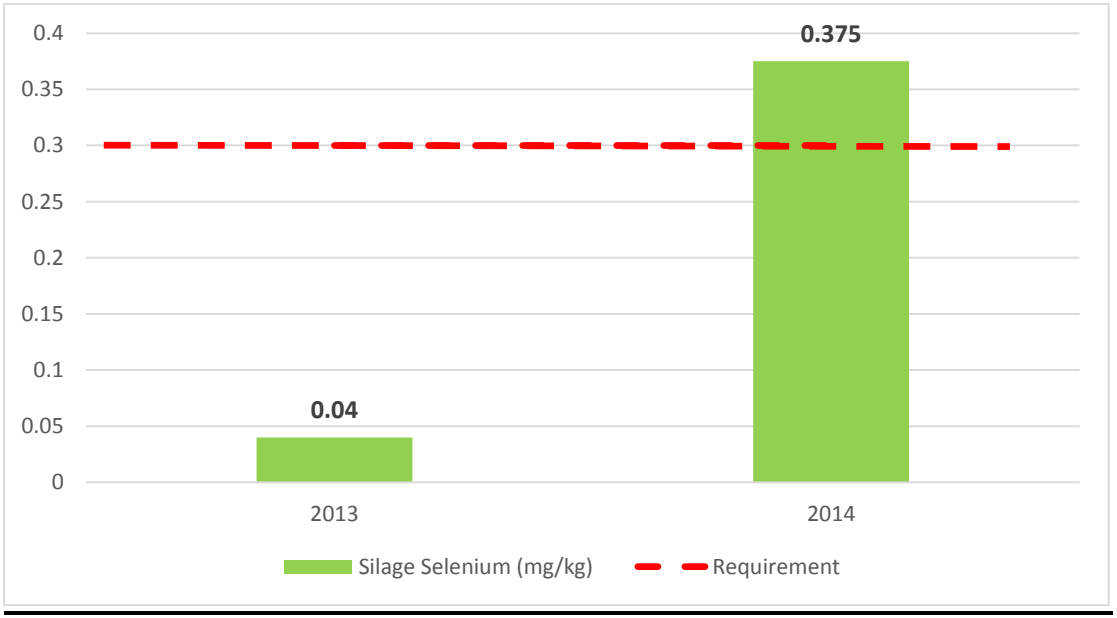
Selenium Trial – Co. Kilkenny

Trial Background:

- The trial took place on a farm consisting of 130 cows in Co. Kilkenny and began in February 2014
- Low selenium levels have been an issue on the farm and the farmer tried various methods to solve this
- Selenium had been added to water on this farm in Kilkenny during the winter 2013/2014 (prior to trial commencing) at a cost of €10.40/day and **cows were still retaining afterbirths**
- Monthly grass and blood samples were taken from the farm from February 2014 on
- 4 bags/ac of **Selenigrass** was spread over the year on **silage and grazing** ground
- Grass and blood Selenium levels rose immediately. This ensured adequate blood selenium levels for the critical breeding season

