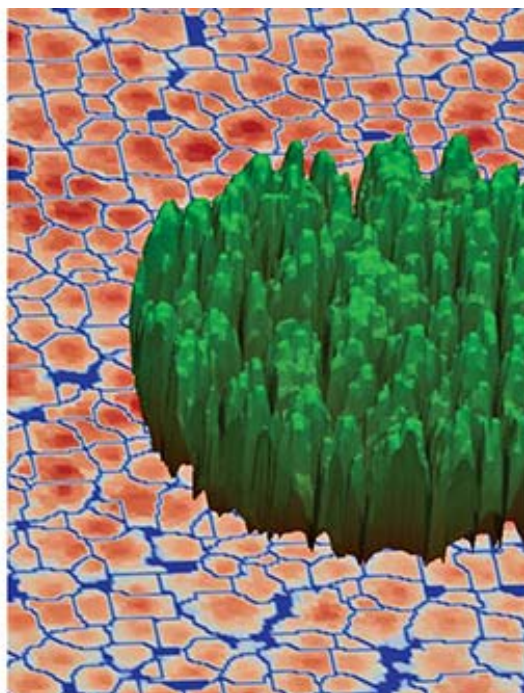


Forestry and Dairy in the Central North Island

Juan J. Monge, Sandra J. Velarde and Warren Parker



Objectives

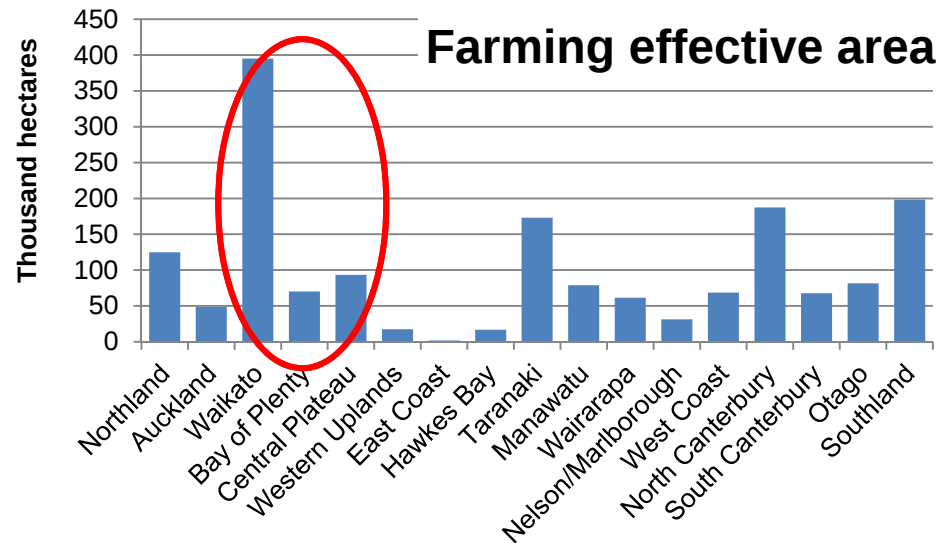
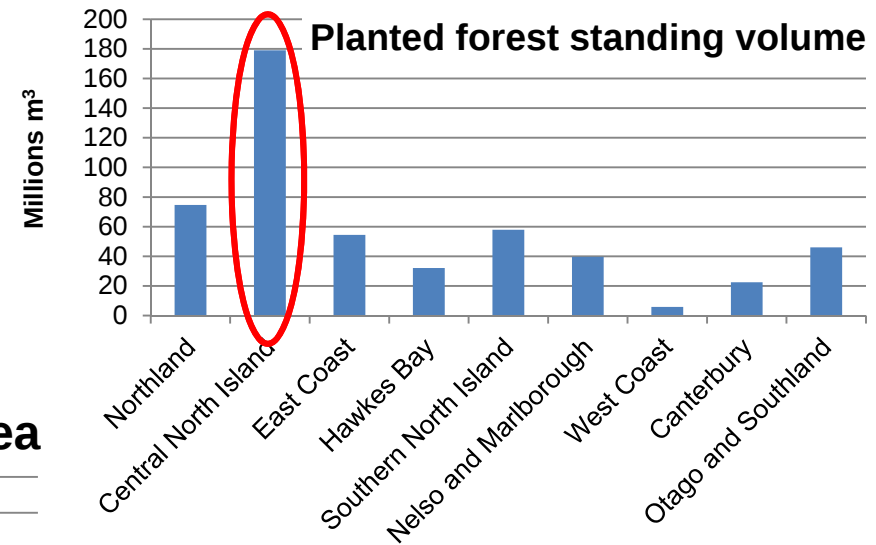
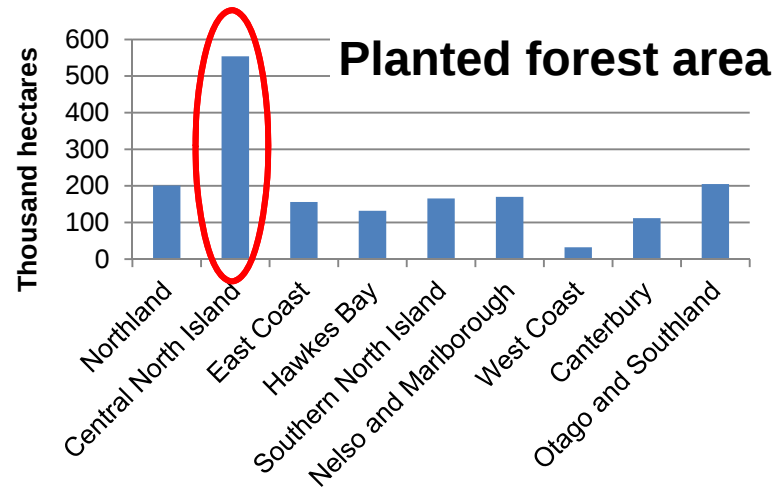
- Contextualize forestry's importance as an industry
- Compare apples to apples – per year per hectare
 - Farmers do not plan long-term
 - Economic and environmental
- Identify complementarities
- Analyze risk and uncertainty for land-use alternatives
- Scenario analysis of environmental policies

