Is there a silver bullet?

Phil Graham & Doug Alcock

NSW DPI

Yass & Cooma

2000’s

- Difficult seasons
- Changing markets relativities
- Tighter margins
- New breeds

- Has resulted in producers looking for change

Changing sheep enterprises usually results in

- Different stocking pressure due to differences in body weight and reproduction rates.
- Changes in management – a surge in interest because of the change.
- Together this creates noise in producer data about enterprise change.

Impact of ewe weight on pasture eaten

- 60 kg ewe eats 100%
- 70 kg ewe eats 118%
- 80 kg ewe eats 131%

- Therefore 130 ewes of 60 kg equals 100 ewes of 80 kg ewes
- Changes to lambing percentages has additional effects

Modelling

- By using modelling the variables can be controlled to give a clearer picture of the differences between enterprises.

- Once the base system is developed, variables can be changed to look at the impact on the enterprises.

GrassGro

5 yr average prices

- Meat

- 1st cross + $3.60
- M/T $3.39
- Dohnes $3.30
- Merino $3.00

- Mutton $1.80

- Wool

- 18 um 1076c/kg
- 19um 976c/kg
- 21um 838c/kg
- 26um 590c/kg

5 yr average costs

- Shearing $ 5.74
- Grain feeding $280/t
- Variable costs $3.50/hd
- Replacement ewes $100/hd 1st cross
- $60 merino ewes
- Rams $800
- Fertilizer $30/ha
- Overhead costs $100/ha
- Stock commission 5%

Results for Yass good pasture 1960 to 2007

PL	D	S	MT	M18L	M18Y
70 kg Body Wt	60kg	68kg	55kg	50kg	50kg
4.2 kg Fleece	4.8	3.8	4.5	4.8	4.8
27um	20.2um	23um	20um	18um	18um
118% marking	97%	113%	91%	84%	80%

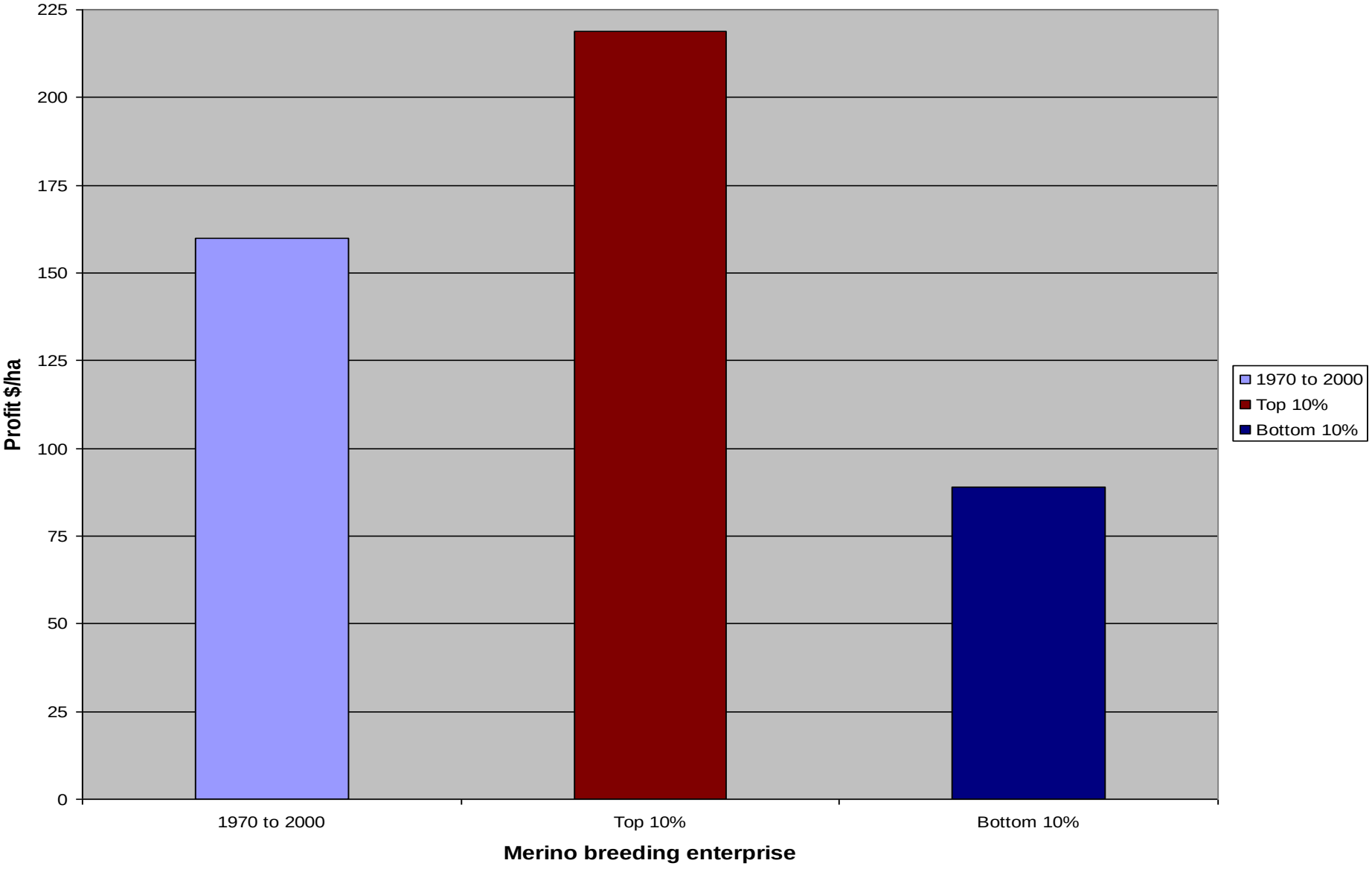
Results

PL	D	S	MT	M18L	M18Y
5.6/ha ewes	4.9	5.1	7.1	6.4	5.3
668 lambs sold	341	470	659	383	0
$162 profit/ha	**$168**	**$155**	**$181**	**$175**	**$167**

