

Efficient use of pastures and supplements

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Efficient use of pastures and supplements is based around planning and having management rules

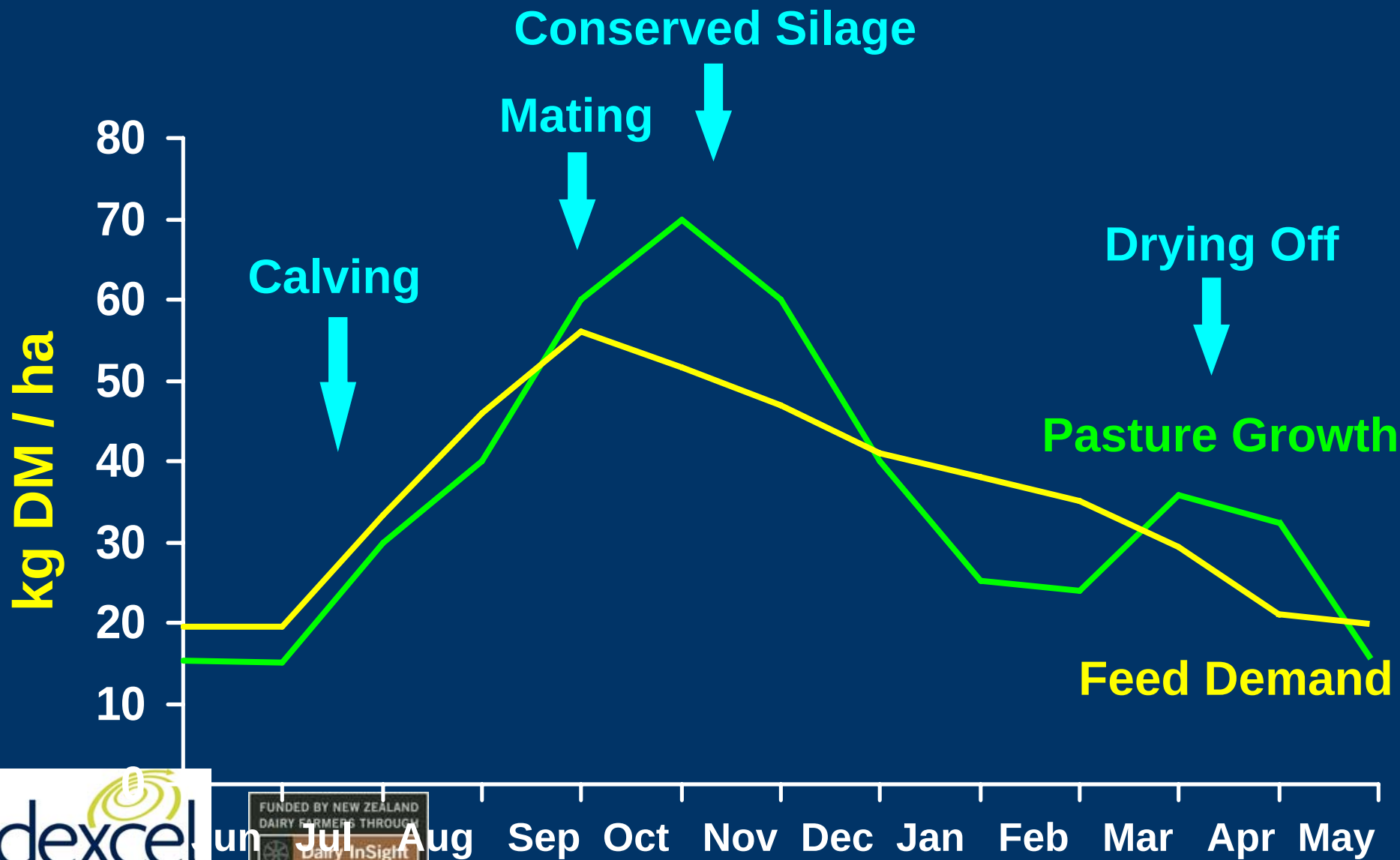
Important factors

- High quality pasture
- High quality (energy) supplements
- Maximising days in milk
- BCS at calving
- Cow quality
- Fully fed cows
- Compact calving
- Systems – management rules
- Motivated people

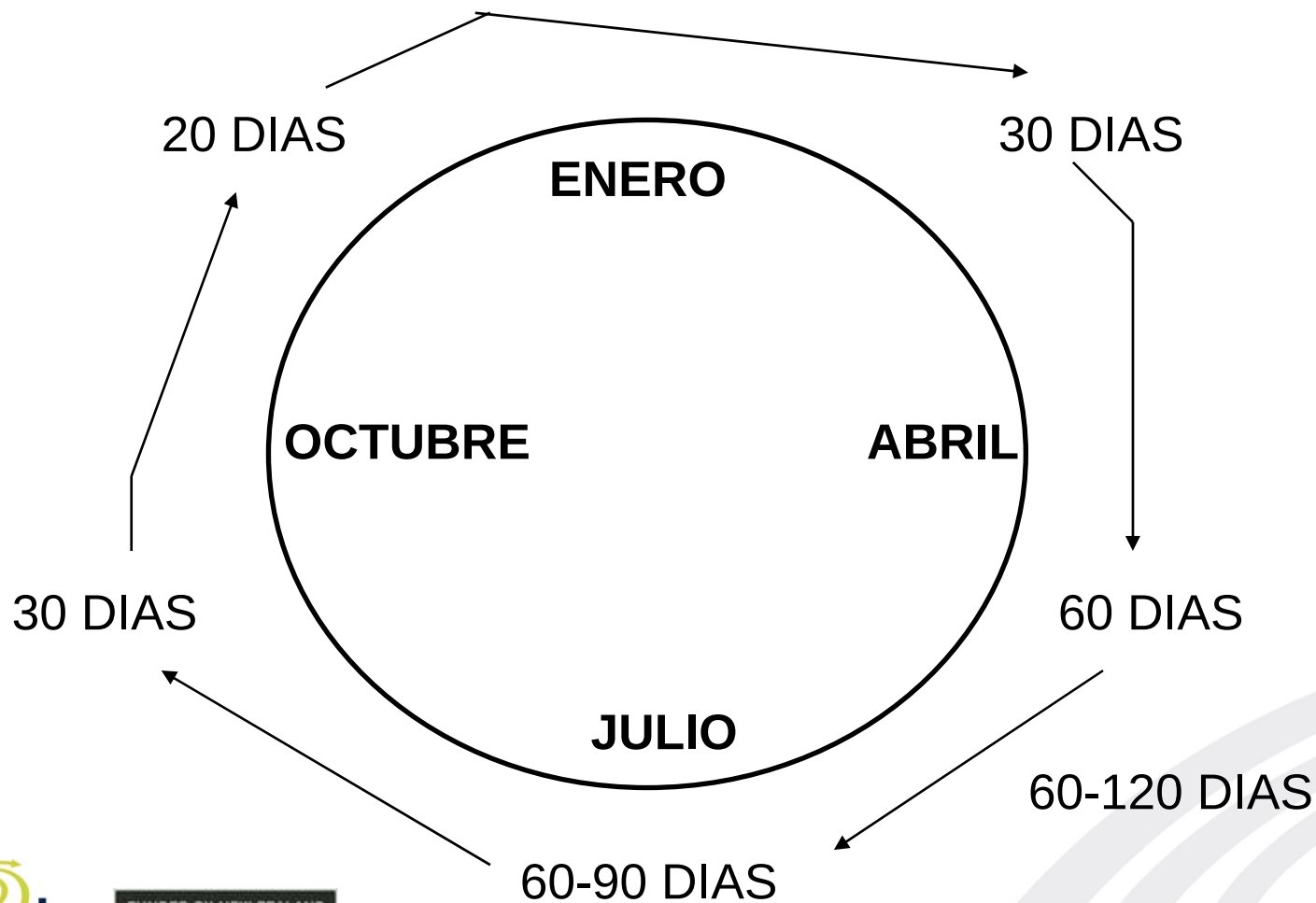
Factores clave de los sistemas Neo Zelandeses