Land use drivers

- Economic
 - Profits
 - Land values
- Land quality
 - Prime
 - Marginal
- Risk attitudes
 - Averse
 - Lover

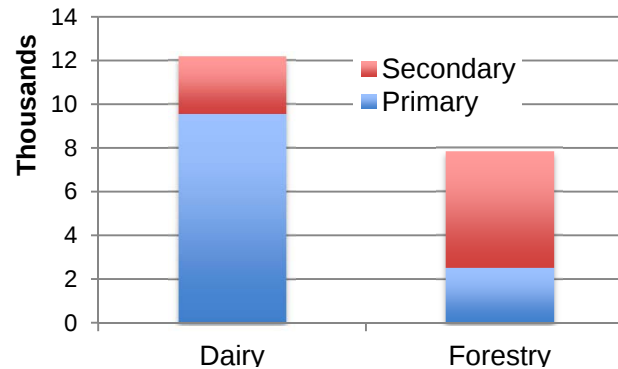


Why the Central North Island?

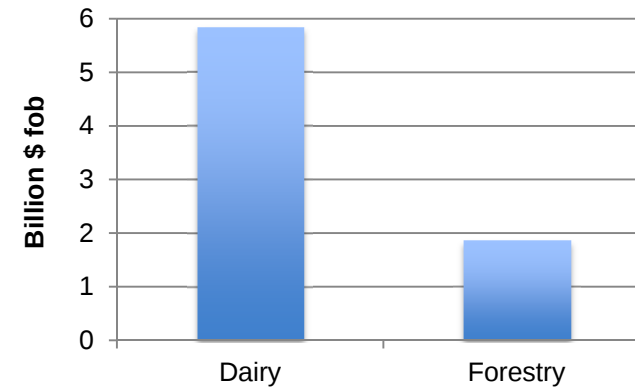


General economic facts

