

DAFTAR PUSTAKA

- Aalaei, M., A. Khatibjoo, M. Zaghari K. Taherpoor, M. Akbari-Gharaei, dan M. Soltani. 2018. *Comparison of single and multi-strain probiotics effects on broiler breeder performance, egg production, egg quality and hatchability*. British Poultry Science. 1-34
- Aalaei, M., A. Khatibjoo, M. Zaghari K. Taherpoor, M. Akbari-Gharaei, dan M. Soltani. 2019. *Effect of single- and multi-strain probiotics on broiler breeder performance, immunity and intestinal toll-like receptors expression*. Journal of Applied Animal Research. 47 (1): 236-242.
- Aazami, N., E. Kalantar, H. Poormazaheri, N.S.V. Pour, dan G.S. Jauzan. 2015. *Selection and characterization of potential probiotic Lactobacilli spp isolated from chicken feces may be used as a potent antibacterial agent*. Asian J. Dairy and Food Res. 35 (1): 50-57.
- Abdurrahman, Z.H. dan Y. Yanti. 2018. *Gambaran umum pengaruh probiotik dan prebiotik pada kualitas daging ayam*. Jurnal Ternak Tropika. 19(2): 95-104.
- Adetoye, A., E. Pinloche, B.A. Adeniyi, dan F.A. Ayeni. 2018. *Characterization and anti-salmonella activities of lactic acid bacteria isolated from cattle faeces*. BMC microbiology. 96.
- Adib, A., M.H. wahid, P. Sudarmono, I.S. Surono. 2013. *Lactobacillus plantarum pada feses individu dewasa sehat yang mengonsumsi Lactobacillus plantarum IS-10506 dari dadih*. J. Teknol. Dan Industri Pangan. 24(2): 154-160.
- Agarwal, R., A.K. Pant, dan O. Prakash. 2012. *Chemical composition and biological activities of essential oils of Cinnamomum tamala, Cinnamomum zeylenicum and Cinnamomum camphora growing in uttarakhand*. Dalam *Chemistry of Phytopotentials: Health, Energy and Environmental Perspectives*. Section A Health Perspectives. 18-92.
- Ahongshangbam, S.K. dan G.A.S. Devi. 2017. *Proximate analysis and mineral (elemental) composition of certain spices of manipur, india*. International Research Journal of Pharmacy 8(1):1-5.
- Ajanal, M., M.B. Gundkalle, dan S.U. Nayak. 2012. *Estimation of total alkaloid in Chitrakadivati by UV-spectrophotometer*. And. Sci. Life. 31(4): 198-201.

- Al-Daihan, S., M. Al-Faham, N. Al-Shawi, R. Almayman, A. Brnawi, S. Zargar, dan R.S. Bhat. 2013. *Antibacterial activity and phytochemical screening of some medicinal plants commonly used in Saudi Arabia against selected pathogenic microorganisms*. *Jornal of King Saud University-Science*. 25: 115-120.
- Al-Jaleel, R.A.A. 2012. *Use of turmeric (Curcuma longa) on the performance and some physiological traits on the broiler diets*. *The Iraqi Journal Veterinary Medicine*. 36 (1): 51– 57.
- Al-Kassie, G.A.M. 2010. *The effect of thyme and cinnamon on the microbial balance in gastro intestinal tract on broiler chicks*. *International Journal of Poultry Science*. 9(5): 495-498.
- Alhaag, H., X. Yuan, A. Mala, J. Bai, dan T. Shao. 2019. *Fermentation characteristics of Lactobacillus Plantarum and Pediococcus species isolated from sweet sorghum silage and their application as silage inoculants*. *Applied sciences*.
- Aling, C., R.A.V. Tuturoong, Y.I.R. Tulung, dan M.R. Waani. 2020. *Kecernaan serat kasar dan BETN (bahan ekstrak tanpa nitrogen) ransum komplit berbasis tebon jagung pada sapi Peranakan Ongole*. *Zootec*. 40(2): 428-438.
- Alipoor, Z., Z. Heshmatipour, dan S. Anvari. 2015. *Antagonistic effects of lactic acid bacteria isolated from the feces of breastfed infants against enterotoxigenic and enteropathogenic Escherichia coli*. *Journal of applied environmental and biological sciences* 5(10): 188-194.
- Amalia. 2015. *Kayu manis rempah beraroma manis yang kaya manfaat*. *Warta Penelitian dan Pengembangan Tanaman Industri*. 21(3): 10-14.
- Amaliah, Z.Z.N., S. Bahri, dan P. Amelia. 2018. *Isolasi dan karakterisasi bakteri asam laktat dari limbah cair rendaman kacang kedelai*. *Jurnal Fitofarmaka Indonesia*. 5(1): 253-257.
- Angelina, M., A. Mun'im, dan M. Hanafi. 2011. *Ekstrak terstandar secara kimia daun Brucea javanica Merrill*. *Jurnal Kimia Terapan Indonesia*. DOI: 10.14203/jkti.v13i2.143
- Anggraeni, E.V., L.D. Mahfudz, dan T.A.SArjana. 2017. *Pengaruh penggunaan probiotik, acidifier, dan kombinasinya sebagai pengganti antibiotik terhadap performan ayam broiler*. *Prosiding Seminar Nasional Pengembangan Peternakan Berkelanjutan 9*. Sumedang.

- Anzani, E. 2020. Kandungan kurkuminoid ekstrak rimpang temu hitam (*Curcuma aeruginosa* Roxb.), temu putih (*Curcuma zedoaria* (Christm.) Roscoe) dan temulawak (*Curcuma xanthorrhiza* Roxb.). Skripsi. Program Studi Farmasi, Fakultas Farmasi, Universitas Bhakti Kencana. Bandung.
- AOAC. 2005. Official Method of Analysis. 18th Ed. Association of Analytical Chemists. Maryland.
- Apridani, E., Yusmarini, dan Rahmayuni. 2014. *Viabilitas Lactobacillus plantarum 1 yang diisolasi dari susu kedelai terfermentasi spontan terhadap asam klorida dan garam empedu*. Jurnal Online Mahasiswa Fakultas Pertanian Universitas Riau. 1(1).
- Arfianta, W.F., T.A. Sarjana, dan E. Widiastuti. 2020. *Pengaruh zona penempatan berbeda pada closed housed terhadap mikroklimatik ammonia, bobot relative organ limfoid, kelenjar tiroid, dan usus halus pada ayam broiler*. Tropical Animal Science. 2(1): 1-9.
- Arshad, F.A., R. Mehmood, S. Khan, Rubina, S. Hussain, A. Khan dan O. Farooq. 2018. *Lactobacilli as probiotics and their isolation from different sources*. British Journal of Research. 5(3): 1-11.
- Astungkarawati, D., N. Suthama, dan U. Atmomarsono. 2014. *Penggunaan protein dan pertumbuhan pada ayam broiler yang diberi ransum dengan penambahan tepung temu kunci (*Boesenbergia pandurata* Roxb.)*. Animal Agriculture Journal. 3(2): 163-171.
- Astuti, E.J. 2014. *Serat pangan dalam produk pangan fungsional*. Refleksi Awal Tahun 2014 Prosiding: Tantangan profesi kesehatan pada masa akan datang. Malang.
- Astuti, A.F. 2018. Pengaruh pemberian antibiotik dan probiotik terhadap kualitas daging broiler. Skripsi. Jurusan Ilmu Peternakan, Fakultas Sains dan Teknologi, Universitas Islam Negeri Alauddin.
- Badan Pusat Statistik. 2021a. Provinsi Daerah Istimewa Yogyakarta Dalam Angka. Badan Pusat Statistik DI. Yogyakarta.
- Badan Pusat Statistik. 2021b. Kabupaten Sleman Dalam Angka 2021. Badan Pusat Statistik Kabupaten Sleman. Sleman.
- Baharun, K., I. Rukmi, A.T. Lunggani, dan E. Fachriyah. 2013. *Daya antibakteri berbagai konsentrasi minyak atsiri rimpang temu hitam (*Curcuma aeruginosa roxb.*) terhadap *Bacillus subtilis* dan *Staphylococcus aureus* secara in vitro*. Jurnal Biologi. 2(\$): 16-24.

- Balai Pengkajian Teknologi Pertanian Banten. 2016. Bulletin: *Mengenal kayu manis*.
- Barton, M.D., dan W.S. Hart. 2001. *Prublic health risks: antibiotic resistance, review*. Asian Australasian Journal of Animal Sciences. 14: 414-422.
- Bazireh, H., P. Shariati, S.A. Jamalkandi, A. Ahmad, dan M.A. Boroumand. 2020. *Isolation of novel probiotic Lactobacillus and Enterococcus strains from human salivary and fecal sources*. Frontiers in microbiology. 20: 1-12.
- Berliana, Nelwida, dan Nurhayati. 2021. *Growth performance and blood profile of broiler chicken fed black garlic and curcuma in the ration*. Buletin Peternakan. 45(2): 95-102.
- Bhardwaj, A., M. Puniya, K.P.S. Sangu, S. Kumar, dan T. Dhewa. 2012. *Isolation and biochemical characterization of Lactobacillus species isolated from dahi*. A Journal of Dairy Science and Technology. 2 (2): 1-14.
- Bidura, I.G.N.G. 2010. *Pengaruh probiotk Saccharomyces spp. dalam ransum terhadap pencernaan pakan dan kandungan gas ammonia dalam ekskreta ayam*. Majalah Ilmiah Peternakan. 23(2): 84-90.
- Bidura, I.G.N.G. 2017. Buku ajar: Limbah Pakan Ternak. Fakultas Peternakan. Universitas Udayana. Denpasar.
- Bouba, A.A., N.Y. Njintang, H.S. Foyet, J. Scher, D. Montet, dan C.M.F. Mbofung. 2012. *Proximate composition, mineral, and vitamin content of some wild plants used as spices in Cameroon*. Food and Nutrition Sciences. 3:423-432.
- Brashears, M.M., D. Jaroni, dan J. Trimble. 2003. *Isolation, selection, and characterization of lactic acid bacteria for a competitive exclusion product to reduce shedding of Escherichia coli O157:H7 in cattle*. Journal of Food Protection. 66(3): 355-363.
- Brenes, A. Dan E. Roura. 2010. *Essential oils in poultry nutrition: Main effects and modes of action*. Animal Feed Science and Technology 158 (2010) 1–14.
- Browne, H.P., B.A. Neville, S.C. Forster, dan T.D. Lawley. 2017. *Transmission of the gut microbiota: spreading of health*. Nat. Rev. Microbiol. 15(9): 531-543.
- Bujalance, C., M. Jiménez-Valera, E. Moreno, dan A. Ruiz-Bravo, 2006. *A selective differential medium for Lactobacillus plantarum*. Journal of Microbiological Methods 66: 572–575.