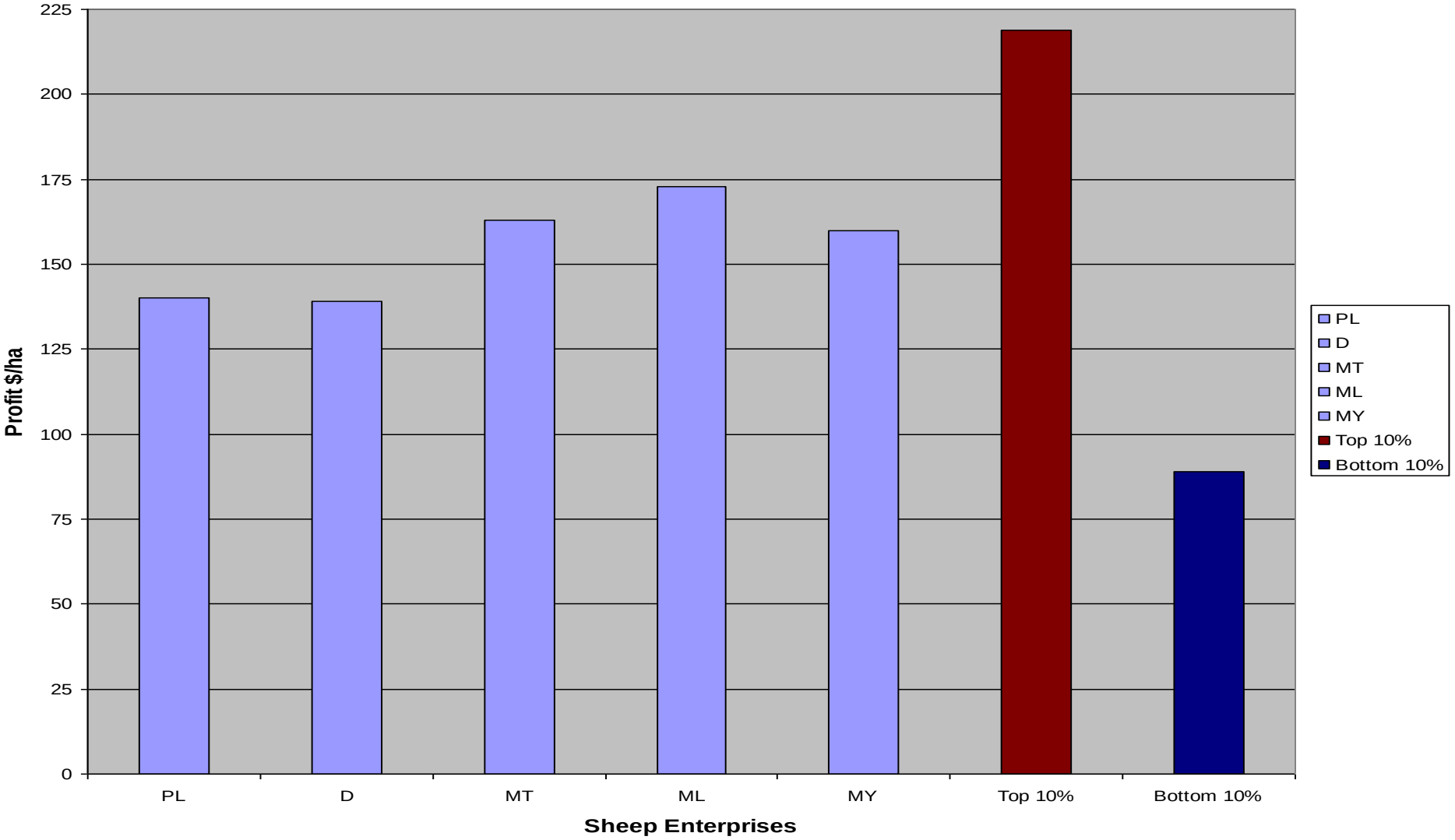
Range within the industry

PL $4.40/kg fast	Top industry levels, 6.4 kg at 17.9 um	Merino lower performing 4.0kg at 18um
$262/ha	$250/ha	$89/ha
118% marking	80% marking	80% marking
5.4 ewes/ha	5 ewes/ha	5 ewes/ha

Variation within an industry



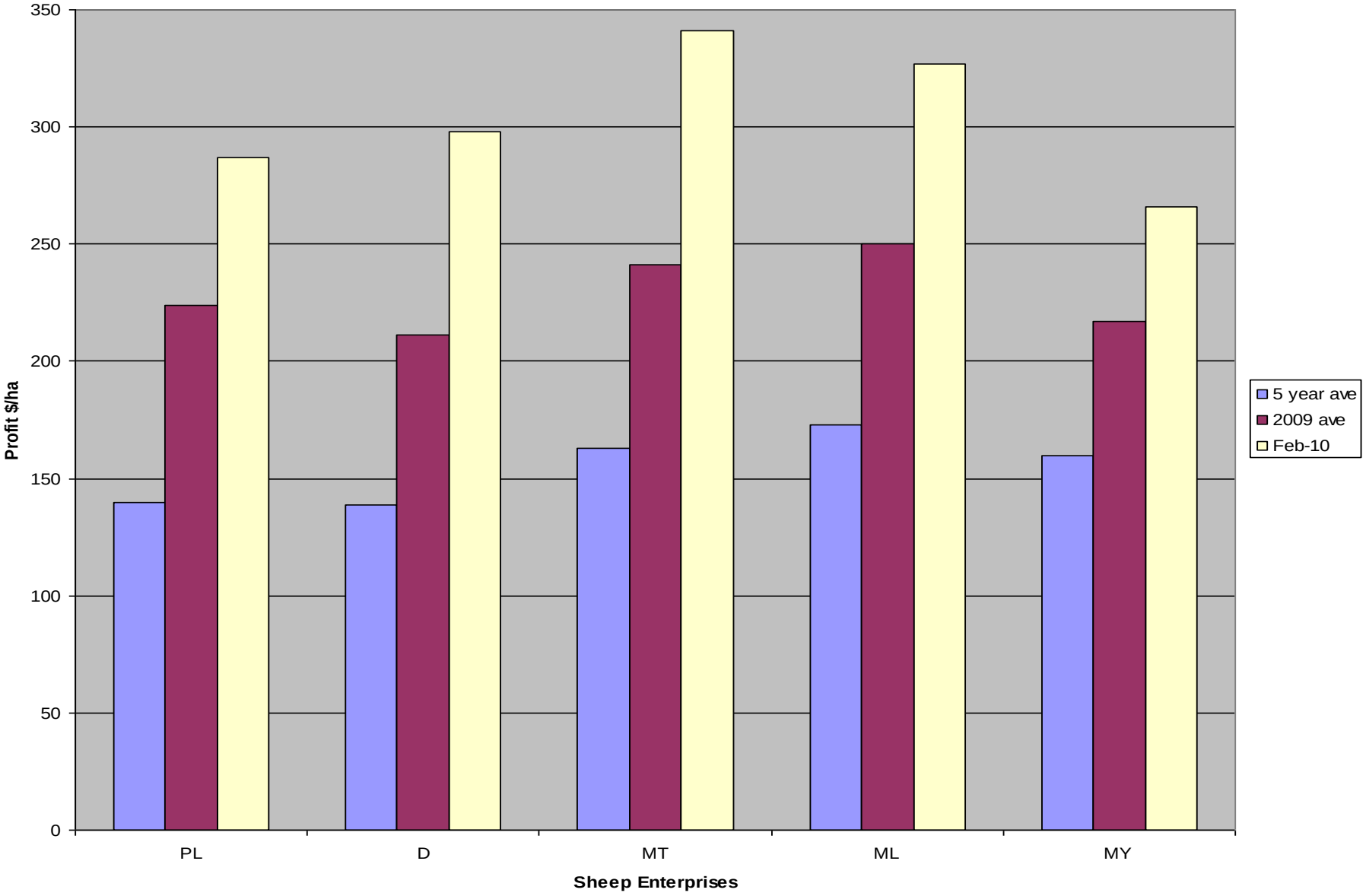
Within enterprise variation is greater than between enterprise variation



