What are you feeding for?

Stirlingshire Monitor Farm - 27th January 2026

Graham Lofthouse & Emily Grant

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LoD Forage crop costs

	Redstart	Redstart & stubble turnips	Compound feed @£300/T
Granular Lime	£63.27	£63.27	
Sprayer	£17.50	£17.50	
Glyphosate 540	£21.75	£21.75	
Sowing	£74.13	£74.13	
Muck spreading	£44.00	£44.00	
Seed	£59.94	£56.33	
Fert: 3-16-16	£215.88	£215.88	
Fertiliser spreading	£29.40	£29.40	
Fert: 24-7-0	£53.20	£53.20	
Cost £/ha	**£579.06**	**£575.45**	
Dry Matter T/ha	5.9	6.6	0.88
Cost £/kg Dry Matter	**£0.98**	**£0.87**	**£0.34**
Energy MJ/Kg DM	11.0	11.0	12.7
Cost £/MJ/Kg DM	**£0.09**	**£0.08**	**£0.27**
Cost ratio compound vs. crop	3.0	3.4	1

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Forage crops - having a strategy

- Why is a forage crop important in your system?
- What do you want to achieve?
- What are the current strengths/weaknesses of your current grazing/cropping system - are you achieving what you hope?

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Task - which forage crop?

Course of Action (CoA) Matrix

- Rows = decision criteria - the key things that matter to you. Then apply a weighting (importance)
- Columns = different forage crop option
- Score each option 1-5, multiply by weighting
- Get ‘best on paper’ option. It’s a thinking tool!

COA Matrix

Criteria (examples below)	Weighting (1-5)	Eg Kale		Crop 2		Crop 3		Crop 4	
Yield potential	3	3	9		0		0		0
Establishment cost	3	2	6		0		0		0
Animal performance	4	3	12		0		0		0
Utilisation efficiency	4		0		0		0		0
Transition requirement	2		0		0		0		0
Length grazing window	2		0		0		0		0
Establishment reliability	3		0		0		0		0
Weather resilience - wet/cold	5		0		0		0		0
Flexibility (if plans change)	3		0		0		0		0
Regraze potential	1		0		0		0		0
Labour demand	2		0		0		0		0
Weighted Total			**27**		**0**		**0**		**0**

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COA Matrix

Criteria	Weighting (1-5)	Hybrid		Hybrid & ST		Fodder			
Yield potential	2	3	6		0	5	10		0
Establishment cost	4	4	16		0	1	4		0
Animal performance	3	3	9		0	2	6		0
Weather tolerant	4	3	12		0	3.5	14		0
Length grazing window	4	2	8		0	4	16		0
			0		0		0		0
			0		0		0		0
			0		0		0		0
			0		0		0		0
			0		0		0		0
Weighted Total			**51**		**0**		**50**		**0**

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Target growth rates for cattle

