

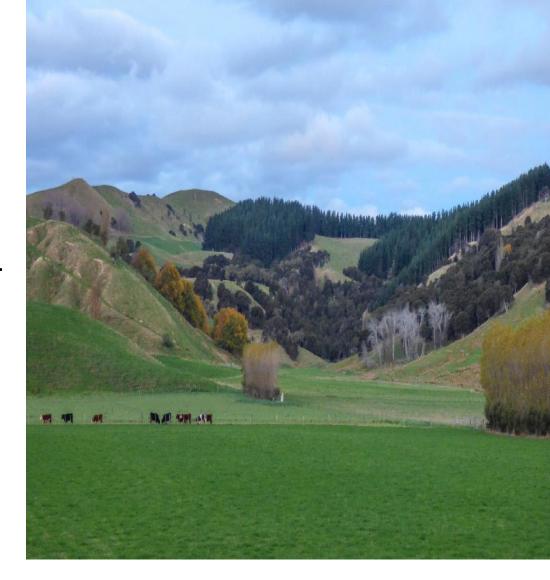
There is a report...

https://www.fertiliser.org.nz/Site/resear ch/projects/forestry-on-farms.aspx



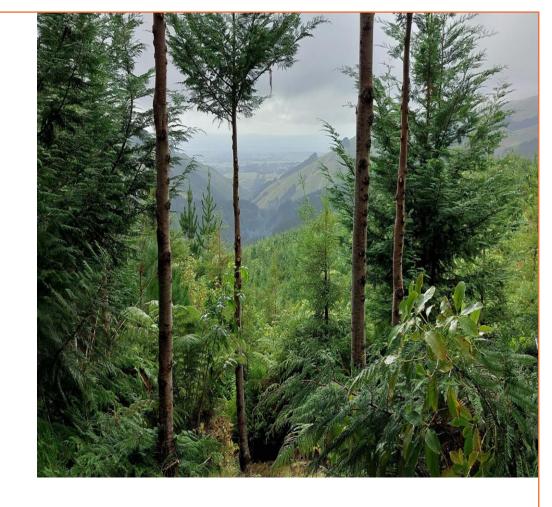
Objectives:

- Understand the opportunity to farm better class farmland more productively while planting forestry on poorer class farmland
- Analysis of the economic impact at the on-farm level of planting areas into forest
- Assessment of the wider macro-economic impacts of such land use changes
- Assessment of the impact of blanket planting (i.e. whole farms) into forestry for carbon/timber



Methodology:

- 2 S&B farms set up Northland & Hawke's Bay, based on B+LNZ Economic Service stats
- Initially 10% of the (lower productive area) farm planted into forestry
- 30% of the farm planted into forestry
- 100% of the farm planted into forestry
- Assessed impact on farm profitability & GHG emissions with/without carbon
- Asses wider impact on the region assuming all farms planted up



Tree spp were:

- Pines
- Cypress
- **Natives**

Results: Changes in Farm Profitability

Northland	EBITDA Total	% Change from Base	EBITDA/ha	% Change from Base	SU Eff/ha	Stock Numbers Adjustment
Base	\$76,564		\$223		9.9	
10% Forestry	\$72,376	-5%	\$234	5%	10.4	Sheep & Cattle reduced 5%
30% Forestry	\$52,940	-31%	\$221	-1%	11.1	Sheep & Cattle reduced 22%
Steep	\$3,101		\$69			
Rest of Farm	\$73,463		\$247			

		% Change		% Change		Stock Numbers
Hawkes Bay	EBITDA Total	from Base	EBITDA/ha	from Base	SU Eff/ha	Adjustment
Base	\$342,666		\$525		9.0	
						Sheep & Cattle reduced
10% Forestry	\$328,633	-4%	\$559	7 %	9.5	5%
						Sheep & Cattle reduced
30% Forestry	\$274,730	-20%	\$601	15%	10.3	20%
Steep	\$91,761		\$370			
Rest of Farm	\$250,905		\$620			

Results: Changes in Farm Production

			% Change cf		% Change cf
Northland	Base	10% Forest	Base	30% Forest	Base
kg sheep meat sold	6,493	6,141	-5.4%	5,039	-22.4%
kg wool sold	2,176	2,064	-5.1%	1,693	-22.2%
kg beef sold	82,934	78,660	-5.2%	64,522	-22.2%
			% Change cf		% Change cf
Hawkes Bay	Base	10% Forest	Base	30% Forest	Base
kg sheep meat sold	56,643	53,832	-5.0%	45,301	-20.0%
kg wool sold	18,616	17,736	-4.7%	15,073	-19.0%
kg beef sold	76,594	72,727	-5.0%	61,359	-19.9%

