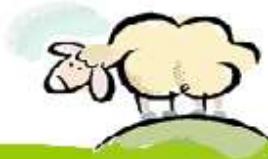
Seasonal Outlook Autumn 2016

GRAZ PROPHET CONSULTING



Doug Alcock

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The GrassGro modelling approach

- Biophysical model which mimics the physics and physiology of the major system components.

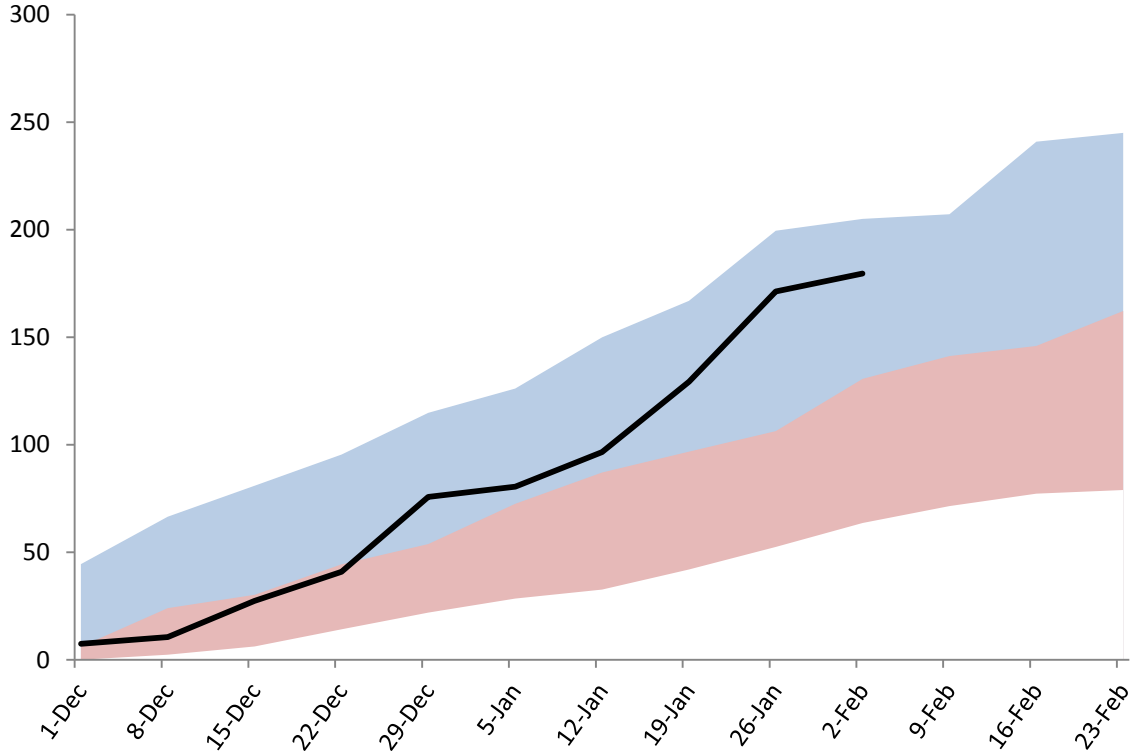
What systems are modelled

- Bungarby Native System (1000ha)
  - Poa, Austrostipa, introduced annuals
  - 19 micron merino ewes @ 2.4 ewes/ha
  - Lamb 1st Sept
- Improved Pasture (1000ha)
  - Phalaris/Fescue, ann. grass and sub clover.
  - Same ewes and lambing time.@ 4.2 ewes/ha

Conditions for the “spin-up” to the 10th of Feb

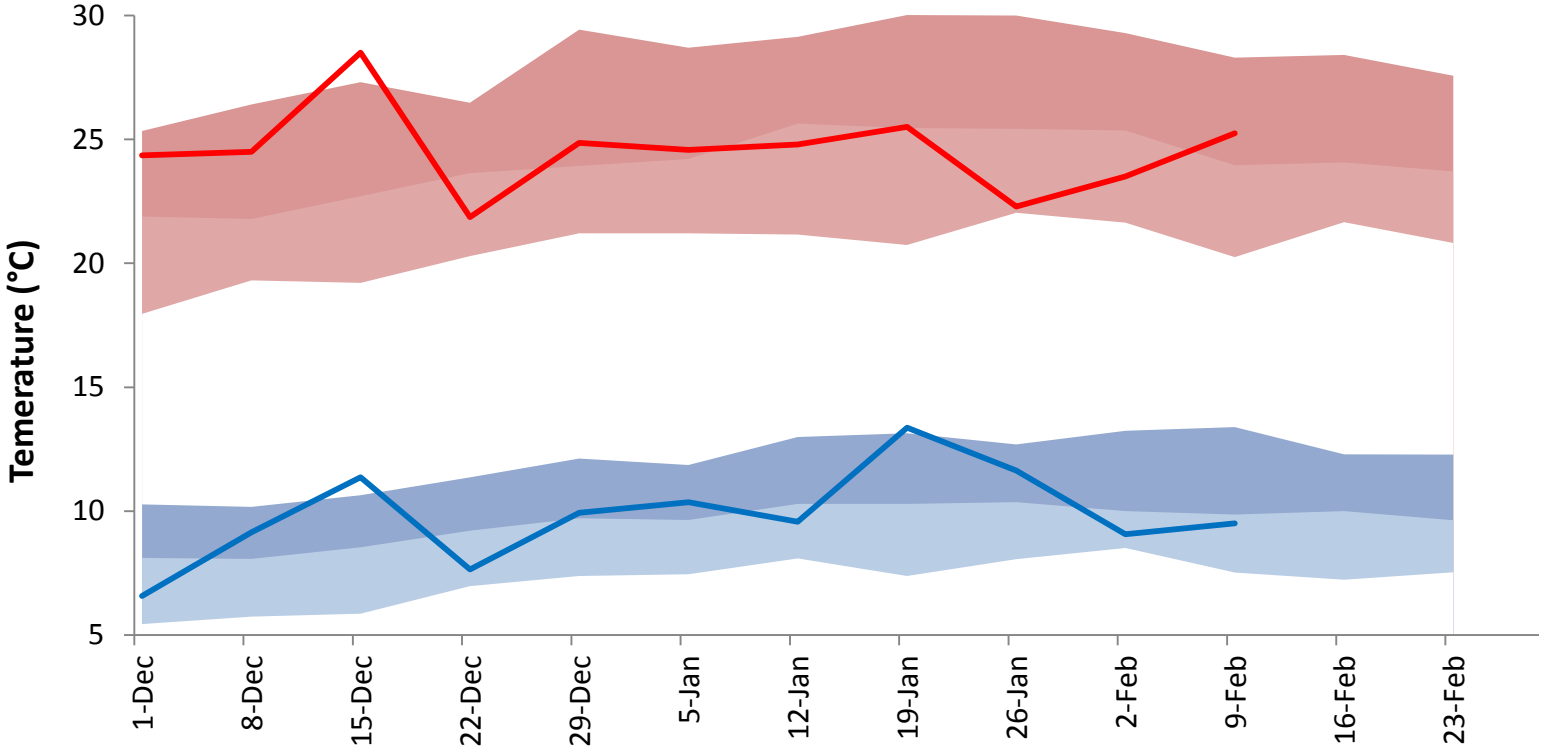
Cumulative Rainfall for the past 3 Months

