



INGREDIENTS  
IRELAND

# Teagasc/Glanbia (GII) Monitor Farm Walk

*Financial and Infrastructure Planning  
on Expanding Farms*

Wednesday, 13<sup>th</sup> April | 11am

Jamie Kealy, Slaneyquarter,  
Tullow, Co. Carlow

*Topics for discussion include:*

- Long term planning
- Current cashflow management
- Planning good farm infrastructure
- Improving submission rate

[www.teagasc.ie](http://www.teagasc.ie)





# TEAGASC/GLANBIA MONITOR FARM WALK

<b>Farmer</b>	Jamie and Loraine Kealy	<b>Date</b>	13-Apr-16
<b>Adviser</b>	Eamonn Grace		

Short Term Goals	Long Term Goals
Milk 105 cows	Simple system
Improve infrastructure	Sustainable income for the family
Increase grass grown and milk solids sold	

Farm Details		Stock Details		Today
Land owned (ha)	15	Dairy cows		90
Land farmed (ha)	51	Replacements 0-1yr		25
		Replacements 1-2 yr		31
Milking platform (ha)	37	Replacements 2 yr+		
Cows/milking platform ha	2.4	Other cattle 0-1yr		
		Other cattle 1-2yr		
		Other cattle 2yr+		
		Total LU		119
		Stocking rate (LU/ha)		2.34
		Organic N (kg/ha)		196

Costs & Profits 2015	c/l	Average	Breeding & Fertility	2016		
Average co-op milk price	32.5	31.2		Cows	Repl 9+	Repl 0 - 9
Total Dairy Output	33.7	32.09	No.	78	19	30
			EBI (€)	168	176	190
Feed	3.03	3.82	Milk SI (€)	48	50	60
Fertiliser	1.73	2.58	Fertility SI (€)	88	88	106
Vet	0.75	1.09				
AI	0.82	0.57				
Contractor	1.05	1.6	Calving start date	Cows	Heifers	
Other Variable Costs			Calving spread (weeks)	01-Feb		
Total Variable Costs	10.2	11.57	6 week calving rate (%)	12		
				90		
Machinery	0.79	1.32	Submission rate (%)	90		
Car, ESB, Phone	1.6	1.23	Empty rate (%)	5		
Depreciation	1.59	1.79				
Other Fixed Costs						
Total Fixed Costs	12.17	8.75	Bulls 2016	EBI (€)		
			NPY,MKK,YAD	332		115/171
Total Costs	22.37	20.32	FR2079,FR2034,FR2005,FR2056,FR2119			
Net Profit	11.33	11.77				
Net Profit per cow €	660	646				

