



Contents

Volume 29, No. 1–4, 2020

Vol. 29, No. 1, 2020

Ruminants

Effects of mixed essential oils from eucalyptus, thyme and anise on composition, coagulation properties and antioxidant capacity of the milk of dairy cows

Giller K., T. Rilko, E. Manzocchi (Zurich, Switzerland), S. Hug, R. Bolt (Lindau, Switzerland) and M. Kreuzer (Zurich, Switzerland)

β -carotene as a dietary factor affecting expression of genes connected with carotenoid, vitamin A and lipid metabolism in the subcutaneous and omental adipose tissue of beef cattle

Wei C., X. Tan, G. Liu, F. Wan, H. Zhao, C. Zhang, W. You, X. Liu, X. Zhang, Qing Jin (Jinan, China)

Glutathione redox state, glutathione peroxidase activity and selenium concentration in periparturient dairy cows, and their relation with negative energy balance

Mikulková K., J. Illek, R. Kadek (Brno, Czech Republic)

The influence of lamb rearing system on ewe milk and lamb growth traits in dairy sheep

Margetín M., M. Oravcová, J. Margetinová, K. Vavříšínová, M. Janíček (Nitra, Slovak Republic)

Monogastrics

Exogenous fibrolytic enzymes improve carbohydrate digestion in exercising horses

Józefiak D., M. Komosa, P. Maćkowiak, E. Prószyńska-Oszmałek, P. Kołodziejcki (Poznań, Poland), S. Świątkiewicz (Balice, Poland), M. Rawski, B. Kierończyk (Poznań, Poland), M.R. Bedford, H.V.M Massey O'Neil (Marlborough, Wiltshire, UK)

In-ovo and dietary supplementation of selenium nano-particles influence physiological responses, immunological status and performance of broiler chicks

Ibrahim N.S., E.M. Sabic, M.M. Wakwak (Abou-Zabael, Egypt), I.E. El-Wardany (Cairo, Egypt), Y.M. El-Homosany, N. El-Deen Mohammad (Abou-Zabael, Egypt)

Effect of different feed physical forms (pellet, crumble, mash) on the performance and liver health in broiler chicken with and without carbon tetrachloride challenge

Karimirad R., Heshmatollah - Khosravinia, B. Parizadian Kavan (Lorestan, Iran)

Dietary coenzyme Q₁₀ may improve the growth performance and antioxidant status in quails exposed to cold stress

Bayril T. (Diyarbakir, Turkey), F. Akdemir (Malatya, Turkey), H. Aksit, D. Aksit (Balıkesir, Turkey)

Influence of maize particle size on kibble quality, palatability and metabolizability of diets for the Blue-fronted Amazon parrot (*Amazona aestiva*)

Werneck G.R. (Sorocaba, Brazil), T.B. Moreno, C.M.M. Souza, T.S. Bastos, C. da Rocha, A.P. Félix (Curitiba, Brazil)

Other topics

Effects of natamycin and *Lactobacillus buchneri* on the fermentative process and aerobic stability of maize silage

Pinto S. (Potsdam, Germany), J.F.G. Warth, C.O. Novinski and P. Schmidt (Curitiba, Brazil)

Vol. 29, No. 2, 2020

Ruminants

Graded supplementation of chestnut tannins to dairy cows fed protein-rich spring pasture: effects on indicators of protein utilization

Kapp-Bitter A.N. (Frick, Switzerland), U. Dickhoefer, E. Suglo (Stuttgart, Germany), L. Baumgartner (Frick, Switzerland), M. Kreuzer (Zurich, Switzerland), F. Leiber (Frick, Switzerland)

Effect of ensiled tomato pomace on performance and antioxidant status in the peripartum dairy cow

Tuoxunjiang H., A. Yimamu, X.Q. Li, R. Maimaiti (Urumqi, China), Y.L. Wang (Changji, China)

Performance and health of young rosé veal calves supplemented with yeast (*Saccharomyces cerevisiae*) and a postbiotic from *Lactobacillus acidophilus*

Thorsteinsson M., M. Vestergaard (Tjele, Denmark)

Monogastrics

Effects of maternal vitamin D₃ concentration during pregnancy on adipogenic genes expression and serum biochemical index in offspring piglets

