



Development farm walk

Lessons from Expansion

Wednesday, 28th June, 11am

Pat and Eddie Kennedy, Ballingarry,

Co. Tipperary

Topics for discussion include:

Optimising stocking rate

Managing the workload on large farms

Costs of expansion



Farm Summary

Pat and Eddie farm outside Balingarry, North Tipperary. Like many farms they have expanded their herd in recent years and currently milk 161 cows on 56.6ha milking platform (MPSR 2.85). The main focus on the farm is to maximise output while keeping cost down. They are achieving this by maximising the amount of grass utilised on the farm. Last year the cows produced 472kg of milk solids. The milking platform grew 13.8t DM of grass per ha and 585kg of meal per cow was fed. Pat and Eddie have focused on improving soil fertility and reseed annually. Last year they reseeded 12% of the milking platform and this year they plan to reseed a further 12%. Soil fertility is average and some paddocks require build-up of Ps and Ks. The pH is adequate on most of the land. This year they have spread on average 147 units of N per acre to date. For the summer they are spreading seliniggrass after each round of grazing. Last year silage results indicated a deficiency in selenium and in the same winter a significant number of cows (10%) held their cleanings. Along with other remedies it is hoped that spreading selenium in the fertiliser will help resolve this issue. Already this past spring there was far fewer cows with retained cleanings.

Maintaining herd health is important on large herds. Tactful prevention and prompt treatment is the strategy employed by the Kennedys. This year some calves got infected with rotavirus. Immediately calves were vaccinated and this vaccination will now be included in the vaccination programme from now on. Cows are routinely milk recorded (since 2011) and results are used to identify and treat cows with high SCC. Last year the bulk tank SCC averaged at 134k cells/mL. This data is also used to identify cows to breed replacements from.

This year breeding started on the 28th April and in the first three weeks 89% of cows were submitted for AI. The stock bull was introduced 15th June. The bull will be removed from the herd within the third week of July to ensure that no cows will calve in May next year. Last year the 6 weeks calving rate was 81% and the aim is to maintain if not improve that figure.

Going forward the plan is to add another 10 cows to the milking platform in 2018. To maintain this stocking rate the milking platform needs to grow an additional tonne of grass DM annually. Eddie regularly walks the farm and see autumn grassland management as the main area for improvement should they carry extra cows on the platform. This year the focus will be on building adequate covers and extending the rotation from August onwards. Last year peak average farm cover reached 775kgDM per ha in early October when, at their stocking rate it should have reached 1000-1100kg DM/ha. This year reseeding will take place within the next month (usually done in August) so the land will be available for grazing in the autumn. In addition to the additional grass growth required an additional 60 cubicles will have to be built and the milking parlour will have to be expanded.

Milking 170 cows on the milking platform is the maximum the farm can carry sustainably based on current grass growth. In the coming years Pat and Eddie hope to increase output on the farm by increasing output per cow to 500kg of milk solids (3.65% protein). This will be achieved by maintaining a mature herd and culling low output cows. In recent years the herd has carried about 30% first lactation cows which impacts output. Going forward Pat aims to keep the replacement rate at 18%. The average age of cows culled from the herd last year was 4.9 lactations. The aim on this farm is to achieve an average age of 4.5 lactations and only cull cows after 5.5 lactations if at all possible. Given that it takes approximately 1.6 lactations for a cow to “pay back” her heifer rearing costs, ensuring that cows remain in the herd for as long as possible should be a target for all farms not just the Kennedys.

Land and Stock - 2017

Land farmed (ha)	91	Current Cow numbers	162
Milking platform (ha)	56.6	Current calves 0-1	82 – 51 replacements
Overall stocking rate	2.6	Current yearlings 1-2	70 – 53 in-calf heifers
Milking platform SR	2.85		

Milk production – annual and to date

	2016		Current (20-26 th June)
Yield (L sold/cow)	5,586	Yield (L cow/day)	22.6
kgMS produced/cow	472	kgMS cow/day	1.77
peak MS/day	1.88	Protein %	3.49
Protein %	3.59	Fat %	4.08
Fat %	4.31	peak MS/day	2.00 (15 th May)
Meal fed/cow	585kg	Meal fed/cow to date	401kg