- Burns, P., B. Sánchez, G. Vinderola, P. Ruas-Madiedo, L. Ruiz, A. Margolles, J. Reinheimer, dan C.G. Reyes-Gavilán. 2010. *Inside the adaptation process of *Lactobacillus delbrueckii* subsp. *lactis* to bile*. International Journal of Food Microbiology. 142: 132-141.
- Chafid, M. 2018. Outlook Daging Ayam Ras. Pusat Data dan Sistem Informasi Pertanian, Sekretariat Jenderal Kementerian Pertanian. Jakarta.
- Chang, C.H., P.Y. Teng, T.T. Lee, dan B. Yu. 2019. *Effects of multi-strain probiotics combined with gardeniae fructus on intestinal microbiota, metabolites, and morphology in broilers*. Japan Poultry Science Ssociety. 56 (1): 32-44. doi:10.2141 / jpsa.0170179.
- Chanwitheesuk, A., A. Teerawutgulrag, dan N. Rakariyatham. 2005. *Screening of antioxidant activity and antioxidant compounds of some edible plants of Thailand*. Food Chemistry. 92: 491-497.
- Chowlu, H., V.K. Vidyarthi, dan R. Zuyie. 2018. *Use of cinnamon in diet of broiler chicken*. Livestock research international. 6(2): 42-47.
- Clavijo, V. dan M.J.V. Flórez. 2018. *The gastrointestinal microbiome and its association with the control of pathogens in broiler chicken production: A review*. Poultry Science. 97: 1006-1021.
- Clinical and Laboratory Standards Institute. 2020. Performance Standards for Antimicrobial susceptibility Testing: 30th Ed. CLSI supplement M100. Pennsylvania, USA.
- Chotelersak, K., T. Thamacharoensuk, S. Tanasupawat, K. Nantavisai, M. Taweechotipatr, dan S. Puttikamonkul. 2016. *Preliminary studies of lactic acid bacteria isolated from feces of thai newborns*. J. Med. Assoc. Thai. 99 (8): 90-98.
- Ciftci, M., U.G. Simsek, A. Yuce, O. Yilmaz, dan B. Dalkilic. 2010. *Effects of dietary antibiotic and cinnamon oil supplementation on antioxidant enzyme activities, cholesterol levels and fatty acid compositions of serum and meat in broiler chickens*. ACTA VET. BRNO. 79: 33-40. doi:10.2754/avb201079010033.
- Dani, M., Rusman, dan Zuprizal. 2019. *The influence of nano-encapsulation of *Melastoma malabathricum* L. fruit extract to lipid profile of broiler chicken*. Buletin Peternakan. 43(4): 237-241.
- Daud, M. 2006. *Persentase dan kualitas karkas ayam pedaging yang diberi probiotik dan prebiotik dalam ransum*. Jurnal Ilmu Ternak. 6 (2): 126-131.

- De Vos, P., G.M. Garrity, D. Jones, N.R. Krieg, W. Ludwig, F.A. Rainey, K. Schleifer, dan W.B. Whitman. 2009. *Bergey's Manual of Systematic Bacteriology*. 2nd Ed. (3). Springer Science+Business Media. New York.
- Dehkdoda, F., C.M.M. Lee, J. Medina, dan A.J. Brooks. 2018. *The growth hormone receptor: Mechanism of receptor activation, cell signaling, and physiological aspects*. *Front. Endocrinol.* 9: 1-23.
- Dibner, J.J. dan J.D. Richards. 2005. *Antibiotic growth promoters in agriculture: History and mode of action*. *Poultry Science*. 84: 634-643.
- Direktorat Jenderal Peternakan dan Kesehatan Hewan. 2021. *Statistik peternakan dan kesehatan hewan 2021*. Direktorat Jenderal Peternakan dan Kesehatan Hewan, Kementerian Pertanian RI.
- Dita, I.N.A.B., N.K.S. Rukmini, dan N.M. Yudiastari. 2021. *Pengaruh pemberian asam amino lisin dan metionin terhadap berat bagian-bagian karkas ayam kampung*. *Gema Agro*. 26(02):78-82.
- Djehri-Hocine, B., M. Boukesmis, dan A. Amrane. 2010. *Formulation and evaluation of a selective medium for lactic acid bacteria-validation on some dairy products*. *American Journal of Agricultural and Biological Sciences*. 5(2): 148-153.
- Dosoky, N.S. dan N. Setzer. 2018. *Chemical composition and biological activities of essential oils of curcuma species*. *Nutrients*. 10: 1-42.
- Elazab, S.T., N.S. Elshater, A.T.Y. Kishaway, dan H.A. El-Emam. 2021. *Cinnamon extract and probiotic supplementation alleviate copper-induced nephrotoxicity via modulating oxidative stress, inflammation, and apoptosis in broiler chickens*. *Animals*. 11: 1-20.
- El-Hack, M.E.A., M. Alagawany, A.E. Abdel-Moneim, N.G. Mohammed, A.F. Khafaga, M. Bin-Jumah, S.I. Othman, A.A. Allam, dan S.S. Elnesr. 2020. *Cinnamon (*Cinnamomum zeylanicum*) oil as a potential alternative to antibiotics in poultry*. *Antibiotics*. 9 (5): 1-12.
- Fadhilah, A., Hafsan, dan F. Nur. 2015. *Penurunan kadar kolesterol oleh bakteri asam laktat asal dangke secara in vitro*. *Prosiding Seminar Nasional Mikrobiologi Kesehatan dan Lingkungan*. 174-180.
- FAO. 2016. *Probiotics in animal nutrition – Production, impact and regulation* oleh: Y.S. Bajagai, A.V. Klieve, P.J. Dart dan W.L. Bryden. School of Agriculture and Food Sciences, The University of Queensland, Australia. Editor: H.P.S. Makkar. *FAO Animal Production and Health Paper*. Rome.

- Farida, U.N., V.D. Yuniyanto, dan N. Suthama. 2017. *Deposisi kalsium dan protein daging pada itik Peking yang diberi ransum dengan penambahan tepung temu ireng*. Agromedia. 35(2): 49-54.
- Farouhandeh, H. S.Z. Vahed, M.S. Hejazi, M.R. Nahaei, dan M.A. Dibavar. 2010. *Isolation and phenotypic characterization of Lactobacillus species from various dairy products*. Current research in bacteriology. 3(2): 84-88.
- Fauzi, A.A., I.P. Sampurna, dan H. Suharsono. 2019. *Pemanfaatan dedak padi terfermentasi untuk meningkatkan laju pertumbuhan dimensi panjang itik Bali*. Indonesia Medica Veterinus. 8(2): 193-204.
- Febrisiantosa, A., L. Istiqomah, A. Sofyan, E. Damayanti, H. Herdian, H. Julendra, dan M. Angwar. 2012. *Persentase karkas, kandungan lemak, dan kolesterol daging ayam dengan pemberian aditif pakan mengandung bakteri asam laktat dan tepung Ganoderma lucidum*. Workshop Nasional Unggas Lokal. 109-113.
- Ferdous, M.F., M.S. Arefin, M.M. Rahman, M.M.R. Ripon, M.H. Rashid, M.R. Sultana, M.T. Hossain, M.U. Ahammad, dan K. Rafiq. 2019. *Beneficial effects of probiotic and phytobiotic as growth promoter alternative to antibiotic for safe broiler production*. Journal of Advanced Veterinary and Animal Research. 6 (3): 409-415
- Febriyossa, A., Nurmiati, dan Periadnadi. 2013. *Potensi dan karakterisasi bakteri alami pencernaan ayam broiler pedaging (Gallus gallus domesticus L.) sebagai kandidat probiotik pakan ayam broiler*. J. Bio. UA. 2 (3): 201-206.
- Finnah, A., S. Piñeiro, R. Reuss, dan P. Sanders. 2017. Ampisillin. Compendium of Food Additive Specifications. Joint FAO/WHO Expert Committee on Food Additives (JECFA), 85th meeting 2017. FAO JECFA Monographs 21.
- Fitria, R. D.S.H. Seno, B.P. Priosoeryanto, Hartanti, dan W. Nurcholis. 2019. *Volatile compound profiles and cytotoxicity in essential oils from rhizome of Curcuma aeruginosa and Curcuma zanthorrhiza*. Biodiversitas. 20(10): 2943-2948.
- Fontana, L., M. Bermudez-Brito, J. Plaza-Diaz, S. Muñoz-Quezada, dan A. Gil. 2013. *Sources, isolation, characterization and evaluation of probiotics*. British Journal of Nutrition. 109: S35-S50.
- Fuller, R. 1992. History and development of probiotics. Probiotics, 1–8.

