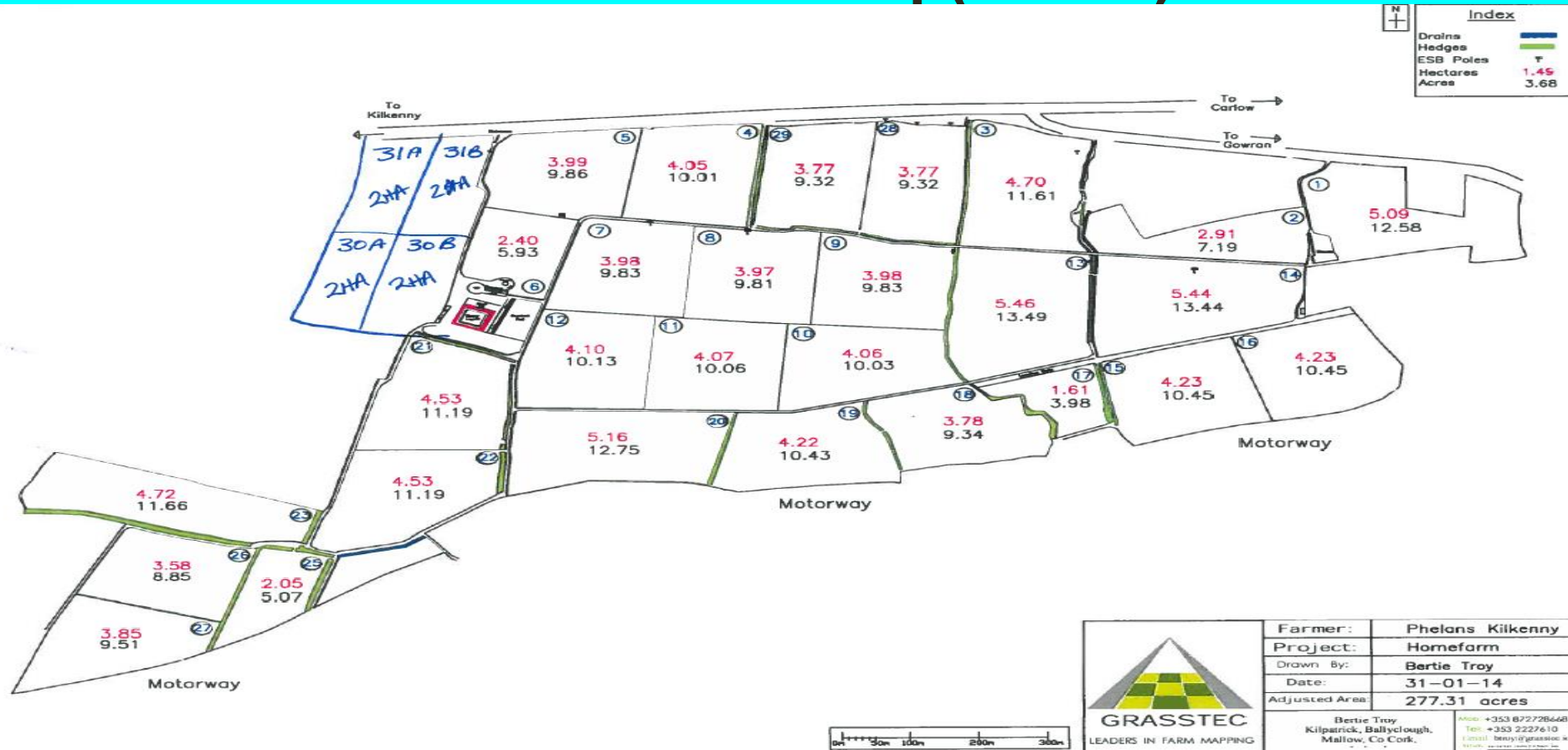


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Greenfield Farm Map(120Ha)



Stock Numbers & Stocking Rate

	Stocking Rate	Cow No. (Milked in June)
2016	2.80	340?
2015	2.73	328
2014	2.72	307
2013	2.83	320
2012	2.60	294
2011	2.61	295
2010	2.35	265 3

