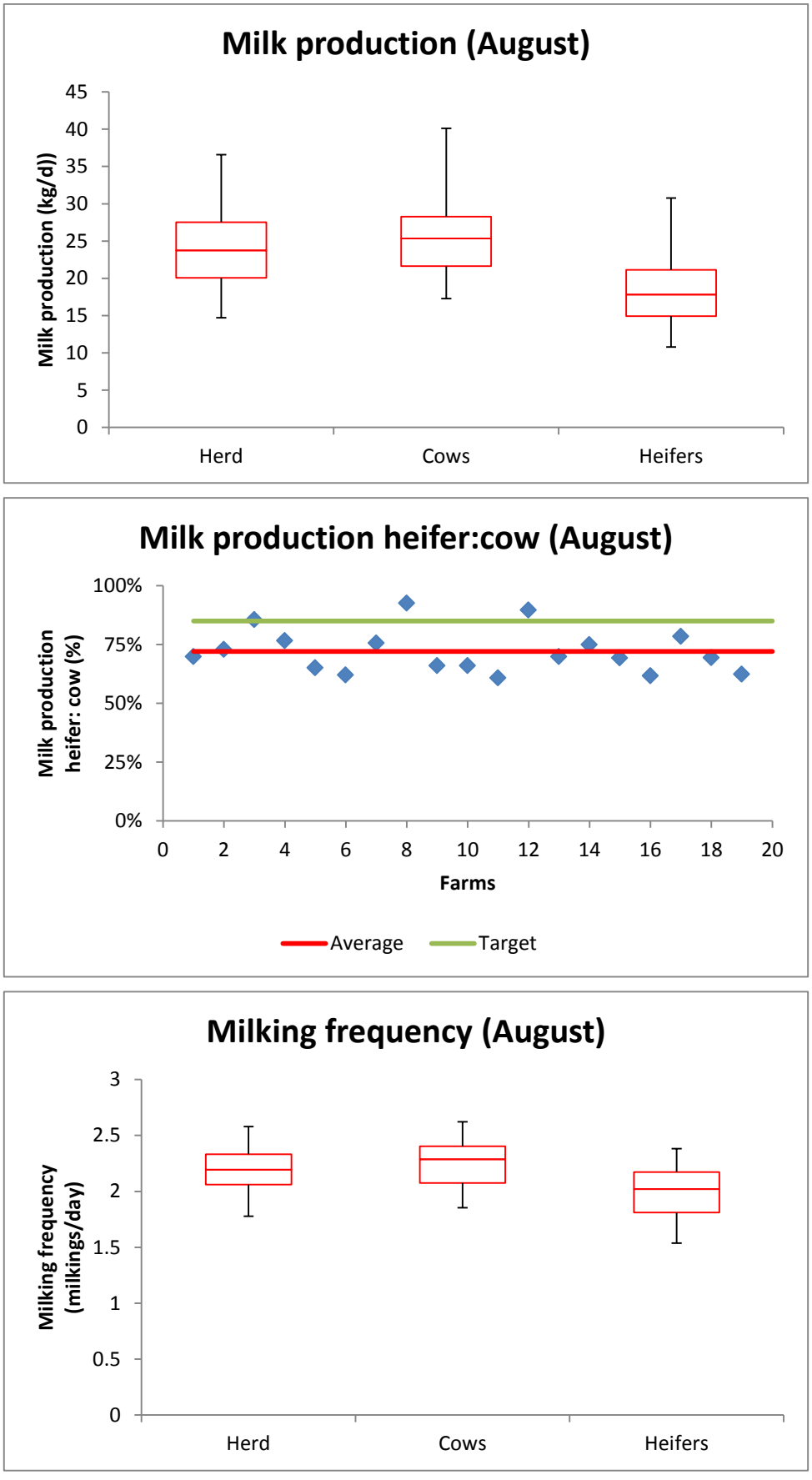


Figure 4: Dairy cow information



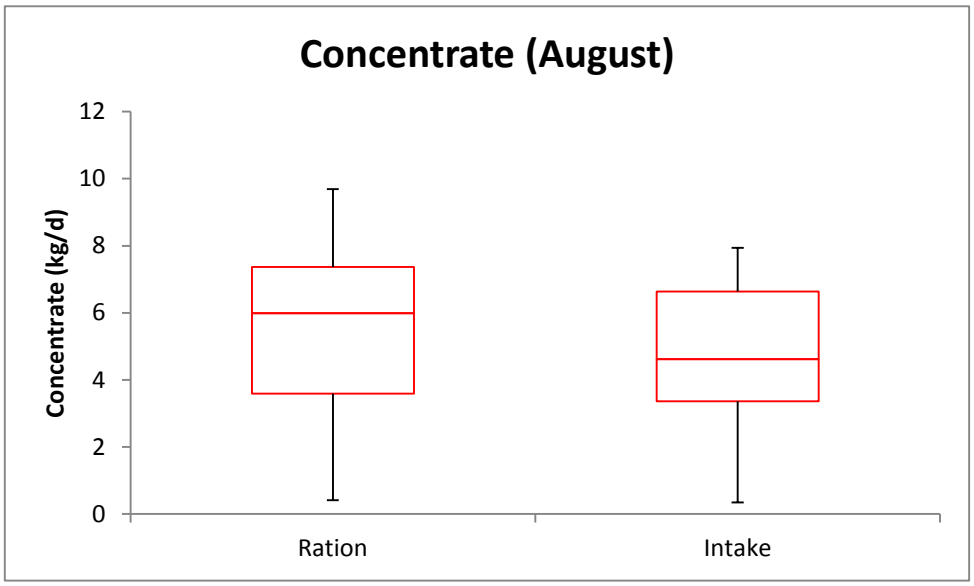
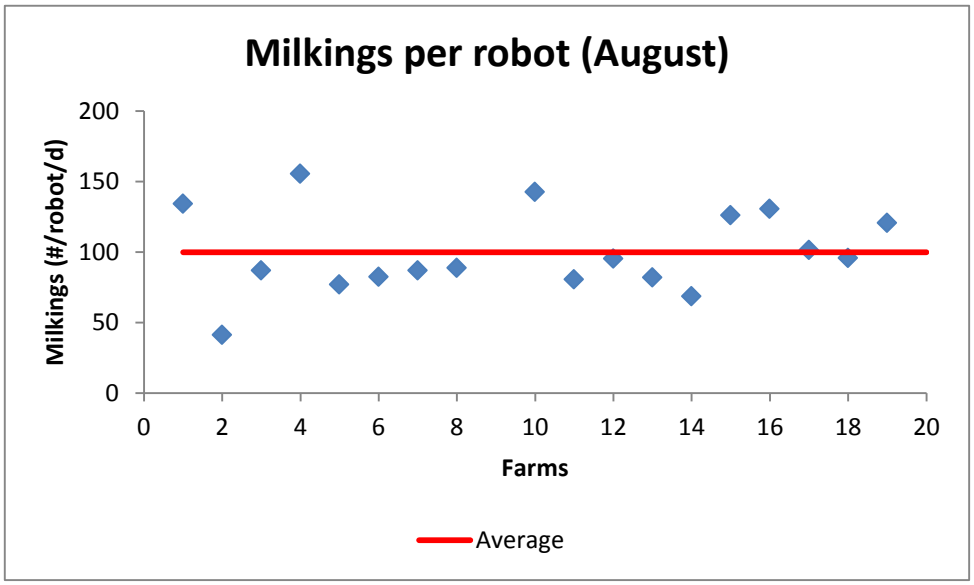
