AGRISTA

mla
MEAT & LIVESTOCK AUSTRALIA

PRODUCTIVITY & PROFITABILITY
series

Spring Pasture Management

Presenter: Basil Doonan

pinion
ADVISORY

Address

- 3 areas
  - High rainfall
  - Low rainfall
  - Rangelands
- 2 Grazing systems
  - Rotational
  - Set stocking
- 2 Seasons
  - Normal
  - Failed
- 2 Animals
  - Sheep
  - Cattle

Spring

- The time to attack!!
  - Month 1 - when's it going to arrive
  - Month 2 - confirming its arrived
  - Month 3 – where did it go!

Typical vs failed/failing spring

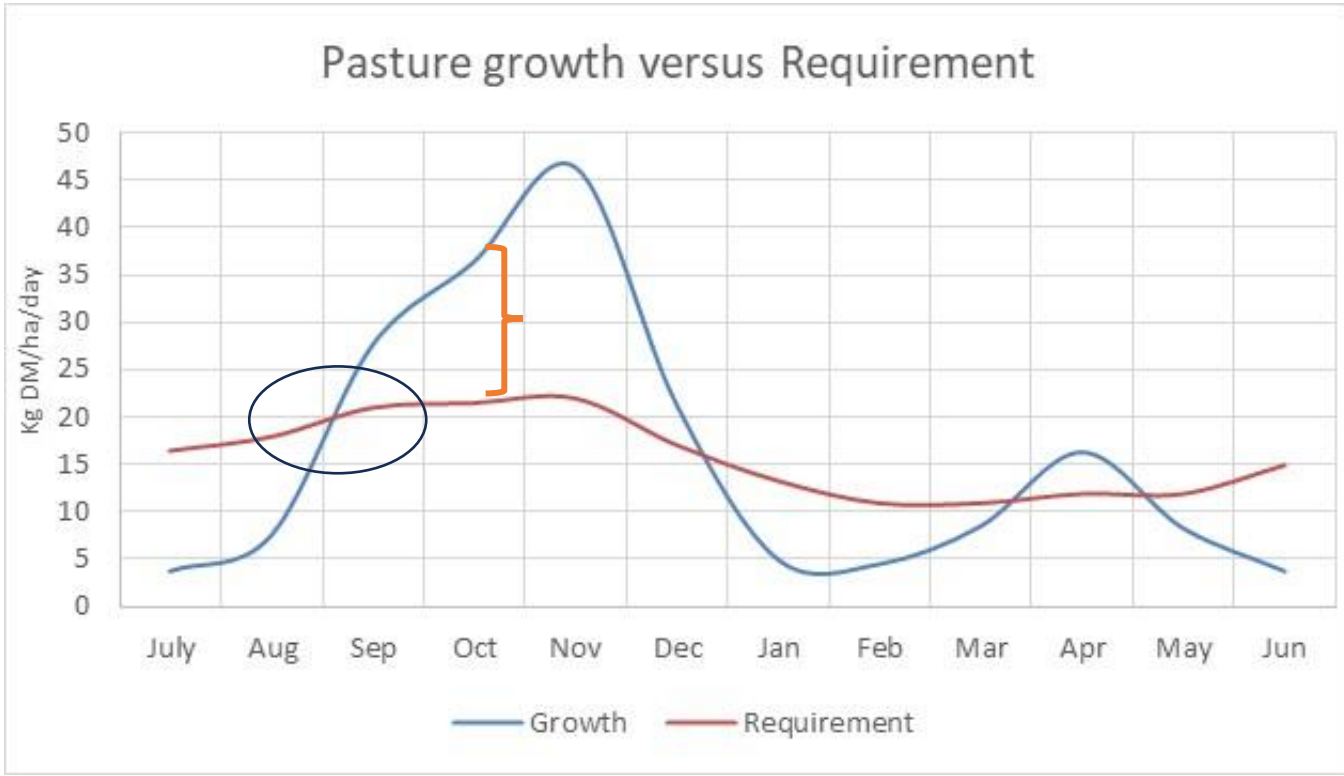
- Really is a tale of 2 seasons in Australia
- Need to cover
  - Normal spring feed base management
  - Failed spring
    - Feeding
    - Destocking

