

# Making The Most of Dorper Genetics



Presented by **Dawson Bradford**

# **Making the Most of Dorper Genetics**

**The dorper breed has introduced another dimension to the Australian sheep farming scene.**

**Their hardiness and easy care traits make them suitable for a wide range of Australian environments.**

# Today's Presentation

- **Overview of Hillcroft Farms Poll Dorset Flock**
- **Developing an “Easy Care” Flock with high performance**
- **A few observations on Dorpers**



**I have been breeding  
Poll Dorsets for just on  
50 years, firstly with  
my father and since  
1972 as Hillcroft Farms  
Stud**

- **Horn Gene**
- **Slow Growth**
- **Fat**
- **High % Lambing  
Difficulties**

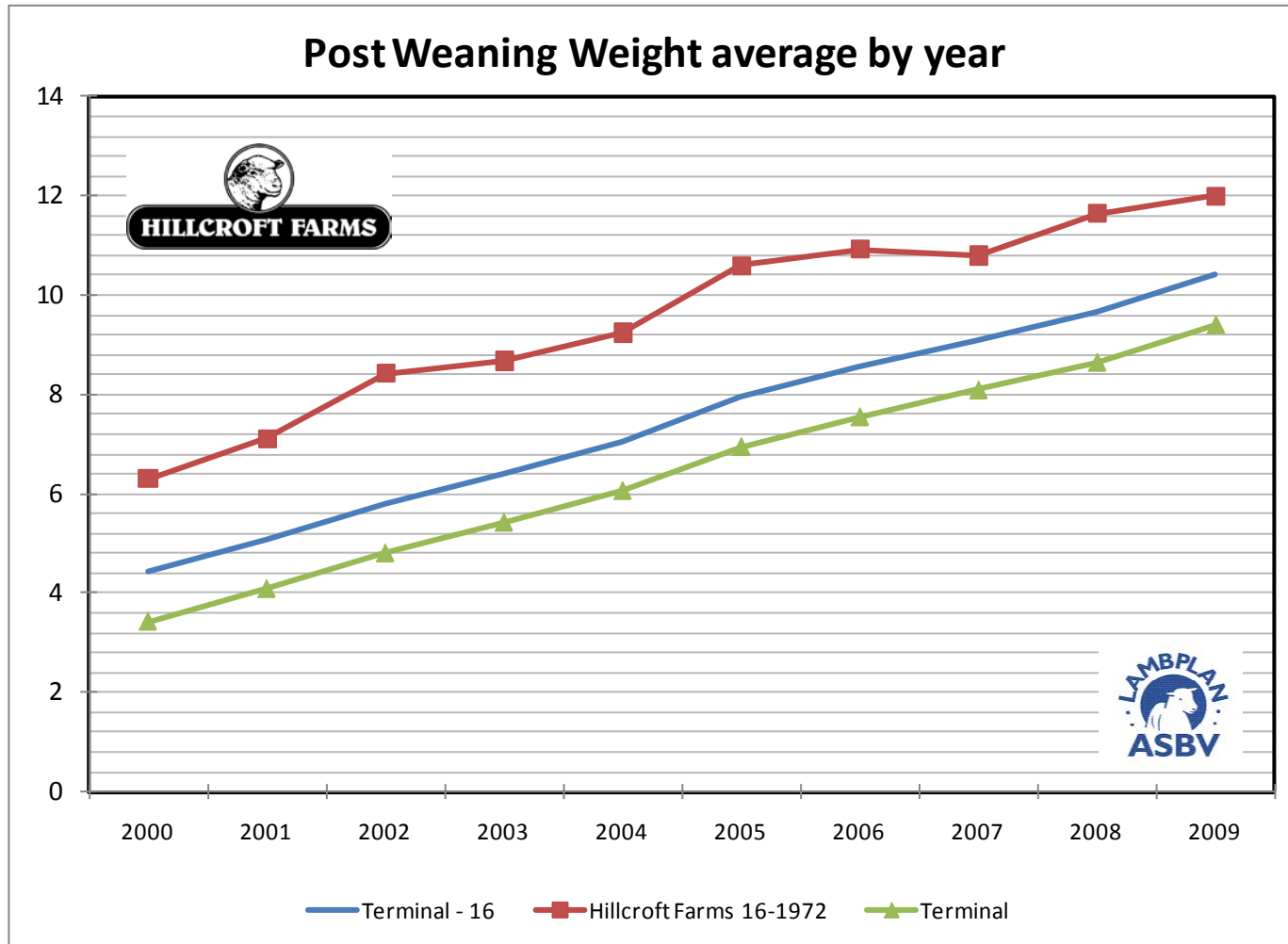
# **I have always believed that you need to strive to breed the best performing livestock possible**

- **Cost no more to manage**
- **Cost less to run**
- **Returns are higher**
- **It's a no brainer**
- **Why over look opportunity**