Replacement Rates, Culling Rates

	2012	2013	2014	2015	2016
Cows at start of year	306	346	332	334	348
Cow Mortality/(%)	6(2%)	7(2%)	8(2.4%)	4(1%)	
No. 1 st time Calvers / (%)	57(19%)	116(34%)	92(28%)	89(26%)	
No. Cows sold/(%)	72 (24%)	102(29%)	78(23%)	58(17%)	
No. Cows at end of year	233	240	246	273	
No. In calf heifers in Dec	116	93	89	75	
Calf Mortality (%)	4	5	6	7.8	4

Culling on the Greenfield Farm

Reason	2013 No.(% of herd)	2014 No. (% of herd)	2015 No. (% of herd)	2016 No. (% of herd)
Aborted	-	3(1%)	-	5(1%)
SCC & Lamé	27(8%)	21(6.3%)	-	
SCC	-	14(4%)	13(3.9%)	
Lamé			4(1%)	
2012 Culls	4(1%)	-		
2012 Culls	11(3%)	-		
NIC	30(9%)	30(9%)	14(4%)	
SCC, Lamé				
Surplus in calf stock sold to UK (in 2013)	24(7%)	8(2.4%)	23(6.9%)	
Cow Mortality	7 (2%)	8(2.4%)	4(1%)	
	103(30%)	84(25%)	58(17%)	

Farm Update 2016

120ha tillage conversion

2016 –Year 7 of lease

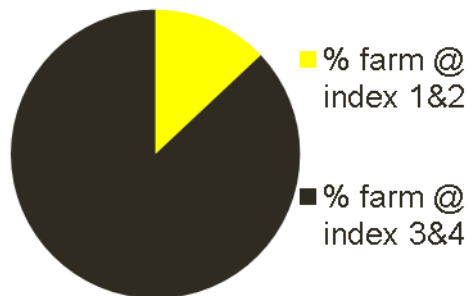
328 cows milked 2015

1.Grass Prodn. & Soil Fertility	2012	2013	2014	2015
Grass Grown (tonnes Dm /ha)	11.80	10	13.5	13.8
Rainfall	791	746	930	826
Phosphorus (kg/ha)	0	16	18	21
Potassium (kg/ha)	34	73	93	70
Sulphur (kg/ha)	36	40	32	33
Lime Spread (Tonnes)	0	0	100	288
pH	6.6	6.7	6.7	6.18

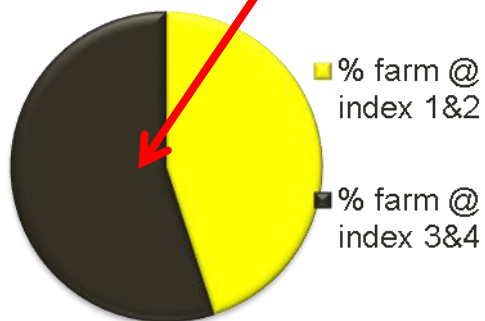
Key Facts

- P index is dropping – now only 50% at index 3&4
- **K Index is increasing – applying up to 93kg K/ha**
- Paddocks growing most grass & surplus paddocks dropping in P & K
- Following cows mid season with fertiliser has worked better for us