The kgMS/cow increased from 459kg to 472kg between 2015 and 2016

Calving and Breeding 2016 vs 2017

	2016	2017
6 week calving rate	79%	81%
Calving interval	364	371
Calving season length	11 weeks – cows; 8 weeks – heifers	12 weeks – cows; 9 weeks – heifers
21 day Submission rate	77%	89% (90% for heifers)
Breeding season length	13 weeks	

EBI

	EBI	Milk	Fert	Calv	Beef	Maint	Mgmt	Hlth	M kg	F kg	P kg	F+P kg	F%	P%	CI days	SU %
Cows	€102	€23	€51	€30	€-8	€5	€0	€1	-7	4.9	2.7	7.6	0.09	0.05	-2.9	1.3
2017 calves	€167	€51	€79	€38	€-12	€6	€1	€3	12	8.9	6.4	15.3	0.15	0.011	-4.3	2.1
Bulls used - 2017	€244	€85	€117	€42	€-11	€4	€2	€4	116	14.1	12.1	26.2	0.16	0.14	-6.0	3.6
Bulls used	Fr2274, SEW, Fr2249, Fr2314, Fr2385, Fr2232, Fr2275, GZY, LWR, AYD, Fr2371, Fr4020															

Last year the cows had the genetics to produce milk with 4.22% fat and 3.54% protein and they produced milk with 4.31% fat and 3.59% protein indicating that cows maximised their potential through optimised feeding and management.

Grassland management

AFC (kgDM/ha)	492	Meal (kg/cow) 2016	585
Cover/cow (kgDM/cow)	155	Grass grown 2016	13.8t
Demand (kgDM/day)	48	Silage quality	72% DMD
		1 st rotation	8 th Feb – 19 th April

Fertiliser

Grazing area – 30units urea/acre in January plus 2500 gallons of slurry on some ground, 40units urea/acre in March, 1.5 bags/acre of 18:6:12 in April and Selinigrass (25% N) following rotations from May.

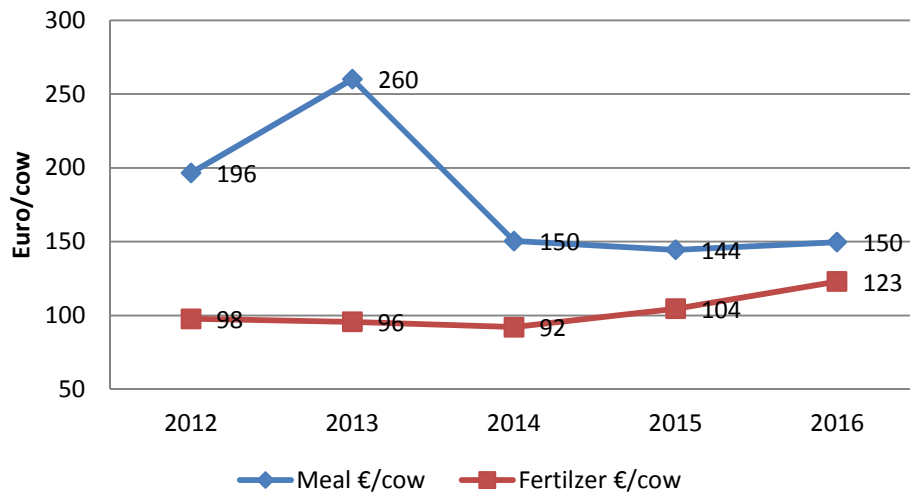
Silage area – 30 units/acre urea in January, 2500 gallons of slurry and 100 units/acre of N (4 bags of selinigrass)

	Kennedys	Top 25% p.monitor		Kennedys	Top 25% p.monitor
Feed	2.58	3.50	Machinery	1.64	0.83
Fertiliser	2.12	2.29	Car/ESB/Phone	0.6	0.91
Vet	0.76	1.03	Depreciation	1.76	1.73
Ai	0.44	0.50	Other common fixed costs	1.37	1.44
Contractor	1.31	1.46			
Other variable costs	1.72	1.55			
Total Variable costs	8.93	10.33	Total common fixed costs	5.37	4.91