- Garmana, A.N., E.Y. Sukandar, dan I. Fidrianny. 2014. *Activity of several plant extracts against drug-sensitive and drug-resistant microbes*. *Procedia Chemistry*. 13: 164-169.
- Gilliland, S.E., C.R. Nelson, dan C. Maxwell. 1985. *Assimilation of cholesterol by *Lactobacillus acidophilus**. *Applied and Environmental Microbiology*. 49 (2): 377-381.
- Gong, Z., Y. Luna, P. Yu, dan H. Fan. 2014. *Lactobacilli inactivate *Chlamydia trachomatis* through lactic acid but not H₂O₂*. *PloSOne*, 9.
- Gomathi, G., S. Senthilkumar, A. Natarajan, R. Amutha, dan M.R. Purushothaman. 2018. *Effect of dietary supplementation of cinnamon oil and sodium butyrate on carcass characteristics and meat quality of broiler chicken*. *Veterinary World*. 11(7): 959-964.
- Goswami, G., S.S. Bora, A. Parveen, R.C. Boro, dan M. Barooah. 2017. *Identification and functional properties of dominant lactic acid bacteria isolated from Kahudi, a traditional rapeseed fermented food product of Assam, India*. *J. Ethn. Foods* 4: 187-197.
- Gowda, N.K.S., D.R. Ledoux, G.E. Rottinghaus, A.J. Berudez, dan Y.C. Chen. 2009. *Antioxidant efficacy of curcuminoids from turmeric (*Curcuma longa* L.) powder in broiler chickens fed diets containing aflatoxin B1*. *British Journal of Nutrition*. 102: 1629-1634. doi:10.1017/S0007114509990869.
- Granstad, S., A.B. Kristoffersen, S.L. Benestad, S.K. Sjurseth, B. David, L. Sørensen, A. Fjermedal, D.H. Edvarden, G. Sanson, A. Løvland, dan M. Kaldhusdal. 2020. *Effect of feed additives as alternatives to in-feed antimicrobials on production performance and intestinal *Clostridium perfringens* counts in broiler chickens*. *Animals*. 10 (240): 1-19.
- Gul, S. dan M. Safdar. 2009. *Proximate composition and mineral analysis of cinnamon*. *Pakistan journal of nutrition* 8(9):1456-1460.
- Guo, F.C., B.A., Williams, R.P. Kwakkel, H.S., Li, P. Li, J.Y. Luo, W.K. Lis, dan M.W.A. Verstegen. 2004. *Effects of mushroom and herb polysaccharides, as alternatives for an antibiotic, on the cecal microbial ecosystem in broiler chickens*. *Poultry Science*. 83: 175-182.
- Hadley, M.E. dan J.E. Levine. 2007. *Endocrinology* 6th Ed. Prentice Hall. New Jersey.
- Halder, D. M. Mandal, S.S. Chatterjee, N.K. Pal., dan S. Mandal. 2017. *Indigenous probiotic *Lactobacillus* isolates presenting antibiotic like activity against human pathogenic bacteria*. *Biomedicine*. 5(31): 1-11.

- Hamidah, S., V. Burhanudin, dan W.T. Istikowati. 2009. *Kajian sifat-sifat dasar kayu manis sebagai pertimbangan pemanfaatan limbah pemanenan kulit kayu manis (*Cinnamomum burmannii*, Blume)*. Jurnal Hutan Tropis Borneo. 10(26): 210-223.
- Haq, A.N., D. Septinova, dan P.E. Santosa. 2015. *Kualitas fisik daging dari pasar tradisional di Bandar Lampung*. Jurnal Ilmiah Peternakan Terpadu. 3(3): 98-103
- Harahap, A.E. 2014. *Simulasi bakteri asam laktat yang diisolasi dari silase dari pelepah sawit pada saluran pencernaan ayam*. Jurnal Peternakan. 11(2): 43-47.
- Harimurti, S. dan E. S. Rahayu. 2009. *Morfologi usus ayam broiler yang disuplementasi dengan probiotik strain tunggal dan campuran*. AGRITECH. 29 (3): 179-183.
- Harimurti, S., Nasroedin, E.S, Rahayu, dan Kurniasih. 2010. *Effect of indigenous lactic acid bacteria probiotics on broiler performance*. The 5th International Seminar on Tropical Animal Production. Yogyakarta.
- Haroen, U., A. Budiansyah, Noperdiman, Harnita, dan Jusalia. 2019. *Performance broiler chickens fed diet added with buffaloes rumen fluid enzymes from slaughterhouses*. Bulletin of Animal Science. 43(2): 109-117.
- Hastuti, S. 2015. *Identifikasi dan Deteksi Molekuler *Lactobacillus plantarum* Dad 13 pada Feses Orang Dewasa Sehat yang Mengonsumsi Susu Fermentasi*. Tesis. Universitas Gadjah Mada. Yogyakarta.
- Hartadi, H., S. Reksohadiprojo, dan A.D. Tillman. 2005. *Tabel komposisi pakan untuk Indonesia*. Cetakan ke-5. UGM Press. Yogyakarta.
- Haryati, T. 2011. *Probiotik dan prebiotik sebagai pakan imbuhan nonruminansia*. WARTAZOA. 21 (3):125-132.
- Hashemi, S.R. dan H. Davoodi. 2010. *Phytogenics as new class of feed additive in poultry industry*. Journal of animal and veterinary advances. 9(17): 2295-2304.
- Hassan, Z. H. 2006. *Isolasi *Lactobacillus*, bakteri asam laktat dari feses dan organ pencernaan ayam*. Seminar Nasional Teknologi Peternakan dan Veteriner.

- Hedayati, M. dan M. Manafi. 2018. *Evaluation of anherbal compound, a commercial probiotic, and an antibiotic growth promoter on the performance, intestinal bacterial population, antibody titers, and morphology of the jejunum and ileum of broilers*. Brazilian Journal of Poultry Science. 20(2): 305-315.
- Hidajati, N. 2005. *Peran bawang putih (*Allium sativum*) dalam meningkatkan kualitas daging ayam pedaging*. Media Kedokteran Hewan. 21 (1): 32-34.
- Hidayah, R., I. Ambarsari, dan Subiharta. 2019. *Kajian sifat nutrisi, fisik, dan sensori daging ayam KUB di Jawa Tengah*. Jurnal Peternakan Indonesia. 21(2): 93-101.
- Hidayati, T.R. 2016. *Pengaruh Pemberian Probiotik Dalam Pakan Terhadap Persentase Karkas, Persentase Lemak Abdominal, Persentase Daging Dada, dan Kadar Koleseterol Daging Ayam Pedaging*. Skripsi. Fakultas Peternakan. Universitas Brawijaya.
- Hrnčár, C., J. Weis, S. Mindek, dan J. Bujko. 2014. *Effect of probiotic addition in drinking water on body weight and body measurements of broiler chickens*. Animal science and biotechnologies. 47(2): 249-253.
- Hutabarat, M.R.T., R.I. Pahlevy, F. Abdurrahman, D. Sibit, W.P. Lokapirnasari, K. Soepranianondo, dan Ardianto. 2020. *Studi pemberian bakteri asam laktat (BAL) terhadap persentase lemak abdominal dan berat karkas ayam pedaging yang diinfeksi *E. coli**. Jurnal Peternakan Indonesia. 22(1): 21-28.
- Inna, M., N. Atmania, dan S. Priskasari. 2010. *Potential use of *Cinnamomum burmannii* essential oil-based chewing gum as oral antibiofilm agent*. Journal of Dentistry Indonesia. 17(3): 80-86.
- Islam, K.N., T. Akbar, F. Akther, dan N.N. Islam. 2016. *Characterization and confirmation of *Lactobacillus* spp. from selective regional yoghurts for probiotic and interference with pathogenic bacterial growth*. Asian Journal of Biological Sciences. 9 (1-2): 1-9.
- Jayaraman, S., P.P. Das, P.C. Saini, B. Roy, dan P.N. Chatterjee. 2017. *Use of *Bacillus Subtilis* PB6 as a potential antibiotic growth promoter replacement in improving performance of broiler birds*. Poultry Science. 96: 2614-2622.
- Jazayeri, S.D., S. Mustafa, M.Y. Manap, A.M. Ali, A. Ismail, N.H. Faujan, dan M.Y. Shaari. 2009. *Survival of *Bifidobacteria* and other selected intestinal bacteria in TPY medium supplemented with curcumin as assessed in vitro*. 4(1): 15-22.

