

International AMS KPI Project - Average farm information

November 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			Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
	Minimum	Average	Maximum				
Cows in milk (#)	46	197	587	232	216	66	276
Heifers (%)	3%	21%	38%	19%	30%	18%	35%
Animals that calved (#)	0	5	26	6	3	2	0
Farm stocking rate (milking cows/ha)	1.2	2.7	4.3	3.0	1.7	2.1	2.8
Robot stocking rate (milking cows/robot)	23	55	82	57	74	35	69
DIM (#)	85	196	297	184	138	255	218

Table 2: Daily milk production and quality

	ALL AMS Farms			Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
	Minimum	Average	Maximum				
Daily milk production (kg/day)	1,090	5,148	18,804	6,215	6,440	1,506	4,332
Fat (%)	3.6	4.2	5.5	3.9	4.2	5.0	4.98
Protein (%)	3.0	3.5	4.1	3.3	3.6	3.9	3.66
Somatic cell count (x 1000)	73	160	268	175	168	129	85

Table 3: Daily milk information

	ALL AMS Farms			Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
	Minimum	Average	Maximum				
Daily milk production herd (kg/cow/day)	13.2	24.3	35.1	26.6	27.7	18.3	14.5
Daily milk production cows (kg/cow/day)	13.6	25.5	36.8	27.7	30.2	19.1	16.6
Daily milk production heifers (kg/cow/day)	10.6	19.7	31.3	21.6	21.9	15.0	10.6
Daily milk production heifers: cows (%)	64%	77%	91%	78%	71%	79%	64%
Milking frequency herd (#/cow/day)	1.7	2.2	3.0	2.2	1.8	2.3	2.3
Milking frequency cows (#/cow/day)	1.8	2.3	3.0	2.3	1.9	2.3	2.5
Milking frequency heifers (#/cow/day)	1.4	2.1	2.9	2.1	1.7	2.3	2.0
Concentrate ration (kg/cow/day)	0.2	5.6	9.1	6.8	2.4	4.3	3.1
Concentrate intake (kg/cow/day)	0.2	5.1	9.0	6.2	2.2	4.0	2.9

Table 4: Milking cow information

	ALL AMS Farms			Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
	Minimum	Average	Maximum				
Milk production (kg/cow/milking)	6.1	11.1	16.6	11.9	15.0	7.9	6.3
Average time in robot (mm:ss/milking)	5:30	6:46	8:10	6:42	7:41	6:19	7:21
Average milk flow (kg milk/min in robot)	1.0	1.7	2.8	1.9	2.1	1.2	1.0

Table 5: Robot performance information

	ALL AMS Farms			Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
	Minimum	Average	Maximum				
Milking events (number/robot/day)	81	124	164	129	136	96	155
Milking time (hours/robot/day)	8:06	14:56	20:36	15:29	18:17	10:37	19:40
Milk harvested (kg/robot/day)	545	1,379	2,272	1,492	2,084	789	1,083
Incomplete milkings (%)	0%	6%	14%	6%	2%	4%	14%

Table 6: Animal health

	ALL AMS Farms			Australian AMS Farms	New Zealand AMS Farms	Irish AMS Farms	Chilean AMS Farm
	Minimum	Average	Maximum				
Lameness (cases every 100 cows)	0.0	1.1	3.8	0.7	1.1	2.5	-
Mastitis (cases every 100 cows)	0.0	1.5	2.7	1.8	1.6	0.7	1.1