**Consequently we adopted a slogan for our stud  
“It’s performance that pays”  
we haven’t waivered from that since**

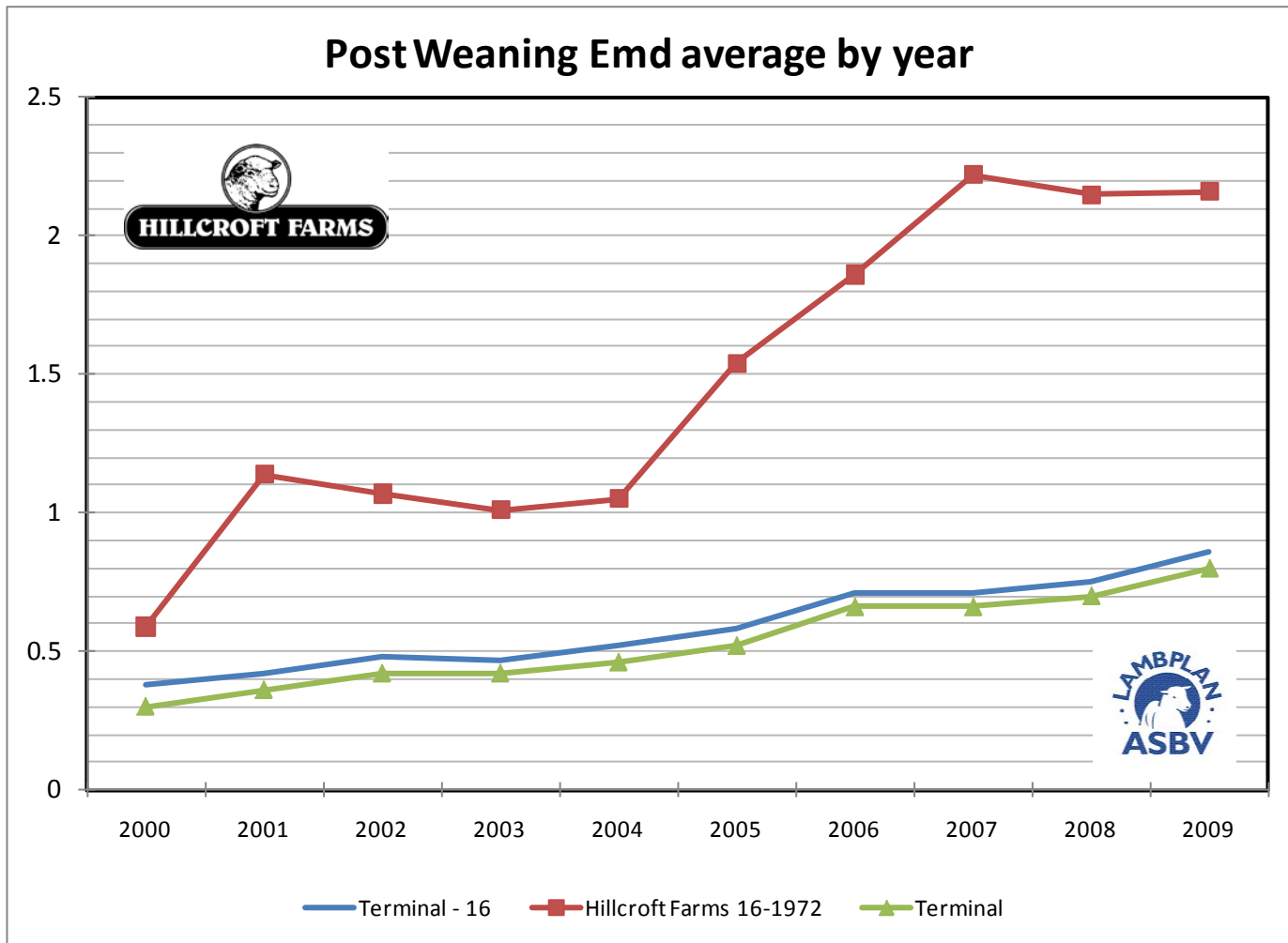
- **1960-1990 Slow Progress**
- **1990-2000 Moderate Progress**
- **2000 -2010 Rapid Progress**

