Ireland's Expanding Cattle Herd

Forage Opportunities for Tillage Farms?

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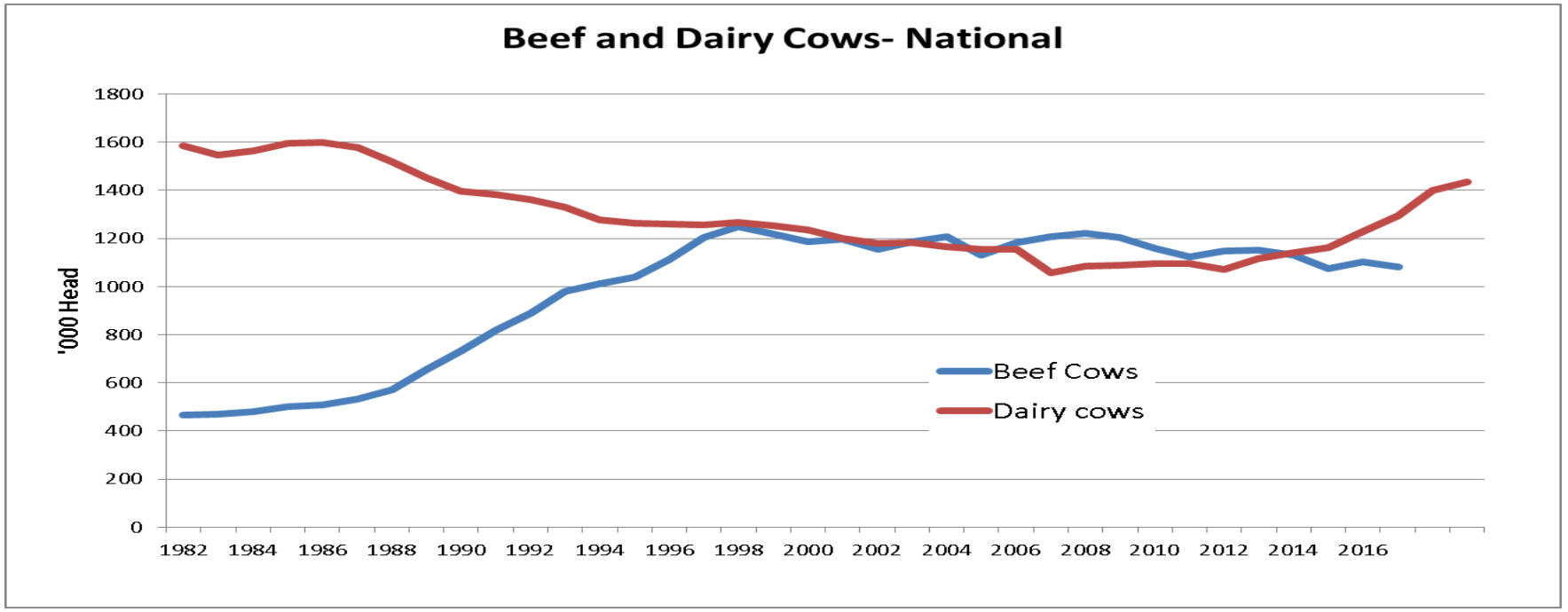
Presentation Outline

- Background and Context
  - Livestock population changes
  - Production system trends
  - Defining the needs of the livestock farmer
- Forage crop options and issues
  - Wholecrop silages
  - Beet and Brassicas
  - Short ley grass crops
- Summary and Conclusions

Trends in cattle population

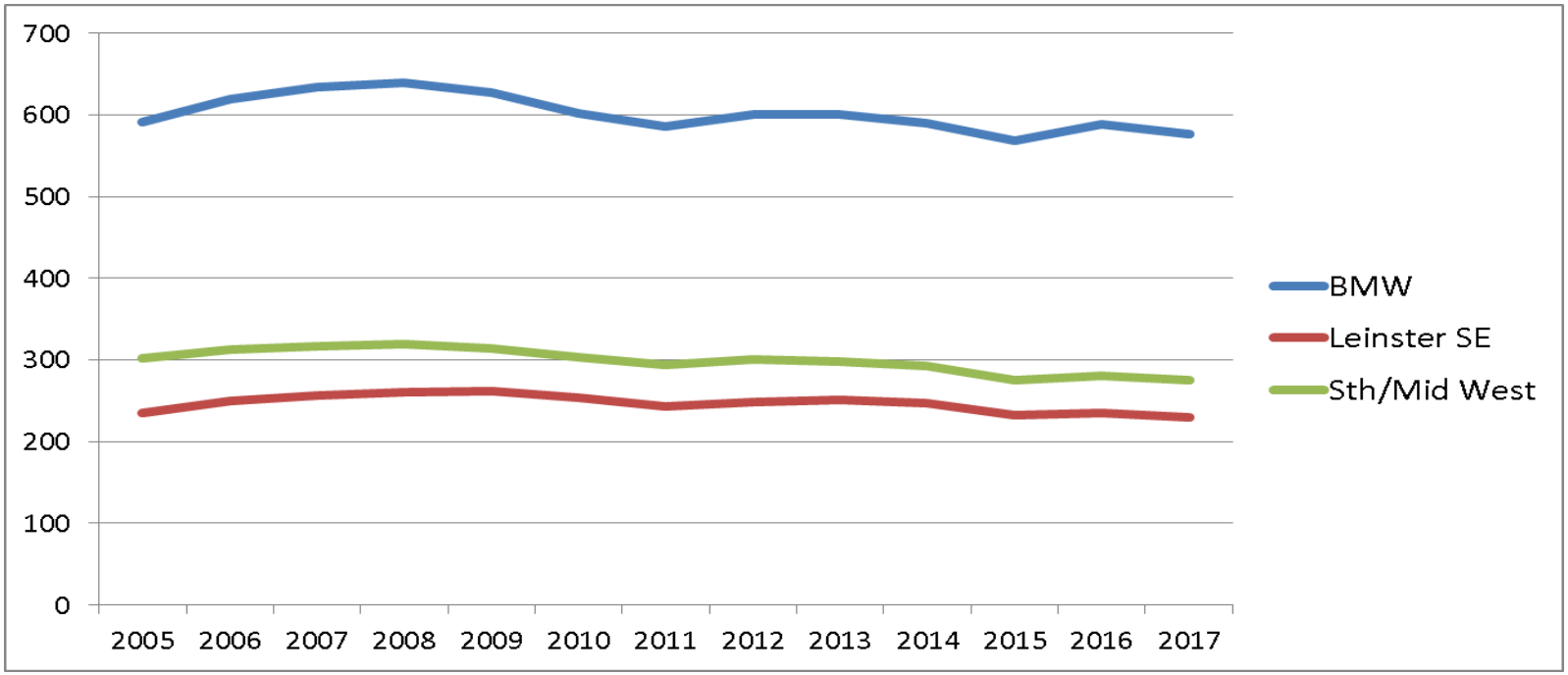


- Direct replacement of dairy cows with beef cows under quota system
- Dairy cows have risen back to 1988 levels this year
  - Productivity and herd size transformed since 2005
  - Future growth depends on land structure, labour, environment policy, volatility
- Suckler cow population stable/declining slightly
  - Decoupled from dairy cow increase

