ADVICE TO **GROW** THE RURAL SECTOR

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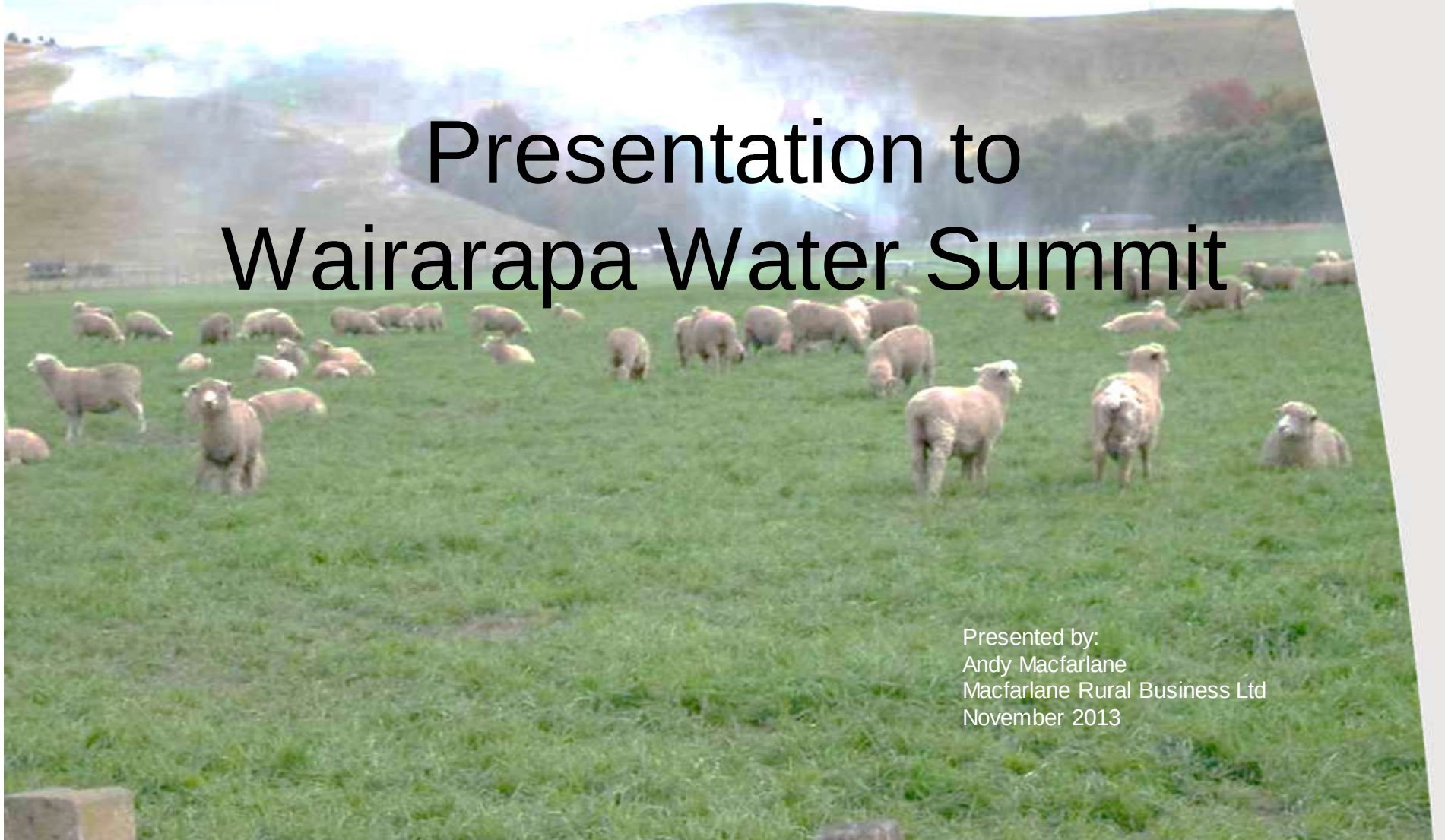

Presentation to Wairarapa Water Summit

Presented by:
Andy Macfarlane
Macfarlane Rural Business Ltd
November 2013

6 key issues for regional stakeholders

1. Will the benefits accrue across all sectors of the economy?
2. Will there be social, environmental and recreational benefits to match economic benefits?
3. Who is paying for the capital?
4. What return will that generate, and how is it measured?
5. What degree of risk is associated with that return?
6. How is the return and risk best communicated?

