RED MEAT UPDATES

TASMANIA

23 July 2021

The cost of compromising perenniality

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Pinion Advisory

Perennial

“lasting or existing for a long or apparently infinite time; enduring or continually recurring”

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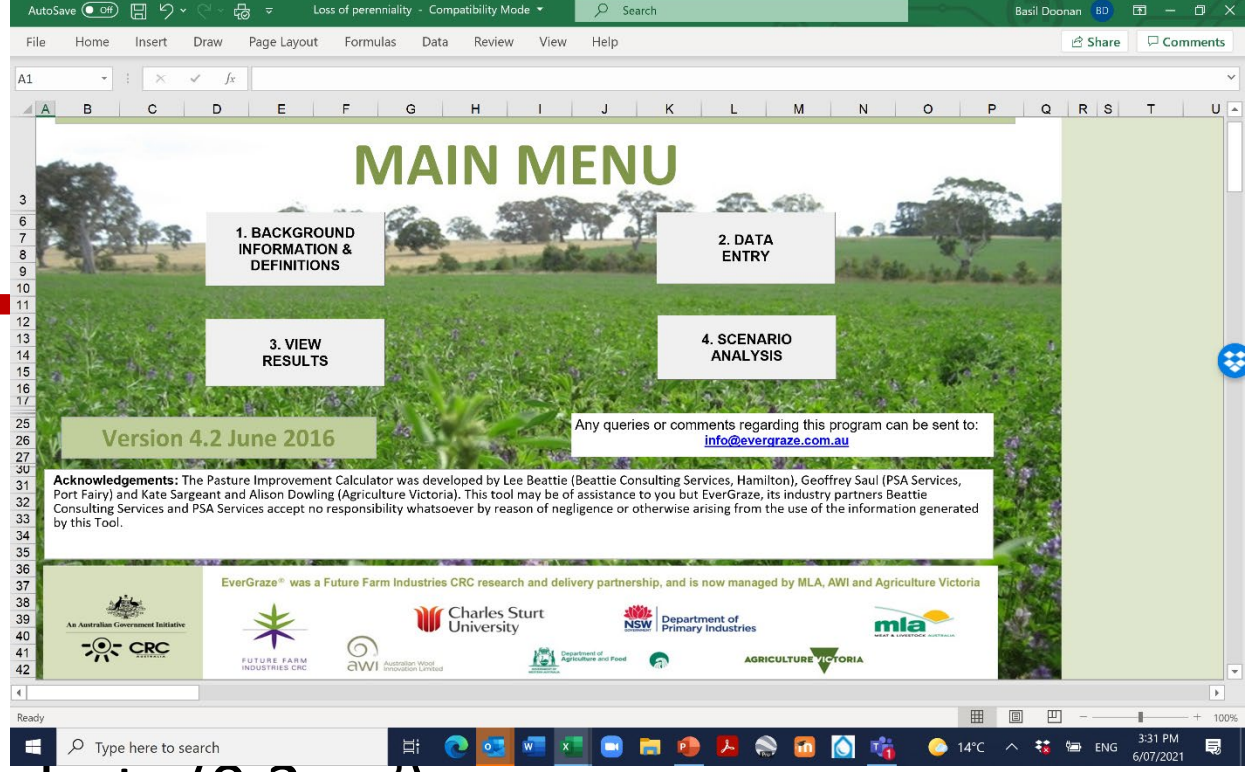
Why is perenniality important?

- Cost of renovation
  - Pasture cost
  - Capital cost
- Lost production and productivity
  - From renovating
  - From run out pastures

Methodology



- Evergraze tool
  - Years to break even/IRR
    - www.evergraze.com.au
- Runout pasture is…..Virgona, J
  - Appearing in less than 30% of quadrats (0.3 m^2)
  - Making up less than 5% of food on offer (FOO)
- Runout pasture is…..Rawnsley, R
  - <70% desirable species (autumn) part renovation?
  - <50% desirable species (autumn) full renovation?

