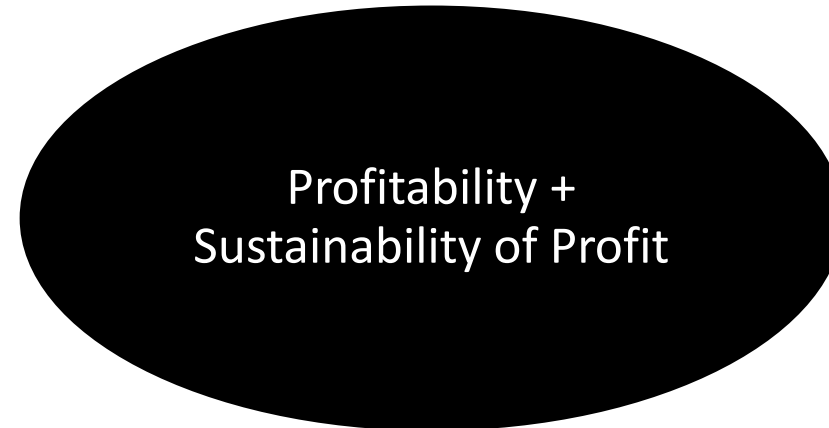


"How Much Can I Make From a Plantation Mānuka Honey?"



**Our Seedlings at Nga
Rakau Nurseries, Feb 2017**

**This Depends
On ...**



What Exactly Are These Risks ?

“Manageable” Risks

- ✓ **Quality of Plants**
- ✓ **Plantation Planning**
- ✓ **Plantation Management**
- ✓ **Apiary Planning and Management**
- ✓ **Bee Health/Nutrition**

“Unmanageable” Risks

- ✗ **Weather**
- ✗ **Activity on Neighbouring Properties
(Beehives, Spraying, Plantings, Pests)**
- ✗ **Regulations**
- ✗ **Market Prices**

Each Risk is covered by one or more of our workshops today.

Our Financial Model Does Not Assume a “Plant and Forget” Strategy



It Assumes Continued MFNZ Involvement from Plant Establishment Phase to Honey Harvest (Year 6/7)



Which is Why We Have Higher than Average Expectations in our Model

“Manageable” Risks

- ✓ Quality of Plants
- ✓ Plantation Planning Plantation Management
- ✓ Apiary Planning and Management
- ✓ Bee Health/Nutrition



Our Six Step Process

	Key Variables
1	Plantation Size (ha)
2	Hives per Ha
3	Total Honey Production per Hive
4	Mānuka Honey as % of Total Honey
4a	Mānuka Honey (kg)
5	UMF Value
6	Price for kg Mānuka Honey
7	% Share of Returns to Landowner
8	% of Plantation Size in receipt of AGS Funding