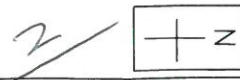
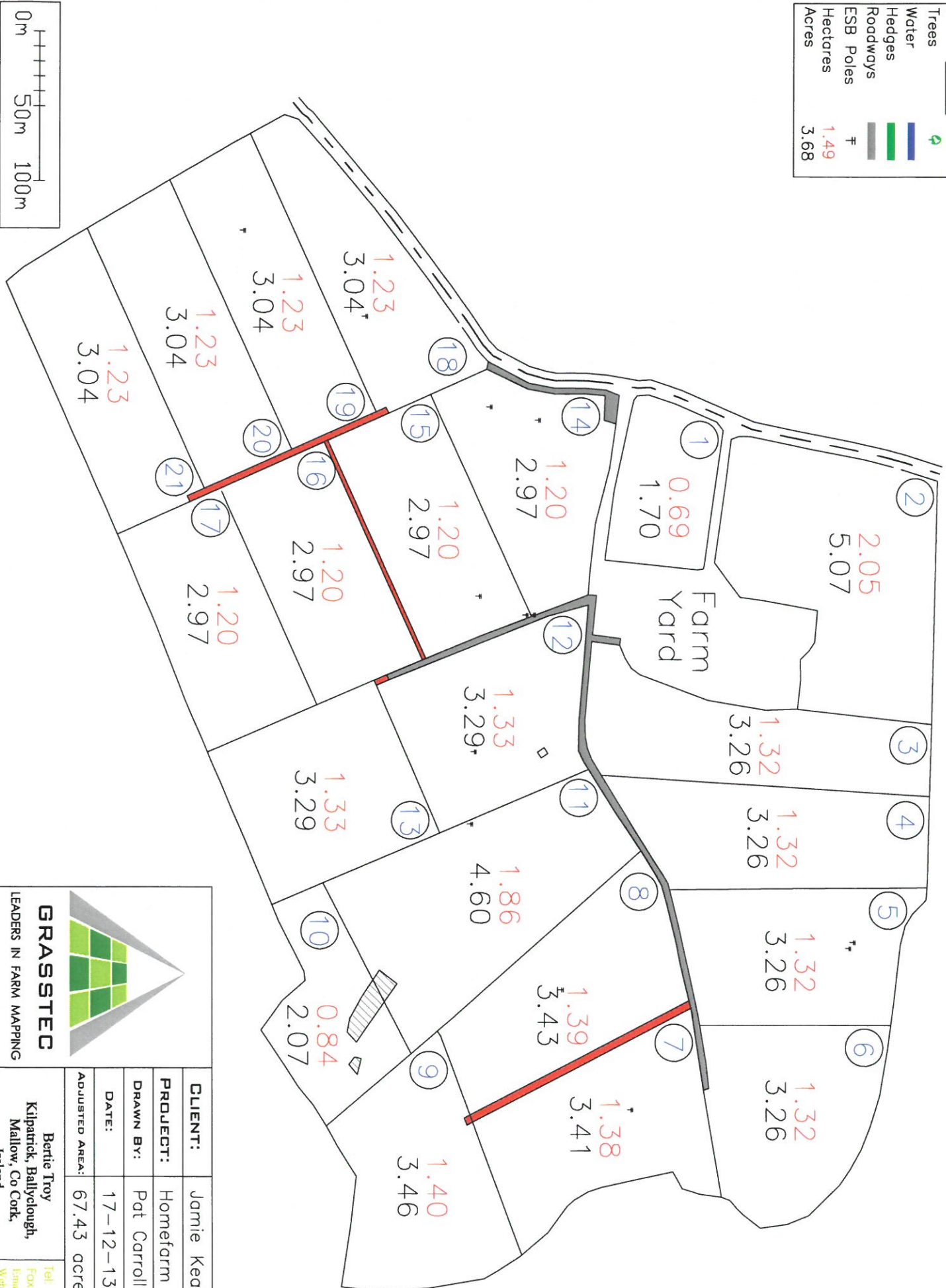
## Current performance

Milk production	2015	Today		Grassland Management	Today	
Milk yield (litres/cow)	5826	27.2		Average farm cover (kgDM/ha)	672	
Milk protein %	3.71	3.35		Pre-grazing yield (kgDM/ha)	1500	
Milk fat %	4.29	4.35		Rotation length (days)	20	
Milk solids/cow (kg/day)	480	2.09		Demand (kgDM/ha)	41	
SCC ,000 cells/ml	90	85		Fertiliser use (kgN/ha)	90	
Concentrates fed (kg/cow)	600	4		Growth	34	


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Index	
Trees	
Water	
Hedges	
Roadways	
ESB Poles	
Hectares	1.49
Acres	3.68



**GRASSTEC**  
LEADERS IN FARM MAPPING

<b>CLIENT:</b>	Jamie Keely
<b>PROJECT:</b>	Homefarm
<b>DRAWN BY:</b>	Pat Carroll
<b>DATE:</b>	17-12-13
<b>ADJUSTED AREA:</b>	67.43 acres

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# Financial Planning

	2015	2018	2021
<b>Ha Farmed</b>	51	51	51
<b>Cow No.</b>	77	105	105
<b>S.R. (Overall/Platform)</b>	1.94/2.1	2.5/2.8	2.5/2.8
<b>Grass growth (kgdm/ha)</b>	12.5	14	15
<b>Six week calving rate%</b>	85	90	90
<b>MS/Cow kg (Fat/Protein %)</b>	484 3.71/4.29	505 3.85/4.40	529 3.90/4.6
<b>Milk Price c/l</b>	32.5	32.75	33.5
<b>Total Receipts</b>	200,632	228,479	240,050
<b>Total Payments</b>	183,514	186,064	178,488
<b>Net Cash Flow €</b>	17,118	42,415	61,562