Virgona, J 2006, What you sow is not what you get
Rawnsley, R 2020 Pers Comm

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Scenarios

1. Breakeven from conversion to irrigated pasture
2. Breakeven from renewal
    i. Assume fixed costs are sunk

Methodology

- So 50% weeds and 50% pasture spp at 1,400mm combined rainfall/irrigation means
  - An increase in SR from 10 DSE/ha to 40 DSE (very generous)
  - In $/DSE of $40 to $50 (very generous)

Methodology

1. Capital costs
   - 120 ha in 24 x 5 ha paddocks

	Description	Costs/ha	Salvage/ha
Fencing	16 km	$400	$100
Troughs and pipework	24 toughs, fittings pipes and pump	$250	$100
Leveling	Smudge	$120	$120
Cultivation	2 x Disc, 1 x triple K	$360	$0
Lime and spreading	10 t/ha	$600	$300
Fertiliser and spreading	1 t 0-7-10 and 200 kg DAP/ha	$650	$200
Seed and sowing	8 kg PRG and 2 kg clover	$203	$0
Chemical and spraying	Glyphosate at 2.5 litres/ha	$70	$0
Irrigation infrastructure, water	Centre pivot and 4 ML water	$8,000	$7,000
	TOTAL/HA	**$10,653**	**$7,820**

Methodology

2. Annual costs
   – 120 ha in 24 x 5 ha paddocks

	Description	Costs/ha
Lime and spreading	200 kg/ha	$12
Fertiliser and spreading	350 kg 0-7-10	$131
Chemical	Flatweed and bug	$80
	TOTAL/HA	**$235**

Methodology

2. General assumptions

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

Questions

- Perceived benefits of renovation?
  - Production
  - Quality
  - Persistency (change spp?)

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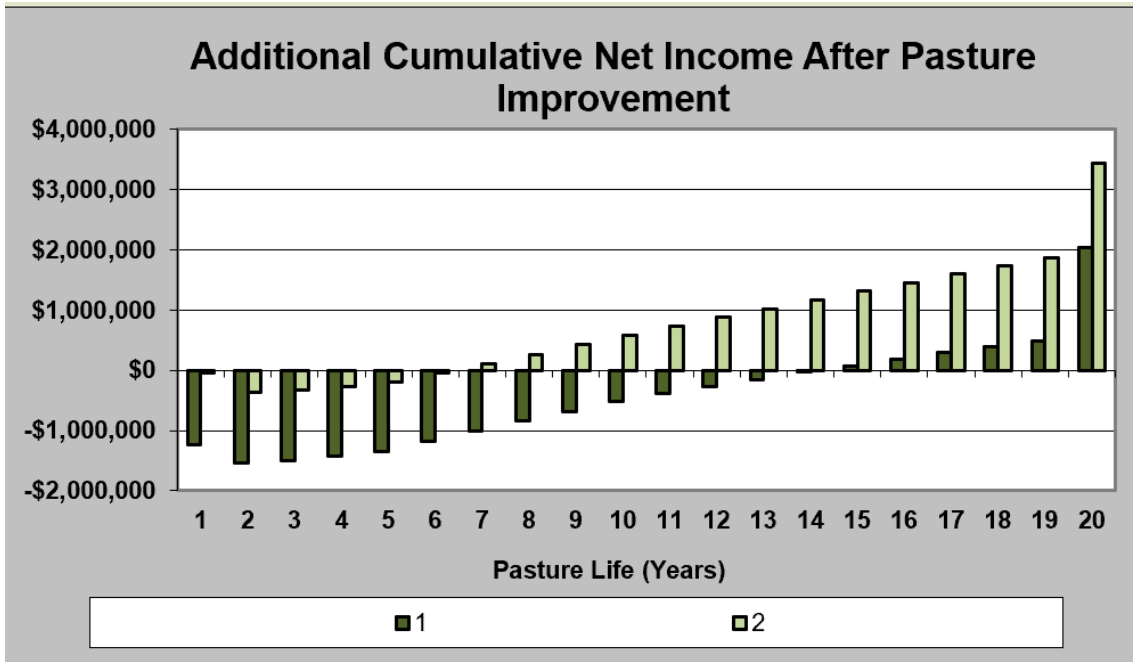
Scenarios

1. From conversion (fixed and variable costs)
   - Break even - 15 Years
   - IRR - 8.4%
2. From renewal (variable costs)
   - Break even - 7 Years
   - IRR 27.4%



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

Source: Evergraze Pasture Improvement Calculator

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Managing for perenniality

- Rest/rotation is critical
  - Tillers are not produced
- Duration of grazing
  - 3-5 days for tiller death
- Confinement/on-off grazing now a real option
- Under irrigation
  - Can't afford not to improve pastures
  - Can't afford to lose them

Top three take home messages

1. Perenniality of a pasture is the biggest contributor to total profit over time (not feed quality or quantity)
   i. Do not improve pastures if you're not committed to survival
2. Between variety/spp benefits likely overrated
   i. Just not enough in it
3. Renovation "required" not "routine"
   i. Mostly renovated due to inappropriate management

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Tools, resources & training

1. Pasture improvement calculator (under development)
    i. https://etools.mla.com.au
2. Pasture Paramedic
    i. www.sfs.org.au
3. Pasture Principles
    i. www.pinionadvisory.com

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Thank You

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