

# ANIMAL PRODUCTION SCIENCE

## CONTENTS Volume 56, Issue 4, 2016, 655–796

### SHEEP REPRODUCTION: PART 2

Foreword iii

Grazing crops: implications for reproducing sheep

*David G. Masters and Andrew N. Thompson* 655–668

Economic value of pregnancy scanning and optimum nutritional management of dry, single- and twin-bearing Merino ewes

*J. M. Young, R. Behrendt, M. Curnow, C. M. Oldham and A. N. Thompson* 669–678

Pregnancy scanning can be used as a source of data for genetic evaluation of reproductive traits of ewes

*Kim L. Bunter, Andrew A. Swan, Ian W. Purvis and Daniel Brown* 679–689

Genetic importance of fat and eye muscle depth in Merino breeding programs

*D. J. Brown and A. A. Swan* 690–697

The impact of selecting for increased ewe fat level on reproduction and its potential to reduce supplementary feeding in a commercial composite flock

*S. F. Walkom, F. D. Brien, M. L. Hebart and W. S. Pitchford* 698–707

Season and reproductive status rather than genetic factors influence change in ewe weight and fat over time. 4. Genetic relationships of ewe weight and fat score with fleece, reproduction and milk traits

*S. F. Walkom, F. D. Brien, M. L. Hebart, N. M. Fogarty, S. Hatcher and W. S. Pitchford* 708–715

Effect of previous reproductive performance on current reproductive rate in South Australian Merino ewes

*David O. Kleemann, Simon K. Walker, Raul W. Ponzoni, Dennis R. Gifford, James R. W. Walkley, Darryl H. Smith, Richard J. Grimson, Kaylene S. Jaensch, Samuel F. Walkom and Forbes D. Brien* 716–725

Neonatal lamb mortality: factors associated with the death of Australian lambs

*G. Refshauge, F. D. Brien, G. N. Hinch and R. van de Ven* 726–735

Thermogenesis and physiological maturity in neonatal lambs: a unifying concept in lamb survival

*K. J. Plush, F. D. Brien, M. L. Hebart and P. I. Hynd* 736–745

Variation in physiological profiles may explain breed differences in neonatal lamb thermoregulation

*K. J. Plush, M. L. Hebart, F. D. Brien and P. I. Hynd* 746–756

Supplementation of Merino ewes with cholecalciferol in late pregnancy improves the vitamin D status of ewes and lambs at birth but is not correlated with an improvement in immune function in lambs

*A. Lockwood, A. Currie, S. Hancock, S. Broomfield, S. Liu, V. Scanlan, G. A. Kearney and A. N. Thompson* 757–766

Genetic evaluation of maternal behaviour and temperament in Australian sheep

*D. J. Brown, N. M. Fogarty, C. L. Iker, D. M. Ferguson, D. Blache and G. M. Gaunt* 767–774

Environmental and genetic factors influence the liveweight of adult Merino and Border Leicester × Merino ewes across multiple sites and years

*S. E. Blumer, G. E. Gardner, M. B. Ferguson and A. N. Thompson* 775–788

Whole-body fatness is a good predictor of phenotypic feed and liveweight efficiency in adult Merino ewes fed a poor-quality diet

*S. E. Blumer, G. E. Gardner, M. B. Ferguson and A. N. Thompson* 789–796