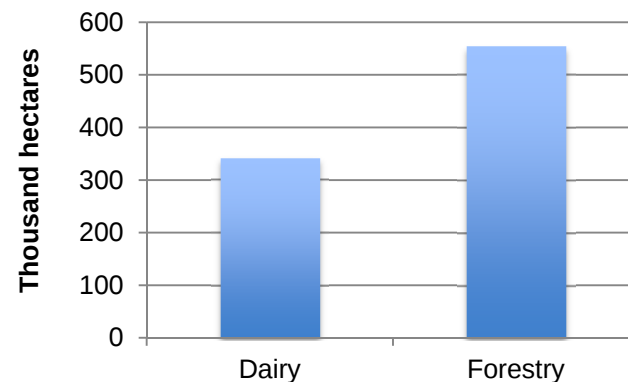
- Employment counts



- Exports from Port of Tauranga



- Area



Apples to apples comparison

Dairy

- Annual
- Milk solid kilograms



Forestry

- 28 years
- Cubic meters

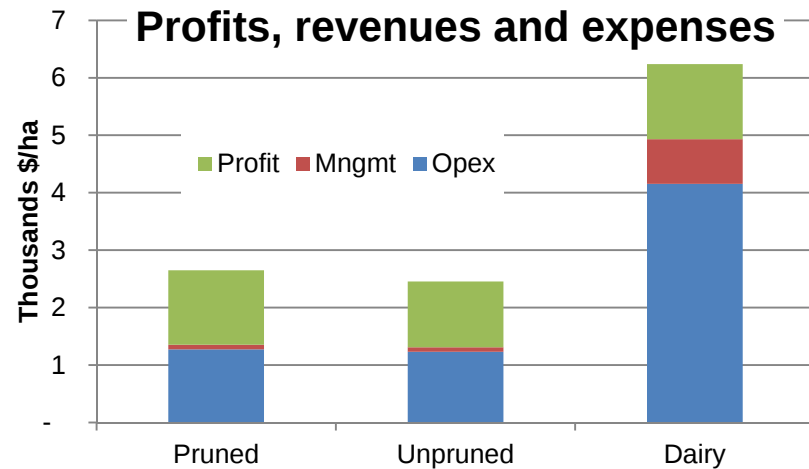


Land