- Silo data drill 36°39’ S : 149°00’ E

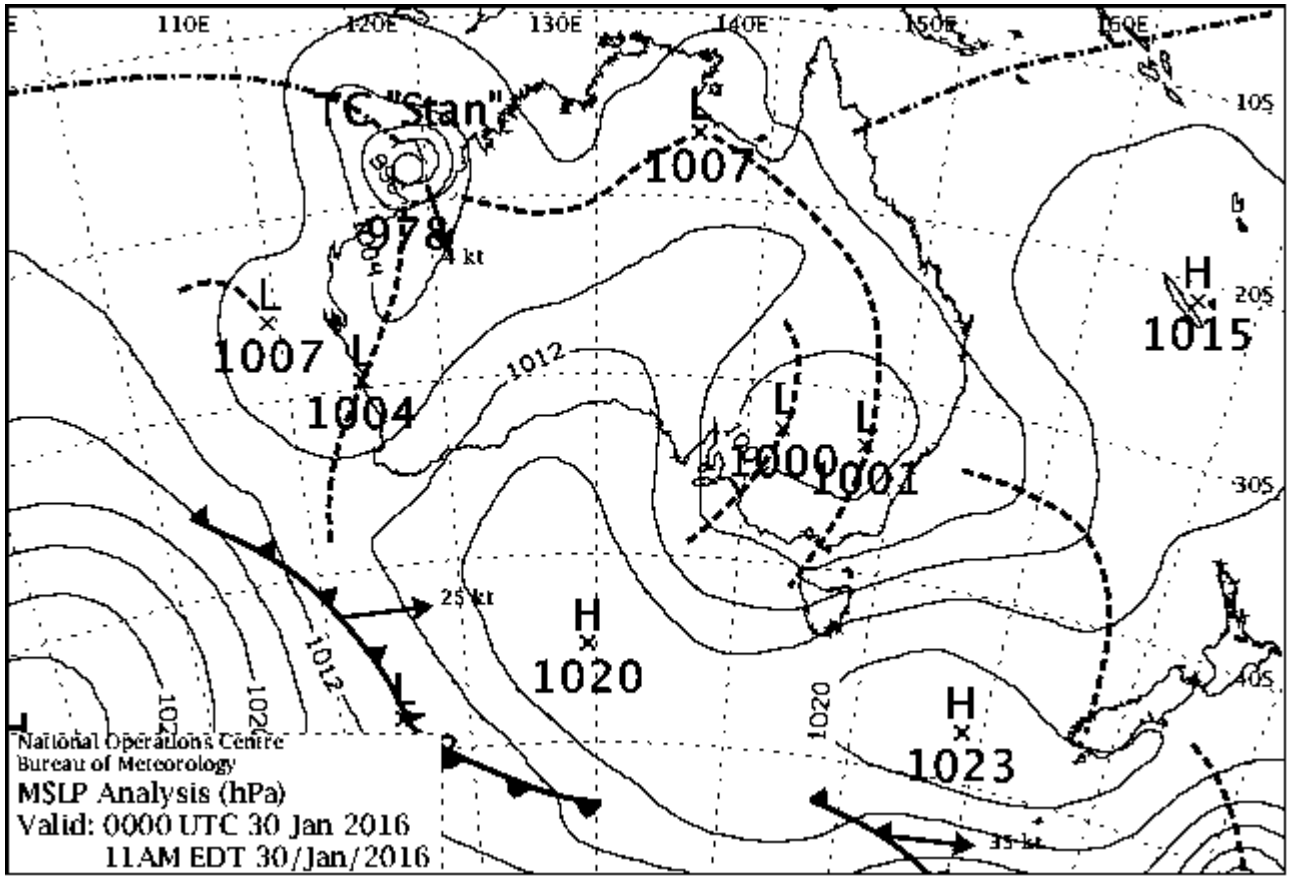


Weekly Average temps since 1st Dec

- Silo data drill 36°39’ S : 149°00’ E



Synoptic Chart 8th -30th Jan 2016



Cumulative Rainfall for the past 3 weeks

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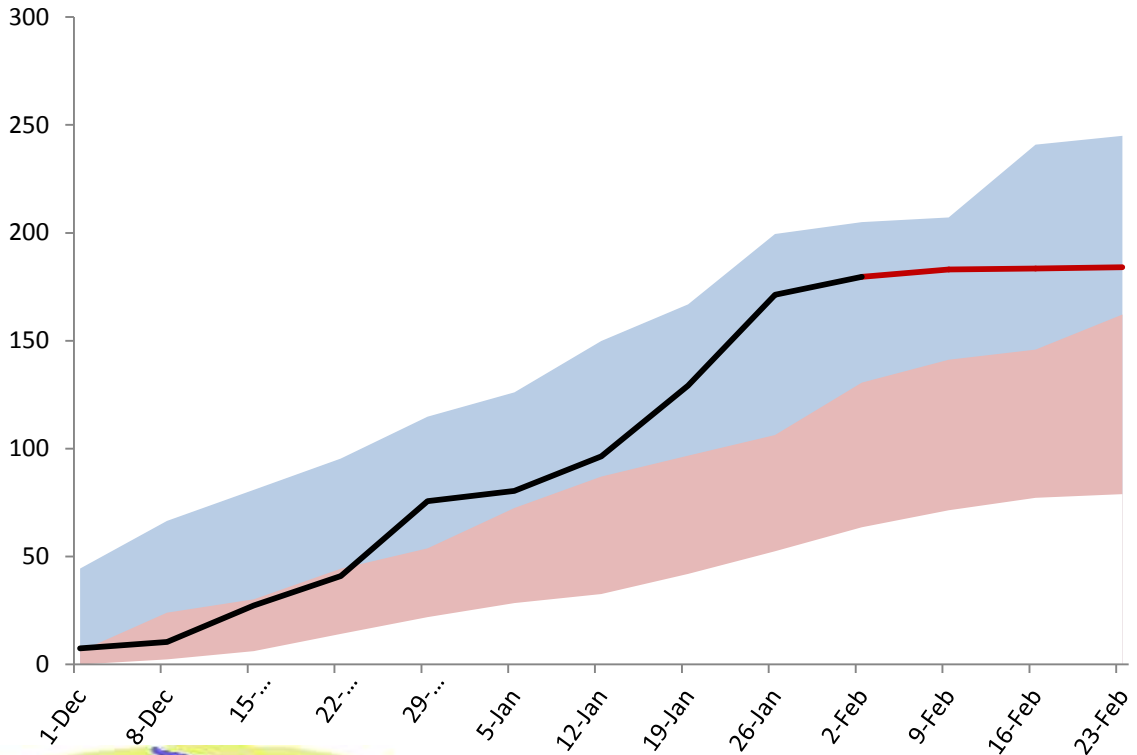
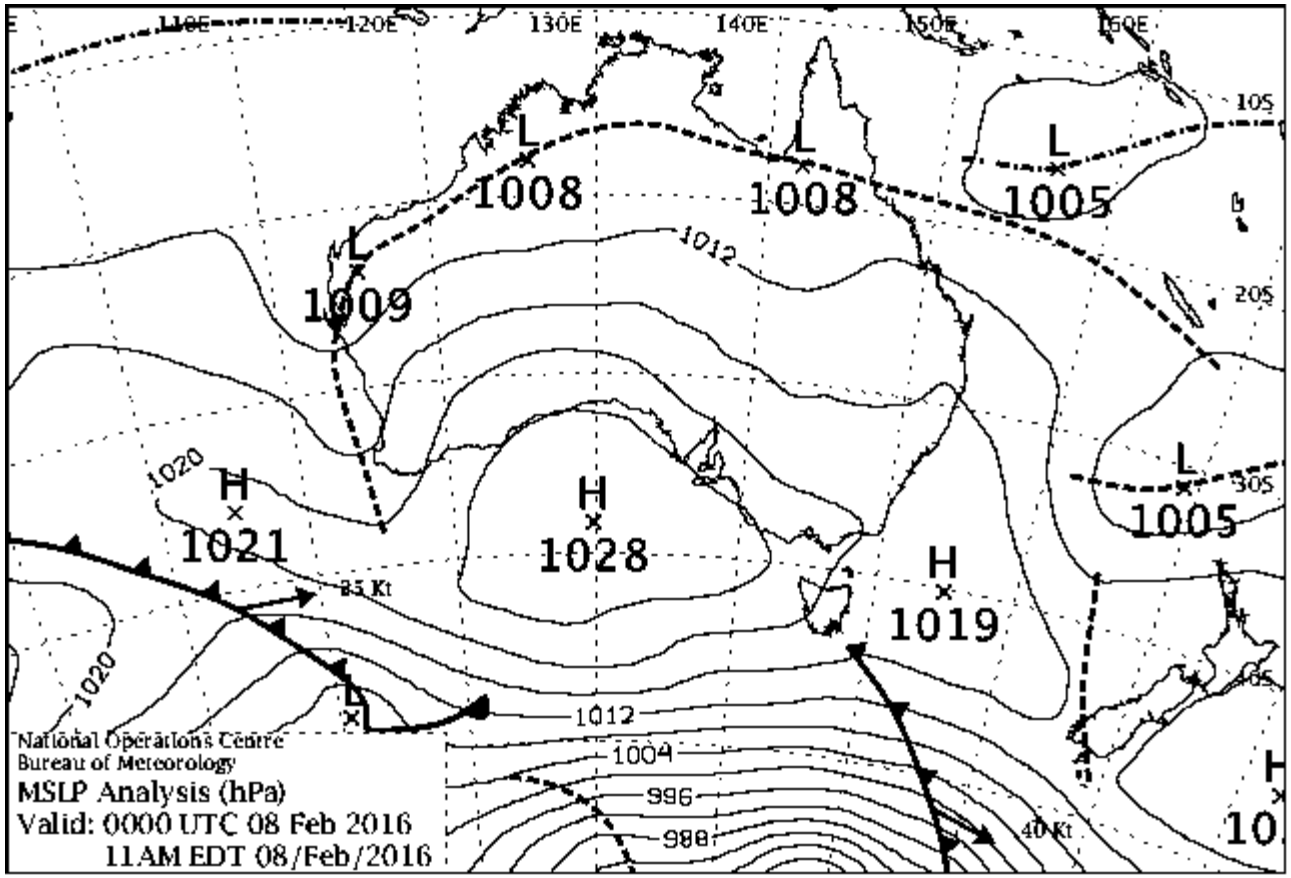


