

## DAFTAR PUSTAKA

- Abun. 2006. Nutrisi Ternak Unggas dan Monogastrik. Universitas Padjadjaran. Bandung.
- Adil,S., T. Banday, G. A. Bhat, M. S. Mir, and M. Rehman. 2010. Effect of dietary suplementation of organic acids on performance, intestinal histomorphology, and serum biochemistry of broiler chicken. *Vet. Med. Int.* 10:1-7.
- Akoso, B. T. 1993. Manual Kesehatan Unggas. Kanisius, Yogyakarta.
- Amrullah, I. K. 2003. Nutrisi Ayam Broiler. Bogor. Lembaga Satu Gunung budi.
- Andriani, Lovita., Tuti Widjastuti dan Rizki Dermawan. 2015. *The Effect of Probiotic Supplemented Ration on Broiler Abdominal Fatty Content and Final Weight*. Lucrari Stiintifice-vol. 53, Seria Zootehnie.
- Anggorodi, R. 1995. Nutrisi Aneka Ternak Unggas. PT. Gramedia Pustaka, Jakarta.
- Anggraeni, D, S. 2020. Suplementasi Probiotik *Lactobacillus plantarum* dan *Lactobacillus pentosus* yang Diisolasi Dari Limbah Susu Kedelai Terhadap Mikroflora Usus Halus, Performans Dan Kolesterol Ayam Broiler. (Disertasi) Fakultas Peternakan Universitas Andalas. Padang.
- Aritonang, S.N., E. Roza, E. Purwati, dan Husmaini. 2007. 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.
- Asmawati. 2013. The effect of in ovo feeding on hatching weight and small intestinal tissue development of native chicken. (Disertasi) Fakultas Peternakan Universitas Hasanuddin. Makassar.
- Austic, R.E. and Nesheim., 1990. Poultry Production. 13<sup>th</sup> Ed. Lea and Febiger. Philadelph. London.p. 29.30.
- Awad, W.A., K. Ghareeb, S. Nitclu S. Pasteiner, S.A. Raheem, and J. Bohm. 2008. Efect of dietary inclusion of probiotic, prebiotic and symbiotic on intestinal glucose absorb'tion of broiler chickens. *Lrt. J. Poult. Sci.* 7: 688-691.
- Bell, D. D. & W. D. Weaver. 2002. Commercial Chicken Meat and Egg Production. 3th Edition. Springer Science+Business. Inc. Spiring Street, New York.

- Budiansyah, A. 2004. Pemanfaatan probiotik dalam meningkatkan penampilan produksi ternak unggas. Program Pascasarjana Institut Pertanian Bogor, Bogor.
- Bustos, A. Y., G.F. Valdez, S. Fandaa and M.P. Taranto. 2018. New insight into bacterial bile salt hydrolase and its impact on human health. Food Research Internasional. 112: 250-262.
- Carr E.G, Dunlap G, Hornes R. H, Koegel R. L, Turnbull A. P, Sailor W. 2002. Positive Behavior Supprt: Evalution of an Applied Science. Journal of positive Behavior Interventions 4: 4-16.
- Chumpawadee,S., Chinrasri,O., Chinrasri,T., Ngamluan,S and Soychuta,S. 2001. Effect of dietary inclusion of cassava yeast as probiotic source on growth performance, small intestine (Ileum) morphology and carcass characteristic in broilers. International Journal of Poultry Science 7 (3): 246-250.
- Delgado, A., D. Brito., P. Fevereiro, C. Peres and J.F. Marques. 2001. Antimicrobial activity of L.Plantarum isolated from a traditional lactic acid fermentation of table olives. EDP Sciences 81 : 203215.
- Dellman, H.D., and E.M. Brown. 1992. Buku Teks Histologi Veteriner Edisi 3. Penerjemah : R. Hartono dan Siti S.J. Cetakan 1. UI-Press. Jakarta.
- Dicks, L.M.T. and M. Botes. 2010. Probiotic lactic acid bacteria in the gastro-intestinal tract: health benefits, safety and mode of action. Beneficial Microb. 1.
- Doeschate R. A. H. M., C. W. S Cheele., V. V. A. M Schreurs dan J. D Vander Klis. 1993. Digestibility. *Studies in broiler chickens*. Influence of Genotype, Age.Sex and Methode of Determination, British Poultry Science.
- Ensminger, M. E. 1992. Poultry Science.3 rd Edition. Interstate Publisher, Inc., Danville, Illionis.
- Fan. Y., J. Croom., V. Christensen., B Black., A. Bird., L. Daniel., B. McBride., E. Eisen. 1997. Jejunal glucose uptake and oxygen consumption in turkey poult selected for rapid growth. Poult Sci. 76:1738-1745.
- FAO/WHO. 2002. Joint FAO/WHO Working Group Report on Drafting Guidelines for the Evaluation of Probiotics in Food, London.
- Frandsen, R.D., Wilke, WL., and Fails, A.D. 2008. Anatomy and pshsiology of farm animals 7th Edition. College of Veterinary Medicine and Biomedical Sciences Colorado State University. Wiley - Blackwell. Fort Collins, Colorado. 335-360.