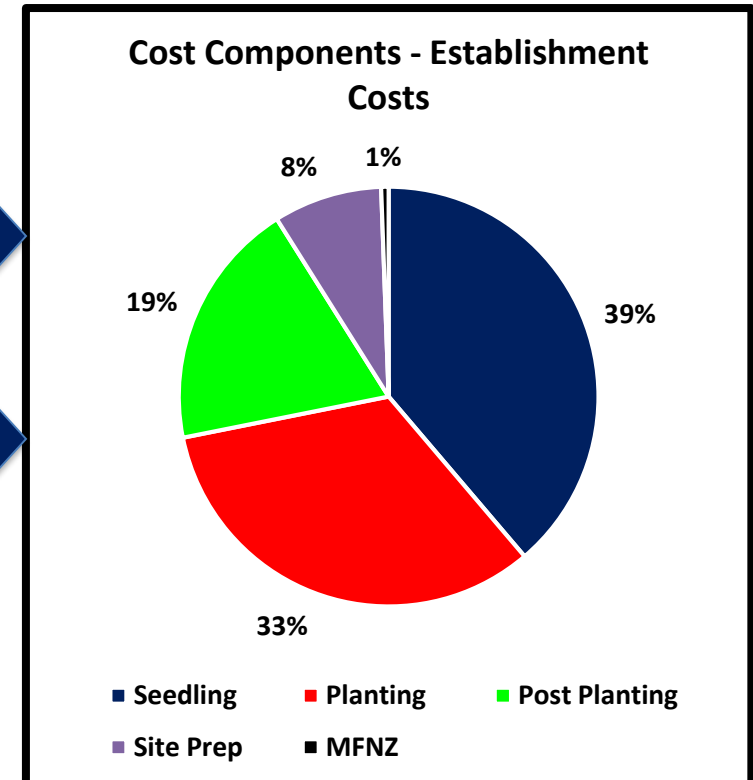
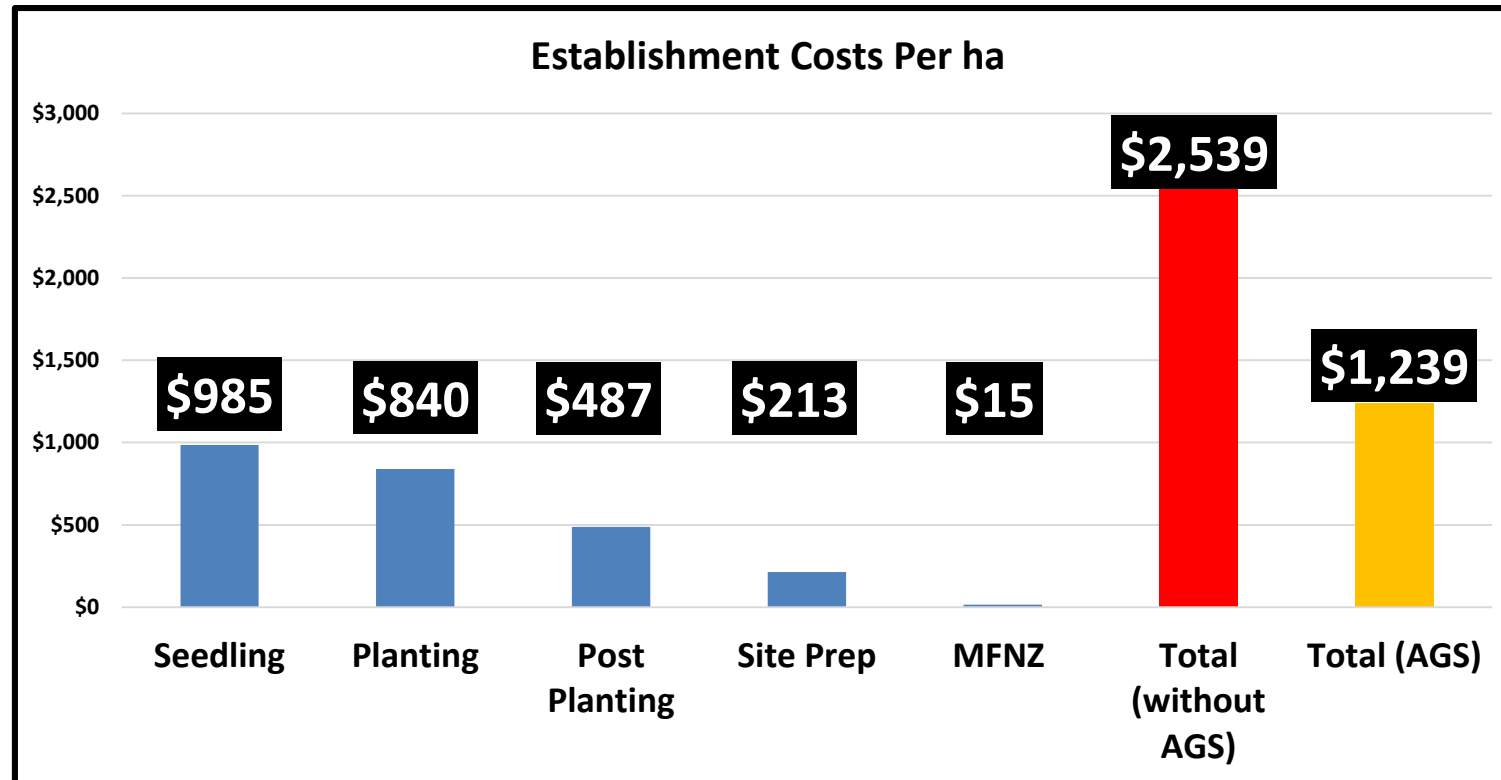
Key Variables in our Financial Model

