

CONTENTS

ENVIRONMENT, WELL-BEING, AND BEHAVIOR

- Dietary self-selection by broilers at normal and high temperature changes feed intake behavior, nutrient intake, and performance
S. Syafwan, G. J. D. Wermink, R. P. Kwakkel, and M. W. A. Verstegen..... 537

Research Note

- Genotoxic effects of deoxynivalenol in broiler chickens fed low-protein feeds
W. A. Awad, K. Ghareeb, A. Dadak, L. Gille, K. Staniek, M. Hess, and J. Böhm 550

GENETICS

- Genetic correlation between heart ratio and body weight as a function of ascites frequency in broilers split up into sex and health status
A. M. Closter, P. van As, M. G. Elferink, R. P. M. A. Croijmanns, M. A. M. Groenen, A. L. J. Vereijken, J. A. M. Van Arendonk, and H. Bovenhuis 556
- Genetic parameters of foot-pad dermatitis and body weight in purebred broiler lines in 2 contrasting environments
D. N. R. G. Kapell, W. G. Hill, A.-M. Neeteson, J. McAdam, A. N. M. Koerhuis, and S. Avendaño 565

IMMUNOLOGY, HEALTH, AND DISEASE

- The probiotic *Bacillus licheniformis* ameliorates heat stress-induced impairment of egg production, gut morphology, and intestinal mucosal immunity in laying hens
W. Deng, X. F. Dong, J. M. Tong, and Q. Zhang 575
- Cytokine gene expression in the livers of ducklings infected with duck hepatitis virus-1 JX strain
C. Q. Gu, C. Q. Xie, X. Y. Hu, W. P. Zhang, D. R. Bi, and G. F. Cheng 583
- Immunological responses to *Clostridium perfringens* alpha-toxin in two genetically divergent lines of chickens as influenced by major histocompatibility complex genotype
L. H. Summers, C. M. Cox, S. Kim, J. E. Salevsky, P. B. Siegel, and R. A. Dalloul 592
- Effects of 2 size classes of intratracheally administered airborne dust particles on primary and secondary specific antibody responses and body weight gain of broilers: A pilot study on the effects of naturally occurring dust
H. T. L. Lai, M. G. B. Nieuwland, A. J. A. Aarnink, B. Kemp, and H. K. Parmentier 604
- Comparison of 2 culture methods and PCR assays for *Salmonella* detection in poultry feces
M. C. Soria, M. A. Soria, and D. J. Bueno 616
- Foot-pad dermatitis and experimentally induced coccidiosis in young turkeys fed a diet without anticoccidia
A. Abd El-Wahab, C. F. Visscher, S. Wolken, J.-M. Reperant, A. Beineke, M. Beyerbach, and J. Kamphues 627
- Diagnostics of severe acute respiratory syndrome-associated coronavirus (SARS-CoV) nucleocapsid antigen using chicken immunoglobulin Y
A. Palaniyappan, D. Das, S. Kammila, M. R. Suresh, and H. H. Sunwoo 636
- Threonine requirement of broiler chickens during subclinical intestinal *Clostridium* infection
L. Star, M. Rovers, E. Corrent, and J. D. van der Klis 643
- The contrasting properties of 2 xenogenic erythrocyte-reactive natural antibodies in commercial ducks
P. F. Cotter 653

METABOLISM AND NUTRITION

- Effects of canthaxanthin on the productive and reproductive performance of broiler breeders
A. P. Rosa, A. Scher, J. O. B. Sorbara, L. S. Boemo, J. Forgiarini, and A. Londero 660
- Effects of stocking density on growth performance, carcass yield, and immune status of a local chicken breed
H. B. Tong, J. Lu, J. M. Zou, Q. Wang, and S. R. Shi 667
- In vitro evaluation of limestone, dicalcium phosphate, and phytase on calcium and phosphorus solubility of corn and soybean meal
C. L. Walk, M. R. Bedford, and A. P. McElroy 674
- Effect of low-protein diets and single sex on production performance, plasma metabolites, digestibility, and nitrogen excretion in 1- to 48-day-old broilers
F. Hernández, M. López, S. Martínez, M. D. Megías, P. Catalá, and J. Madrid 683
- The effect of insoluble fiber and intermittent feeding on gizzard development, gut motility, and performance of broiler chickens
A. Sacranie, B. Svihus, V. Denstadli, B. Moen, P. A. Iji, and M. Choct 693
- Effect of feeding hemp seed and hemp seed oil on laying hen performance and egg yolk fatty acid content: Evidence of their safety and efficacy for laying hen diets
N. Gakhar, E. Goldberg, M. Jing, R. Gibson, and J. D. House 701
- Metabolizable energy value of dried corn distillers grains and corn distillers grains with solubles for 6-week-old broiler chickens
O. Adeola and H. Zhai 712

PROCESSING, PRODUCTS, AND FOOD SAFETY

- Sodium metasilicate affects growth of *Salmonella* Typhimurium in fresh, boneless, uncooked chicken breast fillets stored at 4°C for 7 days
C. S. Sharma, S. K. Williams, K. R. Schneider, R. H. Schmidt, and G. E. Rodrick 719
- Salmonella* detection in poultry meat and meat products by the Vitek immunodiagnostic assay system easy *Salmonella* method, a LightCycler polymerase chain reaction system, and the International Organization for Standardization method 6579
S. Temelli, A. Eyigor, and K. T. Carli 724
- Effects of ultrasonic treatment on eggshell microbial activity, hatchability, tibia mineral content, and chick performance in Japanese quail (*Coturnix coturnix japonica*) eggs
A. Aygun and D. Sert 732

Rapid Communication

- Estimation of egg freshness using *S*-ovalbumin as an indicator
Q. Huang, N. Qiu, M. H. Ma, Y. G. Jin, H. Yang, F. Geng, and S. H. Sun 739

PRODUCTION, MODELING, AND EDUCATION

- Comparative analysis as a management tool for broiler breeder farms: Simulated individual farm analysis (IFAS)
H. Yassin, A. G. J. Velthuis, G. W. J. Giesen, and A. G. J. M. Oude Lansink 744
- Hatching egg and newly hatched chick yolk sac total immunoglobulin Y content at 3 broiler breeder flock ages
A. M. Ulmer-Franco, G. Cherian, N. Quezada, G. M. Fasenko, and L. M. McMullen 758
- Effect of genetic selection on growth parameters and tonic immobility in Leghorn pullets
K. E. Anderson and D. R. Jones 765

Research Note

- Estimation of ideal ratios of methionine and threonine to lysine in starting broiler chicks using response surface methodology
M. Mehri, A. A. Davarpanah, and H. R. Mirzaei 771

ASSOCIATION NOTES

- Positions Available 778
- Upcoming Meeting 780