Synoptic Chart 8th Feb 2016



Weekly Average temps since 10th Feb

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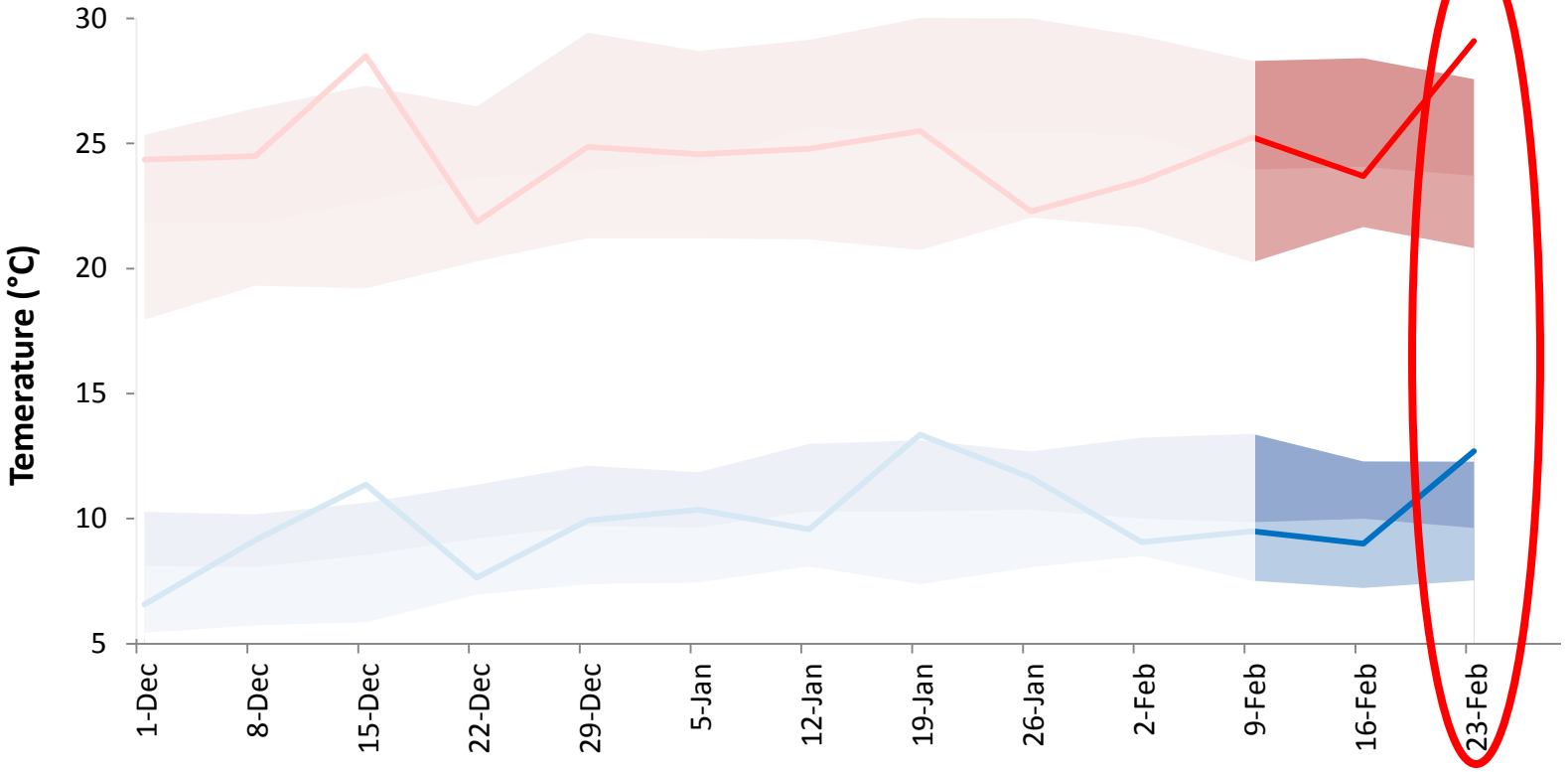
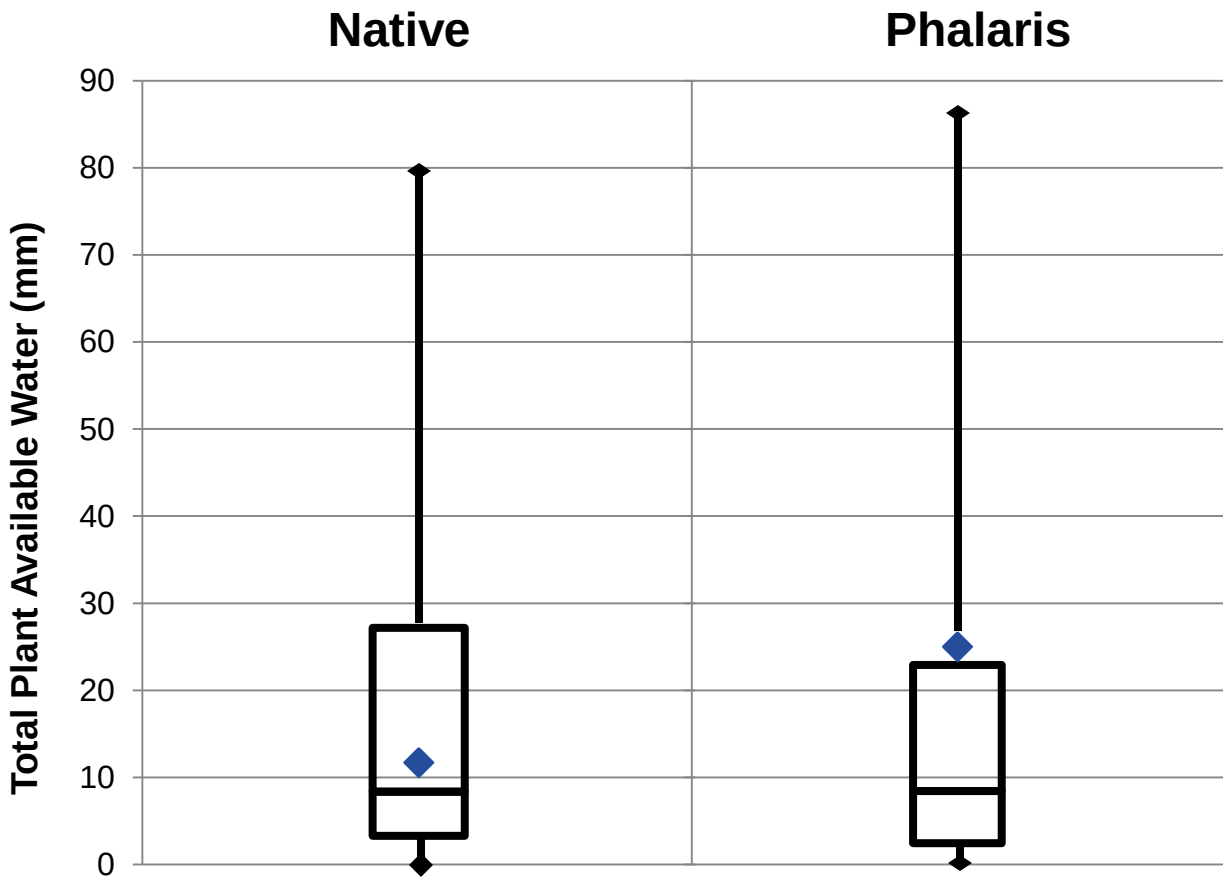
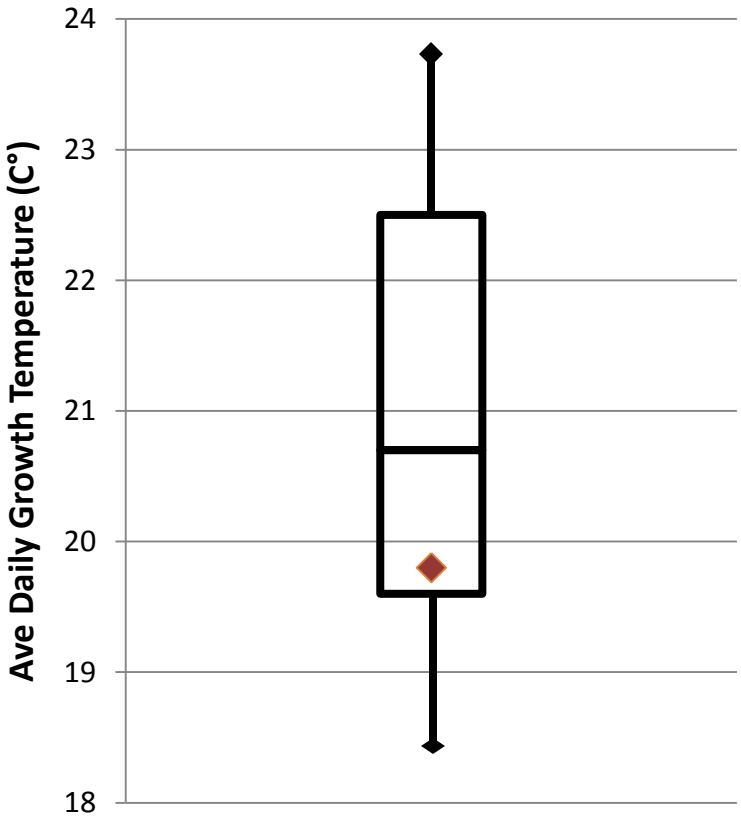


