



RED MEAT UPDATES

T A S M A N I A

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The cost of irrigating perennial and annual fodder crops

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Introduction

- Extensive Tasmanian irrigation development, limited areas of traditional cash crops — opportunity for red meat industry.
- Aim: To relate a range of farm irrigation set-ups and water source costs, with the returns from a range of fodder crop types and livestock enterprises

Assumptions

- Pivots and linear irrigator pumping costs a lot less than gun (typically \$40/ML vs \$100+/ML)



- Manager/labour costs: \$100,000 labour unit — 50% of time pa
- 500ha total area irrigated pivot or linear, vs 160ha gun (\$100/ha vs \$300/ha)
- Repairs and maintenance: pivots 0.7% pa of value pumps, pipes, pivot etc, guns 1%

Assumptions

- Opportunity cost all capital 4% pa
- Actual (not tax) depreciation rate average all pumps, mains, guns, pivots etc.

Pivot system 6% pa, hard hose system 9% pa

- 5ML applied pa: perennial pastures, clover, lucerne etc.
- 2.5 + 2.5 = 5ML applied brassica and ryegrass fodder crop

Infrastructure cost

- 80 ha pivot system: \$4100/ha
- 20ha pivot system: \$5500/ha
- 100ha hard hose system: well laid out, 400m runs, five hard hoses, mains and hydrants, pumps etc., 20% of 4wd tractor, night-time watering plus 40% of days: total \$3500/ha