Regional Population Trends

BMW	Leinster/South East	South/Midwest
Ulster, Connacht Louth, Laois, Offaly, Westmeath, Longford,	Dublin, Meath, Kildare Wicklow Carlow, KK, Wexford South Tipp, Waterford	Cork Kerry, Limerick Clare, North Tipp

Beef Cow Population



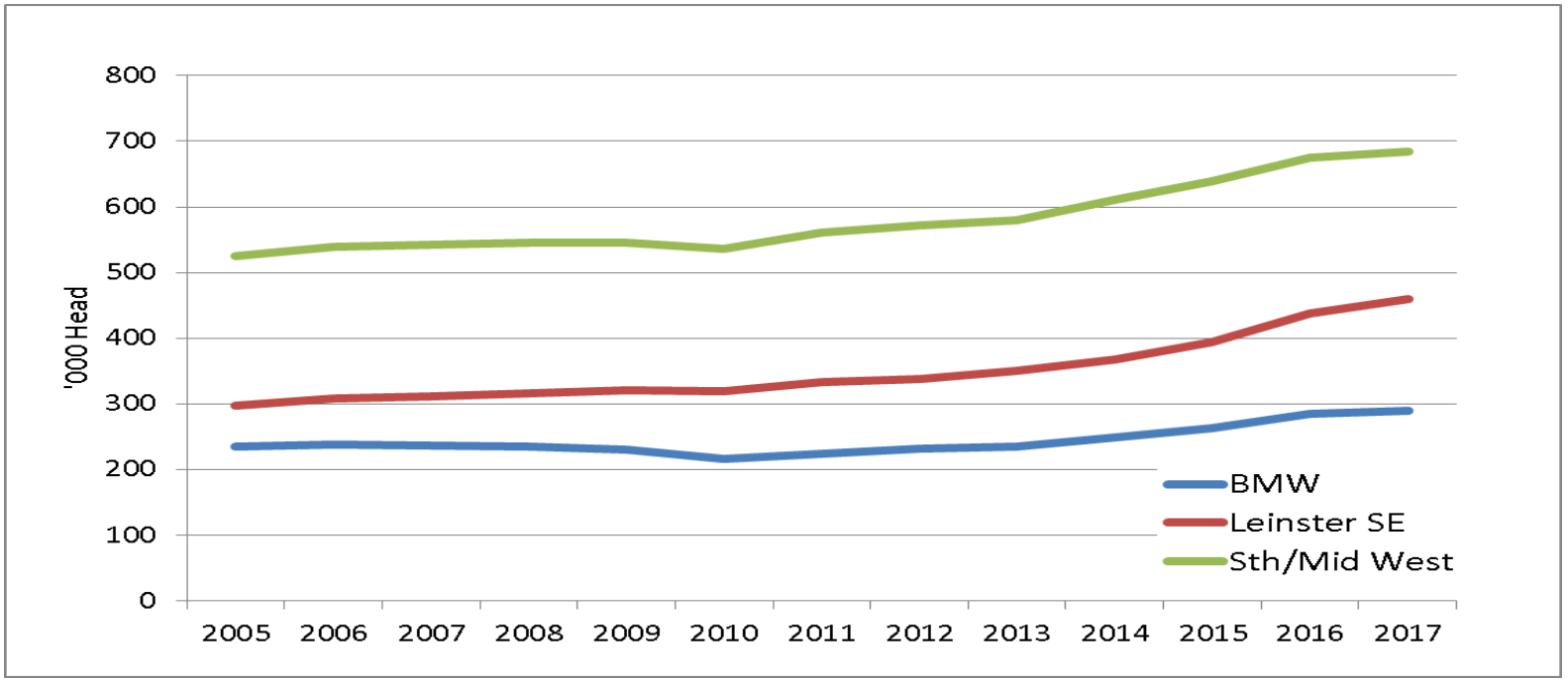
	BMW	Lein/ S.East	South/MW
Total change	-14,000	-6,300	-27,000
% of total change	30	13	57
% within region	-2.4%	-2.68	-8.91

Beef Systems- Margins and Implications

	Suckler Beef	Suckler Weanling	Non-breeding Beef
Stocking Rate	1.90	1.56	1.77
Liveweight Sold kg/ha	645	464	691
Output per ha €	1441	998	1427
Net Margin (Top 1/3)	185 (560)	-36 (258)	128 (530)

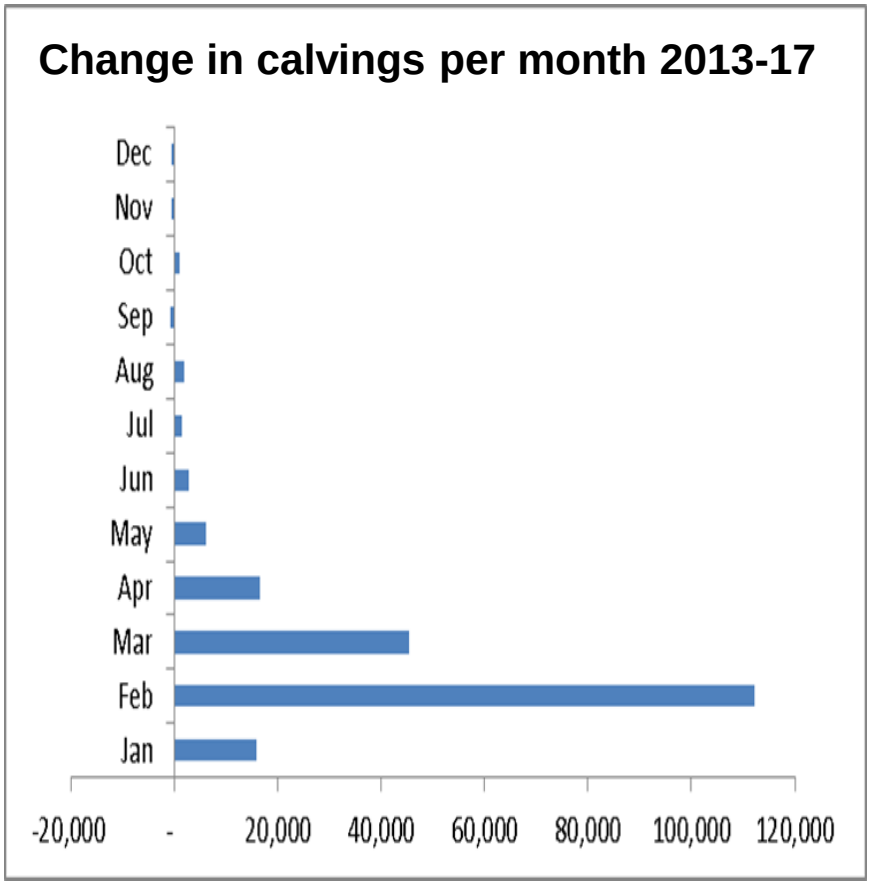
- Drystock farms remain relatively lowly stocked
  - Output per ha on suckler weanling farms returns negative margin
- Alternative forage options would need to reduce total winter feed cost
  - Necessitate increase in grazing stocking rate
- Calf-to-beef systems a potential growth area for grazing in-situ crops

