Using figures to make money

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Overview

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- Setting the scene
- Levels of management
- Budgeting tools and concepts
- Physical figures
- Adding costs and prices

What figures do you use and why?

Levels of management

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- Strategic
- Tactical
- Operational

Production economics

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- What to produce?
- How much to produce?
- How to produce?

Tools and concepts

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- Root-cause analysis (5 whys?)
- PDCA
- The marginal principle (vs average)
- Opportunity cost
- Sunk costs
- Partial budget
- Annual (cash flow) budget
- With-without budgeting (options appraisal)


Key physical figures for a
NEW HOLLAND
Crop farm?


A dairy farm?


Beef and.....

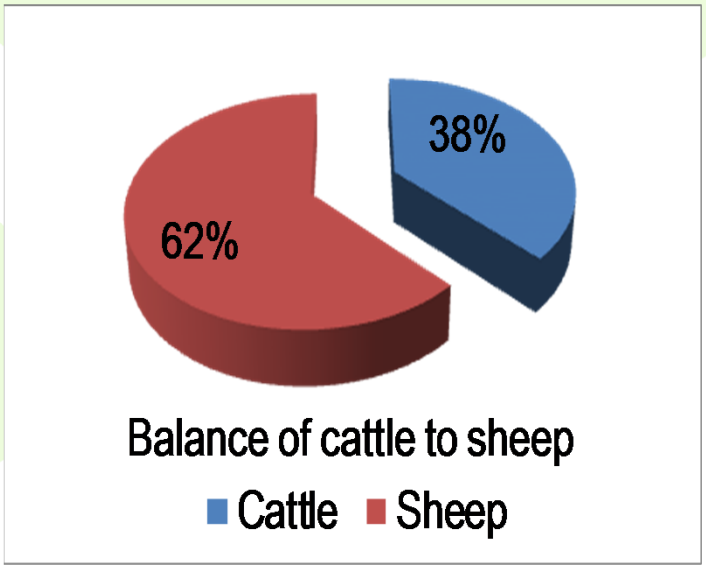

.....sheep farm?

Stocking rate & LWT per ha

Key Performance Indicator dashboard for: John Williams & Partners

Total Kgs/ha LWT produced	Sheep	Cattle	Total	
Total Kgs Liveweight produced	62,530	22,960	85,490	kg
Total adjusted forage area	206	124	330	ha
Total Kg LWT/ha	**304**	**185**	**259**	**kg/adj. forage ha**

Where (for "total" production);
- < 300 = low
- 300 - 400 = moderate
- 400 - 500 = high
- > 500 = very high



Total livestock	277 GLUs
Total area	330 adj. forage ha
STOCKING RATE	**0.84 GLU/adj. forage ha**

Where;
- <0.75 = low
- 0.75 - 1.20 = moderate
- > 1.20 = high


Cow efficiency

Kg of calf weaned per kg cow – average per cow

	Farm A	Farm B
Cow weight (kg)	667	595
Calf 200 day wt (kg)	291	336
Efficiency (% of cow weight)	43.6	56.5

What if Farm A's calves reared was 85% compared to B's 95%?

Kg of calf weaned per kg cow – herd basis

	Farm A	Farm B
Cow weight (kg)	667 x 100 = 66,700	595 x 100 = 59,500
Calf 200 day wt (kg)	291 x 85 = 24,735	336 x 95 = 31,920
Efficiency (% of cow weight)	37.1	53.7