Normal spring

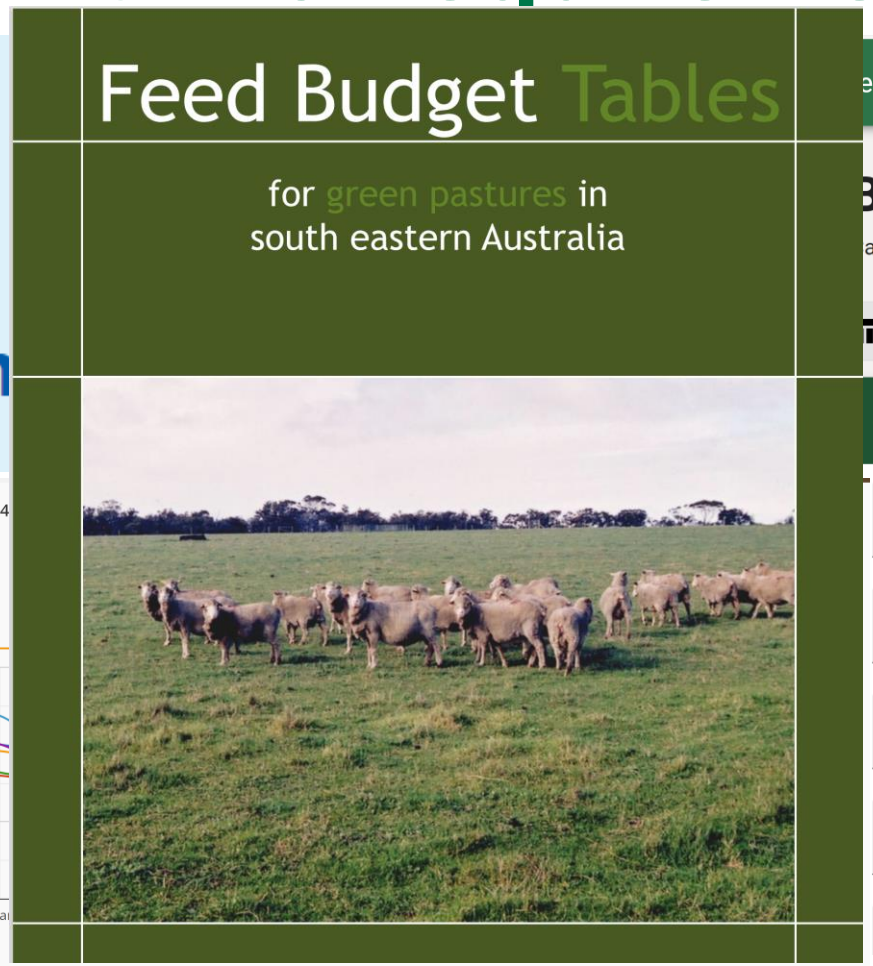
- Challenges are:
  - Not chasing break-even (BE) away/holding your nerve
  - Excess feed
  - Feed quality
    - Matching animals needs to feed quality
  - Survivability/Perreniality