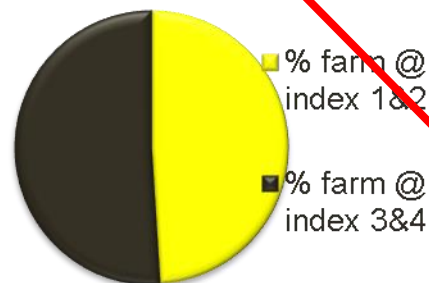
2012 Soil P Index



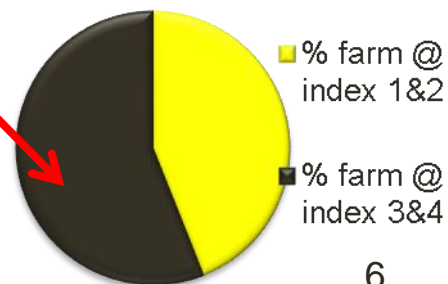
2014 Soil P Index



2012 Soil K Index

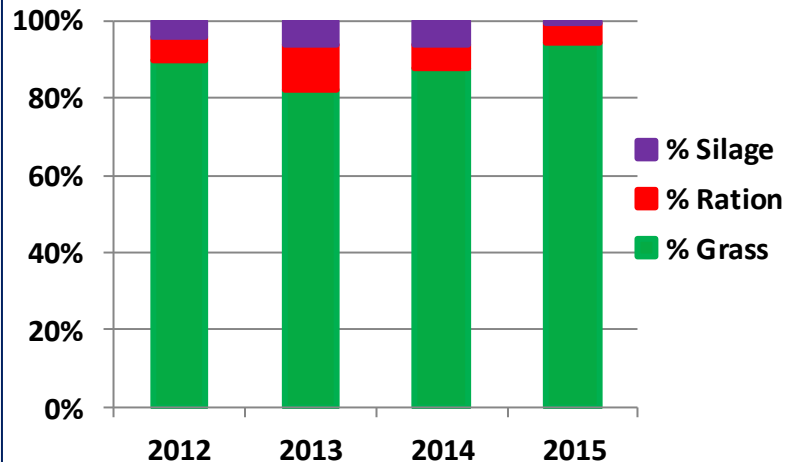


2014 Soil K Index



Four Year Farm Performance Update(2010-2016)

% Grass, Ration & Silage in Annual Diet



Key Facts

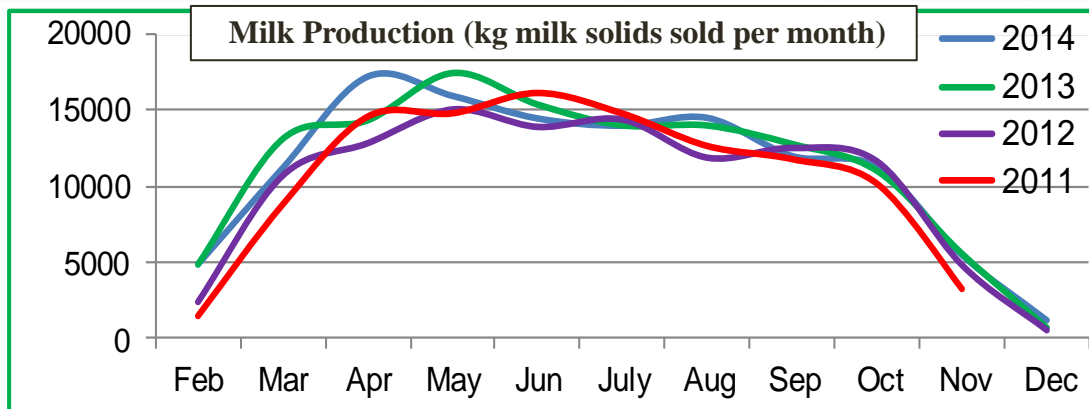
- 20% winter feed bought in(avg.) over 3 year period
- Ration Fed: 180kg/cow 2015, 270kg/cow 2014, 600kg 2013, 300 kg 2012

2. Herd Fertility	2011	2012	2013	2014	2015	2016
Date when 50% calved		1-Mar	12-Feb	13-Feb	19-Feb	12-Feb
Herd EBI (€)		123	144	161	168	171
Mating start date	26-Apr	16-Apr	24-Apr	24-Apr	22-Apr	
Breeding Season(wks.)	15	12	12	15	17	
Not in calf rate (%)	13	11	10	10	5	
Replacement Rate	24	20	36	30	26	

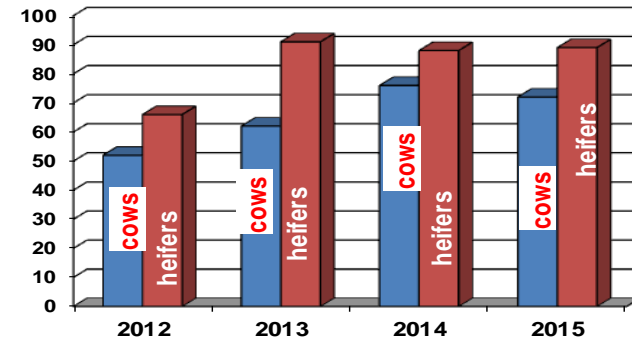
Key Facts 2015

- 5% not in calf rate, after 17 wks. breeding, 100% AI
- High replacement rate (30%) in 2015

