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Animal performance changes over 11 years after implementing a lucerne grazing system on Bog Roy Station

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New Zealand's specialist land-based university

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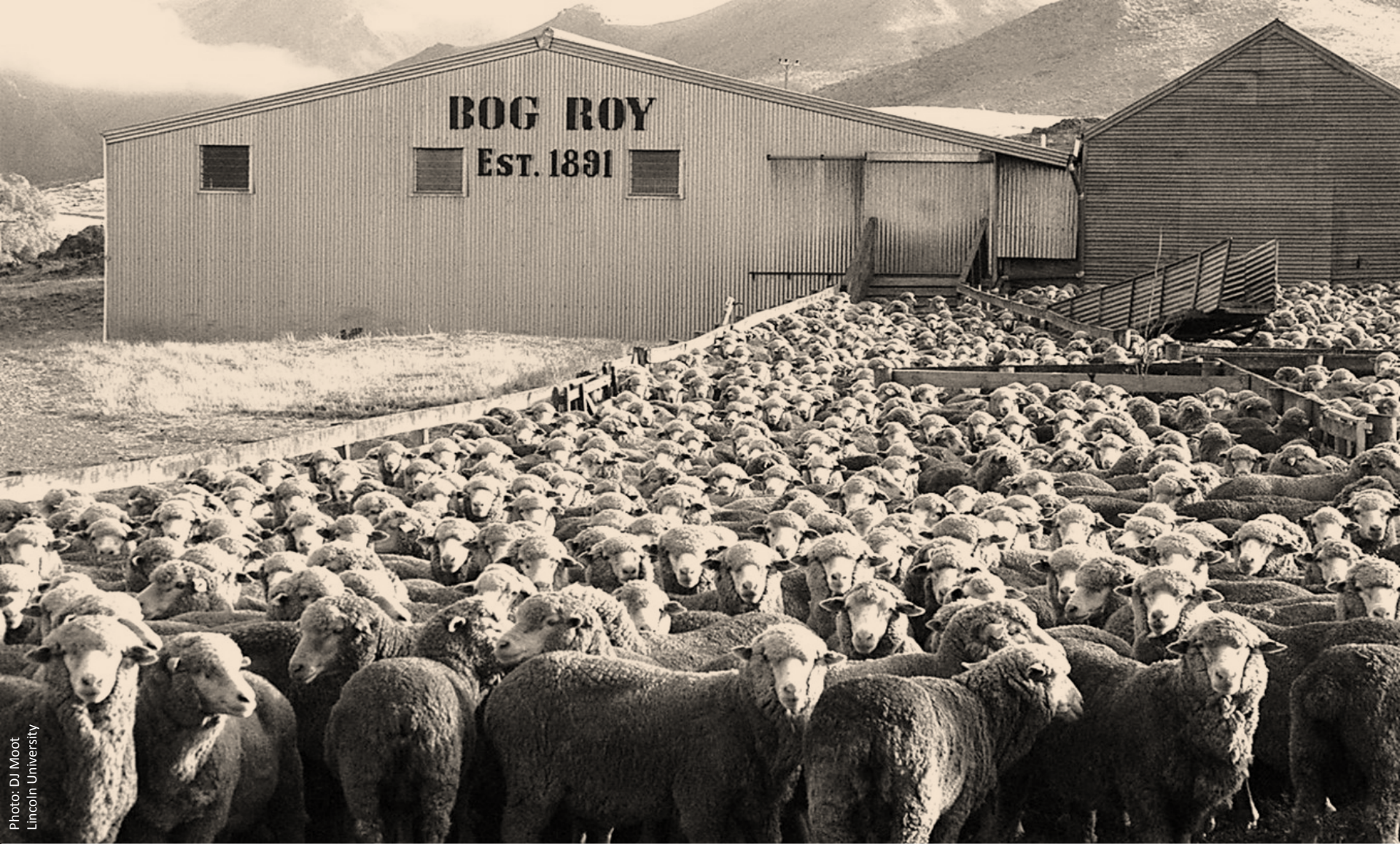


