

DAFTAR PUSTAKA

- Abdel-Fattah, S.A., M.H. El-Sanhoury, N.M. El-Mednay, and F. Abdel-Azeem. 2008. Thyroid activity, some blood constituents, organs morphology and performance of broiler chicks fed supplemental organic acids. *Journal of Poultry Science*. 7: 215-222.
- Abdel-Hafeez, H.M., E.S.E. Saleh, S.S. Tawfeek, I.M.I. Youssef, A.S.A. Abdel-Daim. 2016. Effects of probiotic, prebiotic, and synbiotic with and without feed restriction on performance, hematological indices and carcass characteristics of broiler chickens. *Asian-Australasian Journal of Animal Sciences*. 30: 672-682.
- Abdulla, N.R., A.N.M. Zamri, A.B. Sabow, K.Y. Kareem, S. Nurhazirah, F.H. Ling, A.Q. Sazili, and T.C. Loh. 2017. Physico-chemical properties of breast muscle in broiler chickens fed probiotics, antibiotics or antibiotic-probiotic mix. *Journal of Applied Animal Research*. 45: 64-70.
- Abudabos, A.M., G.M. Suliman, A.H. Alyemni, and A.N. Al-Owaimer. 2014. Effect of different organic acids on breast quality characteristics of broilers challenged with *Salmonella enterica*. *Journal of Food, Agriculture, and Environment*. 12: 193-197.
- Abudabos, A.M., A.H. Alyemni, Y.M. Dafallac, and R.U. Khan. 2017. Effect of organic acid blend and *Bacillus subtilis* alone or in combination on growth traits, blood biochemical and antioxidant status in broilers exposed to *Salmonella typhimurium* challenge during the starter phase. *Journal of Applied Animal Research*. 45: 538-542.
- Adams, C.A. 2000. The role of nutraceuticals in health and total nutrition. *Proceedings Australian Poultry Science Symposium*. 12: 17-24.
- Al-Owaimer, A.N., G.M. Suliman, A.H. Alyemni, and A.M. Abudabos. 2014. Effect different probiotics on breast quality characteristics of broilers under *Salmonella* challenge. *Italian Journal of Animal Science*. 13: 450-454.
- Al-Sultan, S.I., S.M. Abdel-Raheem, W.R. El-Ghareeb, and M.H.A. Mohamed. 2016. Comparative effects of using prebiotic, probiotic, synbiotic and acidifier on growth performance, intestinal microbiology and histomorphology of broiler chicks. *Japanese Journal of Veterinary Research*. 64: 187-195.
- Alfaig, E., M. Angelovica, M. Kral, and O. Bucko. 2014. Effect of probiotics and thyme essential oil on the essential amino acid content of the broiler chicken meat. *Acta Scientiarum Polonorum Technologia Alimentaria*. 13: 425-432.

- Alkhaf, A., M. Alhaj, and I. Al-Homidan. 2010. Influence of probiotic supplementation on blood parameters and growth performance in broiler chickens. *Journal of Biological Science*. 17: 219-225.
- Allen, C.D., D.L. Fletcher, J.K. Northcutt, and S.M. Russel. 1998. The relationship of broiler breast color to meat quality and shelf-life. *Journal of Poultry Science*. 77: 361-366.
- Altekruse, S.F., N. Bauer, A. Chanlongbutra, R. DeSagun, A. Naugle, W/ Schlosser, R. Umholtz, and P. White. 2006. *Salmonella enteritidis* in broiler chickens, United States, 2000-2005. *Emerging Infectious Diseases*. 12: 1848-1852.
- Angulo, F.J., J.A. Nunnery, and H.D. Bair. 2004. Antimicrobial resistance in zoonotic enteric pathogens. *Revue Scientifique Et Technique International Office of Epizootics*. 23: 485-496.
- Apata, D.F. 2009. Antibiotic resistance in poultry. *Journal of Poultry Science*. 8: 404-408.
- Amertaningtyas, D. 2012. Kualitas daging sapi segar di pasar tradisional kecamatan Poncokusumo kabupaten Malang. *Jurnal Ilmu dan Teknologi Hasil Ternak*. 7: 42-47.
- Anggitasari, S., O. Sjojfan, dan I.H. Djunaidi. 2016. Pengaruh beberapa jenis pakan komersial terhadap kinerja produksi kuantitatif dan kualitatif ayam pedaging. *Buletin Peternakan*. 40: 187-196.
- Awad, W.A., K. Ghareeb, S.A. Raheem, and J. Bohm. 2009. Effects of dietary inclusion of probiotic and synbiotic on growth performance, organ weights, and intestinal histomorphology of broiler chickens. *Journal of Poultry Science*. 88: 49-55.
- Balasubramanian, B., T. Li, and I.H. Kim. 2016. Effects of supplementing growing-finishing pig diets with *Bacillus spp.* probiotic on growth performance and meat-carcass grade quality traits. *Revista Brasileira de Zootechia*. 45: 93-100.
- Barbanti, D. and M. Pasquini. 2005. Influence of cooking conditions on cooking loss and tenderness of raw and marinated chicken breast meat. *Swiss Society of Food Science and Technology*. 38: 895-901.
- Baurhoo, B., A. Letellier, X. Zhao, and C.A. Ruiz-Feria. 2007. Cecal populations of *Lactobacilli* and *Bifidobacteria* and *Escherichia coli* populations after in vivo *Escherichia coli* challenge in birds fed diets with purified lignin or *Mannanoligosaccharides*. *Journal of Poultry Science*. 86: 2509-2516.
- Bermudez-Brito, M., J. Plaza-Diaz, S. Muñoz-Quezada, C. Gómez-Llorente, and A. Gil. 2012. Probiotic Mechanisms of Action. *Animals of Nutrition and Metabolism*. 61: 160-174.