# Let's look at progress post 2000

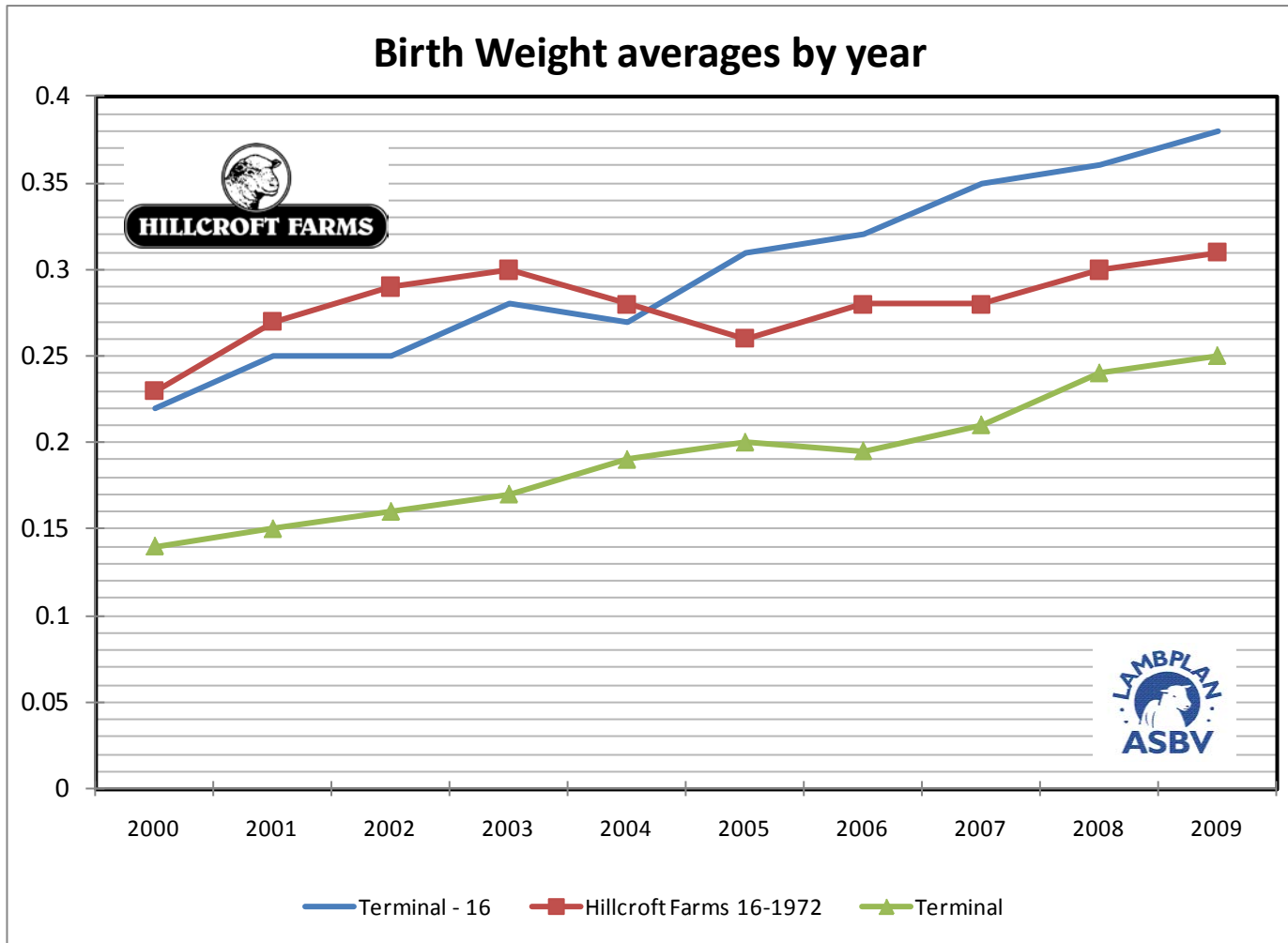


Post Weaning Weight gain of over 0.5kg per year from 6.3kg to 12.0 kg

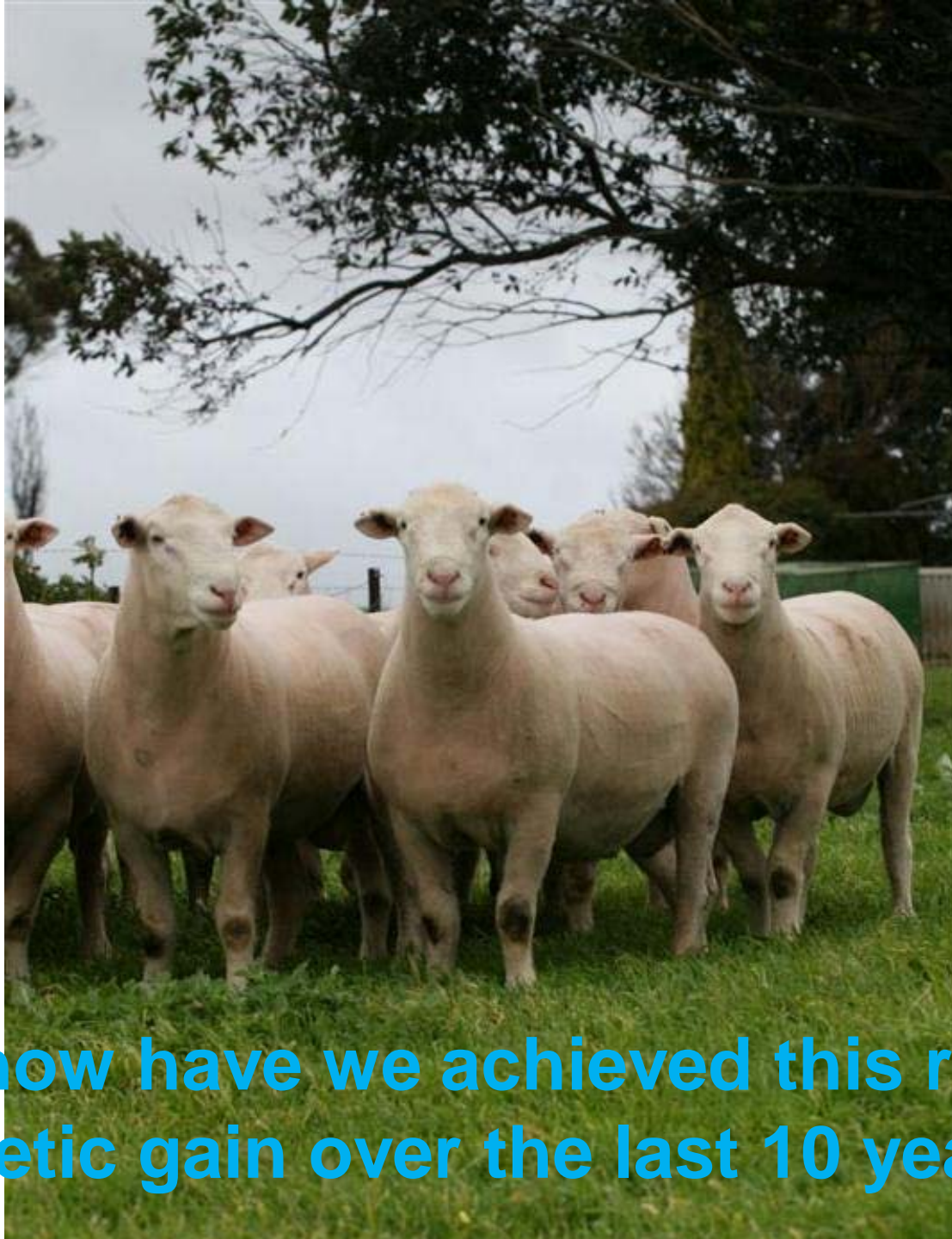
Whichever way you look at this, it is a significant gain that keeps on returning a dividend year after year for no extra cost



