

Winning the spring grazing challenge!

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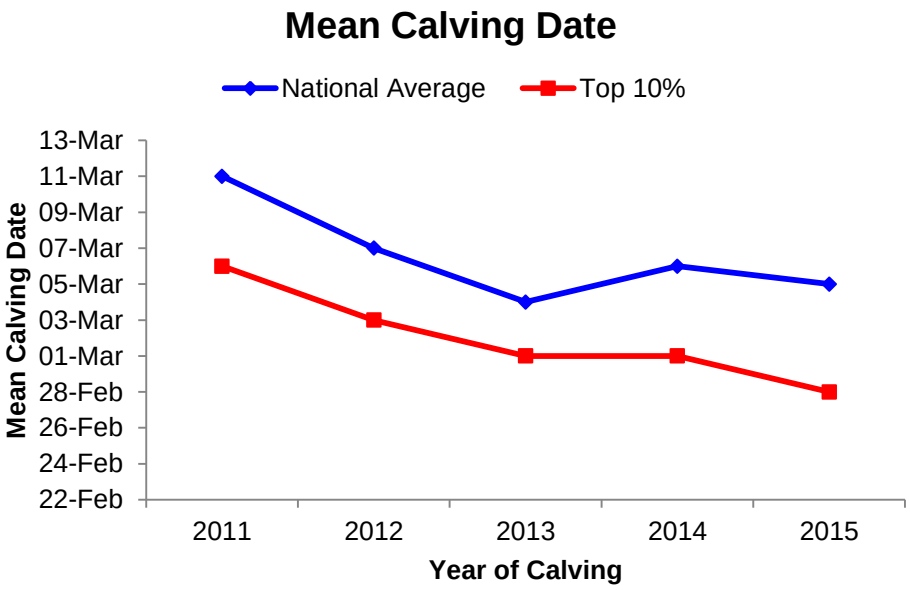
