

Australian Journal of

Experimental Agriculture

Contents Volume 47, Issue 10, 2007, 1117–1243

The influence of genetics, animal age and nutrition on lamb production – an integrated research program
D. W. Pethick, R. D. Warner and R. G. Banks 1117–1118

Genotype and age effects on sheep meat production. 1. Production and growth.
D. L. Hopkins, D. F. Stanley, L. C. Martin and A. R. Gilmour 1119–1127

Genotype and gender effects on sheep limb bone growth and maturation: selection for loin depth causes bone hypotrophy.
M. A. Cake, M. D. Boyce, G. E. Gardner, D. L. Hopkins and D. W. Pethick 1128–1136

Myofibre characteristics of ovine *longissimus* and *semitendinosus* muscles are influenced by sire breed, gender, rearing type, age and carcass weight.
P. L. Greenwood, S. Harden and D. L. Hopkins 1137–1146

Genotype and age effects on sheep meat production. 2. Carcass quality traits.
E. N. Ponnampalam, D. L. Hopkins, K. L. Butler, F. R. Dunshea and R. D. Warner 1147–1154

Genotype and age effects on sheep meat production. 3. Meat quality.
D. L. Hopkins, D. F. Stanley, L. C. Martin, E. S. Toohey and A. R. Gilmour 1155–1164

Accuracy of dual energy X-ray absorptiometry, weight, *longissimus lumborum* muscle depth and GR fat depth to predict half carcass composition in sheep.
F. R. Dunshea, D. Suster, P. J. Eason, R. D. Warner, D. L. Hopkins and E. N. Ponnampalam 1165–1171

Genotype and age effects on sheep meat production. 4. Carcass composition predicted by dual energy X-ray absorptiometry.
E. N. Ponnampalam, D. L. Hopkins, F. R. Dunshea, D. W. Pethick, K. L. Butler and R. D. Warner 1172–1179

Sheep genotype, age and muscle type affect the expression of metabolic enzyme markers.
G. E. Gardner, D. L. Hopkins, P. L. Greenwood, M. A. Cake, M. D. Boyce and D. W. Pethick 1180–1189

Genotype and age at slaughter influence the retail shelf-life of the loin and knuckle from sheep carcasses.
R. D. Warner, E. N. Ponnampalam, G. A. Kearney, D. L. Hopkins and R. H. Jacob 1190–1200

Factors affecting the concentration of short branched-chain fatty acids in sheep fat.
L. Salvatore, D. Allen, K. L. Butler, D. Tucman, A. Elkins, D. W. Pethick and F. R. Dunshea 1201–1207

Sire and growth path effects on sheep meat production. 1. Growth and carcass characteristics.
D. L. Hopkins, D. F. Stanley, L. C. Martin, E. N. Ponnampalam and R. van de Ven 1208–1218

Sire and growth path effects on sheep meat production. 2. Meat and eating quality.
D. L. Hopkins, D. F. Stanley, E. S. Toohey, G. E. Gardner, D. W. Pethick and R. van de Ven 1219–1228

Unravelling the complex interactions between genetics, animal age and nutrition as they impact on tissue deposition, muscle characteristics and quality of Australian sheep meat.
R. D. Warner, D. W. Pethick, P. L. Greenwood, E. N. Ponnampalam, R. G. Banks and D. L. Hopkins 1229–1238

Opportunities and challenges in meat production from sheep.
R. W. Purchas 1239–1243

Front cover: Front cover: clockwise from the top: Dr David Hopkins (NSW DPI) measuring meat colour of lamb loin muscle with a Minolta chromameter; Peter Walker (DPI, Victoria) and Leonie Martin (NSW DPI) collecting muscle samples for enzymatic, proteomic and genomic analysis, with PhD student Fahri Fahri in the background; subprimals of the hind leg with the knuckle (mid cut in the picture), one of the cuts used for assessing colour stability (photographs supplied by DPI NSW). *Back cover:* Back cover: Poll Dorset Merino lambs (at weaning) used in experiments conducted at the Centre for Sheep Meat Development, Cowra (NSW DPI).