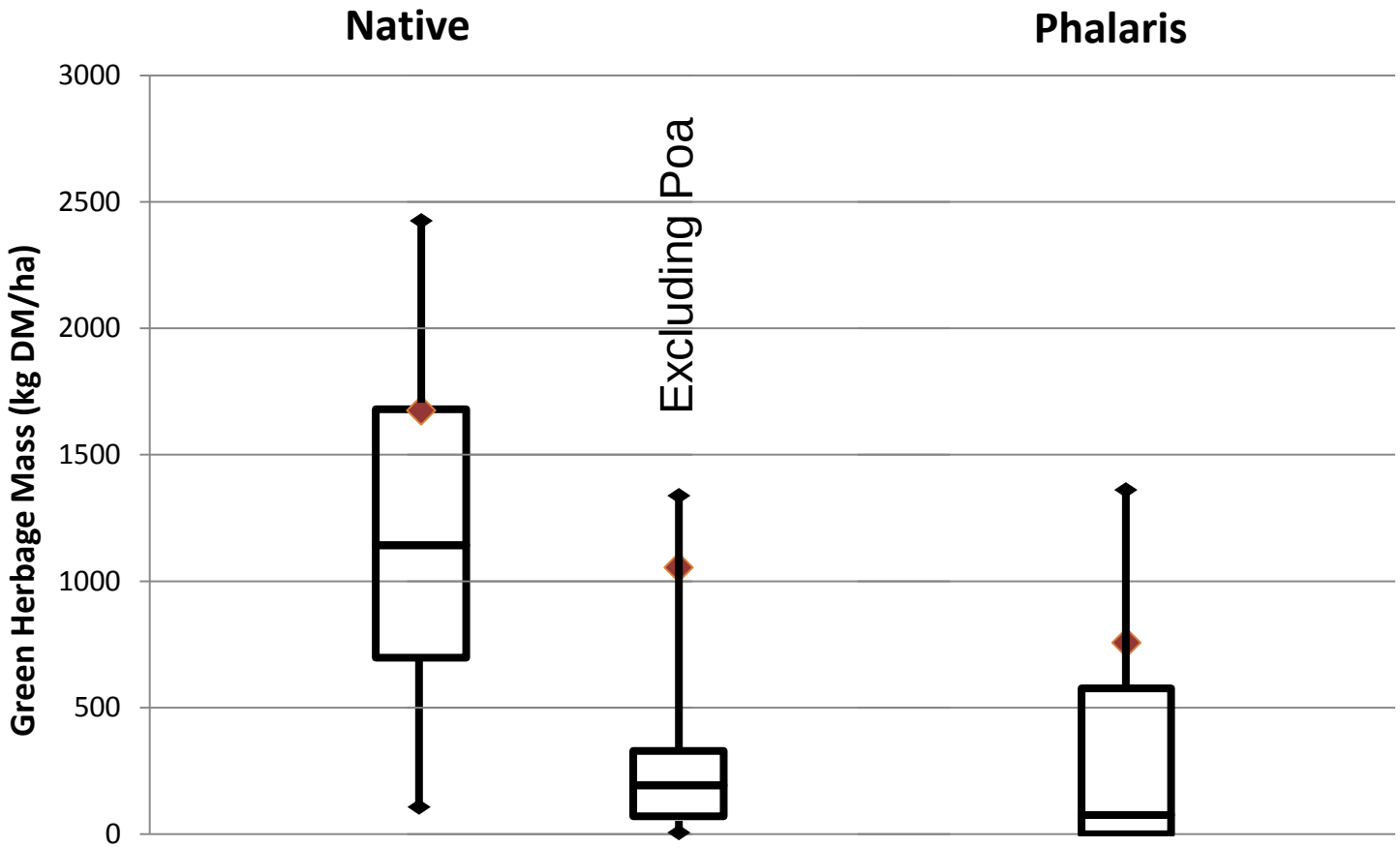
Plant Available Water 10/2/16



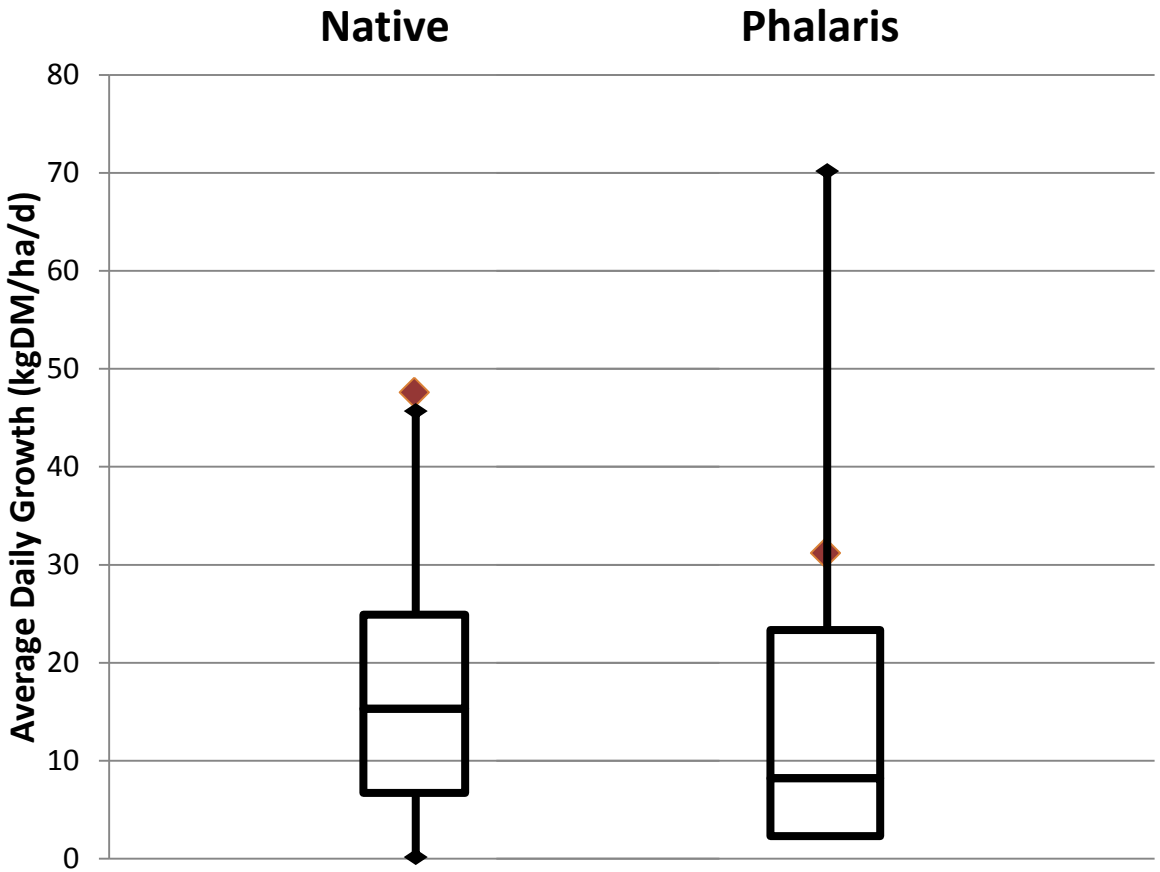
Below average temperatures for January



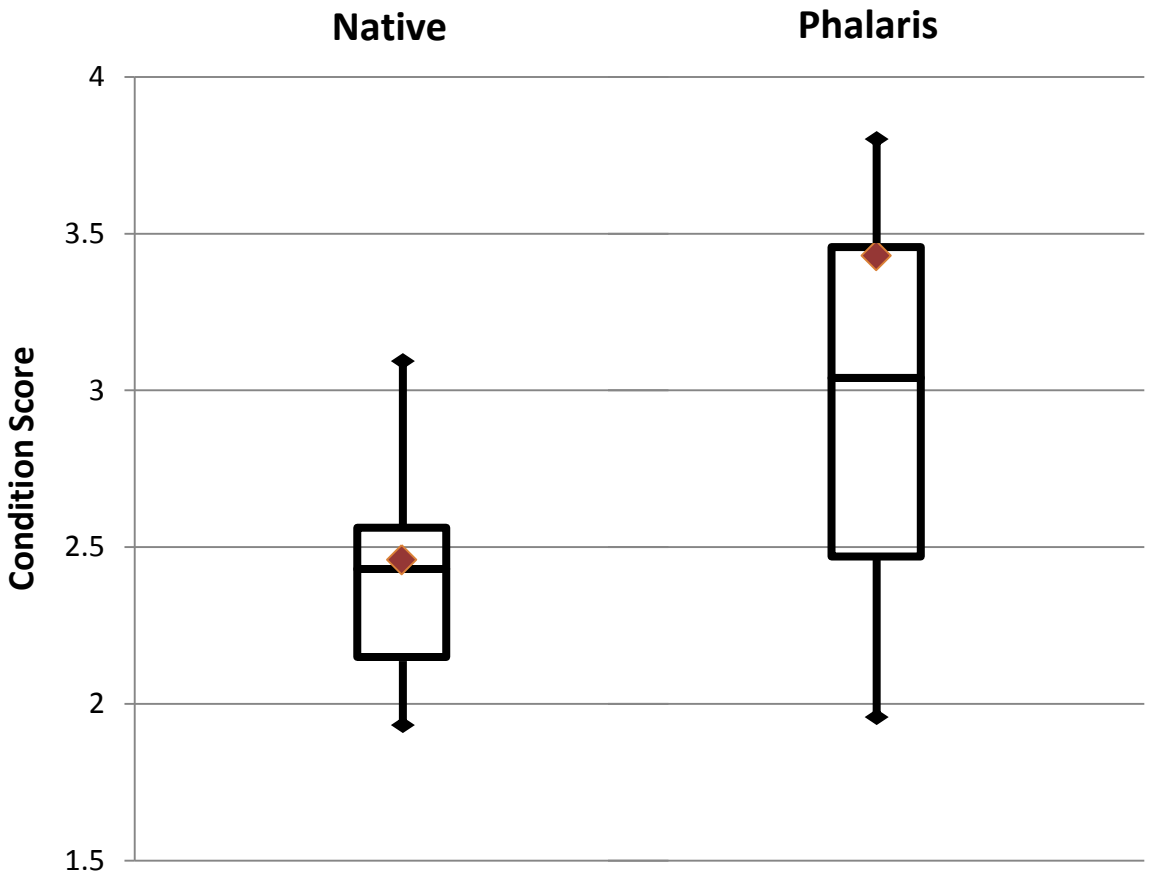
Above Average Green Herbage



Better than average growth for Jan



Ewes in good condition



