

## DAFTAR PUSTAKA

- Abdurrahman, Z, H, Yuli Y. 2018. Gambaran Umum Pengaruh Probiotik dan Prebiotik pada Kualitas Daging Ayam. Jurnal ternak Tropika. Vol: 19, No. 2 pp. 95-104. DOI: 10.21776/ub.jtapro.2018.019.02.4
- Ahrens, K. E. S., P. Ade, B. Marten, P. Weber, W. Timm, Y. Asil, C. C. Gluer, and J. Schrezenmeir. 2007. Prebiotics, probiotics, and synbiotics affect mineral absorption, bone mineral content, and bone structure. *J. Nutr.* 137: 838S-846S.
- Alakomi, H. L., E. Skytta, M. Sarrela, dan S. Maffila. 2000. Lactic acid permeabilizes Gram negatif bacteria by disrupting the outer membrane. *Journal App Environt Microbial*, 66: 2001-2005.
- Ali FHM. Probiotic fed supplement to improve quality of broiler chicken carcasses. *World J Dairy Food Sci*, 2010; 5:93–9.
- Allen, S.J., E.G. Martinez, G.V. Gregorio, dan L.F. Dans. 2011. Probiotics for treating acute infectious diarrhea, Sao Paulo Medical Journal halaman 185.
- Alloui, M. N., Szczurek, W., & Świątkiewicz, S. 2013 . The usefulness of prebiotics and probiotics in modern poultry nutrition: a review / przydatność prebiotyków i probiotyków w nowoczesnym żywieniu drobiu – przegląd. *Annals of Animal Science*, 13(1), 17–32. <https://doi.org/10.2478/v10220-012-0055-x>.
- Almatsier,S. 2002. *Prinsip Dasar Ilmu Gizi*. Penerbit PT Gramedia Pustaka Utama. Jakarta.
- Altaher, Y.W, Jahromi M.P, Ebrahim R, Zulkifli, Liang J.B. 2015. *Lactobacillus Pentosus* ita 23 and *L.Acidipisca* ita 44 Enhabce Feed Conversion Efficiency and Beneficial Gut Mikrobiota in Broiler Chickens. *Brazilizn Journal of Poultry Science*. Vol.17. hal 159-164.
- Amrullah, I. 2006. Nutrisi Ayam Broiler. Lembaga Satu Gunung Budi.(Vols. Cetakan ke-3). Bogor.
- Amrullah, I.K. 2004. Nutrisi Ayam Broiler. Lembaga Satu Gunung Budi, Bogor.
- Anggorodi, R. 1994. Kemajuan Mutakhir Dalam Ilmu Makanan Ternak. Cetakan Pertama. Universitas Indonesia Press, Jakarta.
- Anggorodi, R. 1985. Kemajuan Mutakhir dalam Ilmu Makanan Ternak Unggas. Universitas Indonesia Press, Jakarta.

- Anjum, M.I., A.G. Khan, A.Azim dan M. Afzal. 2005. Effect of dietary supplementation of multistrain probiotic on broiler growth performance. Pakistan.
- Arief, I. I., C. Budiman, B. S. L. Jenie, E. Andreas, & A. Yuneni. 2015. *Plantaricin* IIA-1A5 from *Lactobacillus plantarum* IIA-1A5 displays bactericidal activity against *Staphylococcus aureus*. *Benef Microbes*. 6(4): 603-613.
- Aritonang, S.N., E. Roza, E. Rossi, E. Purwati, dan Husmaini. 2017. Isolation and identification of lactic acid bacteria from okara and evaluation of their potential as candidate probiotics. *Pakistan Journal of Nutrition*, 16 (8), 618-628.
- Astuti, F. K, Woro B, Osfar S. 2015. Pengaruh Penambahan Probiotik Cair Dalam Pakan Terhadap Penampilan Produksi Pada Ayam Pedaging. *J-PAL*, Vol. 6, No. 2. SSN: 2087-3522E-ISSN: 2338-1671.
- Astuti dan R. Ana. 2010. *Asimilasi Kolesterol dan Dekonjugasi Garam Empedu Oleh Bakteri Asam Laktat (BAL) dari Limbah Kotoran Ayam secara in vitro*. Prosiding Seminar Nasional Penelitian, Pendidikan dan Penerapan MIPA Fakultas MIPA, Universitas Negeri Yogyakarta, 15 Mei 2010.
- Awad W, Ghareeb K, Abdel-Raheem S, Böhm J. 2009. Effects of dietary inclusion of probiotic and synbiotic on growth performance, organ weights, and intestinal histomorphology of broiler chickens. *Poult Sci*. 88(1):49-56.
- Babot JD, Argañaraz-Martínez E, Lorenzo-Pisarello MJ, Apella MC, Perez-Chaia A. 2017. Lactic acid bacteria isolated from poultry protect the intestinal epithelial cells of chickens from in vitro wheat germ agglutinin-induced cytotoxicity. *Br Poult Sci*.58(1):76-82.
- Bell, D. D.,and W. D. Weaver. 2002.Comercial Chicken Meat and Egg Production.5thEdition.SpringerScience and Business Media, Inc, New York.
- Boke, H.,B. Aslim and G. Alp.2010. The role of resistance to bile salt and acid tolerance of exopolysaccharides (EPSS) produced by yogurt stater bacteria. *Arch. Biol. Sci.* 62:323-328.
- Bouzaine, T. R.D. Dauphin, Ph. Thonart, M. C. Urdaci, M. Hamdi. 2005. Adherence and colonization properties of *Lactobacillus rhamnosus* TB1, a broiler chicken isolate. *Journal of Applied Microbiology*. Volume 40, Issue 5.
- Buckle, K.A., R. A. Edwards., G. H. Fleet and M. Wootton.2007. Ilmu Pangan, Terjemahan Hari Purnomo dan Adino. Universitas Indonesia.Jakarta.
- Bustos, A. Y., G. F. Valdez. S. Fandda and M. P. Taranto. 2018. New insight into bacterial bile salt hydrolase and its impact on human health. *Food Research Internasional*. 112: 250-262.

