

CONTENTS

Research Reports

Effects of lighting intensity on growth and reproductive performance of breeder geese S. C. Chang, M. J. Lin, Y. K. Fan, and T. T. Lee	315
A modified strategy of multiplex RT-PCR for simultaneous detection of H5, H7, and H9 subtypes of avian influenza virus based on common forward oligo M. S. Tahir, D. Mehmood, A. U. Sultan, M. H. Saeed, A. R. Khan, F. Ansari, M. M. Salman, and K. A. Majeed	322
Direct-fed microbial and its combination with xylanase, amylase, and protease enzymes in comparison with AGPs on broiler growth performance and foot-pad lesion development C. Flores, M. Williams, J. Pieniazek, Y. Dersjant-Li, A. Awati, and J. T. Lee	328
Impact of variable corn nutrient content, AME prediction, and xylanase inclusion on growth performance R. E. Latham, M. P. Williams, C. Flores, H. V. Masey O'Neill, T. W. York, and J. T. Lee	338
Replacement of canola meal with <i>Moringa oleifera</i> leaf powder affects performance and immune response in broilers S. Liaqat, S. Mahmood, S. Ahmad, Z. Kamran, and K. C. Koutoulis	352
Potential of dried cassava pulp as an alternative energy source for laying hens S. Khempaka, L. Hokking, and W. Molee	359
Assessment of interactions between glutamine and glucose on meat quality, AMPK, and glutamine concentrations in pectoralis major meat of broilers under acute heat stress H. Hu, X. Bai, A. Wen, A. A. Shah, S. Dai, Q. Ren, S. Wang, S. He, and L. Wang	370
Effect of sequential feeding using whole cereal grains during finishing period in male mule ducks (<i>Carina moschata</i> × <i>Anas platyrhinchos</i>) J. Arroyo, F. Lavigne, C. Molette, M. Bijja, J. P. Dubois, and L. Fortun-Lamothe	379
Influence of dietary fiber sources on the physiological and behavioral stress responses of Greylag geese (<i>Anser anser</i>) L. W. He, Q. X. Meng, D. Y. Li, Y. W. Zhang, and L. P. Ren	389
The effects of a competitive exclusion product and two probiotics on <i>Salmonella</i> colonization and nutrient digestibility in broiler chickens C. Schneitz, E. Koivunen, P. Tuunainen, and J. Valaja	396
Effect of infection with mixed <i>Eimeria</i> species on T cells and T regulatory cell properties M. W. S. Walston, R. Shanmugasundaram, and R. K. Selvaraj	407
Moisture content and moisture quantity of sweated chicken eggs in 2 storage environments J. A. Gradl, P. A. Curtis, K. M. Keener, K. S. Macklin, and R. A. Norton	414

Effects of dietary L-threonine levels on antioxidant capacity, digestive enzyme activities, and antibody production of Xinyang green-shell laying hens

J. M. Li, X. Y. Zhang, C. Yuan, L. P. Miao, H. X. Yan, X. Y. Dong, J. J. Lu,
and X. T. Zou

422

Field Reports

Spatial variation of manure nutrients and manure sampling strategy in high-rise laying-hen houses

S. Roberts, H. Xin, R. Swestka, M. Yum, and K. Bregendahl

428

Parental diet effects on egg component weights and shell quality

Z. S. Lowman and C. M. Ashwell

437

Review Article

Formulation challenges of organic poultry diets with readily available ingredients and limited synthetic methionine

H. K. Burley, K. E. Anderson, P. H. Patterson, and P. B. Tillman

443