

AUSTRALIAN JOURNAL OF EXPERIMENTAL AGRICULTURE

CONTENTS Volume 48, Issue 6–7, 2008, 695–1051

ANIMAL PRODUCTION IN AUSTRALIA

27th Proceedings of the Australian Society of Animal Production

Post genomics: where to and how to apply genomic information in livestock systems

Application of rumen microbial genome information to livestock systems in the postgenomic era
G. T. Attwood, W. J. Kelly, E. H. Altermann, C. D. Moon, S. Leahy and A. L. Cookson 695–700

Application of gene expression studies in livestock production systems: a European perspective
I. Cassar-Malek, B. Picard, C. Bernard and J.-F. Hocquette 701–710

Linking rumen function to animal response by application of metagenomics techniques
J. L. Firkins, S. K. R. Karnati and Z. Yu 711–721

Diversity of methanogens in ruminants in Queensland
D. Ouwerkerk, A. F. Turner and A. V. Klieve 722–725

‘Smart’ technologies for livestock systems

Smart Foods from the pastoral sector – implications for meat and milk producers
E. N. Bermingham, N. C. Roy, R. C. Anderson, M. P. G. Barnett, S. O. Knowles and W. C. McNabb 726–734

Contemporary livestock carrying capacities for pastoral properties in Northern Australia: a methodology for integrating objective data on pasture growth and condition
J. S. Hamilton, C. R. Chilcott and D. B. Savage 735–740

Development and validation of a simple technique for logging body temperature in free-ranging cattle
J. M. Lea, D. D. O. Niemeyer, M. T. Reed, A. D. Fisher and D. M. Ferguson 741–745

A training program to improve milk production in the developing Chinese dairy industry
R. D. Bush, J. K. House, B. Hamilton and P. C. Wynn 746–751

Some important changes in the Australian sheep meat processing industry
D. L. Hopkins, E. S. Toohey, K. L. Pearce, I. Richards and P. Keane 752–756

An industry applicable model for predicting lean meat yield in lamb carcasses
D. L. Hopkins 757–761

Strategic use of sheep coats can improve your economic return
S. Hatcher, K. D. Atkins and K. J. Thornberry 762–767

Using video image analysis to count hens in cages and reduce egg breakage on collection belts
G. M. Cronin, S. S. Borg and M. T. Dunn 768–772

Transformational changes in livestock systems

Manipulating dietary preference to improve animal performance
G. R. Edwards, A. J. Parsons and R. H. Bryant 773–779

Climate change and Australian livestock systems: impacts, research and policy issues
S. M. Howden, S. J. Crimp and C. J. Stokes 780–788

Approaches for assessing some attributes of feed-base systems in mixed farming enterprises
Lindsay W. Bell, Michael J. Robertson, Dean K. Revell, Julianne M. Lilley and Andrew D. Moore 789–798

Increased profitability and social outcomes from livestock in smallholder crop–livestock systems in developing countries: the ACIAR experience
W. H. Winter and P. T. Doyle 799–805

Ruminal protein degradability of a range of tropical pastures
M. K. Bowen, D. P. Poppi and S. R. McLennan 806–810

Responses to grain : sunflower meal supplements by weaned calves grazing mature pasture or eating hay in pens
H. Dove, M. Freer, A. Axelsen and J. R. Donnelly 811–817

Effect of muddy conditions in the field on the liveweight gain of cattle consuming *Leucaena leucocephala*–*Digitaria eriantha* pastures in north-west Australia

S. R. Petty and D. P. Poppi 818–820

Understanding interactions between forages and concentrates is important for formulating feeding strategies for growing cattle in central Vietnam

P. T. Doyle, C. R. Stockdale, Nguyen Xuan Ba, Nguyen Huu Van and Le Duc Ngoan 821–824

Benefits obtained from cattle by smallholder farmers: a case study of Limpopo Province, South Africa