**Post Weaning Emd from 0.59 to 2.16**



**Birth Weight Average from 0.23 to 0.30**



**So how have we achieved this rapid genetic gain over the last 10 years?**

- **Restricted the in flow of outside genetics**
- **Selections based on performance, structural soundness and functionality**
- **Used TGRM for mating selections –set breeding parameters and control inbreeding**  
**Bwt <.30      Pwwt >13.5      Pemd>2.2**  
**Pfat -.05 to -.08      Inbreeding< 15%**
- **Used predominately ram lambs to increase rate of gain and limit inbreeding**
- **Mate ewe lambs at 7 months**
- **Take no notice of the show ring results**



**What have we learned along the way ?**



- **Inbreeding or line breeding is the best way to quickly develop a high degree of uniformity in the flock**
- **You need to have good genetics before you close a flock – free of major faults**
- **Let the contents shape the container -**
- **Tall sheep will never carry muscle at early ages, usually over 12 months before muscle develops. This ram will be a big sheep when he grows out.....**
- **Growth gives length - Short sheep lack growth**
- **The show ring in its current state is holding back the industry**

- **When line breeding, need to be vigilant looking out for unwanted characteristics developing. Eg bad mouths, weak pasterns, front legs set too far forward etc. result from using sheep with these characteristics that have gone unnoticed at the time.**
- **Controlled line breeding up to 15% doesn't have the downsides that we have all been led to believe, if you adhere to the few simple rules I have mentioned.**

# **So much for the Poll Dorset Flock**

**The Poll Dorset is a very well balanced breed suitable for most of the lamb producing areas of Australia.**

**The only fault that they have is that they grow wool**



**Hence the development of our easycare flock**

# What are we aiming to develop?

- **Non shearing**
- **Hardy – able to utilize our dry feed better**
- **High fertility and mothering ability**
- **High performance - growth , muscle, fat, FCR**
- **Year round breeding**
- **Moderate mature adult weights**
- **Self replacing**
- **Poll Dorset flock covers -**
  - ✓ **High performance**
  - ✓ **Year round breeding**
  - ✓ **Moderate adult weights**

- **The Dorper covers-**
  - ✓ **Non shearing**
  - ✓ **Hardiness**

**The fertility of the Dorper is similar to Poll Dorset but it is my belief that because they are not producing a fleece of wool they should be able to rear two lambs.**

**Plenty of them already do.**

**Need to produce an extra 30% of lambs to cover the loss of-**

- **skin value of the lamb.**
- **wool value from the ewe**

# So to increase the fertility of this new flock we have selected the Inverdale gene from the Romney breed

- **20% AND 40% more lambs per mating**
- **Nucleus flock results to date 170% to 180% at tailing**
- **80% twins**
- **10% singles**
- **7 - 8% triplets**



**The other area that we see opportunity to improve quickly is the hindquarter and the lean meat yield of this new flock**

- **The Texel breed carries the gene known as the myomax gene**
- **Sheep carrying a double copy of this gene, according to New Zealand data, will give lean meat yields of 10% more than the same sheep genetics that don't carry that gene**

- **Why wouldn't you incorporate this gene into your flock? It represents an increase of over 1.2kg of lean meat on a 24kg carcass or a value of between \$5 & \$10 per head to the processor**

**Why wouldn't you incorporate this gene into the new breed?**

# So what is the final breed going to consist of ?

- **Poll Dorset 60%**
- **Dorper 40%**

**The final mix also depends on being able to hold the gene that controls the hardiness of the Dorper**

- **Romney - less than 0.5% - only want the inverdale gene**
- **Texel - less than 0.5% - only want the myomax gene**