- Biggs, P. and C.M. Parsons. 2008. The effects of Grobiotic-P on growth performance, nutrient digestibilities, and cecal microbial populations in young chicks. *Journal of Poultry Science*. 87: 1796-1803.
- Bogosavljevic-Boskovic, S., S. Mitrovic, R. Djokovic, V. Doskovic, and V. Djermanovic. 2010. Chemical composition of chicken meat produced in extensive indoor and free range rearing systems. *African Journal of Biotechnology*. 9: 9069-9075.
- Bouton, P.E., P.V. Harris, and W.R. Shorthose. 1971. Effect of ultimate pH upon the water holding capacity and tenderness of mutton. *Journal of Food Science*. 36: 435-439.
- Botha, S.St.C., L.C. Hoffman, and T.J. Britz. 2006. Effect of hot-deboning on the physical quality characteristics of ostrich meat. *South African Journal of Animal Science*. 36: 197-208.
- Bozkurt, M., K. Kucukyilmaz, A. U. Catli, M. Cinar, M. Cabuk, and A. Alcicek. 2012. Effects of administering an essential oil mixture and an organic acid blend separately and combined to diets on broiler performance. *Archiv fur Geflugelkunde*. 76: 81-87.
- Brooks, J.C. and J.W. Savell. 2003. Perimysium thickness as an indicator of beef tenderness. *Meat Science*. 67: 329-334.
- Butaye, P., L.A. Devriese, and F. Haesebrouck. 2003. Antimicrobial growth promoters used in animal feed: Effects of less well known antibiotics on gram-positive bacteria. *Clinical Microbiology Reviews*. 16: 175-188.
- Canibe, N., S.H. Steien, M. Overland, and B.B. Jensen. 2007. Effect of K-diformate in starter diets on acidity, microbiota, and the amount of organic acids in the digestive tract of piglets, and on gastric alterations. *Journal of Animal Science*. 79: 2123-2133.
- Carillo, C.L., R.J. Atterbury, A. El-Shibiny, P.L. Connerton, E. Dillon, A. Scott, and I.F. Cornneton. 2005. Bacteriophage therapy to reduce *Campylobacter jejuni* colonization of broiler chickens. *Applied and Environmental Microbiology*. 71: 6554-6563.
- Casewell, M., C. Friis, E. Marco, P. McMullin, and I. Phillips. 2003. The European ban on growth-promoting antibiotics and emerging consequences for human and animal health. *Journal of Antimicrobial Chemotherapy*. 52: 159-161.
- Castanon, J.I.R. 2007. History of the use of antibiotic as growth promoters in European poultry feeds. *Journal of Poultry Science*. 86: 2466-2471.

- Chen, C.Y., S.W. Chen, and H.T. Wang. 2017. Effect of supplementation of yeast with bacteriocin and *Lactobacillus* culture on growth performance, cecal fermentation, microbiota composition, and blood characteristics in broiler chickens. *Asian-Australasian Journal of Animal Sciences*. 30: 211-220.
- Cheng, C., X. Zhang, M. Xia, Z. Liu, H. Wei, Z. Deng, C. Wang, S. Jiang, and J. Peng. 2017. Effect of oregano essential oil and benzoic acid supplementation to a low-protein diet on meat quality, fatty acid composition, and lipid stability of longissimus thoracis muscle in pigs. *Bio Medical Central*. 16: 1-9.
- Choct, M. 2009. Managing gut health through nutrition. *British Poultry Science*. 50: 9-15.
- Chotikatum, S., I. Kramomthong, and K. Angkanaporn. 2005. Effects of medium chain fatty acids, organic acids and fructo-oligosaccharide on cecal *Salmonella enteritidis* colonization and intestinal parameters of broilers. *Thai Journal of Veterinary Medicine*. 39: 245-258.
- Chowdhury, R., K.M.S. Islam, M.J. Khan, M.R. Karim, M.N. Haque, M. Khatun, and G.M. Pesti. 2009. Effect of citric acid, avilamycin, and their combination on the performance, tibia ash, and immune status of broilers. *Journal of Poultry Science*. 88: 1616-1622.
- Collier, C.T., J.D. Van der Klis, B. Deplancke, D.B. Anderson, and H.R. Gaskins. 2003. Effects of *Tylosin* on bacterial mucolysis, *Clostridium perfringens* colonization, and intestinal barrier function in a chick model of *Necrotic enteritis*. *Antimicrobial Agent and Chemotherapy*. 47: 3311-3317.
- Collins, M.D. and G.R. Gibson. 1999. Probiotics, prebiotics, and synbiotics: approaches for modulating the microbial ecology of the gut. *The American Journal of Clinical Nutrition*. 69: 1052-1057.
- Costa, A.I.A., E. Teldeschi, M.A. Gerritzen, H.G.M. Reimert, J.P.H. Linszen, and J.W. Cone. 2006. Influence of flock treatment with the antibiotic *Tylosin* on poultry meat quality: results of a preliminary experiment. *Wageningen Journal of Life Sciences*. 54: 269-278.
- Daud, M. 2005. Performan ayam pedaging yang diberi probiotik dan prebiotik dalam ransum. *Jurnal Ilmu Ternak*. 5: 75-79.
- Davey, P.G., M. Wilcox, W. Irving, and G. Thwaites. 2015. *Antimicrobial Chemotherapy*. Oxford University Press. Oxford.
- Delzenne, N.M. 2003. Oligosaccharides: state of the art. *Proceedings of The Nutrition Society*. 62: 177-182.

- Denli, M., F. Okan, and K. Celik. 2003. Effect of dietary probiotic, organic acid, antibiotic supplementation to diets on broiler performance and carcass yield. *Pakistan Journal of Nutrition*. 2: 89-91.
- Dewi, S.H.C. 2012. Korelasi antara kadar glikogen, asam laktat, pH daging dan susut masak daging domba setelah pengangkutan. *Jurnal Agri Sains*. 4: 59-70.
- Dhama, K., R. Tiwari, R.U. Khan, A. Chakraborty, M. Gopi, K. Karthik, M. Saminathan, P.A. Desingu, and L.T. Sunkara. 2014. Growth promoters and novel feed additives improving poultry production and health, bioactive principles and beneficial applications. *International Journal of Pharmacology*. 10: 129-159.
- Dibner, J.J. and P. Buttin. 2002. Use of organic acids as a model to study the impact of gut microflora on nutrition and metabolism. *Journal of Applied Poultry Research*. 11: 453-463.
- Dibner, J.J. and J.D. Richards. 2005. Antibiotic growth promoters in agriculture: history and mode of action. *Journal of Poultry Science*. 84: 634-643.
- Dikeman, M. and C. Devine. 2014. *Encyclopedia of Meat Sciences*. Academic Press Inc. San Diego.
- Dono, N.D. 2010. Kualitas daging ayam boiler yang mendapatkan tepung bawang putih dan tepung temulawak dalam ransum. *Jurnal Ilmu Ternak dan Veteriner*. 15: 81-87.
- Dono, N.D. 2012. Nutritional strategies to improve enteric health and growth performance of poultry in the post antibiotic era. Ph.D. Thesis. University of Glasgow, Glasgow.
- Douglas, M.W., M. Persia, and C.M. Parsons. 2003. Impact of galactose, lactose, and Grobiotic-B70 on growth performance and energy utilization when fed to broiler chicks. *Journal of Poultry Science*. 82: 1596-1601.
- Duval, E.L.B., M. Debut, C.M. Berri, N. Sellier, V.S. Lhoutellier, Y. Jego, and C. Beaumont. 2008. Chicken meat quality: Genetic variability and relationship with growth and muscle characteristics. *Bio Medical Central Genetics*. 9: 53-58.
- Ebrahimi, H., S. Rahimi, P. Khaki, J.L. Grimes, and S. Kathariou. 2016. The effects of probiotics, organic acid, and a medicinal plant on the immune system and gastrointestinal microflora in broilers challenged with *Campylobacter jejuni*. *Turkish Journal of Veterinary and Animal Science*. 40: 329-336.