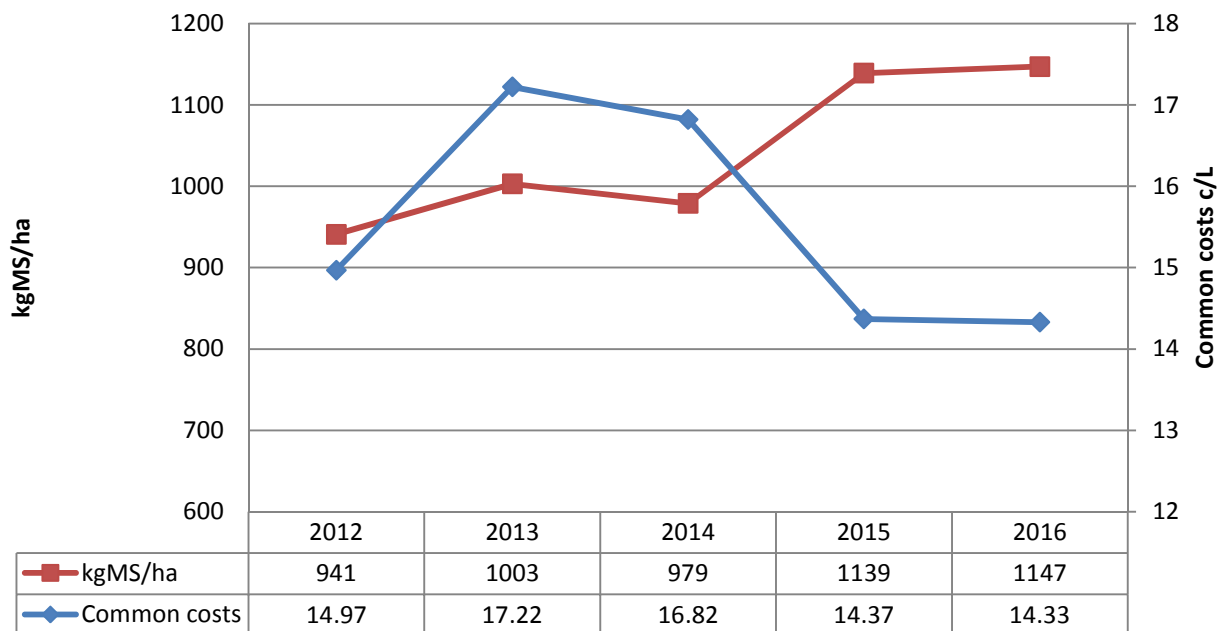
Expansion 2012-2016

Year	2012	2013	2014	2015	2016
Cow numbers	112	110	115	128	143
MPSR	2.33	2.14	2.03	2.26	2.51
Overall SR	2.49	2.45	2.49	2.49	2.43

