

## CONTENTS

**Research Reports**

- Assessing meat production of 3 Hungarian Landrace Guinea Fowl ecotypes reserved for in vivo conservation**  
I. T. Szalay, T. N. Lan Phuong, T. R. Ferencz, K. D. T. Dong Xuan, K. Kustos, and K. Kovacsne Gaal 139
- The effects of adding aqueous extract and dried aerial part powder of *Tribulus terrestris* on productive performance and blood parameters of laying hens**  
T. Amirshkari, N. Ziaei, S. M. Ghoreishi, and E. Esfandiarpour 145
- Choice feeding of protein concentrate and grain to organic meat chickens**  
A. C. Fanatico, C. M. Owens-Hanning, V. Brewer Gunsaulis, and A. M. Donoghue 156
- Immune response of broiler chickens supplemented with prebiotic from *Sacharomyces cerevisiae* challenged with *Salmonella enteritidis* or Minnesota**  
M. C. Lourenço, A. M. de Souza, R. M. Hayashi, A. B. da Silva, and E. Santin 165
- Composition of broilers meat**  
J. de Oliveira, S. V. Avanço, M. Garcia-Neto, and E. H. G. Ponsano 173
- Evaluation of a cellulose-based industrial wastewater byproduct as broiler bedding**  
C. W. Ritz, B. H. Kiepper, and B. D. Fairchild 182
- Hops  $\beta$ -acids (*Humulus lupulus*) decrease intestinal gene expression of proinflammatory cytokines in an *ex-vivo* model**  
C. Bortoluzzi, J. F. M. Menten, H. Silveira, A. D. B. Melo, and M. H. Rostagno 191
- Effects of dietary lysine and methionine supplementation on Ross 708 male broilers from 21 to 42 d of age (I): growth performance, meat yield, and cost effectiveness**  
W. Zhai, E. D. Peebles, M. W. Schilling, and Y. Mercier 197
- Effects of dietary lysine and methionine supplementation on Ross 708 male broilers from 21 to 42 days of age (II): breast meat quality**  
W. Zhai, M. W. Schilling, V. Jackson, E. D. Peebles, and Y. Mercier 212
- Effects of dietary lysine and methionine supplementation on Ross 708 male broilers from 21 to 42 d of age (III): serum metabolites, hormones, and their relationship with growth performance**  
W. Zhai, E. D. Peebles, X. Wang, P. D. Gerard, H. A. Olanrewaju, and Y. Mercier 223
- Evaluation of protection induced by *Riemerella anatipestifer*-*E. coli* O78 bacterin in white pekin ducks**  
Simone T. Stoute, Tirath S. Sandhu, and Maurice E. Pitesky 232
- High dosing NSP enzymes for total protein and digestible amino acid reformulation in a wheat/corn/soybean meal diet in broilers**  
K. De Keyser, L. Kuterna, S. Kaczmarek, A. Rutkowski, and E. Vanderbeke 239

<b>Examination of poultry slaughterhouse wastewater sludge conditioning using microwave irradiation</b>	
N. B. Pakdil	247
<b>The effect of safflower meal substitution in a lysine fortified corn-soybean meal diet on performance, egg quality, and yolk fat profile of laying hens</b>	
G. W. Barbour, N. N. Usayran, S. K. Yau, S. K. Murr, H. A. Shaib, N. N. Abi Nader, G. M. Salameh, and M. T. Farran	256
<b>Field Reports</b>	
<b>On farm monitoring of the impact of water system sanitation on microbial levels in broiler house water supplies</b>	
P. Maharjan, T. Clark, C. Kuenzel, M. K. Foy, and S. Watkins	266
<b>On-farm assessment of switchgrass bedding</b>	
J. R. Moyle, L. A. Brooks, B. A. McCrea, and W. R. Brown	272
<b>Symposium: PSA Informal Nutrition</b>	
<b>Toward a better understanding of mechanisms of probiotics and prebiotics action in poultry species</b>	
K. M. Ajuwon	277
<b>The use and abuse of immune indices in nutritional immunology studies</b>	
Ramesh K. Selvaraj, Revathi Shanmugasundaram, and Ravikumar Rengasamy	284
<b>Confirming the promise to prevent physiological disorders of organs: urolithiasis in laying hens</b>	
Robert F. Wideman, Jr.	292
<b>Assessing measurements in feed enzyme research: Phytase evaluations in broilers</b>	
M. R. Bedford, C. L. Walk, and H. V. Masey O'Neill	305