

CONTENTS

ENVIRONMENT, WELL-BEING, AND BEHAVIOR

- Nest use is influenced by the positions of nests and drinkers in aviaries
T. L. Lentfer, S. G. Gebhardt-Henrich, E. K. F. Fröhlich, and E. von Borell..... 1433
- Changes of blood parameters associated with bone remodeling following experimentally induced fatty liver disorder in laying hens
S. Jiang, H. W. Cheng, L. Y. Cui, Z. L. Zhou, and J. F. Hou..... 1443
- The influence of loose-mix feeding on behavior, feed intake, and body weight of growing geese
J. Arroyo, A. Auvergne, J. P. Dubois, F. Lavigne, M. Bijja, C. Bannelier, and L. Fortun-Lamothe 1454
- Growth performance and hematological traits of broiler chickens reared under assorted monochromatic light sources
M. J. Kim, R. Parvin, M. M. H. Mushtaq, J. Hwangbo, J. H. Kim, J. C. Na, D. W. Kim, H. K. Kang, C. D. Kim, K. O. Cho, C. B. Yang, and H. C. Choi..... 1461

Review

- Review of the social and environmental factors affecting the behavior and welfare of turkeys (*Meleagris gallopavo*)
J. Marchewka, T. T. N. Watanabe, V. Ferrante, and I. Estevez 1467

GENETICS

- Performance comparison of laying hens segregating for the frizzle gene under thermoneutral and high ambient temperatures
T. Zerjal, D. Gourichon, B. Rivet, and A. Bordas..... 1474
- Analysis of egg production in layer chickens using a random regression model with genomic relationships
A. Wolc, J. Arango, P. Settar, J. E. Fulton, N. P. O'Sullivan, R. Preisinger, R. Fernando, D. J. Garrick, and J. C. M. Dekkers..... 1486

IMMUNOLOGY, HEALTH, AND DISEASE

- Imidapril inhibits right ventricular remodeling induced by low ambient temperature in broiler chickens
Xue-Qin Hao, Shou-Yan Zhang, Xiang-Chao Cheng, Meng Li, Tong-Wen Sun, Ji-Liang Zhang, Wen Guo, and Li Li 1492
- Comparison of 3 agar media in Fung double tubes and Petri plates to detect and enumerate *Clostridium* spp. in broiler chicken intestines
M. A. Barrios, J. K. Saini, C. M. Rude, R. S. Beyer, D. Y. C. Fung, and B. A. Crozier-Dodson..... 1498
- Comparison of 3 culture methods and PCR assays for *Salmonella gallinarum* and *Salmonella pullorum* detection in poultry feed
M. Cecilia Soria, Mario A. Soria, Dante J. Bueno, and Horacio R. Terzolo 1505
- Pharmacokinetics of gamithromycin after intravenous and subcutaneous administration in broiler chickens
A. Watteyn, E. Plessers, H. Wyns, S. De Baere, P. De Backer, and S. Croubels 1516
- Expression profiles for genes in the turkey major histocompatibility complex *B*-locus
M. S. Monson, K. M. Mendoza, S. G. Velleman, G. M. Strasburg, and K. M. Reed 1523
- Influences of F-strain *Mycoplasma gallisepticum* vaccine on productive and reproductive performance of commercial parent broiler chicken breeders on a multi-age farm
J. J. Liu, L. Ding, J. Z. Wei, and Y. Li 1535

A novel combined adjuvant strongly enhances mucosal and systemic immunity to low pathogenic avian influenza after oral immunization in ducks Haihong Kang, Hongli Wang, Qinghua Yu, and Qian Yang	1543
--	------

Research Notes

Quantitative real-time PCR study of the expression and regulation of the tetracycline resistance gene in <i>Riemerella anatipestifer</i> Chong-Yue Zhong, An-Chun Cheng, Ming-Shu Wang, De-Kang Zhu, Qi-Hui Luo, Shun Chen, Su-Hui Zhang, and Xiao-Yue Chen	1552
Effect of immersion and inoculation in ovo of <i>Lactobacillus</i> spp. in embryonated chicken eggs in the prevention of <i>Salmonella</i> Enteritidis after hatch R. A. Yamawaki, E. L. Milbradt, M. P. Coppola, J. C. Z. Rodrigues, R. L. Andreatti Filho, C. R. Padovani, and A. S. Okamoto.....	1560