Dairy Cow Population- Regional



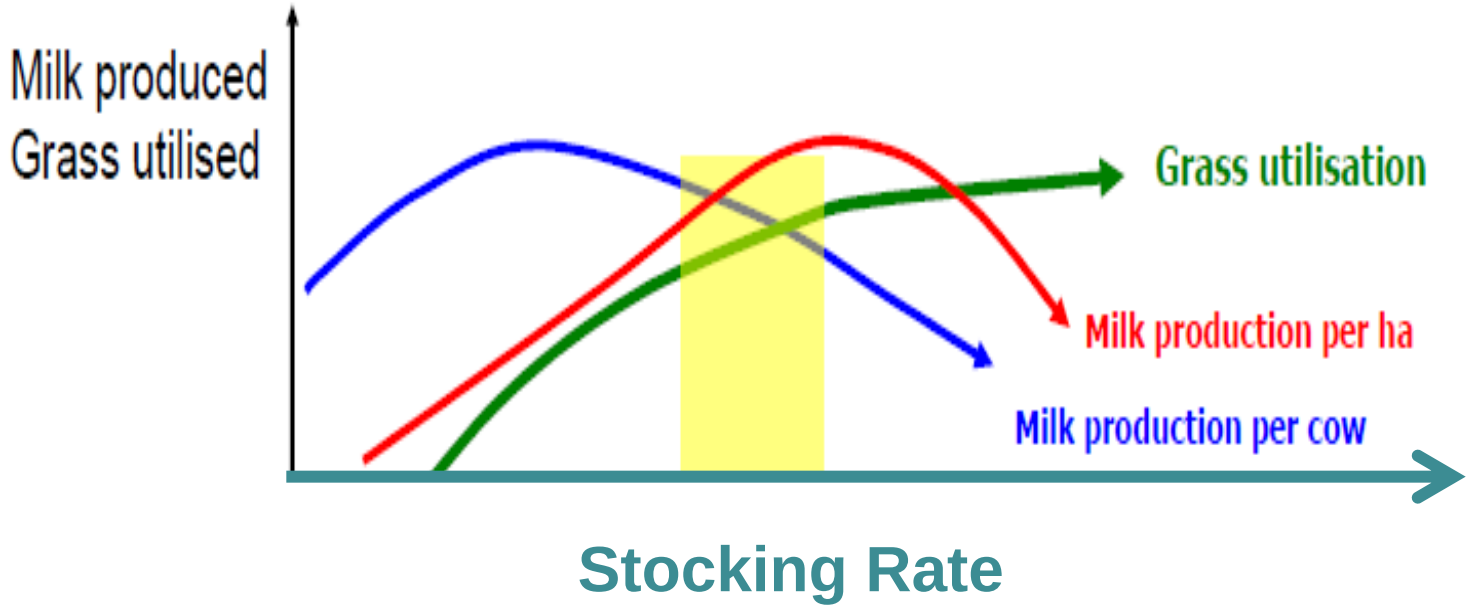
	BMW	Lein/ S.East	South/MW
Total change	56,000	162,000	159,000
% of total change	15	43	42
% within region	24	55	30

Pattern of Dairy Expansion- Calving System



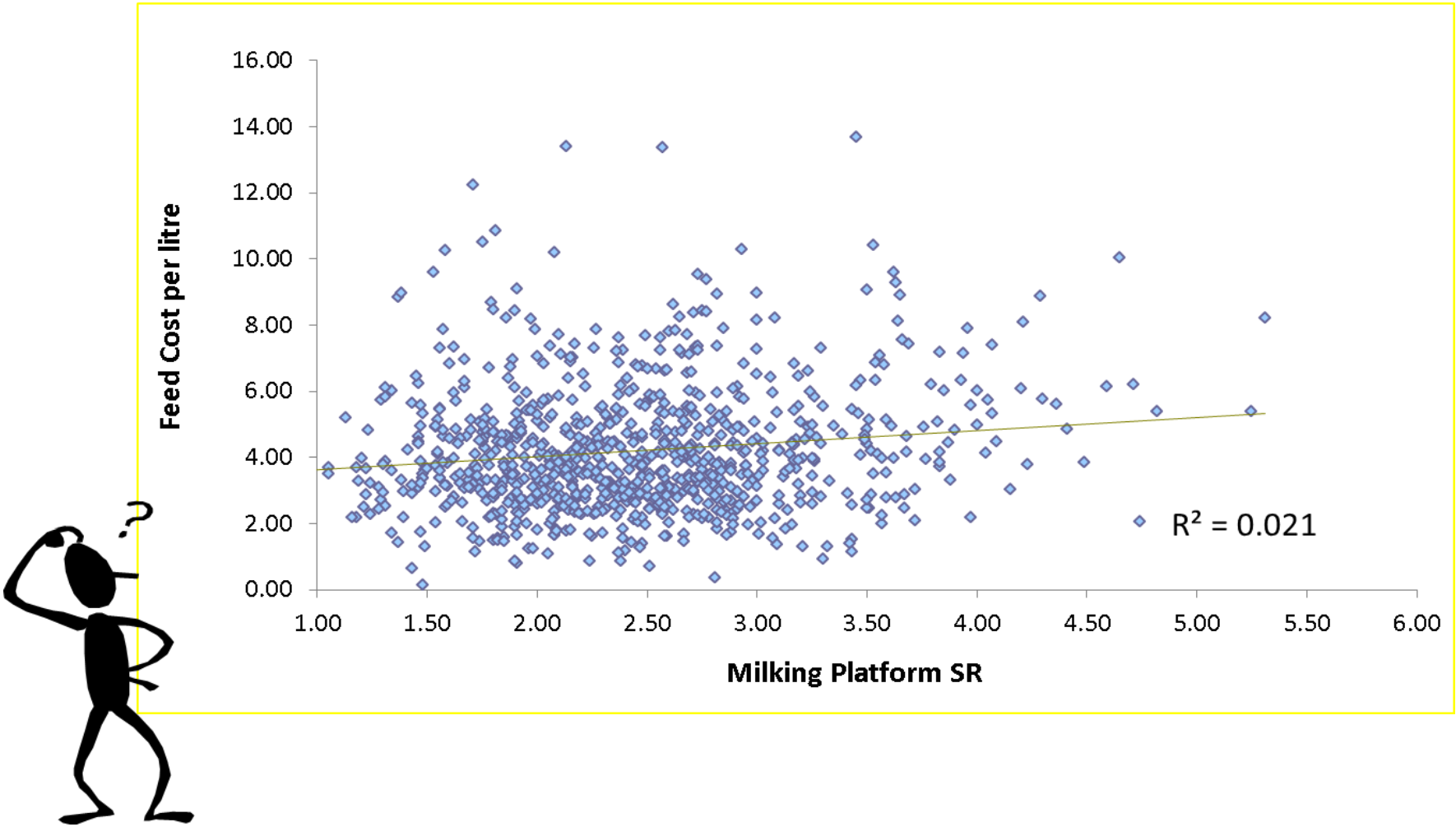
- 98% extra cows calving Jan to April
  - Static Autumn calving
  - 100% extra dairy heifers born in Feb
- Factors
  - Pasture focus - feed cost
  - Labour input per cow
  - New entrants/multiple units
  - Inadequate premium for winter milk
  - Winter facilities cost
- **Implications**
  - Dry cow feed 50%+ of total silage
  - Milking feed fed as grass buffer