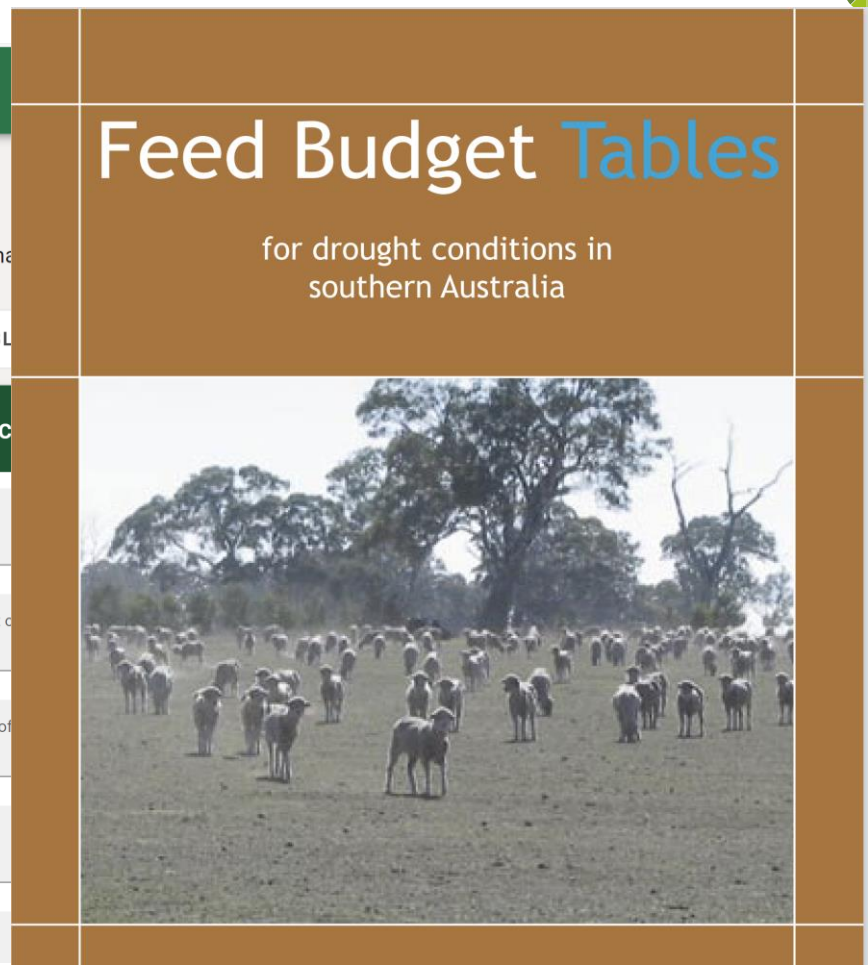
Measurement

- Know where you are relative to expected
  - TSDM
  - FOO
  - Groundcover
  - Average pasture cover
- Know when you're in surplus
  - Supply > demand
- Know by how much
  - BE is a pain point



Growth vs Requirement





Breakeven!

- When growth (kg DM/ha/day) = Demand kg DM/ha/day
- If pasture growth is 45 kg DM/ha/day
- And we have 3 steers/ha allocated 10 kg DM/ha then we require 30 kg DM/ha/day
- Our excess is 45 – 30 = 15 kg DM/ha/Day
- OR 15/45 = 33% of the growth! (farm area)

Excess feed

- Decrease rotation length
  - Offer more
- Lift residual
  - Lift animal intake
- Build cover
- Isolate excess
  - Rotational Grazers - Drop paddocks
  - Set Stockers - Box mobs

Genuine surplus

- Mostly cost-effective option:
  - Hay (55% efficiency)
  - Silage (65% efficiency)
  - Defer (45% efficiency)
  - Liveweight (80% efficiency)
- Example of cost

Activity	Cost
Pasture (surplus)	$0
Mow, rake, bale, wrap, transport	$158/tonne
Decreased energy value	20%
Wastage at feedout	20%
Cost to feedout	$120/tonne
TOTAL	$430/tonne

Induced surplus

- Can be a costly mistake to make:
  - The cost of what you induced it with is the starting price per tonne
- Examples
  - Nitrogen
  - Grain