**How far have we got ?**

# **Poll Dorset X Dorper Flock**

- **4000 PDXDP F1 and F2 ewes from full shedders to very little shedding**
- **Used nearly all F2 (25% PD 75% DP) ram lambs for the current drop – only used Dorpers over Pure Poll Dorset ewes**
- **About 5% of F1s shed completely**
- **Approx 25% of F2s shed completely**
- **Reduced numbers need crutching**
- **Lambing % 130 -140%**
- **Sell first rams in spring 2010**



# **Poll Dorset X Dorper plus Myomax and Inverdale Nucleus**

- **Approx 250 ewes in flock**
- **66% carrying the Inverdale gene**
- **About 80% carrying single copy of Myomax**
- **20% carrying double copy of Myomax**
- **Some shedding – none complete**
- **Lambing% 170-180%**
- **Still a work in progress**



**I'm looking forward  
to the day when I can  
use the shearing  
shed for something  
else, other than  
shearing**

# Observations along the way

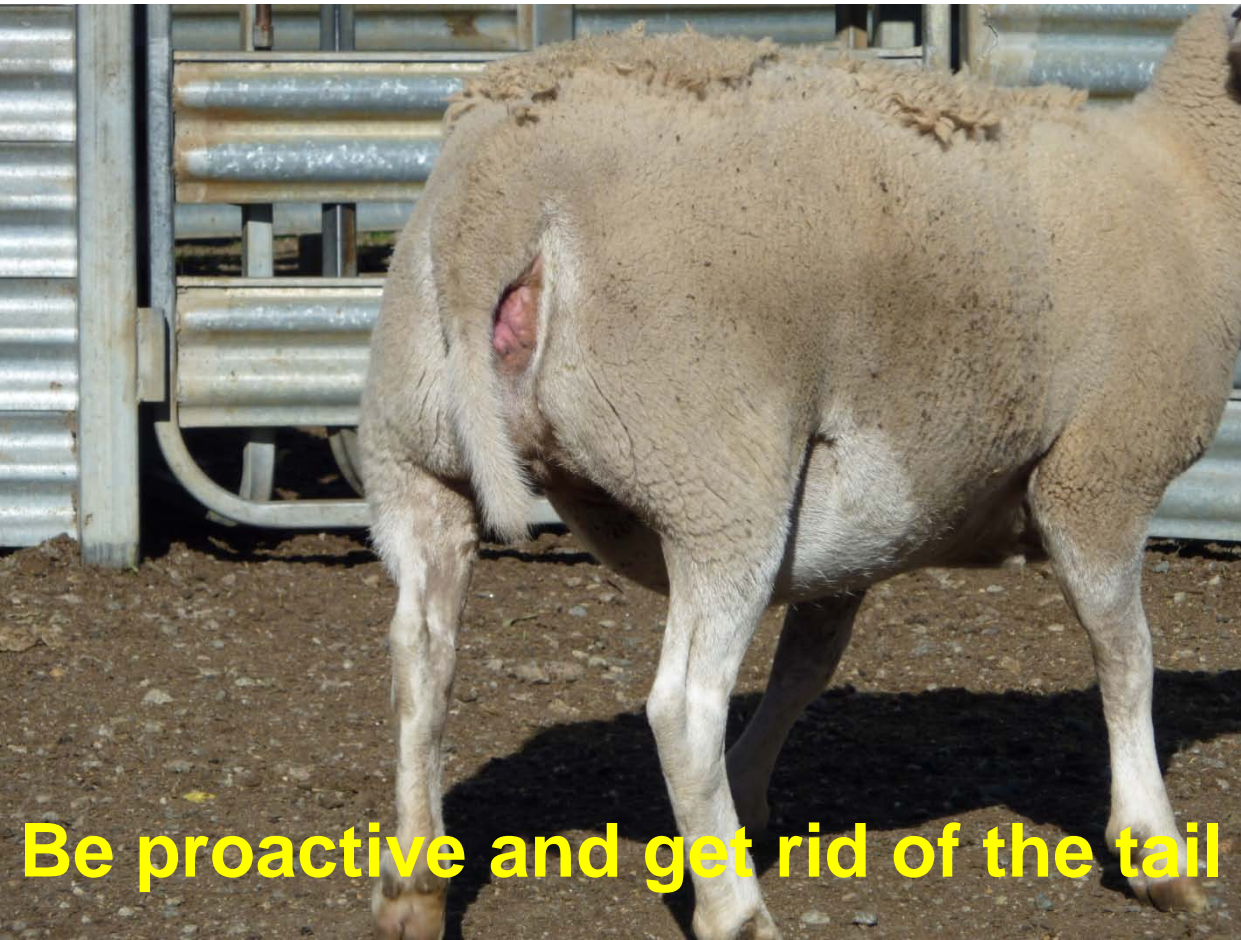
## Shedding

- **Not all Dorpers are 100% shedders**
- **Why don't Dorper Breeders sell their rams unshorn?**