Dairy Stocking Rates- Key messages for expanding herds



'Diminishing economic return once grass utilised is at max'

Real World- How does Stocking Rate Relate to Feed Costs?

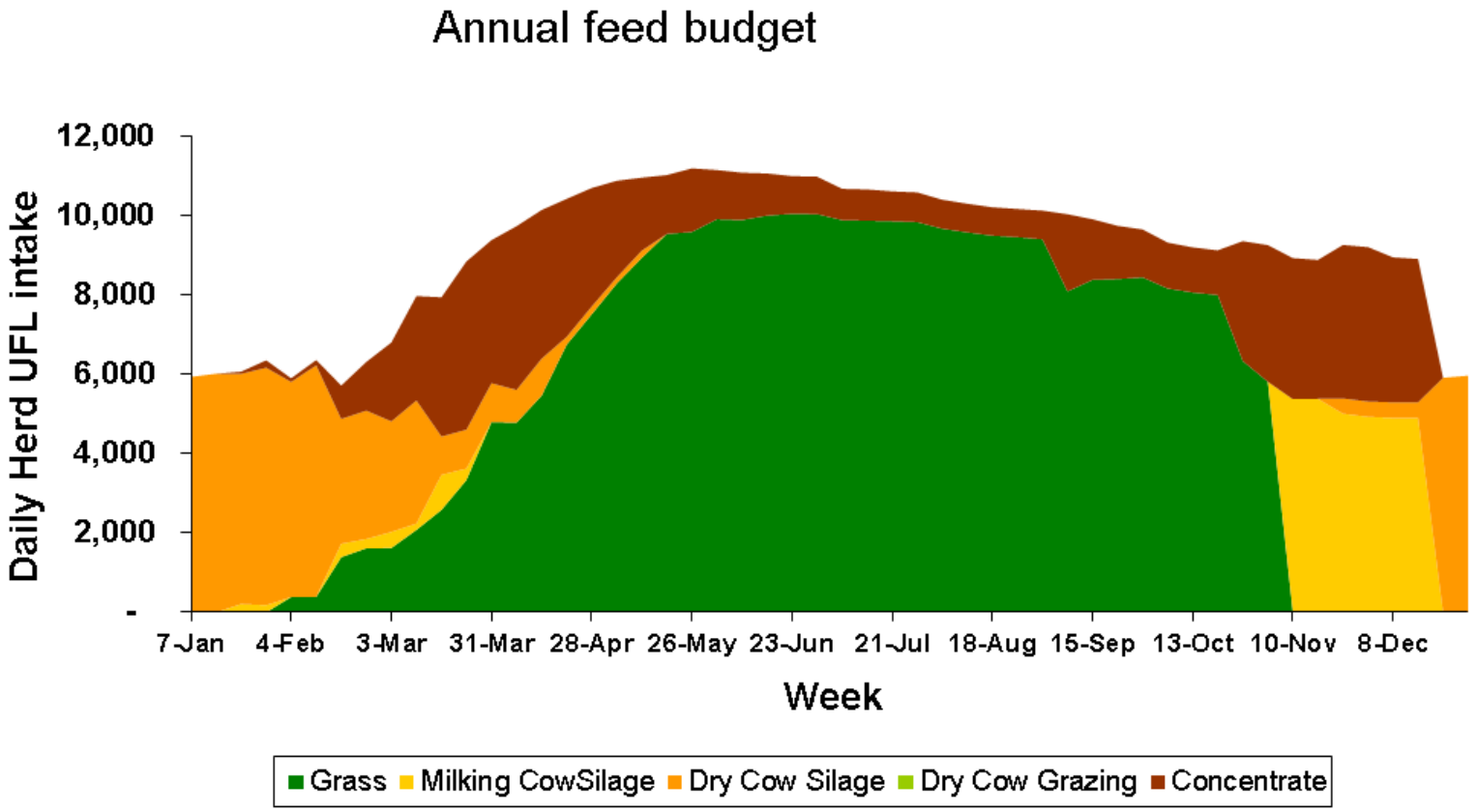


Stocking Rate & Feed Supplements

The most profitable farms (ePM):

