

CONTENTS

ANIMAL WELL-BEING AND BEHAVIOR

- Development of perching behavior in 3 strains of pullets reared in furnished cages
A. M. Habinski, L. J. Caston, T. M. Casey-Trott, M. E. Hunniford, and T. M. Widowski.....519

GENETICS AND GENOMICS

- Evaluation of genetic diversity of Saudi native chicken populations using microsatellite markers
M. M. Fathi, I. Al-Homidan, M. I. Motawei, O. K. Abou-Emera, and M. F. El-Zarei.....530

Rapid Communications

- Sexing chick mRNA: A protocol based on quantitative real-time polymerase chain reaction
Z. Wan, Y. Lu, L. Rui, X. Yu, and Z. Li.....537

IMMUNOLOGY, HEALTH, AND DISEASE

- Effects of coccidiosis vaccination administered by in ovo injection on the hatchability and hatching chick quality of broilers
A. O. Sokale, W. Zhai, L. M. Pote, C. J. Williams, and E. D. Peebles541
- Effects of immunomodulatory nutrients on growth performance and immune-related gene expression in layer chicks challenged with lipopolysaccharide
E. L. Wils-Plotz and K. C. Klasing.....548

Research Note

- Comparison of goblet cell staining methods in jejunal mucosa of turkey poult
S. O. Osho, T. Wang, N. L. Horn, and O. Adeola556

MANAGEMENT AND PRODUCTION

- Evaluation of chlorine dioxide based product as a hatchery sanitizer
P. Maharjan, S. Cox, U. Gadde, F. D. Clark, K. Bramwell, and S. E. Watkins560

METABOLISM AND NUTRITION

- Effects of dietary xylanase supplementation on performance and functional digestive parameters in broilers fed wheat-based diets
Wen-Chao Liu and In-Ho Kim566
- Nutrient availability of different batches of wheat distillers dried grains with solubles with and without exogenous enzymes for broiler chickens
I. M. Whiting, V. Pirgozliev, S. P. Rose, J. Wilson, A. M. Amerah, S. G. Ivanova, G. P. Staykova, O. O. Oluwatossin, and A. O. Oso574
- Effects of the inclusion of sunflower hulls in the diet on growth performance and digestive tract traits of broilers and pullets fed a broiler diet from zero to 21 d of age. A comparative study
M. V. Kimiaeitalab, L. Cámara, S. Mirzaie Goudarzi, E. Jiménez-Moreno, and G. G. Mateos.....581
- Effects of lysophospholipid supplementation to lower nutrient diets on growth performance, intestinal morphology, and blood metabolites in broiler chickens
W. Boontiam, B. Jung, and Y. Y. Kim593