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8 Key issues for water users

1. How much water do I need ?
   - on an annual basis, or a daily basis
2. How reliable does it need to be?
3. How do I apply it?
4. What is the cost of taking up Wairarapa water and developing my infrastructure?
5. How do I make it pay?
6. What do I have to do to meet required nutrient management outcomes?
7. Can I recover my capital?
8. When do I need to make a decision?

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Outline of Presentation

1. Key issues to think about.
2. Some basic principles from experience (why does it work)
3. What does it cost?
4. 10 Lessons learnt from experience.
5. How do I make it pay

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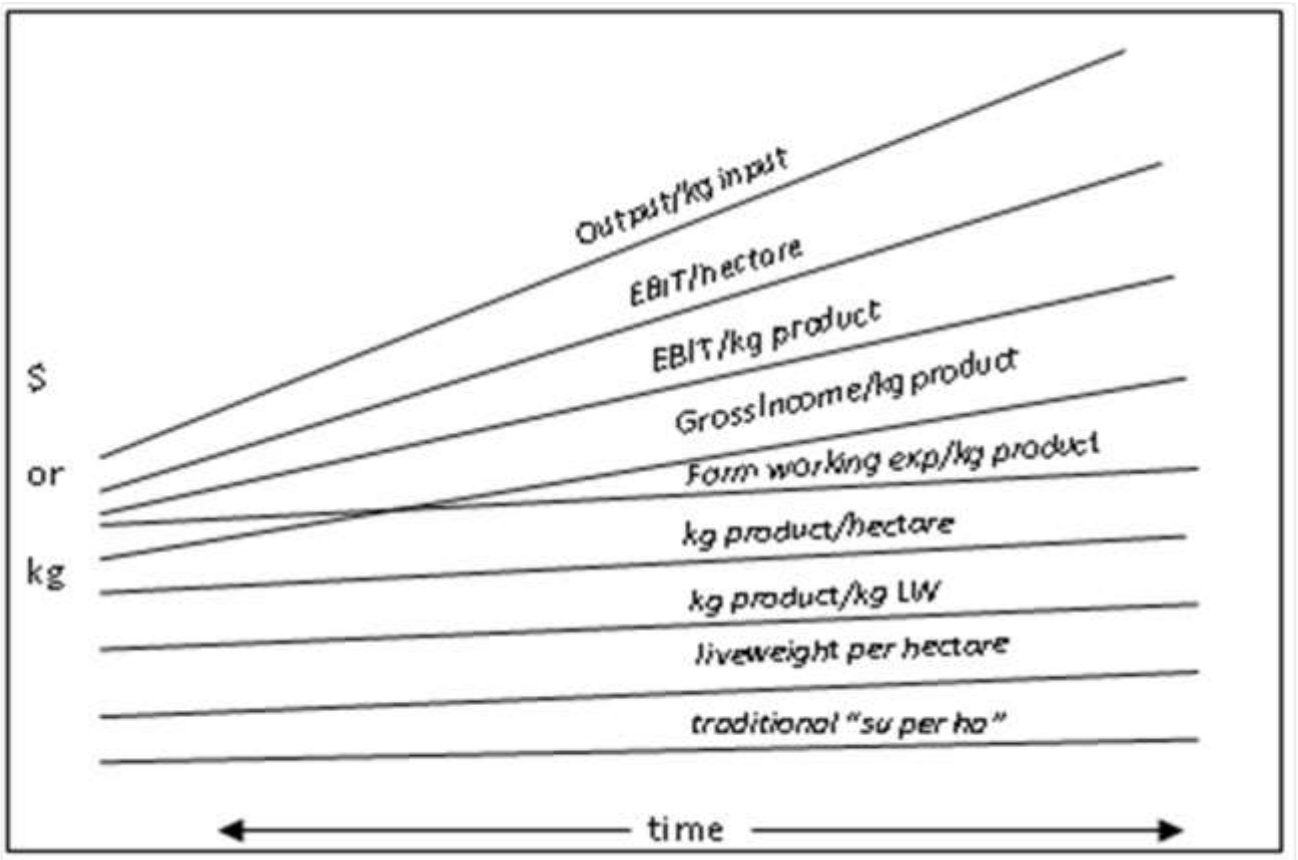
“Success”, as measured by improving productivity, profitability, and resource use efficiency



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Why irrigate?

