

**Effect of the TM-QTL and sex on meat  
quality parameters of the  
*semimembranosus* muscle of purebred  
Texel lambs**

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- Previous presentations: TM-QTL
  - Increased carcass weight in carriers
  - homozygotes had higher lean meat yield
  - Carriers had greater muscularity in loin
- Meat Quality
  - Important to determine impacts on product quality
    - Lambe et al. (2010) – no negative impacts on loin muscle (*longissimus dorsi*) or knuckle (*vastus lateralis*)

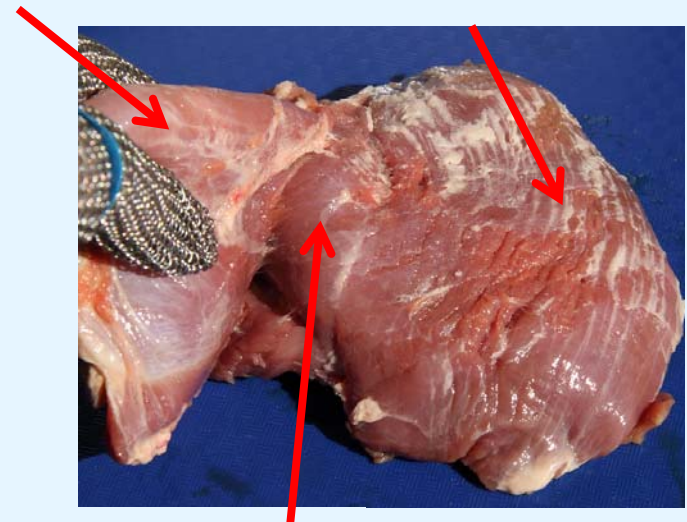


- To investigate the effects of TM-QTL and Sex on the eating quality of lamb *semimembranosus* muscle

Also known as the “topside”