# Tailing

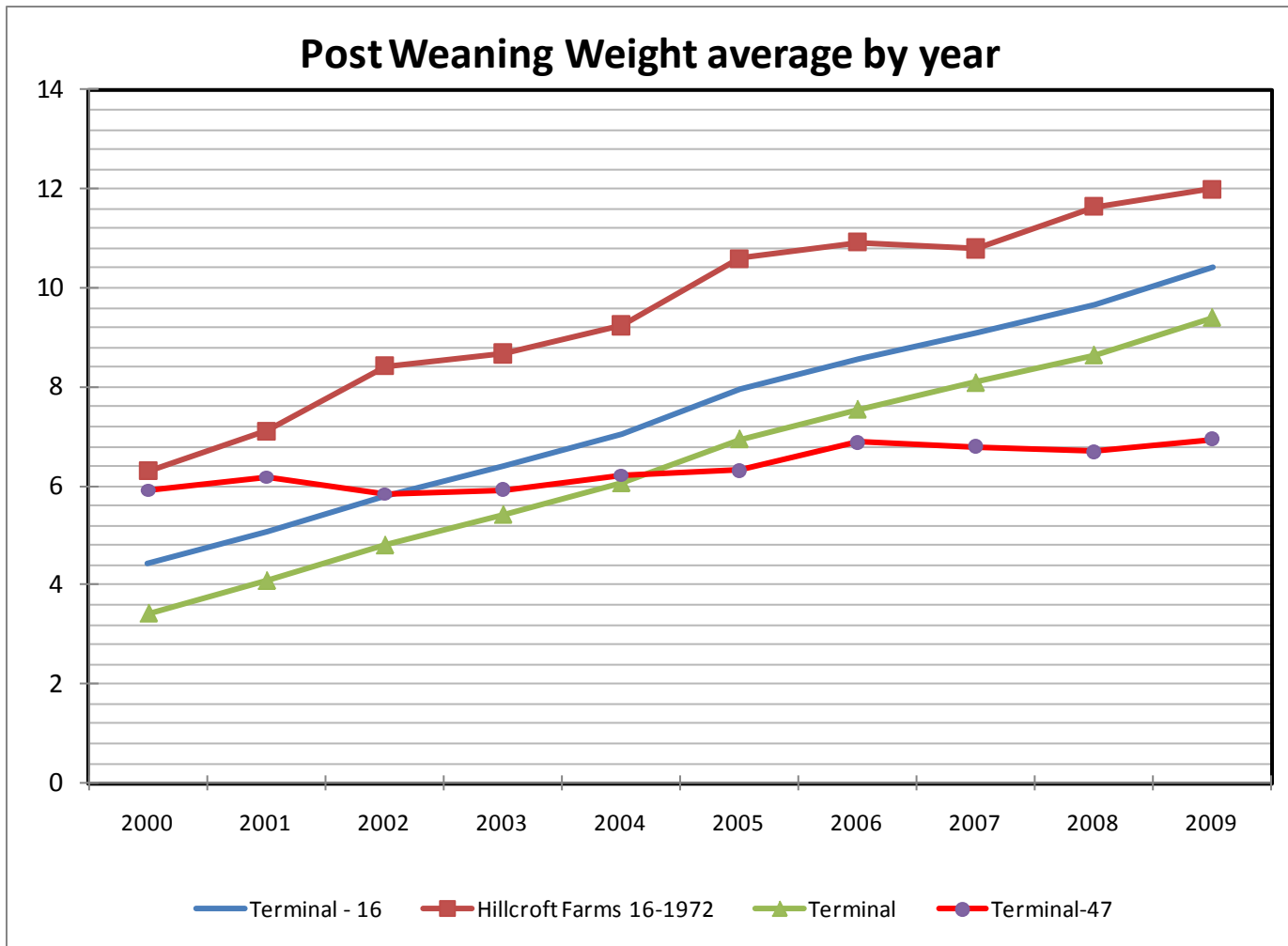
- The Dorper breed obviously carries a recessive gene that effects the tail length
- Opportunity to incorporate this unique aspect into the breed