Effects of dietary copper and amino acid density on growth performance, apparent metabolizable energy, and nutrient digestibility in <i>Eimeria acervulina</i> -challenged broilers S. J. Rochell, J. L. Usry, T. M. Parr, C. M. Parsons, and R. N. Dilger.....	602
Methodology affects measures of phosphorus availability in growing broilers: Effects of calcium feeding strategy and dietary adaptation period length on true ileal phosphorus digestibility and predicted endogenous phosphorus losses K. R. Perryman, H. V. Masey O'Neill, M. R. Bedford, and W. A. Dozier, III.....	611
Methodology affects measures of phosphorus availability in growing broilers. 2. Effects of calcium feeding strategy and dietary adaptation period length on phytate hydrolysis at different locations in the gastrointestinal tract K. R. Perryman, H. V. Masey O'Neill, M. R. Bedford, and W. A. Dozier, III.....	622
The effect of maternal canthaxanthin supplementation and hen age on breeder performance, early chick traits, and indices of innate immune function M. L. Johnson-Dahl, M. J. Zuidhof, and D. R. Korver	634
Effect of broiler breeders fed with corn or sorghum and canthaxanthin on lipid peroxidation, fatty acid profile of hatching eggs, and offspring performance A. P. Rosa, C. E. V. Bonilla, A. Londero, C. B. S. Giacomini, C. Orso, M. O. Fernandes, J. S. Moura, and R. Hermes.....	647
Interactive effects of dietary arginine and <i>Eimeria acervulina</i> infection on broiler growth performance and metabolism S. J. Rochell, A. Helmbrecht, C. M. Parsons, and R. N. Dilger.....	659
The diverse effects of α - and γ -tocopherol on chicken liver transcriptome Tamara Korošec, Urška Tomažin, Simon Horvat, Rok Keber, and Janez Salobir	667
Research Note	
Evaluation of dried vegetables residues for poultry: II. Effects of feeding cabbage leaf residues on broiler performance, ileal digestibility and total tract nutrient digestibility A. F. Mustafa and B. Baurhoo	681
MICROBIOLOGY AND FOOD SAFETY	
Population dynamics and antimicrobial resistance of the most prevalent poultry-associated <i>Salmonella</i> serotypes Devendra H. Shah, Narayan C. Paul, Willium C. Sischo, Rocio Crespo, and Jean Guard.....	687
Distribution of <i>Campylobacter jejuni</i> multilocus sequence types isolated from chickens in Poland K. Wieczorek, E. Denis, B. Lachtara, and J. Osek.....	703
Effects of dietary recombinant chlorella supplementation on growth performance, meat quality, blood characteristics, excreta microflora, and nutrient digestibility in broilers H. Choi, S. K. Jung, J. S. Kim, K-W. Kim, K. B. Oh, P-y. Lee, and S. J. Byun	710
MOLECULAR AND CELLULAR BIOLOGY	
Gamma and Deltacoronaviruses in quail and pheasants from Northern Italy C. A. Torres, V. Listorti, C. Lupini, G. Franzo, M. Drigo, E. Catelli, P. E. Brandão, and M. Cecchinato	717
PHYSIOLOGY AND REPRODUCTION	
Effects of inhibitors of transcription factors, nuclear factor- κ B and activator protein 1, on the expression of proinflammatory cytokines and chemokines induced by stimulation with Toll-like receptor ligands in hen vaginal cells T. Kamimura, N. Isobe, and Y. Yoshimura	723
PROCESSING AND PRODUCTS	
Lipid oxidation and color changes of goose meat stored under vacuum and modified atmosphere conditions A. Orkusz, G. Haraf, A. Okruszek, and M. Wereńska-Sudnik	731

Effect of acute heat stress and slaughter processing on poultry meat quality and postmortem carbohydrate metabolism	
R. H. Wang, R. R. Liang, H. Lin, L. X. Zhu, Y. M. Zhang, Y. W. Mao, P. C Dong, L. B. Niu, M. H. Zhang, and X. Luo.....	738
Color stability and lipid oxidation of broiler breast meat from animals raised on organic versus non-organic production systems	
F. M. Viana, A. C. V. C. S. Canto, B. R. C. Costa-Lima, A. P. A. A. Salim, and C. A. Conte-Junior	747
Evaluation of non-additive genetic variation in feed-related traits of broiler chickens	
Y. Li, R. Hawken, R. Sapp, A. George, S. A. Lehnert, J. M. Henshall, and A. Reverter.....	754
The effects of electrical stunning voltage on meat quality, plasma parameters, and protein solubility of broiler breast meat	
J. C. Huang, J. Yang, M. Huang, K. J. Chen, X. L. Xu, and G. H. Zhou	764

Research Note

Effects of caponization and ovariectomy on objective indices related to meat quality in chickens	
X. Cui, R. Liu, H. Cui, G. Zhao, M. Zheng, Q. Li, J. Liu, Z. Liu, and J. Wen	770

CORRIGENDUM

Probiotic form effects on growth performance, digestive function, and immune related biomarkers in broilers	
I. Palamidi, K. Fegeros, M. Mohnl, W. H. A. Abdelrahman, G. Schatzmayr, G. Theodoropoulos, and K. C. Mountzouris	778