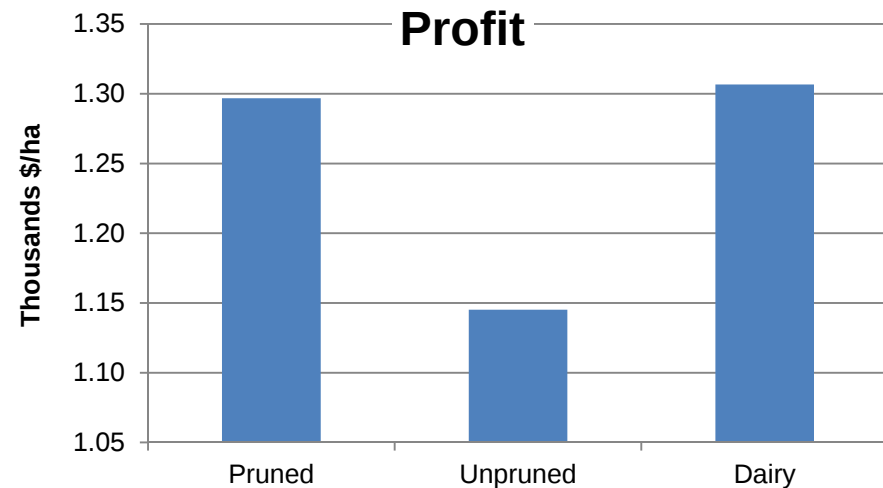


Per hectare

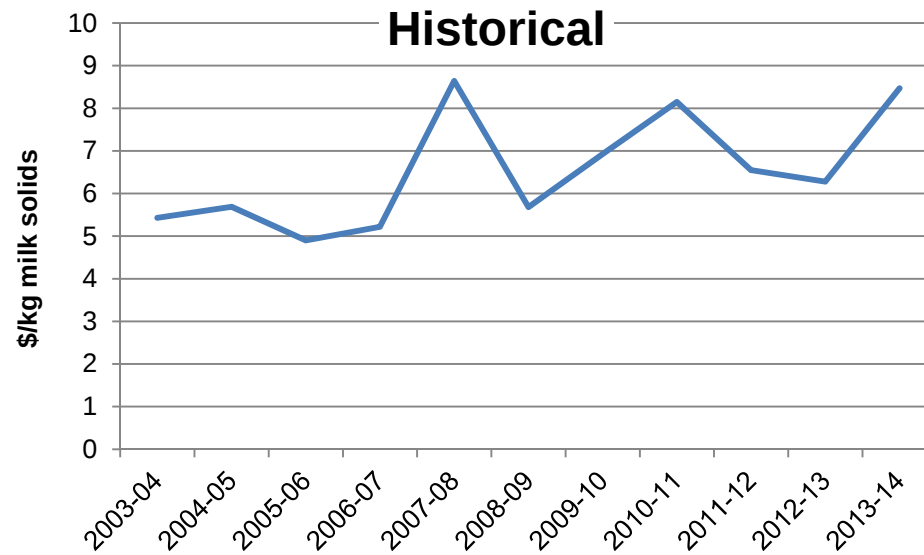
Apples to apples comparison



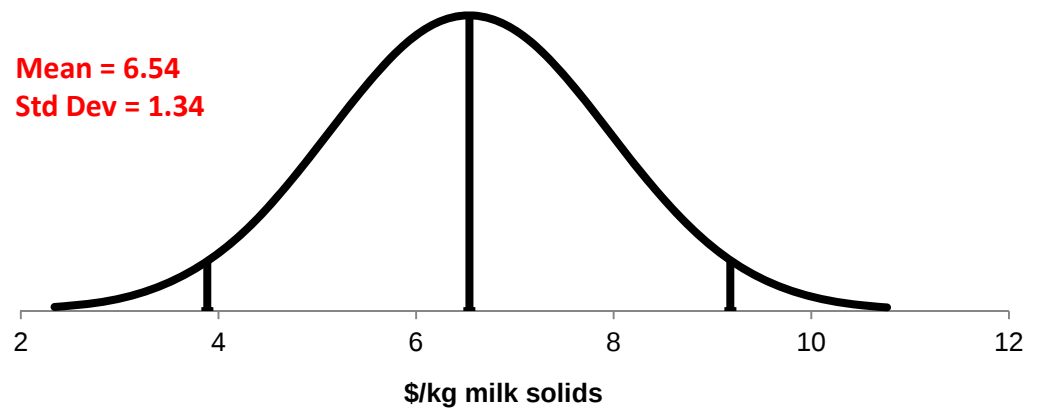
Only part of the picture



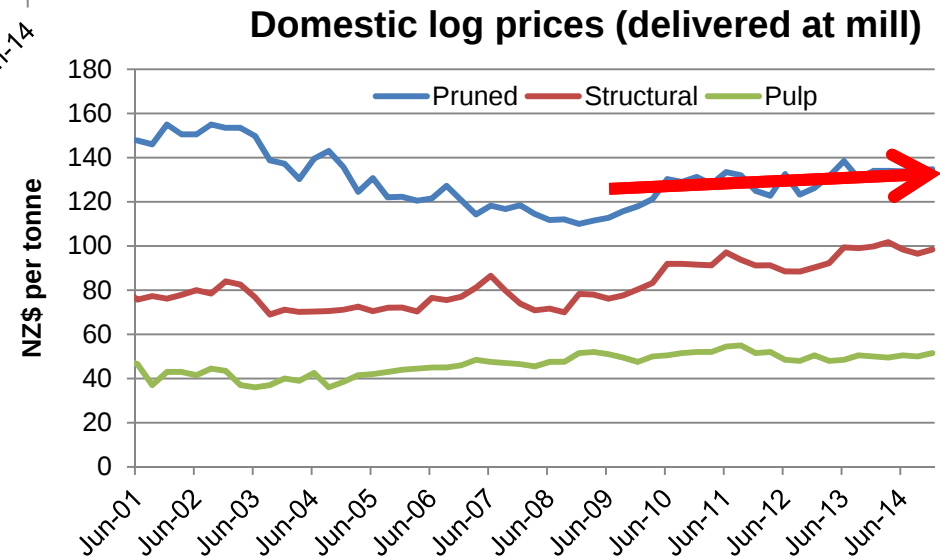
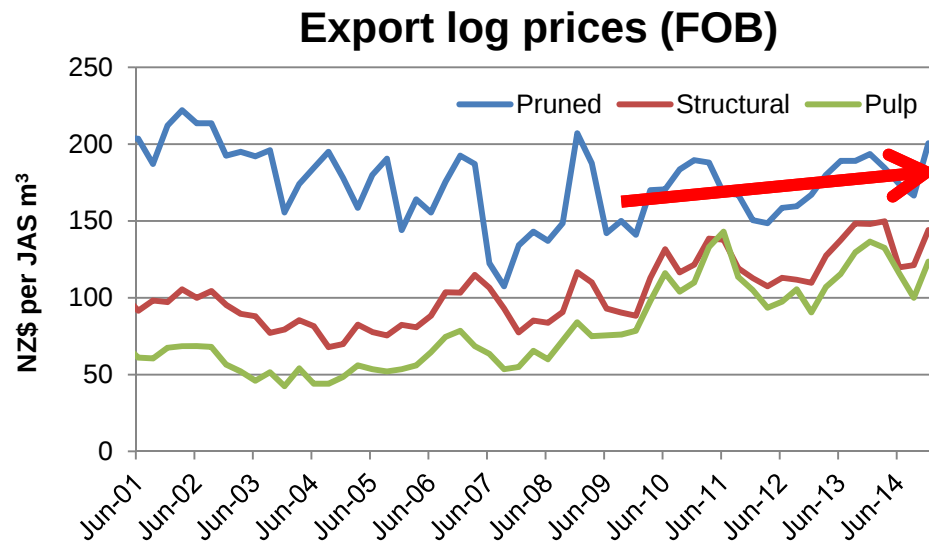
Dairy payout