Seasonal Projections for Bungarby

- Projecting from 11 Feb to 31st Aug
- Applying seasonal rainfall patterns from each year 1961 – 2015.
- Using a GrassGro tactical simulation

  Assumes no outcome is any more or less likely than another. But….

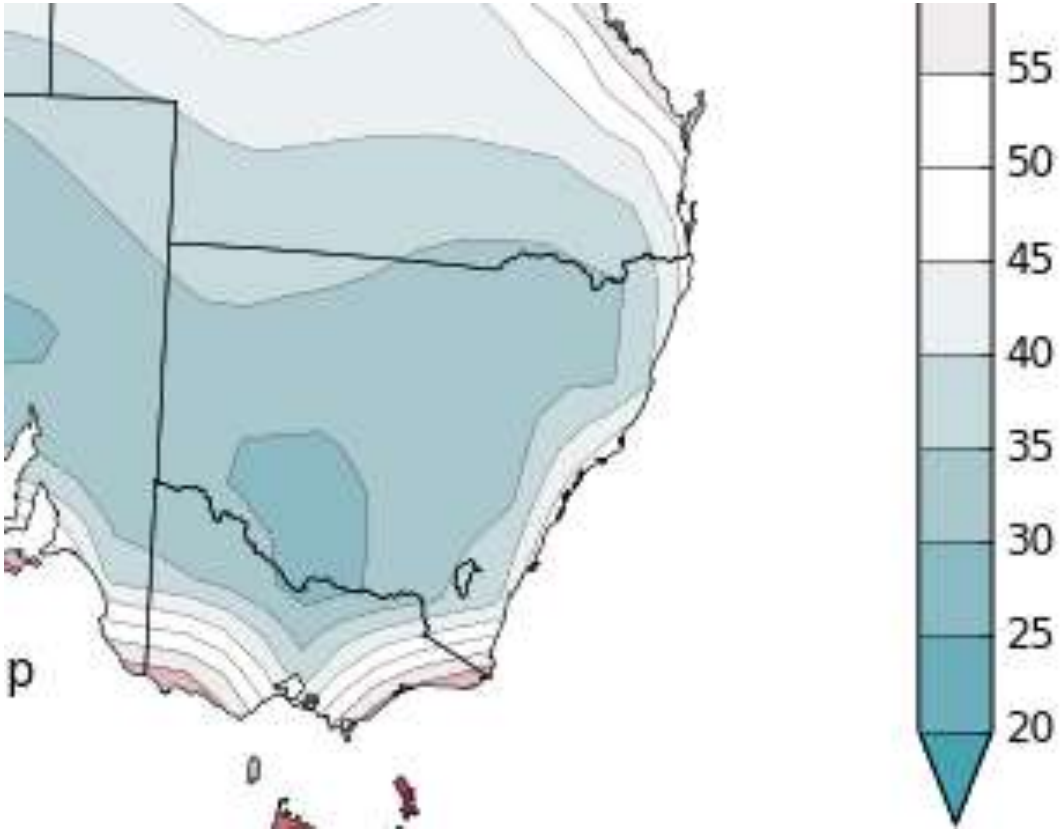
  What does BOM say?