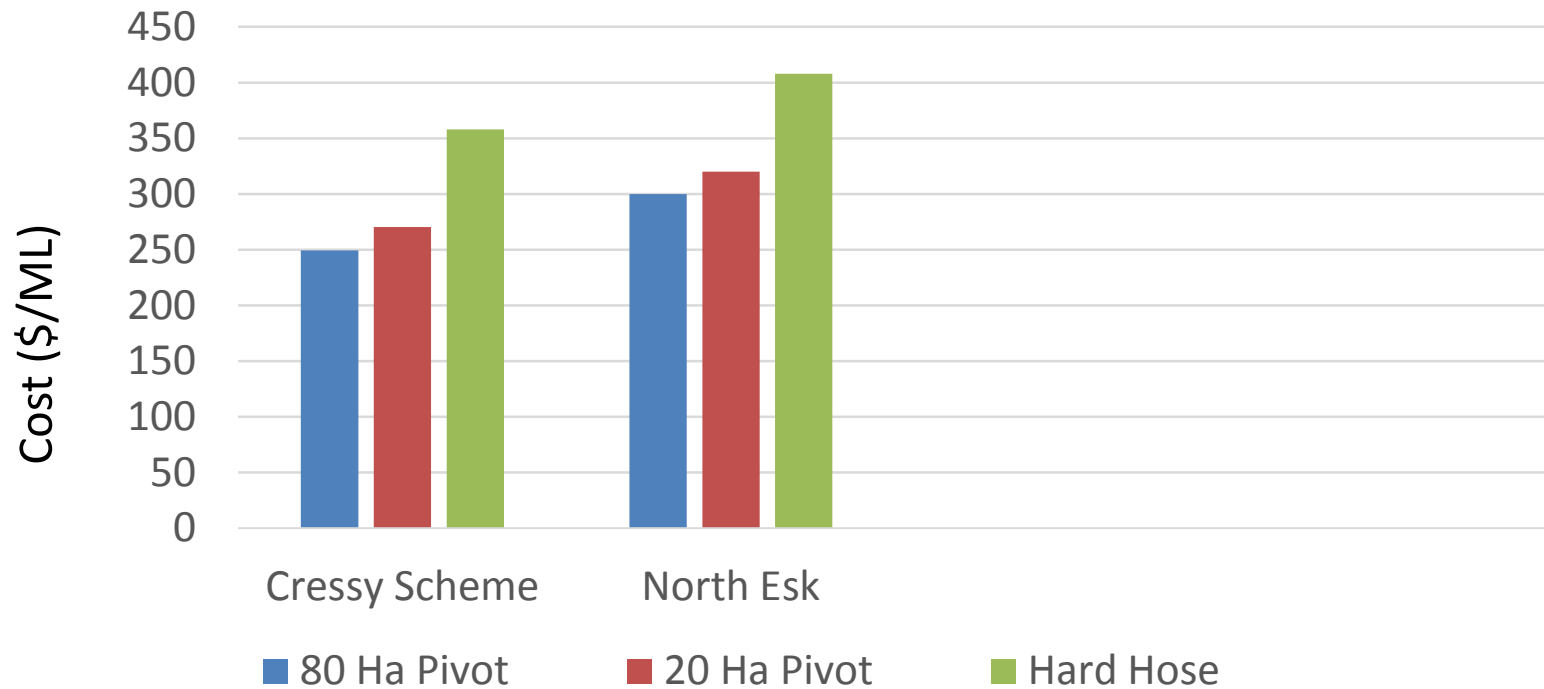
Water source costs

- Capital value all 95% surety water rights: \$1500/ML
- Real value of water right keeps up with inflation
- Annual usage and fixed charges total:
 - Cressy scheme = \$39.50/ML pa,
 - North Esk scheme = \$90/ML pa

Dry matter responses — Cressy

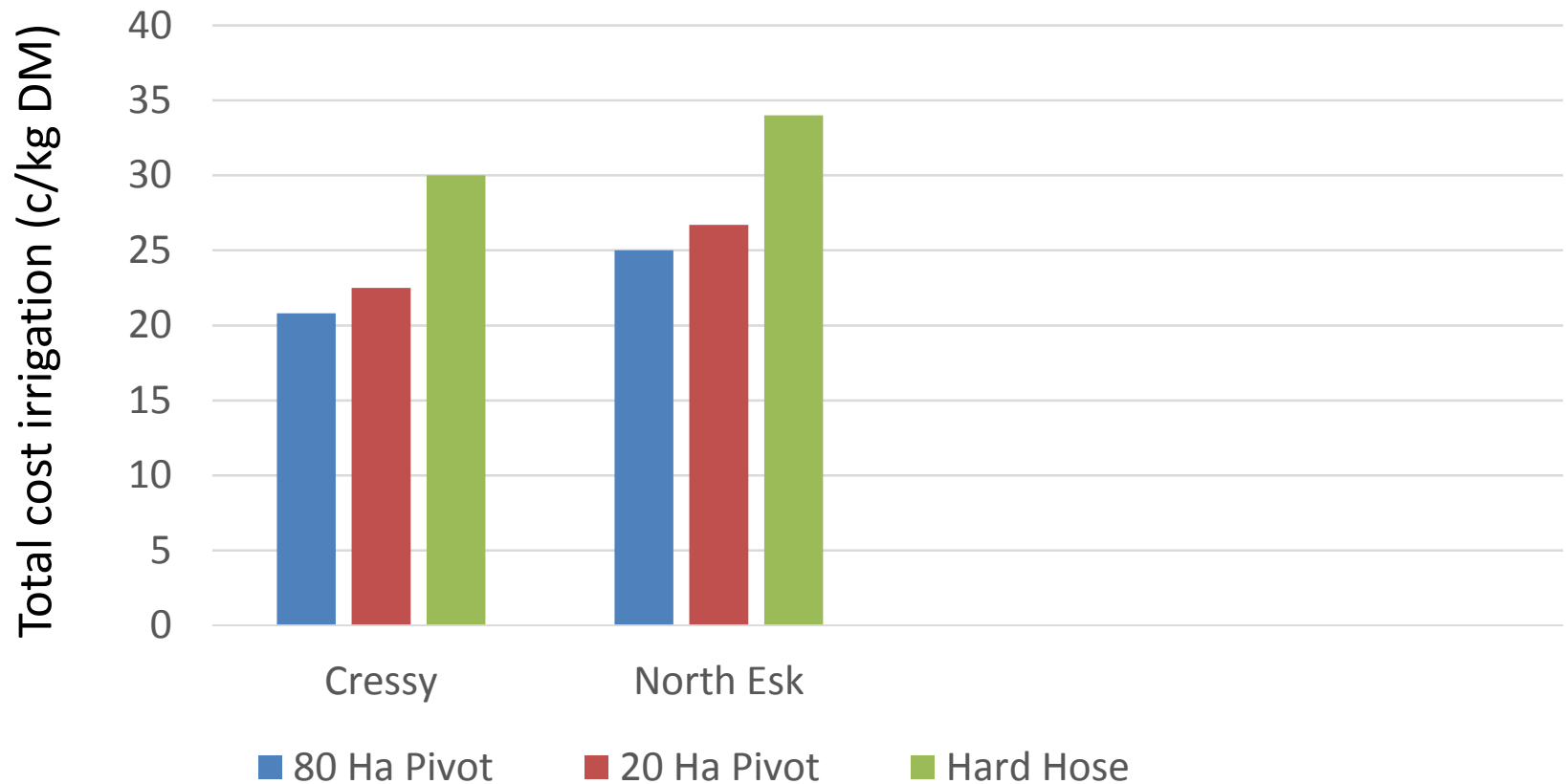
- Ryegrass/white clover permanent pasture: 1.2t/ML
- Turnips: 2.2t/ML
- New February-sown pasture: 1.3t/ML
- Lucerne (established): 2t/ML
- White clover(established): 1.6t/ML
- Break-even value of dry matter (DM) is net of other growing costs and takes into account feed conversion efficiency and average lamb and beef prices past 12 months.

