

CONTENTS

ENVIRONMENT, WELL-BEING, AND BEHAVIOR

- Increasing dietary vitamin D₃ improves the walking ability and welfare status of broiler chickens reared at high stocking densities
Z. W. Sun, L. Yan, Y. Y. G, J. P. Zhao, H. Lin, and Y. M. Guo 3071
- The impact of broiler production system practices on consumer perceptions of animal welfare
Janneke de Jonge and Hans C. M. van Trijp 3080
- No evidence of temperature-dependent sex determination or sex-biased embryo mortality in the chicken
K. E. Collins, B. J. Jordan, B. L. McLendon, K. J. Navara, R. B. Beckstead,
and J. L. Wilson..... 3096
- The effects of light stimulation during incubation on indicators of stress susceptibility in broilers
Gregory S. Archer and Joy A. Mench 3103

GENETICS

Research Notes

- The detection and elimination of flavin-containing monooxygenase 3 gene T329S mutation in the Beijing You chicken
Qin Chu, Jian Zhang, Shanshan Zhu, Yao Zhang, Haihong Wang, Ailian Geng,
and Huagui Liu 3109
- Abundant polymorphisms at the microsatellite locus LEI0258 in indigenous chickens
Bo Han, Ling Lian, Lujiang Qu, Jiangxia Zheng, and Ning Yang 3113
- Comparison of protoporphyrin IX content and related gene expression in the tissues of chickens laying brown-shelled eggs
Guangqi Li, Sirui Chen, Zhongyi Duan, Lujiang Qu, Guiyun Xu, and Ning Yang 3120

IMMUNOLOGY, HEALTH, AND DISEASE

- Influence of dietary calcium level, calcium source, and phytase on bird performance and mineral digestibility during a natural necrotic enteritis episode
D. M. Paiva, C. L. Walk, and A. P. McElroy 3125
- Effect of *Mycoplasma synoviae* and lentogenic Newcastle disease virus coinfection on cytokine and chemokine gene expression in chicken embryos
Luka Bolha, Dušan Benčina, Ivanka Cizelj, Irena Oven, Brigita Slavec,
Olga Zorman Rojs, and Mojca Narat 3134
- Comparison of water-based foam and carbon dioxide gas emergency depopulation methods of turkeys
M. K. Rankin, R. L. Alphin, E. R. Benson, A. L. Johnson, D. P. Hougentogler,
and P. Mohankumar..... 3144
- Acquisition of immunity to the protozoan parasite *Eimeria adenoeides* in turkey poults and cellular responses to infection
U. Gadde, T. Rathinam, G. F. Erf, and H. D. Chapman 3149
- Pharmacokinetic/pharmacodynamic evaluation of the efficacy of flumequine in treating colibacillosis in turkeys
C. Ferraresi, L. Lucatello, V. Meucci, L. Intorre, G. Grilli, A. Piccirillo, E. Russo,
R. Villa, C. Montesissa, and P. Cagnardi 3158

Research Notes

- A 5-year retrospective report of *Gallibacterium anatis* and *Pasteurella multocida* isolates from chickens in Mississippi
K. H. Jones, J. K. Thornton, Y. Zhang, and M. J. Mauel..... 3166

- Impact of fowlpox-vectored *Mycoplasma gallisepticum* vaccine Vectormune FP MG on layer hen egg production and egg quality parameters
S. A. Leigh, S. L. Branton, J. D. Evans, and S. D. Collier..... 3172

METABOLISM AND NUTRITION

- Apparent metabolizable energy and prediction equations for reduced-oil corn distillers dried grains with solubles in broiler chicks from 10 to 18 days of age
K. J. Meloche, B. J. Kerr, G. C. Shurson, and W. A. Dozier III 3176
- Assessing the age-dependent optimal dietary branched-chain amino acid ratio in growing chicken by application of a nonlinear modeling procedure
A. Pastor, C. Wecke, and F. Liebert..... 3184
- Effects of dietary tryptophan on protein metabolism and related gene expression in Yangzhou goslings under different feeding regimens
Xiaohua Pan, Zongyou Wei, Hongrong Wang, Lihuai Yu, and Xianghuan Liang..... 3196