Figure 1: International AMS KPI Project – Evolution

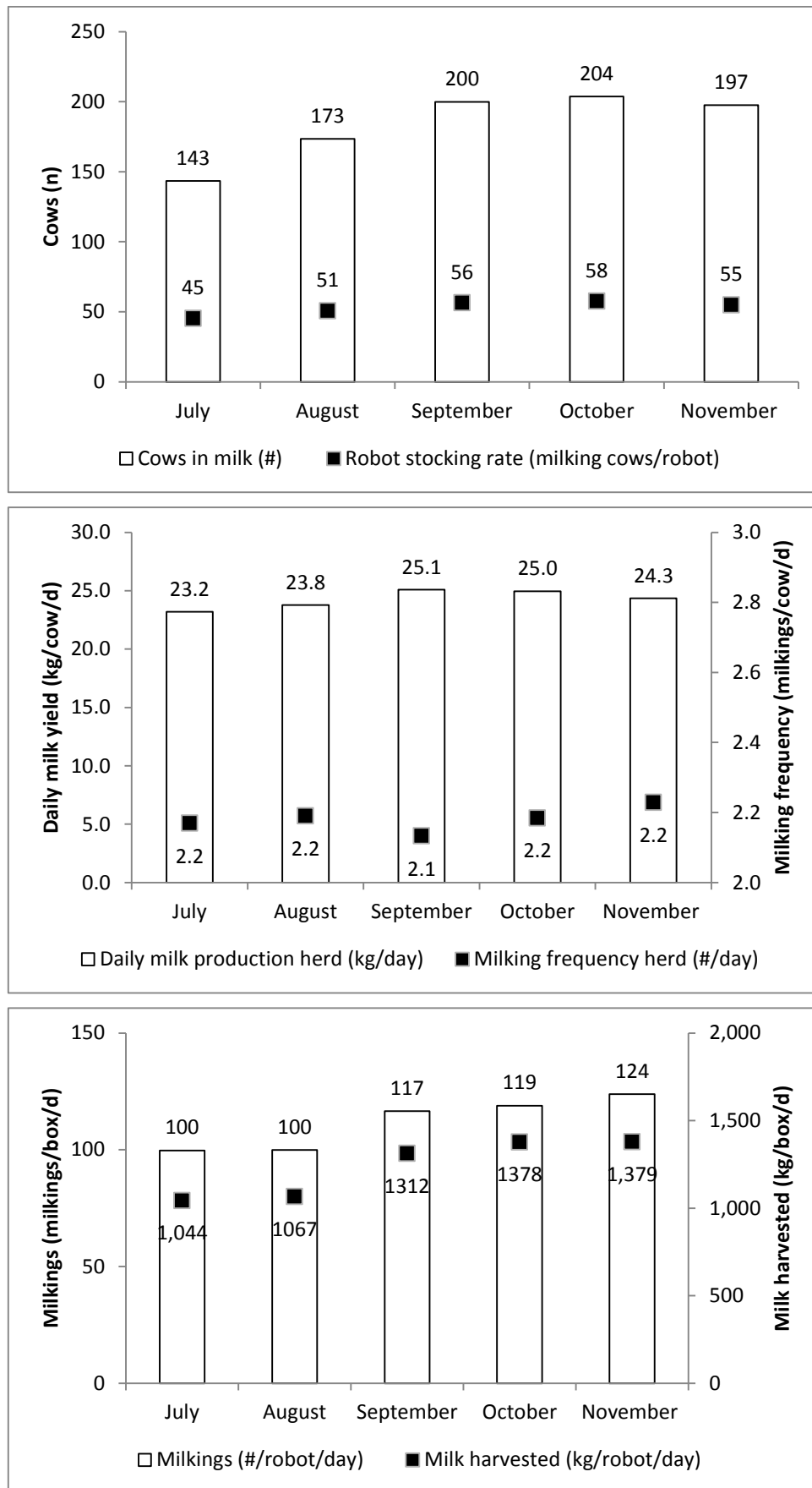