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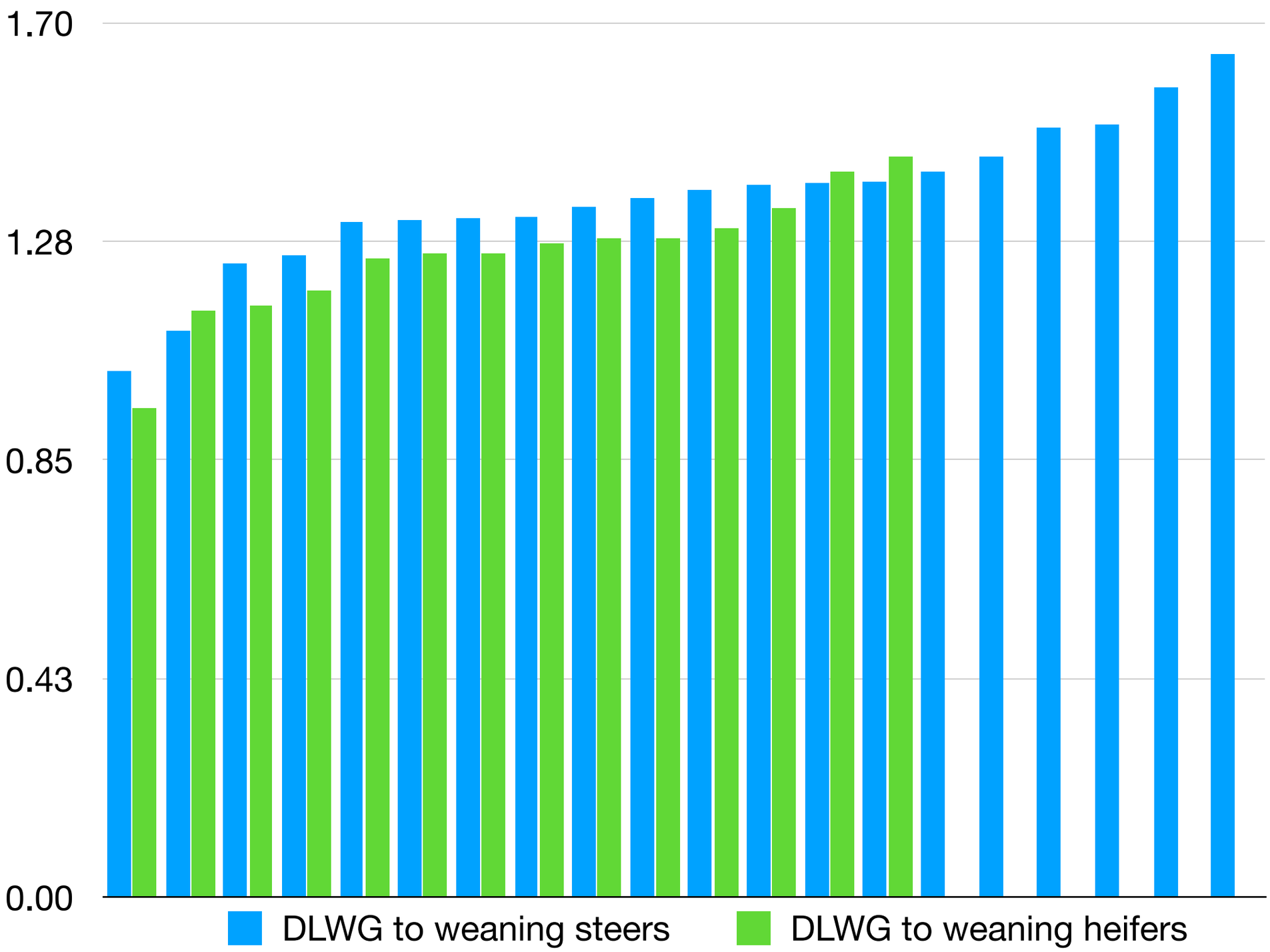
2025 born Charolais cross calves - DLWG weaning



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Lands of Drumhead calves

2025 ChX steers & heifers

	Steers	Range	Heifers	Range
Av weaning weight Kgs	**339Kgs**	**278-353Kgs**	**301Kgs**	**231-365Kgs**
Av DLWG weaning Kgs	**1.36Kgs**	**1.02 - 1.64Kgs**	**1.25Kgs**	**0.95-1.44Kgs**
Av DLWG Jan 26 Kgs	**-**	**-**	**1.05Kgs**	**0.92-1.17Kgs**
Sale price £	**£1,617.50**	**£1,480-£1,680**	**-**	**-**
Av p/Kg	**£4.81**	**£4.40-£5.32**		
Average age at sale - days	**215**	**166-254**	**-**	**-**
Av value £/day	**£7.63**	**£6.58-£9.67**	**-**	**-**