Irrigation cost per scheme and delivery system



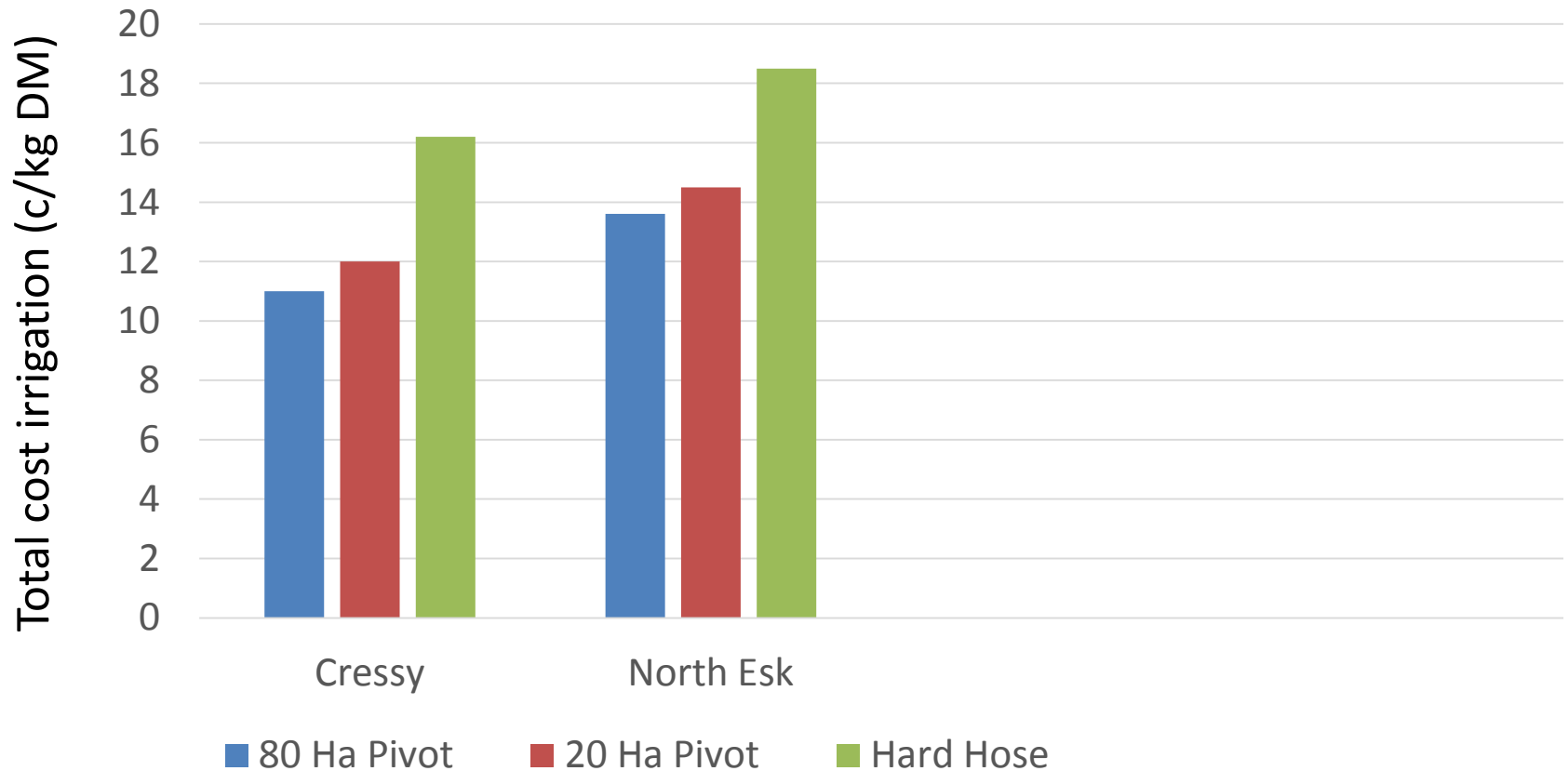
Perennial ryegrass/ white clover pasture