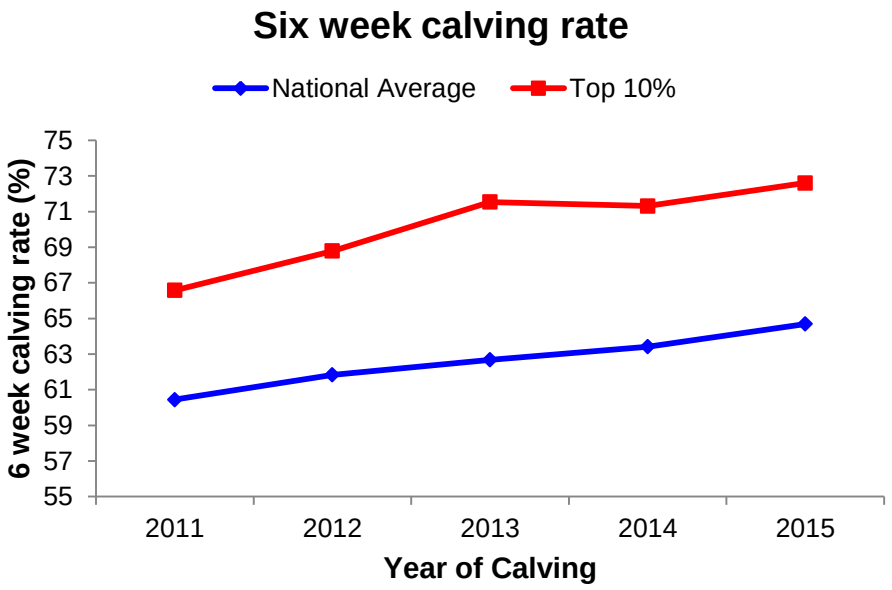
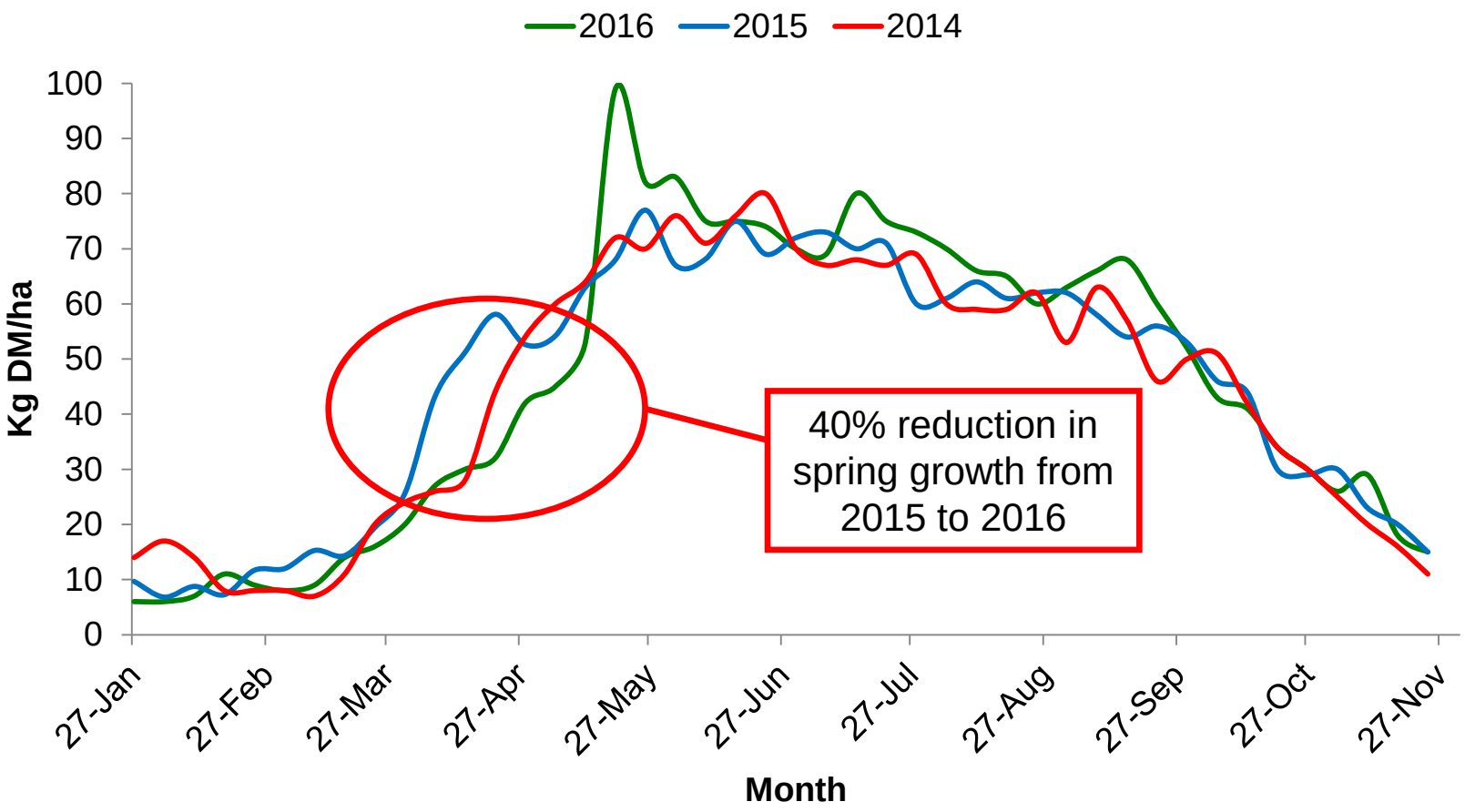
Challenge for spring grass