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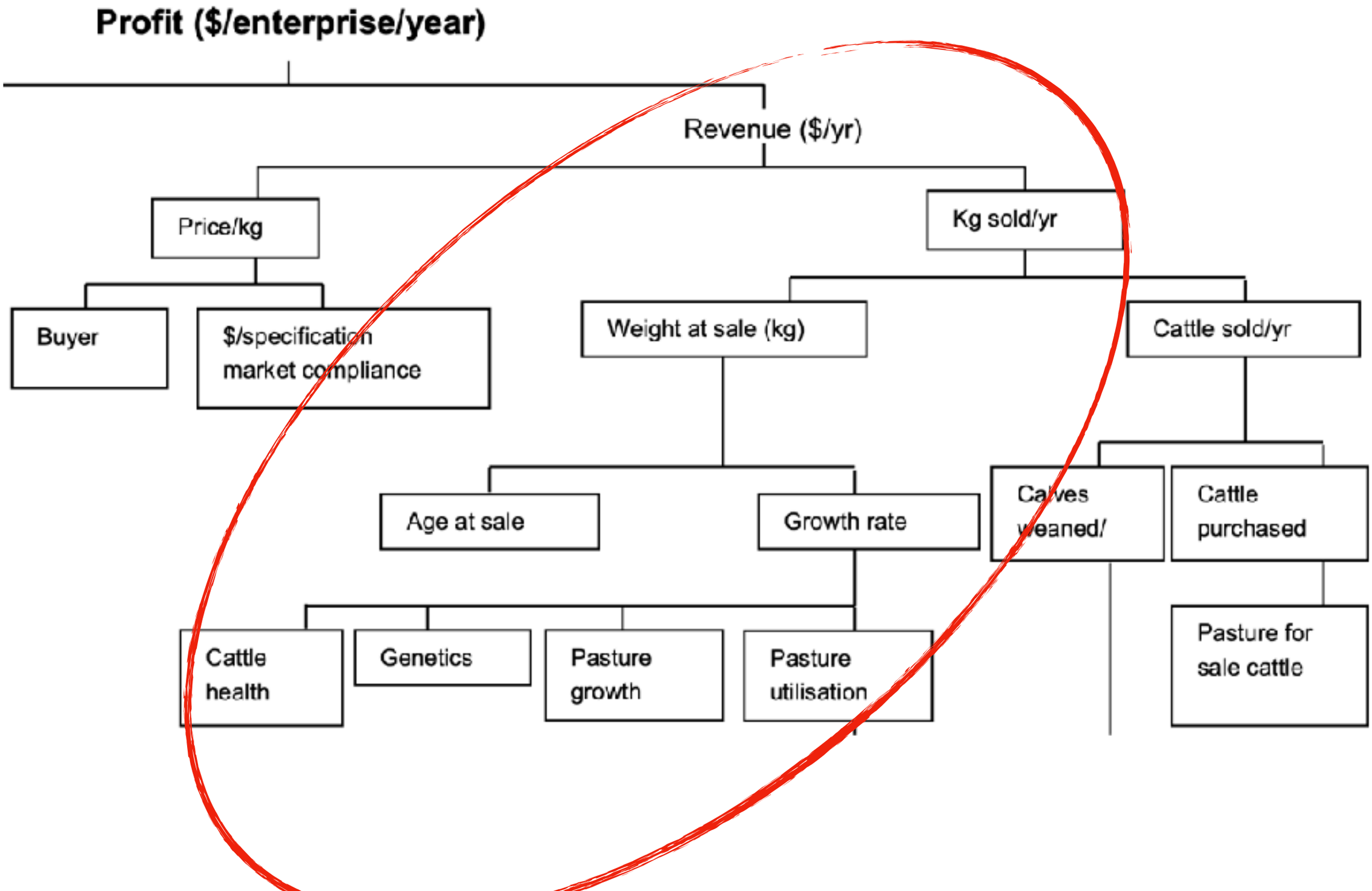
Why set a target?



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Three Phases

- Rearing (up until weaning)
- Growing (store period - mainly growing frame)
- Finishing (short & sharp, maximise case yield & optimise fat cover)

Different breeds and sexes have different needs

- Native, or small framed/earlier maturing animals usually need a longer foraged based growing period, with shorter finishing time
- Continental, or larger framed/later maturing animals suit high quality feed and forage to support higher growth rates and to finish.
- Bulls suit high energy concentrate diet due to their ability to growth fast and lean. They can essentially by-pass the growth stage.

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Key considerations

- What resources does the farm have?
- What type of cattle do you have?
- What is your target market?

