

# A farm-scale framework to assess potential farm- and regional-scale implications of removing palm kernel expeller as a supplementary feed for dairy cows

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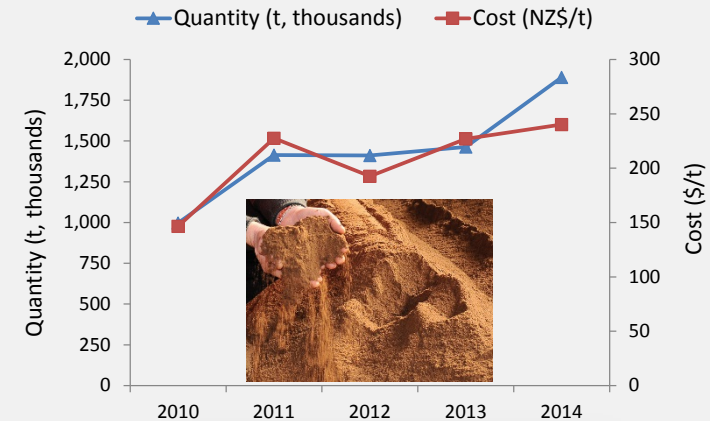
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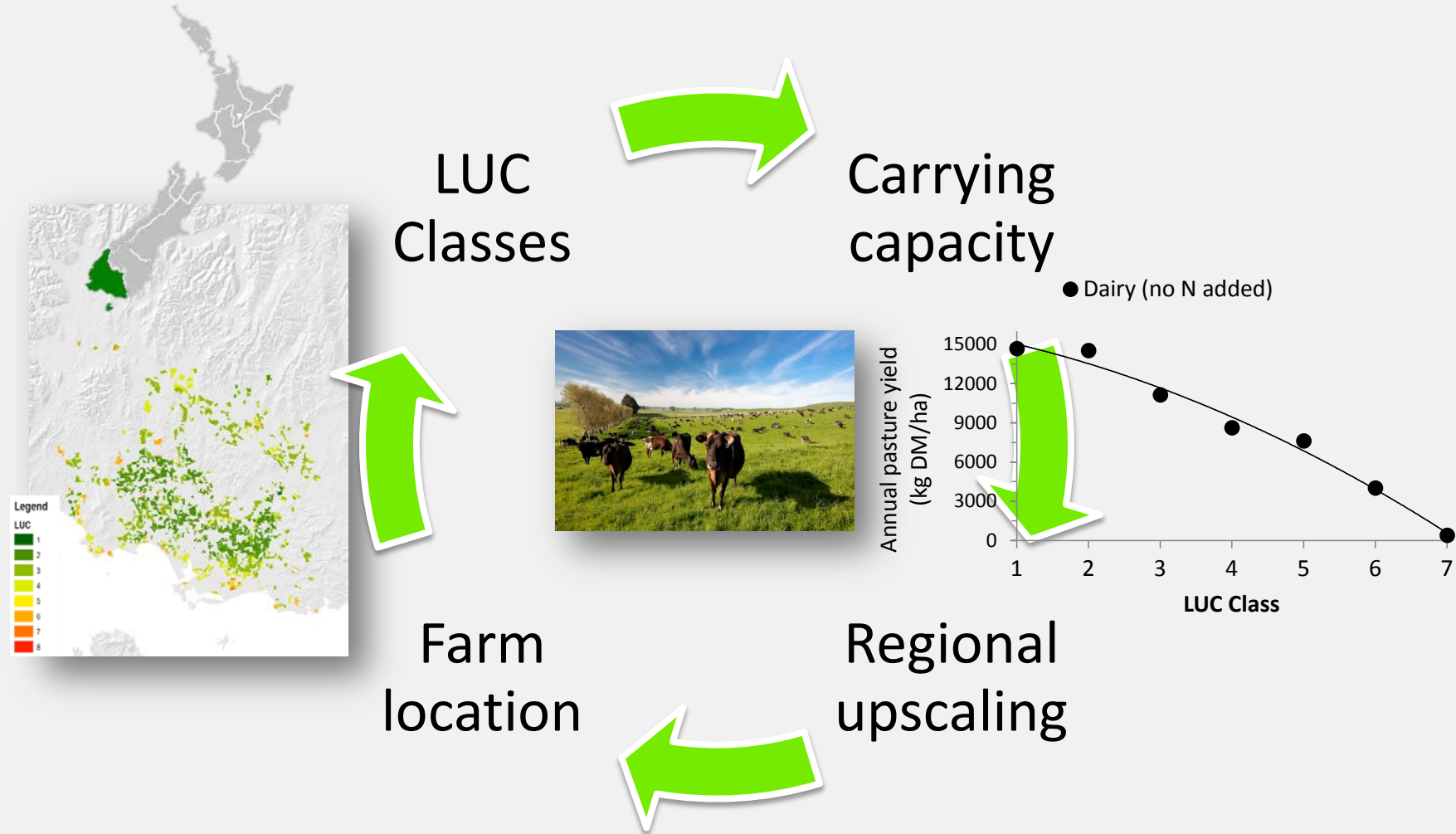
## REMOVAL OF PALM KERNEL EXPELLER AS A DAIRY FEED IN SOUTHLAND BACKGROUND – OBJECTIVES – METHODS



- Consumer awareness and the expansion of the Asian sector may increase pressure to find alternatives to PKE
- Barley grain as a PKE replacement
  - Similar flexibility
  - Can be sourced locally
- 2 farm systems modelled:
  - System 3 (<20% imported feed)
  - System 4 (<30% imported feed)
- 4 PKE options:
  - Baseline
  - No PKE, fewer cows but similar MS/cow
  - No PKE, same cows but lower MS/cow
  - PKE replaced with barley grain



# REMOVAL OF PALM KERNEL EXPELLER AS A DAIRY FEED IN SOUTHLAND METHODS



## REMOVAL OF PALM KERNEL EXPELLER AS A DAIRY FEED IN SOUTHLAND IMPLICATIONS

- At a regional scale, the amount of barley grain to replace PKE to sustain current levels of MS production:
  - Sys 3: 14% of total barley grain produced in the SI
  - Sys 4: 40% of total barley grain produced in the SI
- Land required to supply barley grain as a PKE replacement:
  - Sys 3: 8,500 ha
  - Sys 4: 25,000 ha
- Currently, only 6,000 ha and 57,000 ha used to grow barley in Southland and in the South Island
- Substantial amounts of barley grain would need to be transported into the region or produced locally to replace PKE
  - Implications for land use