1. Water is an enabler to new technology

Examples of improvement over the past decade:

Land Use		2002	2012
Wheat	"top yield"	9 t/ha	15 t/ha
Water use		480 mls	300 mls
Increase in productivity/ha			66%
Increase in productivity/ml water applied			267%

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Land Use		2002	2012
Milk			
"Top production (kg MS/ha)		1,000	1,800
Water use		750mls	450mls
Increase in productivity/ha			80%
Increase in productivity/ml water applied			300%
Bull Beef			
"Top" bull beef production			
(kg beef CWG/ha)		670	960
Water use		750 mls	450 mls
Increase in productivity/ha			43%
Increase in productivity/ml water applied			237%

Why irrigate?

2. Water is an “enabler” to new land uses

- NZ will be the worlds largest, most reliable seed nursery.
- We have a major market for fresh produce on our doorstep
- Our cost structures and infrastructure for process cropping, dairy systems, and meat production systems are low.
- The “risk” factor associated with New Zealand is low.

Why irrigate?

3. The larger profit gains from irrigation are typically made in wet seasons! (Gains are made from integrated farming systems, not insurance policy irrigation)

Why irrigate?

4. Water creates certainty, which sharpens the confidence to make timely decisions, which improves profit by itself.

Certainty is a result of predictability.

Why irrigate?

5. Water improves the whole farm, not just the irrigated footprint.

“The golf course effect”

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Why irrigate?

6. Cash is king! The better cash flows enable more effective reinvestment, and greater confidence to borrow for that reinvestment.

You can't be green if you are in the red.