- Charoen Pokphand Indonesia. 2006. Manajemen broiler modern. Kiat-kiat memperbaiki FCR. Technical Service dan Development Departement, Jakarta.
- Collado MC, Surono IS, Jussi Meriluoto, Seppo Salminen. 2007. Indigenous dadih lactic acid bacteria: Cell-surface properties and interactions with pathogens, *J Food Sci* 72: 89-93. DOI: 10.1111/j.1750-3841.2007.00294.x.
- Dankowiakowska, A., Kozlowska, I., & Bednarczyk, M. (2013). Probiotics, Gambaran Umum Pengaruh Probiotik dan Prebiotik pada Kualitas Daging Ayam *J Journal of Central European Agriculture*, 14(1), 467–478. <https://doi.org/10.5513/JCEA01/14.1.1222>.
- Davis WW & Stout TR. 2009. Disc Plate Method of Microbiological Antibiotic Assay. *Applied and Environmental Microbiology*. vol. 22 (4): 666-670.
- Dawson, W.R. dan G.C. Whittow.2000. Regulation of body temperature. In: G.C.Whittow, (eds). Sturkie's Avian Physiology. Academic Press. San Diego. P.299-325.
- Dewanti, R. Dan A. C. L. Wong. 1995. Influence of culture conditions on biofilm formation by Escherichia coliO157:H7. *Intl. J. Food Mikrobiol.* 26: 147.
- Ditjennak. 2017. Buku Statistik Peternakan tahun 2017. Direktorat Jendral Peternakan, Departemen Pertanian, Jakarta.
- Druyan S., M. Ruzal, D. Shinder and A. Haron. 2018. Effects Of Low Oxygen During Chorioallantoic Membrane Development On Post-Hatch Growing Performance Of Broiler Chickens. Poultry Science Association Inc. Accepted January 23, 2018.
- Duraisamy, K. M Senthil Kumar, and K. Mani. 2013. Effect of saturated and unsaturated fat om the performance, serum and meatcholesterol level in broiler. *Vet. World* 6(3): 159-162, doi:10.5455/vetworld.2013.159-162.
- Fadda, M. E., Valentina, M., Maura, D., Maira, B. P., Sofia, C. 2017. In vitro screening of *Kluyveromyces* strains isolated from fiore sardo cheese for potential use as probiotics. Department of Public Health. Clinic and Molecular Medicine, University of Cagliari. Cittadela Universitaria. Monserrato, Italy. *LWT – Food Science and Technology* 75: 100-106, <http://dx.doi.org/10.1016/j.lwt.2016.08.020>.
- Fauziah PN, Nurhajati J, Chrysanti. 2014. Daya Antibakteri Filtrat Asam Laktat dan Bakteriosin *Lactobacillus bulgaricus* KS1 dalam Menghambat Pertumbuhan *Klebsiella pneumoniae* Strain ATCC 70603, CT1538, dan S941. *MKB*. vol 47 (1): 35-41.

- Fuller, R. 2002. Probiotic- What They Are and What They do. What they and what do, html
- Fuller, R 1992. History and development of probiotics. In: Fuller, R. (Ed). Probiotics The Scientific Basis. Chapman & Hall. London.
- Fuller, R. 1989. Probiotic in man and animal. J Appl. Bacteriol.,66: 365-378.
- Gordon, S.H., Bhogal, A. and Walker, A.W. (2002) Integration of organic poultry in whole farm systems: manure nutrient budgets. From: Powell et al. (Eds), UK Organic Research 2002: Proceedings of the COR Conference, 26 March 2002, Aberystwyth: 237-242.
- Gordont, R.T. dan T.W. Jordan . 1992. Poultry Disease. 2<sup>nd</sup> ed. El Bs. London.
- Guan X, Qingxian X, Yi Z, Lei Q, Bin L. 2017. Screening and characterization of lactic acid bacterial strains that produce fermented milk and reduce cholesterol levels. Braz J Microbiol, Vol; 48(4): 730–739.
- Halim, C.N., Zubaidah, E. 2013. Studi Kemampuan Probiotik Isolat Bakteri Asam Laktat Penghasil Eksopolisakarida Tinggi Asal Sawi Asin (*Brassica juncea*). Jurnal Pangan dan Argoindustri. 1(1):129-137.
- Hammes WP, Vogel RF. 1995. The Genera of Lactic Acid Bacteria. Wood BJB,Hopzapfel WH: Editor. Blackie Academic and Professional, Glasgow.
- Hammond. 1994. The Effect of *Lactobacillus acidophilus* on the production and chemical composition of hen eggs. Poultry Sci.75:491-494.
- Hansen, R. S. end W. A. Becker. 1959. Feeding Space, Population Density and Growth of Young Chikens. Scientifict Paper No. 1885, Washington Agricultural Experiment Stations, Pullman. Project No. 1342.
- Hardiningsih, R., Napitupulu, R.N.R dan Yulinery, T., 2006. Isolasi dan uji resistensi beberapa isolat *Lactobacillus* pada pH rendah. Biodiversitas 7(1): 15-17.
- Hardjosworo, P. S. dan Rukmiasih. 2000. Meningkatkan Produksi Daging Unggas. Penebar Swadaya, Depok.
- Haryanto, R. 2005. Antara Antibiotik, Probiotik dan Prebiotik. Asisten mobil lab Basic Science Center ITB, Bandung.
- Hidayat, M. 2010. Efektivitas probiotik *bacillus spp* terhadap performan ayam pedaging. <http://lambungsatu>. Blogspot.com/2010/04/efektivitas-probiotik-bacillus-spp.html.