Figure 2: Herd information

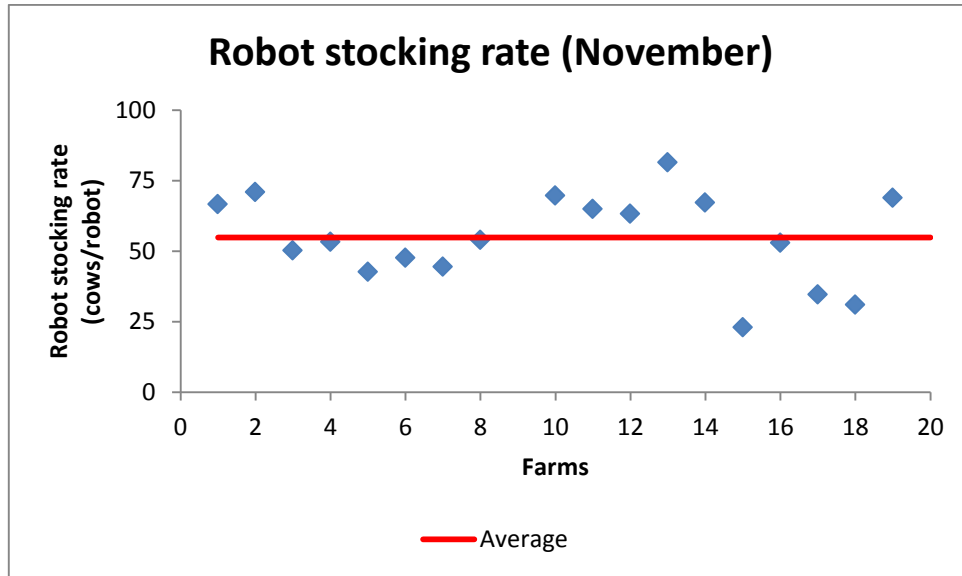


Figure 3: Daily milk information