Meal and Fertiliser spend



KgMS/ha and common costs



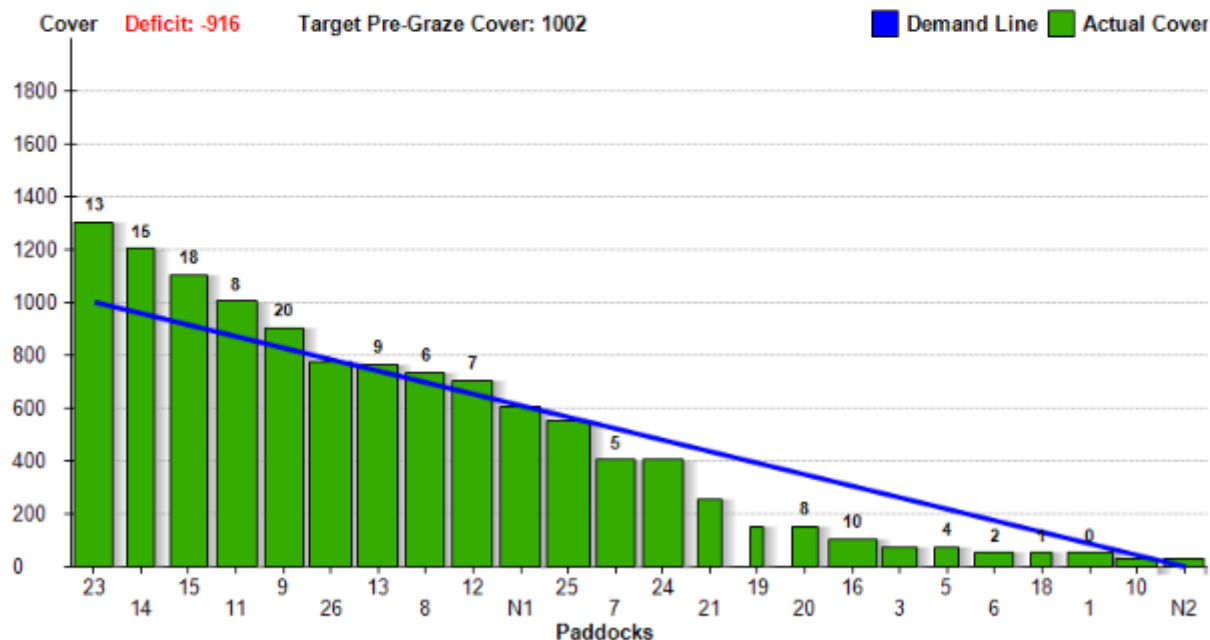
Grass cover – 27th June

AgriNet www.agrinet.ie

Farmer Name Eddie Kennedy
 Date Measured 27/06/2017
 Daily Growth 103.5
 Farm Cover 492
 Total Area 50.9
 Total LU 162
 LU / Ha 3.18
 Demand / Day 2430
 N Kg / Ha 0
 N % Area 0
 Demand / Ha 47.7
 Weather
 Cover / LU 154.72
 Litre/Cow/Day 0
 kgMS/Cow 0
 Milk Quality F0% / P0%
 KgMs/Ha YTD 0 (40.52 Ha)
 Short Term Silage 2 (4.84Ha)
 Long Term Silage 0 (0Ha)
 Area Unmeasured 5.75 Ha

	No.	Actual Grass	Meal	Silage
Spring Milkers	162	15	3	0
Autumn Milkers	0	0	0	0
Dry Cows	0	0		
0-1 Year Old	0	0		
1-2 Year Old	0	0		
2+ Year Old	0	0		

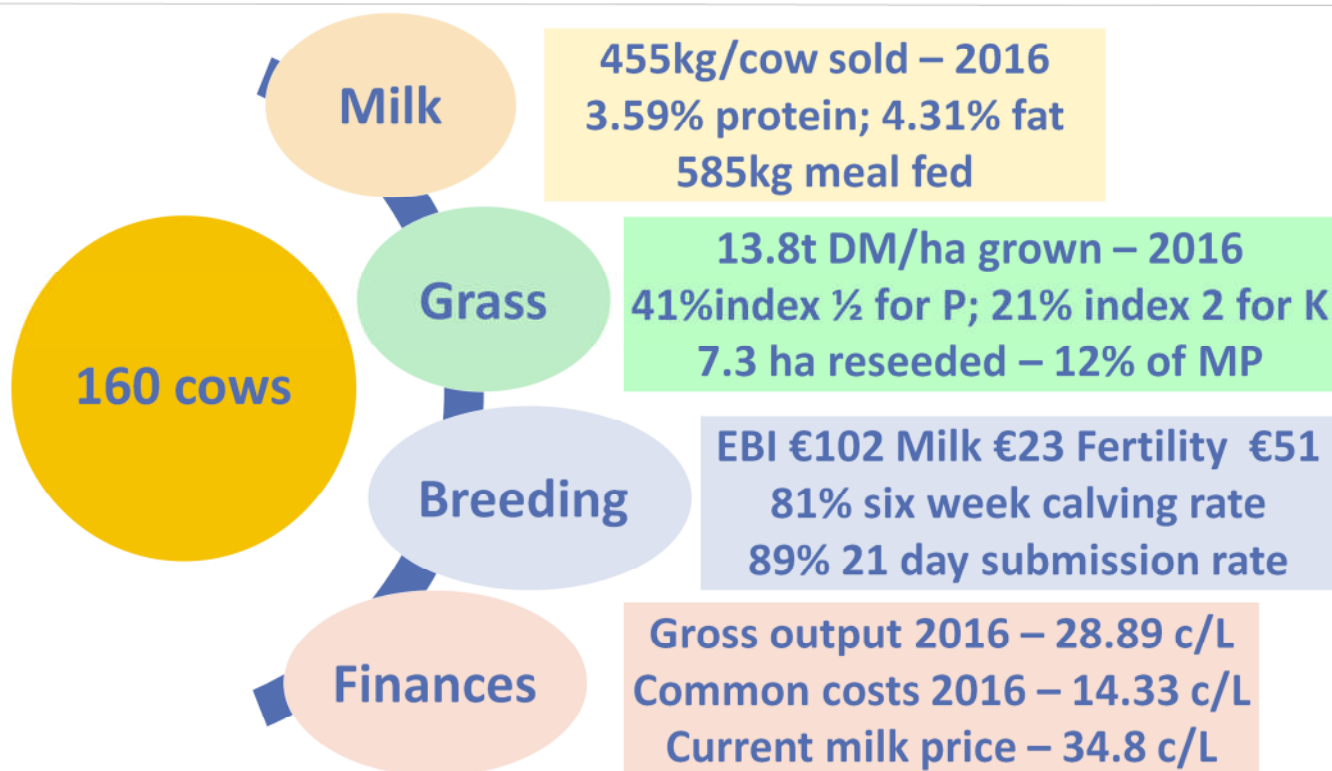
Rotation Length 21 Rotation Last Week: 33.4
 Post Grazing Cover 0