Guo L. (Sumy, Ukraine), Z. Miao, H. Ma Xinxiang, China, S. Melnychuk (Sumy, Ukraine)

Serum metabolomic investigations of mulberry leaf powder supplementation in Chinese Erhualian pigs Deng S., D. Li, X. Liu (Nanjing, China), Z. Cai (Hangzhou, China), W. Wei, J. Chen, L. Zhang (Nanjing, China)	132	The effects of supplementation of yeast (<i>Saccharomyces cerevisiae</i>) and postbiotic from <i>Lactobacillus acidophilus</i> on the health and growth performance of young Jersey heifer calves Thorsteinsson M., H.L. Martin, T. Larsen, J. Sehested and M. Vestergaard (Tjele, Denmark)	224
Effect of processed maize stover as an alternative energy source in swine production H.W. Guo, P. Wang, J. Chang, Q.Q. Yin, C.Q. Liu, M.L. Li (Zhengzhou, China), X. W. Dang (Xinxiang, China), F.S. Lu (Shangshui, China)	143	Effects of rumen-protected choline supplied at different dietary energy levels on growth performance and meat quality of fattening goats Tu Y.L., K. Zhang, Y.F. Bai, L.P. Gao (Jiangsu, China) and W. Hong (Shanghai, China)	234
The effect of age of introducing whole sorghum grain on performance of broiler chickens Mabelebele M. (Rooderpoort, South Africa), R. M. Gous (Pietermaritzburg, South Africa), H. Massey O'Neil (Marlborough, United Kingdom), P. A. Iji (Nasinu, Fiji)	151	Monogastrics Effects of different combinations of dietary starch and non-starch polysaccharides on intestinal functions, and lipid and glucose metabolism in weaned pigs Zhou H., D.-w. Chen, J. He, X.-b. Mao, J. Yu, P. Zheng, J.-q. Luo, Y.-h. Luo, H. Yan and B. Yu (Chengdu, China)	241
Other topics Effect of <i>Lactobacillus buchneri</i> on the nutritive value of Sucrosorgo 506 bagasse silage Wilk M., B. Król, M. Słupczyńska (Wrocław, Poland), J. Sowiński (Wrocław, Poland) and Z. Antoszkiewicz (Olsztyn, Poland)	158	Effect of dilution of broiler chicken diet with cracked maize on performance and intestinal morphology Jelveh K., B. Rasouli, A. Seidavi (Pole-Taleshan, Iran), P. Makovicky (Bratislava, Slovakia), E. Hatzigiannakis and Ch. Milis (Sindos Thessaloniki, Greece)	250
Effects of calcium carbonate on the fermentation quality and aerobic stability of total mixed ration silage P. Tian (Beijing, China), D. Vyas (Gainesville, USA) D. Niu, S. Zuo, Di Jiang and Ch. Xu (Beijing, China)	167	Effects of supplementation of lysophosphatidylcholine (LPC) to laying hens on production performance, fat digestibility, blood lipid profile, and gene expression related to nutrients transport in small intestine Juntanapum W., Ch. Bunchasak, T. Poeikhampha, Ch. Rakangthong and K. Pongpong (Bangkok, Thailand)	258
Short communication Evaluation of efficacy of selected oestrous synchronization programs depending on the functional state of the ovaries, heifers and cows of meat breed Rekešiūtė A., P.A. Januškauskas, S. Kerzienė, N. Sutkevičienė, G. Vaičiulienė, A. Rutkauskas and H. Žilinskas (Kaunas, Lithuania)	175	Effects of opioid and cholinergic receptors inhibition on the intestine hormones concentration and release in rats Jaszca K. (Kraków, Poland), C.G. Scanes (Fayetteville, USA), M. Capcarova (Nitra, Slovak Republic) and K. Pierzchała-Koziec (Kraków, Poland)	266
Vol. 29, No. 3, 2020		Editorial news and events Prof. PhD Lech Zwierzchowski – memorial	276
Review The application of computer-assisted semen analysis (CASA) technology to optimise semen evaluation. A review Valverde A., V. Barquero (Alajuela, Costa Rica), C. Soler (Paterna, Spain)	189	Vol. 29, No. 4, 2020	
Ruminants Effects of on-farm supplemental feeding of probiotic <i>Bacillus subtilis</i> on milk production in lactating dairy cows under tropical conditions Choonkham W. (Chiang Mai, Thailand), J.T. Schonewille (Utrecht, Netherlands), J.K. Bernard ((Tifton, United States), W. Suriyasathaporn (Utrecht, Netherlands)	199	Ruminants Effects of copper sulphate and rumen-protected copper sulphate addition on growth performance, nutrient digestibility, rumen fermentation and hepatic gene expression in dairy bulls La S., C. Wang, Q. Liu, G. Guo, W. Huo, J. Zhang and C. Pei (Taigu, P.R. China)	287
Use of yeast-fermented cassava roots as a sole source of protein in beef cows Promkot C., P. Pornanek (Nakhon Ratchasima, Thailand) ..	206	Rapid responses in bovine milk fatty acid composition and phenol content to various tanniferous forages Birkinshaw A. (Zurich, Switzerland), A. Schwarm (Ås, Norway), S. Marquardt (Nairobi, Kenya), M. Kreuzer (Zurich, Switzerland) and M. Terranova (Lindau, Switzerland)	297
Acidified milk for feeding dairy calves in tropical raising systems Coelho M.G., F.L.M. Silva, M.D. Silva, A.P. Silva, A.M. Cezar, G.S. Slanzon, E. Miqueo, A.F. Toledo and C.M.M. Bittar (Sao Paulo, Brazil)	215	Impact of DDT residues in feed on thyroid gland and liver secretory activity of Aberdeen-Angus cattle depending on cattle age and sex Li A., M. Derkho (Troitsk, Russia), R. Tuyakova (Kostanay, Kazakhstan), P. Iwaniuk and B. Lozowicka (Białystok) ...	306