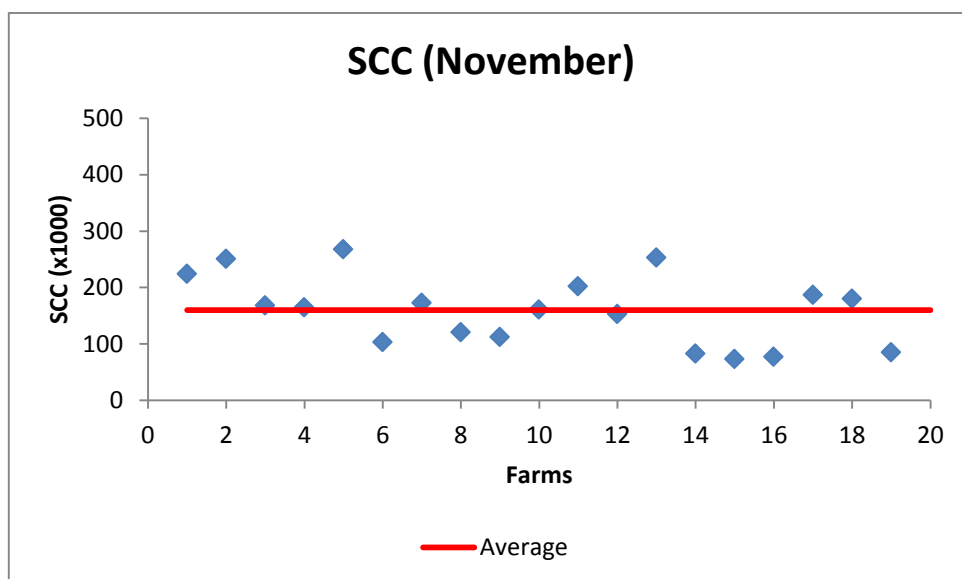
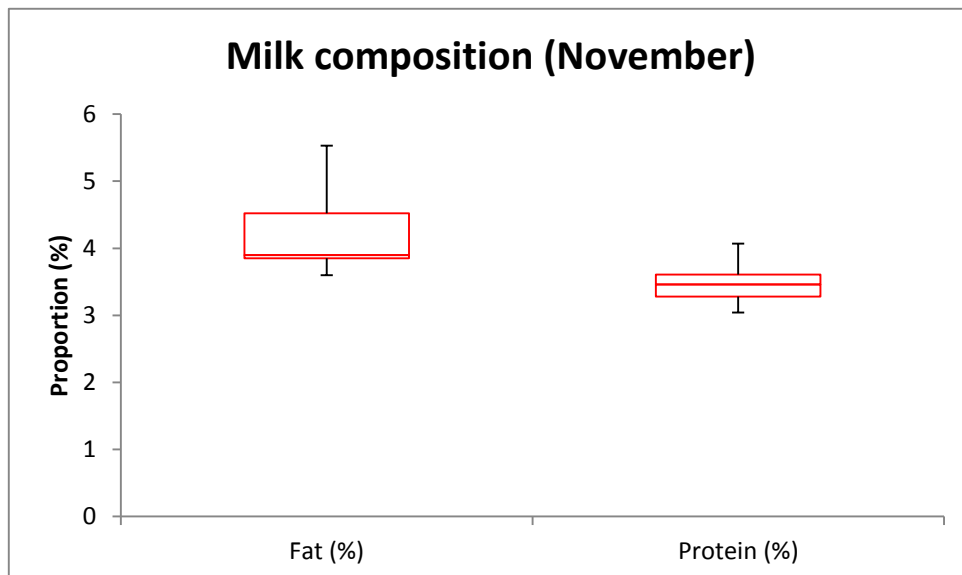
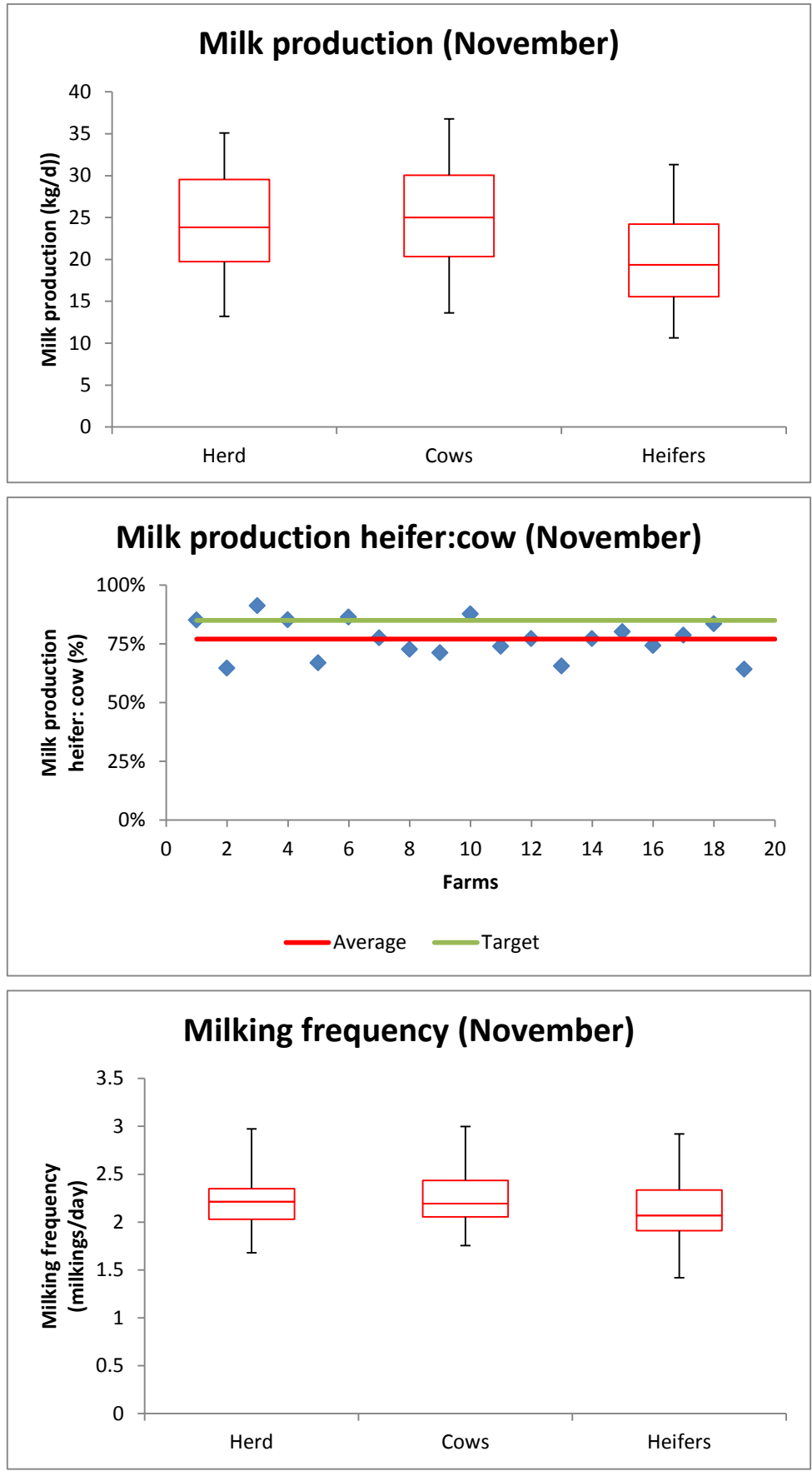