Decision Notes:

Decisions:

10 (2.458Ha 1700 Cover): Take out for ST Silage
 N2 (2.38Ha 600 Cover): Take out for ST Silage



What's the ideal stocking rate?

Concentrate kg /cow	Pasture grown (tDM/ha)			
	10	12	14	16
0	1.5	2.0	2.3	2.6
290kg	1.7	2.1	2.4	2.8
580kg	1.8	2.2	2.5	3.0
1.16 tonne	2.0	2.4	2.9	3.2
1.75 tonne	2.2	2.6	3.1	3.5
2.32 tonne	2.4	2.9	3.3	3.9

40 ha farm
Growing 11t
grass

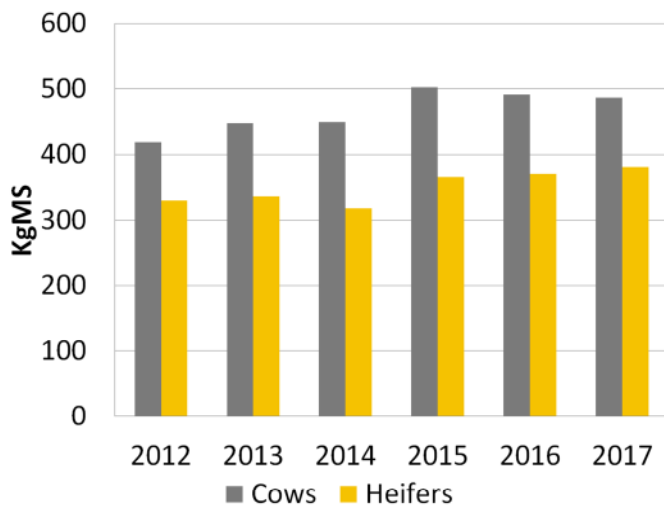


Increase
stocking rate
2.0-2.5



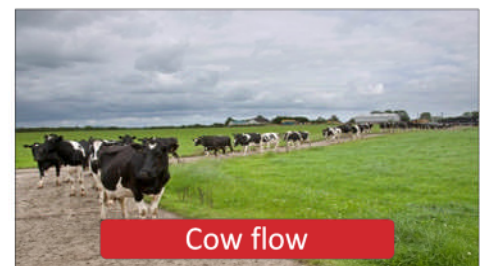
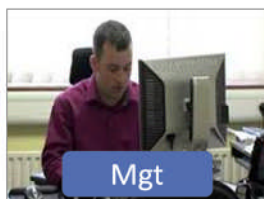
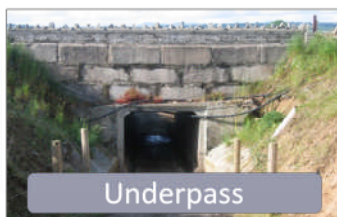
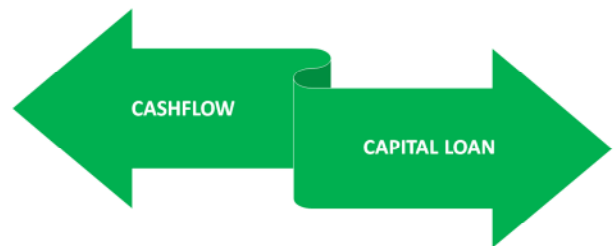
€129/cow
EXTRA FEED