- Ebrahimnezhad, Y., V. Azarakhsh, and M. Salmanzadeh. 2014. The effects of ginger root (*Zingiber officiale*) processed to different levels on growth performance, carcass characteristics and blood biochemistry parameters in broiler chickens. *Bulletin of Environment, Pharmacology, and Life Sciences*. 3: 203-208.
- Edens, F.W. 2003. An alternative for antibiotic use in poultry: probiotics. *Brazilian Journal of Poultry Science*. 5: 75-97.
- Elkhair, R.A., H.A. Ahmed, and S. Selim. 2014. Effects of black pepper (*Piper nigrum*), turmeric powder (*Curcuma longa*) and coriander seeds (*Coriandrum sativum*) and their combinations as feed additives on growth performance, carcass traits, some blood parameters and humoral immune response of broiler chickens. *Journal of Animal Science*. 27: 847-854.
- Erdelyi, M., Z. Ancsin, A. Bocsai, G. Forgo, T. Szolnoky, K. Balogh, and M. Mezes. 2014. Effect of certain phytobiotics on meat quality of broiler chicken when DDGS is included in the diet. *European Poultry Conference*. 14: 1-4.
- Esteve-Garcia, E., J. Brufau, A. Perez-Vendrell, A. Miquel, and K. Duven. 1997. Bioefficacy of enzyme preparations containing β -glucanase and xylanase activities in broiler diets based on barley or wheat, in combination with flavomycin. *Journal of Poultry Science*. 76: 1728-1737.
- Fascina, V.B., G.A.M. Pasquali, F.B. Carvalho, E.M. Muro, F. Vercese, M.M. Aoyagi, A.C. Pezzato, E. Gonzales, and J.R. Sartori. 2017. Effects of phytogenic additives and organic acids, alone or in combination, on the performance, intestinal quality and immune responses of broiler chickens. *Brazilian Journal of Poultry Science*. 19: 497-508.
- Fathi, R., M.S. Samadi, A.A.A. Qotbi, A. Seidavi, and A.L. Martínez Marín. 2016. Effects of feed supplementation with increasing levels of organic acids on growth performance, carcass traits, gut microbiota and pH, plasma metabolites, and immune response of broilers. *Animal Science Papers and Reports*. 34: 195-206.
- Fooks, L.J. and G.R. Gibson. 2002. In vitro investigations of the effect of probiotics and prebiotics on selected human intestinal pathogens. *Federation of European Microbiological Societies*. 39: 67-75.
- France, J., and E. Kebreab. 2008. *Mathematical Modelling in Animal Nutrition*. Biddles Ltd, King's Lynn. Cambridge.
- Fuller, R. 1989. Probiotics in man and animals. *Journal of Applied Bacteriology*. 66: 365-378.

- Gaucher, M.L., G.G. Perron, J. Arsenault, A. Letellier, M. Boulianne, and S. Quessy. 2017. Recurring necrotic enteritis outbreaks in commercial broiler chicken flocks strongly influence toxin gene carriage and species richness in the resident *Clostridium perfringens* population. *Frontiers in Microbiology*. 8: 1-11.
- Gibson, G.R. and M.B. Roberfroid. 1995. Dietary modulation of the human colonic microbiota: introducing the concept of prebiotics. *The Journal of Nutrition*. 125: 1401-1412.
- Giguere, S., J.F. Prescott, and P.M. Dowling. 2013. *Antimicrobial Therapy in Veterinary Medicine*. John Wiley and Sons, Inc. Oxford.
- Glamoclija, N., K. Sevic, B. Baltic, M. Boskovic, J. Janjic, V. Djordjevic, and R. Markovic. 2016. Effects of phytobiotics on Cobb broiler production results, meatiness and chemical composition. *Journal Meat Technology*. 57: 89-94.
- Grashon, M.A. 2010. Use of phytobiotics in broiler nutrition-an alternative to infeed antibiotics?. *Journal of Animal and Feed Science*. 19: 338-347.
- Gunal, M., G. Yayli, O. Kaya, N. Karahan, and O. Sulak. 2006. The effect of antibiotic growth promoter, probiotic, or organic acid supplementation on performance, intestinal microflora and tissue of broilers. *Journal of Poultry Science*. 5: 149-155.
- Gustafson, R.H. and R.E. Bowen. 1997. Antibiotic use in animal agriculture. *Journal of Applied Microbiology*. 83: 531-541.
- Hajati, H. And M. Rezaei. 2010. The application of prebiotics in poultry production. *Journal of Poultry Science*. 9: 298-304.
- Hartono, E., N. Iriyanti, dan R.S.S. Santosa. 2013. Penggunaan pakan fungsional terhadap daya ikat air, susut masak, dan keempukan daging ayam broiler. *Jurnal Ilmiah Peternakan*. 1: 10-19.
- Hascik, P., L. Trembecka, M. Bobko, J. Cubon, O. Bucko, and J. Tkacova. 2015. Evaluation of meat quality after application of different feed additives in diet of broiler chickens. *Scientific Journal for Food Industry*. 9: 174-182.
- Hassan, H.M.A., M.A. Mohamed, A.W Youssef, and E.R. Hassan. 2010. Effect of using organic acid to substitute antibiotic growth promoters on performance and intestinal microflora of broilers. *Journal of Animal Science*. 23: 1348-1353.
- Hashemi, S.R. dan H. Davoodi. 2010. Phytogetic as new class of feed additive in poultry industry. *Journal of Animal Veterinary Advances*. 9: 2295-2304.