- Huang, M.K., Y.J. Choi, R. Houde, J.W. Lee, B. Lee and X. Zhao, 2004. Effects of *Lactobacilli* and *anacidophilic* fungus on the production performance and immune responses in broiler chickens. *Poult.Sci.*, 83: 788-795.
- Hung AT, Lin S-Y, Yang T-Y, Chou C-K, Liu H-C, Lu J-J, Wang B, Chen S-Y, Lien T-F. 2012. Effects of *Bacillus coagulans* ATCC 7050 on growth performance, intestinal morphology, and microflora composition in broiler chickens. *Anim Prod Sci.* 52(9):874-879.
- Husmaini, 2012. Potensi *Lactococcus Plantarum* isolat limbah pengolahan virgin Coconut Oil (Blondo) sebagai probiotik dan aplikasinya untuk meningkatkan performans unggas. Disertasi. Universitas Andalas. Padang.
- Husmaini, Abbas, M.H., Purwati, E., Yuniza, A and Alimon, A.R., 2011. Growth and survival of lactic acid bacteria isolated from by product of virgin coconut oil as probiotic candidate for poultry. *Internasional journal of poultry science* 10(4): 309-314.
- Hutkins, Robert W. 2006. Mikrobiology and Technology of Fermentasi Food. Oxford, Ukarblackwell Publishing Ltd.
- Huyghebaert, G., Ducatelle, R., van Immerseel, F. 2011. An update on alternatives to antimicrobial growth promoters for broilers. *The Veterinary Journal* 187:182-188.
- Jahromi, M. F., Y. W. Altaher, P. Shokryazdan, R. Ebrahimi, M. Ebrahimi, Z. Idrus, V. Tufarelli and J. B. Liang. 2015. Dietary Supplementation Of A Mixture Of *Lactobacillus* Strains Enhance performance Of Broiler Chickens Raised Under Heat Stress Conditions. *Int J Biometeorol.* Publish online: 22 November 2015.
- Jain, N., A. Mehta, and A. Bharti. 2017. Screening characterization and in vitro evaluation of probiotics of *Lactobacillus* strain. *Asian Journal of Pharmaceuticals and Clinical research.* Vol 10(8).
- James RG. 1992. Livestock and Poultry Production. 4th Edition. The Avi Publishing Co, Inc. Wesport. Conecticut.
- Jeevaratnam K, Jamuna M, Bawa AS. 2005. Biological preservation of foods- bacteriocins of lactic acid bacteria Indian J Biotechnol. Vol (4) page: 446-454.
- Jenie, S.L., dan Shinta E. Rini. 1995. Aktivitas Antimikroba dari Beberapa Spesies *Lactobacillus* terhadap Mikroba Patogen dan Perusak Makanan. *BuletinTeknologi dan Industri Pangan*, 7(2) : 46-51.
- Jeong J, Kim I. 2014. Effect of *Bacillus subtilis* C-3102 spores as a probiotic feed supplement on growth performance, noxious gas emission, and intestinal microflora in broilers. *Poult Sci.* 93(12):3097-3103.

- Kabir SML. 2009. The Role of probiotics in the poultry industry. *Int J Mol Sci.* 10:3531-3546.
- Kalavathy, R., N. Abdullah, S. Jalaludin and Y. W. Ho. 2003. Effect of *Lactobacillus* cultures on growth performances, abdominal fat deposition, serum lipids and weight of organs of broiler chickens. *British Poultry Science.* Vol. 44, No. 1: 139-144.
- Kartasudjana, R. dan E. Suprijatna. 2006. *Manajemen Ternak Unggas.* Penebar Swadaya.Jakarta
- Kheravii, S.K, R.A. Swick, M. Choct, S, B. Wu. 2017. Effect of oat hulls as a free choice feeding on broiler performance, short chain fatty acids and microflora under a mild necrotic enteritis challenge. *Animal Nutrition Journal.*doi:10.1016/j.aninu.2017.11.003.
- Khiralla, G. M, Eman. A.H. Mohamed, Azza G. Farag, Hesham Elhairy. 2015. Antibiofilm effect of *Lactobacillus pentosus* and *Lactobacillus plantarum* cell-free supernatants against some bacterial pathogens. *Journal of Biotech Research [ISSN: 1944-3285].*
- Kimoto. 2000. *Lactobacillus acidophilus* bacteriocin, from production to their application: an overview. *J Biotechnol* 9:2843-2850.
- Kirby, B. 2009. Kirby-Bauer Disk Diffusion Susceptibility Test Protocol. *American Society for Microbiology.*66,208.
- Kompiang, I. P. 2009. Pemanfaatan mikroorganisme sebagai probiotik untuk meningkatkan produksi ternak unggas di Indonesia. *Pengembangan Inovasi Pertanian* 2 (3): 177-191.
- Kompiang, I.P. 1999. Pengaruh suplementasi kultur *bacillus sp.* Melalui pakan atau air minum terhadap kinerja ayam petelur. *Jurnal Ilmu Ternak dan Veteriner. Pusat Penelitian Dan Pengembangan. Balitbang. Deptan Bogor.*
- Lee, J., Y. Kim, H. S. Yun, J. G. Kim, S. Oh dan S. H. Kim. 2009. Genetic and proteomic analysis of factors affecting serum cholesterol reduction by *Lactobacillus acidophilus* A4. *Applied and Environmental Microbiology.* Vol. 76(14): 4829-4835.
- Lee, Y.K. dan S. Salminen.2009. *Handbook of Probiotics and Prebiotics.* 2<sup>nd</sup> eds. Jhon Willeys abd Sons. Inc. New Jersey.
- Leeson, S dan J.D. Summer, 2001. *Commercial Poultry Nutrition.* 3<sup>rd</sup> Depart of Animal Science University of Guelph. Ontario Canada.
- Lei X, Ru Y, Zhang H. 2014. Effect of *Bacillus amyloliquefaciens*-based direct-fed microbials and antibiotic on performance, nutrient digestibility, cecal