- Feed conversion efficiency reduces as cattle mature
- The older an animal is by slaughter, the more it costs lifetime feed and fixed costs
- For breeding heifers, adequate weight gain ensures onset of puberty and reproductive success in first and subsequent calvings

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Feed

- Usually biggest variable cost
- Need to be strategic in it's use. Supplement not substitute forage

Feed efficiency important:

- Aim to maximise intake
- Health
- Genetics
- Age
- Gender (bulls>steers>heifers)

Concentrates should redress the deficit in nutrient supply from forages to allow cattle reach performance targets

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Cost considerations

- ‘In a pasture based system, growth response to concentrate supplementation is higher where grass supply is low, or quality is poorer, and usually declines as supplementation level increases’

Table 4. Impact of silage quality on concentrate feed levels assuming 400 kg continental steer gaining 1 kg LW/day

Grass silage quality (MJ ME/kg DM) (All 30% DM)	Concentrates required to meet target performance (kg/head/day)	Cost per kg gain (£)
Poor (9.5)	5.5	1.52
Moderate (10.5)	4.2	1.36
Good (11)	3.0	1.23
Excellent (11.5)	1.5	1.11

Price assumptions: grass silage £35/tonne fresh weight, concentrates £200/tonne

https://projectblue.blob.core.windows.net/media/Default/Beef & Lamb/BR_FeedingGrowingFinishingCattle-WEB.pdf

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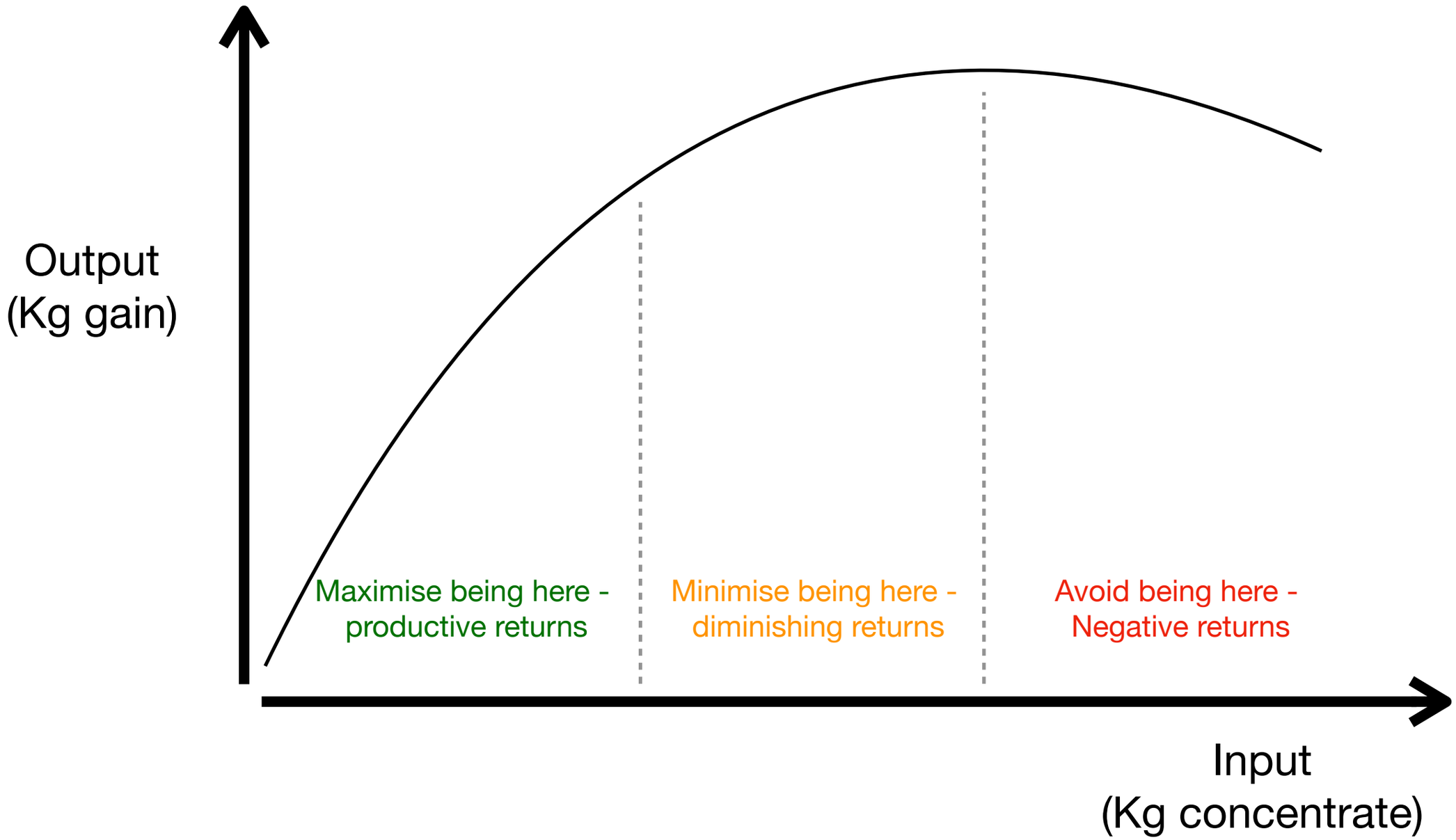
Economics 101
- the law of diminishing marginal returns