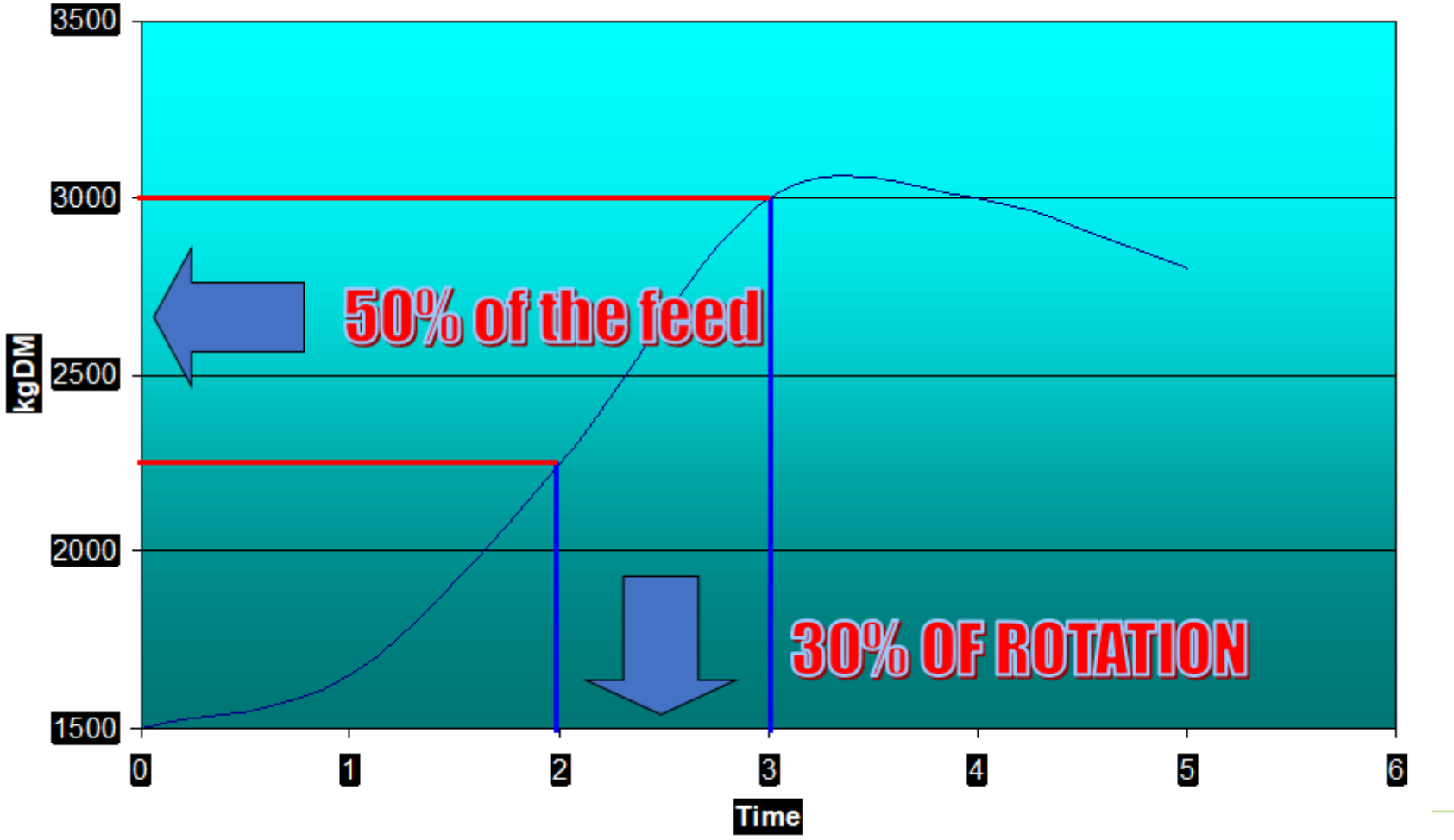
Activity	Cost
Grain	$400/tonne
Mow rake bale wrap transport	$158/tonne
Decreased energy value	20%
Wastage at feedout	20%
Cost to feedout	$120/tonne
TOTAL	$1,060/tonne

Warning!

- Never chase poor quality feed at the expense of good quality feed
- Never “lock-up” supplements at the expense of animal production

Dampe

- To mainta
  - Excessi



Maintaining feed quality

- Spring feed is usually pretty good stuff
- If we don’t maintain grazing pressure, we lose quality
  - Rotational grazing
  - Set Stocked
- Need to decrease elongation and kill parent tillers
  - Promote the production and survival of daughter tillers