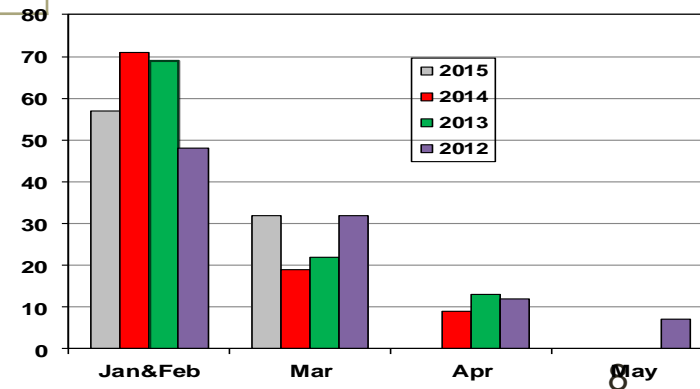
3. Milk Production	2011 Greenfield Dairy Farm	2012 Greenfield Dairy Farm	2013 Greenfield Dairy Farm	2014 Greenfield Dairy Farm	2015 Greenfield Dairy Farm
Fat & Protein (kg/cow) sold	368	372	386	396	400
Tonnes MS	110.4	112.6	125.2	124	130.7
% Fat	4.41	4.61	4.44	4.60	4.65
% Protein	3.52	3.57	3.62	3.74	3.87
SCC	169	235	157	190	170
Avg. Milk Price	38	36	41	42	35.11



6 Week Calving Rate (%)




% Calved Per Month



Animal Health

2014-2015

- Milk fever cases increasing– cows too fat or not enough Magnesium given to cows post calving
- Rotavirus scour an issue in Mar 2015- vaccinated cows calving after Mar 2015-
 No scours after that. Low mortality levels but lot of extra work in management.
- Huge improvement in SCC. Monthly milk recording a huge help.

2013

- Lameness was a problem in the Spring of 2013
- See NEXT slide for vaccine schedule

2012

- SCC was a problem on the farm in 2012(Staph. Aureus).
- Lameness was a challenge towards the end of 2012
- Mortality is low and vet call outs are low
- All cows get dry cow minerals and post calving minerals
- All cows are dosed for fluke and at drying off

Greenfield Labour Management

Currently –Feb & Mar

- 2 full time staff + 1 student + farm relief 1 day/wk.
- Relief day each week (8 weeks): calf sheds cleaned, disinfected & bedded and calving area
- **90% cows** calved from 7am -11pm in 2015 by restricting feed from **7am – 4.30pm daily**
- Shift work for calving(every second night on) for about 6-8 weeks
- Every second weekend off
- ½ day on a Monday for the person that worked the full weekend
- ***Nutrition & rest is important during this period for staff***