- Clima templado, pasturas de alta calidad que crecen y se pastorean 365 días al año.
- Parición y producción estacional.
- Más del 90% de la leche para exportación, por cooperativas de productores.
- Grande explotaciones y rodeos (media 320 Vacas y 100 ha).
- Baja mano de obra (1 persona c/ 120 a 200 Vacas)
- Pasturas como principal fuente de alimento: baja producción por vaca, pero se requiere alta fertilidad.
- Vacas genéticamente adaptadas para estos sistemas de bajo costo y rentables

Pasture Growth *vs* Feed Demand



DIAS AL PROXIMO PASTOREO

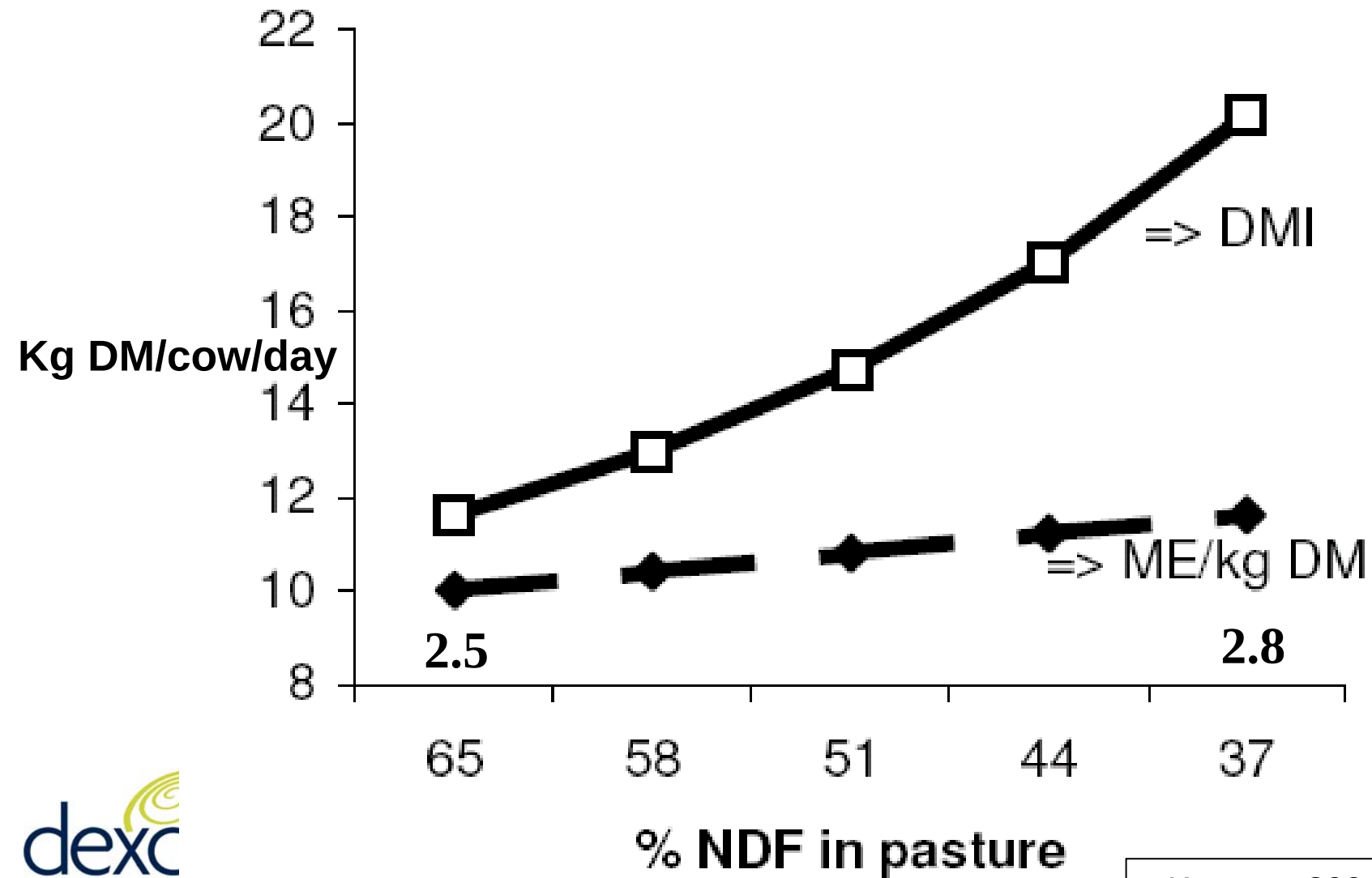


High quality pasture

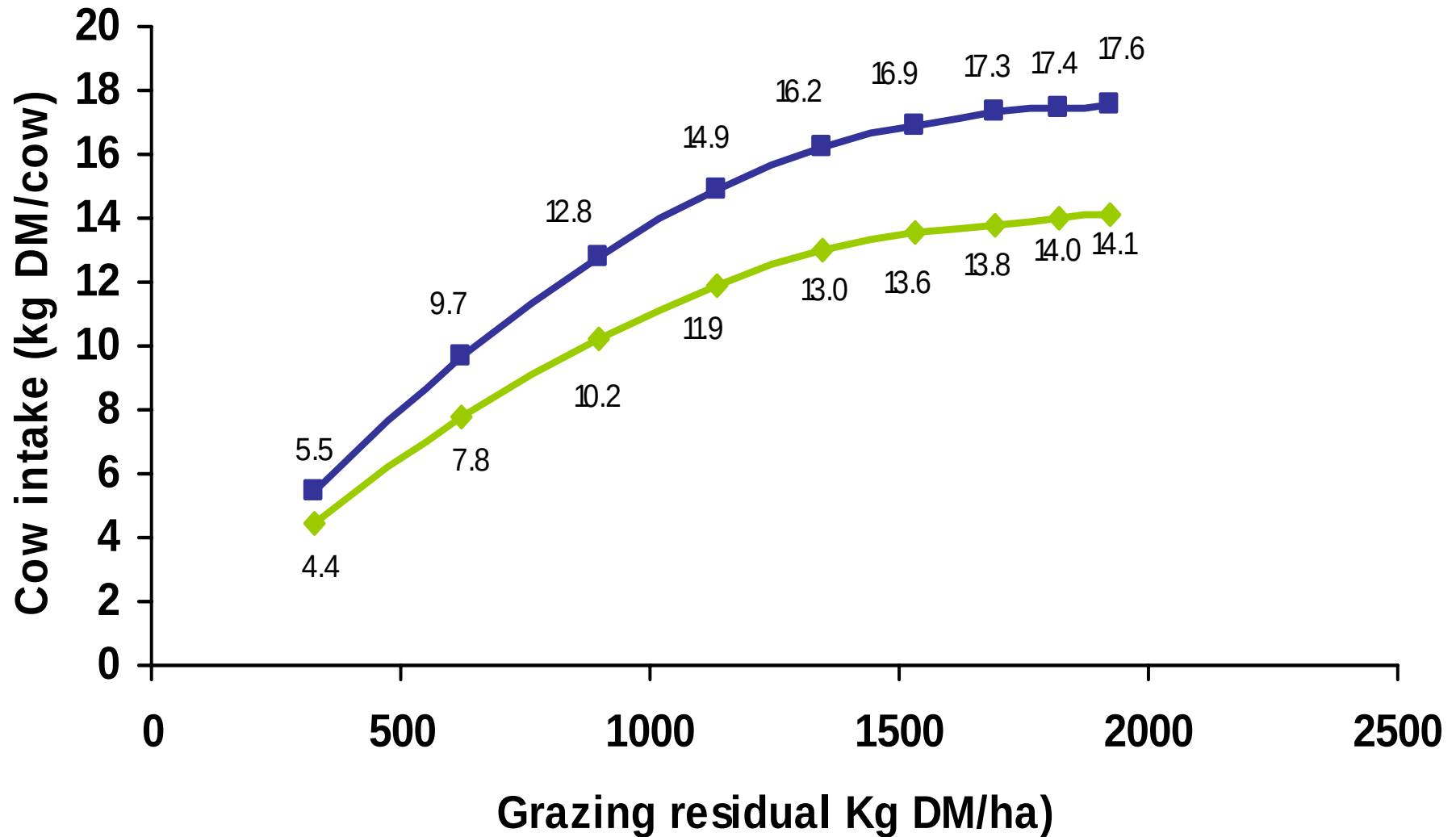
Ryegrass Plant



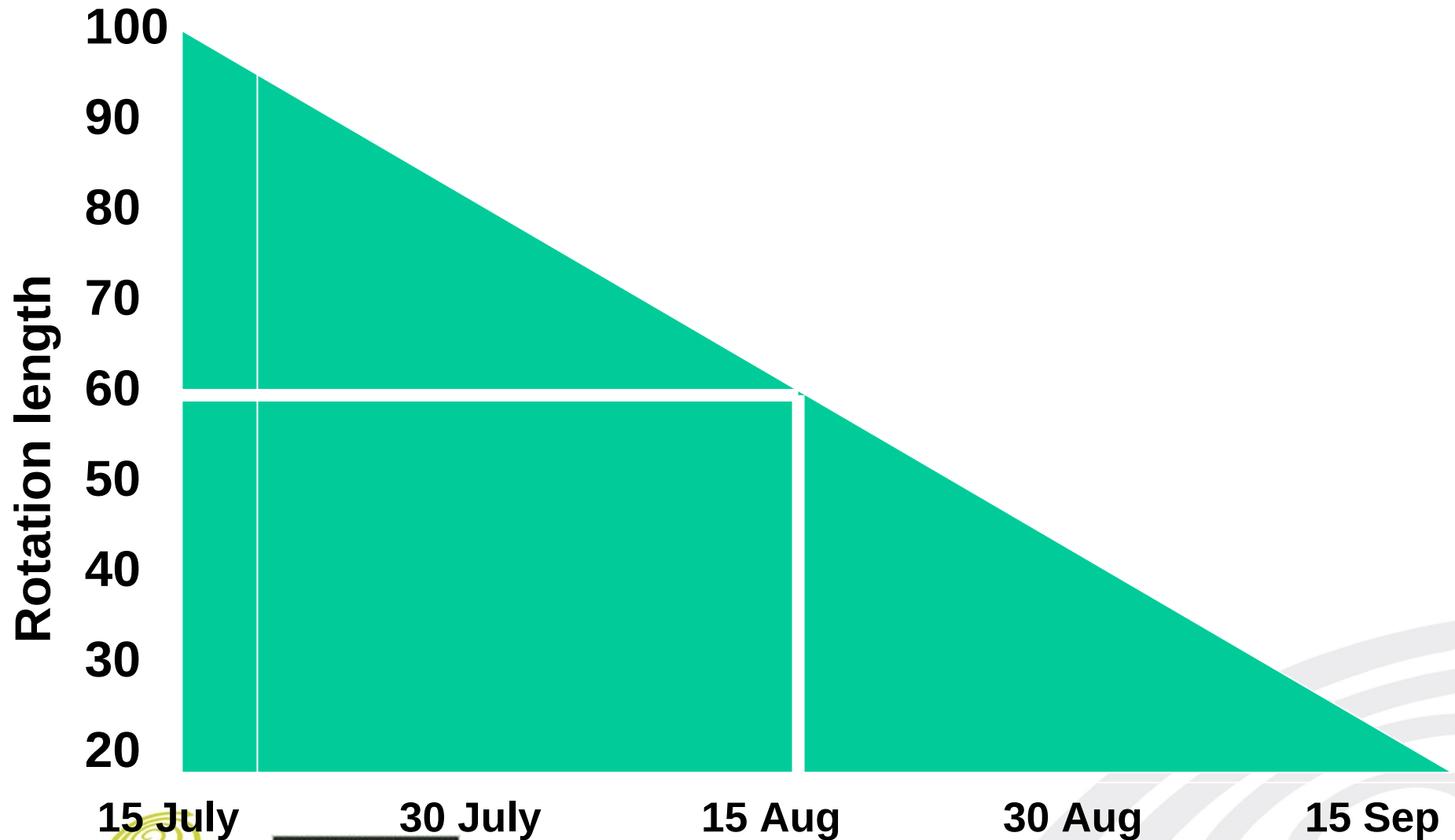