Photo: DJ Moot
Lincoln University

400 mm rainfall environment

2018 NZGA

Photo: D. & L. Anderson
Bog Roy Station

Property Description 2008

Area = 2860 ha

Most extensively grazed hill and high country

- 47% Unimproved tussock grasslands stocked at 0.3 SU/ha
- 42% oversown and topdressed country stocked at 1.5-2.0 SU/ha
- 11% flood irrigated pastures
  - 100 ha of flood irrigated perennial ryegrass and tall fescue for finishing overwintered lambs in spring then closed for baleage
  - 60 ha of dryland lucerne (30 ha grazed; 30 ha conserved)

Process of change

- 2 years ryecorn - now the winter feed
- Lucerne area increased 30 ha/year to 265 ha
- Tall fescue and ryegrass no longer sown
- Rotational graze on lucerne with 750 ewes and lambs
- Then - how to lamb on lucerne
- 2012 - StockCare for flock recording

StockCare – CS at weaning, 1 month pre–mating, mating, ram removal, scanning and at lambing

Ewe flock performance

kg lamb weaned = number of lambs x weaning weight

Key Drivers are:

Ewe Performance

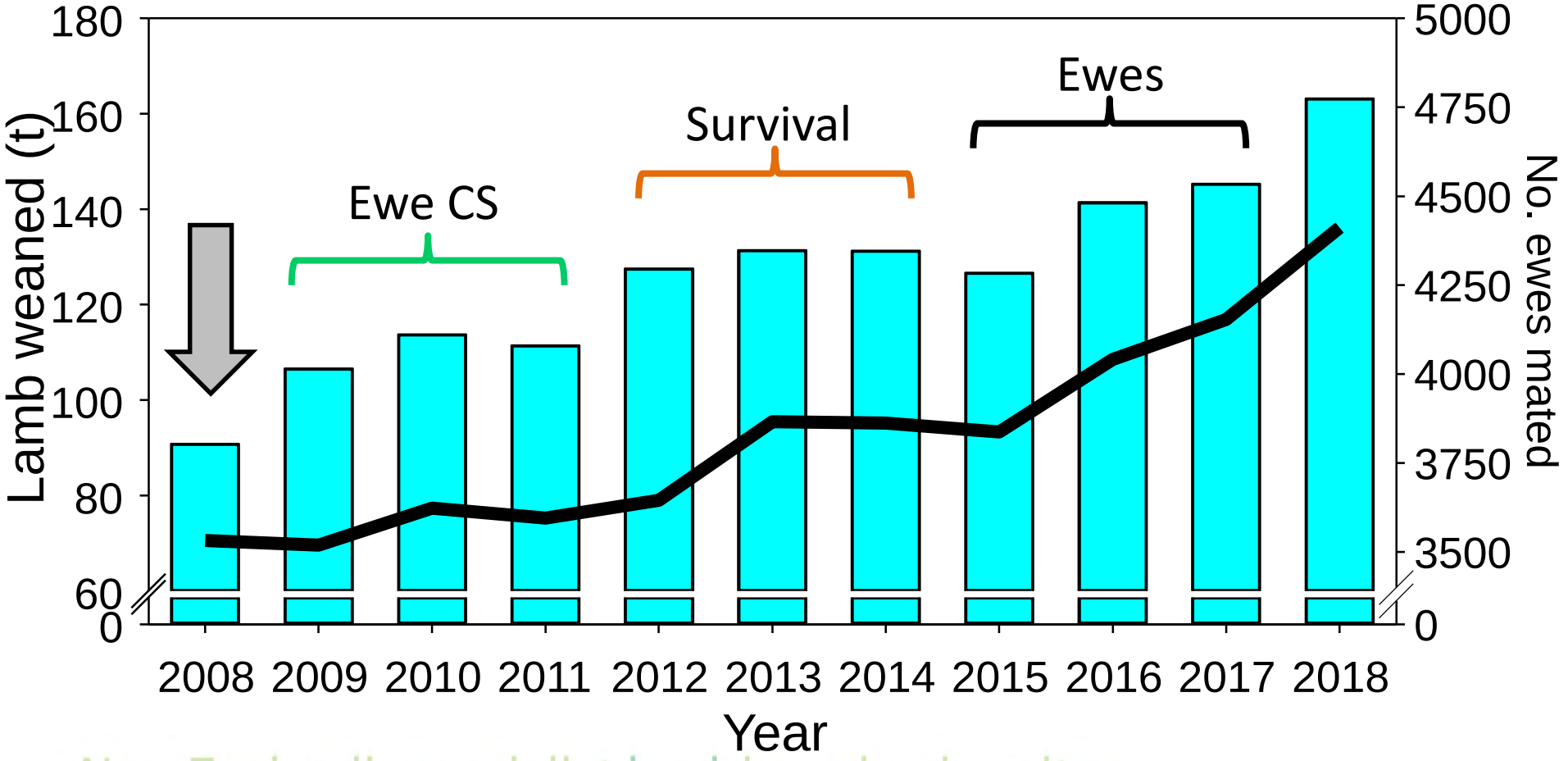
- Scanning %
- Lamb wastage %
- Lambing %