Key Variables		Key Point
1	Plantation Size (ha)	The larger the plantation, the better you can manage your risk:
		✓ "Self-contain" your bees
		✓ Maximise Mānuka mono-florality
2	Hives per Ha (at peak)	✓ More hives does not mean more honey ! Used as proxy metric. Wild Mānuka = 1 per ha, Plantation Mānuka = 1-2 per ha
3	Total Honey Production per Hive	✓ Ranged from 24.2 kg in 2011 to 39.4 kg in 2013. 29.1kg in 2016
4	Mānuka Honey as % of Total Honey	✓ The greater % the higher overall revenue from your honey
		✓ Monoflorality and Flowering duration will influence this.
5	UMF Value	✓ The higher the value the higher the price
6	Price for kg Mānuka Honey	
7	% Share of Returns to Landowner	✓ Important if you are not doing your own beekeeping.
8	% of Plantation Size in receipt of AGS Funding	✓ \$ 1300 per hectare makes a difference !

What are the key Assumptions Behind the Financial Modelling ?



- Establishment Costs of \$ 2,539 per hectare:



- Ongoing costs of \$ 62 /ha from Yr 3 – 6, \$ 47/ha from Yr 7 - 20



Other Key Assumptions Behind the Financial Modelling ?

- **Full Maturity of Mānuka Plants from Year 7, with ..**
- **No. of hives gradually increasing accordingly**
- **\$ 0.85 per seedling (if ordered before June 30th, 2017)**
- **Excludes Financing Costs and Business Operating Expenses**

Inputs for 20 Year Financial Projection

	Key Variables	Target
1	Plantation Size (ha)	100
2	Hives per Ha (at peak)	1.5
3	Total Honey Production per Hive	40.00
4	Mānuka Honey as % of Total Honey	80%
4a	Mānuka Honey (kg)	4,800
5	UMF Value	15
6	Price for kg Mānuka Honey	\$72.45
7	% Share of Returns to Landowner	30%
8	% of Plantation Size in receipt of AGS Funding	90%

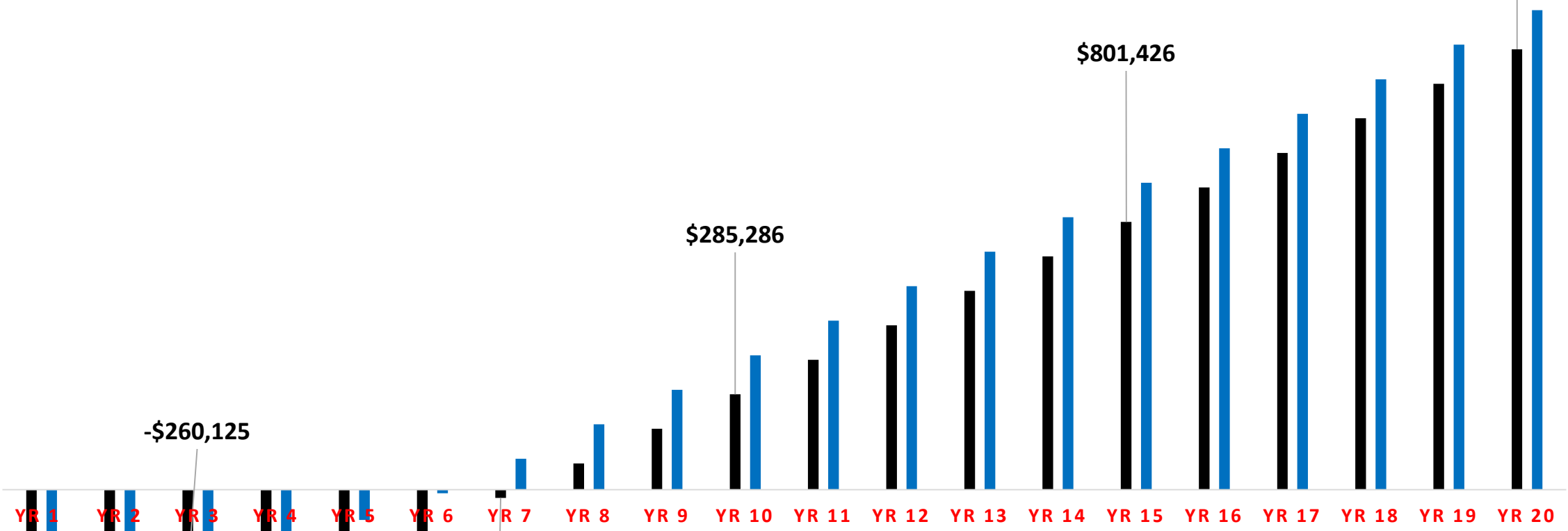
Honey	Gate Price
Amber Clover	\$10
Mānuka UMF 5	\$21
Mānuka UMF 10	\$37
Mānuka UMF 15	\$72
Mānuka UMF 20	\$130