Turds

Increasing digestibility

2 6.SEP.20071513:42 03-5DAIRY BRANCH DPT FEEDTEST NO.383

Victoria Department of Primary Industries

FEEDTEST

A.B.N. 42 579 412 233

A BUSINESS OF THE DEPARTMENT OF PRIMARY INDUSTRIES

Victoria The Place To Be

mla MEAT & LIVESTOCK AUSTRALIA

AGRISTA

Feed Analysis Report

Test	Units
Drymatter	16%
Crude protein	26%
NDF	43.5%
Digestibility	86%
ME	13.2

Feed quality

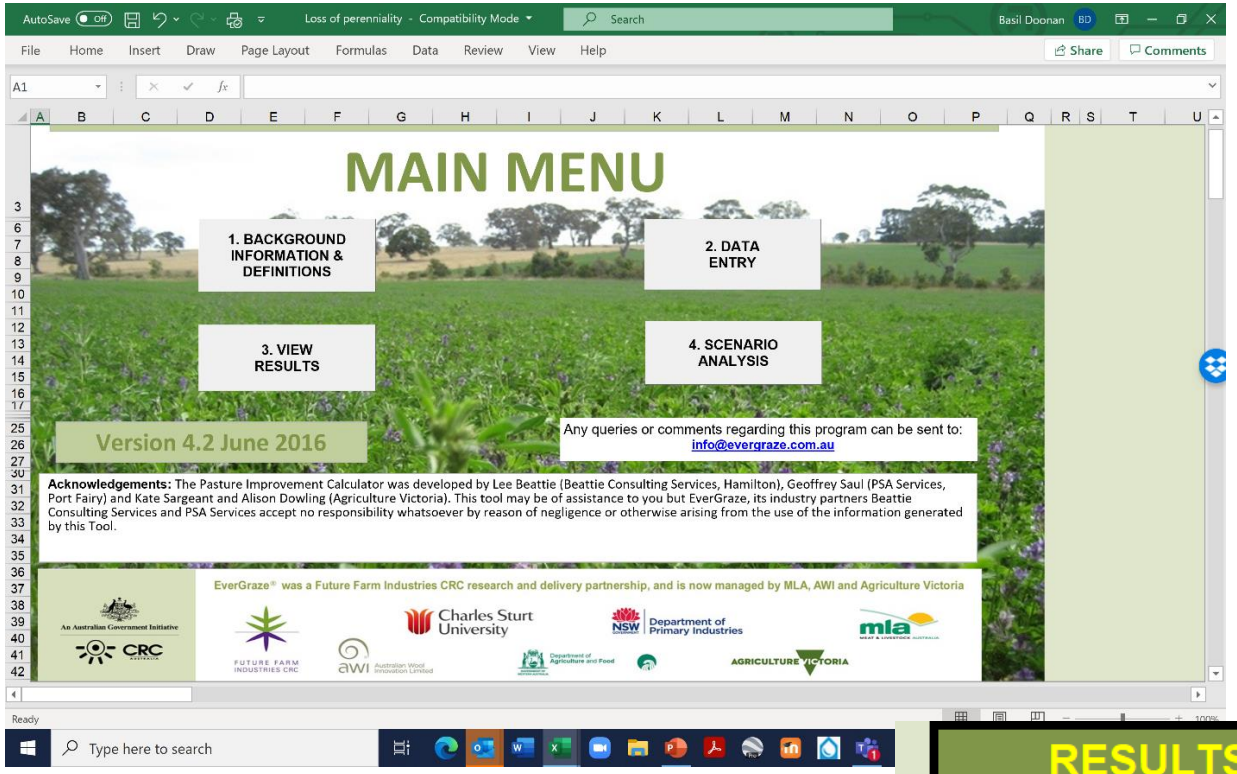
Growth phase	NSC/DIP	% RDP	Ca:P	K/(Ca + Mg)
0-1	1:1	30	1:1	8:1
1-1.5	1:1	22	1.5:1	-
1.5-2	2:1	16	2:1	2.5:1
Optimal	2:1	18	2:1	2.2:1

Donaghy, D

Survivability

- Perennial plant tillers
  - Last about a year
  - Generally don’t like regrazing
  - Generally are hard to kill by grazing the crown
  - Need light at the tiller base to be produced
  - Daughter tillers are only produced after the parent has enough energy to survive grazing