- Increase in dairy cow numbers
  - Additional 100,000 cows calved in spring 2016
- Improvements in fertility performance

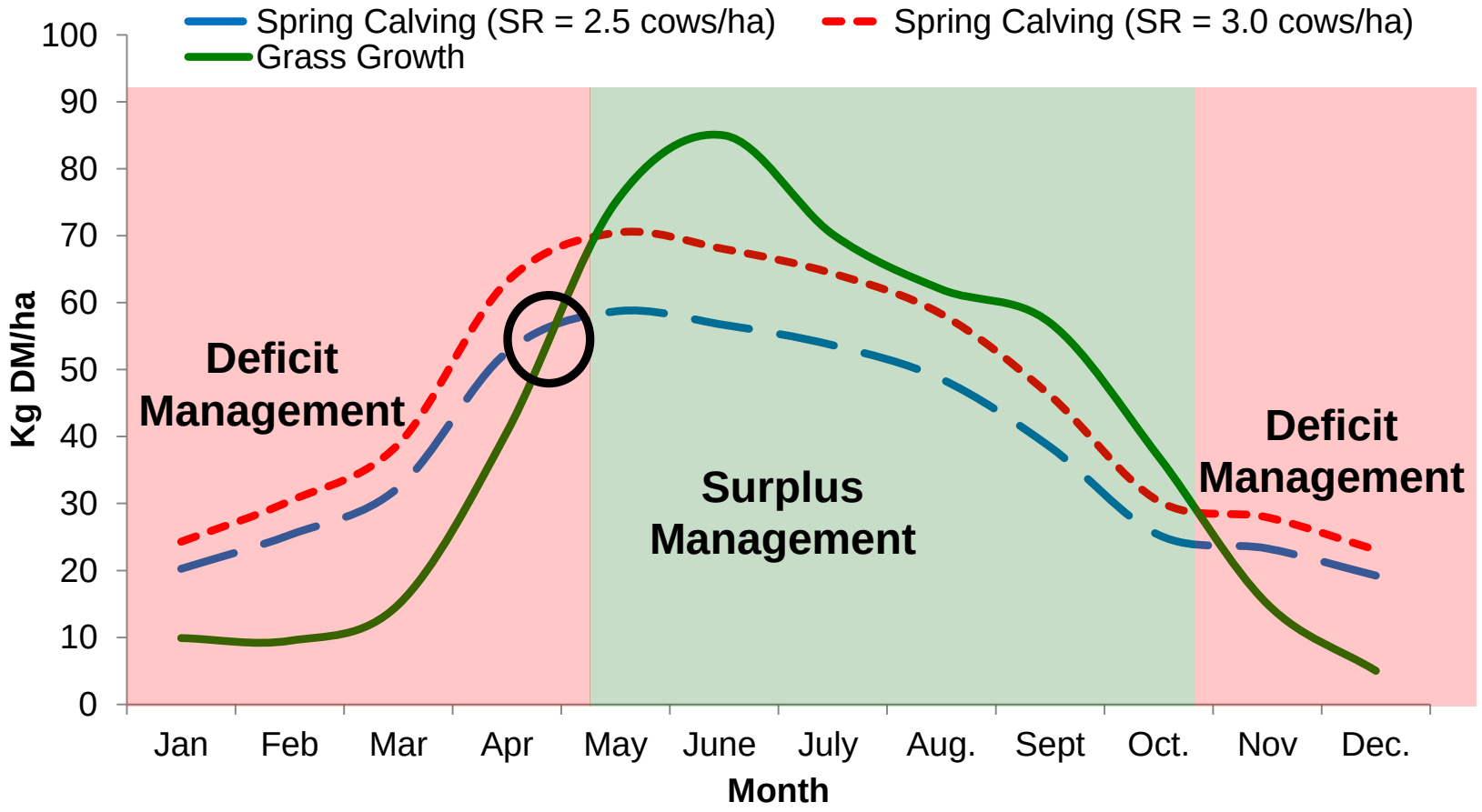