- microflora, and intestinal morphology in broiler chickens. *J Appl Poult Sci.* 23(3):486-493.
- Levi L, Pekarski I, Gutman E, Fortina P, Hyslop T, Biran J, Levavi B, Lubzens E 2009. Revealing genes associated with vitellogenesis in the liver of the zebrafish (*Danioerio*) by transcriptome profiling. *Licensee BioMed Central.* 10:141.
- Lin WH, Hwang CF, Chen Lw, Tsen HY. 2006. Viaable counts, characteristic evaluation for commersial lactic acid bakteri product [Short Communication]. *Food Microbiol* 23: 74-81. Doi:10.1016/j.foodcont.2008.08.019.
- Liong, M.T and N.P. Shah. 2005. *Bile Salt Deconjugation Ability, Bile Salt Hydrolase Activity and Cholesterol Co-precipitation Ability of Lactobacillus Strains*. International Dairy Journal. Vol. 15: 391-398.
- Lisal. J.S. 2005. Konsep probiotik dan prebiotik untuk modulasi mikrobiota usus besar. *J.Med. Nus.* 26(24):259-262.
- Mabelebele, M., Alabi, O.J., Ng'ambi, J.W., Norris, D and Ginindza,M.M., 2013. Comparison of gastrointestinal tracts and pH value od digestive organs of ross 308 broiler and indigenous venda chickens fed the same diet. *Asian journal of animal and veterinary advance* pp 1-6.
- Manik, A. K., L. Adriani and D. Latipudin. 2017. The Effect Of Fermented Milk, Soy Milk And The Combination Of It On Meat Cholesterol And Intestine Ph Of Broiler. *Scientific Papers. Series D. Animal Science.* Vol. LX, 2017.
- Manin F., E. Hendalia, Yusrizal dan Yatno.2010. Penggunaan Sinbiotik Yang Berasal Dari Bungkil Inti Sawit dan Bakteri Asam Laktat Terhadap Performans dan Status Kesehatan Ternak Ayam Broiler. *Penelitian Hibah Bersaing Tahun 2010. Fakultas Peternakan Universitas Jambi.*
- Maslami, V. 2019. Isolasi dan seleksi bakteri asam laktat asal angan fermentasi Sumatera Barat penghasil asam glutamate dan aplikasinya dalam meningkatkan performans dan kualitas karkas. *Disertasi. Fakultas Pertanian. Universitas Andalas.*
- Mc Naught, C.E., dan J. MacFie, 2000. Probiotics in clinical practice: a critical review of the evidence. *Nutr. Research* 21 (2001) 343-353.
- Melia, S. 2018. Potensi isolate bakteri asam laktat dari susu kerbau sebagai probiotik dan penghasil bakteriosin untuk pangan fungsional. *Disertasi. Fakultas Peternakan. Universitas Andalas.*
- Mirghelenj A., Sh. R. Ahimi, dan M. A. Kamali. 2004. Effect of omega-3 fatty acid sources in laying hen diets on blood plasma Cholesterol. *Journal Poultry Sci.* 352.