Prices used

	2005 to 2009	22/1/2010
Lamb c/kg	359 c	480 c
Mutton c/kg	180 c	300 c
18 um wool c/kg	1076 clean	1208 clean
Replace ewes $/hd	100/70	125/95
Sell wethers	40	60
Sell ewes	60	110

Impact of market prices



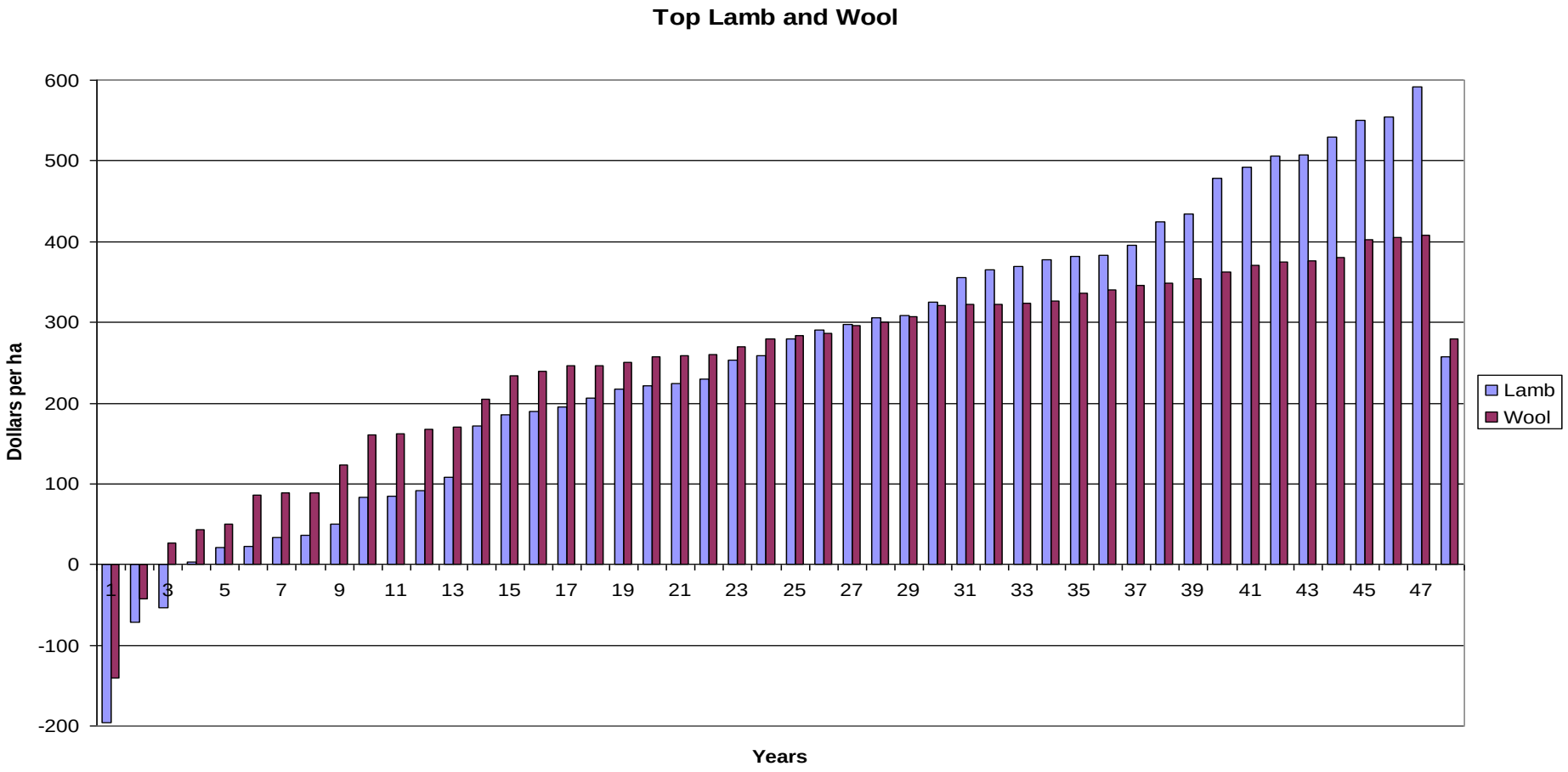
Impact of changing replacement ewe costs.

	Replacement cost $/hd	Profit $/ha
1 cross ewe	$150 $125 **$100**	$97 $129 **$162**
Merino ewe	$110 $90 **$70**	$115 $147 **$181**