Lamb Performance

- Lamb growth rate
- Lamb weaning weight

Photo: D & L Anderson
Bog Roy Station

Change in LWt produced at Bog Roy



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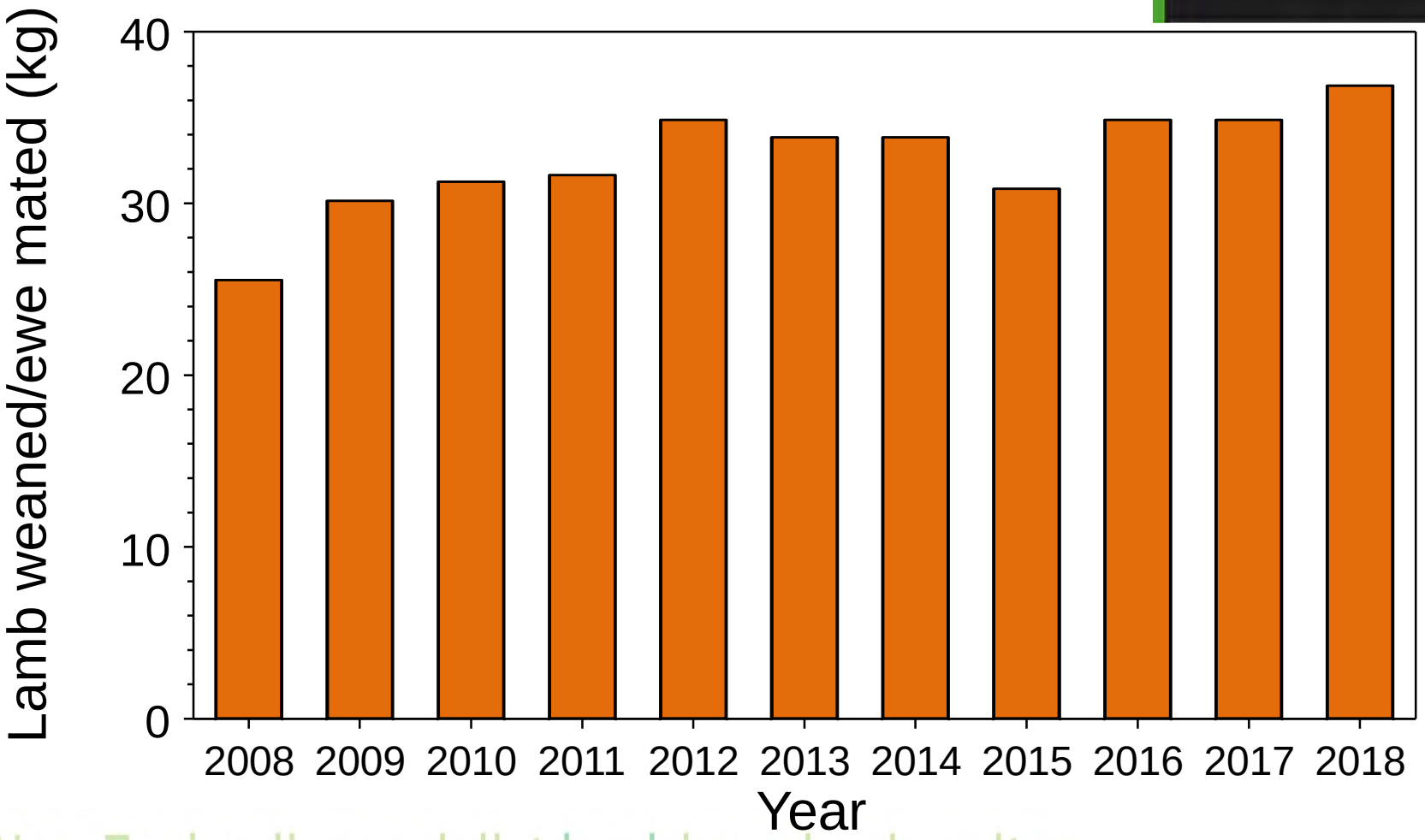
Lamb weaned per ewe mated