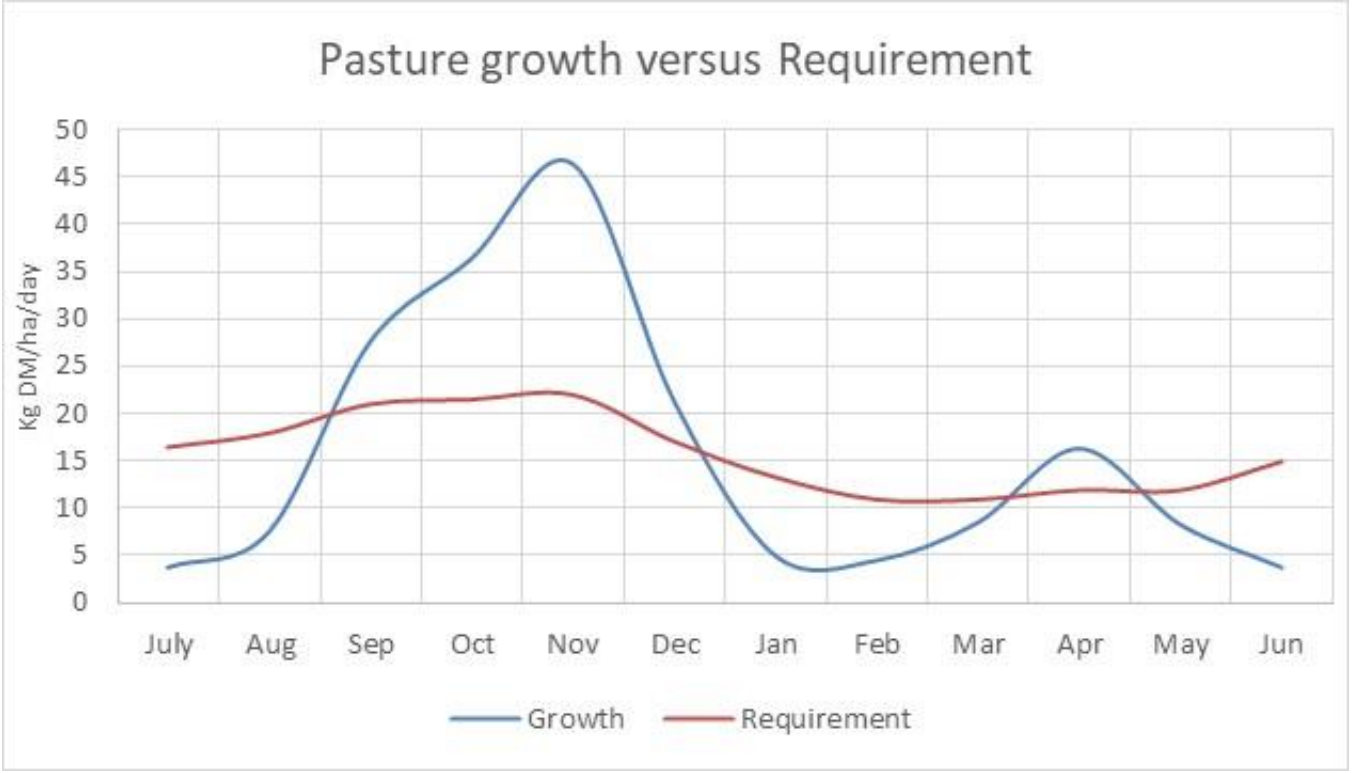
Survivability



General Assumptions	
Paddock and Pasture Production Values	
Expected pasture/infrastructure life (4-20 Years)	20
Chance of pasture failure (%)	5%
Stocking rate before improvement (DSE/ha)	10.0
Peak stocking rate after improvement (DSE/ha)	40.0
Time to reach peak stocking rate (1-5 years)	5.0
Year when stocking rate begins to decline	6.0
Stocking rate at end of pasture/infrastructure life (DSE/ha)	20.0
No. weeks pasture grazed in year of sowing	38.0
Economic and Financial Values	
Agistment cost ($ per DSE per week)	$1.22
Gross margin before improvement ($/DSE)	$44.00
Gross margin at peak stocking rate ($/DSE)	$50.00
Capital cost of livestock ($ per DSE)	$150
Opportunity cost of invested capital	7.0%
Expected Annual Inflation Rate	2.0%
Marginal Tax Rate	30%
Interest on borrowed funds	3.0%
Interest on investment funds	4.0%
Residual Values	
Residual value of the seed and sprays ($/ha)	$0
Residual value of the lime/gypsum ($/ha)	$300
Residual value of the fertiliser ($/ha)	$200
Residual value of soil N (higher legume content) ($/ha)	$0
Residual value of paddock infrastructure ($/Ha)	$6,000
Total residual value of paddock development ($/ha)	**$6,500**
Estimated Environmental Benefits	
Annual environmental benefit ($/Ha)	$0

RESULTS	1	2
Net Present Value	$178,745	$949,451
Internal Rate of Return	8.4%	27.4%
Peak Debt	-$1,543,009	-$357,035
Year of Peak Debt	2	2
Break Even Year	15	7

Feed profile



The method is the important thing

- Beware of “Man Math” or “Bush Economics”
  - Working backward to justify a decision you have already made
  - Making big enough mistakes that any option pays!
- Particularly in a failed spring….the stakes are high

Failed springs or end of spring

- Challenges are:
  - The start of more to come (El Nino prediction)
  - Coinciding with low red meat prices
  - Supplement and input prices likely to climb