- Jena, P.K., D. Trivedi, K. Thakore, H. Chaudhary, S.S. Giri, dan S. Seshadari. 2013. *Isolation and characterization of probiotic properties of Lactobacilli isolated from rat fecal microbiota*. Microbiology and Immunology. 57: 407-416.
- Jomehzadeh, N., H. Javaherizadeh, M. Amin, M. Saki, M.T.S. Al-Ouqaili, H. Hamidi, M. Seyedmahmoudi, dan Z. Gorjian. 2020. *Isolation and identification of potential probiotic Lactobacillus species from feces of infants in southwest Iran*. International Journal of Infectious Diseases. 96: 524-530.
- Kalsum, U., H. Soetanto, Achmanu, dan O. Sjojfan. 2012. *Effect of probiotic containing Lactobacillus salivarius on the laying performance and egg quality of Japanese quails*. Livestock Research for Rural Development. 24(12).
- Kamazeri, T.S.A.T., O.A. Samah, M. Taher, D. Susanti, H. Qarallah. 2012. *Antimicrobial activity and essential oils of Curcuma aeruginosa, Curcuma mangga, and Zingiber cassumunar from Malaysia*. Asian Pacific Journal of Tropical Medicine. 202-209.
- Kanani, P.B., M. Daneshyar, J. Aliakbarlu, dan F. Hamian. 2017. *Effect of dietary turmeric and cinnamon powders on meat quality and lipid peroxidation of broiler chicken under heat stress condition*. Veterinary Research Forum. 8(2): 163-169.
- Karakas-Sen, A., dan E. Karakas. 2018. *Isolation, identification and technological properties of lactic acid bacteria from raw cow milk*. Bioscience Journal, 34(2): 385-399.
- Karimi, S., E. Rashidian, M. Birjandi, L. Mahmoodnia. 2018. *Antagonistic effect of isolated probiotic bacteria from natural sources against intestinal Escherichia coli pathotypes*. Electronic Physician. 10 (3): 6534-6539.
- Ketaren, P.P. 2010. *Kebutuhan gizi ternak unggas di Indonesia*. WARTAZOA. 20 (4).
- Khosravi, A., F. Boldaji, B. Dastar, dan S. Hasani. 2008. *The use of some additives as growth promoter in broilers nutrition*. International Journal of Poultry Science. 7(11): 1095-1099
- Kompiang, I.P. 2009. *Pemanfaatan mikroorganisme sebagai probiotik untuk meningkatkan produksi ternak unggas di Indonesia*. Pengembangan Inovasi Pertanian. 2(3): 177-191.

- Koochaksaraie, R.R., M. Irani, dan S. Gharavy. 2011. *The effects of cinnamon powder feeding on some blood metabolites in broiler chicks*. Brazilian Journal of Poultry Science. 13 (3): 197-201.
- Kook, S., E. Chung, Y. Lee, D.W. Lee, dan S. Kim. 2019. *Isolation and characterization of five novel probiotic strains from Korean infant and children faeces*. Plos one: 1-17.
- Krauze, M., K. Abramowicz, dan K. Ognik. 2020. *The effect of addition of probiotic bacteria (*Bacillus subtilis* or *Enterococcus faecium*) or phytobiotic containing cinnamon oil to drinking water on the health and performance of broiler chickens*. Ann. Anim. Sci., 20(1): 191-205.
- Krauze, M., M. Cendrowska-Pinkosz, P. Matissevicius, A. Stepniowska, P. Jurczak, dan K. Ognik. 2021. *The effect of administration of a phytobiotic containing cinnamon oil and citric acid on the metabolism, immunity, and growth performance of broiler chickens*. Animals. 11(399): 1-17.
- Kusharto, C. M. 2006. *Serat makanan dan peranannya bagi kesehatan*. Jurnal Gizi dan Pangan. 1(2): 45-54.
- Kusumo, P. D. 2012. *Kolonisasi mikrobiota normal dan pengaruhnya pada perkembangan sistem imunitas neonatal*. Kedokteran. 320: 55-63.
- Lan, R.X., S.I. Lee, dan I.H. Kim. 2017. *Effects of *Enterococcus faecium* SLB 120 on growth performance, blood parameters, relative organ weight, breast muscle meat quality, excreta microbiota shedding, and noxious gas emission in broilers*. Poultry Science. 96: 3246-3253.
- Landy, N., dan A. Kavyani. 2013. *Effects of using a multi-strain probiotic on performance, immune responses and cecal microflora composition in broiler chickens reared under cyclic heat stress condition*. Iranian Journal of Applied Animal Science. 3 (4): 703-708.
- Lee, H.M., dan Y. Lee. 2008. *A differential medium for lactic acid-producing bacteria in a mixed culture*. Letters in Applied Microbiology. 46: 676-681.
- Lestari, J.H.S. 2016. Dekok daun kresen (*Muntingia calabura*) sebagai cairan sanitasi tangan dan buah apel manalagi (*Malus sylvestris*). Skripsi. Program Studi Biologi, Fakultas Teknobiologi, Universitas Atma Jaya, Yogyakarta.
- Lezia, A. 2020. Pengaruh Pemberian Probiotik *Lactobacillus plantarum* dan *Lactobacillus pentosus* Terhadap Bobot Hidup, Karkas, dan Lemak Abdominal Ayam Broiler. Skripsi. Fakultas Peternakan. Universitas Andalas.

- Liao, S.F. dan M. Nyachoti. 2017. *Using probiotics to improve swine gut health and nutrient utilization*. *Animal Nutrition*. 3. 331-343.
- Lin, C., M. Lin, C. Lin, M. Chiou, J. Chen, K. Yang, dan M. Wu. 2020. *Potential probiotic of *Lactobacillus* strains isolated from the intestinal tracts of pigs and feces of dogs with antibacterial activity against multidrug-resistant pathogenic bacteria*. *Arch. Microbiology*. 202(7): 1849-1860.
- Liu, W., M. Chen, L. Duo, J. Wang, S. Guo, H. Sun, B. Menghe, dan H. Zhang. 2020. *Characterization of potentially probiotic lactic acid bacteria and bifidobacterial isolated from human colostrum*. *Journal of Dairy Science*. 103(5): 4013-4025.
- Liu, Y., Y. Li, X. Feng, Z. Wang, dan Z. Xia. 2018. *Dietary supplementation with *Clostridium butyricum* modulates serum lipid metabolism, meat quality, and the amino acid and fatty acid composition of Peking ducks*. *Poultry Science*. 97: 3218-3229.
- Lopera, P.A., J.C. Rodriguez-Lecompte, dan J. Reyes. 2016. *Modulation of adaptive immune responses by probiotics in chicken pullets*. *Poultry Science Association 105th Annual Meeting*. Abstract.
- Ma, F., S. Xu, Z. Tang, Z. Li, dan L. Zhang. 2021. *Use of antimicrobials in food animals and impact of transmission of antimicrobial resistance on humans*. *Biosafety and health*. 3 (1): 32-38.
- Magdalena, S., Natadiputri G.H., Nailufar F., dan Purwadaria T. 2013. *Pemanfaatan produk alami sebagai pakan fungsional*. *WARTAZOA*. 23(1): 31-40.
- Maharatih, N.M.D., I.W. Sukanata, dan I.P.A. Aswata. 2017. *Analisis performance usaha ternak ayam broiler pada model kemitraan dengan sistem open house (studi kasus di Desa Baluk Kecamatan Negara)*. *Journal of Tropical Animal Science*. 5(2): 407-416.
- Mandal, H., R. Jariwala, dan T. Bagchi. 2015. *Isolation and characterization of lactobacilli from human faeces and indigenous fermented foods for their potential application as probiotics*. *Canadian Journal of Microbiology*, 62: 349-359.
- Matulessy, D.N., E. Suryanto, dan Rusman. 2010. *Evaluasi karakteristik fisik, komposisi kimia dan kualitas mikrobia karkas broiler beku yang beredar di pasar tradisional Kabupaten Halmahera Utara, Maluku Utara*. *Buletin Peternakan*. 34(3): 178-185.

- Michiels, J., Missotten, J., Dierick, N., Fremaut, D., Maene, P., dan De Smet, S. 2008. *In vitro degradation and in vivo passage kinetics of carvacrol, thymol, eugenol and trans-cinnamaldehyde along the gastrointestinal tract of piglets*. Journal of the Science of Food and Agriculture, 88(13): 2371-2381. doi:10.1002/jsfa.3358.
- Milutinović, M., S. Dimitrijević-Branković, dan M. Rajilić-Stojanović. 2021. *Plant extracts rich in polyphenols as potent modulators in the growth of probiotic and pathogenic intestinal microorganisms*. Frontiers in Nutrition. 8:1-11.
- Mirmiranpour, H., H.F. Huseini, H. Derakhshanian, Z. Khodaii, dan B. Tavakoli-Far. 2020. *Effects of probiotic, cinnamon, and synbiotic supplementation on glycemic control and antioxidant status in people with type 2 diabetes: a randomized, double-blind, placebo-controlled study*. Journal of Diabetes & Metabolic Disorder. 19: 53-60.
- Mir, N.A., A. Rafiq, F. Kumar, V. Singh, dan V. Shukla. 2017. *Determinants of broiler chicken meat quality and factors affecting them: a review*. Journal Food Science and Technology. 54(10): 2997-3009.
- Moektiwardoyo, W.M., A. Tjitraesmi, Y. Susilawati, Y. Iskandar, E. Halimah, dan D. Zahryanti. 2014. *The potential of dewa leaves (Gynura pseudochina (l) d.c) and temu ireng rhizomes (Curcuma aeruginosa roxb.) As medicinal herbs for dengue fever treatment*. Procedia Chemistry. 13: 134-141.
- Mohammadigheisar, M., R.B. Shirley, J. Barton, A. Welsher, P. Thiery, dan E. Kiarie. 2019. *Growth performance and gastrointestinal responses in heavy Tom turkeys fed antibiotic free corn- soybean meal diets supplemented with multiple doses of a single strain Bacillus subtilis probiotic (DSM29784)*. Poultry science. 98: 5541-5550.
- Molla, M.R., M.M. Rahman, F. Akter, dan M. Mustofa. 2012. *Effects of Nishyinda, black pepper and cinnamon extract as growth promoter in broilers*. The Bangladesh veterinarian. 29(2): 69-77.
- Momin, J.K., dan J.B. Prajapati, 2019. *Effect of selected medicinal herbs on viability and acid production of lactic dairy starters*. Emergent Life Science Research. 5(2): 35-42.
- Moningkey, A.F., F.R. Wolayan, C.A. Rahasia, dan M.N. Regar. 2019. *Kecernaan bahan organik, serat kasar dan lemak kasar paskan ayam pedaging yang diberi tepung limbah labu kuning (Cucurbita moschata)*. Zootec. 39(2): 257-265.
- Mujnisa, A., L.A. Rotib, N. Djide, dan A. Natsir. 2013. *Ketahanan bakteri asam laktat hasil isolasi dari feses broiler terhadap kondisi saluran pencernaan broiler*. JItP. 2(3): 152-158.