BOM Chance of exceeding median rainfall February – April 2016

Low Accuracy

What About Temperatures

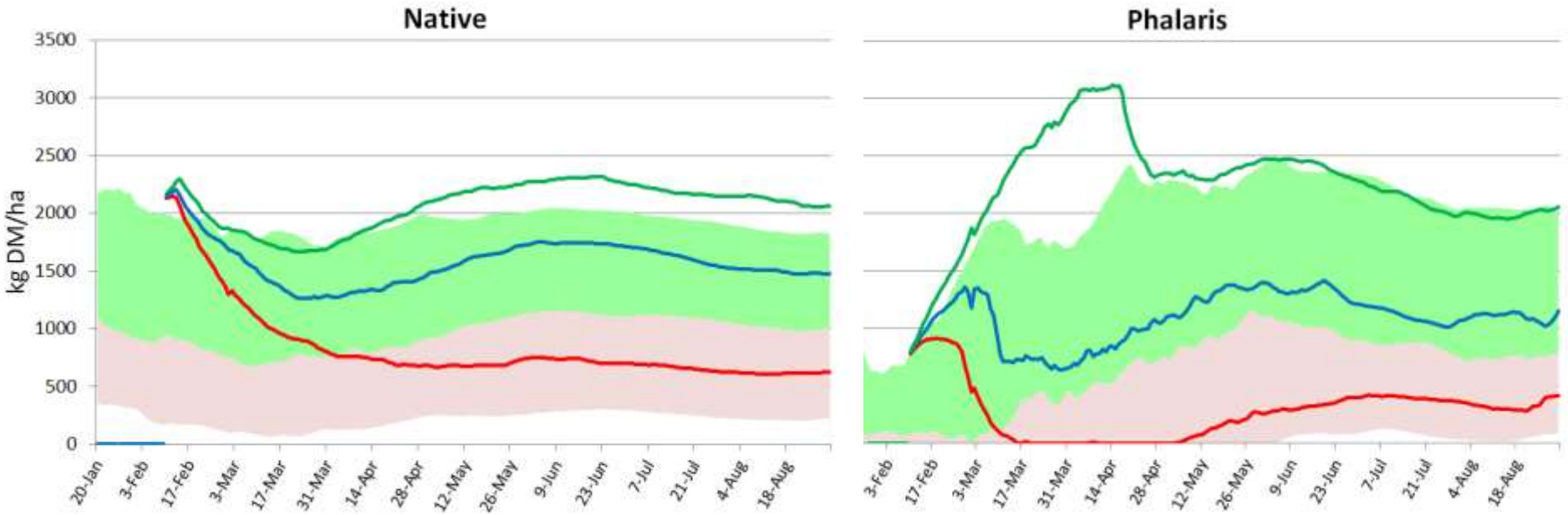
Chance of exceeding median Max temps



Conclusion from BOM outlook

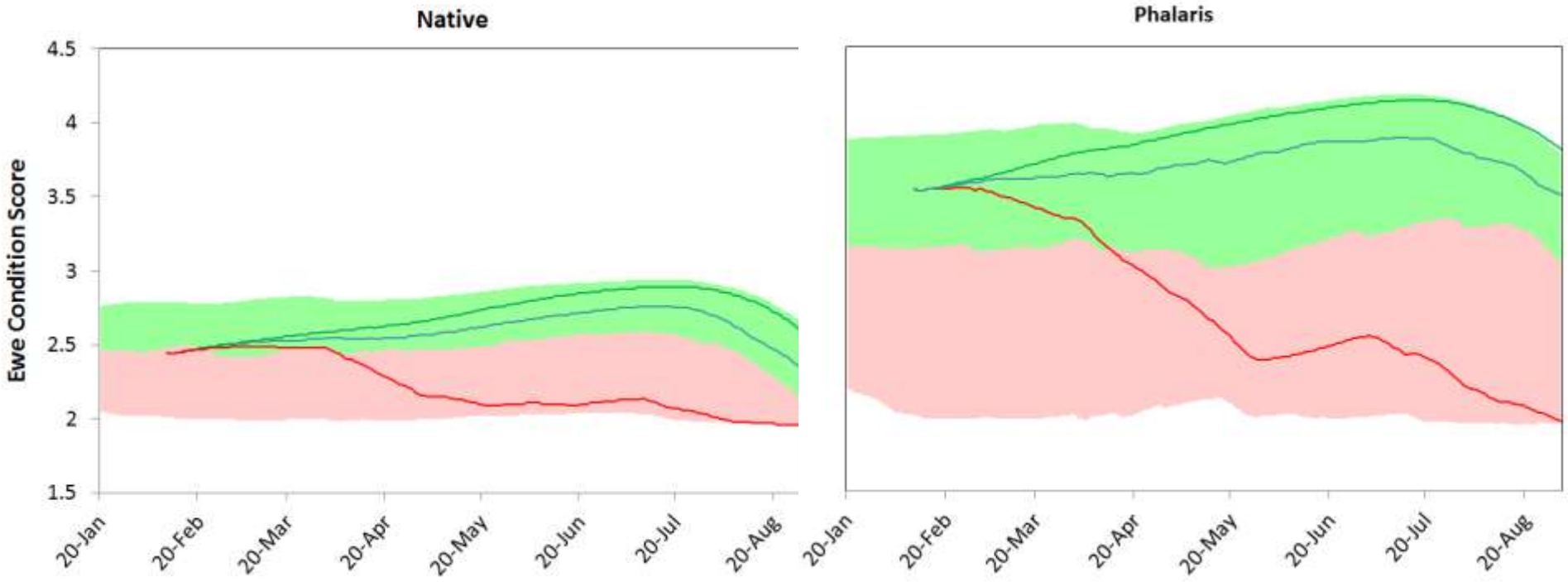
- Low Accuracy
- “No better than a flip of a coin”
- Just use the long term distribution