- Molenaar, R., 2012. The importance of the brooding period. World's Poultry Congress 24 :1-6
- Montgomery, R., R. L. Dryer, T.W. Conway, dan A.A. Spector. 1993. Biokimia Suatu Pendekatan Berorientasi Kasus. Terjemahan oleh M. Ismadi. Gadjah Mada University Press, Yogyakarta.
- Mountzouris K, Tsitsikos P, Palamidi I, Arvaniti A, Mohnl M, Schatzmayr G, Fegeros K. 2010. Effects of probiotic inclusion levels in broiler nutrition on growth performance, nutrient digestibility, plasma immunoglobulins, and cecal microflora composition. *Poult Sci.* 89(1):58-67.
- Mountzouris, K. C., I. Palamidi, P. Tsitsikos, M. Mohnl, G. Schatzmayr and K. Fegeros. 2015. Effect Of Dietary Inclusion Level Of A Multi-Species Probiotic On Broiler Performance And Two Biomarkers Of Their Caecal Ecology. *Animal Production Science*, 2015, 55, 484–493.
- Muwarni, R. 2008. Adiktif Pakan: Aditif Pakan Pengganti Antibiotika. UNNES Press, Semarang.
- Nelintong N. 2015. Aktivitas Antibakteri Susu Probiotik *Lactobacilli* Terhadap Bakteri Penyebab Diare (*Escherichia coli*, *Salmonella typhimurium*, *Vibrio cholerae*). *Jurnal Farmasi dan Ilmu Kefarmasian Indonesia*. vol. 2 (1): 25-30.
- Nissen L, Chingwaru W, Sgorbati B. 2009. Gut health promoting activity of new putative probiotic/protective *Lactobacillus* spp. Strains: A functional study in the small intestinal cell model. *J Food Microbiol* 135: 288-94. DOI: 10.1016/j.ijfoodmicro.2009.08.027.
- Noh, D. O., S. H. Kim dan S. E. Gilliland. 1997. Incorporation cholesterol into the cellular membrane of *Lactobacillus acidophilus* ATCC 43121. *Journal Dairy Science*. Vol. 80: 3107-3113.
- North, M. O. 1990. Commercial Chicken Production. The Avi Publishing, Corp. Inc Wesport. Connecticut.
- NRC.1994. Nutrients Requirements of Poultry 14<sup>th</sup> Ed. National Academy Press, Washington, D.C.
- Nuraida L. 2015 Health Promoting Lactic Acid Bacteria in Traditional Indonesia Fermented Foods. *J.Food Science and Human Weilness*. 4: 47-45.
- Ohimain, E.I dan R.T.S. Ofongo. 2012. The Effect of Probiotic and Prebiotic Feed Suplementation on Chicken Health and Gut Microflora: A Review. *Internasional Journal of Animal and Veterinary Advances* 4(2): 135-143.

- Ooi, L. G. dan M.T. Liong. 2010. Cholesterol-Lowering Effects of Probiotics and Prebiotics: A Review of *in Vivo* and *in Vitro*. *Int. J. Mol. Sci.* 11(6): 2499-2522.
- Patterson, J. A. and K.M. Burkholder. 2003. Application of Prebiotics and Probiotics in Poultry Production. *Pault.J. Anim. Sci.* 82:627-631.
- Pelczar, Michael J dan Chan, E. C. S. 2008. Dasar-Dasar Mikrobiologi Jilid I. Jakarta: UI Press.
- Pelinescu, D.R., E. Sasarman, M. Carmen, Chifiriuc, I. Stoica, A. M. Nohit, I. Avram, F. Serbancea, and T.V. dimov. 2009. Isolation and identification of some *Lactobacillus* and *Enterococcus* strain by a polyphasic taxonomical approach. *Romanian Biotechnological Letters*. Vol 14 (2): 4225-4233.
- 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. *Poultry Science* 0:1–8.
- Peraturan Menteri Pertanian Republik Indonesia. 2017. Nomor14/PERMENTAN/PK.350/5/2017 Tentang Klasifikasi Obat Hewan. Menteri Pertanian Republik Indonesia. Jakarta.
- Phumkhachorn, P. dan Rattanachaikunsopon, P. (2010). Lactic acid bacteria: their antimicrobial compounds and their usus in food production. *Annals of Biological Research* 1 (4): 1-8.
- Poppi LB, Rivaldi JD, Coutinho TS, Ferreira ACS, Ferreira AJP, Mancilha IM. 2015. Effect of *Lactobacillus* sp. Isolates Supernatant on *Escherichia coli* O157:H7 Enhances the Role of Organic Acids Production as a Factor for Pathogen Control. *Pesq Vet Bras.* vol 35 (4): 353-359.
- Potocnjak, M., Pusic, Frece, J., Abram, M., Jankovic, T. and Gobin, I., 2017. Three new *Lactobacillus plantarum* strains in the probiotic toolbox against gut pathogen *Salmonella* enteric serotype Typhimurium. *Food technology and biotechnology*, 55 (1), pp 48-54.
- Prasetyo, R. P., Santosa, S. S., & Iriyanti, N. (2013). Penggunaan level pakan fungsional terhadap kadar lemak dan protein daging ayam broiler. *Jurnal Ilmu Peternakan*, 1(1), 289–289.
- Prescott, L. M., J.P, Harley and D.A. Klein. 2002. Laboratory exercises in microbiology. McGraw-Hill Companies.
- Purwati, E, Husmaini, S. Syukur, Y. Murni, dan F. Othman. 2006. *Lactobacillus* sp. Isolasi dari blondo virgin coconut oil efektif sebagai probiotik. Proceding

Seminar Hasil Penelitian Ilmu-Ilmu Pertanian BKS Wilayah Barat. Jambi, 26-28 April 2006.