What you should do vs what you can do

- Should do:
  - Marginal cost vs marginal revenue
  - Average cost is a killer
    - Working on “average costs” and “average returns” means you are losing at the margin
- Could do:
  - Cash limited

Decisiveness is important

- Destocking and feeding are not mutually exclusive
- Marginal approach can be highly effective
- Steps
    1. Determine feed resources and suitability
    2. Destock unprofitable animals early (mobs)
    3. Retain only the profitable animals in the profitable mobs
        i. Often not done well

Step one

- Marginal cost approach sets animals up to compete for scarce resources
- Average cost approach means losing at the margin
  - Feeding for longer than you should
  - Feeding more animals than you should
- HGF types
  - Growing/Finishing
  - Holding/Maintenance
  - Weight loss

Profitable mobs

- Say our lambs and ewes are competing for pasture
  - There's not enough to go round
- We decide to feedlot the lambs and run the ewes on pasture that the lambs could have eaten!
- Most producers will work out if that specific activity has a margin.
  - Its important to do the “most” profitable thing!

Example: Lambs versus ewes

- We feedlot the lamb's 50:50 vetch hay and grain at $250/tonne DM and $350/tonne DM respectively
- The average cost of the diet is $300/tonne DM
- 2 kg DM will add 250 gms liveweight say
- 2 kg @ $0.30 is $0.60
- Price $2.50 kg Lwt at 250 gms is $0.62
- MOFC (average margin) = $0.02/kg Lwt

Lambs versus ewes

- The ewes are eating pasture at $100/tonne
- Say our lambing rate is 100% and weaned lambs average $50 then the return is $50/365 days then the average return is just $0.15/day
- If we can run them on 1 kg DM that's $0.10/day…we have a margin
- BUT
- Because the ewes are competing for lamb food the cost of the ewe's diet at the margin is also $300/tonne DM
- If we can run them on 1 kg DM that's $0.30/day or a loss at the margin of -$0.15/day

What's this saying…..

- Don’t supplement at present….destock!
  - The costliest group of animals
    - Probably old ewes
- Graze the lambs on the grass and achieve the widest margin
  - That maximises profit from the available resources
  - That return would be $0.62 - $0.20 = $0.42/kg lwt
- A loss is a loss but for the sake of consistency
  - Lambs returned $0.21/kg DM fed
  - Ewes lost -$0.15/kg DM fed

Lambs vs Lambs

- Lambs now graze 1.5 kg DM pasture at $100/tonne DM and get 250 grams grain at $350/tonne so the average cost of the diet is $120/tonne
- They do 250 grms/day say
- It costs $0.24 to get this and at $2.50/kg we get $0.62 or a MOFC of $0.38
- So on average lambs need to achieve only 110 grams/day to break even using the average cost of the diet.
- However, the marginal cost is $350/tonne so they need to do at least 320 grams….which is less than the lambs are doing on average

What's this saying.....

- That on average our supplement strategy is paying off
- However some lambs are costing money
- Profit is compromised
- Sell the worst lambs and turn off as many as possible from pasture

Ewes vs ewes

- Ewe lambs 70% lambing
- Mid age group 130% lambing
- Older age group 100% lambing
- A weaned XB lamb is worth $50
- Ewe lambs 70% lambing x $50/365 = $0.10/day
- Mid age group 130% lambing x $50/365 = $0.18
- Older age group 100% lambing x $50/365 = $0.14

Ewes vs ewes

- Ewe lambs 70% lambing x 1.5 kg DM/day @ $100/tonne = $0.15/day
- Mid age group 130% lambing 2 kg DM/day = $0.20/day
- Older age group 100% lambing x 1.75 kg DM/day = $0.18/day
- MARGIN
- Ewe lambs 70% lambing = -$0.05/day
- Mid age group 130% lambing = -$0.02/day
- Older age group 100% lambing = -$0.04/day

Summary

- Spring offers opportunity
  - Know where you are relative to average or expectation
  - Know when you are past break even
  - Know how much you can build APC/TSDM/Groundcover/FOO
  - Quickly drop surplus feed out
  - Maintain quality
  - Be hard to convince to manipulate the diet

Summary

- If it fails
  - At low prices destock before feeding
  - Feed at the margin
  - Feed profitable mobs
  - Feed profitable animals in profitable mobs