



Renewing paddocks which have poor growth or high weed content can give high financial returns. In this example we have used top end renewal costs (\$1330/ha), but this still returns \$6290/ha net income over 4 years. This is an internal rate of return of 139%¹, one that few other investments can match.

Typical costs of renewal

Direct costs/ha	\$ (inc. GST)
Appropriate herbicide(s) applied	60
Light disc then drill	160
Maxsyn perennial ryegrass 18 kg/ha, Kotuku 2 kg/ha, Ruru 2 kg/ha (all treated) ²	380
Slug bait ²	100
Cambridge roll ³	80
Establishment fertiliser (DAP 200 kg/ha) including spreading ³	380
Broadleaf herbicide	70
Total cost	\$1330

¹ Based on annual cash flow after investment (financial-calculators.com)
² Estimated retail prices, October 2024
³ Average price for North and South Island-based contractors, October 2024

Measuring paddock performance

The benefit of renewal is in the table below, based on the assumptions:

- 3 t DM/ha DM yield per year increase from new pasture
- +0.6 MJ/kg DM higher ME (science says 0.6 - 0.9 ME increases are typical)
- 5% greater utilisation from better ME & palatability (assumed +5%).

Returns renewal vs do nothing (leave underperforming pasture) over 4 years

Extra grown (t DM/ha/year)		Do nothing	Renew
1. DM yield	Extra growth 3t DM/ha/year	0	+12 t DM/ha
	DM lost during renewal	0	-1.5 t
	Net increase	0	10.5 t DM/ha
	Extra kg MS ⁴	0	710
2. Higher ME new pasture	Extra kg MS ⁵	0	330
3. Utilisation	Extra kg MS ⁶	0	230
Total extra kg MS		0	1270 kg MS
Income extra MS @ \$8/kg		0	\$10,160
Cost of renewal (table above)		0	-\$1330
Variable cost extra MS @ \$2/kg MS ⁷		0	-\$2540
Net increase income		0	\$6290
Internal rate of return		0	139%

⁴ 3 t DM/ha/year extra yield, utilisation 80%, average ME 11 conversion of 130 MJ ME/kg MS

⁵ Go from 11 to 14 t DM/ha/year yield, 80% utilised, and an 0.6 MJ ME/kgDM increase, conversion 80MJ ME/kgMS.

⁶ Increase 5% pasture utilisation of 14 t DM/ha/year yield

⁷ Variable cost increase of extra MS (While most costs are fixed (e.g. land, labour, rates), a portion of farm costs increase (e.g. vat refrigeration, extra cows)). This varies between farms.