Figure 4: Daily cow information



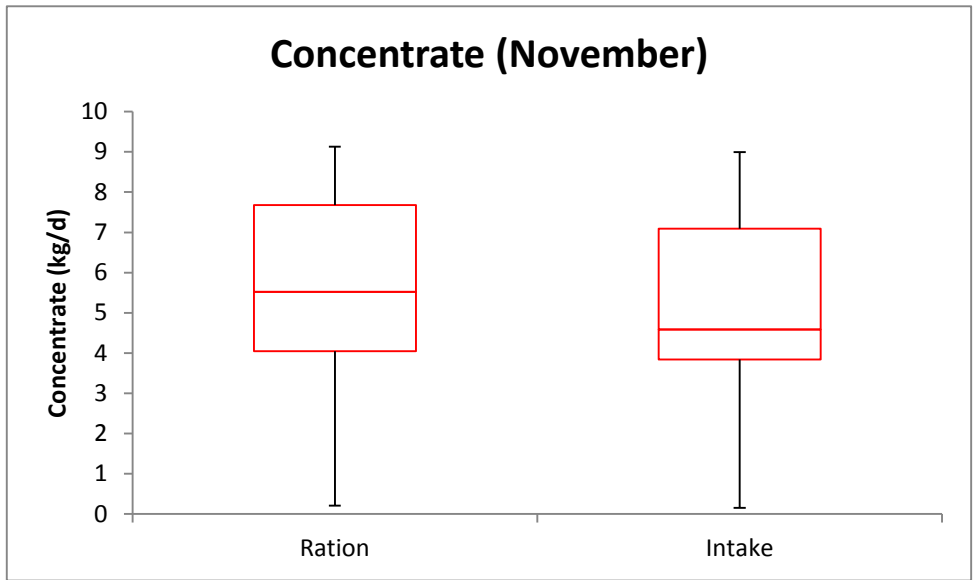
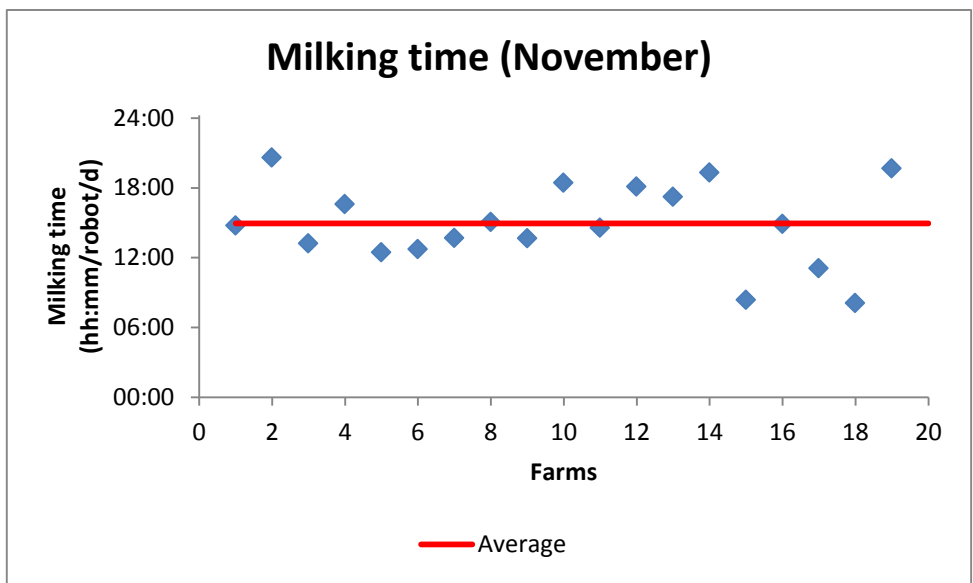
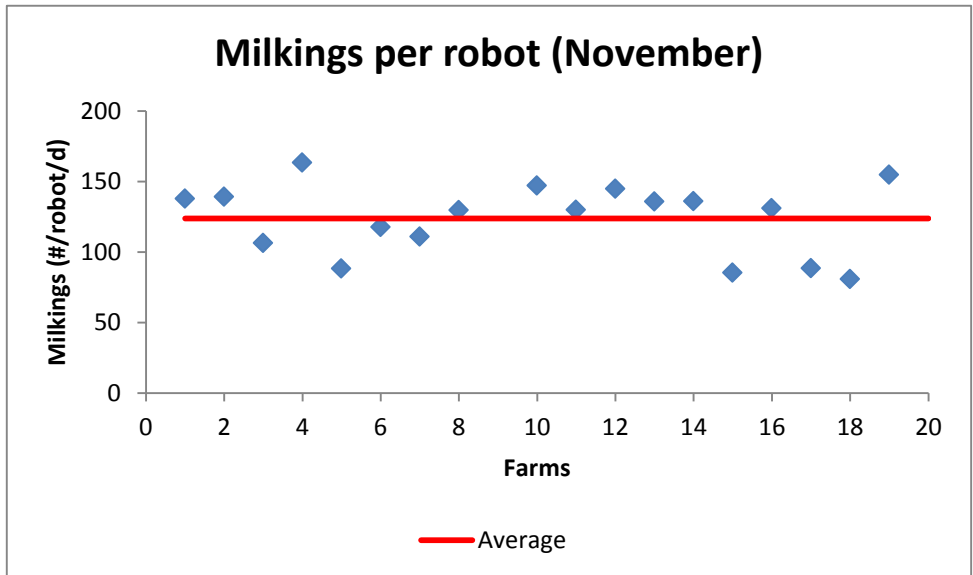