- Purwati, E. S. Syukur, dan Z. Hidayat. 2005. *Lactobacillus sp.* isolasi dari *Bivicophitomega* sebagai probiotik. Di dalam Proceeding Lembaga Ilmu Pengetahuan Indonesia, Jakarta 24-25 Januari 2005.
- Rafian, A. 2003. Penampilan Ayam Broiler dan Komposisi Kimia Karkas dengan Perlakuan Pembatasan Konsumsi Energi pada Awal Fase Starter. *Skripsi*. Fakultas Peternakan Universitas Gajah Mada. Yogyakarta.
- Rasyaf, M. 2008. Panduan Beternak Ayam Pedaging. Jakarta: Penebar Swadaya.
- Rasyaf. 2009. Panduan Beternak Ayam Petelur. Cetakkan ke-2. Penebar Swadaya, Jakarta.
- Rasyaf ,M. 2003. Beternak ayam Pedaging. Penebar Swadaya. Jakarta
- Rasyaf, M. 1989. *Memelihara Ayam Buras*. Edisi ke I. Kanisius: Yogyakarta
- Ray, B. 1996. Fundamental of Microbiology. CRC Press. Boca Ration. Florida.
- Resta, S. C. 2009. Effects of Probiotics and Commensals on Intestinal Epithelial Physiology: Implications for Nutrient Handling. *J. Physiol.* 587:4169-4174.
- Rodríguez-Lecompte J.C., Brady J., Camelo-Jaimes G., Sharif S., Crow G., Ramirez-Yanez G., Guenter W. and House J.D. 2010. Intestinal characterization of avian defensins and cytokines after the early administration of probiotic with organic acids in broilers. Avian Immunology Research Group. Budapest, Hungary.
- Rossi, E., Roza, E., Yurnalis, S., Aritonang, S. N., and Purwati, E., 2018. Characterization of Probiotics Properties of *Lactobacillus* from Solid Waste of Soy Milk Production. *Asian Jr. of Microbiol. Biotech. Env. Sc.* Vol. 20, No. (3) :2018: 718-724.
- Rossi, Evi. 2018. Potensi Isolat Bakteri Asam Laktat dari Limbah Padat Pembuatan Susu Kedelai Sebagai Probiotik dan Pengawet Alami pada Pangan Fungsional. Disertasi, Universitas Andalas.
- Saidin, M. 2000. Kandungan Kolesterol dalam Berbagai Bahan Makanan Hewani. *Bul. Penelit. Kesehatan.* 27 (2) 1999/2000.
- Salma U, Miah AG, Maki T, Nishimura M, Tsujii H. Effect of dietary *Rhodobacter capsulatus* on cholesterol concentration and fatty acid composition in broiler meat. *Poult Sci*, 2007; 86:1920–6.
- Salminen, S., Wright O. V., Ouwehand. A., 2004. Lactic Acid Bacteria Microbiology and Functional Aspect third edition, Marcel Dekker Inc, New York, p.19-43.

- Sanchez-Ortiz, A. C, and A. Luna-Gonzales. 2015.“ Isolation and Characterization of Potential Probiotic Bacteria from Pustulose Ark (Anadara Tuberculosa) Suitable for Shirmp Farming/Aislamiento y Caracterizacion De.” American Journal of Aquatic Research 43 (1):123-136.
- Sari, F. M., Evy R., Raswen E.2018. Viabilitas Bakteri Asam Laktat (BAL) yang diisolasi Dari Kulit Ari Kacang Kedelai terhadap Garam Empedu (*oxgall*) dan Asam Klorida (HCL). Jom Ur Volume 5 Edisi 2 Juli S/D Desember 2018.
- Sasongko,W.R.2006. Mutu karkas ayam potong.Triyanti.Prosiding Seminar Nasional Peternakan dan veteriner, Bogor.
- Saulnier D, Spinler JK, Gibson GR, Versalovic J. 2009. Mechanisms of probiosis and prebiosis: considerations for enhanced functional foods. Current Opinion in Biotechnology;20:135-141.
- Savadogo A, Outtara CAT, Bassole IHN, Traore AS. 2004. Antimicrobial activities of lactic acid bacteria *strains* isolated from Burkina Faso fermented milk. *Pakistan Journal of Nutrition.* 3:174-179.
- Segara, HM. 2000. Prosedur Reagensia Kimia Klinik. PT. Segara Husada Mandiri, Jakarta.
- Shokryazdan P, Sieo CC, Kalavathy R, Liang JB, Noorjahan BA, Jahromi MF Ho YW. 2014. Probiotic Potential of Lactobacillus Strains with Antimicrobia Activity against Some Human Pathogenic Strains. BioMed ResearchInternational 2014:927268.
- Sieladie, D. V., N. F. Zambou, P. M. Kaktcham, A. Cresci and F. Fonteh. 2011. Probiotic properties of lactobacillus strains isolated from raw cow milk in the western highlands of cameroon. Innovative Romanian Food Biotechnology. 9 : 12-28.
- Singh TP, Kaur G, Malik RK, Schillinger U, Guigas C, Kapila S. 2012. Characterization of intestinal *Lactobacillus reuteri* strains as potential probiotics. Probiotics Antimicrob Proteins 2012;4:47-58.
- Siregar, A.P., M. Sabrani dan P. Suroprawiro. 1980. Ternak Ayam Pedaging di Indonesia. Margie Group, Jakarta.
- Sitepoe, J.E. 1992. Kolesterol Fobia. PT. Gramedia Pustaka Utama, Jakarta
- Sjofjan, O. 2003. Kajian probiotik<sup>AB</sup> (*Aspergilus niger* dan *Bacillus spp*) sebagai imbuhan ransum dan implikasi efeknya terhadap mikroflora usus serta penampilan produksi ayam petelur. Disertasi. Universitas Padjadjaran, Bandung.