Effect of feed quality on intake



Residuals and Intake



Dexcel Spring Rotation Planner



Grazing height

Graze consistently to 7 clicks on RPM



Maximising days in milk

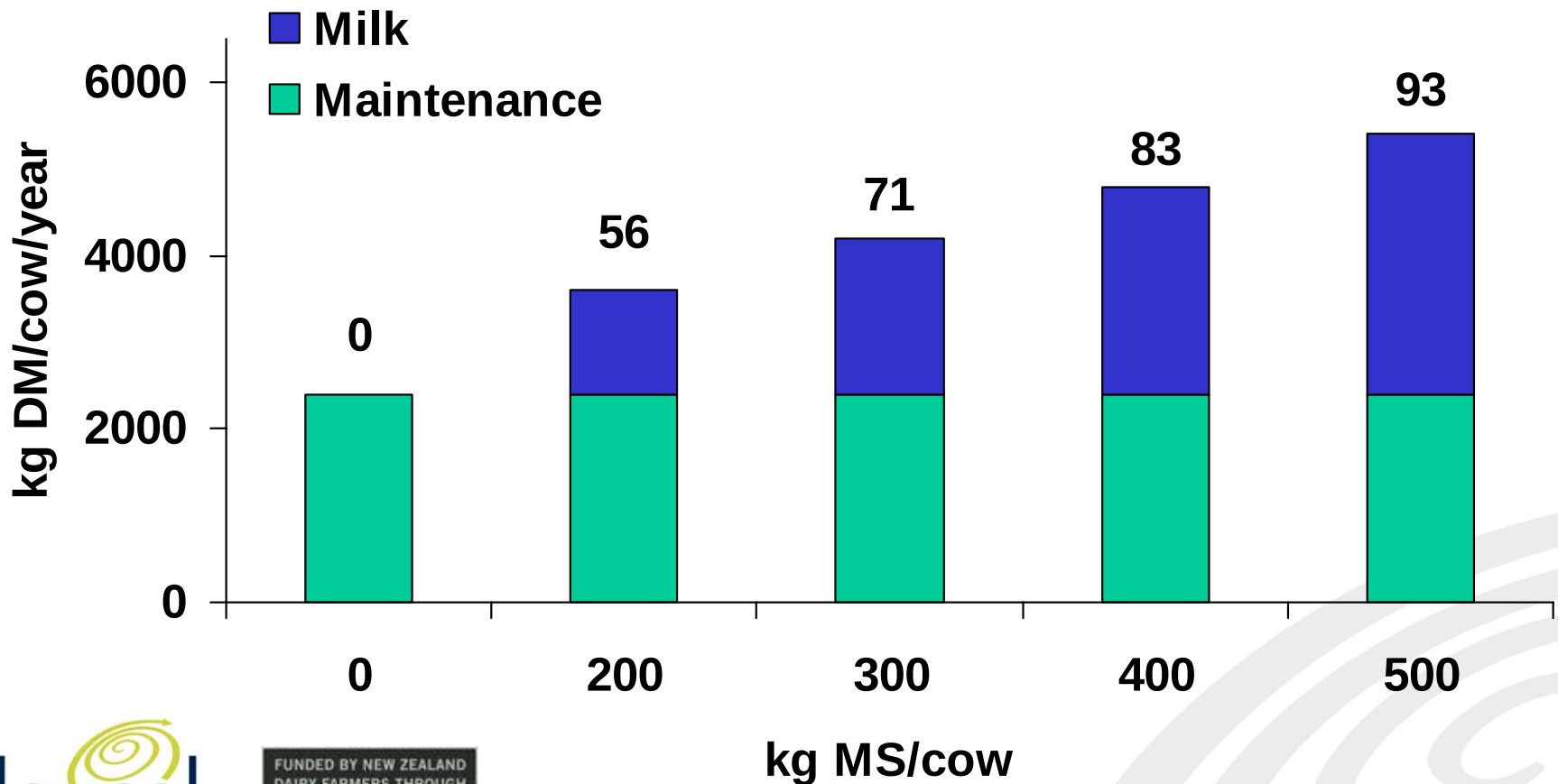
500 kg MS

2.0 Kg MS/day for 250 days

or

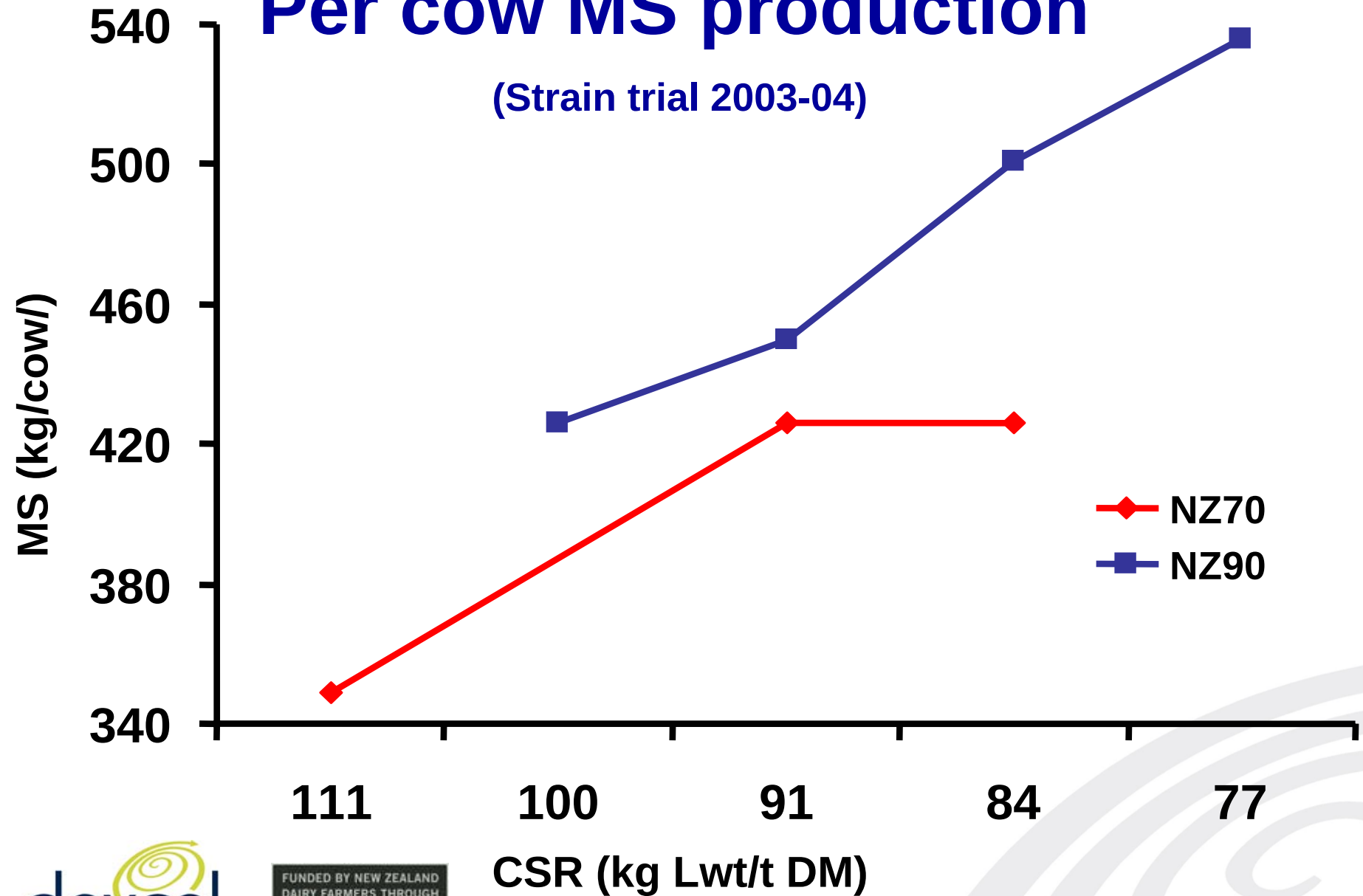
1.67 kg MS/day for 300 days

More MS per cow increases cow efficiency (kg MS/t DM)