Seasonal Projections



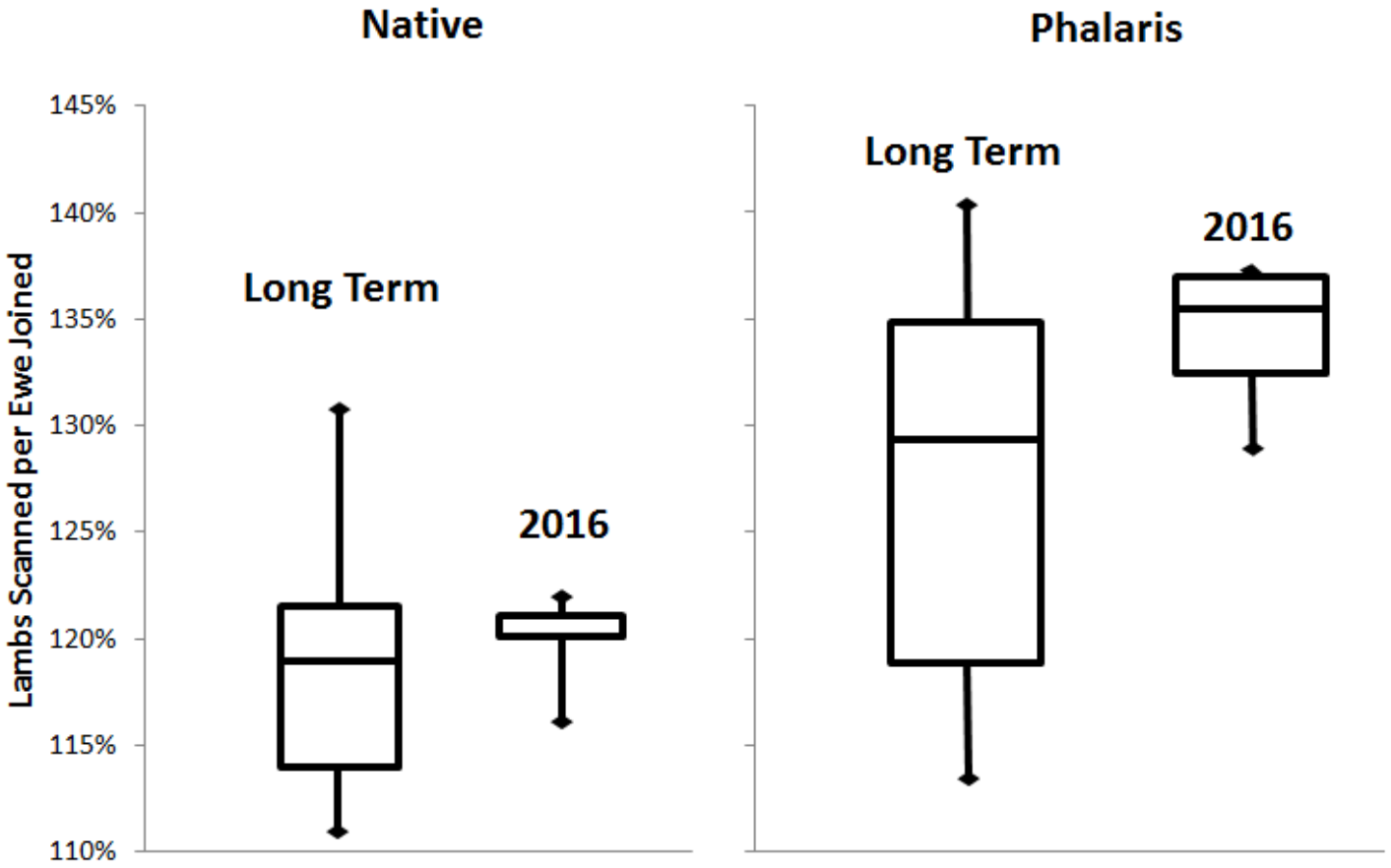
Projections 10% Median 90%

Seasonal Projections



Projections 10% Median 90%

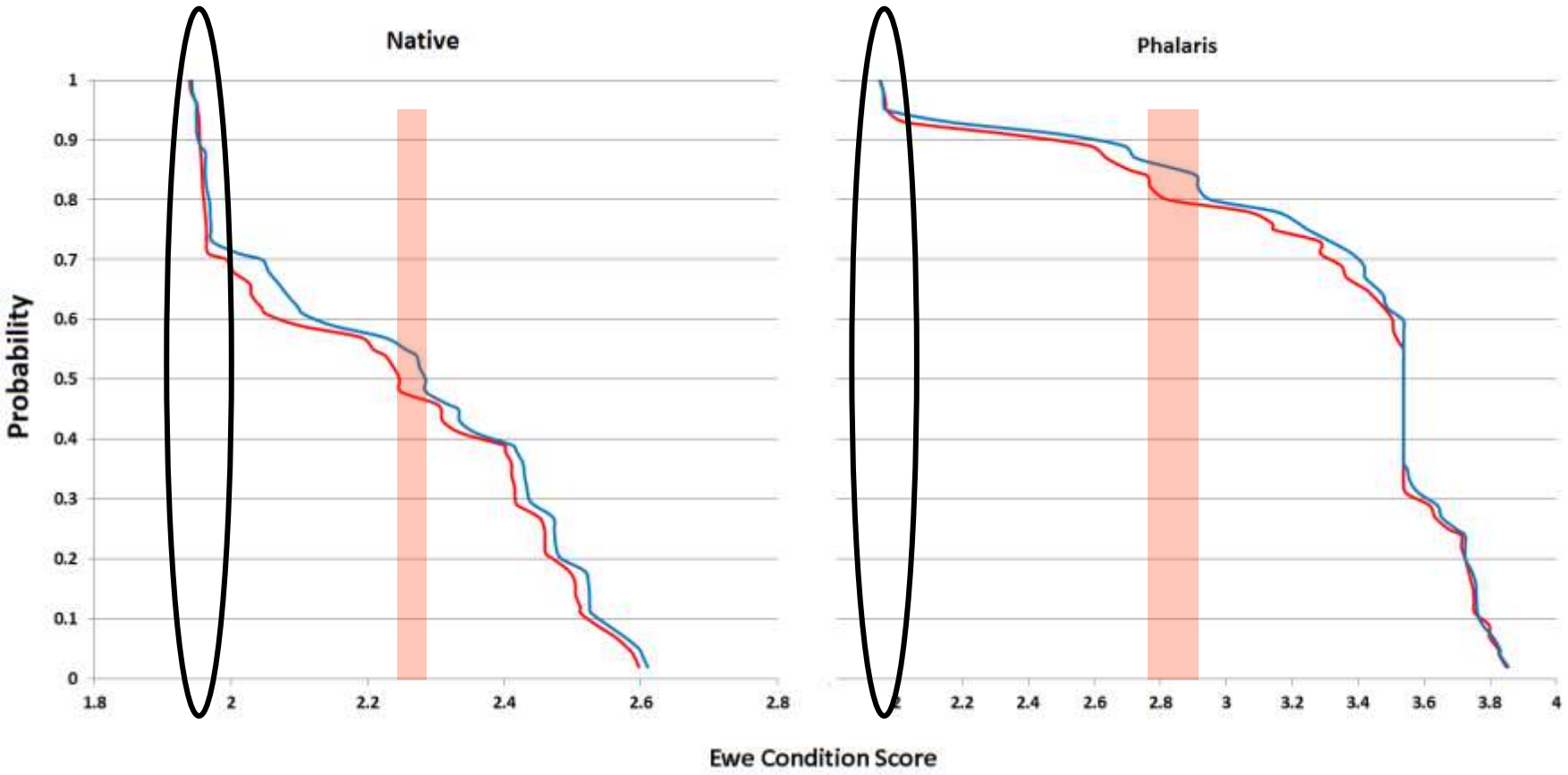
Seasonal Projections Scanning Rate



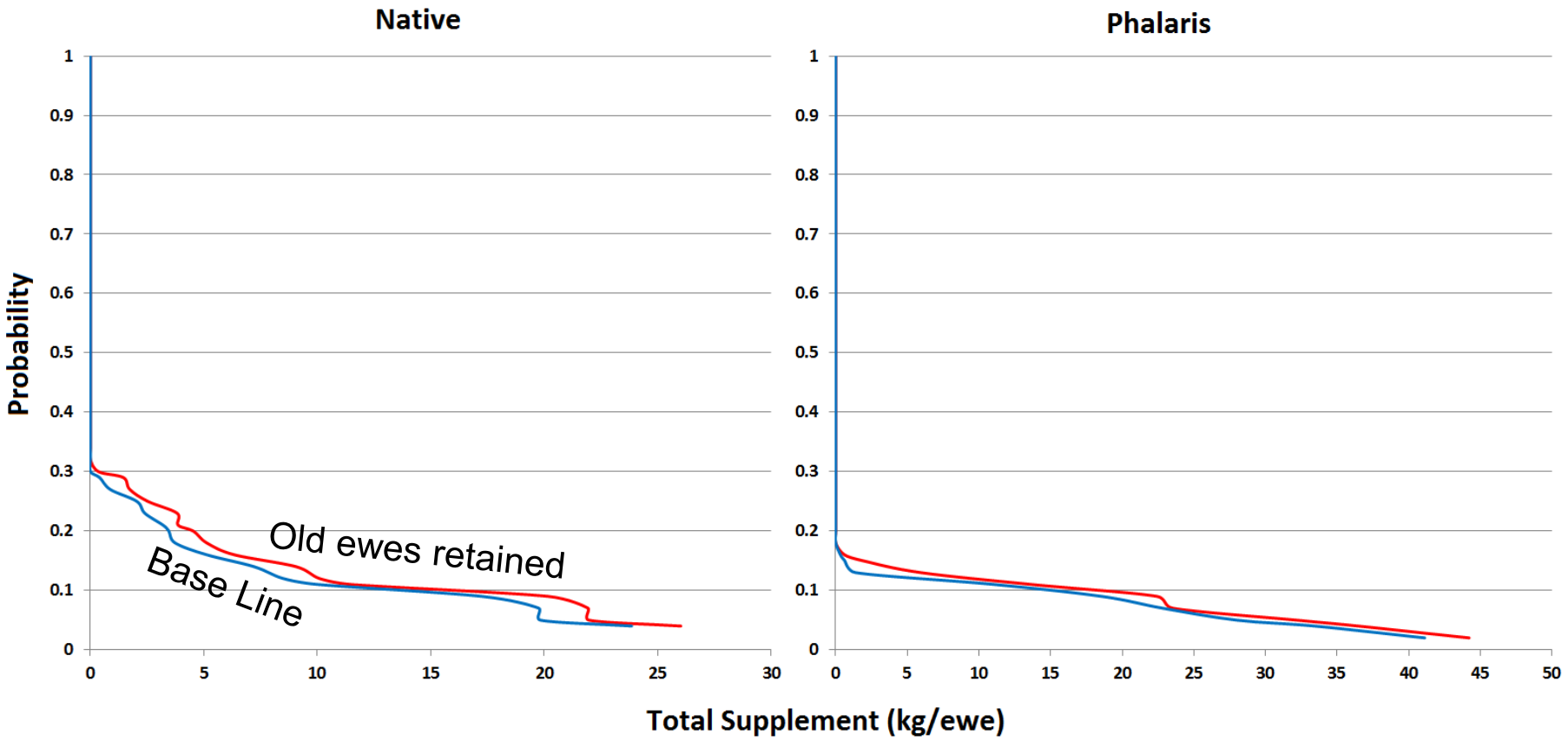
Strategies for Autumn?