## Cash Flow Estimate for 2016

	2015	Est. 2016	Change
<b>Physical</b>			2015-2016
Area farmed			
Dairy platform			
Cows milked			
Milk sales (litres)			
Milk price (c/litre)			
<b>Cash sales</b>			
Milk sales	€ -	€ -	
Stock sales			
Other sales			
<b>Total sales</b>	€ -	€ -	
<b>Variable costs</b>			
Feed			
Fertiliser			
Vet+AI			
Contractor			
Other var. costs			
<b>Total VC</b>	€ -	€ -	
<b>Fixed costs</b>			
Labour			
Machinery			
Interest			
Car/ESB/phone			
Repairs			
Other FC			
<b>Total FC</b>	€ -	€ -	
<b>Cash surplus</b>	€ -	€ -	

## Grazing Infrastructure

- Proper designed road network essential
- Road location should be influenced by:
  - increasing access to paddocks
  - Cow flow to parlour
- Must consider future herd size
- And Location of Grazing platform



## Width of Road

- Avoid 90 degree turns – it can cause bottlenecks
- Use swept bends where possible
- Create the widest section nearest the milking parlour
  - Herd size <80cows – 4-5m road width
  - Herd size <120 cows – 5m road width
  - Herd size 120-250cows – 5.5m road width
  - Herd size <250 cows – 6m road width
  - Roads too narrow – cows push in creating lameness
  - Keep fence 45cm from the edge of the road.

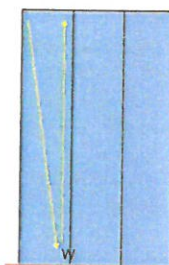


## Paddock Layout

- Square paddocks work best - it minimises damage due to less walking
  - 1:2 ratio for width/length
  - Eg 150 m wide and 300m long
- Create multiple entries into paddock
- Centralise water in paddock.
- Create shallow paddock for early spring grazing



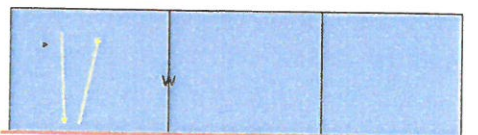
## Paddock Layout



- Traditional
- Long narrow paddocks
- More damage due to increased walking
- Water usually at gap
- Limited access points



## Paddock Layout



- Square paddock as best you can
- Centralise water
- Less walking – less damage
- Easier strip in Spring/Autumn
- Multiple access points possible



## Paddock size

- Paddock size will vary with cow numbers
- For best cow performance use 36 hour paddocks for mid season grazing
- Small paddocks can impact on cow performance and grazing management.
- Most paddock systems on farms are designed for a smaller number of cows.



## Paddock Size

- $\frac{\text{Number of cows} \times \text{daily grass allowance} \times 1.5}{\text{Available pregrazing yield}}$

- Eg: 120 cows on full grass  
 $\frac{120 \times 18 \times 1.5}{1,300} = 2.49\text{Ha}$



## Water

- Cow water intake
  - 10litres on cold wet days
  - Up to 90 litres on hot sunny days
  - Cow drinks up to 14 litres(3gallons) per minute, 30-50% within one hour of milking
  - Locate troughs centrally in paddocks
  - Looped system system will increase flow rate



## Water

- **Calculating water flow rate**
- Assuming a daily demand of 80 litres per cow, almost 50% of which is consumed in a three hour period soon after evening milking, means that an hourly flow rate of 13 litres per cow per hour is required (i.e.  $80 \times 50\% / 3 = 13$  litres/cow/hour.). Therefore, for a herd of 100 cows the flow rate needs to be about:  $100 \text{ cows} \times 13 \text{ litres/hour} = 1300 \text{ litres/hour}$  or 22 litres per minute.