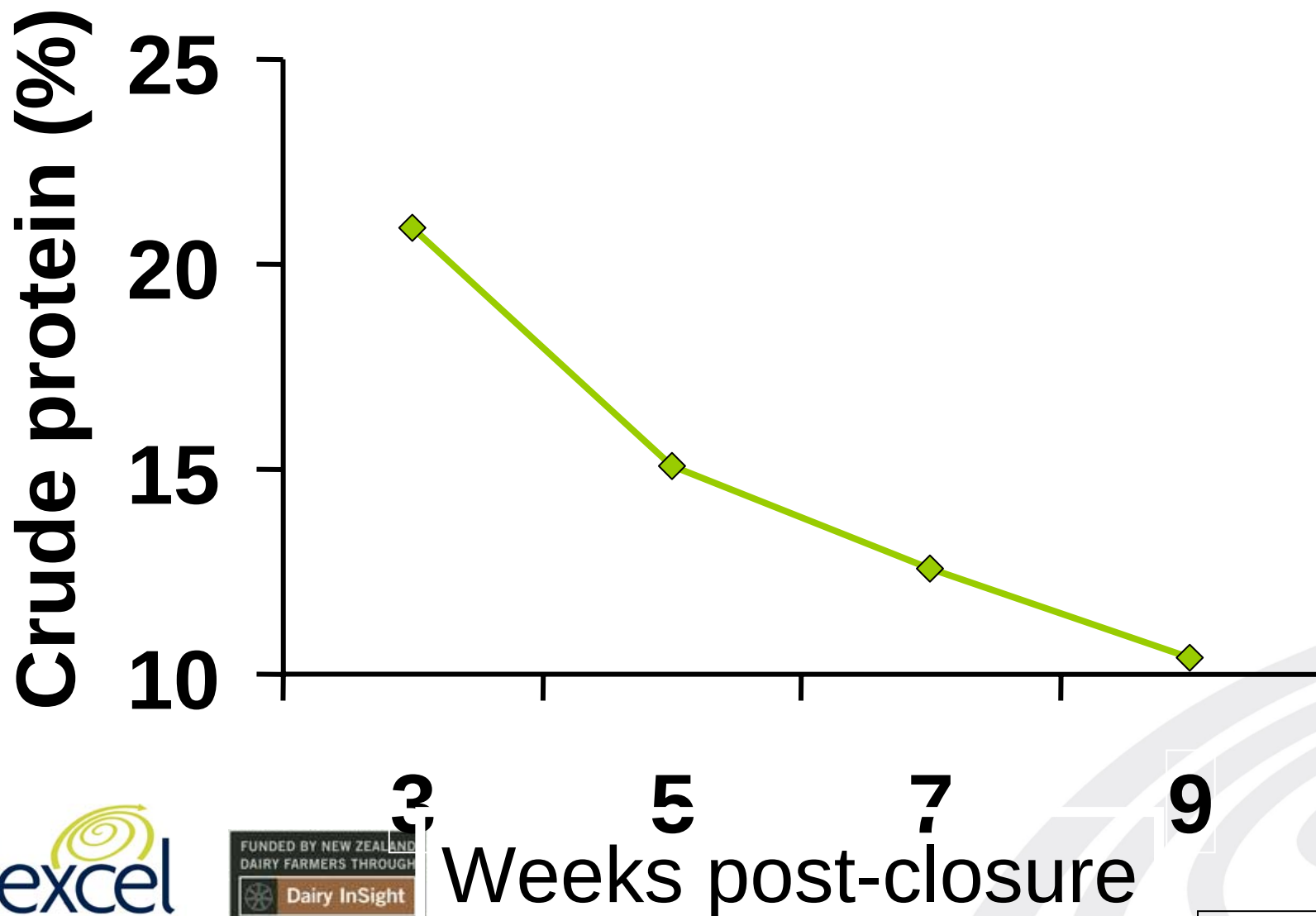


Per cow MS production

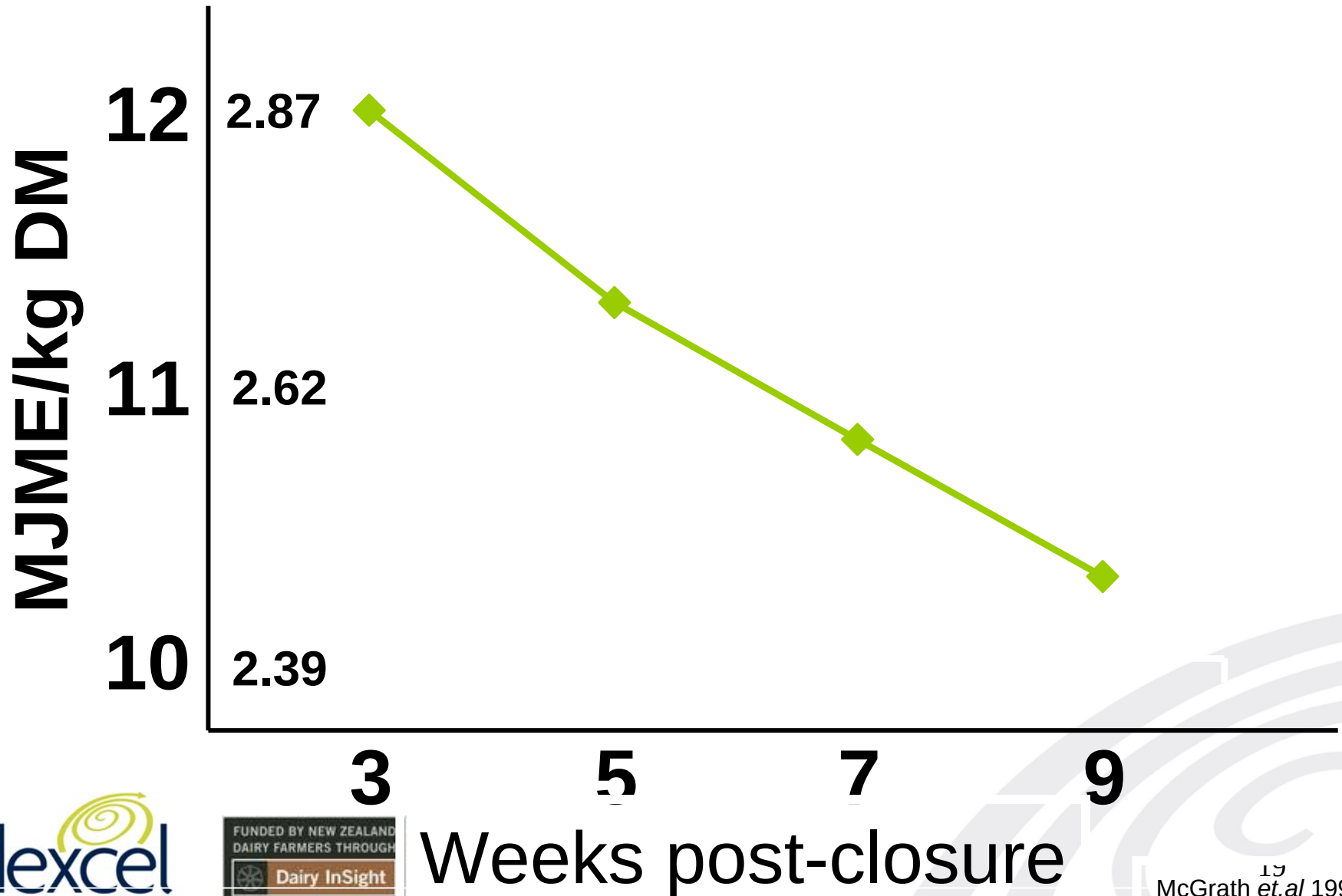
(Strain trial 2003-04)