- Need to economically utilise the potential carrying capacity.
- Retain CFA ewes for another lambing.
- Extended simulation to end Aug to show the impact on potential winter outcomes.

Projected Ewe condition at 31 Aug



Projected Grain Requirement



Economics - Median

Costs/lost income		Extra Income	
Forgone ewe sales (interest and ewe losses)	$3600	Gross Margin for 485 ewes @$90/ewe.	$43650
Extra Feeding Costs	$0		
Total Costs	$3600	Total Income	$43650
		Profit	**$40,050**

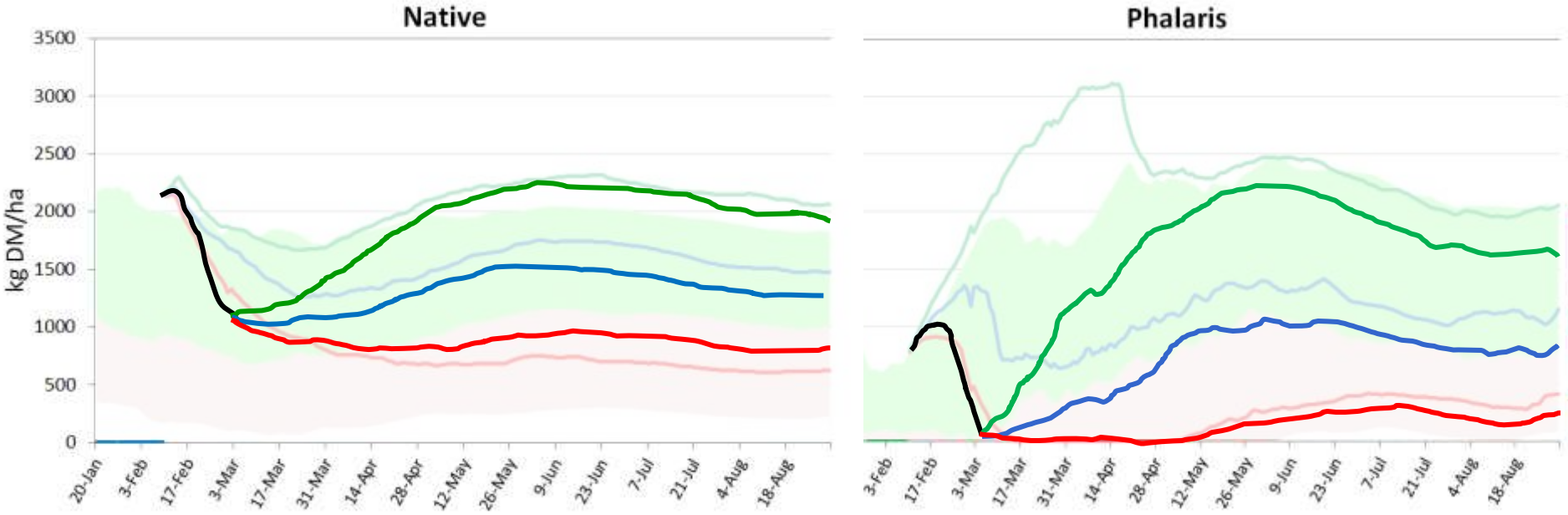
Economics - Worst Case (5th %-ile)

Costs/lost income		Extra Income	
Forgone ewe sales (interest and ewe losses)	$4,800	Gross Margin for 470 ewes @$90/ewe.	$42,300
Extra Feeding Costs	$3,850		
Total Costs	$8,650	Total Income	$42,300
		Profit	**$33,650**

Conclusion (10th of Feb)

- Plenty of spare capacity to retain extra ewes
- Little downside either in ewe performance or the cost of getting them through winter
- Economics should stack up even in a worst case scenario.

Which path have we gone since 10th Feb



Projections 10% Median 90%

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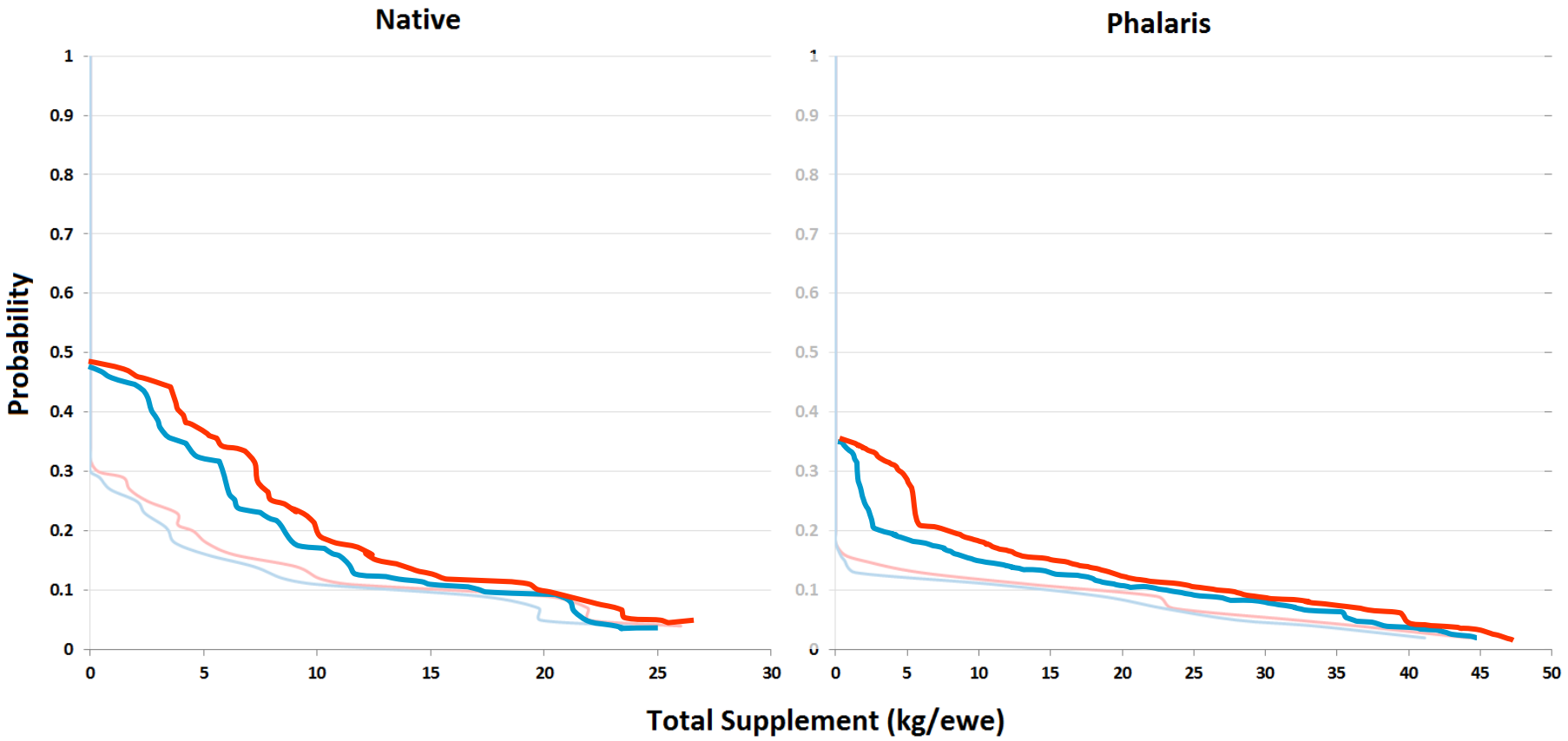

Has the conclusion changed?

- The worst case scenario is no worse.
- The chance of feeding is greater but the profit will still be there.

The business decision remains the same.

The get out clause.

- If the season continues to be poor there is always the option of selling in-lamb ewes.
- This should increase the value of the CFA ewes with very little downside risk to the overall enterprise.

Economics – mate now and sell SIL ewes in early June

Costs/lost income		Extra Income	
Forgone ewe sales with interest ($70/hd)	$35700	Sale of SIL Ewes ($120/hd	$59400
Extra Management Costs	$500		
Total Costs	$36200	Total Income	$59400
		Profit	**$23,200**