PHYSIOLOGY, ENDOCRINOLOGY, AND REPRODUCTION

- Induction of mucin expression by estrogen and lipopolysaccharide in the lower oviductal segments in hens
B. Ariyadi, N. Isobe, and Y. Yoshimura..... 3205
- Expression and identification of recombinant chicken vascular endothelial growth factor in *Pichia pastoris* and its role in the pathogenesis of tibial dyschondroplasia
J.-P. Zhang, Y.-F. Deng, Z.-L. Zhou, and J.-F. Hou..... 3214

PROCESSING, PRODUCTS, AND FOOD SAFETY

- Rapid inactivation of *Salmonella* Enteritidis on shell eggs by plant-derived antimicrobials
Indu Upadhyaya, Abhinav Upadhyay, Anup Kollanoor-Johny, Sangeetha Ananda Baskaran, Shankumar Mooyottu, Michael J. Darre, and Kumar Venkitanarayanan..... 3228
- SavorPhos as an all-natural phosphate replacer in water- and oil-based marinades for rotisserie birds and boneless-skinless breast
G. Casco, G. A. Veluz, and C. Z. Alvarado..... 3236
- Evaluation of the antioxidant effect of *ganghwayakssuk* (*Artemisia princeps* Pamp.) extract alone and in combination with ascorbic acid in raw chicken patties
K. E. Hwang, H. W. Kim, Y. S. Choi, S. Y. Lee, E. J. Yeo, Y. K. Ham, S. M. Choi, M. A. Lee, and C. J. Kim 3244
- The development of chlorophyll-based markers in poultry diets to aid detection of fluorescent fecal contamination
M. R. F. Lee, D. Leemans, V. J. Theobald, H. R. Fleming, and A. P. Gay..... 3251
- Comparison of fatty acid, cholesterol, vitamin A and E composition, and *trans* fats in eggs from brown and white egg strains that were molted or nonmolted
Kenneth E. Anderson..... 3259
- Comparison of a novel strategy for the detection and isolation of *Salmonella* in shell eggs with the Food and Drug Administration Bacteriological Analytical Manual method
Guodong Zhang, Eve Thau, Eric W. Brown, and Thomas S. Hammack 3266
- Carnosine, anserine, creatine, and inosine 5'-monophosphate contents in breast and thigh meats from 5 lines of Korean native chicken
Samooel Jung, Young Sik Bae, Hyun Joo Kim, Dinesh D. Jayasena, Jun Heon Lee, Hee Bok Park, Kang Nyung Heo, and Cheorun Jo 3275
- The effect of season, sex, and portion on the carcass characteristics, pH, color, and proximate composition of Egyptian Goose (*Alopochen aegyptiacus*) meat
Greta Geldenhuys, Louwrens C. Hoffman, and Nina Muller 3283

Review

- Egg white proteins and their potential use in food processing or as nutraceutical and pharmaceutical agents—A review
E. D. N. S. Abeyrathne, H. Y. Lee, and D. U. Ahn..... 3292

PRODUCTION, MODELING, AND EDUCATION

Effect of transportation duration of 1-day-old chicks on postplacement production performances and pododermatitis of broilers up to slaughter age H. Bergoug, M. Guinebretière, Q. Tong, N. Roulston, C. E. B. Romanini, V. Exadaktylos, D. Berckmans, P. Garain, T. G. M. Demmers, I. M. McGonnell, C. Bahr, C. Burel, N. Eterradossi, and V. Michel	3300
Effects of preincubation heating of broiler hatching eggs during storage, flock age, and length of storage period on hatchability M. Gucbilmez, S. Özlü, R. Shiranjang, O. Elibol, and J. Brake	3310
Mid-term financial impact of animal welfare improvements in Dutch broiler production É. Gocsik, A. G. J. M. Oude Lansink, and H. W. Saatkamp	3314
Effects of prestorage application of propolis and storage time on eggshell microbial activity, hatchability, and chick performance in Japanese quail (<i>Coturnix coturnix japonica</i>) eggs Ali Aygun and Durmus Sert	3330

ASSOCIATION NOTES

Positions Available	3338
2013 Annual Meeting	3339
2013 Poultry Science Association Editorial Board Members and Reviewers	3353
2013 Poultry Science Association Awards.....	3357
Poultry Science Association Past Presidents and Recipients of Awards and Honors	3374
Locations and Dates of Poultry Science Association Meetings	3380
Poultry Science Association Constitution and By-Laws	3382