Effect of closure period on crude protein

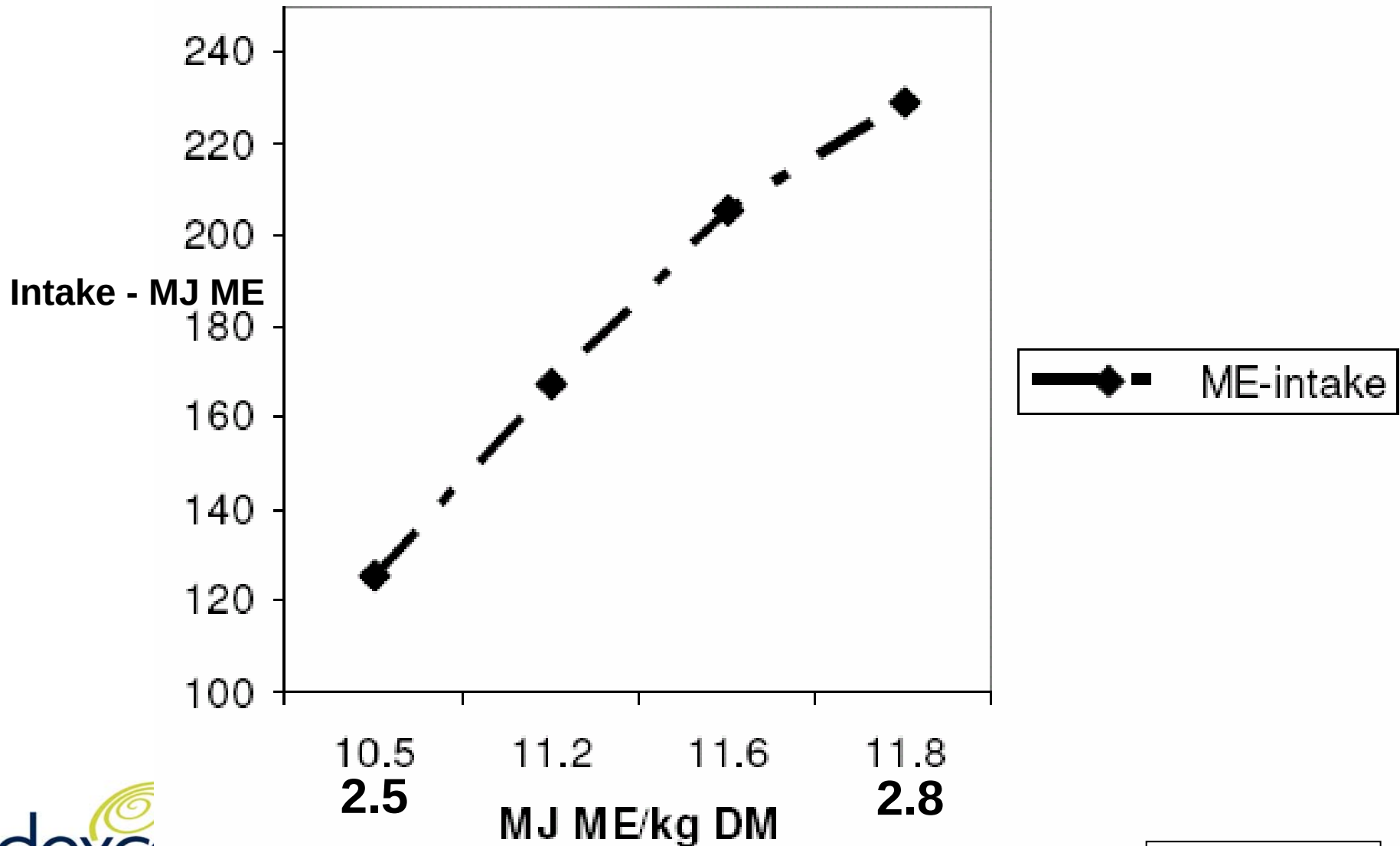


Effect of closure period on ME

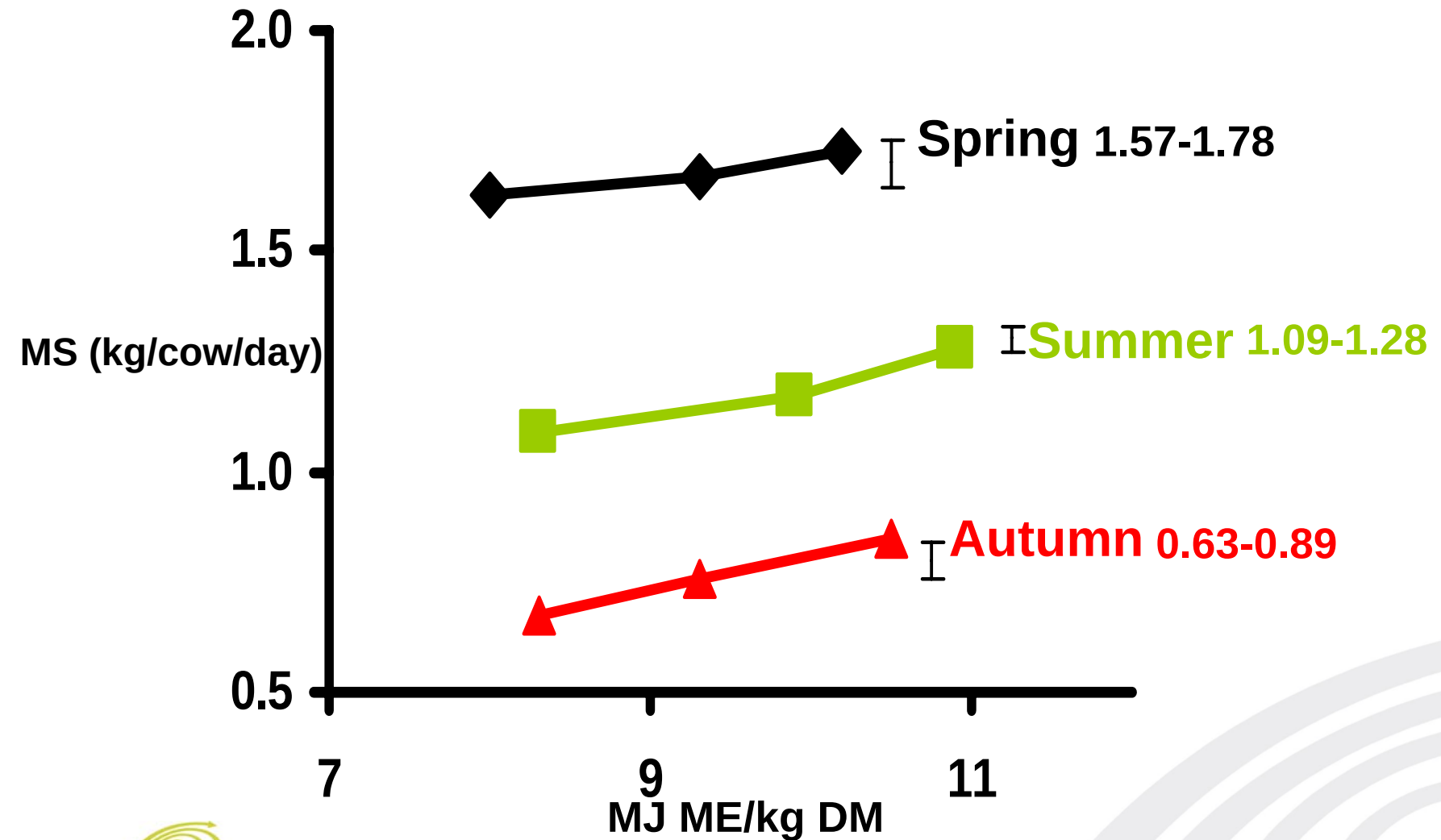




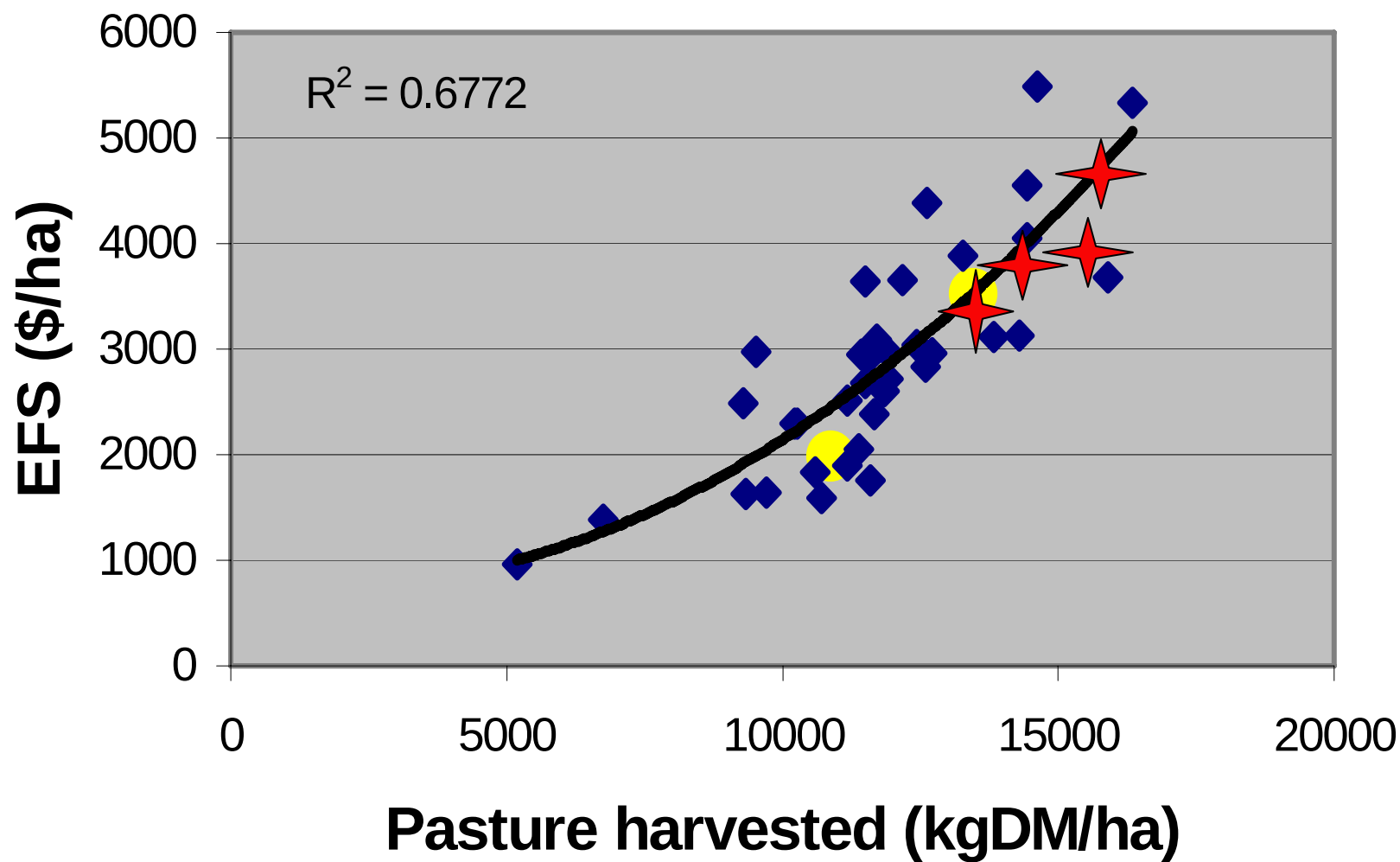
High quality (energy) supplements



Silage quality effect on milksolids production



Pasture Eaten/ha and EFS/ha



Supplements

- **Grazing fundamentals same for low and high input systems**
- **Feedout decisions, have systems in place based on residuals (7-8 clicks)**
- **Supplements will increase MS production providing**
 - **High pasture and supplement utilisation achieved**
 - **Stocked/managed to increase DIM/ha (CSR 80-90)**
- **Supplement quality >2.5 Mcal ME**



Motivated people

- **Need to have systems in place to keep motivated**
- **Retain staff**
- **Staff are an asset not a liability**

BCS at calving

A cow calving at BCS 2.6 instead of 3.1 will:

- Take 8-10 longer to start cycling
- Produce 15 kg MS less

Recommendation:

- Cow calve at BCS 3.1
- Heifer calve at BCS 3.5

BCS Priorities

- Cow condition non negotiable
- Average BCS not important
- Number of cows not at BCS 3.1 at calving
- High risk
 - 1st (heifers) and 2nd calvers

Condition Score 3.1



- **Backbone – Smooth**
- **Ribs – Rounded but not visible**
- **Hip bones - Rounded**
- **Pins - Rounded**
- **Tailhead - Even cover, no sharp edges**

Extra requirements above maintenance for 0.5 BCS gain

	Jersey	Holstein-Friesian
	(kg DM/cow)	
Pasture (autumn)	130	210
Pasture Silage (high quality)	140	220
Pasture Silage (ave. quality)	180	290
Maize Silage	100	160
Grain	75	120

To gain 0.5 BCS in 1 month a cow must eat the amounts shown in the following table over and above her requirements for maintenance.