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Mean daily lamb growth rate

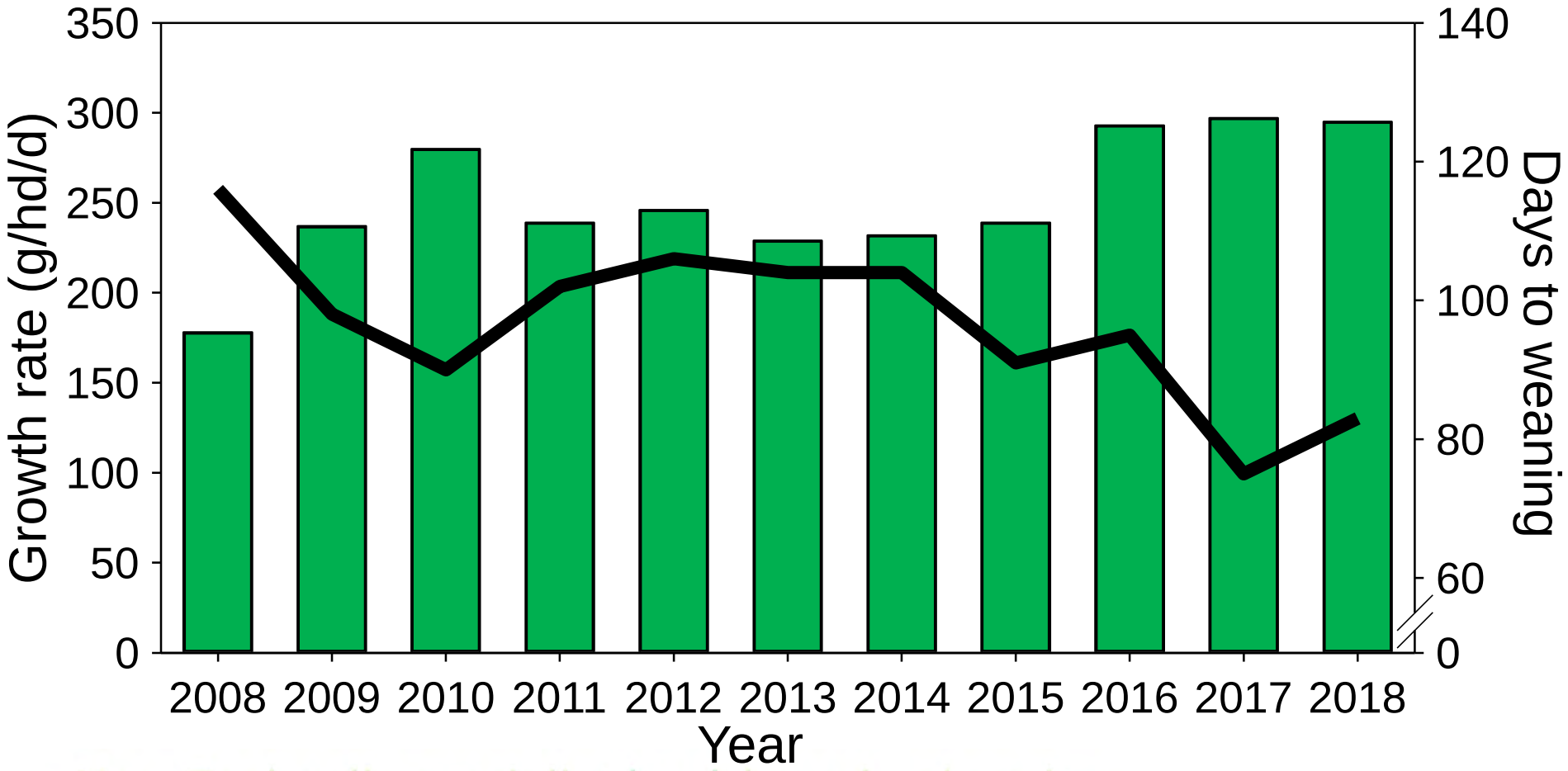