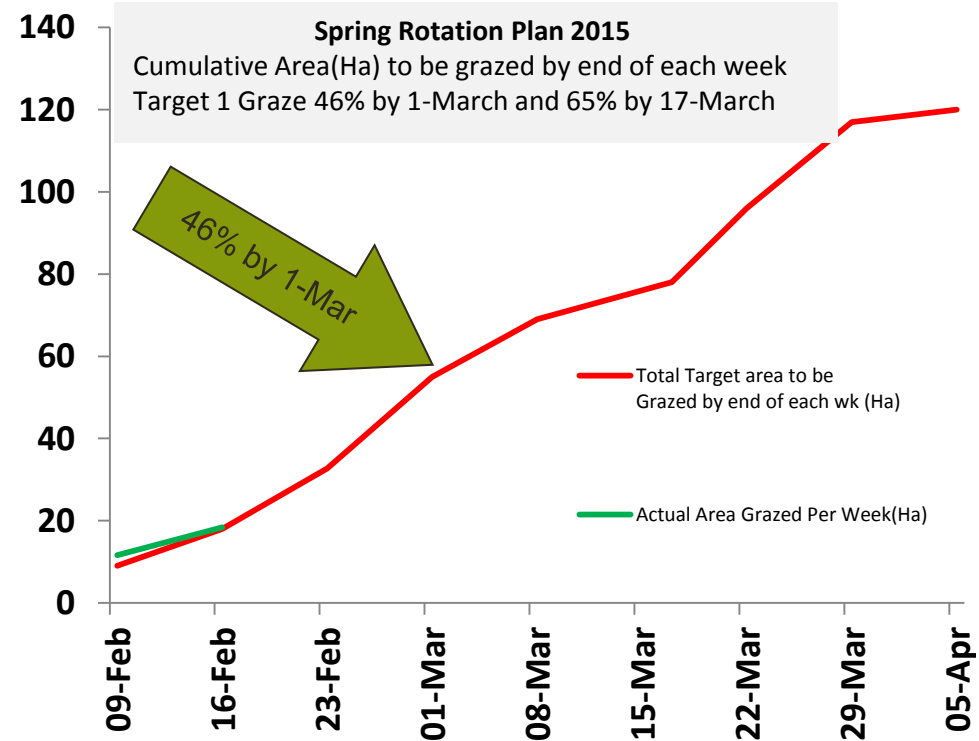
Busy Periods

- Calving (first 2 months)
- Pre Breeding (April)
- Breeding Period(22-Apr – end July)

Spring Grassland Management 2016

Step 1. First Rotation 2016

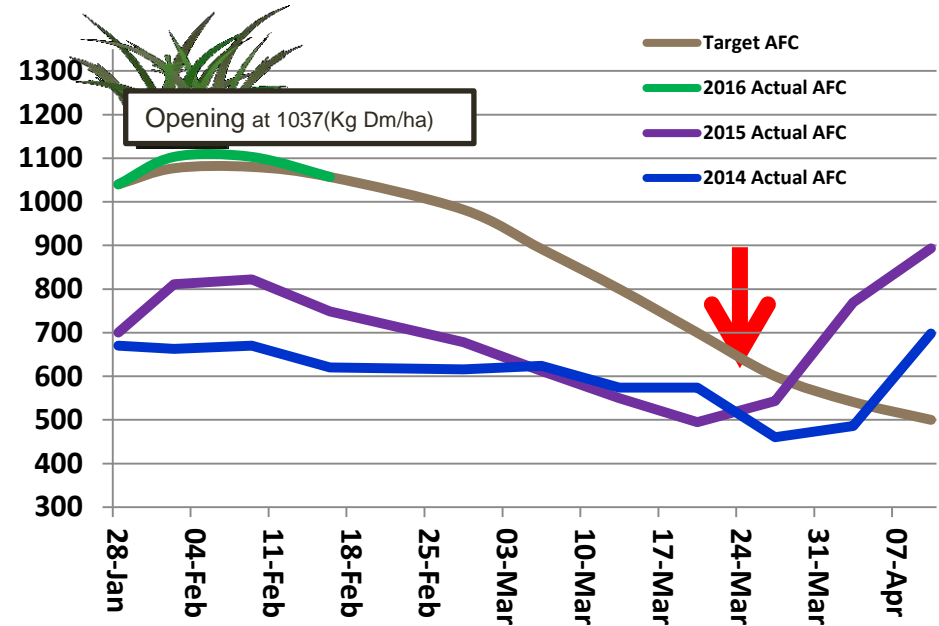
- Opening Cover 1037 kg Dm/ha on the 26-Jan-16
- Didn't get all lime required to be spread in 2015
- 44% farm got urea(20kg on 15-Feb, rest of the paddocks too wet
- All paddocks soil sampled again in 2016
- Will follow same fertiliser plan as 2015
- 2-3kg/day meal for most of first rotation
- Have 120 bales if there is a grass deficit (end March)
- Contract rearers have taken 40 cows for a month
- Target 1 graze 46% by 1-March
- Target 2 graze 66% by 17-March