A. Stroebel, F. J. C. Swanepoel, N. D. Nthakheni, A. E. Nesamvuni and G. Taylor 825–828

Faecal near infrared reflectance spectroscopy estimates of diet quality and responses to nitrogen supplements by cattle grazing *Bothriochloa pertusa* pastures

D. B. Coates and R. M. Dixon 829–834

Diet quality and liveweight gain of steers grazing *Leucaena*–grass pasture estimated with faecal near infrared reflectance spectroscopy (FNIRS)

R. M. Dixon and D. B. Coates 835–842

Spectral analysis of feeding patterns of steers divergent in residual feed intake

Robin Dobos and Robert Herd 843–846

Effect of process variables on the functional properties of seven beef cuts

M. M. Farouk and C. Podmore 847–852

The effect of finishing diet and meat cuts on the attributes of four processed products from bull beef

M. M. Farouk, C. Podmore, C. Boom and G. Sheath 853–859

Effect of whole cottonseed supplementation on energy and nitrogen partitioning and rumen function in dairy cattle on a forage and cereal grain diet

C. Grainger, T. Clarke and R. J. Eckard 860–865

Effects of the composition of irrigated perennial pasture on the milk production of dairy cows and their responses to supplementation with cereal grain-based concentrates

C. R. Stockdale 866–872

Increased levels of cysteinyl leukotrienes and prostaglandin E₂ in gastrointestinal tract mucus are associated with decreased faecal dry matter in Merino rams during nematode infection

A. R. Williams, L. J. E. Karlsson, D. G. Palmer, I. H. Williams, P. E. Vercoe, J. C. Greeff and D. L. Emery 873–878

Feed efficiency for meat and wool production by Merino and F1 Dohne × Merino lambs fed pelleted diets of different nutritive value

D. Van Beem, D. Wellington, B. L. Paganoni, P. E. Vercoe and J. T. B. Milton 879–884

Are the cost-benefits of grazing perennial ryegrass cultivars related to preference?

R. H. Bryant, A. M. Nicol and G. R. Edwards 885–888

Preliminary indications that Merino sheep graze different areas on cooler days in the Southern Rangelands of Western Australia

Dean T. Thomas, Matt G. Wilmot, Mark Alchin and David G. Masters 889–892

Genotype and age effects on sheep meat production. 5. Lean meat and fat content in the carcasses of Australian sheep genotypes at 20-, 30- and 40-kg carcass weights

E. N. Ponnampalam, K. L. Butler, D. L. Hopkins, M. G. Kerr, F. R. Dunshea and R. D. Warner 893–897

Validating the benefits of a medium voltage electrical stimulation unit at an abattoir in Western Australia

R. H. Jacob, K. L. Pearce and N. Smith 898–903

Intramuscular fat levels in sheep muscle during growth

M. J. McPhee, D. L. Hopkins and D. W. Pethick 904–909

Preslaughter management practices influence carcass characteristics of young goats

P. L. Greenwood, J. A. Finn, T. J. May and P. J. Nicholls 910–915

An evaluation of slaughter age on the profitability of intensive slaughter ostrich production

J. W. Jordaan, T. S. Brand, C. Bhiya and B. B. Aucamp 916–920

Reproductive performance and *in utero* effects on livestock performance

In utero effects on livestock muscle development and body composition

John M. Brameld and Zoe C. T. R. Daniel 921–929

Developing twinning cattle for commercial production

L. J. Cummins, C. A. Morris and B. W. Kirkpatrick 930–934

Duration of parturition and frequency of abdominal contractions in primiparous, 2-year-old Angus heifers and the relevance of body dimensions of calves to dystocia

R. E. Hickson, N. Lopez-Villalobos, P. R. Kenyon and S. T. Morris 935–939

Heifer fertility on commercial cattle properties in the Northern Territory

T. J. Schatz and M. N. Hearnden 940–944

Effect of heifer frame size on their subsequent reproductive performance and preweaning performance of their calves