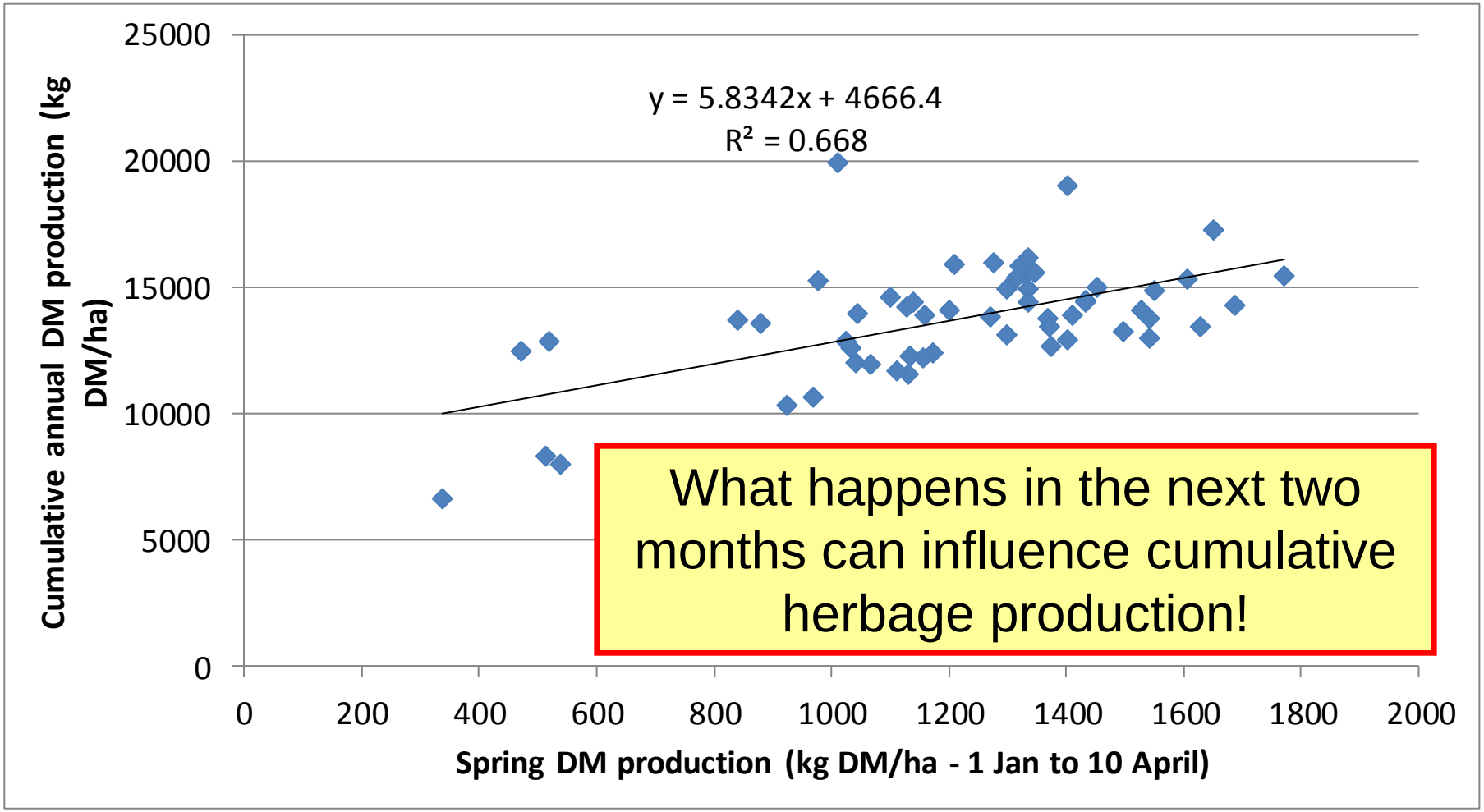
Spring herbage production



Grass Growth and Feed Demand Curve

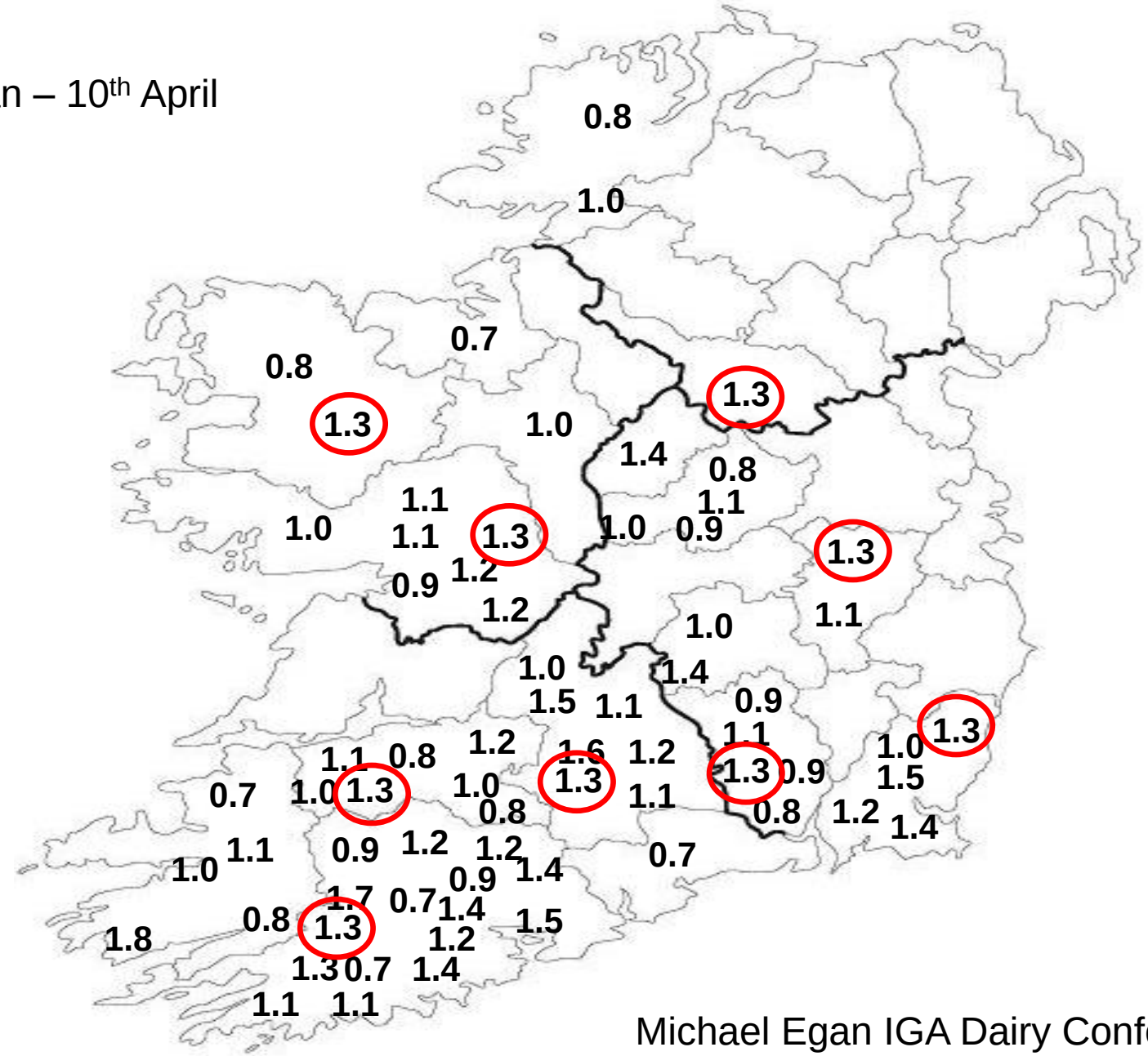


Spring grass growth drives total grown!