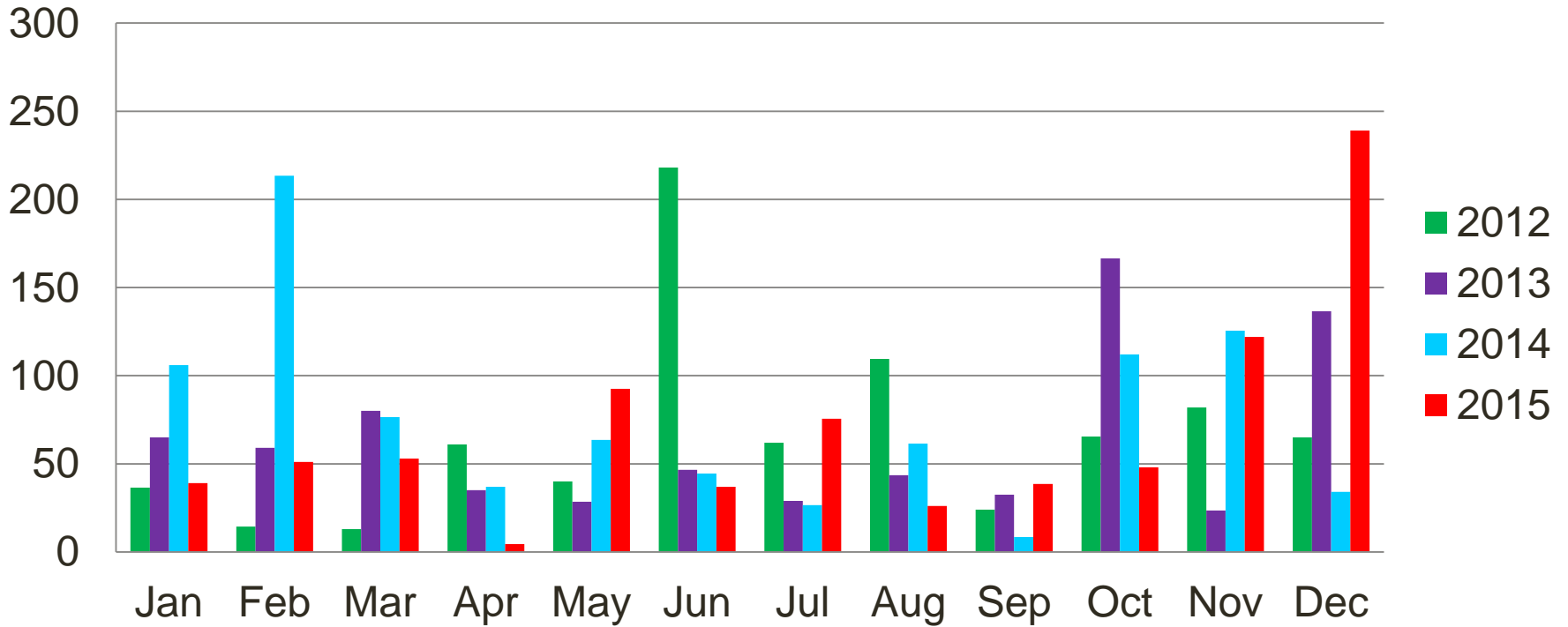
Spring Grassland Management 2016

Step 2. Grass Budget 2016

- Opening Cover 1037 kg Dm/ha on the 26-Jan-16
- Each week farm is walked and will be monitored to see if on target
- **Target 1 and 2** from previous slide must be achieved
- **Target 3** will be monitoring Cover /LU each week from 17-March. We won't drop below 180kg Dm/Lu per cow or try not to drop average farm cover below 500kg Dm/Ha before the end of March.
- If we drop below this then we will supplement with bales to reduce the grass demand
- If we are above this target we will reduce meal & increase grass in diet
- Max stocking rate at end of March will be 2.90cows/ha
- Demand at the end of March will be 46kg Dm/ha



Monthly Rainfall (2012-2015)



Fertiliser Used

	2015	2014	2013	2012
Kgs Nitrogen/Ha	249	249	249	249
Kgs Phosphorus /Ha	21	19	16	0
Kgs Potash /Ha	70	88	76	34
Kgs Sulphur /Ha	36	33	34	17
Grass Grown T Dm/Ha	13.80	13.45	10	13
Meal Fed Per Cow(Kgs)	180	270	620	307
Winter Feed (Kgs)	0	0	250	0