Photo: D & L Anderson
Bog Roy Station

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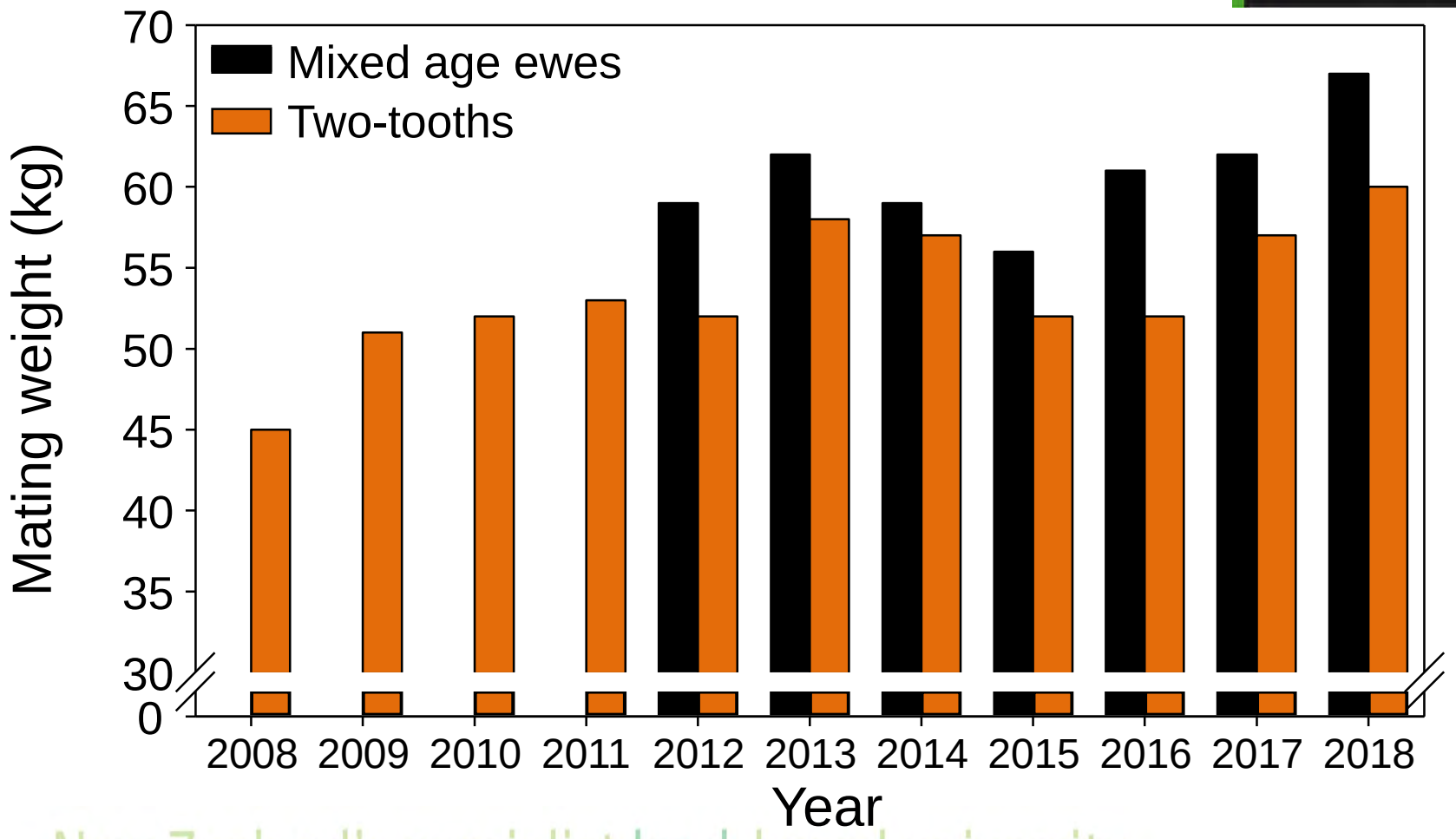
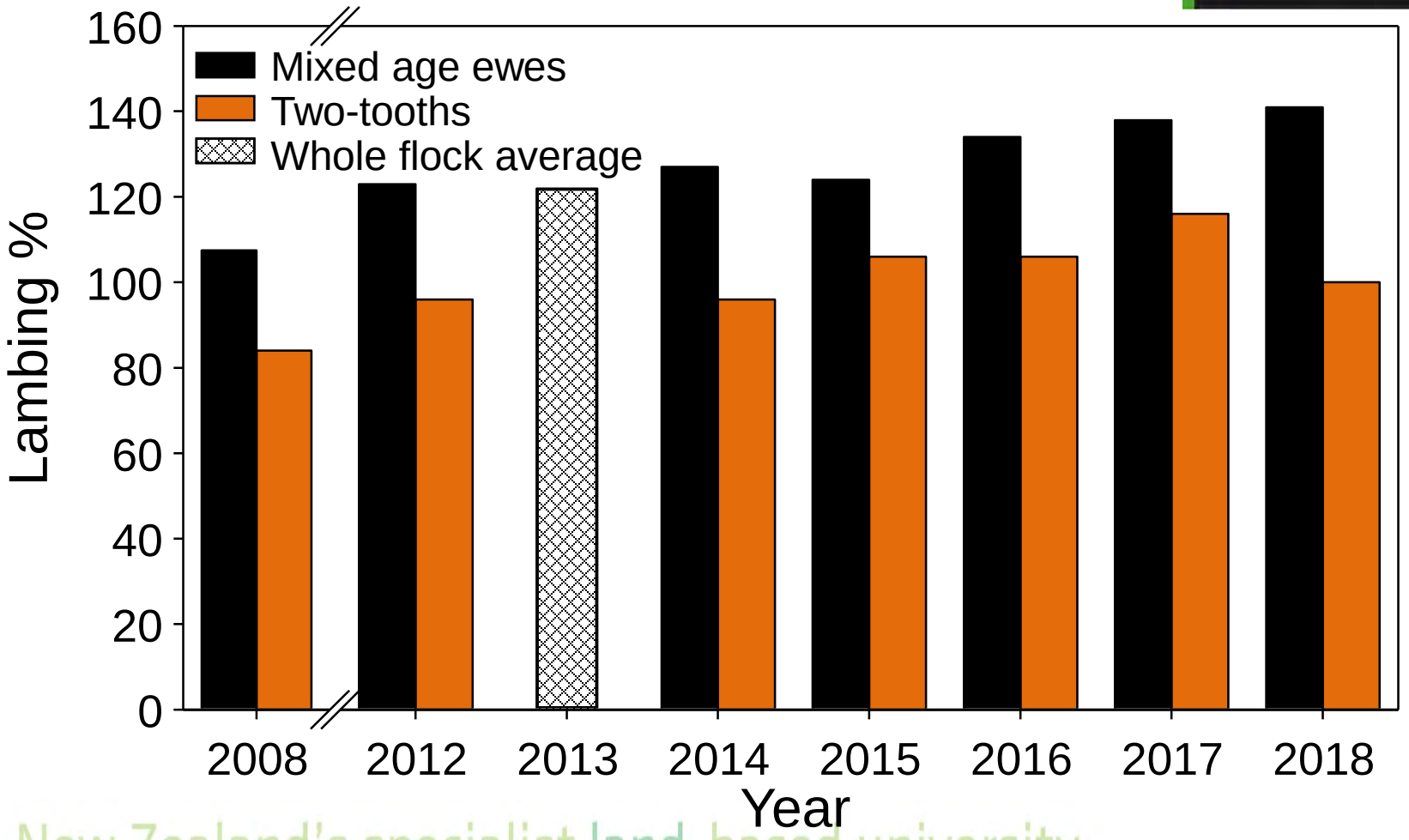
Mating weights (kg/hd)