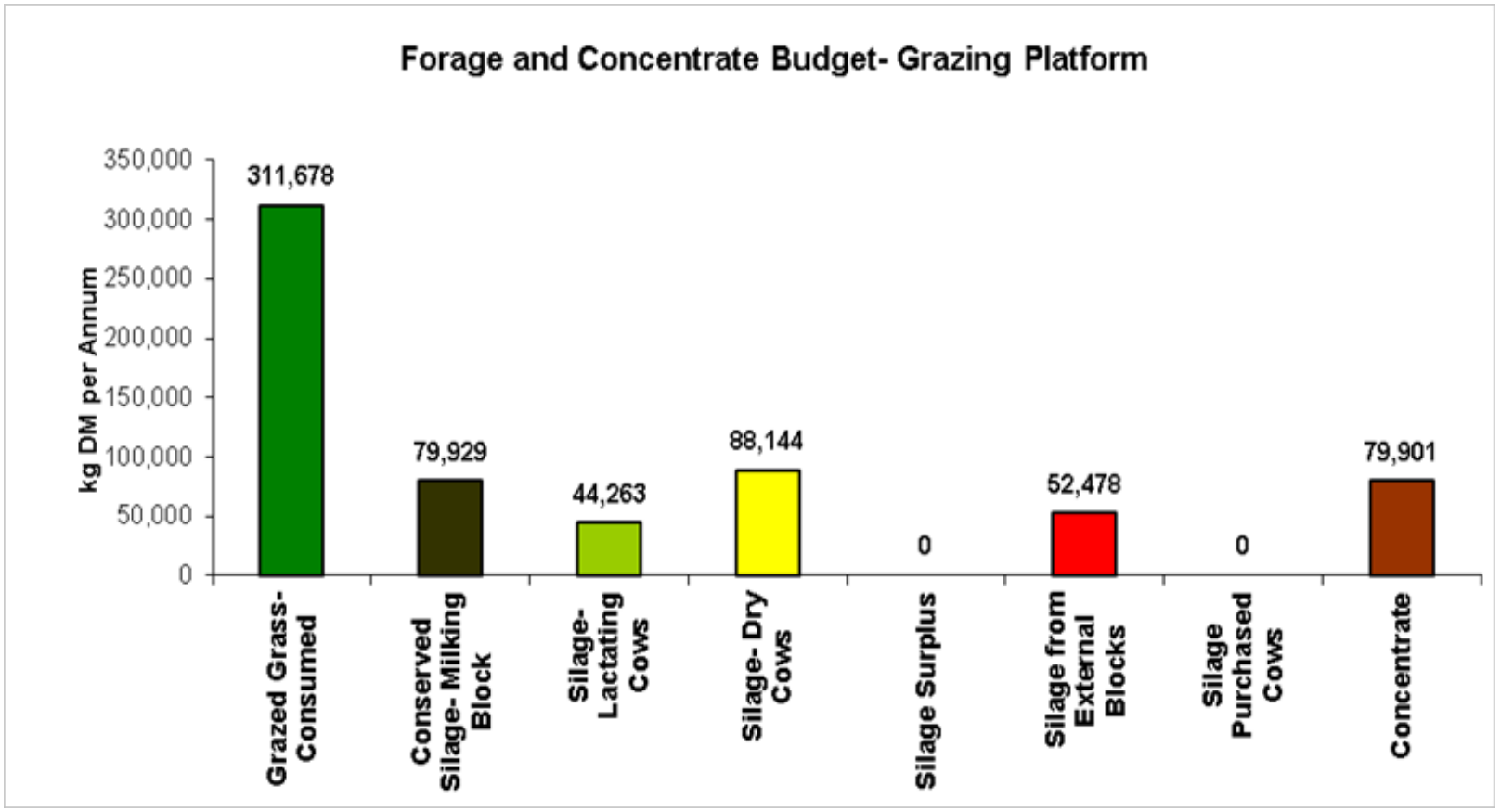
- Growing 14.5+ tonnes dry matter per ha
  - Adequate to sustain 2.65 LU per ha
- Stocked at approx 3.1 LU per ha milking area
  - Deficit approx 2.1 tonnes DM per ha
  - 600-800kg DM forage deficit per cow
- Sourced from external land:
  - Silage plus youngstock out-block
  - Contract rearing farm surpluses

Case Study Farm- 100 cows plus followers on 64 ha



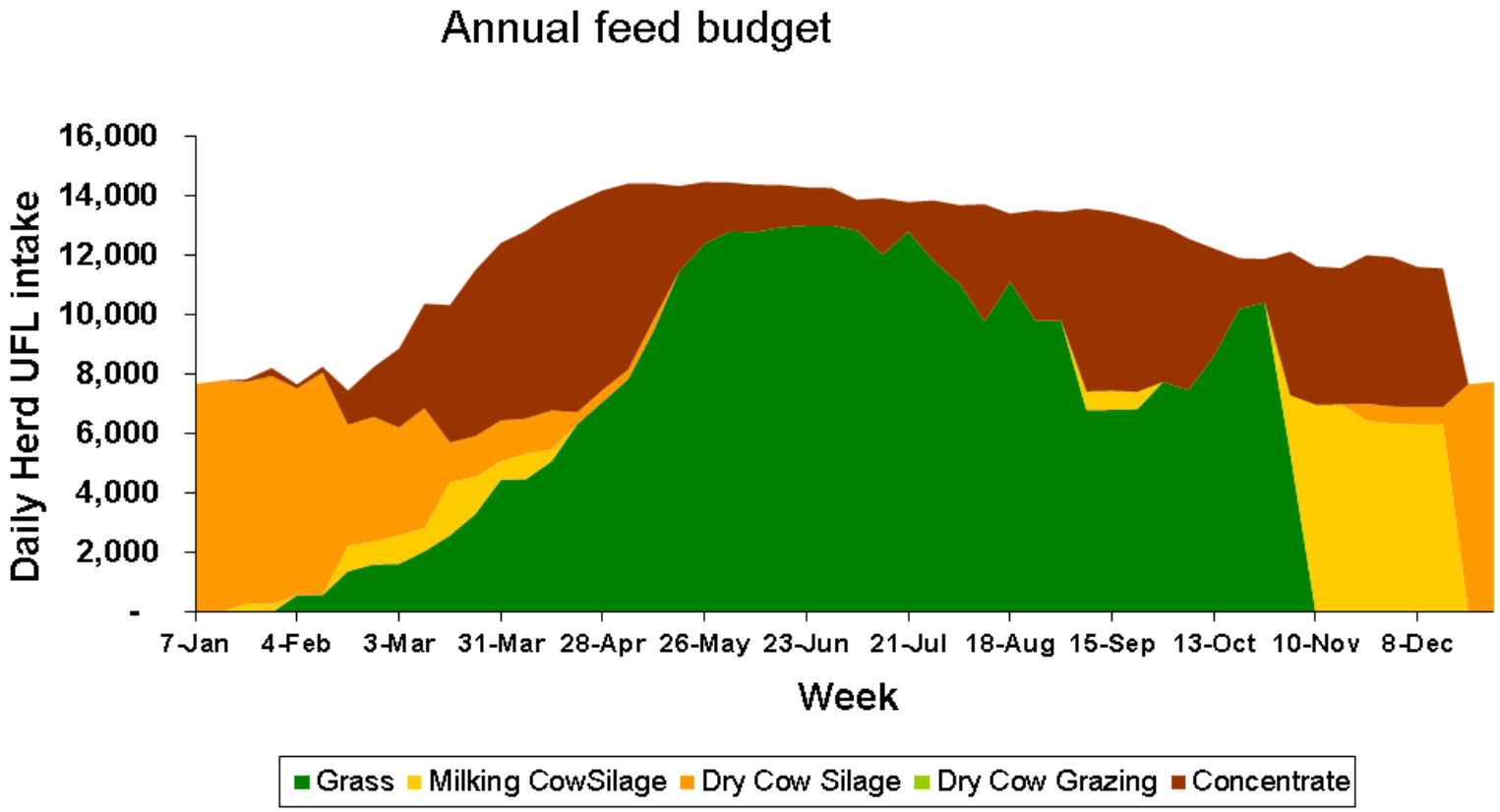
Grazing SR 2.38, Whole Farm 2.01. Annual grass 10.8t DM