Break-even for finishing lambs: 25c/kg DM

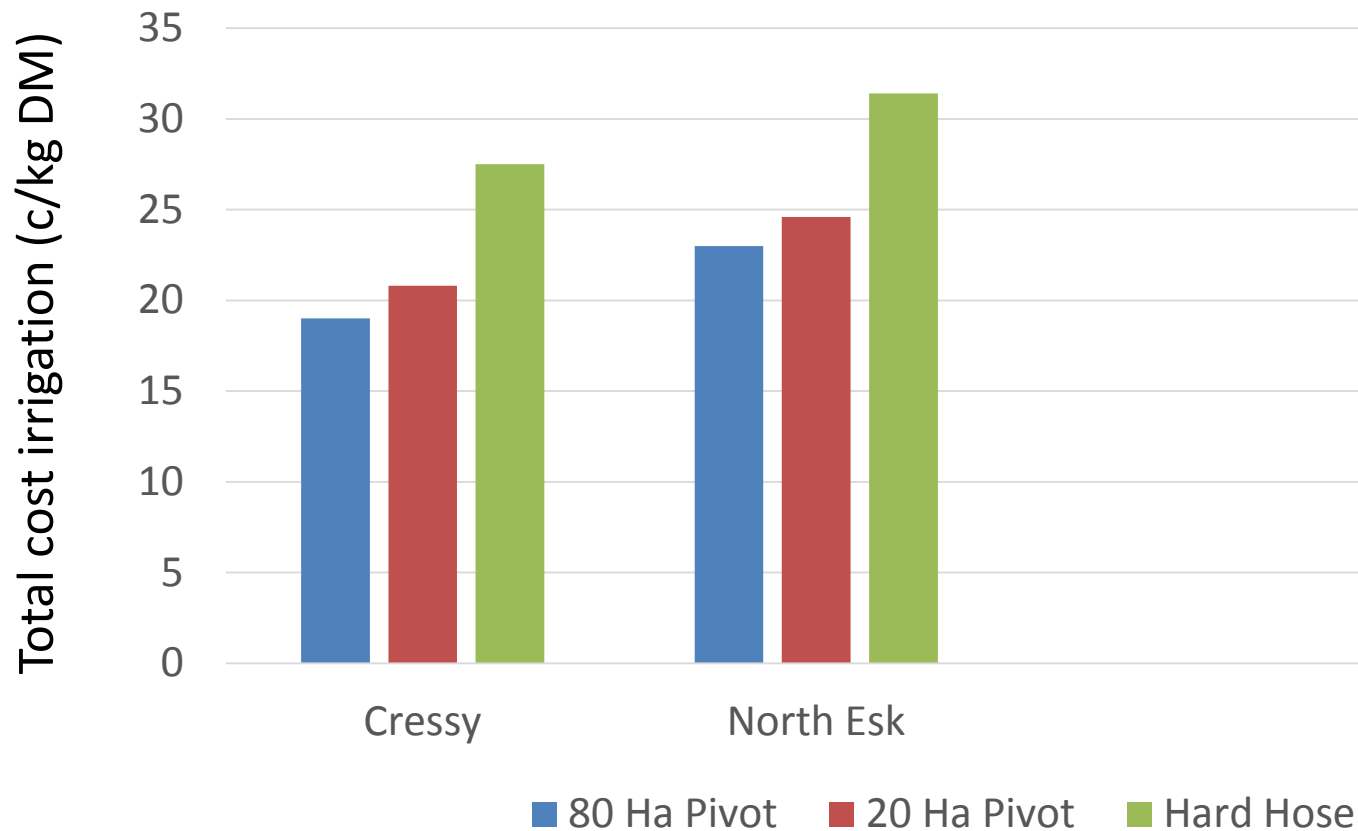


Turnips / brassicas

Break-even for finishing lambs/beef: 25c/kg DM

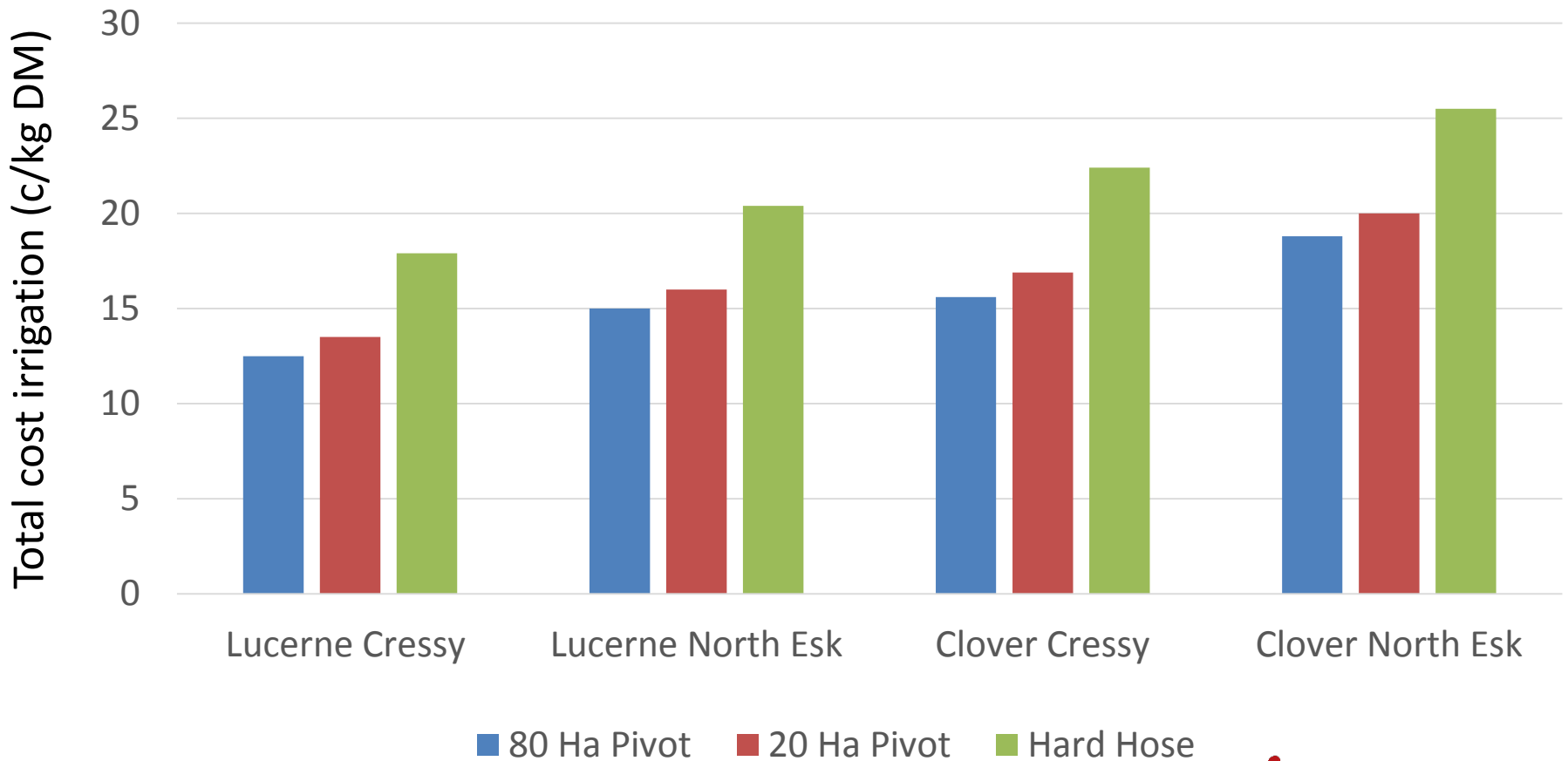


New pasture (February sown)



Lucerne, white clover

Break-even for finishing lambs: lucerne (25c/kg DM), clover (32c/kg DM)



Top three take home messages

1. Most set-ups won't pay to fully irrigate permanent ryegrass/clover pastures for red meat production.
2. Fully irrigating quick-maturing fodder crops and starting new pastures to fill specific feed gaps generally pays.
3. Fully irrigating perennial finishing crops, like white clover and lucerne, pays for most pivot set-ups but is marginal for hard hoses if water costs are high.

Tools, resources & training

- Local irrigation consultants
- Local agronomists
- Pasture Principles course (Macquarie Franklin)
- Making More from Sheep (MLA)



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