- Herawati and Marjuki. 2011. The effect of feeding red ginger (*Zingiber officinale rosc*) as phytobiotic on broiler slaughter weight and meat quality. *Journal of Poultry Science*. 10: 983-985.
- Hertog-Meischke, M.J.A., R.J.L.M. Van-Laack., and F.J.M. Smulders. 1997. The water-holding capacity of fresh meat. *The Veterinary Quarterly*. 19: 175-181.
- Hidayat, C. 2015. Penurunan deposit lemak abdominal pada ayam pedaging melalui manajemen pakan. *WARTAZOA*. 25: 125-134.
- Higgins, S.E., J.P. Higgins, A.D. Wolfenden, S.N. Henderson, A. Torres-Rodriguez, G. Tellez, and B. Hargis. 2008. Evaluation of a *Lactobacillus*-based probiotic culture for the reduction of *Salmonella Enteritidis* in neonatal broiler chicks. *Journal of Poultry Science*. 87: 27-31.
- Honikel, K.O. dan R. Hamm. 1994. Quality Attributes and their Measurement in Meat, Poultry and Fish Products: Measurement of water holding capacity and juiciness. Blackie Academic and Professional, Glasgow.
- Huang, R.L., Z.Y. Deng, C.B. Yang, Y.L. Yin, M.Y. Xie, G.Y. Wu, T.J. Li, L.L. Li, Z.R. Tang, P. Kang, Z.P. Hou, D. Deng, H. Xiang, X.F. Kong, and Y.M. Guo. 2007. Dietary oligochitosan supplementation enhances immune status of broiler. *Journal of The Science of Food and Agriculture*. 87: 153-159.
- Huff, W.E., G.R. Huff, N.C. Rath, J.M. Balog, and A.M. Donoghue. 2002. Prevention of *Escherichia coli* infection in broiler chickens with a bacteriophage aerosol spray. *Journal of Poultry Science*. 81: 1486-1491.
- Immerseel, F.V., J.D. Buck, F. Pasmans, G. Huyghebaert, F. Haesebrouck, and R. Ducatelle. 2004. *Clostridium perfringens* in poultry: an emerging threat for animal and public health. *Avian Pathology*. 33: 537-549.
- Inbaraj, B.S. and B.H. Chen. 2016. Nanomaterial-based sensors for detection of foodborne bacterial pathogens and toxins as well as pork adulteration in meat products. *Journal of Food and Drug Analysis*. 24: 15-28.
- Isabel, B. and Y. Santos. 2009. Effects of dietary organic acids and essential oils on growth performance and carcass characteristics of broiler chickens. *Journal of Poultry Science*. 18: 472-476.
- Jacobs, C.M. 2011. The effects of potential dietary prebiotics and grain particle size on the growth performance and intestinal microflora of young poultry. Dissertation. University of Illinois at Urbana-Champaign, Champaign.

- Jaiswal, S.K., A.K. Chaturverdani, M. Raza, L. Diliwar, K. Dhruw, and V. Sahu. 2017. Review: Natural growth promoters, alternative to antibiotic growth promoters on poultry. *International Journal of Science, Environment*. 6: 254-259.
- Jensen, B.B. 1998. The impact of feed additives on the microbial ecology of the gut in young pigs. *Journal of Animal and Feed Sciences*. 7: 45-64.
- Juarez, M., S. Failla, A. Ficco, F. Pena, C. Aviles, and O. Polvillo. 2010. Buffalo meat composition as affected by different cooking methods. *Food Bioproducts Process*. 88: 145-148.
- Jukna, C., V. Jukna, and A. Simkus. 2005. The effect of probiotics and phytobiotics on meat properties and quality in pigs. *Veterinarija Ir Zootechnika*. 29: 80-84.
- Kabir, S.M.L., M.M. Rahman, M.B. Rahman, M.Z. Hosain, M.S.I. Akand, and S.K. Das. 2005. Viability of probiotics in balancing intestinal flora and effecting histological changes of crop and caecal tissue of broilers. *Biotechnology*. 4: 325-330.
- Kannan, M., R. Karunakaran, V. Balakhrisnan, and T.G. Prabhakar. 2005. Influence of prebiotics supplementation on lipid profile of broilers. *Journal of Poultry Science*. 4: 994-997.
- Karaoglu, M. and H. Durdag. 2005. The influence of dietary probiotic (*Saccharomyces cerevisiae*) supplementation and different slaughter age on the performance, slaughter and carcass properties of broilers. *Journal of Poultry Science*. 4: 309-316.
- Kauffman, K., S.T. Joo, C. Schultz, R. Warner, and C. Faustman. 1994. Measuring water-holding capacity in post-rigor muscle. *Reciprocal Meat Conference Proceedings*. 47: 70-72.
- Kementrian Pertanian. 2015. Outlook Komoditas Pertanian Subsektor Peternakan: Daging Ayam. Pusat Data dan Sistem Informasi Pertanian Sekretariat Jenderal Kementrian Pertanian. Jakarta.
- Kemmet, K., N.J. Williams, G. Chaloner, S. Humphrey, P. Wigley, and T. Humphrey. 2014. The contribution of systemic *Escherichia coli* infection to the early mortalities of commercial broiler chickens. *Avian Pathology*. 43: 37-42.
- Khambualai, O., K. Yamauchi, J. Ruttanavut, T. Incharoen, and J. Kashimura. 2010. Effect of sugar cane extract, commercial probiotic and their mixture on growth performance and intestinal histology in broiler chickens. *American Journal of Animal and Veterinary Sciences*. 5: 132-138.
- Khattak, F.M., T.N. Pasha, Z. Hayat, and A. Mahmud. 2006. Enzymes in poultry nutrition. *Journal Animal and Plant Science*. 16: 1-7.

