

Contents

Volume 32, No. 1–4, 2023

Vol. 32, No. 1, 2023

Review

- Anaerobic rumen fungi and fungal direct-fed microbials in ruminant feeding
Król B., M. Słupczyńska, M. Wilk, M.U. Asghar and P. Cwynar (Wrocław, Poland) 3

Animal physiology

- Effect of caffeine on adenosine and ryanodine receptor gene expression in the hypothalamus, pituitary, and choroid plexus in ewes under basal and LPS challenge conditions
Szczepkowska A. (Olsztyn, Poland), J. Bochenek, M. Wójcik, D. Tomaszewska-Zaremba, H. Antushevich, M. Tomczyk (Jabłonna, Poland) J. Skipor (Olsztyn, Poland) and A.P. Herman (Jabłonna, Poland) 17

Monogastrics

- Microbial agent spraying in pig housing and slurry can potentially reduce harmful gas emissions – a preliminary study
Muhizi S. and I.H. Kim (Cheonan, South Korea) 26

- Effect of *Achyranthes japonica* Nakai extract on growth performance, apparent nutrient digestibility, excreta microbial count and gas emission in broilers fed different protein diets
Hoque M.R. and I.H. Kim (Cheonan, South Korea) 34

- Changes in haematological and biochemical blood parameters of laying hens of the ROSS 308 parent flock during the hatching period
Straková E., L. Všetičková, M. Kutlvaří and P. Suchý (Brno, Czech Republic) 43

- Effects of phytogenic feed on productive performance, egg quality, antioxidant activity and lipid metabolism of laying hens
Li T., M.M. Shen, Q.R. Hou, S.L. Zhang, H.L. Huang, P. Guo, P. Wu and W.G. Zhao (Zenjiang, China) 50

- The potency of *Lactobacillus acidophilus* and *L. lactis* probiotics and *Guazuma ulmifolia* Lam. extract as feed additives with different application times to improve nutrient intake and feed efficiency in *Coturnix coturnix japonica* females
Lokapirnasari W.P., M.A. Al Arif, L. Maslachah, A.L.P. Kirana, A. Suryandari, A.B. Yulianto (Surabaya, Indonesia) and A. Sherasiya (Gujarat, India) 59

Ruminants

- The effects of heat stress in Jersey, Hungarian Simmental and Holstein-Friesian cows
Jurkovich V., B. Somoskői (Budapest Hungary), L. Kovács (Gödöllő, Hungary) and M. Bakony (Budapest Hungary) 68

- Utilisation of slow-release non-protein nitrogen produced from agro-industrial by-products: feed digestibility and ruminal parameters
Amani-Yengejeh M., A. Taghizadeh, H. Mohammadzadeh, A. Hosseinkhani, S. Shirmohammadi (Tabriz, Iran), S. Abachi (Quebec, Canada), V. Palangi (Erzurum, Turkey), H. Eseceli (Balikesir, Turkey), M. Besharati (Ahar, Iran) and I. Giannenas (Thessaloniki, Greece) 76

Other topics

- Comprehensive proteomic analysis of the main liver and attached liver of *Glyptosternum maculatum* on the basis of data-independent mass spectrometry acquisition
Zhang G. (Wuhu, China), Z. Mou (Lhasa, China), H. Wang and H. Liu (Hefei, China) 85

Vol. 32, No. 2, 2023

Review

- Effect of dietary selenium supplementation (organic and inorganic) on carcass characteristics and meat quality of ruminants: a meta-analysis
Wahyono T., R. Wahyuningsih, A.I. Setiyawan, D. Pratiwi, T. Kurniawan, S. Hariyadi (Gunungkidul, Indonesia), M.M. Sholikin, A. Jayanegara (Bogor, Indonesia), E. Triyannanto (Sleman, Indonesia) and A. Febrisiantosa (Gunungkidul, Indonesia) 127

Poultry

- 25-hydroxycholecalciferol affects growth performance, bone calcium content and intestinal calcium transporter gene expression in broiler chickens
Liu M.Y., L.H. Wu, X.L. Lv (Zhengzhou, China), L. He, J.F. Hao, B.B. Ma, L. Xi (Shangqiu, China), Y.Y. Qiao (Zhengzhou, China), F. Tang (Rizhao, China) and J.C. Han (Shangqiu, China) 138

- Feeding value of field bean (*Vicia faba* L. var. minor) for laying hen pullets
Pirgozliev V.R., I.M. Whiting, S.C. Mansbridge, J.M. Abdulla, M.W. Mirza, and S.P. Rose (Shropshire, UK) 146