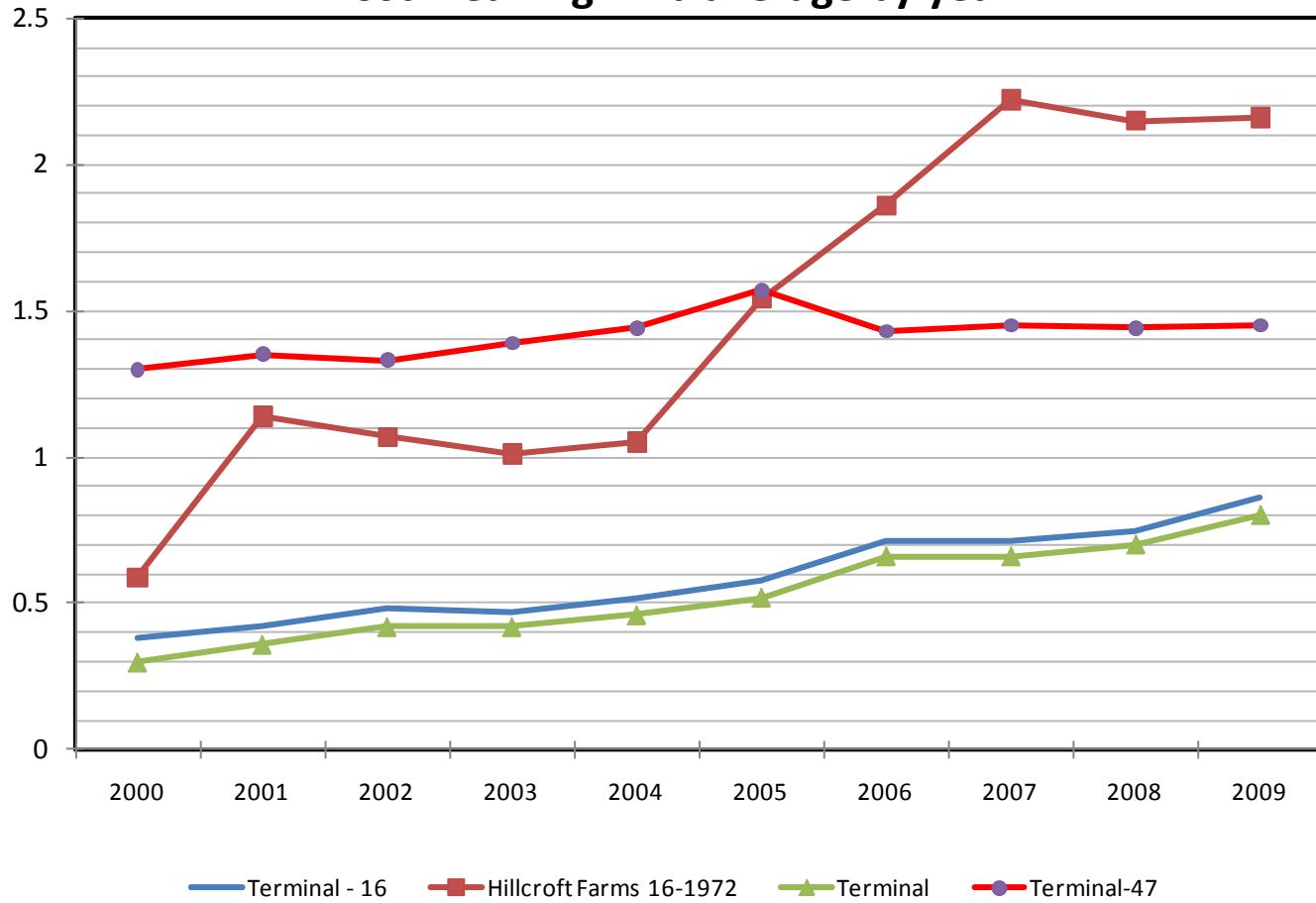
- Animal welfare
- Be proactive
- Tailing does set lambs back
- It does cost you

**Be proactive and get rid of the tail**

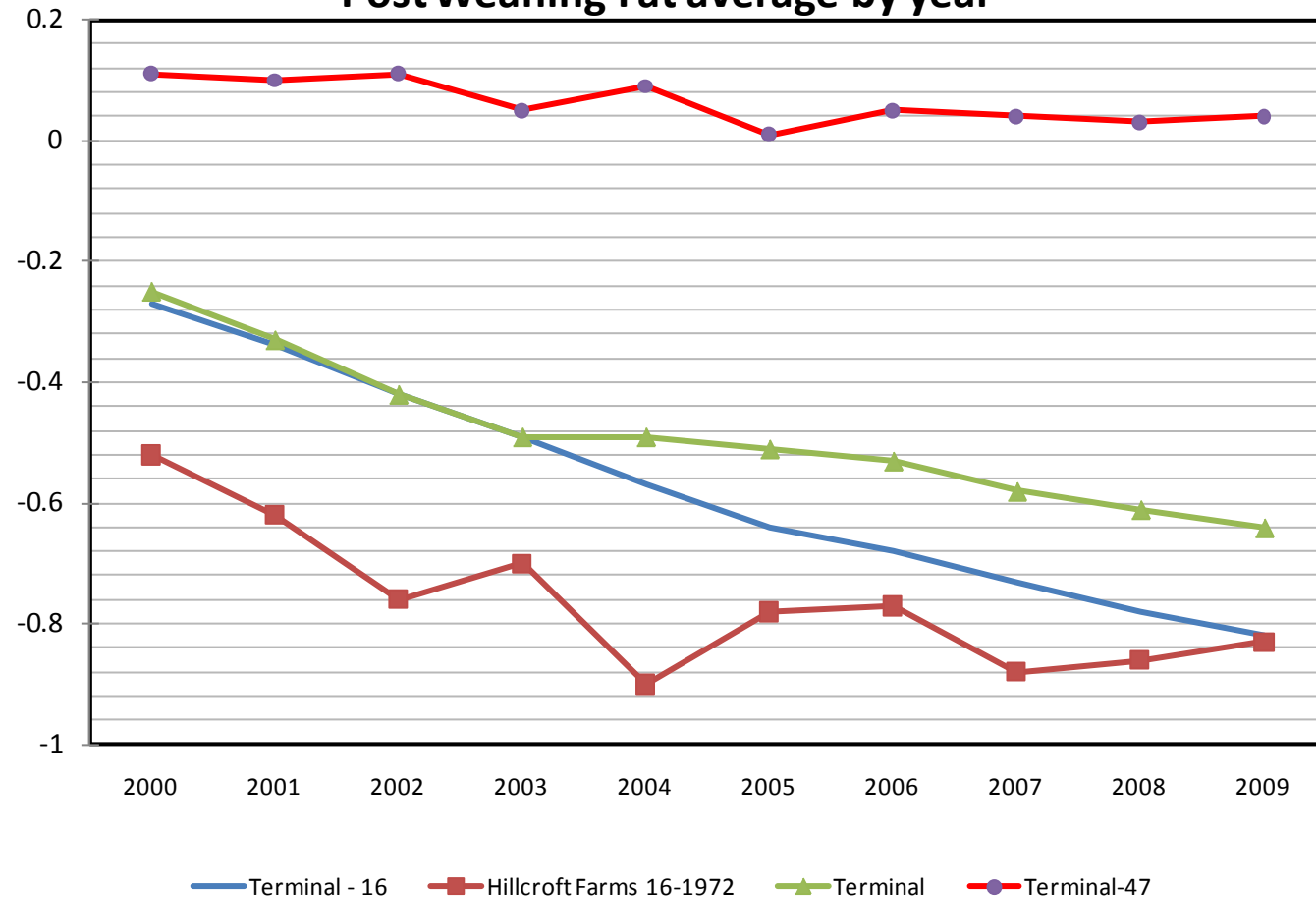
# Where are Dorper performance indicators today ?