Annual Feed Budget



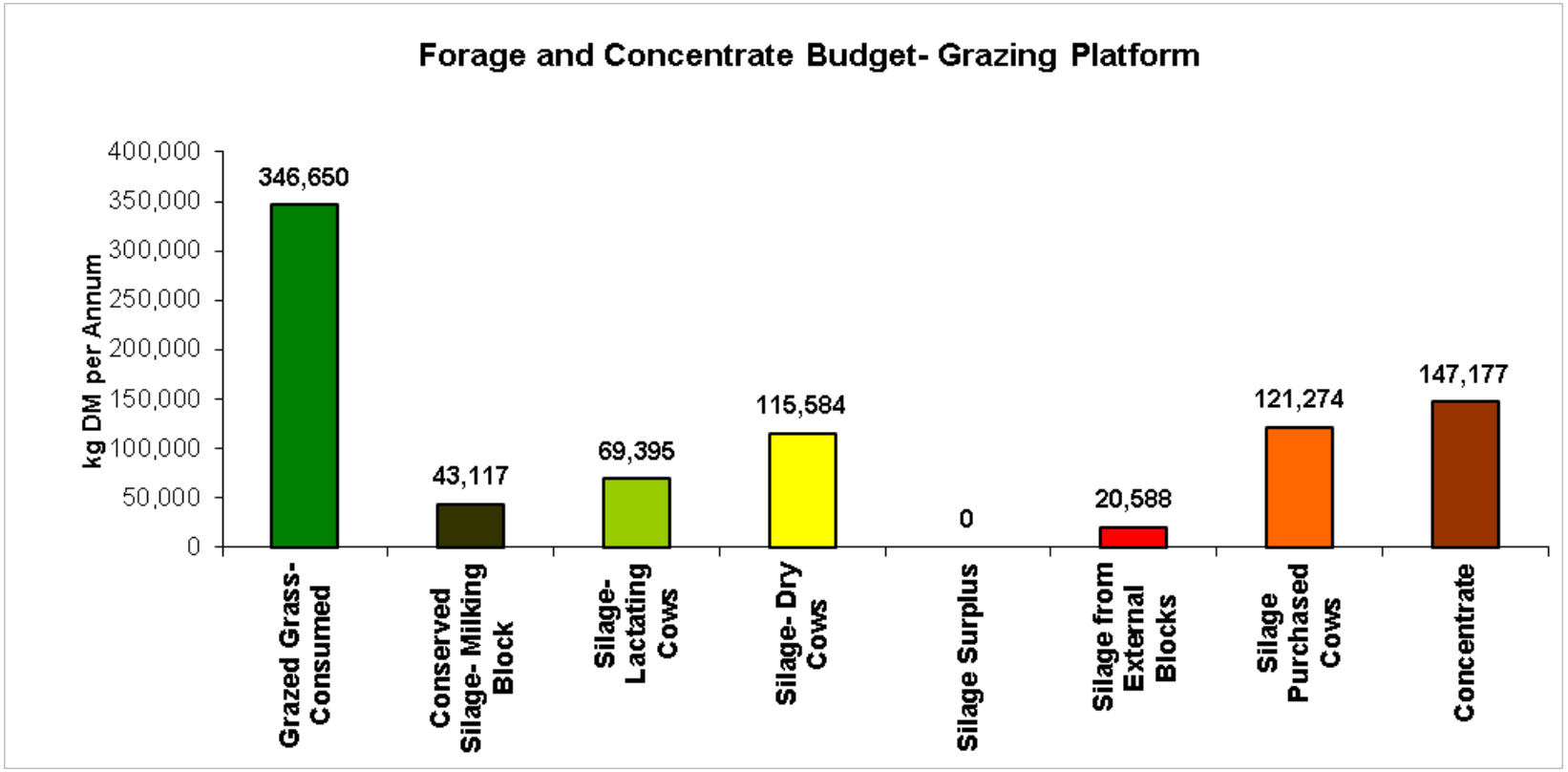
Purchased Feed €26k

Expand to 130 and buy standing crop silage



Grazing SR 3.10, Whole Farm 2.59. No change growth rate

Expand to 130 and buy standing crop silage



	Base	Forage 150	Forage 185
Concentrate €	26,000	45,000	45,000
Forage €	-	18,000	22,400
Margin over Feed		**+12900**	**+8500**