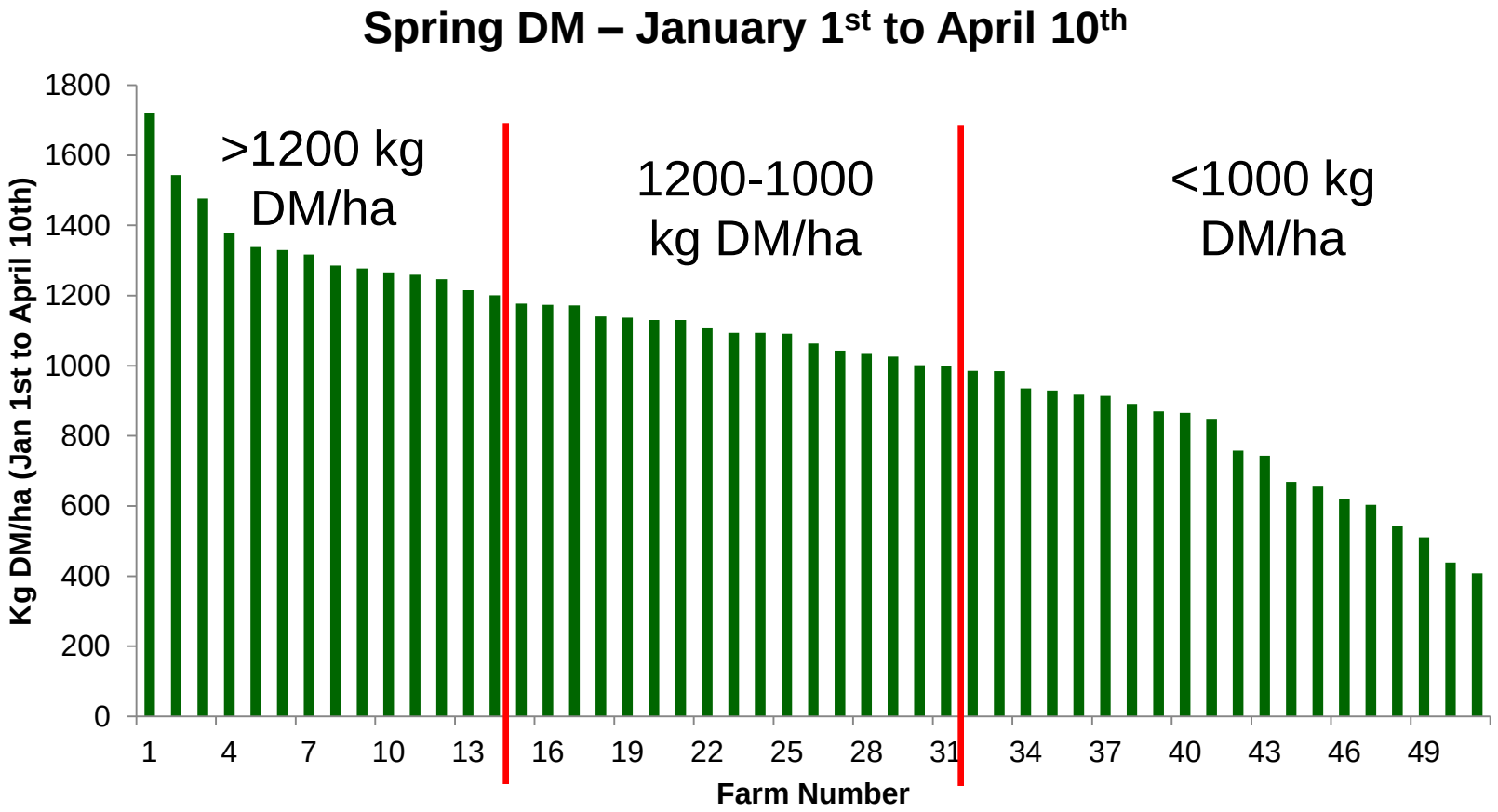


Spring herbage production (kg DM/ha) - Variation

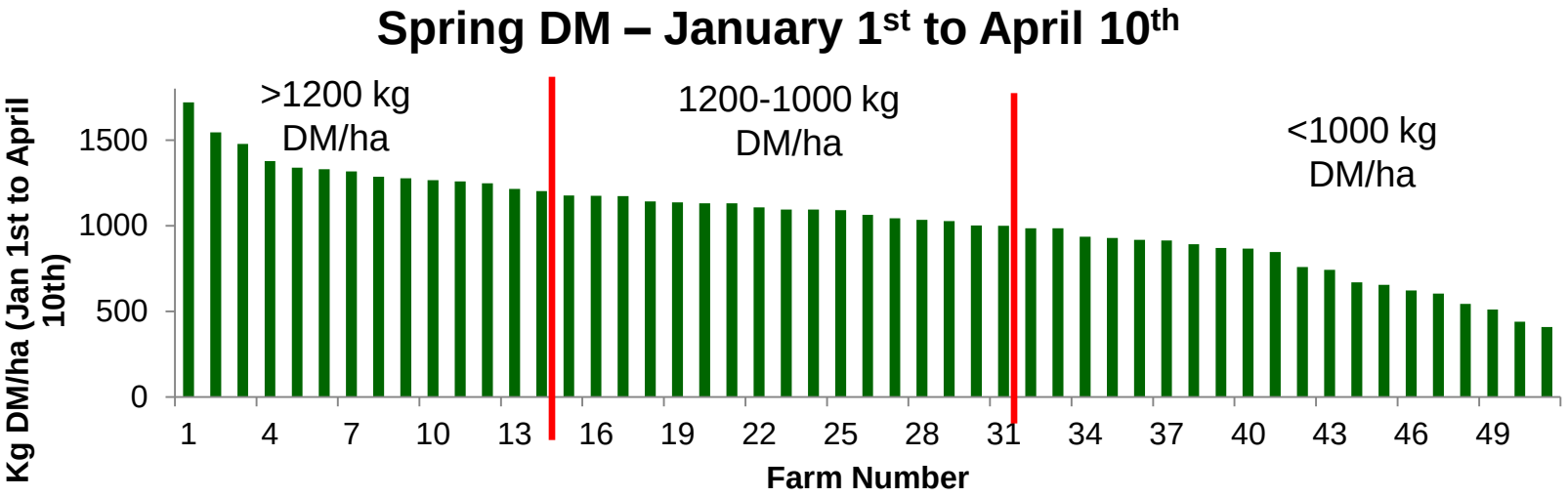
1st Jan – 10th April



Spring herbage production
Across farm variation



Spring herbage production – across farm variation



1. Opening Farm Cover
2. Turnout date
3. % area grazed in Feb
4. Total units N spread by April 1st
5. 2nd rotation start date

Spring Rotation Planner

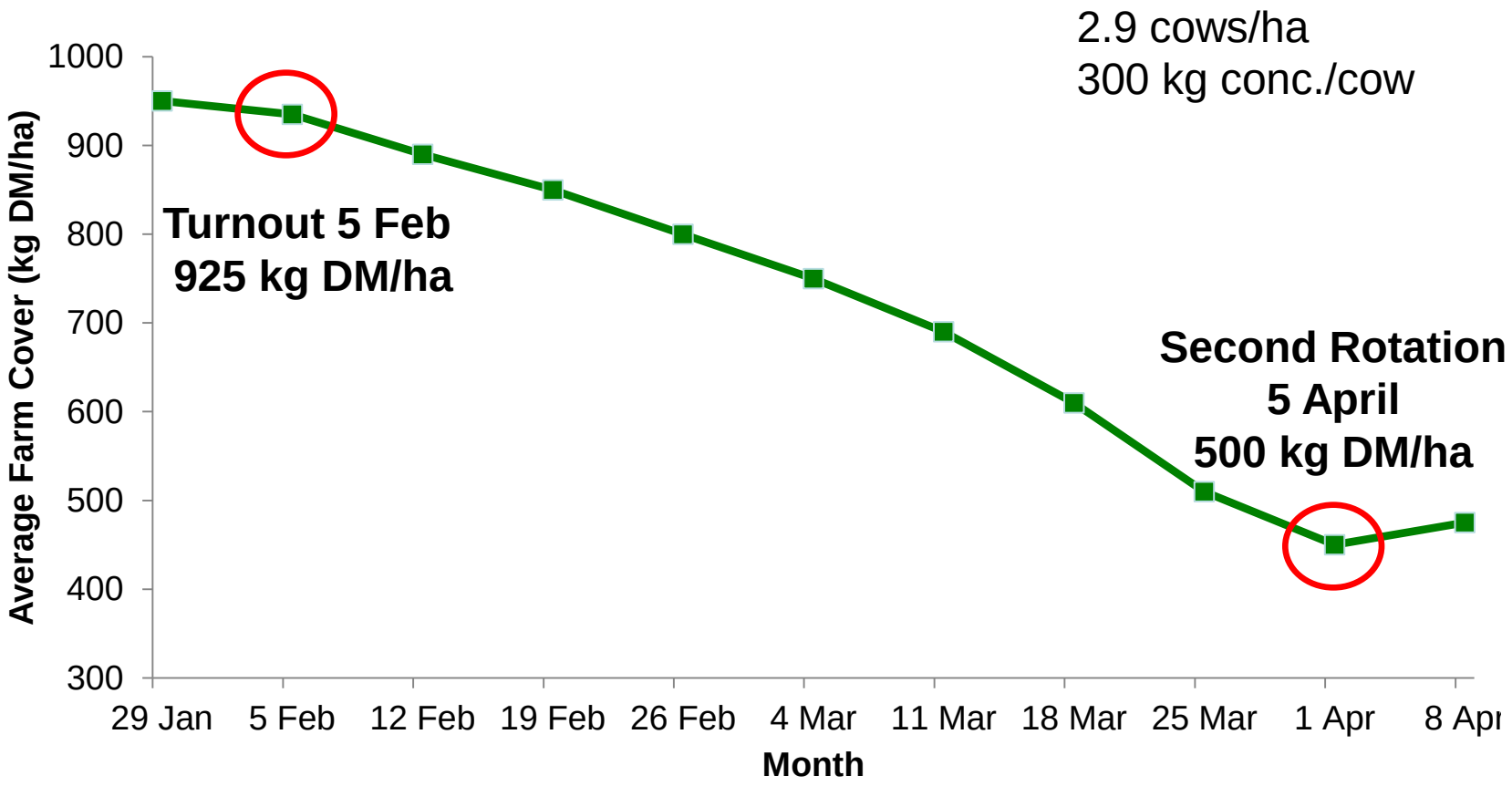
Week	Total area grazed by week ending (%)	Cumulative area grazed (ha)/ week ending	Paddock cover at start of 2nd rotation (5 April)
1st to 7th Feb	7	2.8	800 - 1,200
8th to 14th Feb	14	5.6	
15th to 21st Feb	21	8.4	
22nd to 28th Feb	30	12	
1st to 7th Mar	45	18	400 – 800
8th to 14th Mar	60	24	
15th to 21st Mar	73	29.2	
22nd to 28th Mar	87	34.8	100 - 400
29th Mar to 4th Apr	100	40	

Spring Rotation Planner – what's happening on farm?