< 39% = low

40-44% = Moderate

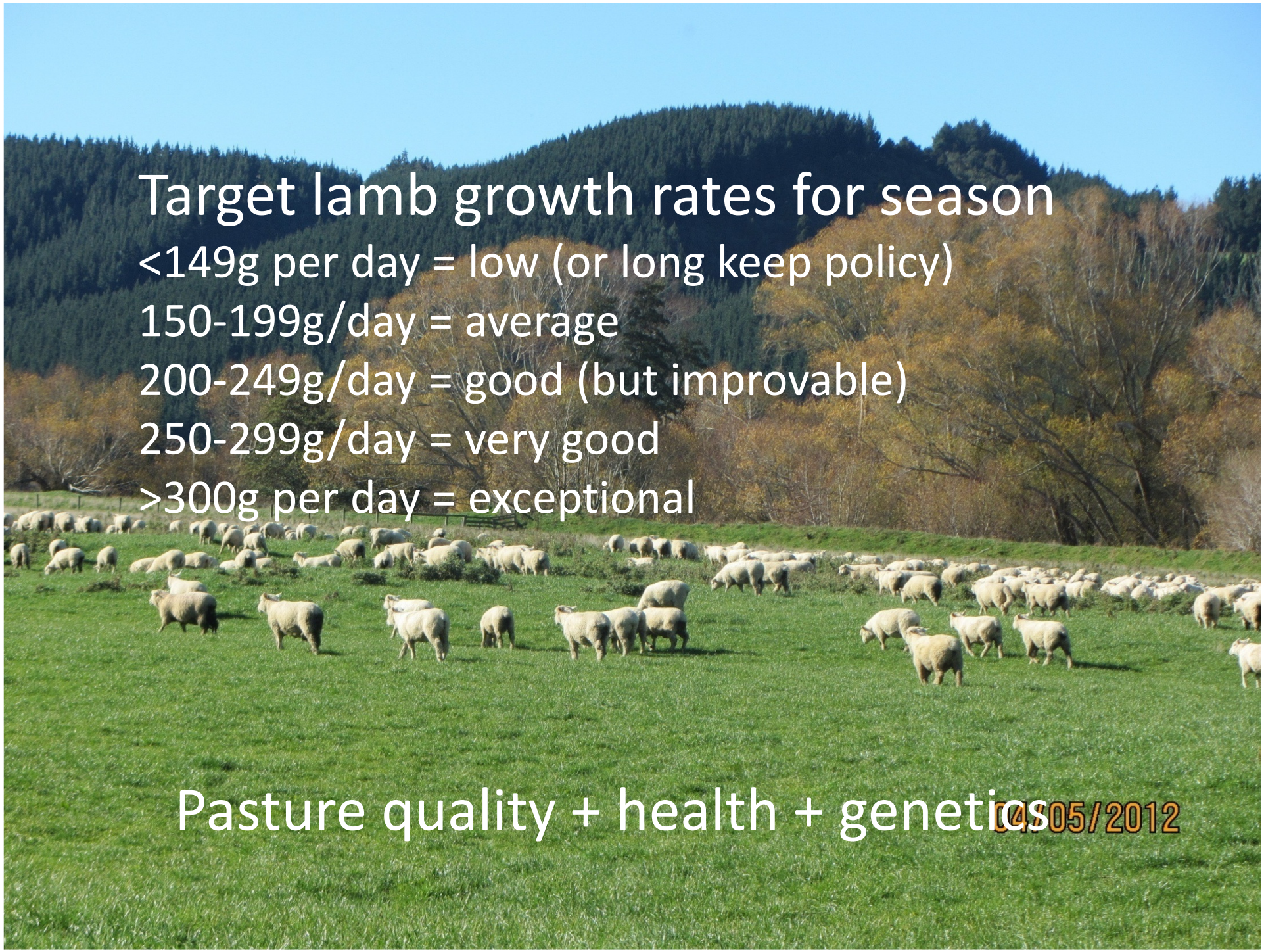
45-49% = Good

>50% = Exceptional

So avoid big cows with low calving %'s delivering poor growth rates!


Ewe efficiency
Birth to weaning
Weaning target (at 90 days)
Total lamb lwt as % ewe weight
55-59% = Good
60-69% = Very good
> 70% = Excellent


Ewe efficiency
To disposal
> 100% = target


Target lamb growth rates for season
<149g per day = low (or long keep policy)
150-199g/day = average
200-249g/day = good (but improvable)
250-299g/day = very good
>300g per day = exceptional
Pasture quality + health + genetics
04/05/2012

Weigh scales – a key piece of kit on beef/sheep farms

UME (dairy efficiency)

ME required per cow	= 27 (Maint & Preg) + (yield x 5.25) / 1000
Less ME provided by purchased feed	= (kg/yr/cow x DM%) / 1000 x energy density
Multiplied by stocking rate	= cows / ha
	= UME / ha (gigajoules)

UME (dairy efficiency)

ME required per cow = 66gj/cow	= 27 (Maint & Preg) + (7500 x 5.25) / 1000
Less ME provided by purchased feed = 27gj/cow	= (2500kg/cow x 86%) x 12.5M/D / 1000
Multiplied by stocking rate	= 1.9 cows/ ha
	= 74gj / ha (gigajoules)
Wilkinson (1984!) avge 65 (range of 30 – 140)	

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Physical + £'s (costs & returns)

= Economic Efficiency

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MR = MC

The marginal principle

Budgeting N for barley

kgN/ha	Marginal Cost	Marginal Revenue	(Marginal) Margin
100	70p		
101	70p		
102	70p		
103	70p		
104	70p		
105	70p		
106	70p		

Where;
Expected barley price of £100/t
AN price £227/t

What other information do you need?