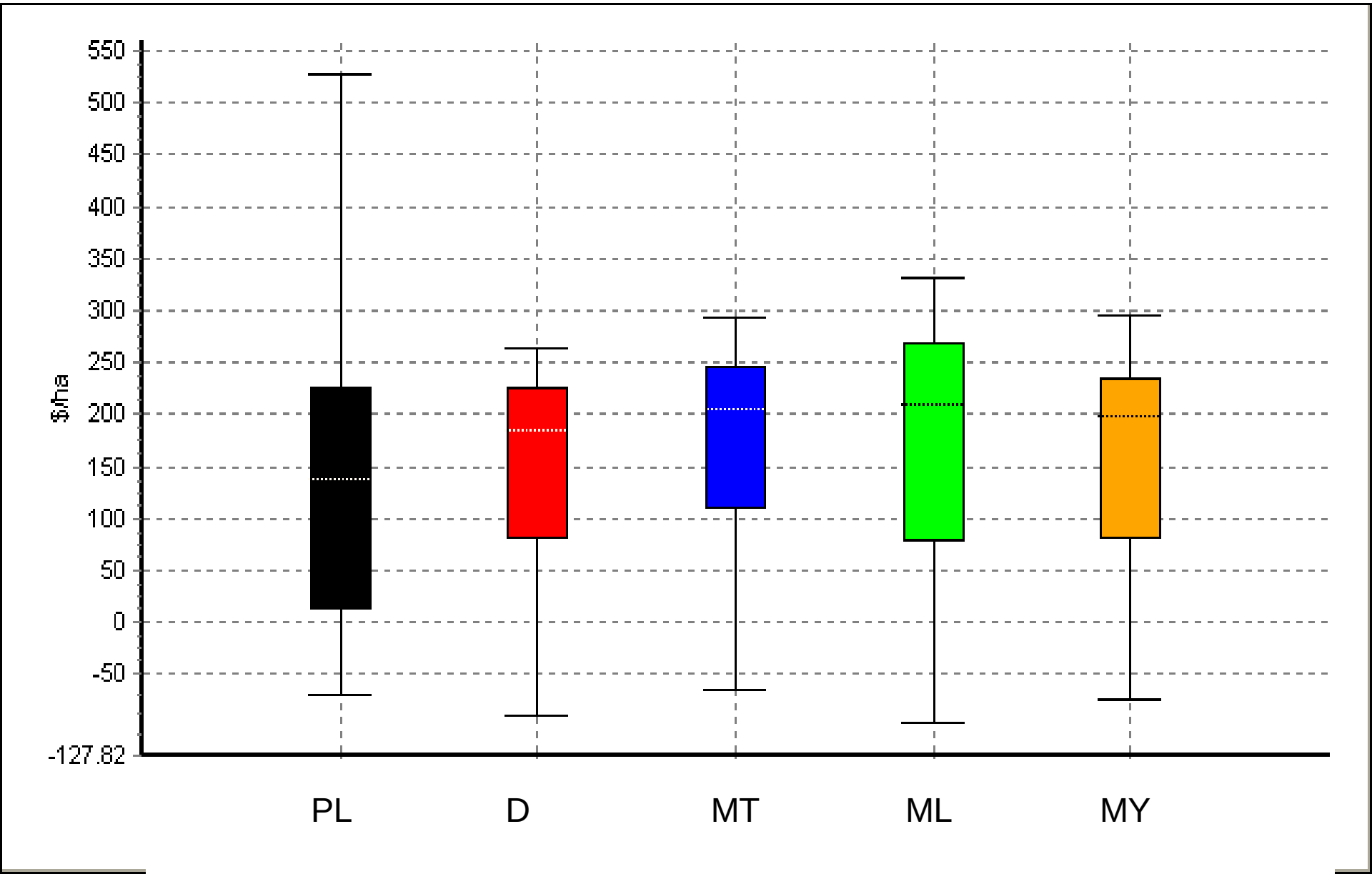
Impact on 20 um Dohne of varying wool and lamb price

	Low wool 795c/kg	5yr ave wool	High wool 1021 c/kg	Difference wool
Low lamb 290c/kg	$110	$132	$166	
5 yr ave lamb	$137	**$160**	$193	
High lamb 390 c/kg	$178	$201	$234	$56/ha
Difference lamb			$68/ha	

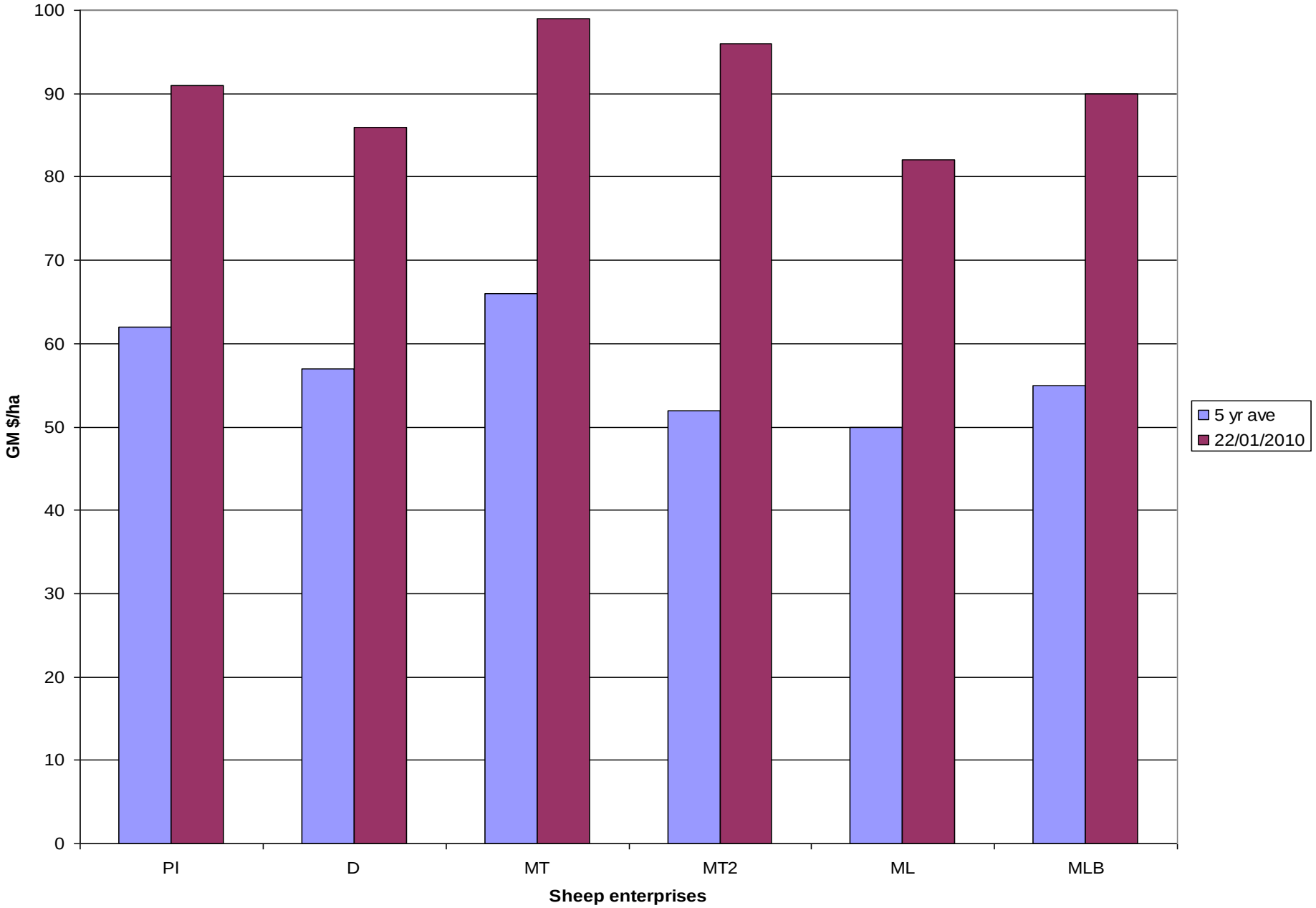
How do wool and meat vary?