- Smirnov, A., Perez, R., Amit- Romach, E., Sklan, D., and Uni, Z. 2005. Mucin dynamics and microbial populations in chickens small intestine are changed by dietary probiotic and antibiotic growth promoter supplementation. *J Nutr* 135:187-192.
- Soeharsono. 2010. Probiotik Basis Ilmiah, Aplikasi dan Aspek Praktis. Widya Padjajaran. Bandung.
- Sofjan. O. 2010. Probiotik Untuk Unggas. Dalam\_Probiotik Basis Ilmiah, Aplikasi dan Aspek Praktis (Ed.Soeharsono) Widya Padjadjaran, Bandung
- Spivey, Megan A, Sadie L. Dunn-Horrocks, Tri Duong. 2014. Epithelial cell adhesion and gastrointestinal colonization of *Lactobacillus* in poultry. *Poultry Science Journal*. Volume 93, Issue 11, Pages 2910-2919.
- Spring. P. 1997. Understanding the development of the avian gastrointestinal microflora: an essential key for developing competitive exclusion product. *Proc.Alltech 11<sup>th</sup> Annual Asia Pacific Lecture Tour*. 149-160.
- Steel, R.G.D, dan Torrie. J.H. 1995. Principles and Procedures of Statistis. Diterjemahkan oleh B. Soemantri. 1991. Prinsip dan Prosedur Statistic. Gramedia Utama. Jakarta.
- Subhan A, Yuwanta T, Zuprizal, Supadmo1. 2015. The use of *Pomacea canaliculata* snails in feed to improve quality of alabio duck (*Anas platyrhinchos borneo*) meat. *J Indonesian Trop Anim Agric*. 40(4): 238 244.
- Sudha, M. R., C. Prashant, D. Kalpana, B. Sekhar dan J. Kaiser. 2009. *Probiotics as Complementary Therapy for Hypercholesterolemia*. Biology and Medicine. Vol. 1 (4): Rev 4.
- Sugiarto, A., Iriyanti, A., & Mugiyono, S. (2013). Penggunaan berbagai jenis probiotik dalam ransum terhadap kecernaan bahan kering (KBK) dan kecernaan bahan organik (KBO). *Jurnal Ilmu Peternakan*, 1(3), 933–937.
- Sumarsih, S., B. Sulistyanto, C. I. Sutrisno dan E. S. Rahayu. 2012. Peran Probiotik Bakteri Asam Laktat Terhadap Produktivitas Unggas. *Jurnal Litbang Provinsi Jawa Tengah*, Vol.10 No.1 – Juni 2012.
- Supardi ,I dan Sukamto. 1999. Mikrobiologi dalam Pengolahan dan Keamanan Pangan. Alumni, Bandung.
- Surono, I. S. 2004. Probiotik Susu Fermentasi dan Kesehatan. Tri Cipta Karya. Jakarta.
- Susanti I, Retno W K, Fatim I. 2007. Uji Sifat Probiotik Bakteri Asam Laktat Sebagai Kandidat Bahan Pangan Fungsional. *Jurnal Teknol. dan Industri Pangan*, Vol 18 No.2: 89-95.

- Suskovic, J. Kos, B. Beganovic, J. Pavunic, A.L. Habjanic, K. Matosic, S. 2010. Antimicrobial Activity- The Most Important Property of Probiotic and Starter Lactic Acid Bacteria. *J.Food Technol.Biotechnol.* 48(3): 296-307.
- Syukur, Sumaryati dan Endang Purwati. 2013. Bioteknologi Probiotik untuk Kesehatan Masyarakat. Penerbit Andi Yogyakarta.
- Syukur Sumaryati, Utami Lidya Sari, Endang Purwati, Urnemi and Jamsari, 2011, Screening And Invitro Antimicrobial, Ptotease Activities From *Lactic Acid Bacteria* Associated With Green Cacao Fermentation in West Sumatra, Indonesia, Proseding Seminar Internasional HKI, Pekanbaru, Juli 17-21.
- Tambekar DH, and Bhutada SA. 2010. An Evaluation of Probiotic Potential of *Lactobacillus* sp. from Milk of Domestic Animals and Commercial Available Probiotic Preparations in Prevention of Enteric Bacterial Infections. *Recent Research in Science and Technology*. Vol 2 (10): 82-88.
- Tannock, G. W. 1992. Genetic manipulastion of gut microorganism dalam Husmaini. 2012. Potensi *Lactococcus Plantarum* isolat limbah pengolahan virgin coconut oil (Blondo) sebagai produk dan aplikasi untuk meningkatkan perfromans unggas. Disertasi. Universitas Andalas. Padang.
- Thamacharoensuk T, Nuttha T, Malai T, Vasana T, Kentaro K, Somboon T. 2013. Screening and Characterization of Lactic Acid Bacteria from Animal Faeces for Probiotic Properties. *Thai J Vet Med* 43(4):541-551.
- Todorov SD, Dicks LMT. 2007. Effect of growth medium on bacteriocin production by *Lactobacillus pentosus*. *Journal Food Technology Biotechnology*, 43 (2), 165-173.
- Todorov SD, Botes M, Danova ST, Dicks LMT. 2003. Probiotics properties of *Lactococcus lactis* spp. Lactis HV219, isolated from human vaginal secretions. *J Appl Microbiol.* 103:629-639.
- Tokarth, M., G. Gulgur, S.B. Elmaci, N.A. Isleyen and F. Ozcelik. 2015. Invitro properties of potensial probiotic indigenous lactic acid bacteria originating from tradisional pickles. Biomed Research Internasional. <http://dx.doi.org/10.1007/s12602-017-9278-6>.
- Torriani S, Felis GE, Dellaglio F. 2001. Differentiation of *Lactobacillus plantarum*, *L.pentosus*, and *L. paraplanitarum* by recA gene sequence analysis and multiplex PCR assay with recA gene-derived primers. *Appl Environ Microbiol*67:3450-3454.
- Toy, T.S. S., B.S. Lampus, B.S.P. Hutagalung. 2015. Uji daya hambat ekstrak rumput laut gracilaria sp terhadap pertumbuhan bakteri *Staphylococcus aureus*. *Jurnal eG.* 3(1): 153-159.