PROJECTED CUMULATIVE NET CASH FLOWS

\$1,317,566

■ Forecast - Without AGS ■ Forecast - With AGS



-\$260,125

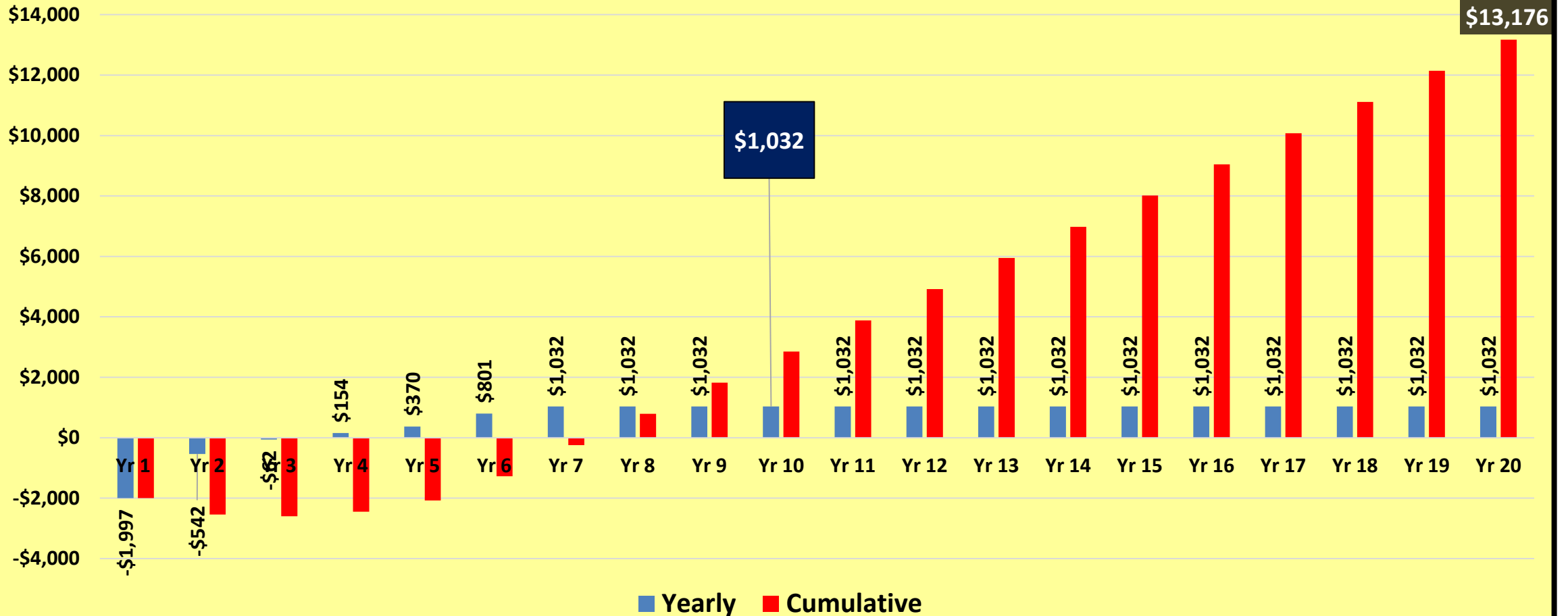
\$285,286

\$801,426

-\$24,398