- Mulik, S.E., J.F. Bale-Therik, dan A.I.R. Detha. 2019. *Chemical and microbiological quality of broiler meat supplemented fermented pursalane (*Portulaca oleracea* L.) flour in commercial diets*. Bulletin Peternakan. 43(3): 188-192.
- Mulyono, R. Murwani, dan F. Wahyono. 2009. *Kajian penggunaan probiotik *Saccharomyces cereviceae* sebagai alternatif aditif antibiotik terhadap penggunaan protein dan energi pada ayam broiler*. J. Indon. Trop. Anim. Agric. 34 (2): 145-151.
- Muñoz-Quezada, S., E. Chenoll, J.M. Vieites, S. Genovés, J. Maldonado, M. Bermúdez-Brito, C. Gomez-Llorente, E. Matencio, M.J. Bernal, F. Romero, A. Suárez, D. Ramón, dan A. Gil. 2013. *Isolation, identification and characterisation of three novel probiotic strains (*Lactobacillus paracasei* CNCM I-4034, *Bifidobacterium breve* CNCM I-4035 and *Lactobacillus rhamnosus* CNCM I-4036) from the faeces of exclusively breast-fed infants*. British Journal of Nutrition. 109 (S2): S51-S62.
- Mursyida, E., dan H.M. WAti. 2021. *Aktivitas antibakteri ekstrak kayu manis (*Cinnamomum burmannii*) terhadap pertumbuhan *E.coli**. Jurnal Kedokteran dan Kesehatan. 8(2): 87-91.
- Muthusamy, K., I. Soundharrajan, S. Srisesharam, D. Kim, P. Kuppusamy, K.D. Lee, dan K.C. Choi. 2020. *Probiotic characteristics and antifungal activity of *Lactobacillus plantarum* and its impact on fermentation of Italian ryegrass at low moisture*. Applied Science. 10(417): 1-15.
- Nagappan, R. 2012. *Evaluation of aqueous and ethanol extract of bioactive medical plant, *Cassia didymobotrya* (Fresenius) Irwin dan Barneby against immature stages of filarial vector, *Culex quinquefasciatus* Say (Diptera: Culicidae)*. Asian Pacific Journal of Tropical Biomedicine. 2(9): 707-711.
- Narayanan, R. dan K.T. Raghavan. 2019. *Antibiotic susceptibility profile of lactic acid bacteria with probiotic potential isolated from humans*. Biomed. J. Sci. and Tech. Res. 17(4): 12964-12966.
- National Research Council. 1994. *Nutrient Requirements of Poultry*. 9th Ed. National Academy Press. Washington DC.
- Nawab, A., G. Li, W. Liu, R. Lan, J. Wu, Y. Zhao, K. Kang, B. Kieser, C. Sun, S. Tang, M. Xiao, dan L. An. 2019. *Effect of dietary curcumin on the antioxidant status of laying hens under high-temperature conditions*. Brazilian Journal of Poultry Science. 21(2): 1-9.

- Neijat, M., R.B. Shirley, A. Welsher, J.Barton, P. Thiery, dan E. Kiarie. 2019. *Growth performance, apparent retention of components, and excreta dry matter content in Shaver White pullets (5 to 16 week of age) in response to dietary supplementation of graded levels of a single strain Bacillus subtilis probiotic*. Poultry Science. 98: 3777-3786.
- Neveling, D.P., dan L.M.T. Dicks. 2021. *Probiotics: an antibiotic replacement strategy for healthy broilers and productive rearing. Probiotics antimicrobe*. Proteins. 13(1): 1-11.
- Ni, K., Y. Wang, D. Li, Y. Cai, dan H. Pang. 2015. *Characterization, identification and application of lactic acid bacteria isolated from forage paddy rice silage*. Plos one. 10 (3): 1-14.
- Nisa, L.C. 2014. Aktivitas antibakteri kulit kayu manis (*Cinnamomum burmannii*) dengan cara ekstraksi yang berbeda terhadap *Escherichia coli* dan *Staphylococcus aureus*. Skripsi. Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Surakarta.
- Nosrati, M., F. Javandel, L.M. Camacho, A. Khusro, M. Cipriano, A. Seidavi, dan A.Z.M. Salem. 2017. *The effects of antibiotic, probiotic, organic acid, vitamin C, and Echinacea purpurea extract on performance, carcass characteristics, blood chemistry, microbiota, and immunity of broiler chickens*. J. Appl. Poult. Res. 26: 295-306.
- Nugroho, E., I. Whendrato, I.M. Madyana, dan E. Kusumo. 1992. Tumbuh-tumbuhan Berkhasiat Obat. Eka Offset. Semarrang.
- Nunigtyas, Y.F. 2014. *Pengaruh penambahan tepung bawang putih (Allium sativum) sebagai aditif terhadap penampilan produksi ayam pedaging*. Ternak Tropika. 15 (1): 21-30.
- Nur, F., Hafsan, dan A. Wahdiniar. 2015. *Isolasi bakteri asam laktat berpotensi probiotik pada dangke, makanan tradisional dari susu kerbau di Curio Kabupaten Enrekang*. Biogenesis. 3(1): 60-65.
- Nurchahyo, H., Suyanta, A. Dale, dan F.A. Furqon. 2019. *Isolation and characterization of lactic acid bacteria (LAB) from small intestine content of duck (Anas sp.) as a probiotic candidate*. Journal of Physics: Conference Series. 1397: 1-9.
- Nurcholis, W., N. Khumaida, M. Syukur, M. Bintang, dan I.D.A.A.C. Ardyani. 2015. *Phytochemical screening, antioxidant and cytotoxic activities in extracts of different rhizome parts from Curcuma aeruginosa Roxb*. International Journal of Research in Ayurveda and Pharmacy. 6(5): 634-637.

- Nurcholis, W., N. Khumaida, M. Syukur, dan M. Bintang. 2016. *Variability of curcuminoid content and lack of correlation with cytotoxicity in ethanolic extracts from 20 accessions of Curcuma aeruginosa Roxb.* Asian Pacific Journal of Tropical Disease. 6(11): 887-891.
- Nurhidayah, A.L. 2017. Isolasi dan Karakterisasi Bakteri Asam Laktat Asal Rektum Kelinci (*Oryctolagus cuniculus*) Sebagai Kandidat Probiotik. Skripsi. Fakultas Kedokteran Hewan. Universitas Brawijaya.
- Nurhikmayani, R. R.S. Daryono, dan E. Retnaningrum. 2019. *Isolation and molecular identification of antimicrobial-producing lactic acid bacteria from Chao, South Sulawesi (Indonesia) fermented fish product.* Biodiversitas. 20(4): 1063-1068.
- Nursiam, I., M. Ridla, dan W. Hermana. 2018. Kajian pengaruh ukuran partikel pakan terhadap performa produksi dan saluran pencernaan ayam broiler. Tesis. Institut Pertanian Bogor.
- Nuryati, T. 2019. *Analisis performans ayam broiler pada kandang tertutup dan kandang terbuka.* Jurnal Peternakan Nusantara. 5(2): 77-86.
- OECD/FAO. 2020. OECD-FAO Agricultural Outlook 2020-2029, FAO, Rome/OECD Publishing, Paris, <https://doi.org/10.1787/1112c23b-en>.
- Oluwafemi, R.A., A.I. Olawale, dan J.O. Alagbe. 2020. *Recent trends in the utilization of medicinal plants as growth promoters in poultry nutrition – a review.* Agricultural & Veterinary Sciences. 4 (1): 5-11.
- Padmavathi, T.R. Bhargavi, P.R. Priyanka, N.R. Niranjan, dan P.V. Pavita. 2018. *Screening of potential probiotic lactic acid bacteria and production of amylase and its partial purification.* Journal of genetic engineering & biotechnology. 16(2).
- Pakage, S., B. Hartono, Z. Fanani, B.A. Nugroho, D.A. Iyai, J.A. Palulungan, A.R. Ollong, dan D. Nurhayati. 2020. *Pengukuran performa produksi ayam pedaging pada closed house system dan open house system di Kabupaten Malang Jawa Timur Indonesia.* Jurnal Sain Peternakan Indonesia. 15(4): 383-389.
- Park, J.H., S.I. Lee, dan I.H. Kim. 2018. *Effect of dietary Spirulina (Arthrospira) platensis on the growth performance, antioxidant enzyme activity, nutrient digestibility, cecal microflora, excreta noxious gas emission, and breast meat quality of broiler chickens.* Poultry science. 97: 2451-2459.