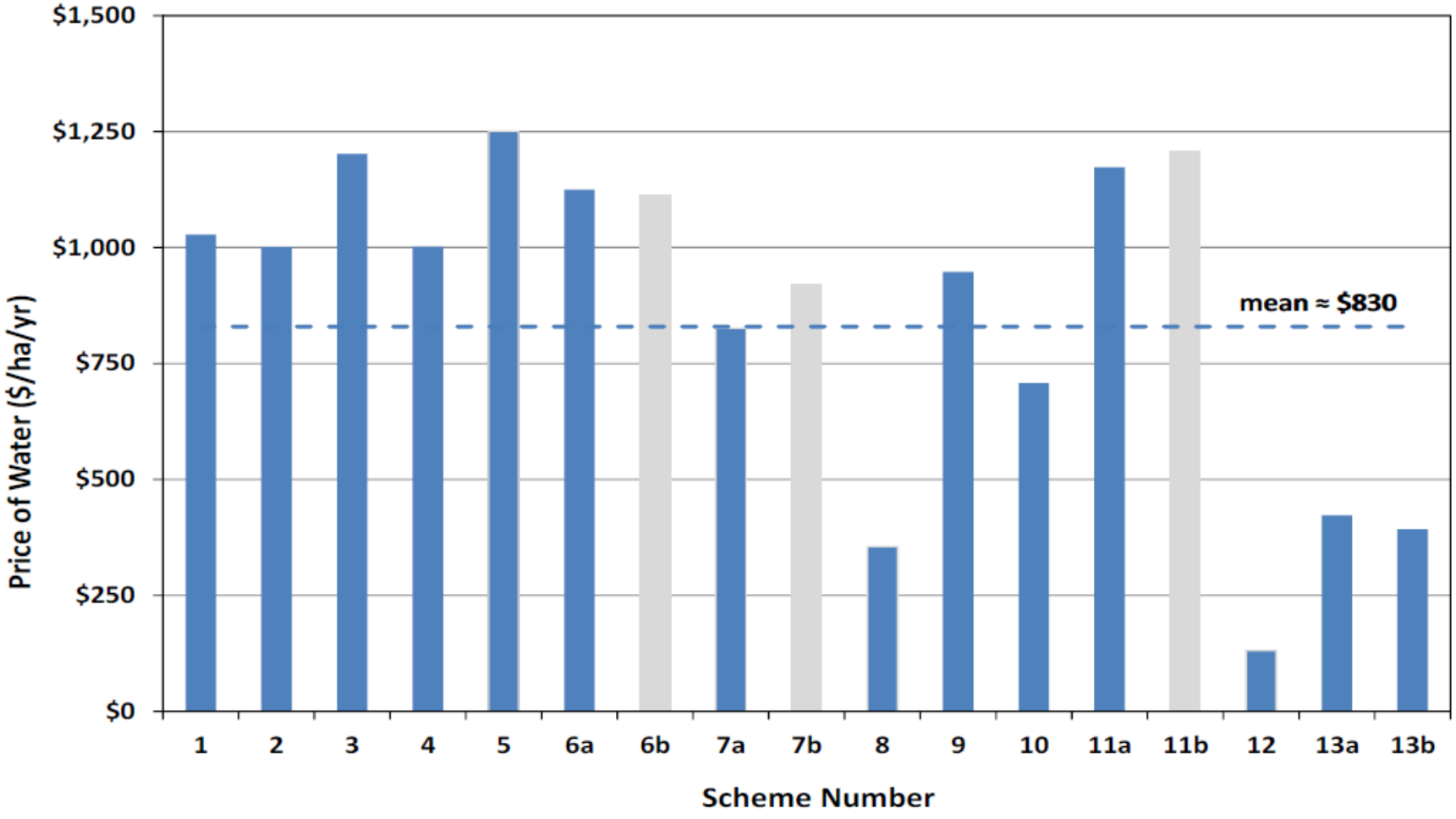
Cost of water

Components of cost

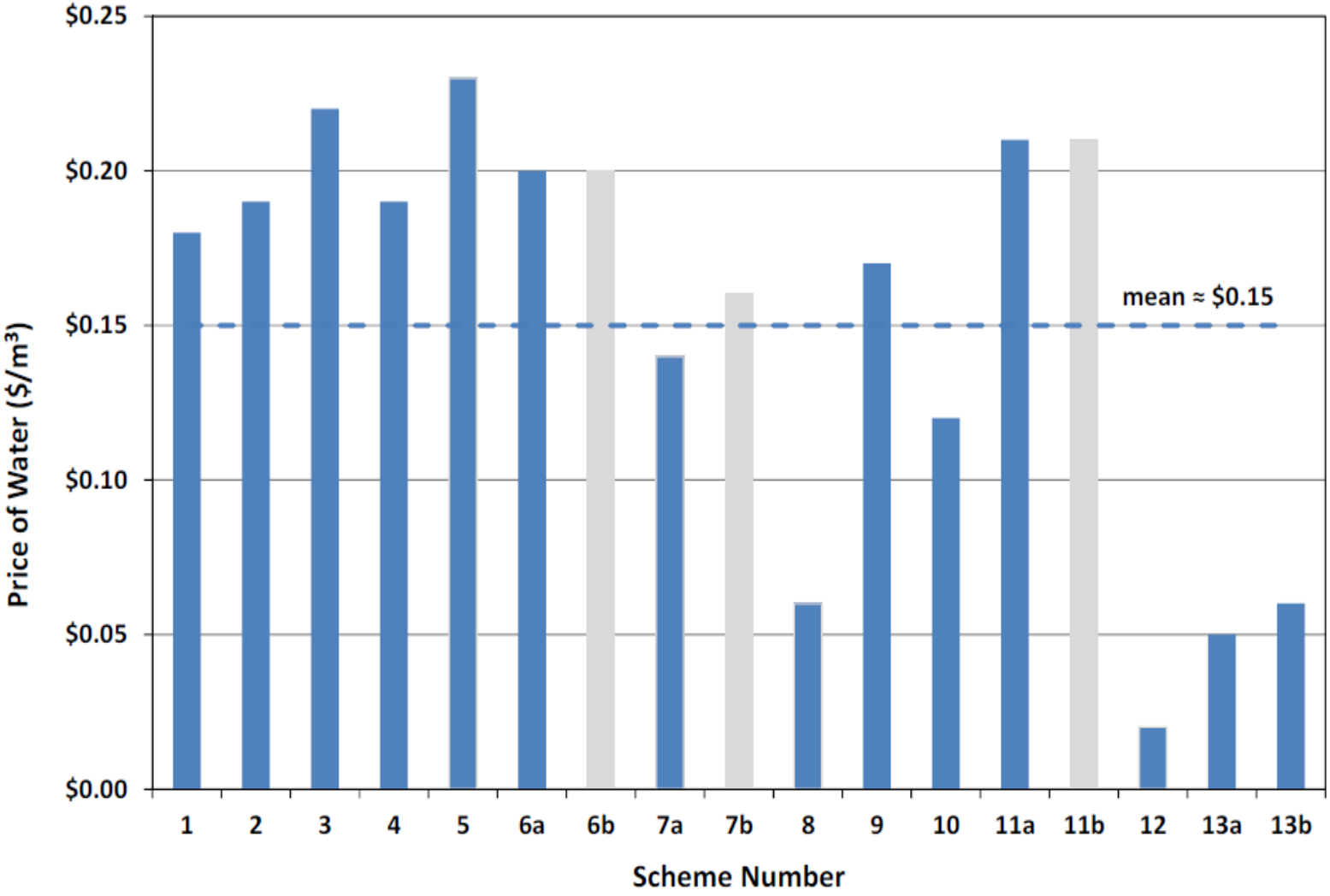
1. Capital ($/ha x cost of capital)
2. Labour
3. Energy
4. R&M
5. Life span
6. Overhead costs
7. Opportunity cost of land