- Kim, G.B., Y.M. Seo, C.H. Kim, and I.K. Paik. 2011. Effect of dietary prebiotic supplementation on the performance, intestinal microflora, and immune response of broilers. *Journal of Poultry Science*. 90: 75-82.
- Kim, D.W., J.H. Kim, H.K. Kang, N. Akter, M.J. Kim, J.C. Na, J. Hwangbo, S.W. You, H.C. Choi, O.S. Suh, and H.M. Salim. 2014. Dietary supplementation of phenyllactic acid on growth performance, immune response, cecal microbial population, and meat quality attributes of broiler chickens. *Journal of Applied Poultry Research*. 23: 661-670.
- Kim, H.W., T. Cramer, O.O.E. Ogbeifun, J.K. Seo, F. Yan, H.W. Cheng, and Y.H.B. Kim. 2017. Breast meat quality and protein functionality of broilers with different probiotic levels and cyclic heat challenge exposure. *Meat and Muscle Biology*. 1: 81-89.
- Kizerwetter-Świda, M. and M. Binek. 2005. Selection of potentially probiotic *Lactobacillus* strains towards their inhibitory activity against poultry enteropathogenic bacteria. *Polish Journal of Microbiology*. 54: 287-294.
- Klinhom, P., J. Klinhom, and S. Methawiwat. 2017. Effect of different cooking method on cooking loss and lipid oxidation in buffalo meat. *Applied Mechanics and Materials*. 855: 70-74.
- Knarreborg, A., M.A. Simon, R.M. Engberg, B.B. Jensen, and G.W. Tannock. 2002. Effects of dietary fat source and subtherapeutic levels of antibiotic on the bacterial community in the ileum of broiler chickens at various ages. *Applied and Environmental Microbiology*. 68: 5918-5924.
- Kolar, M., R. Pantucek, J. Bardon, I. Vagnerova, H. Typovska, I. Valka, and J. Doskar. 2002. Occurrence of antibiotic-resistant bacterial strains isolated in poultry. *Veterinary Medicine*. 47: 52-59.
- Kompiang, I. P. 2009. Pemanfaatan mikroorganisme sebagai probiotik untuk meningkatkan produksi ternak unggas di Indonesia. *Pengembangan Inovasi Pertanian*. 2: 177-191.
- Kopecky, J., C. Hrncar, and J. Weis. 2012. Effect of organic acids supplement on performance of broiler chickens. *Journal of Animal Sciences and Biotechnology*. 45: 51-54.
- Kusumasari, Y.F.Y., V.D. Yuniyanto, and R. Suprijatna. Pemberian fitobiotik yang berasal dari mahkota dewa (*Phaleria macrocarpa*) terhadap kadar hemoglobin dan hematokrit pada ayam broiler. *Jurnal Aplikasi Teknologi Pangan*. 1: 129-132.
- Lapase, O.A., J. Gumilar, dan W. Tanwiriah. 2016. Kualitas fisik (daya ikat air, susut masak, dan keempukan) daging paha ayam sentul akibat lama perebusan. *Jurnal Universitas Padjajaran*. 5: 1-7.

- Lee, J.I., Y.D. Kim, D.Y. Kim, Y.I. Choi, J.N. Ahn, H.S. Chae, and J.H. Choi. 2002. Effects of *Saccharomyces cerevisiae* on growth performance and meat quality of broiler chickens. Proceedings Korean Journal of Animal Science Technology. 34: 576-582.
- Lee, K.W., H. Everts, and A.C. Beynen. Essential Oils in Broiler Nutrition. Journal of Poultry Science. 3: 738-752.
- Line, J.E., J.S. Bailey, N.A. Cox, N.J. Stern, and T. Tompkins. 1998. Effect of Yeast-Supplemented Feed on Salmonella and Campylobacter Populations in Broilers. Journal of Poultry Science. 77: 405-410.
- Lippens, M., G. Room, G. De Groote, and E. Decuypere. Early and temporary quantitative food restriction of broiler chickens. 1. Effects on performance characteristics, mortality and meat quality. British Poultry Science. 41: 343-354.
- Liu, X., H. Yan, L. Lv, Q. Xu, C. Yin, K. Zhang, P. Wang, and J. Hu. 2012. Growth performance and meat quality of broiler chickens supplemented with *Bacillus licheniformis* in drinking water. Journal of Animal Science. 25: 682-689.
- Lopez, K.P., M.W. Schilling, and A. Corzo. 2011. Broiler genetic strain and sex effects on meat characteristics. Journal of Poultry Science. 90: 1105-1111.
- Losa, R. 2001. The use of essential oils in animal nutrition. Joaquim Brufau De Barbera. 39-44.
- Magdalena, S., G.H. Natadiputri, F. Nailufar, dan T. Purwadaria. 2013. Pemanfaatan produk alami sebagai pakan fungsional. WARTAZOA. 23: 31-40.
- Mario, W.L.M.S., E. Widodo, dan O. Sjojfan. 2014. Pengaruh penambahan kombinasi tepung jahe merah, kunyit dan meniran dalam pakan terhadap pencernaan zat makanan dan energi metabolis ayam pedaging. Jurnal Ilmu-Ilmu Peternakan. 24: 1-8.
- Marlina, N., E. Zubaidah, dan A. Sutrisno. 2015. Pengaruh pemberian antibiotika saat budidaya terhadap keberadaan residu pada daging dan hati ayam pedaging dari peternakan rakyat. Jurnal Ilmu-Ilmu Peternakan. 25: 10-19.
- Matitaputty, P.R. dan Suryana. 2010. Karakteristik daging itik dan permasalahannya serta upaya pencegahan *off-flavor* akibat oksidasi lipida. WARTAZOA. 20: 130-138.

- Mencano, A., V.A. Kuttapan, X.H. Velasco, T. Urbano, F. Matte, S. Layton, G. Kallapura, J. Latorre, B.E. Morales, O. Prado, J.L. Vicente, J. Barton, R.L.A. Filho, M. Lovato, B.M. Hargis, and G. Tellez. 2014. Evaluation of a commercially available organic acid product on body weight loss, carcass yield, and meat quality during preslaughter feed withdrawal in broiler chickens: A poultry welfare and economic perspective. *Journal of Poultry Science*. 93: 448-455.
- Miles, R.D., G.D. Butcher, P.R. Henry, and R.C. Litell. 2006. Effect of antibiotic growth promoters on broiler performance, intestinal growth parameters, and quantitative morphology. *Journal of Poultry Science*. 85: 476-485.
- Mishra, C. and J. Lambert. 1996. Production of antimicrobial substances by probiotics. *Asia Pacific Journal of Clinical Nutrition*. 5: 20-24.
- Modi, C.M., S.K. Mody, H.B. Patel, G.B. Dudhatra, A. Kumar, and T.J. Sheikh. 2011. Growth promoting use of antimicrobial agents in animals. *Journal of Applied Pharmaceutical Science*. 1: 33-36.
- Mountzouris, K.C., P. Tsitrsikos, I. Palamidi , A. Arvaniti , M. Mohnl, G. Schatzmayr, and K. Fegeros. 2010. Effects of probiotic inclusion levels in broiler nutrition on growth performance, nutrient digestibility, plasma immunoglobulins, and cecal microflora composition. *Journal of Poultry Science*. 89: 58-67.
- Muhl, A. and F. Liebert. 2007. Growth, nutrient utilization and threonine requirement of growing chicken fed threonine limiting diets with commercial blends of phytogetic feed additives. *Journal of Poultry Science*. 44: 297-304.
- Murry, A.C., A. Hinton, and R.J. Buhr. 2006. Effect of botanical probiotic containing *Lactobacilli* in growth performance and populations of bacteria in ceca, cloaca, and carcass rinse of broiler chickens. *Journal of Poultry Science*. 5: 344-350.
- Musa, H.H., G.H. Chen, J.H. Cheng, E.S. Shuiep, and W.B. Bao. 2006. Breed and sex effect on meat quality of chicken. *Journal of Poultry Science*. 5: 566-568.
- Nisha, A.R. 2008. Antibiotic Residues: A global health hazzard. *Veterinary World*. 1: 275-377.
- Noer, S.M., dan M. Poeloengan. 2005. Pemakaian antibiotika pada ternak dan dampaknya pada kesehatan manusia. Lokakarya Nasional Keamanan Pangan Produk Peternakan. 56-64.
- Nurwantoro, V.P. Bintoro, A.M. Legowo, A. Purnomoadi, L.D. Ambara, A. Prakoso, dan S. Mulyani. Nilai pH, kadar air, dan total *Escherichia coli* daging sapi yang dimarinasi dalam jus bawang putih. *Jurnal Aplikasi Teknologi Pangan*. 1: 20-22.