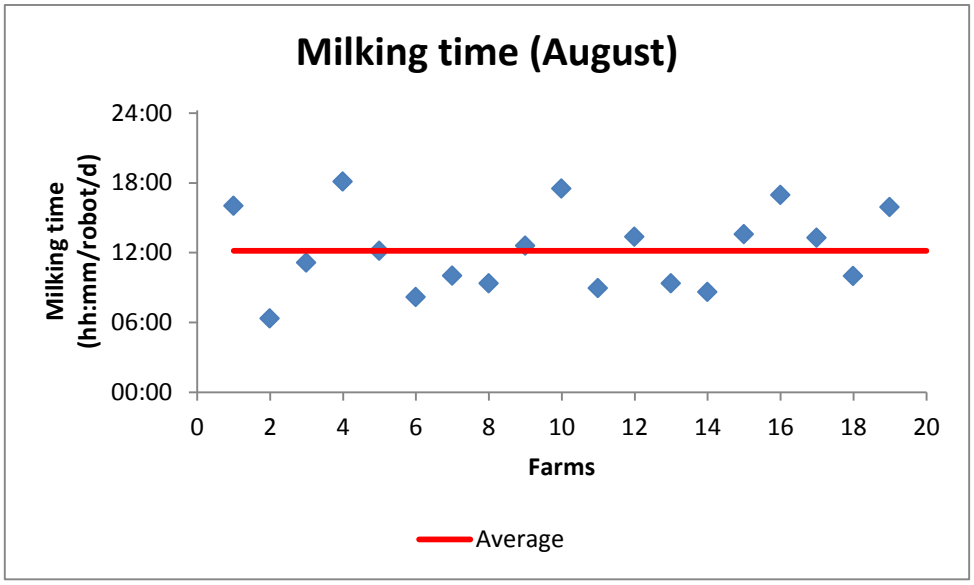
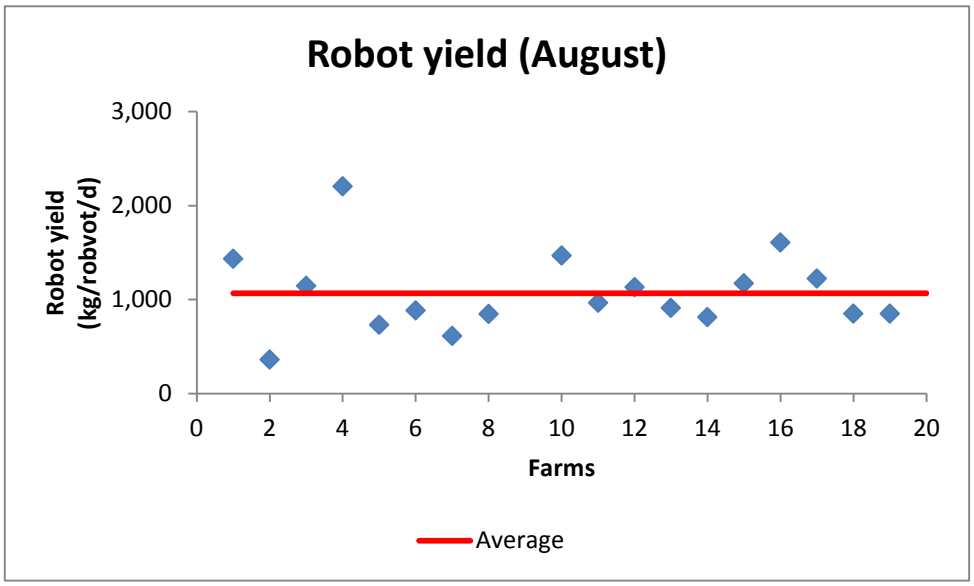


Figure 5: Robot performance







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