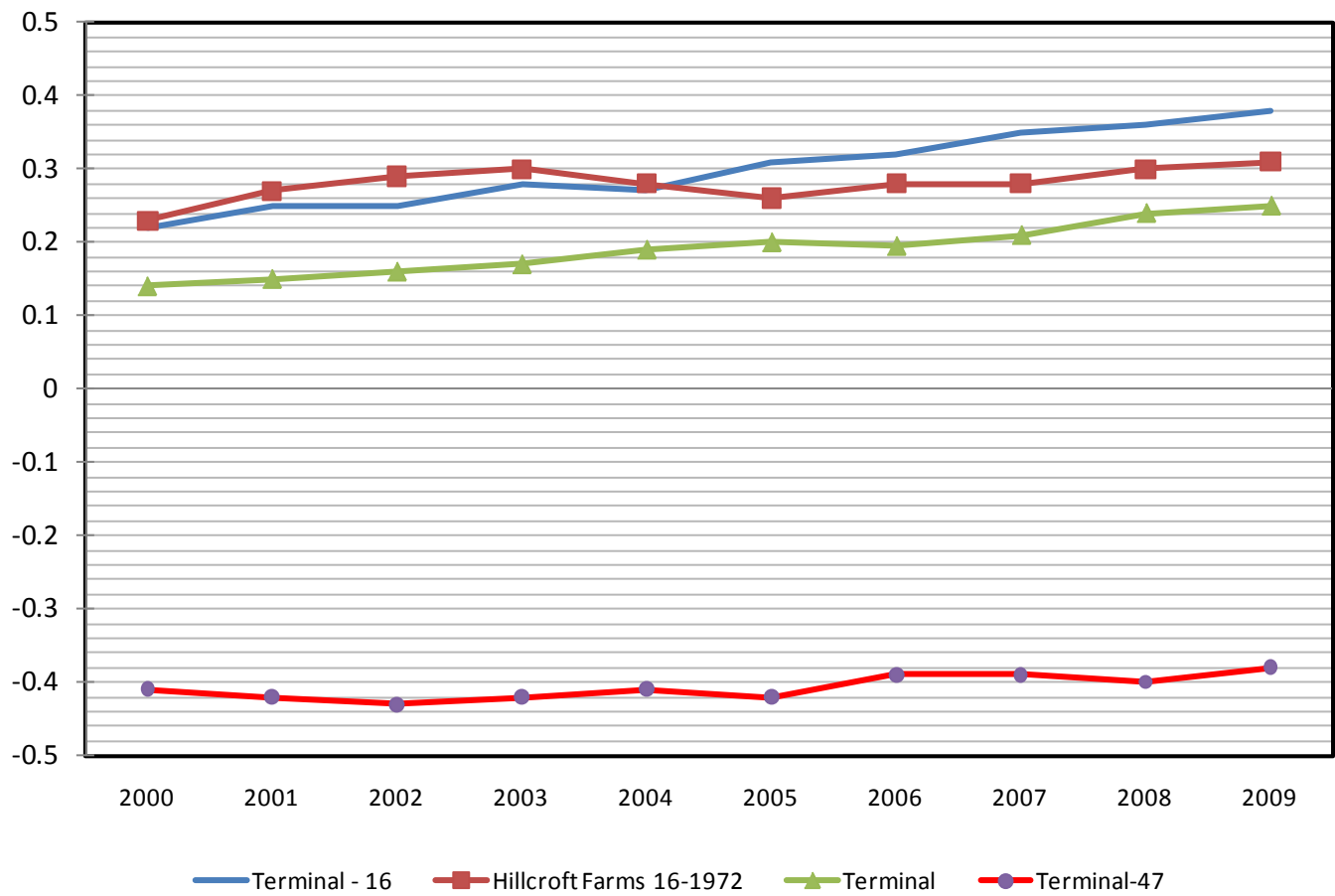
### Post Weaning Emd average by year



### Post Weaning Fat average by year



### Birth Weight averages by year



**The Dorper genetic makeup is unique**



**Let's not waste its potential**