Change in lambing% at Bog Roy



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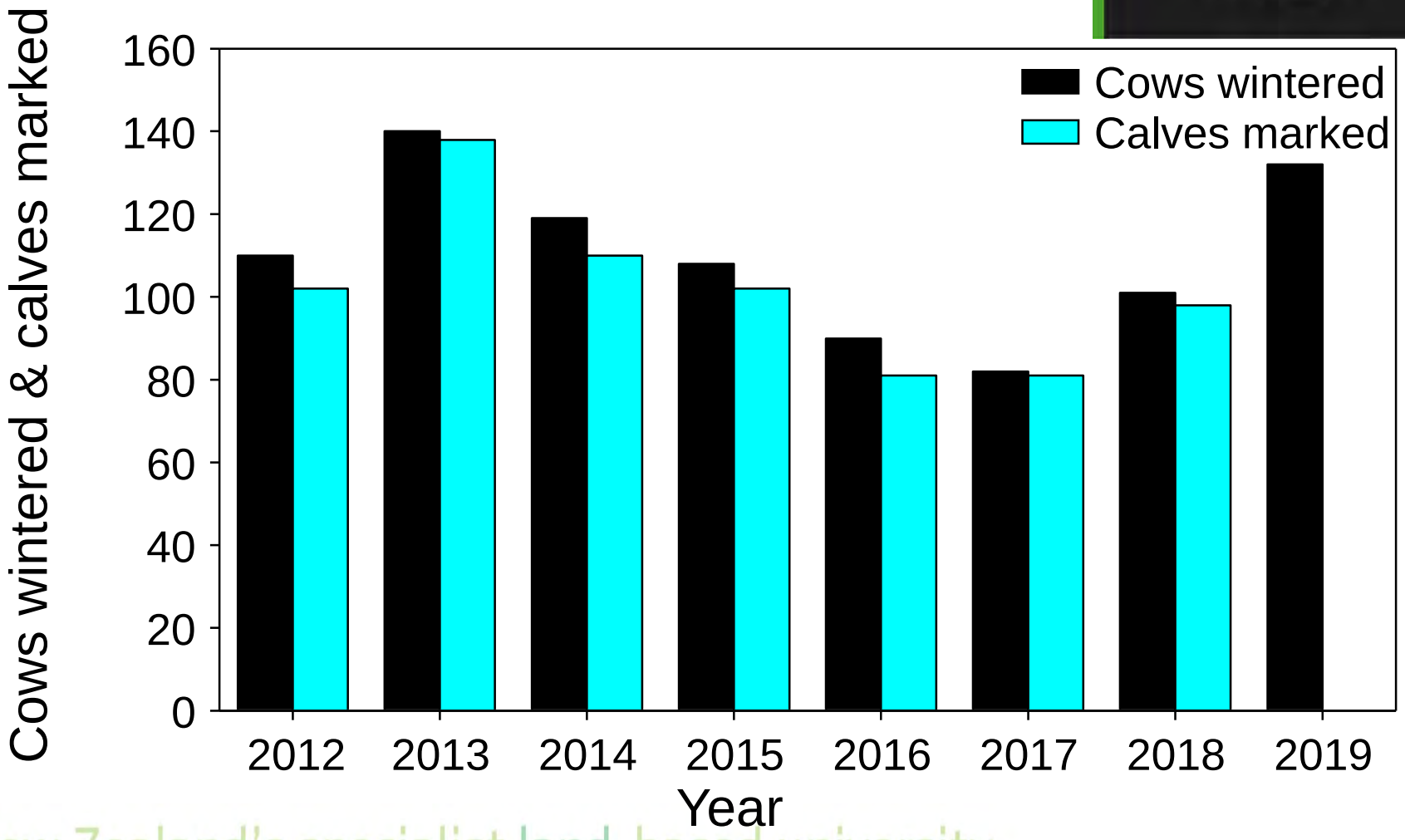
Cows wintered and calves marked