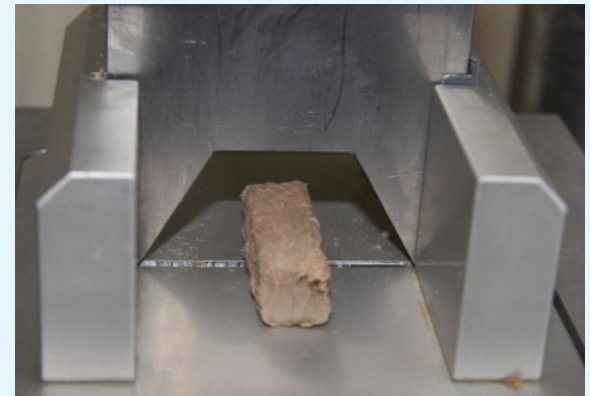


*m. Gracilis*                      *m. Semimembranosus*

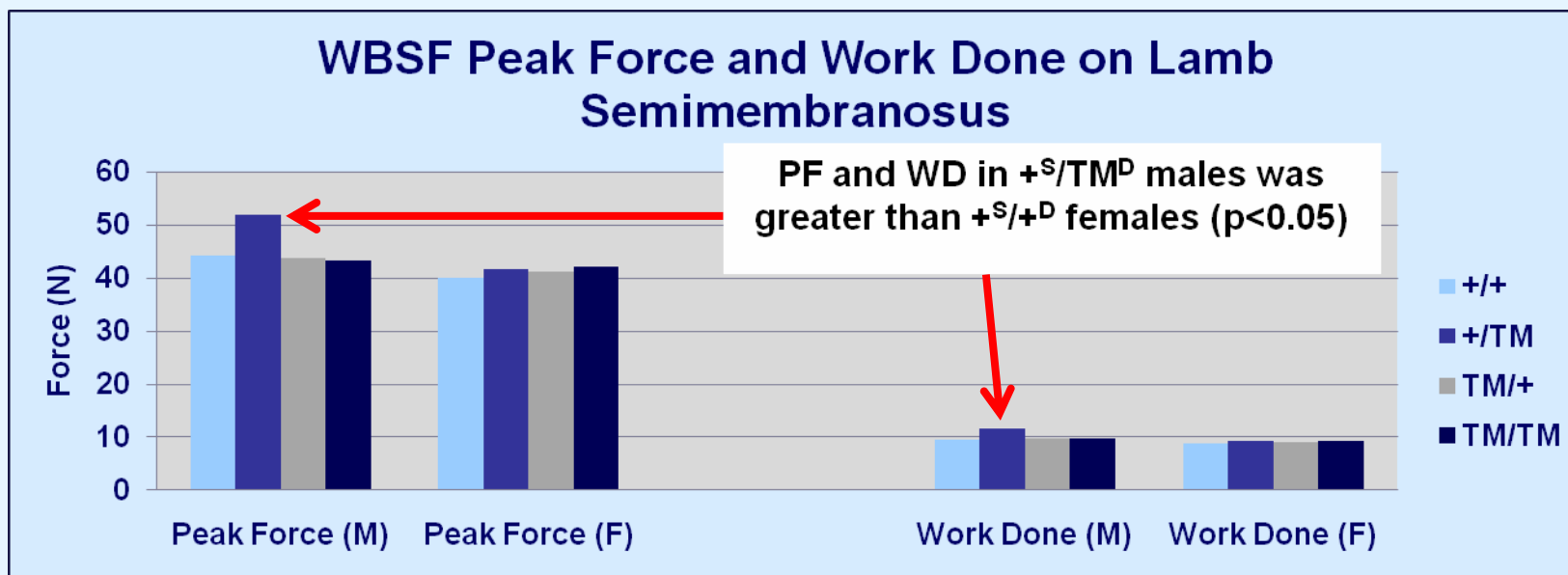


*m. Adductor*

- Modified Warner Bratzler shear force (12 repeats)
  - 7 - 9d aging
  - Peak Force (PF), Work Done (WD)
- Colour parameters  $L^*a^*b^*$ 
  - Calculated Hue angle
- Mixed Model (proc mixed)
  - N = 197 (143 with complete genotype used)
  - Sex, farm, rearing rank, genotype and sex\*genotype interaction, sire as a random effect
  - PF and WD  $\log_e$  transformed, Least squares means, Bonferroni adjusted



- Textural measures

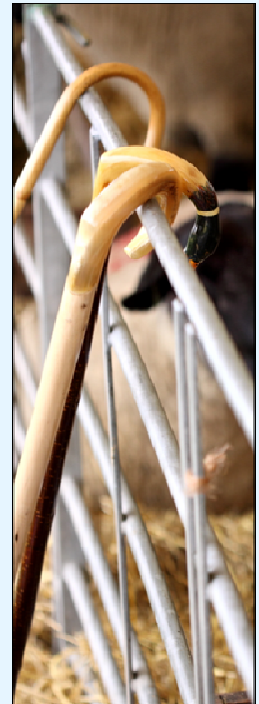


- For the remaining traits, there was no interaction between sex and genotype. However the main effect of sex was significant ( $P < 0.05$ )
  - Males higher PF, WD, Cooking Loss and Hue angle

# Conclusions



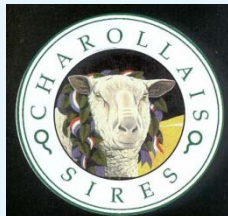
- The small but significant effects of TMQTL on MQ are:
  - Not large enough to cause problems after  $\geq 7$ d aging
- Sex effected all measured traits
  - Females more tender than males
  - Further investigation with full dataset (n = 197)

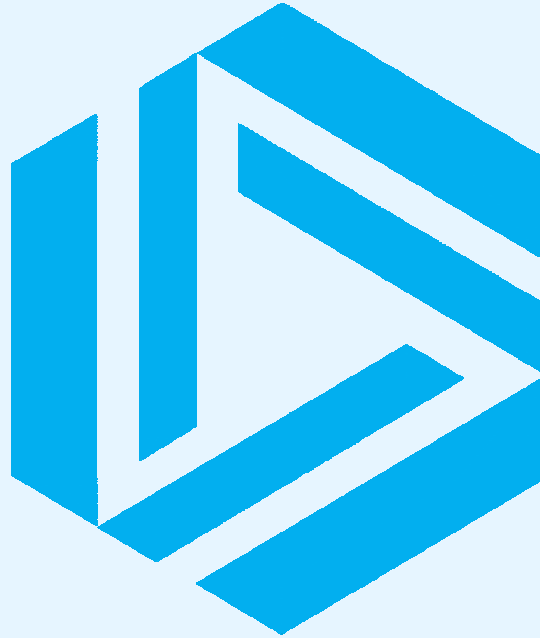


# Acknowledgements



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