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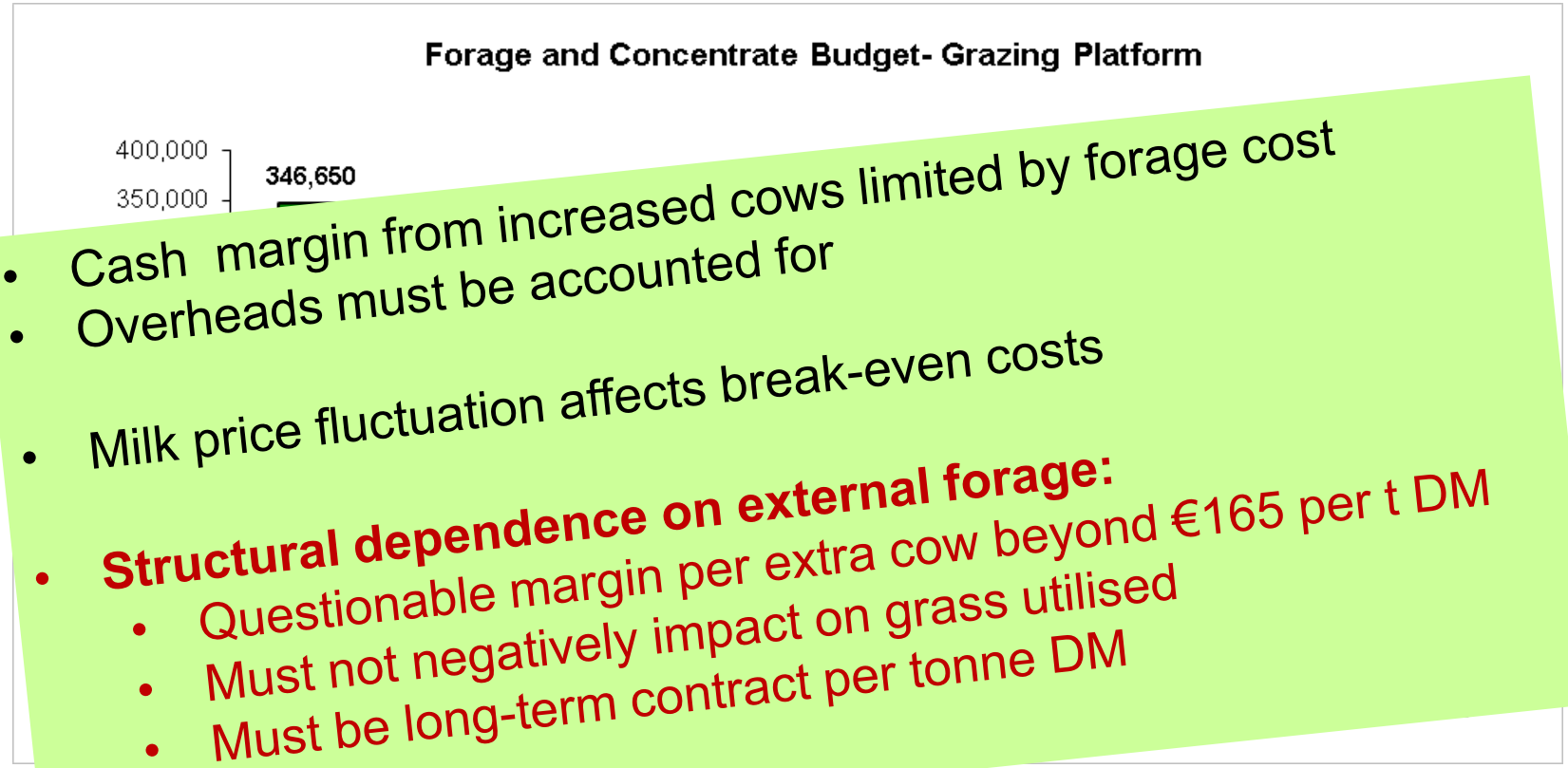

- Cash margin from increased cows limited by forage cost
- Overheads must be accounted for
- Milk price fluctuation affects break-even costs
- **Structural dependence on external forage:**
  - Questionable margin per extra cow beyond €165 per t DM
  - Must not negatively impact on grass utilised
  - Must be long-term contract per tonne DM

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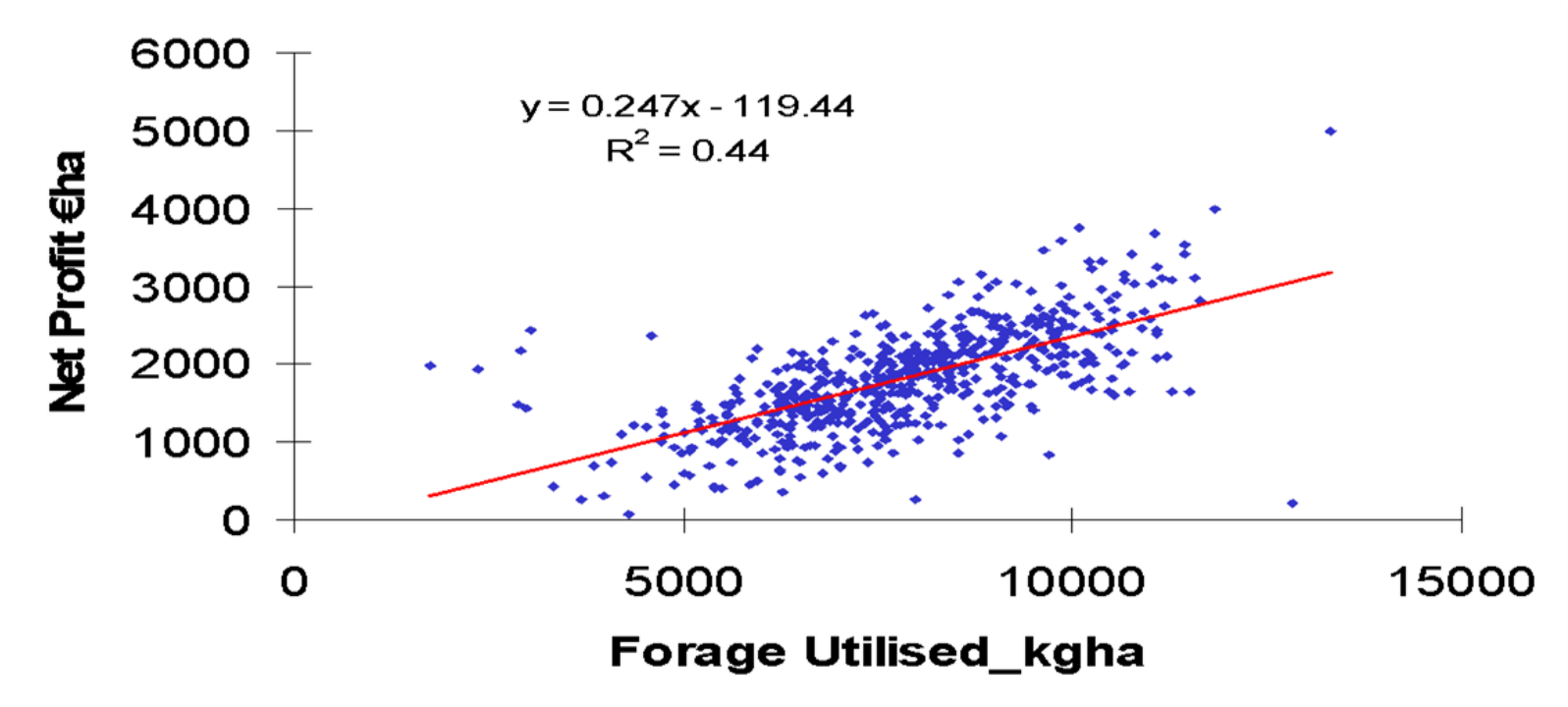
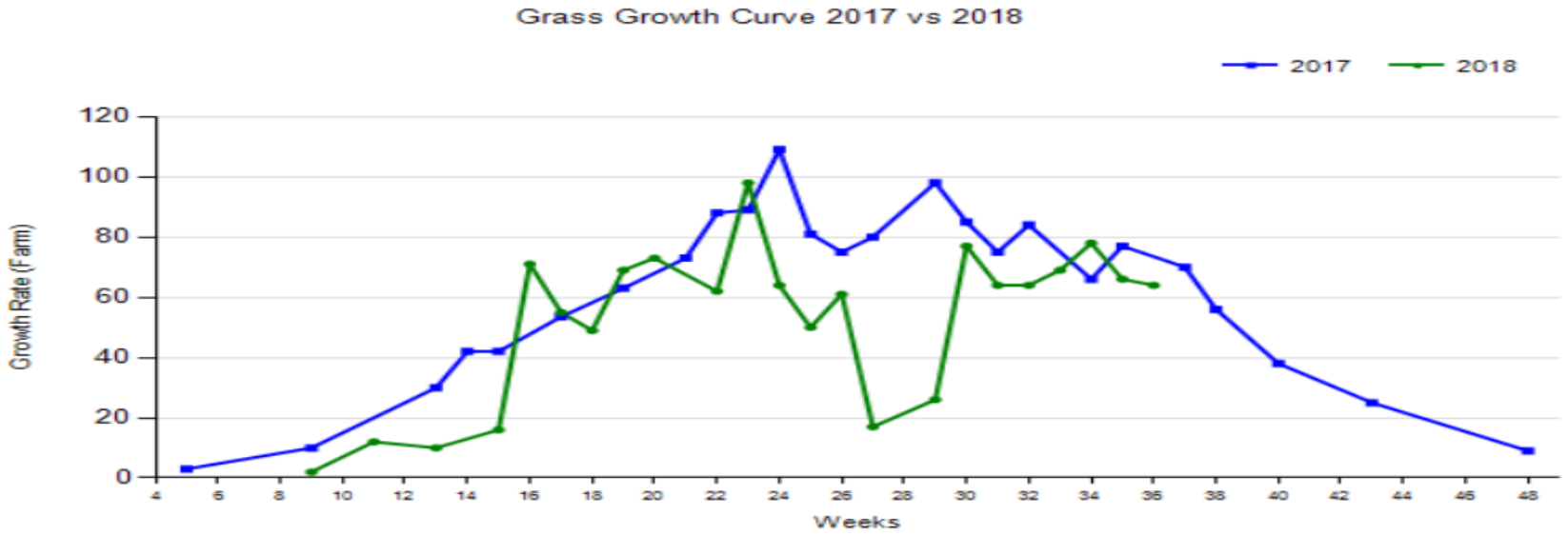
Dairy Stocking Rates- Key messages for expanding herds