Results: Changes in GHG Emissions

		% Change from	Total Biological T	% Change from
Northland	Total CO ₂ e/ha	Base	CO ₂ e/farm	Base
Base	3.71		1,271	
10% Forestry	3.91	5.4%	1,208	-4.9%
30% Forestry	4.17	12.4%	1,002	-21.2%
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		% Change from	Total Biological T	% Change from
Hawkes Bay	Total CO ₂ e/ha	Base	CO ₂ e/farm	Base
Base	3.11		2,030	
10% Forestry	3.28	5.5%	1,928	-5.0%
30% Forestry	3.57	14.8%	1,631	-19.6%

Results: Impact of Carbon

Northland	Total EBITDA No Carbon	Net EBITDA after accounting for carbon	Hawkes Bay	Total EBITDA No Carbon	Net EBITDA after accounting for carbon
Base	\$76,832	\$71,424	Base	\$342,825	\$334,194
10% Pines	\$74,328	\$106,963	10% Pines	\$337,045	\$401,079
30% Pines	\$64,668	\$174,822	30% Pines	\$350,904	\$512,185
100% Pines	\$64,985	\$446,009	100% Pines	\$173,275	\$898,664
10% SPS	\$66,780	\$85,192	10% SPS	\$317,342	\$354,184
30% SPS	\$38,324	\$105,391	30% SPS	\$241,308	\$370,109
100% SPS	-\$35,759	\$201,777	100% SPS	-\$76,442	\$375,777
10% Natives	\$45,326	\$59,421	10% Natives	\$276,522	\$305,114
30% Native	-\$29,869	\$24,123	30% Native	\$117,346	\$221,267
100% Natives	-\$275,295	-\$81,298	100% Natives	-\$524,104	-\$154,775
Mixed	\$21,082	\$98,153	Mixed	\$219,207	\$376,561
Pines/Periodic Harvest	\$50,431	\$110,748	Pines/Periodic Harvest	\$276,813	\$396,299

Results: Impact of Carbon#2

Northland	Area in Pasture (ha)	Area in Forest (ha)	2025 Carbon Levy (\$)	Forestry Credit	Net Levy	EBITDA/ha Post Levy
Base	343	0	\$5,408		-\$5,408	\$208
10% Pines	309	34	\$5,135	\$71,672	\$66,537	\$406
10% SPS	309	34	\$5,135	\$37,281	\$32,146	\$305
10% Natives	309	34	\$5,135	\$18,785	\$13,650	\$252

Hawkes Bay	Area in Pasture (ha)	Area in Forest (ha)	2025 Carbon Levy (\$)	Forestry Credit	Net Levy	EBITDA/ha Post Levy
Base	653	0	\$8,631		-\$8,631	\$512
10% Pines	588	65	\$8,172	\$137,020	\$128,848	\$701
10% SPS	588	65	\$8,172	\$71,273	\$63,101	\$600
10% Natives	588	65	\$8,172	\$35,913	\$27,741	\$546

Results: Regional Impact (10% Pines)

Northland														
Year	0	5	10	15	20	25	28	30	35	40	45	50	55	56
GDP \$m	-58.4	-13.3	-13.3	-13.3	-13.3	-13.3	2,007	-13.3	-13.3	-13.3	-13.3	-13.3	-13.3	2,007
MECs	100	-101	-101	-101	-101	-101	17,568	-101	-101	-101	-101	-101	-101	17,568
Hawke's Bay	/													
Year	0	5	10	15	20	25	28	30	35	40	45	50	55	56
GDP \$m	-93.5	-20.2	-20.2	-20.2	-20.2	-20.2	4,298	-20.2	-20.2	-20.2	-20.2	-20.2	-20.2	4,298
MECs	194	-78	-78	-78	-78	-78	48,575	-78	-78	-78	-78	-78	-78	48,575

Significant impact on the regional economy, but its very good from an investment perspective

Discussion

- Planting lesser productive land into forestry resulted in intensification of the better land – production, profitability and GHG emissions per ha increased, while total farm decreased
- Planting into forestry held the total farm EBITDA with 10% pines, but reduced for all other forestry scenarios
- Advent of a price for carbon meant that the most profitable option was 100% pines, followed by 100% cypress
- From a regional economy perspective the impact was negative, until harvest at which stage there was a significant spike in GDP/employment
- From an investment perspective carbon farming is very positive
- Want trees on farms, not farms into trees