What about other (fixed) costs?

Are sunk costs important?

It’s a couple of weeks from harvest, the potato price has collapsed. Is it worth harvesting the potatoes?

Using a partial budget to figure the options

The power of Partial Budgeting

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Need to Assess

- Costs Saved
- Additional Revenue

✓

- Additional Costs
- Revenue Forgone

X

I'm wondering whether to sell my fat cattle this week or add another 20kgLWT/hd

How should I use a partial budget to help me decide?

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Partial budgeting also helps with bigger decisions

Typical business questions

- Change enterprise mix
- Put up a building
- Buy farm next door

Guiding principles

- Two big economic tests
  - Worthwhileness (profitability)
  - Feasibility (capital needs; cash flow)
- But also
  - Riskiness
  - Practicality (eg, skills)
  - Personal preferences

Guiding principles

- With-without approach
- Use realistic assumptions
  - Physical performance
  - Prices, costs, timescales
  - Sources of information
- Always do some “what-if” to test risk
  - Worse case scenario
  - Critical success factors

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Note!

For big decisions that typically involve help from the bank, a formal business plan is typically needed

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What tools and techniques do you currently use to implement business improvement?

Key tools for making it happen

- Action plan
  - Priority
  - SMART objectives
  - Action required
  - By whom
  - When

Action plan example – lift ewe scanning %

Issue	Objective (ie, What do you aim to do?)	Action (ie, How are you going to do it?)	Who?	When?	Progress RAG
Low number of lambs sold	Lift scanning to 180%	• Wean earlier (c.100 days) to give ewes longer to mend	Self	c.15 July	
		• Review sheep health plan	Self / vet	July	
		• Separate ewes into good condition (BCS 3.5), thins and culls once everything dried off a few weeks post weaning.	Self	Start Aug	
		• Preferentially feed thins to hit BCS 3.5 by tupping. • Go through thins every few weeks and draft good condition ewes into "fit" mob. • Worm any thin ewes a month before tupping (look out for thin gimmers).	Self	Aug / Sept	
		• MOT tups	Self / vet	Early Sept	
		• Check NADIS forecast and fluke accordingly.	Self	Sept/Oct	
		• Build pasture covers through late summer for flushing.	Self	Ongoing from weaning	
		• Maintain ewe BCS through to scanning	Self	Dec-Feb	
		• Leave hoggs untupped but target 45kg LWT by tupping to trigger puberty.	Self	Weigh monthly from weaning	

Action plan example – lift calving %

Issue	Objective (ie, What do you aim to do?)	Action (ie, How are you going to do it?)	Who?	When?	Progress RAG
Improve number of calves reared	Increase calves reared to 90% from 85% per cow and heifer to the bull	Assess suckler herd performance • undertake Fertbench analysis to identify reasons for low rearing rate	Farmer Meeting with consultant and vet to review	February 2016	
		Specific Actions could be			
		Heifer management • Achieve target weights for bulling heifers at mating - 455kg min by 15 months – weigh heifers in May • Preferential treatment for heifers and first calvers – separate group and feeding	Farmer Farmer/stockman	May 2016	
		Bull management • Avoid buying bulls with poor direct calving ease figures • Bull MOT annually – semen test plus physical examination • Restrict heifer mating to 6 weeks	Farmer Vet Farmer/stockman	Ongoing May 2016 Summer 2016	
		Record reasons for calf losses	Farmer	Spring 2016	

Key tools for making it happen

- The annual budget
  - KISS
  - Stock reconciliations
  - Record main assumptions (eg, lamb price)
  - Stress test (what-if)
  - Monitor
  - Update if necessary
  - Tying into cash flow

Thank you for Listening

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