- Nuwan, K.A.S., S.S. Wickramasuriya, D.D. Jayasena, R.M.H. Tharangani, Z. Song, Y.J. Yi, and J.M. Heo. 2016. Evaluation of growth performance, meat quality and sensory attributes of the broiler fed a diet supplemented with Curry Leaves (*Murraya koenigii*). *Korean Journal of Poultry Science*. 43: 169-176.
- O'Mahony, A., T. O'Sullivan, Y. Walsh. A. Vaughan, M. Maher, G.F. Fitzgerald, and D. Van Sinderen. Characteristic of antimicrobial producing lactic acid bacteria from malted barley. *Journal of The Institute Brewing*. 106: 403-410.
- O'Neill, L.M., K. Galvin, P.A. Morrissey, and D.J. Buckley. 1998. Comparison of effects of dietary olive oil, tallow and vitamin E on the quality of broiler meat and meat products. *British Poultry Science*. 39: 365-371.
- Owens, C.M., L.C. Cavitt, and J.F.C. Meullenet. 2004. Tenderness evaluation in poultry meat. *Proceedings of the 57th American Meat Science Association Reciprocal Meat Conference*. 115-121.
- Park, J.H. and I.H. Kim. 2014. Supplemental effect of probiotic *Bacillus subtilis* B2A on productivity, organ weight, intestinal *Salmonella* microflora, and breast meat quality of growing broiler chicks. *Journal of Poultry Science*. 93: 2054-2059.
- Patterson, J.A. and K.M. Burkholder. 2003. Application of prebiotics and probiotics in poultry production. *Journal of Poultry Science*. 82: 627-631.
- Paul, S.K., G. Halder, M.K. Mondal, and G. Samanta. 2007. Effect of organic acid salt on the performance and gut health of broiler chicken. *Journal of Poultry Science*. 44: 389-395.
- Pelicano, E.R.L., P.A. Souza, H.B.A. Souza, A. Oba, M.M. Boiago, N.M.B.L. Zeola, A.M. Scatolini, V.A. Bertanha, and T.M.A. Lima. 2005a. Carcass and cut yields and meat qualitative traits of broilers fed diets containing probiotics and prebiotics. *Brazilian Journal of Poultry Science*. 7: 169-175.
- Pelicano, E.R.L., P.A. Souza, H.B.A. Souza, D.F. Figueiredo, M.M. Boiago, S.R. Carvalho, and V.F. Bordon. 2005b. Intestinal mucosa development in broiler chickens fed natural growth promoters. *Brazilian Journal of Poultry Science*. 7: 221-229.
- Peng, Q., X.F. Zeng, J.L. Zhu, S. Wang, X.T. Liu, C.L. Hou, P.A. Thacker, and S.Y. Qiao. 2016. Effects of dietary *Lactobacillus plantarum* B1 on growth performance, intestinal microbiota, and short chain fatty acid profiles in broiler chickens. *Journal of Poultry Science*. 95: 893-900.

- Persia, M.E., E.L. Young, P.L. Utterback, and C.M. Parsons. 2006. Effects of dietary ingredients and *eimeria acervulina* infection on chick performance, apparent metabolizable energy, and amino acid digestibility. *Journal of Poultry Science*. 85: 48-55.
- Pistova, V., H. Arpasova, and C. Hrnecar. 2016. The effect of the humic acid and garlic (*Allium sativum* L.) on performance parameters and carcass characteristic of broiler chicken. *Journal of Central European Agriculture*. 17: 1168-1178.
- Poorghasemi, M., M. Chamani, S.Z. Mirhosseini, A.A. Sadeghi, and A. Seidavi. 2017. Effect of Lactofeed probiotic and different sources of fat on performance, carcass characteristics and lipid parameters in broiler chickens. *Journal of Livestock Science*. 8: 143-149.
- Pourabedin, M., Z. Xu, B. Baurhoo, E. Chevaux, and X. Zhao. 2014. Effects of mannan oligosaccharide and virginiamycin on the cecal microbial community and intestinal morphology of chickens raised under suboptimal conditions. *Canadian Journal of Microbiology*. 60: 255-266.
- Prasetyo, R.P., S.S. Santosa, dan N. Iriyanti. 2013. Penggunaan level pakan fungsional terhadap kadar lemak dan protein daging ayam broiler. *Jurnal Ilmiah Peternakan*. 1: 289-298.
- Przybylski, W., G. Monin, M.K. Podsiadla, and E. Krzeczio. 2006. Glycogen metabolism in muscle and its effect on meat quality in pigs. *Polish Journal of Food and Nutrition Sciences*. 15: 257-262.
- Puolanne, E.J., A.R. Poso, M.H. Ruusunen, K.V. Sepponen, and M.S. Kyla-Puhju. 2002. Lactic acid in muscle and its effect on meat quality. *Proceedings of the 55th Reciprocal Meat Conference*. 57-62.
- Purbowati, E., C.I. Sutrisno, E. Baliarti, S.P.S. Budhi, dan W. Lestariana. 2006. Karakteristik fisik otot *longissimus dorsi* dan *biceps femoris* domba lokal jantan yang dipelihara di pedesaan pada bobot potong yang berbeda. *Jurnal Protein*. 13: 147-153.
- Purnomo, H., D. Rosyidi, S.K. Pantoro. 2012. Kadar protein dan profil asam amino daging kambing peranakan etawah (PE) jantan dan peranakan boer (PB) kastasi. *Jurnal Ilmu dan Teknologi Hasil Ternak*. 7: 1-5.
- Purwanti, S. 2015. Efektivitas pemanfaatan fitobiotik ekstrak air kunyit dan bawang putih sebagai feed additive untuk meningkatkan kualitas gastrointestinal, kinerja produksi, dan kualitas daging broiler. Disertasi. Program Pascasarjana, Universitas Gadjah Mada, Yogyakarta.