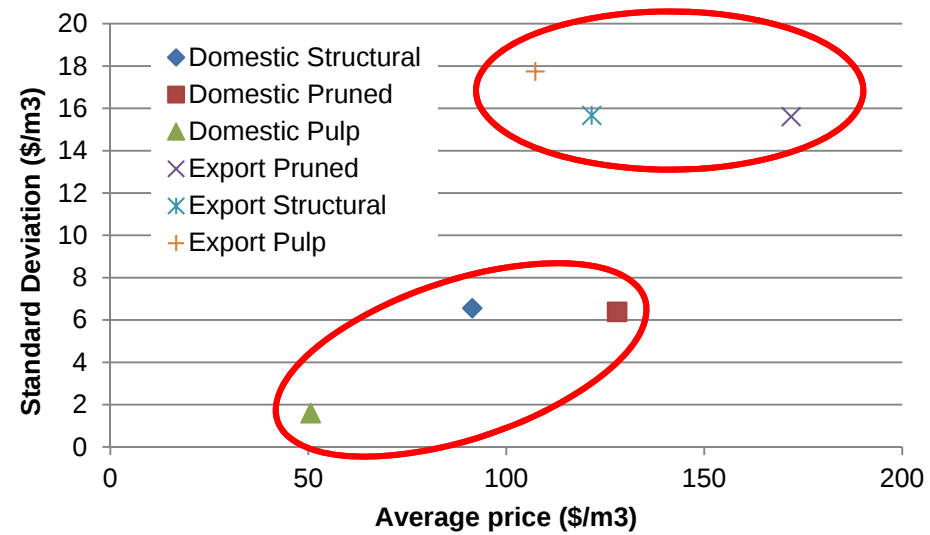
Payout variation



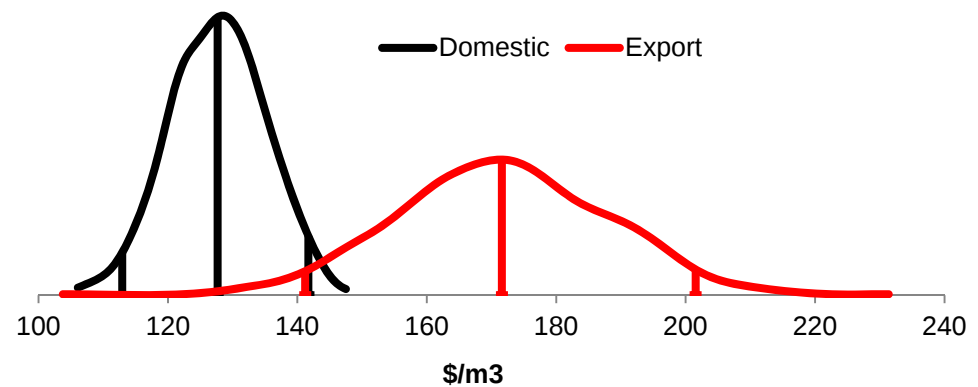
Historical log prices



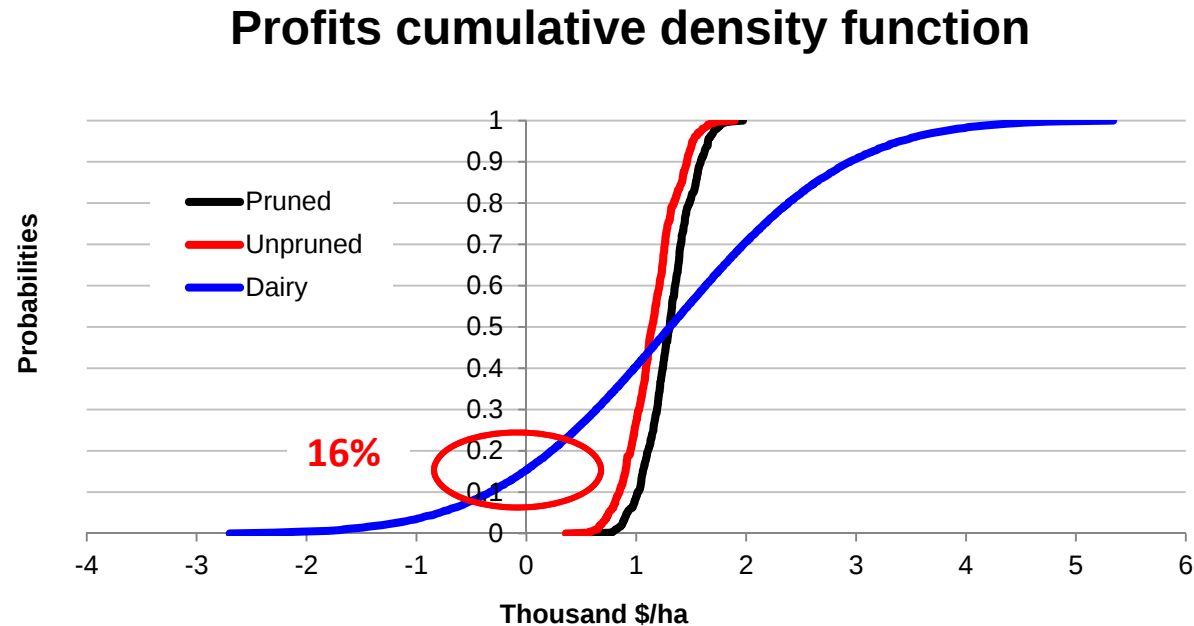
Log price volatility



Pruned log price variation



Apples to apples risk



- Practical representation of risk
- Better alternative if further to the right
- Downside risk

