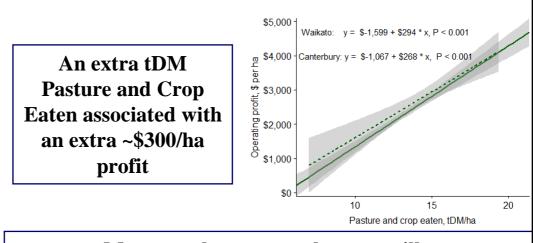


Resilient pasture-based systems:

2005/06 to 2016/17	Top 25%	Others	Signif.
Operating Return on Assets	7%	3%	****
Pasture and Crop eaten	13.6	12.4	****
Stocking rate	3.2	3.1	**
MS per cow	390	360	****
Import & Grazing, kg/cow	610	740	n.s.
MS per ha	1 160	1 090	****
Opex per ha	\$4 770	\$5 240	***
Opex per kg MS	\$4.05	\$4.90	****
Gross farm revenue/kgMS	\$6.75	\$6.60	n.s.
Operating profit/kgMS	\$2.60	\$1.60	****
Asset value, \$/ha	\$48 900	\$56 700	****



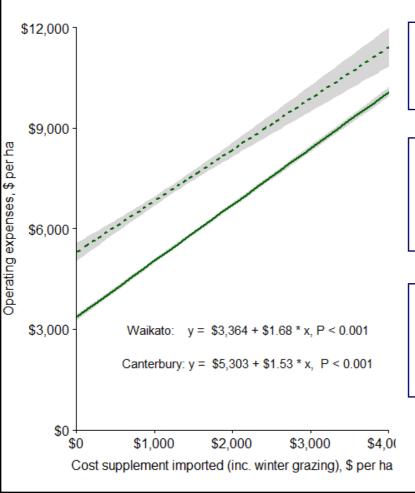
More supplement equals more milk: Does it equal more money?

	MS/ha	Profit,ROA
Low (System 1 and 2)		
Medium (System 3)	+66	Not Signif.
High (Systems 4 and 5)	+149	Not Signif.

Lincoln University: Ma, Renwick & Bicknell (2018)

Lessons from a decade of data



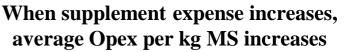


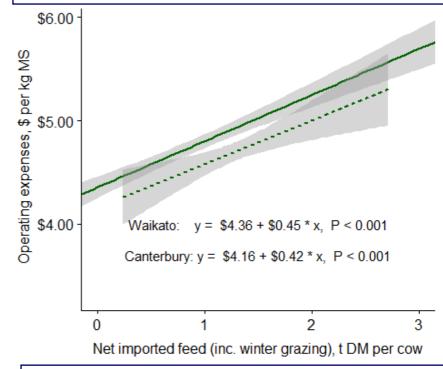
When supplement expense increases, so do other expenses

Waikato: \$1.68 Canterbury: \$1.53 Ireland: \$1.53

UK: \$1.62

Then the marginal cost of milk can exceed the marginal revenue!





A higher Opex per kg MS reduces the businesses ability to weather downturns