## Water

- Allow 450mm (18 inches) drinking space per cow so that close to 10% of your herd to drink at the same time
- Troughs under wires can reduce feed space
- Allow 9l/cow (2 gallons) storage in the field
- Pipe Size critical to flow rate
  - Smaller pipes create more friction reducing flow rate





# Breeding Plan 2016

Date: \_\_\_\_\_



	Target		Actual	
No. of cows and heifers to be served	Cows	Heifers		
No. of heifers required in 2019				
No. of dairy AI straws needed	5.5 straws/repl.			
Aids to heat detection to be used				
Planned start of calving, 2017				
Start of pre-service heat detection	3 weeks before start of AI			
Start of AI (maiden heifers)	1 week before cows			
Start of AI (cows)				
Submission rate – 3 weeks	90 %			%
Cows served in Week 1 (%)	No.	30 %	No.	%
Cows served in Week 2 (%)	No.	30 %	No.	%
Cows served in Week 3 (%)	No.	30 %	No.	%
Examination of non-cycling cows	9 weeks after start of AI			
Change to beef AI/ beef stock bull	All dairy AI straws used			
End of breeding season	13 weeks after start			

Bulls to be Used				
	Target		Actual	
	AI Code	No. of straws	AI code	No. of straws
Bull 1				
Bull 2				
Bull 3				
Bull 4				
Bull 5				

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## Glanbia Bulk Milk Disease Screening Service

Bishops Island Dairies Ltd

C/O Donal O'Reilly

Bishops Island

Watergrasshill

Co Cork

Sample ID

0010323

Herd Number

D3870325

Farm Dev. Advisor

Donal Corkery

Vet

Finn's Veterinary Clinic

### Vaccination Status

IBR	BVD	LEPTO	Salmonella
Yes	Yes	Yes	Yes

## SUMMARY RESULTS REPORT

Disease	Test Method
IBR gB (Non Vaccinating Herd)	ELISA (Antibody)
IBR gE (Vaccinating Herd)	ELISA (Antibody)
Leptospirosis	ELISA (Antibody)
BVD Antibody	ELISA (Antibody)
Neospora	ELISA (Antibody)
Salmonella	PCR/ELISA (Antigen)
Salmonella	ELISA (Antibody)
Ostertagia (Stomach Worms)	ELISA (Antibody)
Fasciolosis (Liver Fluke)	ELISA (Antibody)

Date	26/03/16	Grade
Result Reading	0.464	POS
Result Reading	0.231	POS
Result Reading	53.487	LPOS
Result Reading	0.005	NEG
Result Reading	193.68	POS
Result Reading	0.63915	LPOS
Result Reading	1.478	NEG

Date	02/10/15	Grade
Result Reading	1.444	NEG
Result Reading	0.325	POS
Result Reading	62.491	LPOS
Result Reading	0.063	NEG
Result Reading	ELISA (Antigen)	NEG
Result Reading	0.86309	HPOS
Result Reading	11.22	NEG

Date	19/06/15	Grade
Result Reading	0.690	POS
Result Reading	0.460	POS
Result Reading	42.168	HPOS
Result Reading	0.016	NEG
Result Reading	ELISA (Antigen)	NEG
Result Reading	0.29757	NEG
Result Reading	3.092	NEG

Date	05/05/15	Grade
Result Reading	0.503	POS
Result Reading	0.425	POS
Result Reading	36.740	HPOS
Result Reading	0.041	NEG
Result Reading	ELISA (Antigen)	NEG
Result Reading	0.53211	LPOS
Result Reading	7.719	NEG

COMMENT: Where cows/herds are currently vaccinated for BVD, IBR, Lepto; results for these tests may be affected by vaccination. Results are representative of milking cows whose milk is in the bulk tank at the time of sampling and relate only to the portion of the sample tested. All results should be discussed with your Veterinary Practitioner. Antibody levels indicate previous exposure to disease and/or vaccine. Positive results on antigen tests indicate the presence of that infectious disease in the milk sample.