The entire picture

	Units	Dairy	Forestry
Economic			
Area	Hectares	340,376 ^a	553,956
Exports ^b	Billion \$	5.8	1.8
Employment ^c	Employee counts	12,199	7,865
Profits	\$	1,307	1,145 ^d
Environmental			
Nitrogen	kg/ha/yr	15 – 115	3 – 28
Phosphorus	kg/ha/yr	0.30 – 1.70	0.03 – 0.10
GHG	Tonnes CO ₂ e/ha/yr	+9	-11

^a Effective area

^b From the port of Tauranga

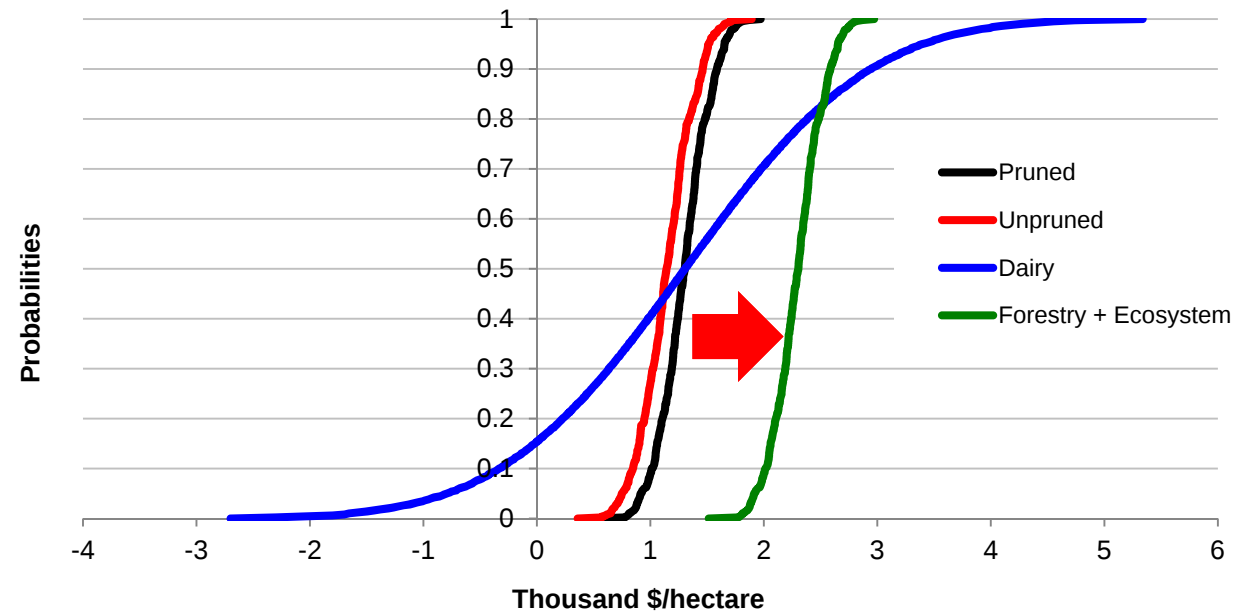
^c Considers primary and secondary industries

^d Unpruned regime

Complementarity opportunities

Future applications

- Inclusion of ecosystem services through:
 - Payments per hectare
 - Afforestation cost sharing





<http://research.nzfoa.org.nz/>
www.scionresearch/gcff

Juan J. Monge
Resource Economist
juan.monge@scionresearch.com

Date: 24/3/15



Funding Support Provided by the Forest Growers Levy Trust

