



Using figures to make money

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Overview



- 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

- Strategic
- Tactical
- Operational



Production economics



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



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Tools and concepts



- 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)



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Stocking rate & LWT production



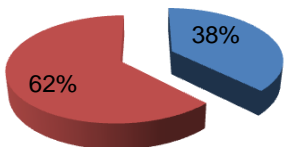
Key Performance Indicator dashboard for: John Williams & Partners

| Total Kgs/ha LWT produced | Sheep | Cattle | Total |
|-------------------------------|--------|--------|-----------|
| Total Kgs Liveweight produced | 62,530 | 30,160 | 92,690 kg |
| Total adjusted forage area | 206 | 124 | 330 ha |

Total Kg LWT/ha **304** **243** **281 kg/adj. forage ha** Where (for "total" production);

- < 300 = low
- 300 - 400 = moderate
- 400 - 500 = high
- > 500 = very high

Note! Production per ha may be much higher for farms with trading stock enterprises (eg, finishing store cattle).



Balance of cattle to sheep

■ Cattle ■ Sheep


Total livestock 277 GLU's

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



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Kg of calf weaned per kg cow – average per cow


SRDP FARM ADVISORY SERVICE

| | 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%?

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**Kg of calf weaned per kg cow
– herd basis**

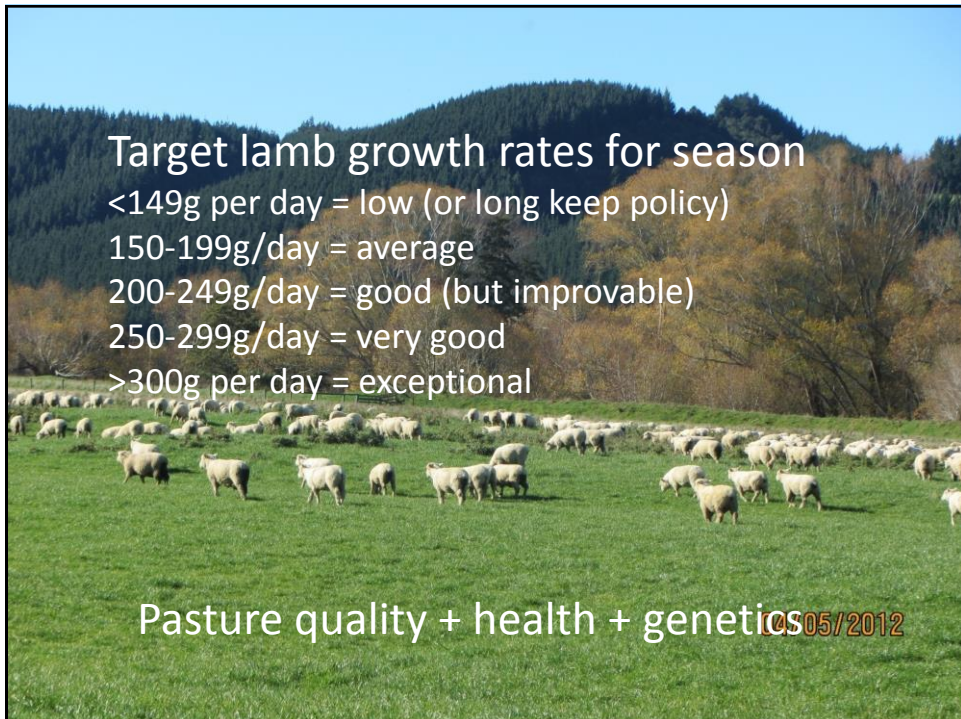


| | Farm A | Farm B |
|------------------------------|--------------------|--------------------|
| Cow weight (kg) | 667 x 100 = 66,700 | 595 x 100 = 59,500 |
| Calf 200 day wt (kg) | 291 x 85 = 24,735 | 336 x 95 = 31,920 |
| Efficiency (% of cow weight) | 37.1 | 53.7 |

< 39% = low
 40-44% = Moderate
 45-49% = Good
 >50% = Exceptional

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







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



Physical + £'s
(costs & returns)

= Economic Efficiency





$$MR = MC$$

The marginal principle



Budgeting N for barley



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

Where;
 Expected barley price of £100/t
 AN price £242/t

What other information do you need?



Budgeting N for barley



| kgN/ha | Marginal Cost | Marginal Revenue | (Marginal) Margin |
|--------|----------------|------------------|-------------------|
| 100 | 1kgNx70p = 70p | 12kgx10p = 120p | +50p |
| 101 | 70p | 11kgx10p = 110p | +40p |
| 102 | 70p | 10kgx10p = 100p | +30p |
| 103 | 70p | 9kgx10p = 90p | +20p |
| 104 | 70p | 8kgx10p = 80p | +10p |
| 105 | 70p | 7kgx10p = 70p | 0 |
| 106 | 70p | 6kgx10p = 60p | -10p |

Where;
Expected barley price of £100/t
AN price £242/t



What other information do you need?

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What about other (fixed) costs?



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Are sunk costs important?



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



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Using a partial
budget to figure the
options



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The power of Partial Budgeting
Need to Assess




| | |
|--|--|
| <ul style="list-style-type: none">• Costs Saved• Additional Revenue  | <ul style="list-style-type: none">• Additional Costs• Revenue Forgone  |
|--|--|



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**Partial budgeting
also helps with
bigger decisions**



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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?



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Key tools for making it happen



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



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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. | Self | Aug / Sept | |
| | | • 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). | | | |
| | | • 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 hogs untupped but target 45kg LWT by tupping to trigger puberty | Self | Weighting from weaning | | | |








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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 | Farmer | February 2016 | | |
| | | • undertake Fertbench analysis to identify reasons for low rearing rate | Meeting with consultant and vet to review | | | |
| | | Specific Actions could be | | | | |
| | | Heifer management | Farmer | May 2016 | | |
| | | • Achieve target weights for bulling heifers at mating - 455kg min by 15 months – weigh heifers in May | Farmer/stockman | | | |
| Bull management | Farmer | Ongoing | | | | |
| • Avoid buying bulls with poor direct calving ease figures | Vet | May 2016 | | | | |
| • Bull MOT annually – semen test plus physical examination | Farmer/stockman | Summer 2016 | | | | |
| • Restrict heifer mating to 6 weeks | | Spring 2016 | | | | |
| | | Record reasons for calf losses | Farmer | Spring 2016 | | |

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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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