METABOLISM AND NUTRITION

Effects of corn replacement by sorghum in broiler diets on performance and intestinal mucosa integrity K. A. A. Torres, J. M. Pizauro Jr., C. P. Soares, T. G. A. Silva, W. C. L. Nogueira, D. M. B. Campos, R. L. Furlan, and M. Macari	1564
Phosphorus digestibility response of broiler chickens to dietary calcium-to-phosphorus ratios J. B. Liu, D. W. Chen, and O. Adeola.....	1572
Evaluation of high dietary inclusion of distillers dried grains with solubles and supplementation of protease and xylanase in the diets of broiler chickens under necrotic enteritis challenge M. R. Berekatain, C. Antipatis, N. Rodgers, S. W. Walkden-Brown, P. A. Iji, and M. Choct	1579
True phosphorus digestibility of black-eyed pea and peanut flour without or with phytase supplementation in broiler chickens E. A. Iyayi, F. Fru-Nji, and O. Adeola	1595

MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY

Establishment of an immortal chicken embryo liver-derived cell line Jeongyoon Lee, Douglas N. Foster, Walter G. Bottje, Hyeon-Min Jang, Yohanna G. Chandra, Lauren E. Gentles, and Byung-Whi Kong	1604
Influence of osteoprotegerin on differentiation, activation, and apoptosis of Gaoyou duck embryo osteoclasts in vitro Ying-Xiao Fu, Jian-Hong Gu, Yi-Ran Zhang, Xi-Shuai Tong, Hong-Yan Zhao, Yan Yuan, Xue-Zhong Liu, Jian-Chun Bian, and Zong-Ping Liu	1613
Differential gene expression between normal and pale, soft, and exudative turkey meat Y. Malila, R. J. Tempelman, K. R. B. Sporer, C. W. Ernst, S. G. Velleman, K. M. Reed, and G. M. Strasburg	1621
Changes in yolk sac membrane absorptive area and fat digestion during chick embryonic development L. Yadgary, O. Kedar, O. Adepeju, and Z. Uni.....	1634
Distribution of extended-spectrum cephalosporin resistance determinants in <i>Salmonella enterica</i> and <i>Escherichia coli</i> isolated from broilers in southern Japan F. Shahada, T. Chuma, G. Kosugi, M. Kusumoto, T. Iwata, and M. Akiba.....	1641

PHYSIOLOGY, ENDOCRINOLOGY, AND REPRODUCTION

Research Note

Energy sensing in developing chicken embryos and posthatch chicks from different size eggs Q. Hu, U. Agarwal, and B. J. Bequette.....	1650
--	------

PROCESSING, PRODUCTS, AND FOOD SAFETY

Evaluation of <i>Saccharomyces cerevisiae</i> as an antiaflatoxicogenic agent in broiler feedstuffs R. P. Pizzolitto, M. R. Armando, M. A. Salvano, A. M. Dalcero, and C. A. Rosa	1655
--	------

Prevalence and quantification of <i>Listeria monocytogenes</i> in chicken offal at the retail level in Malaysia C. H. Kuan, S. G. Goh, Y. Y. Loo, W. S. Chang, Y. L. Lye, S. Puspanadan, J. Y. H. Tang, Y. Nakaguchi, M. Nishibuchi, N. A. Mahyudin, and S. Radu.....	1664
Occurrence of white striping under commercial conditions and its impact on breast meat quality in broiler chickens M. Petracci, S. Mudalal, A. Bonfiglio, and C. Cavani.....	1670

PRODUCTION, MODELING, AND EDUCATION

Investigation of nonlinear models to describe long-term egg production in Japanese quail Dogan Narinc, Emre Karaman, Tulin Aksoy, and Mehmet Ziya Firat.....	1676
Dietary lysine affects chickens from local Chinese pure lines and their reciprocal crosses Juan Li, Xiao-Ling Zhao, Yun-Cong Yuan, Elizabeth Ruth Gilbert, Yan Wang, Yi-Ping Liu, Yao Zhang, and Qing Zhu	1683

ASSOCIATION NOTES

Nunc Dimittis	1690
Positions Available	1691