- Park, J.H., dan I.H. Kim. 2020. *Effect of dietary *Achyranthes japonica* extract supplementation on the growth performance, total tract digestibility, cecal microflora, excreta noxious gas emission, and meat quality of broiler chickens*. Poultry Science. 99: 463-470.
- Parisa, N., R.N. Islami, E. Amalia, Mariana, R.S.P. Rasyid. 2019. *Antibacterial activity of cinnamon extract (*Cinnamomum burmannii*) against *Staphylococcus aureus* and *Escherichia coli* in vitro*. Bioscientia Medicina. 3(2): 19-28.
- Parwata, I.M.O.A. 2016. Diktat/Bahan Ajar Kimia Organik Bahan Alam. Jurusan Kimia, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Udayana. Denpasar.
- Polii, P.F., K. Maaruf, Y. Kowel, H. Liwe, dan Y.C. Raharjo. 2015. *Pengaruh penambahan zat aditif (enzim dan asam organik) dengan protein tinggi dan rendah pada pakan berbasis dedak terhadap performan kelinci*. Jurnal Zootek. 35 (2): 280-288.
- Pope, J.L., Y. Yang, R.C. Newsome, W. Sun, X. Sun, M. Ukhanova, J. Neu, J. Issa, V. Mai, dan C. Jobin. 2019. *Microbial Colonization Coordinates the Pathogenesis of a *Klebsiella pneumoniae* Infant Isolate*. Scientific reports 9: 1-13.
- Prabewi, N. dan P.S. Junaidi. 2015. *Pengaruh pemberian ramuan herbal sebagai pengganti vitamin dan obat-obatan dari kimia terhadap performan ternak ayam kampung super*. Jurnal Pengembangan Penyuluhan Pertanian. 11(22): 97-108.
- Pradikta, R.W., O. Sjojfan, dan I.H. Djunaidi. 2018. *Evaluasi penambahan probiotik (*Lactobacillus* sip) cair dan padat dalam pakan terhadap penampilan produksi ayam petelur*. Jurnal Ilmu-ilmu Peternakan. 28(3): 203-212.
- Prakasita, V.C., W. Asmara, S. Widyarini, dan A.E.T.H. Wahyuni. 2019. *Combinations of herbs and probiotics as an alternative growth promoter: An in vitro study*. Veterinary World. 12(4): 614-620.
- Pramudia, A., I. Mangisah, dan B. Sukamto. 2013. *Kecernaan lemak kasar dan energi metabolis pada itik Magelang jantan yang diberi ransum dengan level protein dan probiotik berbeda*. Animal Agriculture Journal. 2(4): 148-160.

- Pratama, A., K. Suradi, R.L. Balia, H. Chairunnisa, H.A.W. Lengkey, D.S. Sutardjo, L. Suryaningsih, J. Gumilar, E. Wulandari, dan W.S. Putranto. 2015. *Evaluasi karakteristik sinat fisk karkas ayam broiler berdasarkan bobot badan hidup*. Jurnal Ilmu Ternak. 15(2): 61-64.
- Purgiyanti. 2012. *Pengaruh ekstrak maserasi temu hitam (*Curcuma aeruginosa* Roxb.) terhadap kenaikan berat badan mencit jantan (*Mus musculus*)*. Parapemikir: Jurnal Ilmiah Farmasi. 1(2).
- Puspitasari, S., I. Mangisah, dan F. Wahyono. 2018. *Pengaruh penggunaan tepung limbah kecambah kacang hijau terhadap bobot relatif dan panjang organ pencernaan itik magelang jantan*. Jurnal Pengembangan Penyuluhan Pertanian. 15(28): 58-65.
- Putra, A. 2018. *Pengaruh pemberian pakan dan ekstra temu Iren (*Curcuma aeruginosa* Roxb.) terhadap bobot badan dan konsentrasi kolesterol darah pada tikus*. Skripsi. Departemen Biokimia, Institut Pertanian Bogor. Bogor.
- Putri, A.A., Erina, dan Fakhrurrazi. 2018. *Isolasi bakteri asam laktat genus *Lactobacillus* dari feses rusa Sambar (*Cervus unicolor*)*. JIMVET. 2(1): 170-176.
- Putri, H.S. 2016. *Etnobotani tumbuhan obat oleh masyarakat Madura di daerah Ijen Bondowoso dan pemanfaatannya sebagai buku ilmiah populer*. Skripsi. Program Studi Pendidikan Biologi, Fakultas Keguruan dan Ilmu Pendidikan. Universitas Jember.
- Qian, Z., W. Si-si, Y. Guang, Z. Wen, dan L. Hui-ling. 2016. *Development and evaluation of a herbal formulation with anti-pathogenic activities and probiotic stimulatory effects*. Journal of Integrative Agriculture. 15(5): 1103-1111.
- Rachmawati, D., I. Samidjan, dan H. Setiyoso. 2016. *Peningkatan rasio efisiensi protein, pertumbuhan dan kelulushidupan udang windu (*Penaeus monodon*) melalui penambahan enzim fitase dalam pakan buatan*. Prosiding Seminar Nasional Kelautan.
- Raharjo, M. 2001. *Karakteristik beberapa bahan tanaman obat keluarga *Zingiberaceae**. Buletin Plasma Nutfah. 7(2): 25-30.
- Rahman, M.M., K.M. Hossain, dan S.M.M. Rahman. 2016. *Isolation, characterization, and properties study of probiotic lactic acid bacteria of selected yoghurt from Bangladesh*. African Journal of Microbiology Research. 10(1): 23-31.

- Rahmati, F. 2017. *Characterization of Lactobacillus, Bacillus and Saccharomyces isolated from Iranian traditional dairy products for potential sources of starter cultures*. AIMS Microbiol. 3 (4): 815-825.
- Rahmawati, N., E. Sudjarwo, dan E. Widodo. 2014. *Uji aktivitas antibakteri ekstrak herbal terhadap bakteri Eschericia coli*. Jurnal Ilmu-ilmu Peternakan. 24(3): 24-31.
- Ramlucken, U., S.O. Ramchuran, G. Moonsamy, R. Lallo, M.S. Thantsha, dan C.J. Rensburg. 2020. *A novel Bacillus based multi-strain probiotic improves growth performance and intestinal properties of Clostridium perfringens challenged broiler*. Poultry science. 99: 331-341.
- Rao, K.P., G. Chennappa, U. Suraj, H. Nagaraja, A.P.C. Raj, dan M.Y. Sreenivasa. 2015. *Probiotic Potential of Lactobacillus Strains Isolated from Sorghum-Based Traditional Fermented Food*. Probiotics & Antimicro. Prot. 7(2): 146-156.
- Repi, N.B., C. Mambo, dan J. Wuisan. 2016. *Uji efek antibakteri ekstrak kulit kayu manis (Cinnamomum burmannii) terhadap Escherichia coli dan Streptococcus pyogenes*. Jurnal e-Biomedik. 4(1).
- Reuben, R. C., S.L. Sarkar, H. Ibnat, M.A.A. Setu, P.C. Roy, dan I.K. Jahid. 2021. *Novel multi-strain probiotics reduces Pasteurella multocida induced fowl cholera mortality in broilers*. Scientific Reports. 11: 1-16.
- Rizal, Y. 2006. Ilmu Nutrisi Unggas. Andalas University Press. Padang.
- Robledo-Cardona, S., S. Ramírez-Hincapie, dan J. Correa-Álvarez. 2018. *Implementation of a non-invasive bioprospecting protocol for isolation of lactobacillus from feces of hens under foraging conditions*. Ingeniería y Ciencia. 14 (28): 93-111.
- Rodríguez , E., J.L. Arqués, R. Rodríguez, M. Nuñez, dan M. Medina. 2003. *Reuterin production by Lactobacilli isolated from pig faeces and evaluation of probiotic traits*. Lett. Appl. Microbiology. 37(3): 259-263.
- Röhe, I., F. Metzger, W. Vahjen, G.A. Brockman, dan J. Zentek. 2020. *Effect of feeding different levels of lignocellulose on performance, nutrient digestibility, excreta dry matter, and intestinal microbiota in slow growing broilers*. Poultry Science. 99: 5018-5026.

- Rosselli, R., O. Romoli, N. Vitulo, A. Vezzi, S. Campanaro, F. Pascale, R. Schiavon, M. Tiarca, F. Poletto, G. Concheri, G. Valle, dan A. Squartini. 2016. *Direct 16S rRNA-seq from bacterial communities: a PCR-independent approach to simultaneously assess microbial diversity and functional activity potential of each taxon*. Scientific reports. 6.
- Rumiyani, T., Wihandoyo, dan J.H.P. Sidadolog. 2011. Pengaruh pemberian pakan pengisi pada ayam broiler umur 22-28 hari terhadap pertumbuhan, dan kandungan lemak karkas dan daging. Buletin Peternakan. 35(1): 38-49.
- Saarela, M., G. Mogensen, R. Fondén, J. Mättö, T. Mattila-Sandholm. *Probiotic bacteria: safety, functional and technological properties*. Journal of Biotechnology. 84(3):197-215.
- Saidin, M. 1999. *Kandungan kolesterol dalam berbagai bahan makanan hewani*. Buletin Penelitian Kesehatan. 27 (2): 224-230.
- Sang-Oh, P., R. Chae-Min, P. Byung-Sung, dan H. Jong. 2013. *The meat quality and growth performance in broiler chickens fed diet with cinnamon powder*. Journal of Environmental Biology. 34: 127-133.
- Sangani, A.K., A.A. Masoudi, dan S.A. Hosseini. 2014. *The effects of herbal plants on mucin 2 gene expression and performance in ascetic broilers*. Iranian Journal of Veterinary Medicine. 8(1): 47-52.
- Santoso. 2002. *Pengaruh tipe kandang dan pembatasan pakan di awal pertumbuhan terhadap performans dan penimbunan lemak pada ayam pedaging unsexed*. JITV. 7(2).84-89.
- Santoso, A. 2011. *Serat pangan (dietary fiber) dan manfaatnya bagi kesehatan*. Magistra 75(XXIII): 35-40.
- Santoso, U., Y. Fenita, Kususiyah, K. Rusdi, E.M. Savitri, dan N.W. Simanjutak. 2020. *Effect of turmeric and garlic inclusion to *Sauropus androgynus*-bay leaves containing diets on performance, and carcass quality of broilers*. Bulletin of Animal Science. 44(4): 233-239.
- Sedláková, J., B. Kocourkova, dan A. Kuban. 2001. *Determination of essential oils content and composition in caraway (*Carum crave L.*)*. Czech J. Food Sci. 19(1): 31-36.
- Serpunja, S., dan I.H. Kim. 2019. *The effect of sodium stearoyl-2-lactylate (80%) and tween 20 (20%) supplementation in low-energy density diets on growth performance, nutrient digestibility, meat quality, relative organ weight, serum lipid profiles, and excreta microbiota in broilers*. Poultry Science. 98: 269-275.