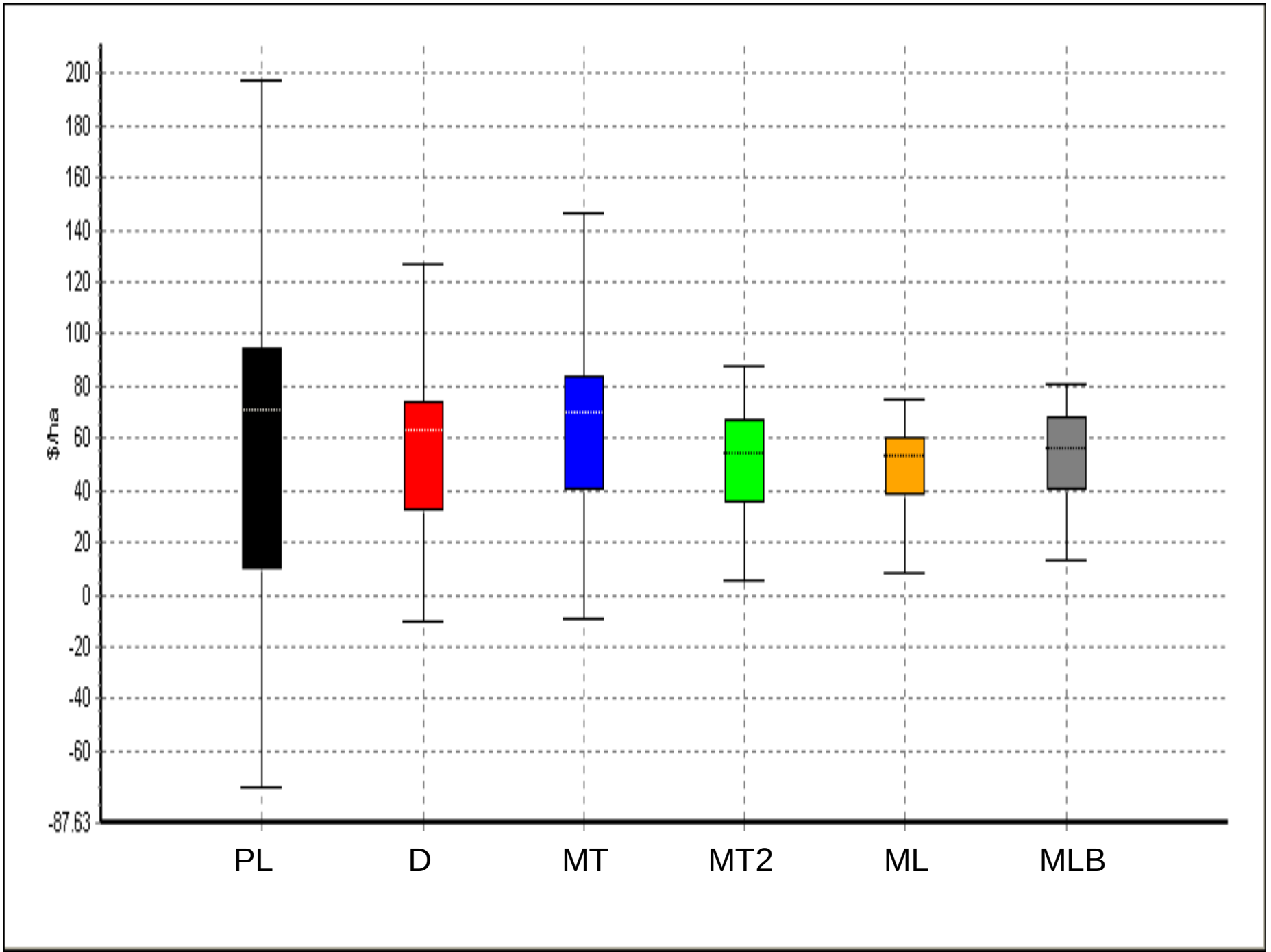


Yearly variation



What happens when we run the same data but at Deniliquin


Impact of Prices on Enterprises
GM $/ha
100
90
80
70
60
50
40
30
20
10
0
PI
D
MT
MT2
ML
MLB
Sheep enterprises
5 yr ave
22/01/2010


200
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
-87.63
$/ha
PL
D
MT
MT2
ML
MLB

Comparisons on Monaro Grasslands.