Ruminal degradability of *Virginia fanpetals (Sida hermaphrodita)* herbage and silage depending on the harvest time

Michalski J.P. (Jablonna, Poland), M. Borsuk, Z. Nogalski, M. Baranowska, A. Krawczyńska and C. Purwin (Olsztyn, Poland) 316

Forestomach fermentation and microbial communities of alpacas (*Lama pacos*) and sheep (*Ovis aries*) fed corn stalk-based diet

Xia C.Q., C.X. Pei, W.J. Huo, Q. Liu, C.X. Zhang and Y.S. Ren (Taigu, P.R. China) 323

Effects of maternal vitamin D₃ on quality and water distribution in pork of offspring pigs during frozen storage

Guo L. (Sumy, Ukraine), Z. Miao (Xinxiang, China), S. Melnychuk (Sumy, Ukraine) and H. Ma (Xinxiang, China) 330

Other topics

Eggshell as a calcium source replacing limestone meal in mink (*Neovison vison*) diets

Ahlstrøm Ø. and A. Skrede (Ås, Norway) 338

Short communication

Effect of dietary supplementation of *Saccharomyces cerevisiae* and a postbiotic from *Lactobacillus acidophilus* on the concentration of organic acids, biogenic amines, and microbiota in the small intestine and colon of rosé veal calves

Thorsteinsson M., N. Canibe and M. Vestergaard (Tjele, Denmark) 345

Milk yield and composition of Katahdin and Pelibuey ewes in tropical conditions

Chay-Canul A.J. (Teapa, México), G.M. Parra-Bracamonte (Reynosa, Mexico), N. Lopez-Villalobos (Palmerston North, New Zealand), J.B. Herrera-Ojeda (Reynosa, Mexico), J.G. Magaña-Monforte, I.N. Peniche-González (Mérida, Mexico), J. Herrera-Camacho (Tarimbaro, Mexico) and R. García-Herrera (Teapa, México) 352

Effect of thymosin β on maturation of pig oocytes and quality of in vitro produced embryos

Poniedziałek-Kempny K., B. Gajda, I. Rajska, L. Gajda and Z. Smorąg (Balice/Kraków, Poland) 351

List of reviewers 362

Authors index 363

Contents of Journal of Animal and Feed Sciences, Volume 29 365