- Qiao, M., D.L. Fletcher, D.P. Smith, and J.K. Northcutt. 2001. The effect of broiler breast meat color on pH, moisture, water-holding capacity, and emulsification capacity. *Journal of Poultry Science*. 80: 676-680.
- Rababah, T., N.S. Hettiarachchy, S. Eswaranandam, J.F. Meullenet, and B. Davis. 2005. Sensory evaluation of irradiated and nonirradiated poultry breast meat infused with plant extracts. *Journal of Food Science*. 70: 228-235.
- Rafeeq, M., N. Rashid, M.M. Tariq, R.B. Tareen, I. Shahzad, A. Ullah, B. Hilal, and Z. Mustafa. 2016. Culinary and medicinal herbs as feed additives, effect on performance, serum biochemical parameters and microbial population of broiler chickens. *Animal Biology and Animal Husbandry International Journal of the Bioflux Society*. 8: 21-28.
- Rosa, P.S., D.E.F. Filho, F. Dahlke, B.S. Vieira, M. Macari, and F.I. Furlan. 2007. Effect of energy intake on performance and carcass composition of broiler chickens from two different genetic groups. *Brazilian Journal of Poultry Science*. 9: 117-122.
- Salakova, A., E. Strakova, V. Valkova, H. Buchtova, and I. Steinhauserova. 2009. Quality indicators of chicken broiler raw and cooked meat depending of their sex. *Journal Acta Veterinaria Brno*. 78: 497-504.
- Saminathan, M., C.C. Sieo, R. Kalavathy, N. Abdullah, and Y.W. Ho. 2011. Effect of prebiotic *Oligosaccharides* on growth of *Lactobacillus* strains used as a probiotic for chickens. *African Journal of Microbiology Research*. 5: 57-64.
- Samli, H.E., G. Sirci, J.L. Bermejo, F. Koc, A.A. Okur, and N. Senkoylu. 2008. Effect of addition of a commercial organic acid mixture on feed microbiology according to duration and conditions of storage. *Acta Agriculturae Scand Section A*. 58: 186-190.
- Sapsuha, Y., M.A. Salim, and A.R. Ryadin. 2016. pengaruh pemberian daun pala (*Myristica fragrans Houtt*) dan daun cengkeh (*Syzygium aromaticum L*) terhadap karakteristik fisik daging kambing kacang (*Capra hircus*). *Seminar Nasional Peternakan*. 141-145.
- Sarangji, N.R., L.K. Babu, A. Kumar, C.R. Pradhan, P.K. Pati, and J.P. Mishra. 2016. Effect of dietary supplementation of prebiotic, probiotic, and synbiotic on growth performance and carcass characteristics of broiler chickens. *Journal of Veterinary World*. 9: 313-319.

- Sarica, S., A. Ciftci, E. Demir, K. Kilinc, and Y. Yildirim. 2005. Use of an antibiotic growth promoter and two herbal natural feed additives with and without exogenous enzymes in wheat based broiler diets. *South African Journal of Animal Science*. 35: 61-72.
- Schneider, B.L., R.A. Renema, M. Betti, V.L. Carney, and M. J. Zuidhof. 2012. Effect of holding temperature, shackling, sex, and age on broiler breast meat quality. *Journal of Poultry Science*. 91: 468-477.
- Sebastian, S., L.E. Phillip, V. Fellner, and E.S. Idziak. 1996. Comparative assessment of bacterial inoculation and propionic acid treatment on aerobic stability and microbial populations of ensiled high-moisture ear corn. *Journal of Animal Science*. 74: 447-456.
- Sevcikova, S., M. Skrivan, G. Dlouha, and M. Koucky. 2006. The effect of selenium source on the performance and meat quality of broiler chickens. *Czech Journal of Animal Science*. 10: 449-457.
- Simon, O. 2005. Micro-organisms as feed additives: probiotics. *Advances in Pork Production*. 16: 161-167.
- Singab, A.N. and O. Eldahshan. 2015. Medicinal importance of herbs & spices. *Medical Aromatic Plants*. 4: 1-2.
- Sinurat, A.P., T. Purwadaria, M.H. Togatorop, dan T. Pasaribu. Pemanfaatan bioaktif tanaman sebagai “*feed additive*” pada ternak unggas: pengaruh pemberian gel lidah buaya atau ekstraknya dalam ransum terhadap penampilan ayam pedaging. *Jurnal Ilmu Ternak Veteriner*. 8: 139-145.
- Situmorang, N.A., L.D. Mahfudz, dan U. Atmomarsono. 2013. Pengaruh pemberian tepung rumput laut (*Gracilaria verrucosa*) dalam ransum terhadap efisiensi penggunaan protein ayam broiler. *Animal Agricultural Journal*. 2: 49-56.
- Sogunle, O.M., L.T. Egbeyale, O.A. Alajo, O.O. Adeleye, A.O. Fafiolu, O.B. Onunkwor, J.A. Adegbite, and A.O. Fanimu. 2010. Comparison of meat composition and sensory values of two different strains of broiler chickens. *Archivos de Zootecnia*. 59: 311-314.
- Sohail, R., M. Saeed, S. Chao, R.N. Soomro, M.A. Arain, I.H.R. Abbasi, S. Raza, G. Lu, and Yousaf M. 2015. Comparative effect of different organic acids (benzoic, acetic, and formic) on growth performance, immune response, and carcass traits of broilers. *Journal of Animal Production Advances*. 5: 757-764.
- Soomro, A.H., T. Masud, and K. Anwaar. 2002. Role of lactic acid bacteria (lab) in food preservation and human health-A review. *Pakistan Journal of Nutrition*. 1: 20-24.

