



“Drought proofing farming without irrigation”

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What I plan to cover

- Lone Star Farms
 - Who we are & what we do

- Caberfeidh Station; the opportunities:
 - Dryland farming Vs Irrigation

LOCATION OF LONE STAR FARMS

NORTH ISLAND

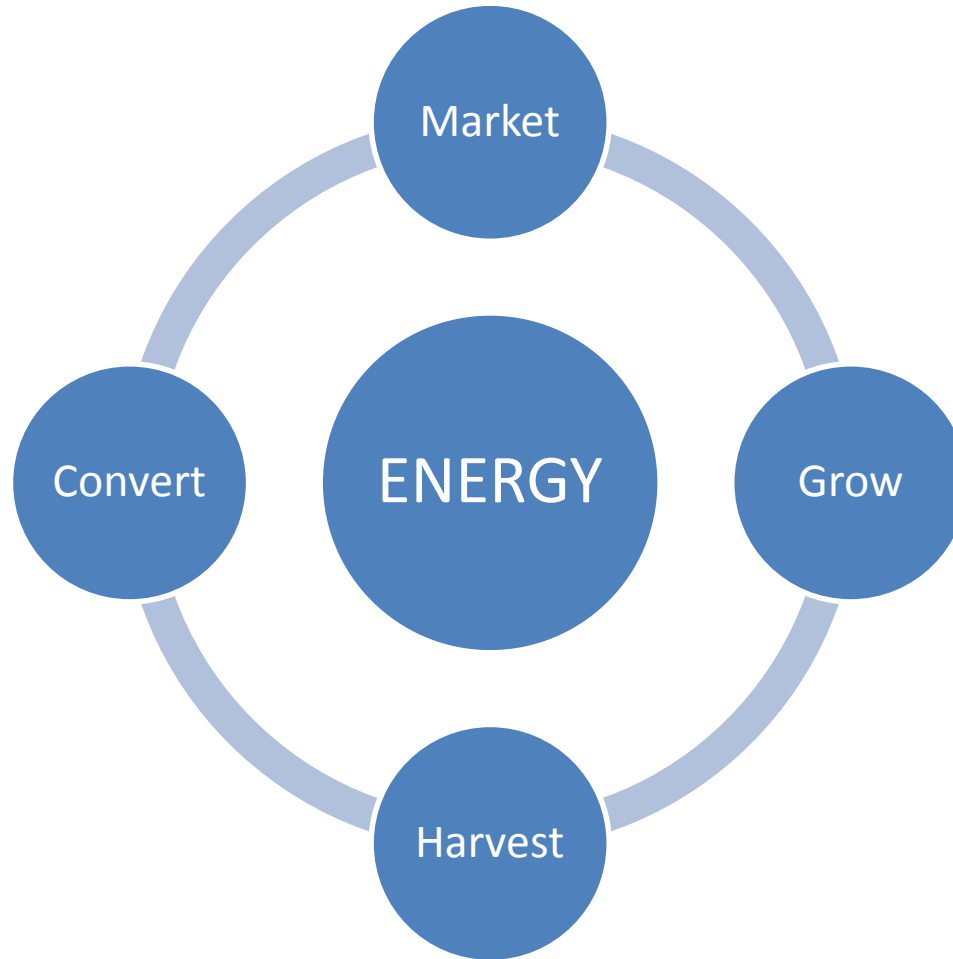


LOCATION OF LONE STAR FARMS

SOUTH ISLAND



We Grow, Harvest, Convert and Market, Energy



Caberfeidh Station

- 5300 effective hectares in the Haka valley.
- 3,800 ha flat to easy country.
- Rainfall, varies from 300mm to 600mm
- 400 ha irrigation, Pivots, Roto Rainer, K- Line.
- 36,000 stock units of sheep and cattle.
- 12 staff

Opportunities on Caberfeidh

- Water is often the limiting factor, so we are farming water.
- We must have water efficient plants.
- Lucerne twice as efficient user of water than a ryegrass system. 24kgdm per mm of moisture.
- Root system to extract water from the whole soil profile.
- Increased, Quality and Quantity! 😊

Extra Revenue

Extra Annual Revenue		KGDM	Utilisation	Price	Income
Old pasture		4975	75%	0.15	\$ 559.69
New Lucerne pasture		7230	75%	0.18	\$ 976.05
				Difference	\$ 416.36

Extra Annual costs

Extra Annual Costs to go to a Lucerne based system			
		per ha /year	
Extra fertiliser		\$	35.80
Capital Lime		\$	25.00
Winter Spraying		\$	20.00
Extra labour		\$	19.00
		\$	99.80

Return on Investment

		Per Ha
Extra Annual Revenue		\$ 416.36
Less Extra Annual Costs		\$ 99.80
Extra Profit		\$ 316.56
ROI		35%

Irrigation Vs Lucerne

	area	kgdm/ha	utilisation		cents/kgdm	Total
Irrigated pasture	300	15000	0.8	3600000	0.25	\$ 900,000.00
Less old production	300	7000	0.75	1575000	0.2	\$ 315,000.00
Increase in production				2025000		\$ 585,000.00
Total Annual benefit						-\$ 6,809.13

Irrigation Vs Pasture

	area	kgdm/ha	utilisation		cents/kgdm	Total
New Production	300	15000	0.8	3600000	0.2	\$ 720,000.00
Less old production	300	4000	0.75	900000	0.2	\$ 180,000.00
Increase in production				2700000		\$ 540,000.00
Total Annual benefit						\$ 249,094.50
ROI	7.37%					

Summary

- We can make numbers say what ever we like.
- A lucerne based system can be profitable compared with an Irrigation opportunity, because;
 - Lucerne is efficient at converting water to KGDM.
 - Lucerne provides the opportunity to use more water and minerals from the full soil profile.
 - Lucerne fix's it own N and N for other species.