

CONTENTS

ENVIRONMENT, WELL-BEING, AND BEHAVIOR

- Influence of raised plastic floors compared with pine shaving litter on environment and Pekin duck condition
D. M. Karcher, M. M. Makagon, G. S. Fraley, S. M. Fraley, and M. S. Lilburn 583
- Effects of dietary dilution source and dilution level on feather damage, performance, behavior, and litter condition in pullets
S. N. Qaisrani, M. M. van Krimpen, and R. P. Kwakkel 591
- Response of restraint stress-selected lines of Japanese quail to heat stress and *Escherichia coli* challenge
G. R. Huff, W. E. Huff, I. V. Wesley, N. B. Anthony, and D. G. Satterlee 603
- Dehydration indicators for broiler chickens at slaughter
R. F. Vanderhasselt, S. Buijs, M. Sprenger, K. Goethals, H. Willemsen, L. Duchateau, and F. A. M. Tuytens 612

Review

- Embryonic development and the physiological factors that coordinate hatching in domestic chickens
Q. Tong, C. E. Romanini, V. Exadaktylos, C. Bahr, D. Berckmans, H. Bergoug, N. Eterradossi, N. Roulston, R. Verhelst, I. M. McGonnell, and T. Demmers 620

IMMUNOLOGY, HEALTH, AND DISEASE

- Outcome of an artificial coccidial infection in poults under the influence of floor heating
A. Abd El-Wahab, C. F. Visscher, S. Wolken, L.-M. Reperant, A. Beineke, M. Beyerbach, and J. Kamphues 629
- Quicklime treatment and stirring of different poultry litter substrates for reducing pathogenic bacteria counts
M. Lopes, V. F. B. Roll, F. L. Leite, M. A. Dai Prá, E. G. Xavier, T. Heres, and B. S. Valente 638
- Differential expression of Toll-like receptor genes in lymphoid tissues between Marek's disease virus-infected and noninfected chickens
H. Jie, L. Lian, L. J. Qu, J. X. Zheng, Z. C. Hou, G. Y. Xu, J. Z. Song, and N. Yang 645
- The effects of yeast feed supplementation on turkey performance and pathogen colonization in a transport stress/*Escherichia coli* challenge
G. R. Huff, W. E. Huff, S. Jalukar, J. Oppy, N. C. Rath, and B. Packialakshmi 655
- Effects of probiotic-supplemented diets on growth performance and intestinal immune characteristics of broiler chickens
S. P. Bai, A. M. Wu, X. M. Ding, Y. Lei, J. Bai, K. Y. Zhang, and J. S. Chio 663
- Bacterial census of poultry intestinal microbiome
S. Wei, M. Morrison, and Z. Yu 671

METABOLISM AND NUTRITION

- Effects of clinoptilolite and modified clinoptilolite on the growth performance, intestinal microflora, and gut parameters of broilers
Q. J. Wu, L. C. Wang, Y. M. Zhou, J. F. Zhang, and T. Wang 684
- Influence of feed form and source of soybean meal on growth performance, nutrient retention, and digestive organ size of broilers. 2. Battery study
M. P. Serrano, M. Frikha, J. Corchero, and G. G. Mateos 693
- Evaluation of carryover effects of dietary lysine intake by Cobb 500 broiler breeder hens
L. Mejia, C. D. McDaniel, M. T. Kidd, K. Lopez, and A. Corzo 709

Extra-phosphoric effects of superdoses of a novel microbial phytase C. L. Walk, M. R. Bedford, T. S. Santos, D. Paiva, J. R. Bradley, H. Wlodecki, C. Honaker, and A. P. McElroy.....	719
Combined dietary effects of supplemental threonine and purified fiber on growth performance and intestinal health of young chicks E. L. Wils-Plotz and R. N. Dilger	726
Modulation of the intestinal environment, innate immune response, and barrier function by dietary threonine and purified fiber during a coccidiosis challenge in broiler chicks E. L. Wils-Plotz, M. C. Jenkins, and R. N. Dilger	735

Research Notes

Trimethylamine deposition in the egg yolk from laying hens with different FMO3 genotypes J. Wang, S. G. Wu, H. J. Zhang, H. Y. Yue, L. Xu, F. Ji, L. Xu, and G. H. Qi.....	746
Effect of β -hydroxy- β -methylbutyrate calcium on growth, blood parameters, and carcass qualities of broiler chickens X. Qiao, H. J. Zhang, S. G. Wu, H. Y. Yue, J. J. Zuo, D. Y. Feng, and G. H. Qi.....	753

MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY

Biallelic expression of the L-arginine:glycine amidinotransferase gene with different methylation status between male and female primordial germ cells in chickens H. J. Jang, M. O. Lee, S. Kim, T. H. Kim, S. K. Kim, G. Song, J. E. Womack, and J. Y. Han	760
Microarray analysis of early and late passage chicken embryo fibroblast cells Byung-Whi Kong, Jeongyoon Lee, Walter G. Bottje, Kentu Lassiter, Jonghyuk Lee, Lauren E. Gentles, Yohanna G. Chandra, and Douglas N. Foster.....	770
Differences between fertilized and unfertilized chicken egg white proteins revealed by 2-dimensional gel electrophoresis-based proteomic analysis Ning Qiu, Wen Liu, Meihu Ma, Lei Zhao, and Yuqi Li.....	782
Expression of microRNA and microRNA processing machinery genes during early quail (<i>Coturnix japonica</i>) embryo development H. Kocamis, Md. M. Hossain, M. U. Cinar, D. Salilew-Wondim, A. Mohammadi-Sangcheshmeh, D. Tesfaye, M. Hölker, and K. Schellander.....	787

PHYSIOLOGY, ENDOCRINOLOGY, AND REPRODUCTION

Research Note

Acrosome reaction of fowl sperm: Evidence for shedding of the acrosomal cap in intact form to release acrosomal enzyme M. U. Ahammad, C. Nishino, H. Tatemoto, N. Okura, S. Okamoto, Y. Kawamoto, and T. Nakada	798
--	-----

PROCESSING, PRODUCTS, AND FOOD SAFETY

Effect of hot water spray on broiler carcasses for reduction of loosely attached, intermediately attached, and tightly attached pathogenic (<i>Salmonella</i> and <i>Campylobacter</i>) and mesophilic aerobic bacteria L. Zhang, P. Singh, H. C. Lee, and I. Kang.....	804
Estimation of factors associated with the occurrence of white striping in broiler breast fillets V. A. Kuttappan, V. B. Brewer, A. Mauromoustakos, S. R. McKee, J. L. Emmert, J. F. Meullenet, and C. M. Owens.....	811
Consumer preference for chicken breast may be more affected by information on organic production than by product sensory properties F. Napolitano, C. Castellini, S. Naspetti, E. Piasentier, A. Girolami, and A. Braghieri.....	820
Prediction of <i>Listeria innocua</i> survival in fully cooked chicken breast products during postpackage thermal treatment Min Li, Abani Pradhan, Wen Wang, and Yanbin Li	827

Effect of essential oil compound on shedding and colonization of *Salmonella enterica* serovar Heidelberg
in broilers

W. Q. Alali, C. L. Hofacre, G. F. Mathis, and G. Faltys..... 836

Research Note

Salmonella Enteritidis is superior in egg white survival compared with other *Salmonella* serotypes

J. De Vylder, R. Raspoet, J. Dewulf, F. Haesebrouck, R. Ducatelle,
and F. Van Immerseel..... 842