- Shabani, A., V. Jazi, A. Ashayerizadeh, dan R. Barekatin. 2019. *Inclusion of fish waste silage in broiler diets affects gut microflora, cecal short-chain fatty acids, digestive enzyme activity, nutrient digestibility, and excreta gas emission*. Poultry Science. 98: 4909-4918.
- Shariatmadari, F. 2011. *Plans of feeding broiler chickens*. World's Poultry Science Journal. 68:21-31.
- Siahaan, S., R.S. Handayani, dan N.K. Aryastami. 2017. *Improving the use of Curcuma aeruginosa Roxb. as anthelmintic for children in Bogor Regency*. Health Science Journal of Indonesia. 8(2): 95-101.
- Silva, B.C., L.R.C. Jung, S.H.C. Sandes, L.B. Alvim, M.R.Q. Bomfim, J.R. Nicoli, E. Neumann, dan A.C. Nunes. 2013. *In vitro assessment of functional properties of lactic acid bacteria isolated from faecal microbiota of healthy dogs for potential use as probiotics*. Beneficial Microbes. 4(3):267-75.
- Simoh, S., dan A. Zainal. 2015. *Chemical profiling of Curcuma aeruginosa Roxb. rhizome using different techniques of solvent extraction*. Asian Pacific Journal of Tropical Biomedicine. 5(5): 412-417.
- Sinurat, A. P., S. Bahri, S. Muharsini, W. Puastuti, A. Priyanti, I. S. Nurhayati, dan Priyono. 2017. *Kebijakan Pengendalian Penggunaan Antibiotic Growth Promoters dan Ractopamine Dalam Mendukung Keamanan Pangan Nasional*. Pusat Penelitian dan Pengembangan Peternakan. Bogor.
- Sjofjan, O. 2006. *Efek penggunaan probiotik (Lactobacillus sp.) sebagai aditif pakan terhadap kualitas telur*. Jurnal Ilmu-ilmu Hayati. 18 (1). Abstrak.
- Sobrun, Y., A. Bhaw-Luximon, D. Jhurry, dan D. Puchooa. 2012. *Isolation of lactic acid bacteria from sugar cane juice and production of lactic acid from selected improved strains*. Advances in Bioscience and Biotechnology. 3: 398-407.
- Soeparno. 2015. *Ilmu dan Teknologi Daging*. Gadjah Mada University Press. Yogyakarta.
- Soeripto. 2002. *Pendekatan konsep kesehatan hewan melalui vaksinasi*. Jurnal Litbang Pertanian. 21 (2):48-55.
- Soesatyo, M.H.N.E. 1993. *Mucosal Immunity: Role of gut-associated lymphoid tissue (GALT) in IgA response*. Berkala Ilmu Kedokteran. XXV(4): 173-179.

- Somashekaraiyah, R., B. Shruthi, B.V. Deepthi, dan M.Y. Sreenivasa. 2019. *Probiotic properties of lactic acid bacteria isolated from neera: a naturally fermenting coconut palm nectar*. *Frontiers in Microbiology*. 10:1-11.
- Song, D., Y.W. Wang, Z.X. Lu, W.W. Wang, H.J. Miao, H. Zhou, L. Wang, dan A.K. Li. 2019. *Effects of dietary supplementation of microencapsulated *Enterococcus faecalis* and the extract of *Camellia oleifera* seed on laying performance, egg quality, serum biochemical parameters, and cecal microflora diversity in laying hens*. *Poultry Science*. 98: 2880-2887.
- Standar Nasional Indonesia. 2009. Mutu karkas dan daging ayam. Badan Standardisasi Nasional. Jakarta. SNI 3924:2009.
- Standar Nasional Indonesia. 2013. Bibit niaga (*final stock*) umur sehari/kuri (*day old chick*)-Bagian 1: Ayam ra stipe pedaging. Badan Standardisasi Nasional. Jakarta. SNI 8173.2:2015
- Stromfov, V., A. Laukov, dan A.C. Ouwehand. 2004. *Selection of enterococci for potential canine probiotic additives*. *Veterinary microbiology*. 100(1-2): 107-114.
- Sudarsana, A.A.G.D. 2016. Tanaman obat pada tanaman rumah. Program studi Arsitektur Pertamanan, Fakultas Pertanian, Universitas Udayana.
- Suhendra, C.P., I.W.R. Widarta, dan A.A.I.S. Wiadnyani. 2019. *Pengaruh konsentrasi etanol terhadap aktivitas antioksidan ekstrak rimpang ilalang (*Imperata cylindrica* (L) Beauv.) pada ekstraksi menggunakan gelombang ultrasonic*. *Jurnal Ilmu dan Teknologi Pangan*. 8(2): 27-35.
- Sujarwo, B.A., B.S. Amanto, dan Siswanti. 2015. *Kinetika pengeringan temu hitam (*Curcuma aeruginosa* Roxb.) menggunakan cabinet dryer dengan perlakuan pendahuluan blanching*. *Jurnal Teknologi Hasil Pertanian*. VIII(1). 15-20.
- Sumanto, 2016. *Awareness of the antibiotic growth promoters (AGP) and its application in chicken feed*. *Proceedings of International Seminar on Livestock Production and Veterinary Technology*.
- Sumiati dan Sumirat, A. 2003. *Persentase bobot saluran pencernaan dan organ dalam itik lokal (*Anas platyrhynchos*) jantan yang diberi berbagai taraf kayambang (*Salvinia molesta*) dalam ransumnya*. *Media Peternakan*. 26(1): 11-16.

- Sulandari, S., M.S.A. Zein, S. Paryanti, dan T. Sartika. 2007. Taksonomi dan Asal Usul Ayam Domestikasi. Dalam: Keanekaragaman Sumber Daya Hayati Ayam Lokal Indonesia: Manfaat dan Potensi. LIPI Press. Bogor.
- Sultana, B., F. Anwar, dan M. Ashraf. 2009. *Effect of extraction solvent/technique on the antioxidant activity of selected medicinal plant extracts*. *Molecules*. 14: 2167-2180.
- Suphrom, N., G. Pumthong, N. Khorana, N. Waranuch, N. Limpeanchob, dan K. Ingkaninan. 2012. *Anti-androgenic effect of sesquiterpenes isolated from the rhizomes of *Curcuma aeruginosa* Roxb.* *Fitoterapia*. 83: 864-871.
- Suryana. 2013. *Pemanfaatan keragaman genetic untuk meningkatkan produktivitas itik Alabio*. *J. Litbang Pert.* 32(3):100-111.
- Suryani, L. 2005. *Daya antibakteri infusa umbi temu hitam (*Curcuma aeruginosa* Roxb) terhadap berbagai kuman penyebab diare in vitro*. *Mutiara Medika*. 5(1): 3-14.
- Suryani, E., Nurmansyah, S. Purwiyanti, dan O. Rostiana. 2017. *Pertumbuhan, produktivitas dan kualitas lima belas aksesi kayumanis Ceylon pada dataran sedang Solok Sumatera Barat*. *Buletin Penelitian Tanaman Rempah dan Obat*. 28(2): 105-112.
- Suryanto, E., Z. Bachruddin, N. Anggraini, dan R. Ma'arifani. 2019. *The effect of carbohydrate and protein protection in additional feed on carcass, noncarcass and physical quality on Bligon goat meat*. *The 8th International Seminar on Tropical Animal Production Proceeding*. 135-148.
- Sutrisna, R. 2012. *Pengaruh beberapa tingkat serat kasar dalam ransum terhadap perkembangan organ dalam itik jantan*. *Jurnal Penelitian Pertanian Terpadu*. 12(1): 1-5.
- Syaefudin, A. A., R. Murwani dan Isroli. 2016. *Tepung temu hitam (*Curcuma aeruginosa* Roxb) dalam ransum memperbaiki produktifitas dan high density lipoprotein (HDL) serum itik pedaging Peking*. *Jurnal Ilmu-Ilmu Peternakan* 26 (3): 1 - 5.
- Symeon, G.K., A. Athanasiou, N. Lykos, M.A. Charismiadou, M. Goliomytis, N. Demiris, A. Ayoutanti, P.E. Simitzis, dan S.G. Delingeorgis. 2014. *The effect of dietary cinnamon (*Cinnamomum zeylanicum*) oil supplementation on broiler feeding behaviour, growth performance, carcass traits and meat quality characteristics*. *Ann. Anim. Sci.* 14 (4): 883-895.