Details of AI sires used on Greenfield Dairy Farm Since 2010

Year	AI Bulls Used	No. of each breed used	Total no. AI straws
2015	BGJ,BJS,WLY, IGG,SPD,Je2047, APY,OKA,DJB,OKT,EGE,NR2016	46 Jersey (8%) 232 Friesian (41%) 240 Kiwi Cross (42%) 50 Norwegian Red (9%) Hereford / not yet decided	568
2014	GZY,JRE,ZBT,GXY,PKA,OKM,WLY,MSF	100 Jersey (17%) 500 Friesian (83%)	646
2013	HJT, OKM.PZS,WDS,WLY,LHZ,BGJ,HYD,JKF	100 Jersey (20%) 400 Friesian (80%) 12 Norwegian Red	500
2012	HYK,MJS,OKM,PKU,TIO,WTL,GFS,HYZ,MOK ,TEZ,PSH,VBT,EKE,FEA	212 Jersey (43%) 191 Friesian (39%) 48 Kiwi Cross (9%) 14 Norwegian Red 31 Hereford	496
2011	BHQ,HWY,HYK,KJW,KTR,PKU,TIO,WFM,BH Z,HZS,MJD,MTW,SIZ,WDS,WNE,UDP,BWU, GIP	389 Jersey (67%) 102 Friesian (18%) 50 Jersey Cross (9%) 29 Hereford 8 Angus	578
2010	ABT,BHQ,HWY,MJS,PKU,BHZ,BYJ,HRJ,HZS, MTW,SIZ,SOK	156 Jersey(80%) 40 Friesian (20%)	196

Breed Break down & Trend(%)	18-Jun-2011	11-Jul-2012	21-Jun-2013	1-July-2014	30-Jun-2015
Holstein (>78% Holstein)	23	34	28	20	12
Friesian & Holstein (some MO,SH,BS)	67	48	30	18	12
JERX	7	16	39	56	63
NRX	3	2	3	6	8 16

Vaccination Plan GF

Vaccine	2012	2013	2014	2015(Plan)	2015(Actual)
IBR Cows IBR Heifers(Maiden)	28-Jun 22-Jun	20-Jun 22-Jun	17-Apr 18-Apr	13-Apr 14-Apr	16-Apr 30-Mar
IBR Calves (3mths-live) IBR Calves (6mths-inactive)	Mid-Apr	Mid-Apr	12-Jun	10-Jun 10-Dec	15-July 31-Dec
Lepto Cows Lepto Heifers(Maiden)	5-Apr 15-Mar +5-Apr	30-Mar 25-Mar +15-Apr	4-Apr 10-Mar+19-Mar	1-Apr 17-Mar +17-Apr	20-Mar 23-Mar+22-Apr
BVD Cows BVD Heifers	5-Apr 15-Mar +5-Apr	30-Mar 25-Mar +15-Apr	4-Apr 10-Mar+19-Mar	1-Apr 17-Mar+17-Apr	20 Mar 23-Mar+22-Apr
Salmonella Cows Salmonella Heifers	4-Oct Same	8-Oct 25-Sept+9-Oct	22-Sept 22-Sept+14-Oct	1-Sept 3-Sept+2-Oct	14-Sept 14-Sept+13-Oct

Calf Rearing Spring 2016

Event	Time	Comments
Calf Born		
Tagged,& registered in Log book	Immediately	Important
Iodine applied to Navel	After Tagging	Important
Stomach Tube with 1 st Biestings	Within 30 mins of birth	3L Biestings (8.5% BW)
Calf moved to calf pen	After 1 st Biestings	
Feed again in the evening	2 nd or 3 rd Biestings	Important
Calf to have access to meal and water	All the time	
Calf bed to be clean & free of drafts (1 day per week designated to full calf house cleaning)	All the time	Bales straw to prevent drafts
Register Calves on line BVD Tags	ASAP 1-2 days	In the morning time when your not tired!
Dehorn calf/ Gel Paste	Before 2 weeks	Gel Paste not as good as gas torch
Whole milk	From day 1	2 x day, grouped buckets (6-8 litres /day)
RSV and PI3	Before 1 week	
Female calves to contract rearer	1-2 weeks	80 females
Sell Male Calves	Sold ASAP	Low Demand
Sell surplus Female High EBI calves	ASAP	High Demand

Calf Management 2015

- 344 Births(10 sets of twins)
- 27 calf deaths (7%)
- 50 Jerseys sold to factory
- 102 Contract Rearer (95 heifers)
- 185 calves sold (128 males & 57 females)
- €86/calf sold