'Focus on growing and consuming more grass per hectare'

What about the feed situation in 2018?



- Deficit 2.5 to 3.0 tonnes DM per ha due to three weather episodes
  - **1 tonne DM per cow shortfall**

- **Treat reserve as a separate issue to optimal stocking rate per se**
  - Build feed from external land blocks to a working surplus e.g. 800kg per cow
  - Typical scale dairy herd (130 LU) require 80 to 100 tDM reserve
    - 6 to 10ha of forage silage crop
  - Potential to service group of livestock clients across different years

Forage Crop Options

Multi-cut grass silage system - 'The competition'

	11t DM per ha		9.5t DM per ha	
Land Rental/ac	***220***	***180***	***220***	***180***
Total Cost € t/DM	**173**	**162**	**200**	**187**
Cash Cost € t/DM	137	137	159	159

Total cost includes land rental, BPS, fertilizer, slurry, 3x cutting, maintenance
Cash cost excludes land rental, BPS

Teagasc
Agriculture and Food Development Authority

Relative Feed Values

	Hi Conc. Price	Low Conc. Price
76 DMD silage	185	165
68 DMD silage	170	150
Maize 20 Starch	172	150
Maize 30 Starch	182	162
Wholecrop	178	158
Fodder Beet	245 (47)	210 (40)
Brassica Crop	185	165
Barley/soya	*230/365*	*205/320*

- Valued on a UFL (energy) and PDI (protein) basis per t DM utilised
- If growing cost exceeds these values then feeding concentrate competitive

In-Situ Brassica Crops- late summer establishment

- Rape, Hybrid brassicas an option until August
  - Grazing in-situ until early spring
  - Correct site and lie-back area important
  - Crop nutrition and pest control

- Excellent feed source: energy and protein
  - Mineral (Iodine) supplementation
  - Fibre (30% of diet) required. Place long forage in situ
- Popular on farms with increasing heifer numbers
- Dairy calf to beef weanlings

Animals sustained per ha for winter period

Crop	Yield per ha	Weanling 270kg	Dry Cow 550kg
Hybrid	5950	11.9	9.7
Rape	4300	8.6	7.0
Kale	8300	16.6	13.5

Whole Crop and Maize Silages

Typical costs and feed values

Crop yield per ha	Maize 14t DM	WCC 12.5 tDM
Input Costs	1045	784
Machinery Costs	668	622
Total € per ha	1713	1625
Cost DM incl. land charge	€159	€169

- Good quality crops perform well in dairy and beef systems
- Optimum inclusion 30-50% in winter diets

- Value per t DM is limited by:
  - Milk yield and ADG advantages driven by dry matter intake
  - Cost to balance protein fraction

- ‘Like feeding whole crops crops but hate growing them’
- **Single harvest delivered at index linked price per tonne**

Forage Option- Westerwolds

- Annual ryegrass-
  - High yield (13- 15tDM per ha)
  - Moderate quality crop (70 DMD grass silage)

- Establish in August after cereals
  - Rapid vigorous growth
  - First Harvest 60 days after establishment 4 to 5t DM (1)
  - Fertilizer approx as per standard 1st cut silage cuts
  - Potential for early spring grazing (2)
  - March-April silage cut before maize crop establishment (3)
    - Final Cut before seed head emergence

- **Contract 'forage builder' crop option**

Fodder Beet

- High yield potential-14 to 15t DM per ha
  - Variable costs approx €2000 per ha

- High quality feed due to UFL content
  - High performance animals (winter milk , finishing cattle)

- Low fibre value
  - Concentrate replacement value
  - Not a forage stretcher per se

- Inclusion limited by fermentable carb content
  - 2kg DM max in milking cows (depending on diet)

- Handling, and feed-out limit use for some herds

Summary and Conclusions

- Growth in dairy sector will continue to increase grazing stocking rates
  - Winter feed displaced to out-farms
  - Poor quality silage. Can tillage farms provide better?
  - Economic optimum grazing SR should limit individual herd expansion

- Drystock sector may see increase in calf-to-beef systems
- Dairy Heifer rearing farms on the increase
- Grazing in-situ crops may be beneficial in both these cases

- Current advice is to livestock
  - Match stocking rate to growth potential
  - Work on growing more grass per ha from own land
  - Farms not actively encouraged to enter cropping arrangements

- However
  - Building feed reserves should be considered separate to optimal SR
  - Approx 1 tonne DM per cow buffer required in 2018
  - Options for tillage farms to grow for multiple clients over 4-5yr cycle
  - Contract arrangements to manage risk essential

Discussion