- Syukur, H.A., S. Jansen, dan Masfria. 2019. *The effect of herbal extracts and probiotic feeding on productivity and quality of broiler*. Asian Journal of Pharmaceutical Research and Development. 7(3): 5-9.
- Tabak, M., R. Armon and I. Neeman. 1999. *Cinnamon extracts' inhibitory effect on Helicobacter pylori*. Journal Ethnopharmacol. 67(3): 269-277.
- Tahalele, Y., M.E.R. Montong, F.J. Nangoy, dan C.L.K. Sarajar. 2018. *Pengaruh penambahan ramuan herbal pada air minum terhadap persentase karkas, persentase lemak abdomen dan persentase hati pada ayam kampung super*. Ural Zootek. 38(1): 160-168.
- Tarigan, R., O. Sjojfan, dan I. H. Djunaidi. 2007. *Pengaruh penambahan probiotik selulolitik (*Cellulomonas sp*) dalam pakan terhadap kualitas karkas, lemak abdominal, dan bobot organ dalam ayam pedaging*. Jurnal Peternakan.
- Tensiska. 2008. Serat Makanan. Jurusan Teknologi Industri Pangan, Fakultas Teknologi Industri Pertanian. Universitas Padjajaran.
- Thakkar, P., H.A. Modi, dan J.B. Prajapati. 2015. *Isolation, characterization and safety assessment of lactic acid bacterial isolated from fermented food products*. International Journal of Current Microbiology and Applied Sciences. 4(4): 713-725.
- Tilahun, B., A. Tesfaye, D. Muleta, A. Bahiru, Z. Terefework, dan G. Wessel. 2018. *Isolation and molecular identification of lactic acid bacteria using 16S rRNA genes from fermented teff (*eragrostis tef* (zucc.)) Dough*. Hindawi. International Journal of Food Science. <https://doi.org/10.1155/2018/8510620>
- Tillman, A. D., H. Hartadi, S. Reksohadiprodjo, S. Prawirokusumo, S. Lebdoesoekojo. 1998. Ilmu Makanan Ternak Dasar. cetakan ke-6. UGM Press. Yogyakarta.
- Tiquia, S.M. 2002. *Manure composting*. Journal of applied microbiology. 92: 764-775.
- Ulfah, M. 2006. *Potensi tumbuhan obat sebagai fitobiotik multifungsi untuk meningkatkan penampilan dan kesehatan satwa di penangkaran*. Media Konservasi. 11 (3): 109-114.
- Ultee, A., E.P.W. Kets, dan E.J. Smid. 1999. *Mechanisms of action of carvacrol on the food-borne pathogen Bacillus cereus*. Applied and Environmental Microbiology. 4606-4610.

- Umam, M. F., R. Utami, dan E. Widowato. 2012. *Kajian karakteristik minuman sinbiotik pisang kepok (*Musa paradisiaca* forma typical) dengan menggunakan starter *Lactobacillus acidophilus* IFO 13951 dan *Bifidobacterium longum* ATCC 15707*. Jurnal Teknosains Pangan. 1 (1): 2-11.
- Utomo, R. 2015. *Konversi hijauan pakan dan peningkatan kualitas bahan pakan berserat tinggi*. Gadjah Mada University Press. Yogyakarta.
- Ventola, C.L. 2015. *The antibiotic resistance crisis. Part 1: Causes and threats*. P&T. 40 (4): 277-283.
- Verdiana, M., I.W.R. Widarta, dan I.D.G.M. Permana. 2018. *Pengaruh jenis pelarut pada ekstraksi menggunakan gelombang ultrasonic terhadap aktivitas antioksidan ekstrak kulit buah lemon (*Citrus limon* (Linn.) Burn F.)*. Jurnal Ilmu dan Teknologi Pangan. 7(4): 213-222.
- Wahyu, J. 1997. *Ilmu Nutrisi Unggas*. Cetakan ke-4. UGM Press. Yogyakarta
- Wang, C., P. Lin, C. Ng, dan Y. Shyu. 2010. *Probiotic properties of *Lactobacillus* strains isolated from the feces of breast-fed infants and Taiwanese pickled cabbage*. Anaerobe. 16(6): 578-85.
- Wang, K., H. Zhang, J. Feng, L. Ma, C. Nunez, S. Wang, and X. Lu. 2019. *Antibiotic resistance of lactic acid bacteria isolated from dairy products in Tianjin, China*. Journal of Agriculture and Food Research. 1: 1-5.
- Wardinal, Safika dan Y.S. Ismail. 2019. *Identifikasi *Lactobacillus* sp pada orangutan sumatera (*Pongo abelii*) liar menggunakan kit API 50 CHL di Stasiun Penelitian Suaq Belimbing Aceh Selatan*. Jurnal Biotik. 7(1): 49-56.
- Wichienchot, S., P. Thammarutwasik, A. Jongjareonrak, W. Chansuwan, P. Hmadhlu, T. Hongpattarakere, A. Itharat, dan B. Ooraikul. 2011. *Extraction and analysis of prebiotics from selected plants from southern Thailand*. Songklanakarin J. Sci. Technol. 33(5): 517-523.
- Widarta, I.W.R. 2017. *Teknologi Telur*. Pusat Studi Ilmu dan Teknologi Pangan. Universitas Udayana.
- Widodo, T.T. Taufiq, E. Aryati, A. Kurniawati, dan W. Asmara. 2012. *Human origin *Lactobacillus casei* isolated from Indonesian infants demonstrating potential characteristics as probiotics in vitro*. Indonesian Journal of Biotechnology. 17 (1): 79-89.

- Widodo, T.D. Wahyuningsih, A. Nurrochmad, E. Wahyuni, T.T. Taufiq, N.S. Anindita, S. Lestari, P.A. Harsita, A.S. Sukarno, dan R. Handaka. 2017. *Bakteri Asam Laktat Srain Lokal: Isolasi sampai Aplikasi sebagai probiotik dan starter fermentasi susu*. UGM Press. Yogyakarta.
- Widyasari, D.N., N. Ulupi, R. Afnan, R. Mutia, dan J.A. Lase. 2021. *Performance and quality of broiler meat during transportation with various durations and ZnSO₄ level*. *Buletin Peternakan*. 45(3): 170-176.
- Wiryanan, K. G., S. Suharti, dan M. Bintang. 2005. *Kajian antibakteri temulawak, jahe, dan bawang putih terhadap Salmonella typhimurium serta pengaruh bawang putih terhadap performans dan respon imun ayam pedaging*. *Media Peternakan*. 28 (2): 52-62.
- Yamazaki, D.M., H. Ohtsu, Y. Yakabe, M. Kishima, dan H. Abe. 2012. *In vitro screening of Lactobacilli isolated from chicken excreta to control Salmonella enteritidis and Typhimurium*. *British poultry science*. 53 (2): 183-189. <https://doi.org/10.1080/00071668.2012.678814>
- Yanti, A.H., T.R. Setyawati, dan R. Kurniatuhadi. 2020. *Isolation and characterization of lactic acid bacteria from fecal pellets, coelomic fluid, and gastrointestinal tract of Nypa worm (Namalycastis rhodochorde) from West Kalimantan, Indonesia*. *Biodiversitas* 21(10): 4126-4731.
- Yuhendra, Muslim, dan Darmiwati. 2021. *Efek pemberian tepung kulit kayu manis (Cinnamomum burmannii) feed additive ransum terhadap performans ayam broiler*. *Journal of Animal Center*. 3(1): 24-32.
- Yun, J.H., K.B. Lee, Y.K. Sung, E.B. Kim, H. Lee., dan Y.J. Choi. 2009. *Isolation and characterization of potential probiotic Lactobacilli from pig feces*. *J. Basic Microbiol*. 49(2): 220-226.
- Yun-feng, Y., Z. Lu-lu, S. Yu-xin, L. Xiu-dong, Z. Li-yang, L. Lin, dan L. Xu-gang. 2019. *Effects of dietary graded levels of cinnamon essential oil and its combination with bamboo leaf flavonoid on immune function, antioxidative ability and intestinal microbiota of broilers*. *Journal of Integrative Agriculture*. 18(9): 2123-2132.
- Yuwanta, T. 2000. *Dasar Ternak Unggas*. Fakultas Peternakan UGM. Yogyakarta.
- Yuwanta, T., Zuprizal, E.S. Rahayu, dan R. Sutrisna. 2003. *Kontribusi pencernaan fermentative itik yang menggunakan limbah industri pertanian sebagai sumber serat kasar dalam ransum*. Lembaga Penelitian UGM.
- Zaragoza, F.T. 2016. *Classification of food spices by proximate content: principal component, cluster, meta-analyses*. *Nereis* 8: 23-33.

- Zhang, Z.F. dan I.H. Kim. 2014. *Effects of multistrain probiotics on growth performance, apparent ileal nutrient digestibility, blood characteristics, cecal microbial shedding, and excreta odor contents in broilers*. Poultry Science. 93 (2): 364-370. doi: 10.3382/ps.2013-03314.
- Zhang, Z., X. Peng, S. Li, N. Zhang, Y. Wang, dan H. Wei. 2014. *Isolation and identification of quercetin degrading bacteria from human fecal microbes*. Plos One 9(3): 1-5.
- Zhao, P.Y., H.L. Li, M. Mohammadi, dan I.H. Kim. 2016. *Effect of dietary lactulose supplementation on growth performance, nutrient digestibility, meat quality, relative organ weight, and excreta microflora in broilers*. Poultry Science. 95: 84-89.
- Zuprizal. 2006. *Nutrisi Unggas*. Fakultas Peternakan Universitas Gadjah Mada. Yogyakarta.
- Zurmiati, Wizna, M. H. abbas, M. E. Mahata, dan R. Fauzано. 2017. *Effect of Bacillus amyloliquefaciens as a probiotic on growth performance parameters of Pitalah ducks*. Int. J. Poult. Sci. 16 (4): 147-153.