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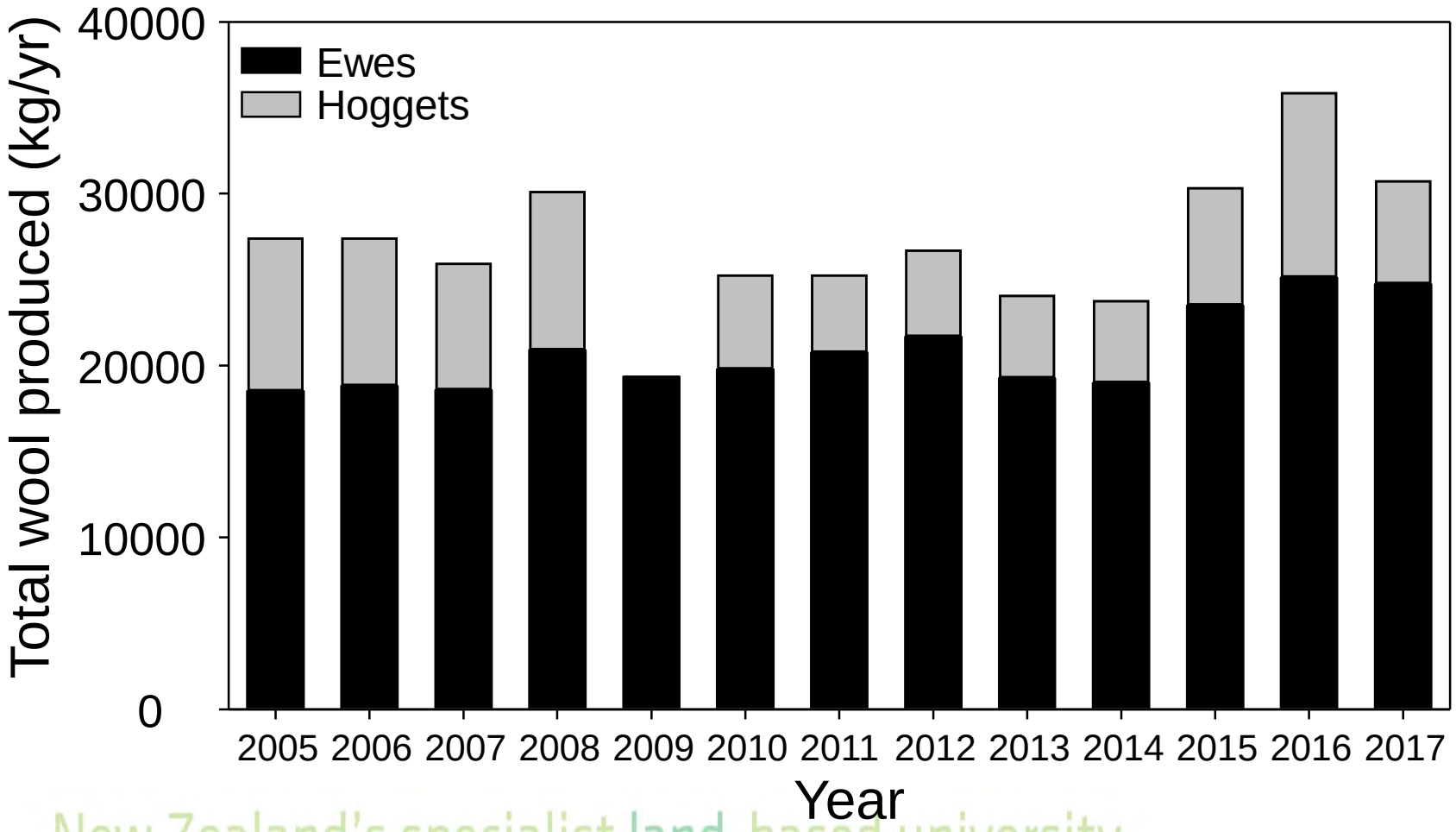
2019
Photo: D & L Anderson
Bog Roy Station

Wool production



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Income and lamb sale weights over six years at Bog Roy Station

Year	Average lamb value ($/hd)	Total lamb income ($)	Average sale LWt (kg)	Average LWt value (¢/kg)
2012/13	73.97	236,409	31.5	234
2013/14	69.94	238,503	29.2	239
2014/15	74.12	256,911	31.6	234
2015/16	99.97	337,499	39.6	252
2016/17	117.21	436,956	39.4	297
2017/18	154.78	623,074	41.5	371

2019
Porina devastation under centre pivot

Photo: D & L Anderson
Bog Roy Station


2019
Luc/CF mix
Porina recovery
Photo: D & L Anderson
Bog Roy Station

Conclusions

- Feed supply has increased and matches animal demand
- Lambs are no longer overwintered
- Phase 1 - 2009-2011 - grazing lucerne - CS ewes 2 tooths
- Phase 2 – 2012-2015 – lambing performance – 2 tooths
- Phase 3 – 2016 – 2018 – irrigation, weaning date and porina!

Learn to graze lucerne monocultures – include grasses strategically

References

Anderson, D., Anderson, L., Moot, D. J. and Ogle, G. I. 2014. Integrating lucerne (*Medicago sativa* L.) into a high country merino system. *Proceedings of the New Zealand Grassland Association*, **76**, 29-34.

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