Systems

- **Pasture measurement**
- **Feed quality feed – silage, supplements**
- **Dexcel spring rotation planner**
- **Reproduction records**
- **Dry off on BCS**
- **Supplementary feeding rules**

Key Messages - Management

- Grazing fundamentals same for low and high input systems
- Feedout decisions have systems in place based on residuals (7-8 clicks)
- Supplements can increase MS production
- BCS at calving is important
- Compact calving
- Systems in place
- Utilise cow potential









Mean calving date and calving spread

	Farmlet 2	Top 10%
Cows/ha	3.34	3.2
Kg N/ha/yr	200	80
Mean calving date	20/07	10/08
Kg MS/cow to 31/12	258	214
Kg MS/cow/day	1.57	1.50
Kg MS/ha to 31/12	863	686
Kg MS/ha post 1 Jan	334	327

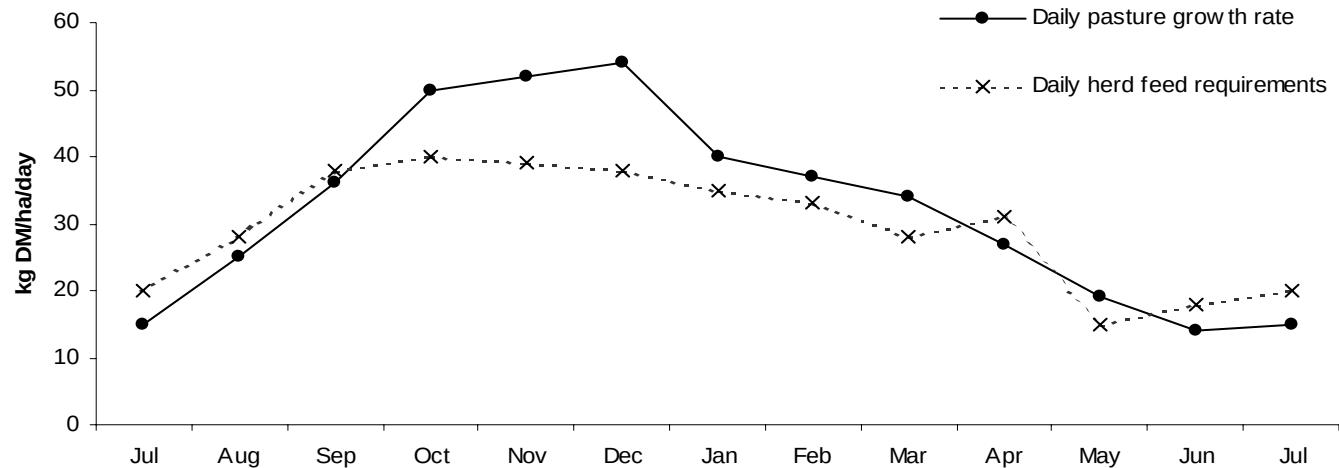
Data for 1997/98 season

Pasture quality and MS production

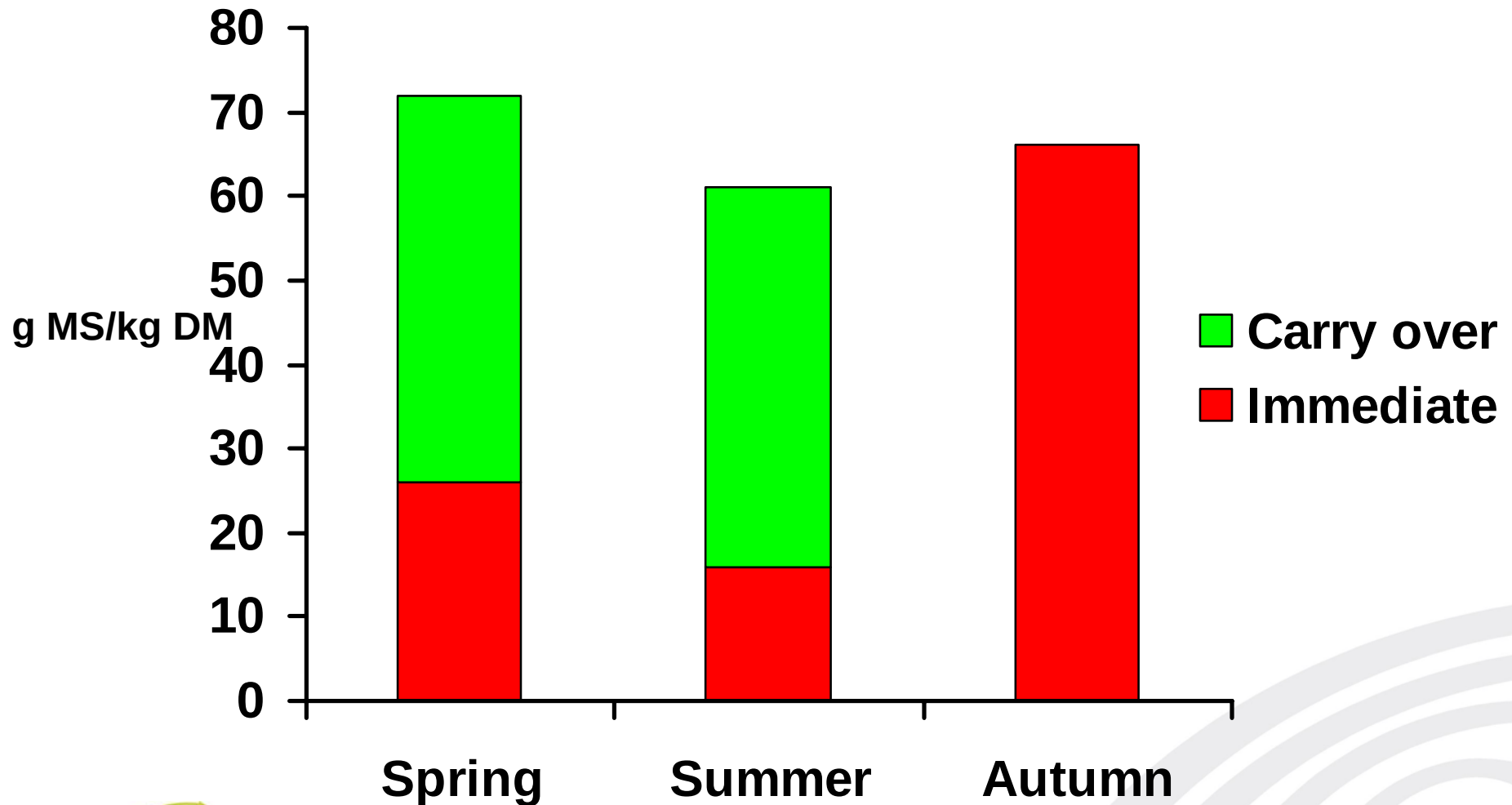
(500 kg cow, 280 DIM)

Past. Quality Mcal ME/kg DM	Kg DM/day	MJME Intake	Avg. MS Kg/cow/day	MS Kg/year
2.39	10.5	105	0.50	151
2.51	12.0	126	0.80	237
2.63	14.0	154	1.30	354
2.75	17.1	198	1.90	535

Sistema lechero, estacional y basados en pasturas, usado, en diferentes formas, en la mayoría de los tambos en Nueva Zelanda



Responses to supplements



Total Feed Supply