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Compensatory growth

Allows overall production targets to be met, whilst essentially redistributing feed supply from periods when feed is scarce and expensive (winter), to when feed is abundant and cheap (spring/early summer).

Key requirements:

- average daily gain of 0.5 – 0.6 kg for steers and heifers during dietary restriction period is sufficient to give an optimal compensatory growth response. Anything below this is likely to result in too much ‘catch up’

- ideal weight when implement dietary restriction is ~300kgs. Young cattle (less than 150kg live weight) will not compensate to the same extent as older cattle and should not be restricted

- if supplementary feed is required during the period of restriction to meet target growth rates or liveweights, supply it towards the start of the period of restriction. Younger animals have better feed conversion rates, and a period pre-turnout without supplements allows stock to transition onto grass more quickly

- during the compensation phase, cattle are likely to have a higher feed intake (data suggests 15-30%) Ensure have adequate availability of good quality pasture. This can help control high pasture growth rates during mid to late spring

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Looking at the manure is a useful indicator of how well the rumen is functioning and how well an animal is digesting its diet.

What the manure looks like	Possible dietary causes (not disease)
Loose manure	High protein (total or soluble); pasture Insufficient fibre in ration
Diarrhoea	Spoiled, mouldy feed or silage Ruminal acidosis
Foamy manure or mucin casts (pieces of gut lining that indicate gut damage)	Ruminal acidosis Increased hindgut fermentation
Large particles, undigested feed	Not enough long fibre/forage Cattle fed a total mixed ration (TMR) may be sorting feed Ruminal acidosis
Manure variable in a feeding group	Cattle are sorting feed; feeding slowly Dominant cattle in the group eating more concentrate Spoiled, mouldy feed or silage
Very dry manure	Diet is too low in protein, potential risk of the rumen stopping working Reduced water intake

Source: Adapted from US Dairy Forage Research Centre, Wisconsin

https://projectblue.blob.core.windows.net/media/Default/Beef & Lamb/BR_FeedingGrowingFinishingCattle-WEB.pdf

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Grass Silage Analysis

SCOTMIN NUTRITION LTD

Advisory Contact

Julie Campbell
13 Whitfield Drive
Heathfiled Industrial Estate, AYR, KA8 9RX

Customer Code: C493

Farm

B DUNCAN
LOD
DRYMEN

Originator Reference Number:

Sample Details

Lab Reference:	4146909	Description:	DRUMHEAD PIT			Date Cut:	01/07/2025
Sample Type:	Silage - Grass Clamp	Cut Number:	1	Additive:	NO	Sample Received:	22/09/2025

Energy		Analysis	Low	Standard	High
D Value	%	62	62	68	78
ME	(MJ/kg)	10.2	10.0	11.0	13.0
FME	(MJ/kg)	8.5	6.0	7.0	10.0
NDF	(g/kg)	597	193	681	880
Ash	(g/kg)	73	53	125	180
Oil-A	(g/kg)	34	21	51	73
Dry Matter Solubility (S)		0.22	0.13	0.36	0.49
(a)		0.32	0.13	0.41	0.54
(b)		0.51	0.12	0.55	0.67
(c)	(per hour)	0.036	0.017	0.061	0.078