- Souza, X.R., P.B. Faria, and M.C. Bressan. 2011. Proximate composition and meat quality of broilers reared under different production systems. *Brazilian Journal of Poultry Science*. 13: 15-20.
- Steer, R., H. Carpenter, K. Tuohy, and G.R. Gibson. 2000. Perspectives on the role of the human gut microbiota and its modulation by pro- and prebiotics. *Nutrition Research Reviews*. 13: 229-254.
- Subha, G. 2013. Herbal and plant derived natural products as growth promoting nutritional supplements for poultry: a review. *Journal of Pharmaceutical and Scientific Innovation*. 2: 12-13.
- Suradi, K. 2006. Perubahan sifat fisik daging ayam broiler post mortem selama penyimpanan temperatur ruang. *Jurnal Ilmu Ternak*. 6: 23-27.
- Suskovic, J., B. Kos, J. Goreta, and S. Matosic. 2001. Role of lactic acid bacteria and bifidobacteria in synbiotic effect. *Journal of Food Technology and Biotechnology*. 39: 227-235.
- Thomke, S. and Elwinger, K. 1998. Growth promotants in feeding pigs and poultry: Growth and feed efficiency responses to antibiotic growth promotants. *Annales de Zootechnie*. 47: 85-97.
- Umam, M. K., H. S. Prayogi, V. M. A. Nurgiartiningsih. 2014. Penampilan produksi ayam pedaging yang dipelihara pada sistem lantai kandang panggung dan kandang bertingkat. *Jurnal Ilmu-Ilmu Peternakan*. 24: 79-87.
- Unruh, J.A. 1986. Effects of endogenous and exogenous growth-promoting compounds on carcass composition, meat quality, and meat nutritional value. *Journal of Animal Science*. 62: 1441-1448.
- Van-Laack, R.L.J.M. 2000. Determinants of ultimate pH of meat and poultry. *Proceedings 53rd Annual Reciprocal Conference*. 74-75.
- Waksman, S.A. 1961. The role of antibiotics in nature. *Perspectives in Biology and Medicine*. 4: 271-286.
- Wang, X., Y.Z. Farnell, E.D. Peebles, A.S. Kiess, K.G.S. Wamsley, and W. Zhai. 2016. Effects of prebiotics, probiotics, and their combination on growth performance, small intestine morphology, and resident *Lactobacillus* of male broilers. *Journal of Poultry Science*. 95: 1332-1340.
- Werdiningsih, S., U. Patriana, N. Ariyani, Ambarwati, E. Nugraha. 2013. Pengkajian residu *Tetracyclin* dalam paha, hati dan telur ayam pada beberapa provinsi di Indonesia. Balai Besar Pengujian Mutu dan Sertifikasi Obat Hewan. Bogor.

- Wierup, M. 2001. The Swedish experience of the 1986 year ban of antimicrobial growth promoters, with special reference to animal health, disease prevention, productivity, and usage of antimicrobials. *Microbial Drug Resistance*. 7: 183-190.
- Winarso, D. 2003. Perubahan karakteristik fisik akibat perbedaan umur, macam otot, waktu dan temperatur perebusan pada daging ayam kampung. *Journal of the Indonesian Tropical Animal Agriculture*. 18: 119-132.
- Xiong, R., L.C. Cavitt, J.F. Meullenet, and C.M. Owens. 2006. Comparison of allo-kramer, warner-bratzler and razor blade shears for predicting sensory tenderness of broiler breast meat. *Journal of Texture Studies*. 37: 179-199.
- Yadav, V.S., K.P. Mishra, D.P. Singh, S. Mehrotra, and V.K. Singh. 2005. Immunomodulatory effects of curcumin. *Immunopharmacology and Immunotoxicology*. 27: 485-497.
- Yanti, H., Hidayati, dan Elfawati. 2008. Kualitas daging sapi dengan kemasan plastik PE (Polyethylen) dan plastik PP (Polypropylen) di Pasar Arengka Kota Pekanbaru. *Jurnal Peternakan*. 5: 22-27.
- Yegani, M. And D.R. Kover. 2008. Factor affecting intestinal health in poultry. *Journal of Poultry Science*. 87: 2052-2063.
- Young, J.F., A.H. Karlsson, and P. Henckel. 2004. Water-holding capacity in chicken breast muscle is enhanced by pyruvate and reduced by creatine supplements. *Journal of Poultry Science*. 83: 400-405.
- Young, K.T., L.M. Davis, and V.J. Dirita. 2007. *Campylobacter jejuni*: molecular biology and pathogenesis. *Nature Reviews Microbiology*. 5: 665-679.
- Zakaria, H.A.H., M.A.R. Jalal, and M.A.A. Ishmais. 2010. The influence of supplemental multi-enzyme feed additive on the performance, carcass characteristics and meat quality traits of broiler chickens. *Journal of Poultry Science*. 9: 126-133.
- Zhang, G.F., Z.B. Yang, Y. Wang, W.R. Yang, S.Z. Jiang, and G.S. Gai. 2009. Effects of ginger root (*Zingiber officinale*) processed to different particle sizes on growth performance, antioxidant status, and serum metabolites of broiler chickens. *Journal of Poultry Science*. 88: 2159-2166.
- Zhang, A.W., B.D. Lee, S.K. Lee, K.W. Lee, G.H. An, K.B. Song, and C.H. Lee. 2005a. Effects of yeast (*Saccharomyces cerevisiae*) cell components on growth performance, meat quality, and ileal mucosa development of broiler chicks. *Journal of Poultry Science*. 84: 1015-1021.

- Zhang, K.Y., F. Yan, C.A. Keen, and P.W. Waldroup. 2005b. Evaluation of microencapsulated essential oils and organic acids in diets for broiler chickens. *Journal of Poultry Science*. 4: 612-619.
- Zhou, T.X., Y. J. Chen, J. S. Yoo, Y. Huang, J. H. Lee, H. D. Jang, S. O. Shin, H. J. Kim, J. H. Cho, and I. H. Kim. 2009. Effects of *chitooligosaccharide* supplementation on performance, blood characteristics, relative organ weight, and meat quality in broiler chickens. *Journal of Poultry Science*. 88: 593-600.
- Zhou, X., Y. Wang, Q. Gu, and W. Li. 2010. Effect of dietary probiotic, *Bacillus coagulans*, on growth performance, chemical composition, and meat quality of Guangxi Yellow chicken. *Journal of Poultry Science*. 89: 588-593.
- Zotte, D.A. 2002. Perception of rabbit meat quality and major factors influencing the rabbit carcass and meat quality. *International Journal of Livestock Production Science*. 75: 11-32.
- Zyla, K., J. Koreleski, S. Swiatkiewicz, A. Wikiera, M. Kujawski, J. Piironen, and D.R. Ledoux. 2000. Effects of phosphorolytic and cell wall-degrading enzymes on the performance of growing broilers fed wheat-based diets containing different calcium levels. *Journal of Poultry Science*. 79: 66-76.