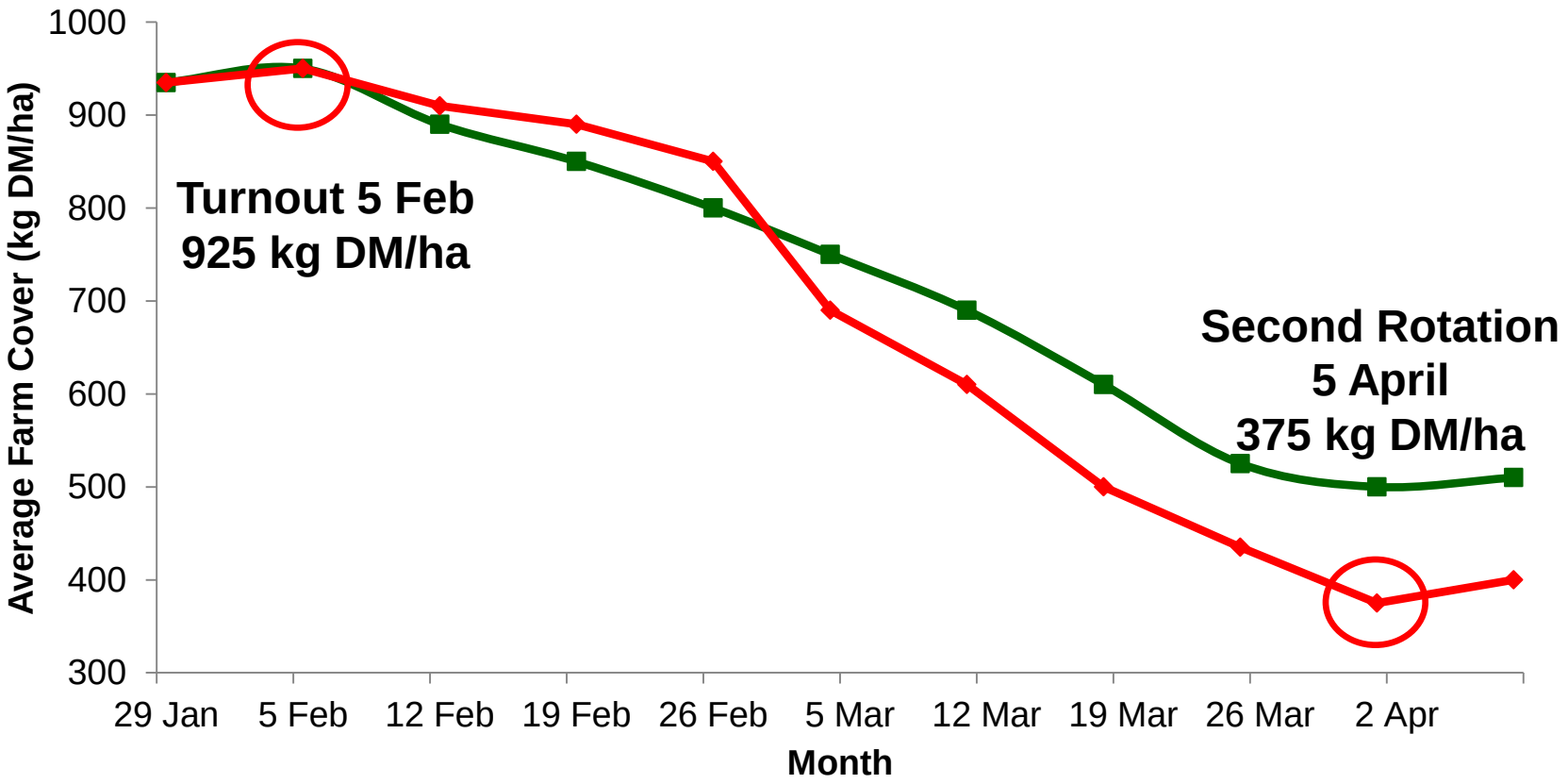
- Area grazed by March 1st – **21%** (0 – 50%) – Target 30%
- Area grazed by March 17th – **51%** (18 – 82%) - Target 66%
- End date – **April 12th** (March 25th – April 20th) – Target 4 – 10 April

Every 1% grazed in February increases grass production by 14kg DM/ha
So if 10 % behind target = 40 ha farm has 5500 kg DM less
- 1 weeks grass