YR 1 YR 2 YR 3 YR 4 YR 5 YR 6 YR 7 YR 8 YR 9 YR 10 YR 11 YR 12 YR 13 YR 14 YR 15 YR 16 YR 17 YR 18 YR 19 YR 20

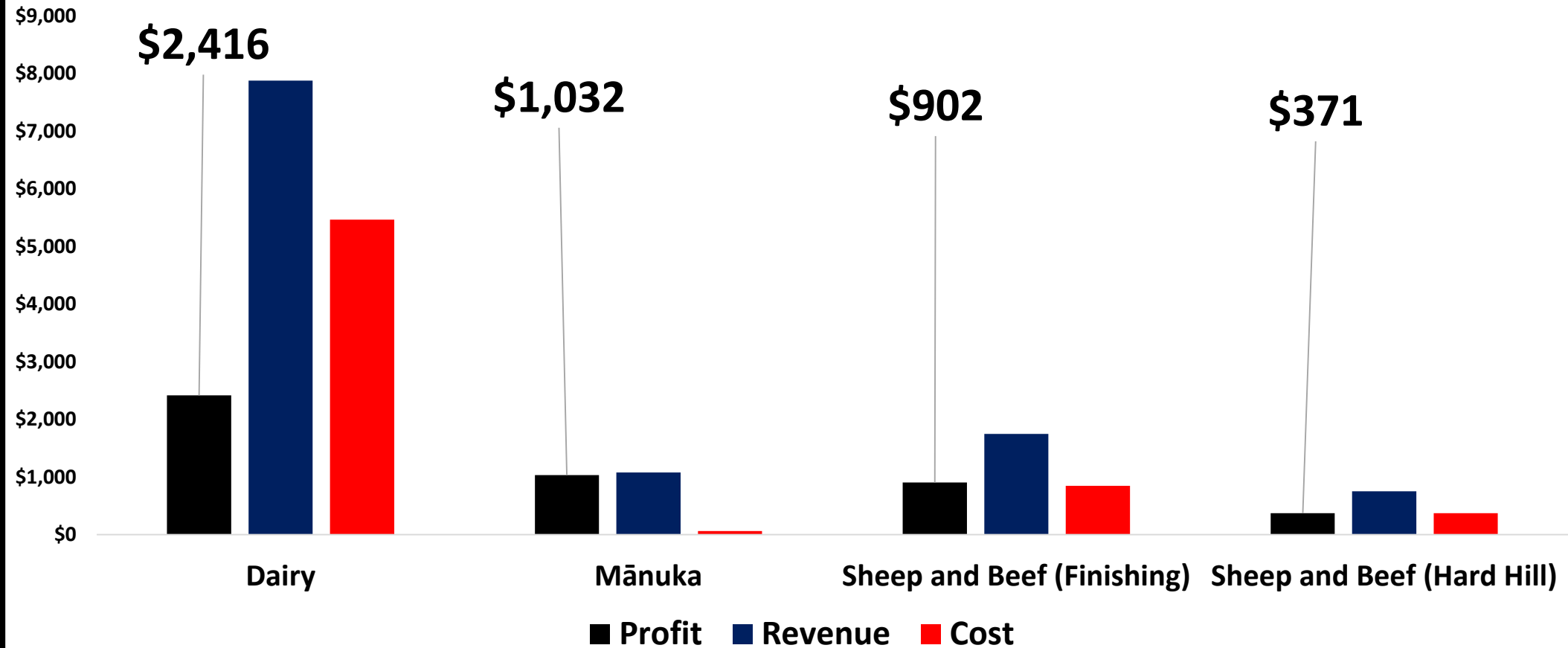
Forecast Net Cash Returns per Hectare (no AGS)