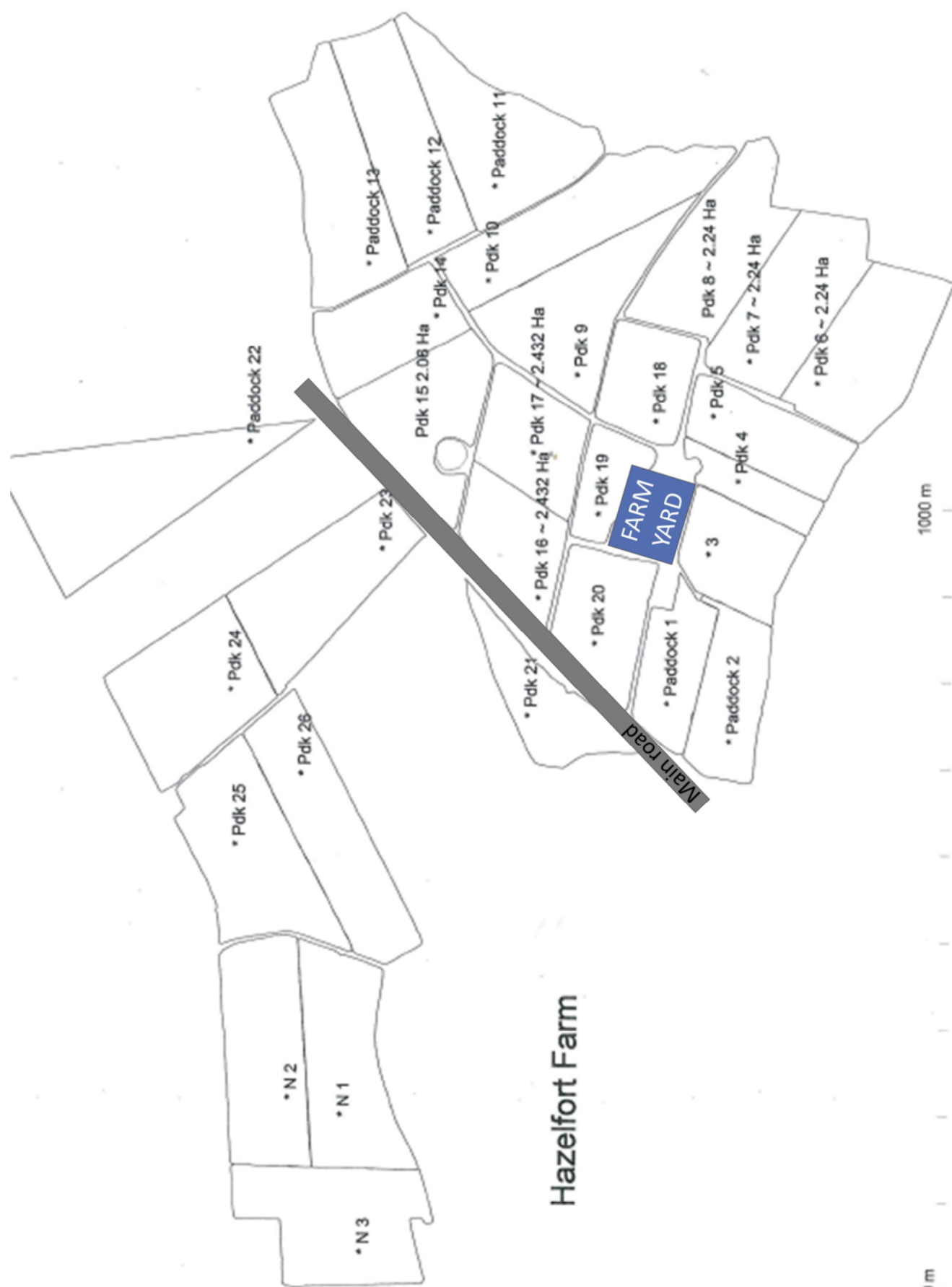
Performance



	2012	2013	2014	2015	2016	2017
% heifers	31%	30%	33%	31%	29%	24%

Infrastructure





100 m
GIS