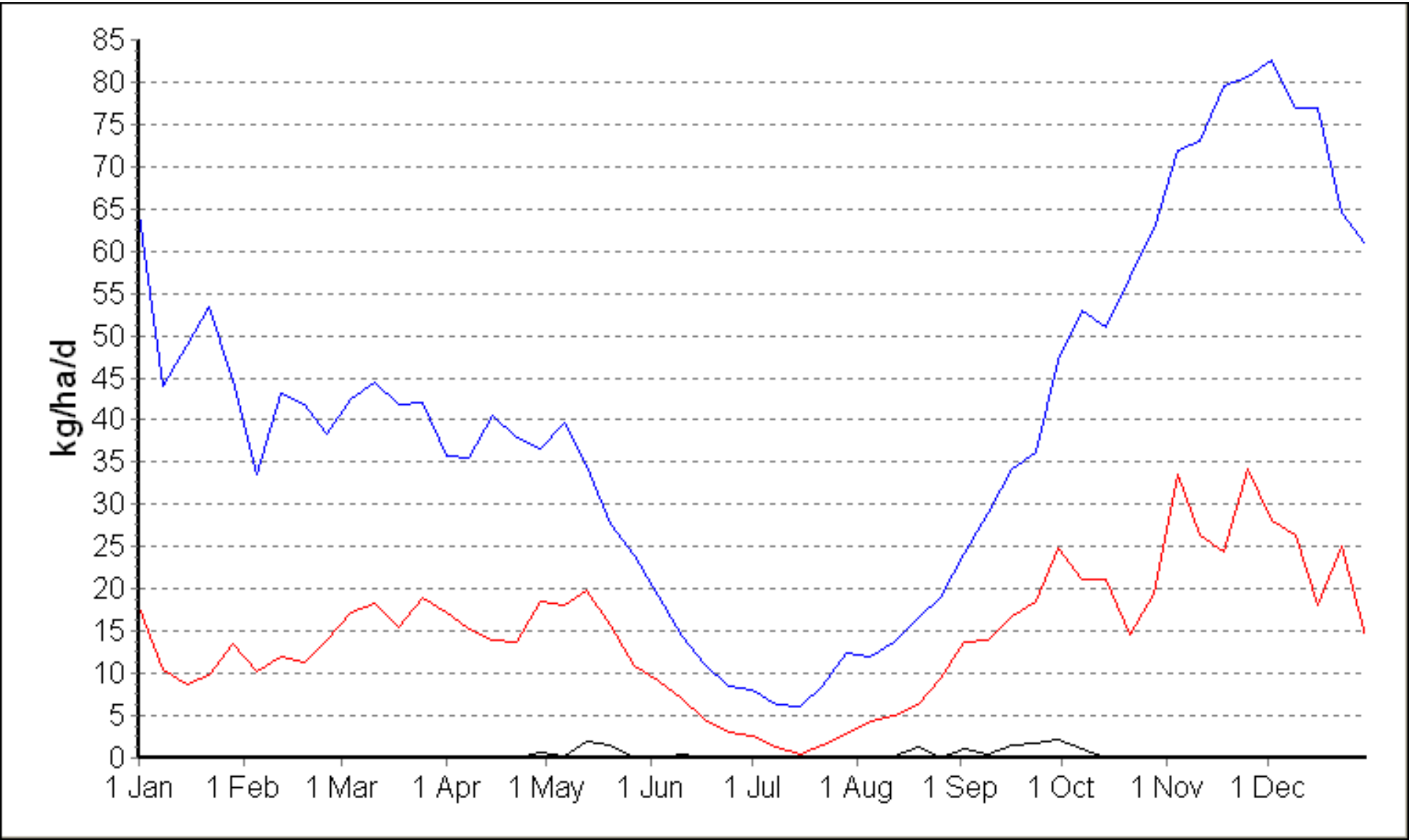
- Fertilised Poa based grassland
  - Poa spp.
  - Austrostipa spp
  - Legume (sub and naturalised clover)
  - Annual grasses.
- Red Stony Basalt
- Bungarby weather data 1960 – 2009
- Prices current as at Jan 2010