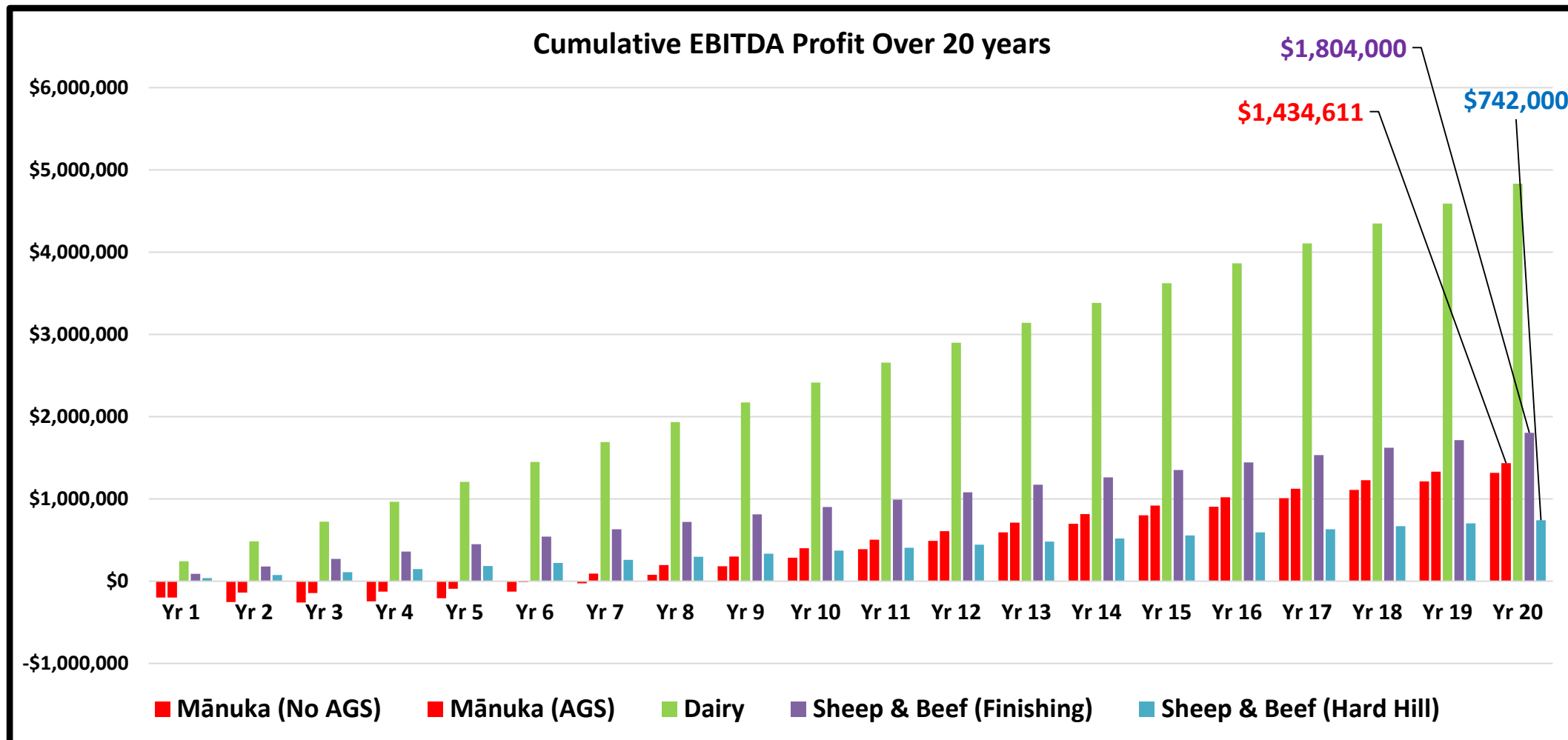
How Do Financial Returns Compare to Other Land Uses ?



Comparison of Yearly EDITDA Profits/Year per Hectare



How Do Financial Returns Compare to Other Land Uses ... over a 20 Yr Period ?





Conclusion

Plantation Mānuka is a financially viable option for :

- ✓ Non-productive land
- ✓ Alternative to Sheep and Beef Farming (Hard Hill Country and/or Intensive Finishing)

Plus BENEFITS with respect to erosion control and environmental impact.

THANK YOU

Appendices

How Do Financial Returns Compare to Other Land Uses ?