Response in liver gene expression and DNA methylation to changes in the intestinal microbial profile after in ovo stimulation of chickens Dunisławska A., E. Pietrzak, A. Beldowska (Bydgoszcz, Poland), A. Sławińska (Toruń, Poland) and M. Siwek (Bydgoszcz, Poland).....	152
Feasibility of including a phytobiotic containing cinnamon oil in the diet to reduce the occurrence of neurodegenerative changes in broiler chicken tissues Krauze M., P. Jurczak, M. Cendrowska-Pinkosz, A. Stępniewska (Lublin, Poland), P. Matusevičius (Kaunas, Lithuania) and K. Ognik (Lublin, Poland)	164
Effect of digital livestock system on animal behavior and welfare, and fatty acid profiles of egg in laying hens Park S.O. (Chunchonsi, South Korea) and V.A. Zammit (Coventry, United Kingdom)	174
Effects of dietary stevia and ginger extracts on fattening performance, organ weights and serum biochemical parameters in quails exposed to heat stress Bayrıl T. (Diyarbakır, Turkey)	181
Ruminants	
Effects of full fat oil seeds on milking performance, milk composition and milk quality in lactating Holstein cows Park B.K., J.S. Shin, G.H. Son, S.K. Lee, J.I. Pak, J.W. Jhoo and G.Y. Kim (Chuncheon)	189
Effect of yeast probiotic supplements in the diet of young ewes on the metabolic activity of rumen microbiota I. Polovyi, S. Vovk and M. Petryshyn (Obroshyne, Ukraine)	198
Long-term changes in the frequency of beta-casein, kappa-casein and beta-lactoglobulin alleles in Polish Holstein-Friesian dairy cattle S. Kamiński, T. Zabolewicz, K. Oleński (Olsztyn, Poland) and A. Babuchowski (Mrągowo, Poland)	205
Vol. 32, No. 3, 2023	
Review	
Dietary supplementation with tomato waste to improve performance and egg quality of laying hens: a meta-analysis Handayani U.F., A. Sofyan, D. Lestari, M.M. Sholikin, W. Wulandari, M.A. Harahap (Bogor, Indonesia), H. Herdian (Kotabumi, Indonesia), H. Julendra, T. Okselni (Bogor, Indonesia) and M.E. Mahata (Padang, Indonesia)	221
Application of polyphenolic compounds in animal nutrition and their promising effects Waqas M., M. Salman and M.S. Sahrif (Samsun, Turkey) ..	233
Animal physiology	
Sodium selenite addition promotes the proliferation of bovine mammary epithelial cells through the Akt-mTOR signalling pathway Zhang J., Y. Liu, L. Bu, Q. Liu, C. Pei and G. Guo (Jinzhong City, P.R. China)	257
Regulation of Nod-like receptor expression in the liver of ewes during early pregnancy Zhang L., Y. Ren, Y. Li, Y. Meng, H. Fang and L. Yang (Handan, China)	267
Poultry	
Does social position affect well-being in laying hens? Rozempolska-Rucińska I., K. Janicka, A. Ziemiańska, K. Kasperek, K. Drabik, B. Nowakowicz-Dębek, Ł. Włazło, A. Czech and G. Zięba (Lublin, Poland)	280
Effect of dietary stevia and ginger extracts on laying performance, fertility, hatchability, and serum biochemical parameters in laying Japanese quails exposed to heat stress Bayrıl T. (Diyarbakır, Türkiye), F. Akdemir (Malatya, Türkiye), S. Gürgöze (Diyarbakır, Türkiye) and C. Orhan (Elazığ, Türkiye)	289
Ruminants	
Effect of supplementation of rumen-protected choline with soluble vitamins on hepatic function and carcass characteristics in Hanwoo steers Park B.K. (Chunchoen, Republic of Korea) and G.M. Chu (Busan, Republic of Korea)	297
<i>In vitro</i> ruminal fermentation and nutrient compositions of potato starch by-products Kara K. (Kayseri, Türkiye), S. Ozkaya (İsparta, Türkiye), B.K. Guclu (Kayseri, Türkiye), E. Aktug (Tekirdağ, Türkiye), S. Demir, S. Yılmaz, G. Pirci, K. Yılmaz and E. Baytok (Kayseri, Türkiye)	306
Inclusion of molasses to garlic foliage silage and its effect on <i>in vitro</i> ruminal fermentation and gas production Pámanes-Carrasco G.A., E.Y. García-Piña, E.E. Araiza-Rosales and E. Herrera-Torres (Durango, México)	316
Animal feed	
Determination of quality and nutrient content of artichoke by-products ensilaged with barley and molasses Demirci M. (Kirikkale, Türkiye), K. Kara (Kayseri, Türkiye) and M.A. Karslı (Kirikkale, Türkiye)	324
Vol. 32, No. 4, 2023	
Review	
Potential use of black soldier fly, <i>Hermetia illucens</i> larvae in chicken feed as a protein replacer: a review Zaid M.Z.A., S.K. Ramiah, E.S. Jamein, I. Zulkifli, I.H. Lokman, F.M.A. Amirul, S.A.A. Fadzlin, S. Mohd Zamri (Selangor, Malaysia), A. Jayanegara (Bogor, Indonesia) and H.A. Hassim (Selangor, Malaysia)	341
Animal physiology	
Effect of FSH stimulation prior to ovum pick-up on follicular dynamics, oocyte competence, and <i>in vitro</i> embryo production in Ongole cows (<i>Bos indicus</i>) Venkata Krishna N. (Tirupati, India), M. Mutha Rao (Guntur, India), K. Veerabrahmaiah, R.V. Suresh Kumar (Tirupati, India), N. Raghavendra Srikanth (Tirupati, India) and D. Yasaswini (Tirupati, India)	354