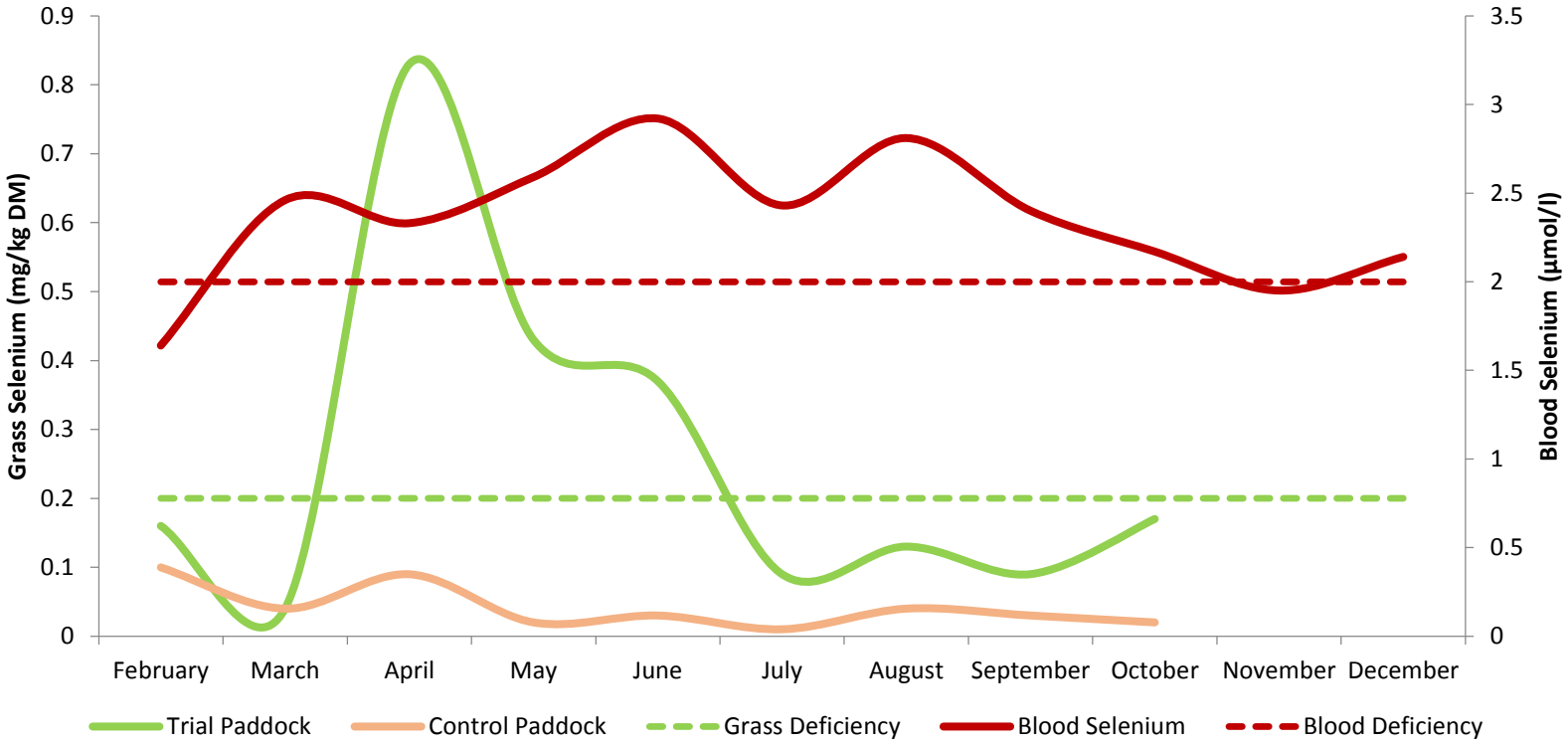
Silage Results:

- A sample of 2013 silage was collected on the farm and sent away for analysis. Selenium levels returned very low with a reading of **0.04mg/kg.** This would have been a huge factor in the low blood selenium results seen in the February 2014 samples.
- A sample of 2014 silage was also taken. This crop received 4 bags/ac of Selenigrass prior to cutting.



Selenium Trial – Co. Kilkenny

Grass and Blood Results:



- There is a huge difference between selenium levels in the control paddock and the rest of the farm all throughout the season
- During the critical breeding season, selenium levels in the herbage were very good. Cows received enough selenium in their diets which contributed to an increase in overall pregnancy rate on the farm.
- Rather than using the laborious and costly methods of bolusing, injecting or adding selenium to water, any selenium deficiencies on the farm were corrected rapidly and cost effectively by simply adding selenium to the fertiliser

Selenium Trial – Co. Kilkenny

Breeding Results:

	Key Performance Indicators (KPI's)							
Year	2011	2012	2013	3yr Average	2014	difference	Top 15% 2014	Top 15% 3yr Average
1. 21 day Submission rate	90%	82%	71%	81%	85%	+4%	79%	77%
2. 42-day Submission rate	97%	96%	90%	94%	98%	+4%	93%	91%
3. 1st Service Conception rate	55%	46%	39%	47%	63%	+16%	72%	67%
4. 6 Week Pregnancy rate	69%	64%	62%	65%	83%	+18%	79%	74%
5. Overall Pregnancy rate	93%	90%	93%	92%	95.4%	+3.4%	%	%
	Other Fertility Performance Indicators							
6. Serves/Conception	1.7	2	1.9	1.9	1.5	-0.4	1.2	1.3
7. Percentage not in-Calf	7%	10%	7%	8%	0%	-8%	0%	4%
8. Short Repeat Intervals	11%	12%	19%	14%	7%	-7%	3%	4%
9. Normal Repeat Intervals	58%	63%	55%	59%	83%	+24%	67%	67%
10. Prolonged Repeat Intervals	32%	26%	26%	28%	10%	-18%	17%	20%

- Empty rate in 2014 was 4.6%. This is down from a 3 year average of 8%.
- 1st service to conception rate rose from a 3 year average of 47% to 63%. This is an increase of 16%
- A big issue for the farmer in 2014 was the increase in normal repeat intervals by 24%. The high number of short and prolonged repeat intervals was a constant problem when it came to heat detection and servicing cows.