Dairy



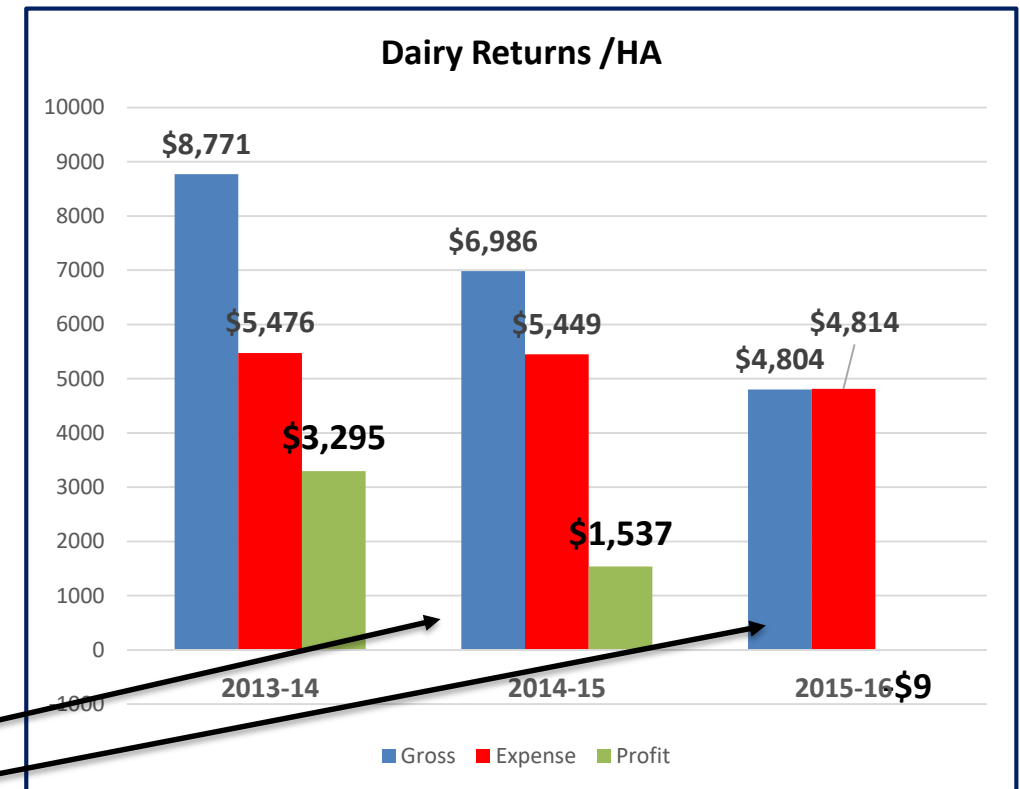
Dairy

Executive Summary

In 2015-16 New Zealand dairy farmers received the lowest milk prices in over two decades, forcing some to rethink the way they farm and how they would survive the season. This was the second consecutive season of reduced incomes which required cost reductions. Despite reduced farm working expenses, operating profit per hectare recorded a small negative. The break-even milk price was reduced to under \$5 per kilogram milk solids, still one dollar above the milk payout received resulting in additional borrowings. Equity decreased 9.3 per cent due to a combination of reduced asset values plus increased term liabilities. It will take a few seasons of reasonable milk prices before farmers recover from this severe downturn.

Owner-operators Summary

Physical KPIs	2014-15	2015-16	% Change
Peak cows milked	419	418	-0.2%
Effective hectares	145.5	148.1	1.8%
Milk solids sold per cow	383	384	0.3%
Milk solids sold per ha	1,102	1,082	-1.8%
Cows per FTE	144	144	
TFP Productivity	1.6%	10.9%	
Prices			
Payout received per kg milk solids	5.76	5.92	-3.1%
Underlying on-farm inflation	-3.1%	-8.3%	
Terms of trade	-21.3%	-27.8%	
Cashflow			
Cash operating surplus	361,272	141,757	
Discretionary cash	109,496	-82,602	
Cash available for living and growth	140,252	21,097	
Cash surplus	-78,278	-21,934	
Profitability			
Dairy gross farm revenue per ha	6,986	4,804	-31%
Dairy operating expenses per ha	5,449	4,813	-12%
Dairy operating profit per ha	1,537	-8	-101%
Dairy gross farm revenue per kg milk solids	6.34	4.44	-30%
Farm working expenses per kg milk solids	4.77	3.64	-11%



How Do Financial Returns Compare to Other Land Uses ?



mānuka farming
NEW ZEALAND

beef+lamb
new zealand

Tools | Have Your Say | What's New | Feedback

Performance Indicators Per Farm Analysis | \$ Per Farm Analysis | **\$ Per Hectare Analysis**

\$ Per Hectare Analysis
For All New Zealand Region, Hard Hill Country (North Island)

Download | Export As PDF

	2014-2015	2015-2016 (PROVISIONAL)	2016-2017 (FORECAST)
REVENUE PER HECTARE			
Wool	91.56	101.31	64.40
Sheep	344.85	317.28	308.12
Cattle	249.51	250.26	247.38
Dairy Grazing	2.73	2.62	2.49
Deer + Velvet	7.77	4.95	6.48
Goat + Fibre			
Cash Crop	0.86	1.44	1.18
Other	23.73	21.23	21.92
Total Gross Farm Revenue	721.01	699.08	651.96
EXPENDITURE PER HECTARE			
Wages	49.55	47.20	48.44
Animal Health	34.09	35.72	36.22
Weed & Pest Control	12.23	12.18	12.32
Shearing	38.96	40.11	38.48
Fertiliser	80.65	71.23	62.40

**SHEEP
& BEEF**

How Do Financial Returns Compare to Other Land Uses ?



SHEEP & BEEF