Circadian and seasonal changes in the expression of clock genes in the ovine pars tuberalis Wojtulewicz K., M. Tomczyk, M. Wójcik, J. Bochenek, H. Antushevich, A. Krawczyńska (Jabłonna, Poland), M. Załęcki (Olsztyn, Poland) and A.P. Herman (Jabłonna, Poland)	363	Comparison of lipid profiles in the faeces of beef cattle fed three common temperate grass silage diets and their relevance to dietary composition Elayadeth-Meethal M. (Wayanad, India), M. Jordana Rivero (Devon, UK), A. Mead (Hertfordshire, UK), M.R.F. Lee and T.H. Misselbrook (Wayanad, India)	427
Effects of three-month feeding high-fat diets with different fatty acid composition on kidney histology and expression of genes related to cellular stress and water-electrolyte homeostasis in mice Wypych A. (Szczecin, Poland), A. Dunisławska (Bydgoszcz, Poland), M. Grabowska, K. Michałek, Ożgo M. (Szczecin, Poland), K. Liput (Warsaw, Poland), A. Herosimczyk (Szczecin, Poland), E. Poławska, M. Pierzchała (Magdalanka, Poland) and A. Lepczyński (Szczecin, Poland)	372	Effect of supplementing sodium butyrate, phytogenic compounds and egg yolk antibodies in calf milk replacer containing probiotic bacteria on selected faecal bacteria in calves Milik J. (Bydgoszcz, Poland), P. Górką (Kraków, Poland), K. Budzińska (Bydgoszcz, Poland), J. Kański (Kraków, Poland) and T. Jankowiak (Żydowo, Poland)	438
Animal feed			
Relationships between microbial community, functional profile and fermentation quality during ensiling of hybrid <i>Pennisetum</i> Zhao J., H. Liu, X. Yin, J. Li, Z. Dong, S. Wang and T. Shao (Nanjing, China)	447		
Other topics			
Is royal jelly a sustainable alternative lipid source in aquaculture? Influence of dietary royal jelly levels on fatty acid composition in zebrafish Vural O., A. Tunç (Bingöl, Türkiye), M. Kamaszewski (Warsaw, Poland) and E. Aksaka (Antalya, Türkiye)	459		
Effect of tyrosine and phenylalanine supplementation on the colour and behaviour of chinchillas Łapiński S., S. Pałka and A. Otwinowska-Mindur (Kraków, Poland)	468		
List of reviewers	477		
Authors index	478		
Contents of Journal of Animal and Feed Sciences, Volume 32	481		
Monogastrics			
Effect of protected sodium butyrate on growth performance, carcass traits, relative weight of digestive organs and intestinal histomorphology of broilers Hanim C., N.D. Dono, B. Ariyadi, M.F. Habibi, M. Al Anas and M.F. Hanif (Yogyakarta, Indonesia)	413		
Ruminants			
Manila palm extract supplementation improves rumen fermentation and eliminates gastro-intestinal parasites in goats Norrapoke T., T. Pongjongmit (Kalasin, Thailand) and C. Supappong (Nakhon Si Thammarat, Thailand)	420		