Comparison of Scheme Costs

Canterbury Survey ($/ha)



Canterbury Survey ($/m^3)



Eight lessons learnt from experience

1. Projecting ahead, the returns never looked brilliant (10-15%), but with hindsight, they have always proved better.

2. Water reliability is critical. Lack of reliability
   - Undermines the confidence the water should provide
   - Wastes water ("just in case" watering, rather than "just in time")
   - Downgrades "system intensity"

3. Irrigation schemes establish best when all costs are equalised:

    - All costs (scheme capital and running costs) must be equal
    - The most expensive farms create the scale needed for the low cost farms to get going.

4. Overdesign!

- Most people come back for more.
- It is very expensive to make pipes larger.
- Integenerational change expands demand.
- Not everyone “sees” the benefit of day one, but a larger part of that group come on board later.
- Later adopters are often more aggressive in water demand than early adopters.

5. Cost overruns are common with on farm development but usually end up being better value for money, as farmers often have “good ideas” as they go !

6. Some of the highest returns accrue to irrigating and intensifying a small piece of a larger property.

- Plenty of good examples in MacKenzie, Opuha, North Island.
- Returns are harder to “calculate” in advance
- Typically result from a small gain in productivity over a larger number of stock units.
- Much of that productivity gain due to being able to look after than dryland part of the farm better (also results in major environment benefits)

7.

- Dairy returns are typically not a higher return on capital, but do result in a much higher return per hectare resulting from high capital investment (grapes are the same). Be wary if that investment is all borrowed money.
- Dairy's key advantage is its efficient conversion of pasture grown to pasture utilised, to saleable output.
- Dairy “metrics” are more easily understood, by farmers, advisers, bankers, and investors.

8. History has shown that from a capital perspective, dryland farms neighbouring irrigated farms lose capital gain potential. From a cash flow potential, they benefit from land use change on neighbouring farms.

We have spent 25 years thinking “buy the neighbour now, the water can be obtained later. Now, we are at the point of thinking “use the water now while it is available. The land can be bought later”

Making it pay

- Average return 12.3%
- Typical range 5% - 30%

Conclusion

Making money with water has never been easy and never will!

but I have met very few farmers or communities who would go back to dryland!

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