G. J. Taylor, F. J. C. Swanepoel, E. C. Webb and A. Stroebel 945–949

Effect of nutrition on testicular traits of tropically adapted yearling beef bulls

F. J. C. Swanepoel, G. J. Taylor, E. C. Webb and A. Stroebel 950–953

Improving calf survival and performance by supplementation in Bali cattle

I. G. N. Jelantik, M. L. Mullik, C. Leo-Penu, J. Jeremias and R. Copland 954–956

Mid-pregnancy shearing of autumn-lambing ewes in New Zealand

G. deNicolo, P. R. Kenyon, S. T. Morris, P. C. H. Morel and A. J. Wall 957–960

Out-of-season breeding of Romney sheep using artificially induced long days

G. deNicolo, S. T. Morris, P. R. Kenyon, P. C. H. Morel and T. J. Parkinson 961–965

Higher weaning weight improves postweaning growth and survival in young Merino sheep

S. Hatcher, J. Eppleston, R. P. Graham, J. McDonald, S. Schlunke, B. Watt and K. J. Thornberry 966–973

Putting Merino weaner management recommendations to the test

J. E. Hocking Edwards, R. M. Gould and K. J. Copping 974–978

Does dam parity affect the performance of ewe progeny born to 2-year-old ewes?

P. R. Kenyon, S. T. Morris, H. T. Blair, K. J. Stafford 979–983

Effect of birthweight on survival in triplet-born lambs

P. C. H. Morel, S. T. Morris and P. R. Kenyon 984–987

Effect of concentrate supplement and sward height on twin-bearing ewe body condition and the performance of their offspring

J. I. Kerslake, P. R. Kenyon, S. T. Morris, K. J. Stafford and P. C. H. Morel 988–994

Mild congenital goitre increases lamb mortality in southern New South Wales

S. M. Robertson, M. A. Friend and B. J. King 995–998

Dag score is negatively correlated with breech bareness score of sheep

D. R. Scobie, D. O'Connell, C. A. Morris and S. M. Hickey 999–1003

Metabolic profile and oxidative status in goats during the peripartum period

Pietro Celi, Adriana Di Trana and Angelo Quaranta 1004–1008

Animal welfare and animal production: conflict or synergy from a global perspective

Development and integration of animal welfare standards into company quality assurance programs in the Australian livestock (meat) processing industry

M. K. Edge and J. L. Barnett 1009–1013

Methodologies by which to study and evaluate welfare issues facing livestock systems of production

Lindsay R. Matthews 1014–1021

Verifying legislative and customer requirements utilising animal welfare quality assurance

M. K. Edge, P. H. Hemsworth and J. L. Barnett 1022–1027

Effect of loading practices and 6-hour road transport on the physiological responses of yearling cattle

S. G. Pettiford, D. M. Ferguson, J. M. Lea, C. Lee, D. R. Paull, M. T. Reed, G. N. Hinch and A. D. Fisher 1028–1033

Effectiveness of non-steroidal anti-inflammatory drugs and epidural anaesthesia in reducing the pain and stress responses to a surgical husbandry procedure (mulesing) in sheep

D. R. Paull, I. G. Colditz, C. Lee, S. J. Atkinson and A. D. Fisher 1034–1039

Prewaning feed exposure and different feed delivery systems to enhance feed acceptance of sheep

D. B. Savage, D. M. Ferguson, A. D. Fisher, G. N. Hinch, D. G. Mayer, E. Duflou, J. M. Lea, N. D. Baillie and M. Raue 1040–1043

Water and feed intake responses of sheep to drinking water temperature in hot conditions

D. B. Savage, J. V. Nolan, I. R. Godwin, D. G. Mayer, A. Aoetpah, T. Nguyen, N. D. Baillie, T. E. Rheinberger and C. Lawlor 1044–1047

Reduced space allowance for adult sheep in lairage for 24 hours limits lying behaviour but not drinking behaviour

E. C. Jongman, M. K. Edge, K. L. Butler and G. M. Cronin 1048–1051