Intake Characteristics		Analysis	Low	Standard	High
Dry Matter	(g/kg)	277	155	431	591
Potential Intake (FiM)	(g/kgW 0.75)	80	70	110	130
pH		4.9	3.7	5.1	6.0
Ammonia N	(% of total N)	5.9	11.0	21.0	32.0
Pot. Acid Loading (FiM)	(meq/kg)	779	750	900	1200

Protein		Analysis	Low	Standard	High
Crude Protein	(g/kg)	153	69	209	280
ERDP	(g/kg)	111	59	158	219
DUP	(g/kg)	30.1	21.8	44.0	66.4
Nitrogen Solubility (N)		0.51	0.17	0.67	0.84
(a)		0.65	0.12	0.74	0.87
(b)		0.24	0.13	0.34	0.47
(c)	(per hour)	0.066	0.062	0.138	0.202

Fermentation Characteristics		Analysis	Low	Standard	High
Sugar	(g/kg)	25	80	163	245
Acetic Acid	(g/kg)	13.7	28.0	57.0	85.0
n Butyric Acid	(g/kg)	10.5	20.0	39.0	60.0
Tot. Ferm. Acids (FiM)	(g/kg)	32.5	85.0	170.0	257.0
Lactic Acid	(g/kg)	5.4	50.0	100.0	150.0

(Reported on a dry matter basis)
Certificate Number: COA2509250013

Printed: 25-Sep-25

Sciantec part of Carwood

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Grass Silage Analysis

SCOTMIN NUTRITION LTD

Advisory Contact

Julie Campbell
13 Whitfield Drive
Heathfiled Industrial Estate, AYR, KA8 9RX

Customer Code: C493

Farm

DUNCAN
LOD
GLASGOW

Originator Reference Number:

Sample Details

Lab Reference:	4194075	Description:	PIT	Date Cut:	01/08/2025
Sample Type:	Silage - Grass Clamp	Cut Number:	2	Additive:	Sample Received: 17/11/2025

Energy		Analysis	Low	Standard	High
D Value	%	62	62	68	78
ME	(MJ/kg)	10.3	10.0	11.0	13.0
FME	(MJ/kg)	8.4	6.0	7.0	10.0
NDF	(g/kg)	609	193	681	880
Ash	(g/kg)	111	53	125	180
Oil-A	(g/kg)	26	21	51	73
Dry Matter Solubility (S)		0.16	0.13	0.36	0.49
(a)		0.32	0.13	0.41	0.54
(b)		0.43	0.12	0.55	0.67
(c)	(per hour)	0.034	0.017	0.061	0.078

Intake Characteristics		Analysis	Low	Standard	High
Dry Matter	(g/kg)	174	155	431	591
Potential Intake (FiM)	(g/kgW 0.75)	65	70	110	130
pH		4.6	3.7	5.1	6.0
Ammonia N	(% of total N)	6.2	11.0	21.0	32.0
Pot. Acid Loading (FiM)	(meq/kg)	1057	750	900	1200

Protein		Analysis	Low	Standard	High
Crude Protein	(g/kg)	168	69	209	280
ERDP	(g/kg)	122	59	158	219
DUP	(g/kg)	33.9	21.8	44.0	66.4
Nitrogen Solubility (N)		0.51	0.17	0.67	0.84
(a)		0.65	0.12	0.74	0.87
(b)		0.24	0.13	0.34	0.47
(c)	(per hour)	0.066	0.062	0.138	0.202

Fermentation Characteristics		Analysis	Low	Standard	High
Sugar	(g/kg)	3	80	163	245
Acetic Acid	(g/kg)	9.8	28.0	57.0	85.0
n Butyric Acid	(g/kg)	17.3	20.0	39.0	60.0
Tot. Ferm. Acids (FiM)	(g/kg)	81.7	85.0	170.0	257.0
Lactic Acid	(g/kg)	29.3	50.0	100.0	150.0

(Reported on a dry matter basis)
Certificate Number: COA2511170159

Printed: 17-Nov-25

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