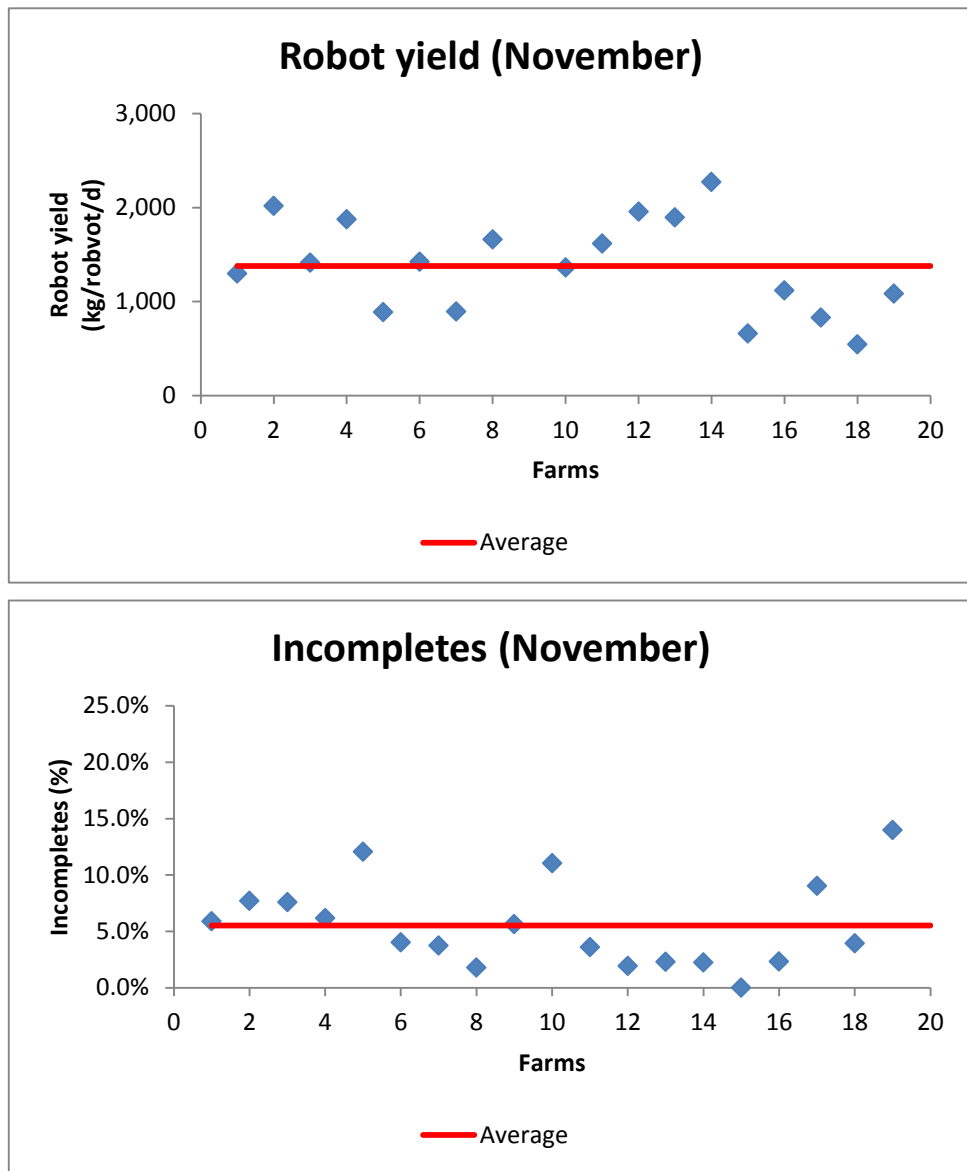


Figure 5: Robot performance





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

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