Average Growth Rates

1960 -2009

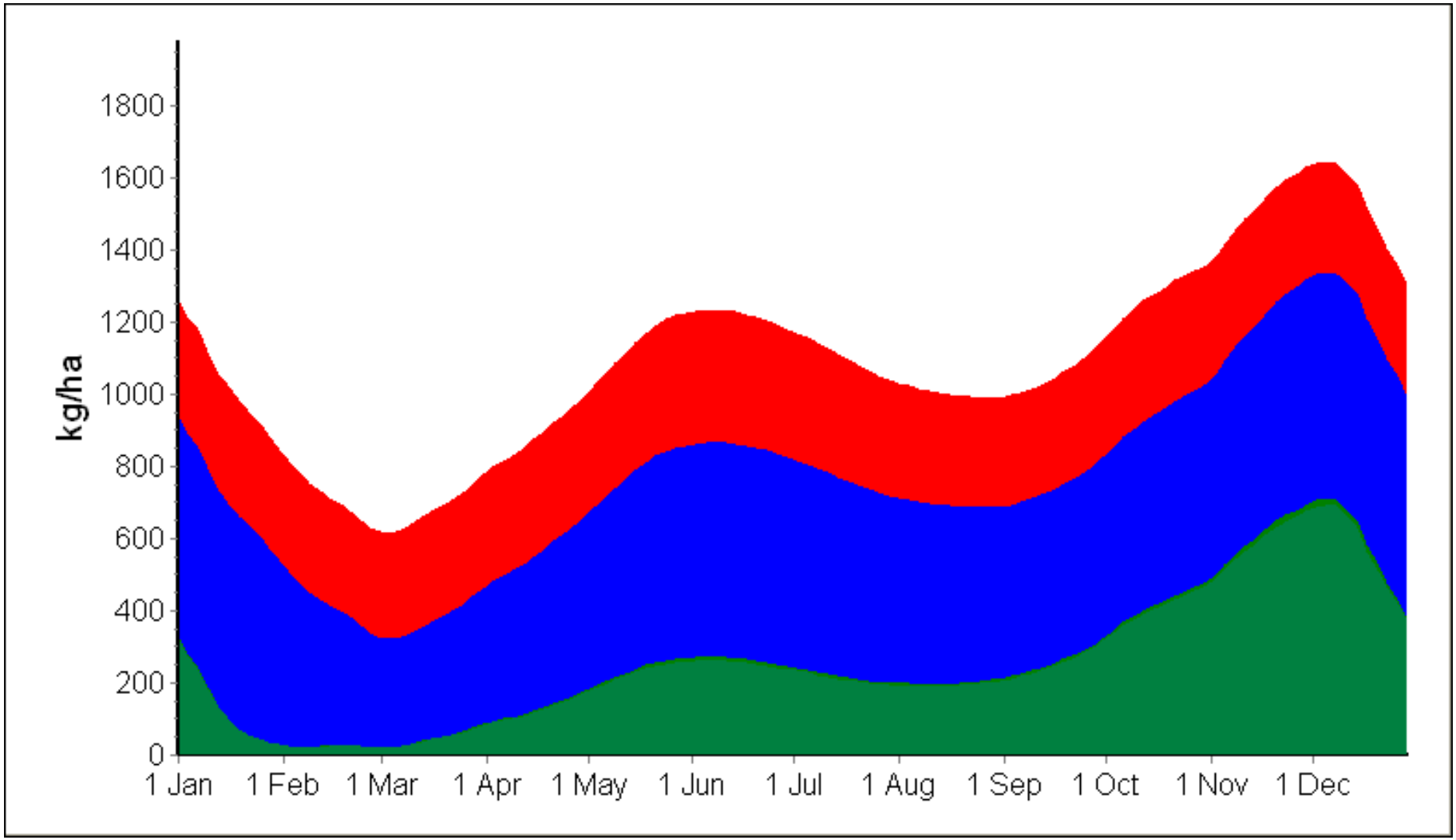
Percentiles of Pasture Growth

1960 - 2009



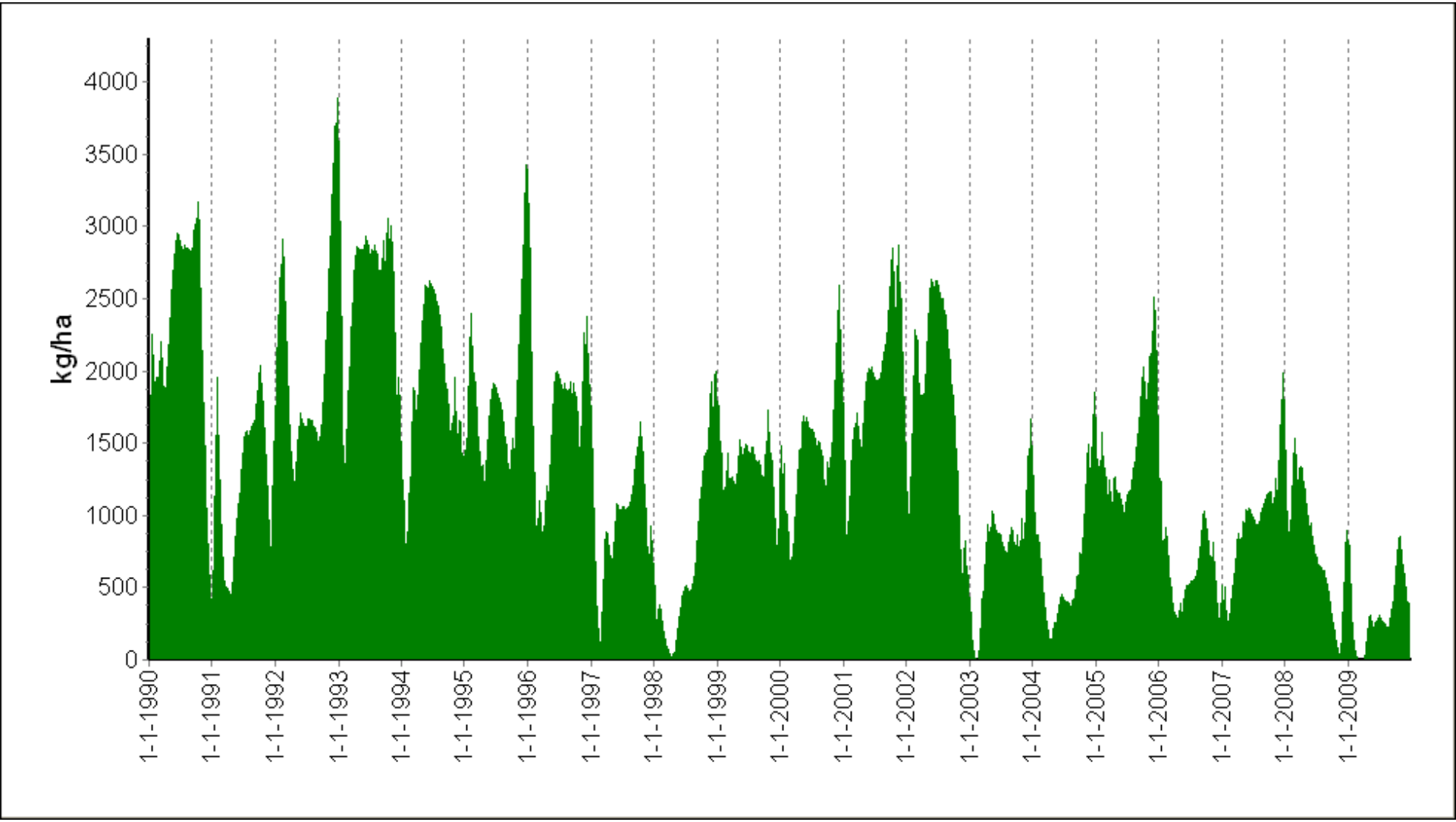
Average Green Available Herbage

1960 - 2009



Green available herbage

1990 - 2009



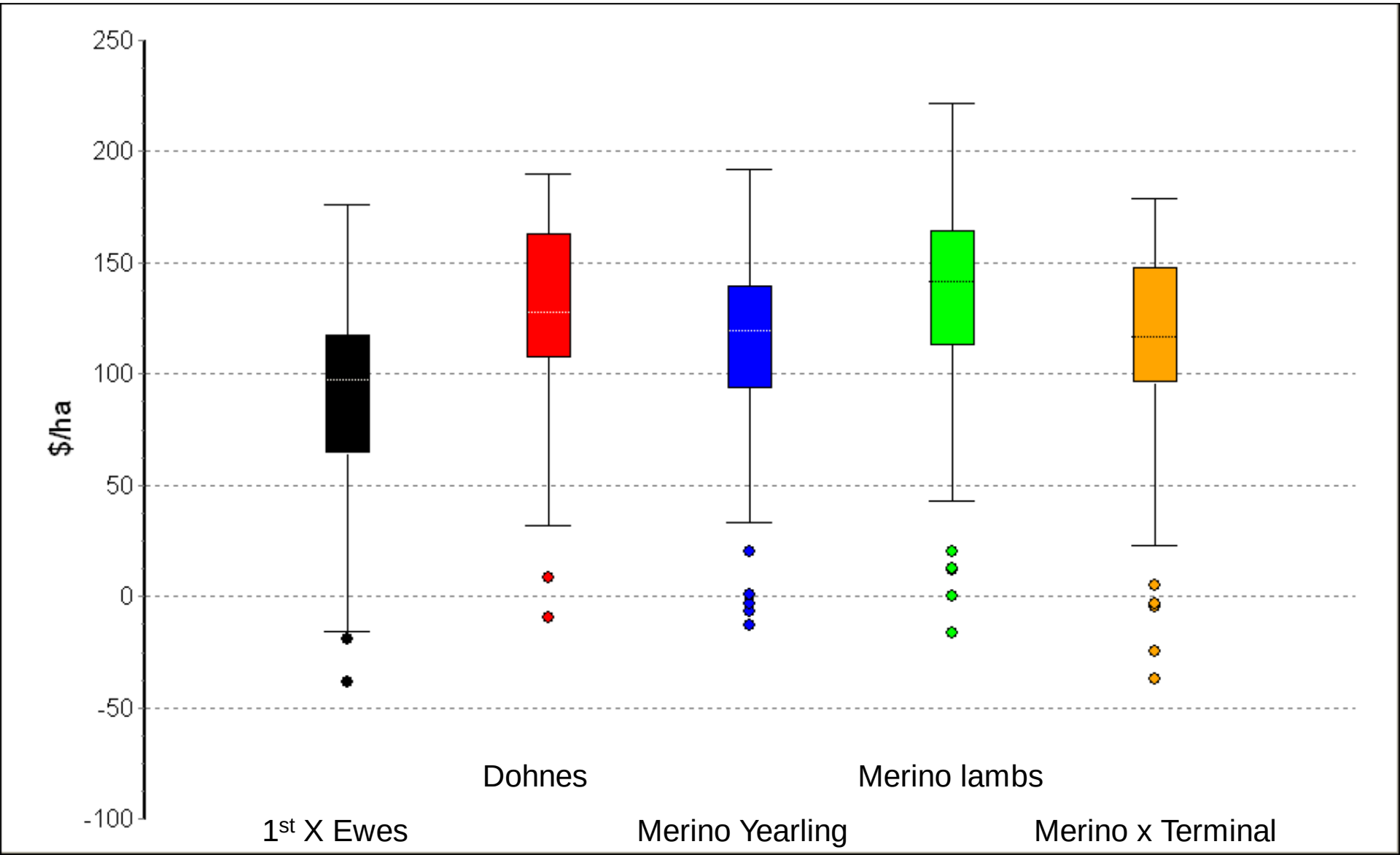
Choice of SR

- Run merinos at the same DSE rating as the Monaro Grasslands Project
  - (High treatment 6.5 dse/ha)
- Run new enterprises at the same pasture utilisation rate.
  - (34% over 50yrs)

34% Pasture Utilisation

	1st X	Dohne	Merino Yearling	Merino Lambs	Merino X Terminal
Stocking Rate ewes/ha	2.4	3.2	3.5	4.2	3.0
LWt. Lambs Sold (kg/ha)	116	77	59	86	120
PROFIT $/ha	85	122	109	127	106
Weaning %	110	100	77	82	92
Pasture Utilised (%)	34	34	34	34	34

Profit and Risk



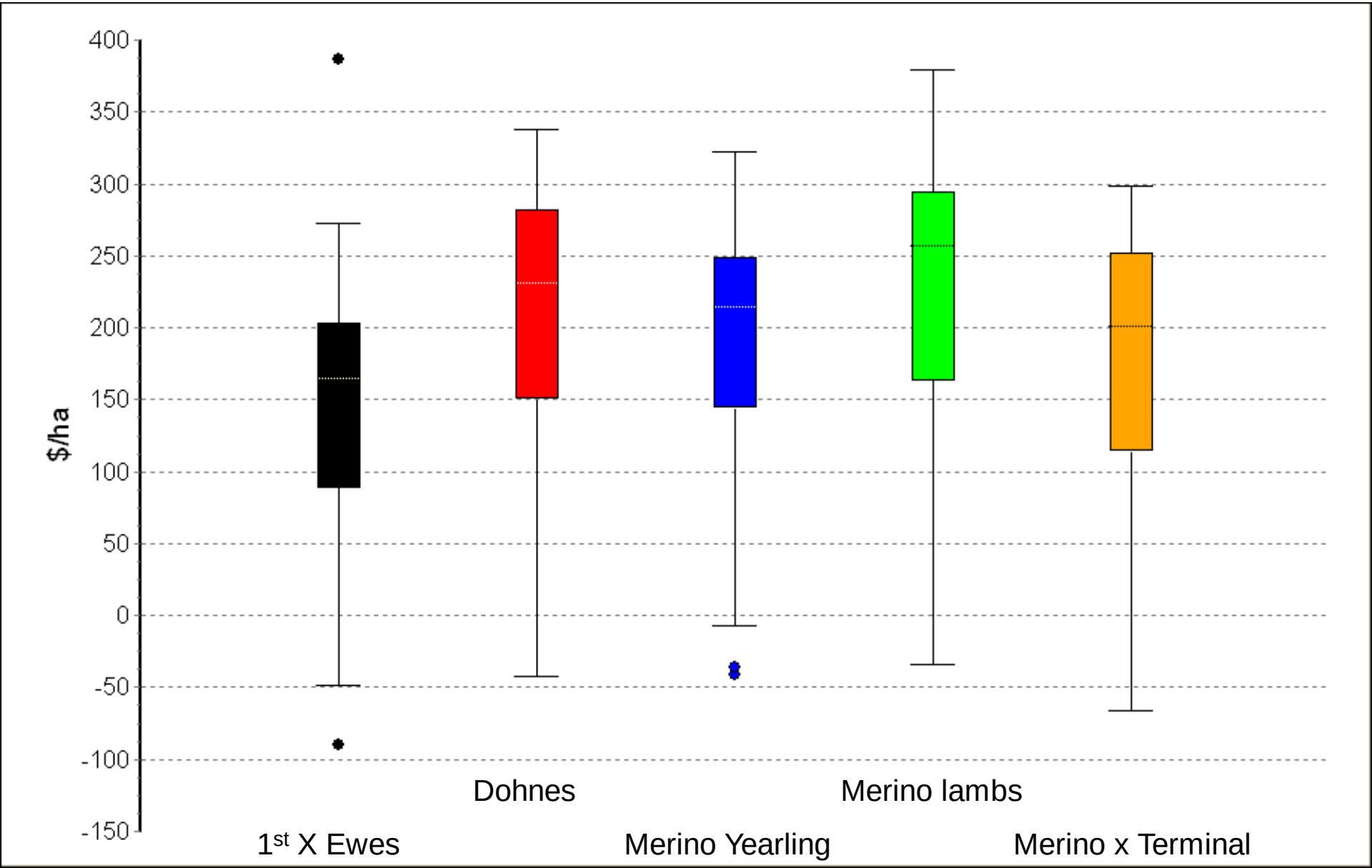
Run at highest sustainable SR

- Minimum Ground Cover above 70% in 70% of years.
- Some variable shift towards annuals

Max Sustainable SR

	1st X	Dohne	Merino Yearling	Merino Lambs	Merino X Terminal
Stocking Rate ewes/ha	3.1	4.5	4.7	5.6	4.0
LWt. Lambs Sold (kg/ha)	158	110	89	119	162
Profit $/ha	**153**	**211**	**185**	**219**	**176**
Weaning %	117	101	80	85	93
Pasture Utilised (%)	42	43	43	42	43

Profit and Risk



Typical Management

- Simple change over to the same number of ewes joined as the base Merino Yearling enterprise at 34% utilisation.

Same ewe SR

	1st X	Dohne	Merino Yearling	Merino Lambs	Merino X Terminal
Stocking Rate ewes/ha	3.5	3.5	3.5	3.5	3.5
LWt. Lambs Sold (kg/ha)	180	84	59	72	139
Profit $/ha	**185**	**140**	**109**	**93**	**136**
Weaning %	118	99	77	83	92
Pasture Utilised (%)	41	37	34	29	39

Profit and Risk