Managing Farm Cover



Managing Farm Cover



Spring Nitrogen

Reference	Fertilizer application (kg/ha)	Application date	Harvest date	Grass yield response (kg DM/kg N)
O'Donovan et al. (2000)	45		arly March	15.7
MacCarthy (1984)				11.6
(Moorepark)				
Stevens e				14.5
Northern Irelan				
Murphy (1994)				9.6
(Johnstown Ca				8.9
Neila				7.3
(Grange)				8.3
				7.8
Kelly et al. (19		y Feb	May	18.2
<u>Wet soil</u>	6			11.3
Laidlaw et al. (2000)	40	Early Feb	>Mid-April	5.3
Northern Ireland				

Average response = 10.7 kg DM/1 kg N applied

Spring Nitrogen

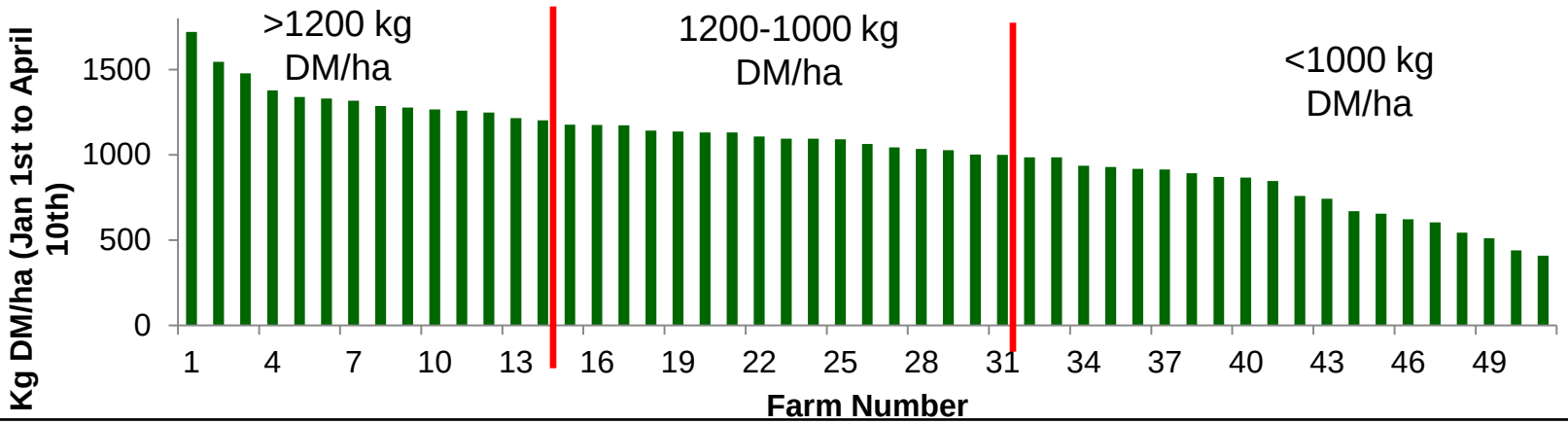
Average Grass Growth Response of >10 kg DM per 1 kg N applied per ha in Spring

Efficiency of slurry utilisation increased (×6) during February & March
2,500 gals./ac = 12.5 units N/ac

Month	Product	Rate	Area
January	Slurry	3000 gal/acre	Covers <600 kg DM/ha
January/February	Urea	23 units/acre	2/3 of grazing platform
March	Urea	46 units/acre	Entire grazing platform
February/March	Slurry	2000 gals/acre	Paddocks that were grazed first
Total applied N by 1st April		70 units/acre	

Spring DM production - Variation

Spring DM – January 1st to April 10th



	> 1200 kg DM/ha	1200 – 1000 kg DM/ha	< 1000 kg DM/ha
Average Spring growth	**1346**	**1094**	**754**
Opening Farm Cover	1025	1010	940
Turnout date	3-Feb	7-Feb	15-Feb
% area grazed in Feb	28%	25%	13.4%
Total units N spread by April 1st (Slurry and chemical)	100	90	75
2nd rotation start date	< April 5th	April 5th – 12th	> April 15th

Wet weather management

Lightly damaged

Moderate damaged

Severely damaged

- On/off grazing
- Cows with an appetite
- Grazing infrastructure
- Flexible farmer attitude

Blueprint to grow 15 t DM/ha

Growth Period	Grass grown (kg DM/ha)	No. of Rotations	Daily growth rate required (kg DM/ha)
1st Jan – 10th April	1,400	1	13
11th April – 5th Aug	1,400	6	70
6th Aug – 1st Sept	1,700	1	65
1st Sept - 1st Oct	1,850	1	55
1st Oct – 15th Nov	1,550	1	30
Total	**15,000**	**10**	

Take home messages

- Spring grass has the same importance irrespective of milk price!
- Huge potential to increase spring grass DM production
- Spring management targets must be met:
  1. Spring rotation planner – hit the targets!!
  2. Spring nitrogen fertiliser – get it out on time!
  3. Farm cover management – 500 kg DM/ha at start of 2nd rotation

Now is the time to put a plan in place!!

2017 “Year of Sustainable Grassland”

Questions ?

Teagasc
Agriculture and Food Development Authority

The Irish Agriculture and Food Development Authority

Michael Egan IGA Dairy Conference 2017