- UU RI.2014. Undang-undang Republik Indonesia nomor 41 tahun 2014 tentang perubahan atas undang-undang nomor 18 tahun 2009 tentang peternakan dan kesehatan hewan. Jakarta (ID): Sekretariat Negara.
- UU RI. Pemerintah Republik Indonesia. 2009. Undang-undang Republik Indonesia nomor 18 tahun 2009 tentang peternakan dan kesehatan hewan. Jakarta (ID): Sekretariat Negara.
- Utami, T., Cahyanto, M.N., Juffrie, M. dan Rahayu, E.S. 2015. Recovery of *Lactobacillus casei* strain Shirota (LCS) from the intestine of healthy Indonesian volunteers after intake of fermented milk dan its impact on the *Enterobacteriaceae* faecal microbiota. *International Journal of Probiotics dan Prebiotics* 10 (2/3): 77–84.
- Vinderola, C. G., N. Bailo and J. A. Reinheimer. 2000. *Survival of probiotic mikroflora in Argentinian yogyurt during refrigerated storage*. Food Res Int; 33: 453-457.
- Wahyu, J. 2002. Ilmu Nutrisi Unggas. Gajah Mada University Pess: Yogyakarta.
- Wahju, 1978. Kebutuhan Zat-Zat Makanan Untuk Unggas. Cetakan ke-3. Fakultas Peternakan IPB, Bogor.
- Wahju, J. 1997. Ilmu Nutrisi Nutrisi Unggas . Gajah Mada University Press. Yogyakarta.
- Wang C, Chang T, Hong Yang H, Cui M. 2015. Antibacterial mechanism of lactic acid on physiological and morphological properties of *Salmonella Enteritidis*, *Escherichia coli* and *Listeria monocytogenes*. *Food Cont.* 47:231-236.doi:10.1016/j.foodcont.2014.06.034
- Wang, H., G. Garruti, M. Liu, P. Portincasa, Davi, Q.H. Wang. 2017. Cholesterol and Lipoprotein Metabolism and Atherosclerosis: Recent Advances in Reverse Cholesterol Transport. *Annals Of Hepatology*. Vol. 16 (Suppl. 1) : s27-s42.
- Wang, L. I dan E. A. Jhonson. 1992. Inhibition of *Listeria Monocytogenes* by Fatty Acid and Monoglycerides. *Applied and Environtmental Microbiology*; 58:624-629.
- Wells JM. 2011. Immunomodulatory mechanisms of *Lactobacilli*. *J Microb Cell Fact* 10: S17. DOI: 10.1186/1475-2859-10-S1-S17.
- Wongsa, P., and Werukhamkul, P.2007. Product Development and Technical Service, Biosolution International.Thailand: Bangkadi Industrial Park
- Woo, K.C., B.Y. Jung, M.K. Lee and I.K. Paik, 2006. Effects of supplementary Safmannan (beta glucan and Mos) and Wordl-Las (multiple probiotics) on the

- performance, nutrient availability, small intestinal mikroflora and immune response in broiler chicks. Korean J. Poul.Sci., 33 : 151- 158.
- Yang J-j, Kun Q, Dong W, Zhang W, Wu Y-j, Xu Y-y. 2017. Effects of different proportions of two *Bacillus* sp. on the growth performance, small intestinal morphology, caecal microbiota and plasma biochemical profile of Chinese Huainan Partridge Shank chickens. *J Integrat Agric.* 16(6):1383-1392.
- Yang, S. C, C.H. Lin, C. T. Sung, and J. Y. Fang. 2014. Antibacterial activities of bacteriocins: application in foods and pharmaceuticals. *Frontiers in Microbiology* 5 (May): 241.
- Yulinery T, dan Nurhidayat N. 2015. Uji Aktivitas Antibakteri *Lactobacillus plantarum* Terseleksi dari Buah Markisa (*Passiflora edulis*) dan Kaitannya dengan Vol 5, Juni 2017 Gen Plantarisin A (*plnA*). *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*. 20 Desember 2014. Depok: Masyarakat Biodiversitasndonesia. ISSN 2407-8050. hal 270-277.
- Yusmarini, R. Indrati, T. Utami, dan Y. Marsono. 2009. Isolasi dan Identifikasi bakteri asam laktat proteolik dari susu kedelai yang terfermentasi spontan. *Jurnal Natur Indonesia*. Volume 12 (1): 28-33.
- Zain, B. 2011. Pengaruh pemberian daun katuk minyak ikan lemuru dan vitamin E terhadap performans dan kualitas daging ayam broiler. *Jurnal Sains Peternakan Indonesia* 6(2): 89-95
- Zulfidin, Evy R, dan Akhyar A. 2018. Viabilitas Bakteri Asam Laktat yang diisolasi dari Ampas Susu Kedelai terhadap Asam Klorida dan Garam Empedu. *JOM Faperta UR* Vol. 5 Edisi I Januari s/d Juni 2018.
- Zurmiati. 2018. Potensi *Bacillus Amyloliquefaciens* dalam Membentuk Campuran Ampas Kelapa dan Ampas Tahu Sebagai Pakan Fungsional untuk Meningkatkan Produktivitas Itik Pitalah Periode Pertumbuhan. Disertasi. Pasca Sarjana Fakultas Peternakan. Universitass Andalas. Padang.