- Fuller, M.F. 1992. Probiotics : The Scientific Basis. Chapman and Hall. London.
- Gilliland, S. E. 1986. Bacterial Starter Cultures for Food. CRS Press. Boca Raton, Florida.
- Harianto,A.R. 2016. Morfometri dan histologis usus itik (Anassp.) yang diberi tepung Kunyit (Curcuma longa) dalam pakan. Skripsi. Program Studi Peternakan. Universitas Hasanuddin, Makassar.
- Harimurti,S dan Rahayu,ES. 2009. Morfologi usus ayam broiler yang disuplementasi dengan probiotik strain tunggal dan campuran. J. Agritech, Vol. 29, No. 3. Hal: 179-183.
- Hartono, E.F., et al. 2016. Efek penggunaan sinbiotik terhadap kondisi mikrofora dan histologi usus ayam sentul jantan. Jurnal Agripet Vol 16, No. 2, Hal: 97-105.
- 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.
- Hooper LV, Midtvedt T, and Gordon JI. 2000. How host-microbial interactions shape the nutrient environment of the mammalian intestine. Annual Rev of Nutrition. 22:283307.
- 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 poultry science 10 (4): 309-314.
- Husmaini, M. H. Abbas, E. Purwati, A. Yuniza dan A. R. Alimon, 2012. Potensi bakteri asam laktat dari sisa pengolahan virgin coconut oil sebagai probiotik dan aplikasinya terhadap peningkatan performans unggas. (Disertasi). Universitas Andalas.
- Ibrahim, S. 2008. Hubungan ukuran –ukuran usus halus dengan berat badan broiler. Agripet: Vol (8) No.2:42-46.
- Intruksi Kerja Personal Balai Veteriner Bukittinggi. 2015. Pembuatan Preparat Histologi
- Jamilah, N. Suthama L, dan D. Mahfuds. 2014. Pengaruh penambahan jeruk nipis sebagai acifier pada pakan step down terhadap kondisi usus ayam pedaging. J.Animal Agriculture: Vol (2) No. 1:309-318.

- Jamroz, D., T. Wertelecki, M. Houszka& C. Kamel. 2006. Influence of diet type on the inclusion of plant origin active substances on morphological andhistochemical characteristics of the stomach and jejunal walls in chicken. *J. Anim. Physiol. Anim. Nutr.* 90: 255-260.
- Jenie, S.L., dan Rini, S.E. 1995. Aktivitas antimikroba dari beberapa spesies lactobacillus terhadap mikroba patogen dan perusak makanan. *Buletin Teknologi dan Industri Pangan* 7(2) : 46-51.
- Jung SJ, Houde R, Baurhoo B, Zhao X, and Lee BH. 2008. Effects of galactooligosaccharides and a bifidobacterialactis - based probiotic strain on the growth performance and fecal microflora of broiler chickens. *Poult Sci.* 87:1694–1699.
- Kabir SML. 2009. The Role of probiotics in the poultry industry. *Int J Mol Sci.* 10:3531-3546.
- Ledezma - Torres R, Possadas - Cantu A, Espinosa - Leija R, Hernandez - Escareno JJ, Fimbres - Durazo H, Riojas - Valdes VM, Santoyo de Estefano RA, PiconRubio FJ. 2015. Effect of adding differentlevels of probiotics to broilers" diets on gastrointestinal tract development and production performance. *African J Microbio Res.* 9(12):892-897.
- Lee, Y.K., C.Y. Lim, W.L. Teng, A.C. Ouwehand, E.M. Tuomola, and S. Salminen. 2000. Quantitative approach in the study of adhesion of lactic acid bacteria to intestinal cells and their competition with enterobacteria. *Appl. Environment.Microbiol.*
- Lehninger, A. L. 1982. Dasar dasar Biokimia. Jilid 3.Terjemahan: M. Thenawijaya. Erlangga, Jakarta.
- Lenhardt L, Mozes S. 2003. Morphological and functional changes of the small intestine in growth- stunted broilers. *Acta Vet Brno.* 72:353-358.
- Lopez, J. 2000. Probiotics In Animal Nutrition. Dept. Dezootecnia, Universidida de Federal RGS. Porto Alegre 9000 1-970. Brazil.
- McDonald, P., A.R. Henderson and S.J.E. Heron 1991. The Biochemistry of Silage. 2<sup>nd</sup> Edition. Chalcombe Publication, Britain.
- Medicinus. 2009. Bakteri Probiotik Meningkatkan Imunitas Tubuh. Bandung. Vol.22, No.3.
- Mile, R.D., Butcher, G.D., Henry, P.R. and Littell, R.C. 2006. Effect of antibiotic growth promoters on broiler performance, intestinal growth parameter, and quantitative morphology. *Journal Poultry Science* 85: 476-485.

- Mitchell, M. A. AndA. J. Carlisle. 1992. The effects of chronic exposure to elevated environmental temperature on intestinal morphology and nutrient absorption in the domestic fowl (*Gallus domesticus*). *Comp. Biochem. Physiol.* 101A: 137-142.
- Murtidjo, B.A. 2003. Pedoman Beternak Ayam Broiler. Kanisius, Yogyakarta.
- Muwarni, Retno. 2008. Aditif pakan alami pengganti antibiotik. Fakultas Peternakan. Universitas Diponegoro, Semarang.
- Nasin, L dan Tjetjep, S. 2008. Yuk Bertenak Ayam Pedaging dan Petelur. Bandung: PT. Puri Pustaka.
- Peng, Q., X. F. Zeng, J. L. Zhu, S. Wang, X.T. Liu, C. L. Hou, P. A. Thacker, and S. Y. Qiao. 2006. Effects of dietary *Lactobacillus plantarum* B1 on growth performance, intestinal microbiota, and short chain fatty acid profiles in broiler chickens. *Poult Sci.* 95: 893-900.
- Price SA and Wilson LM. 1995. Pathophysiology, Clinical Concepts of Disease Processes. Fourth Edition. Anugrah P (Penerjemah), Penerbit Buku Kedokteran EGC, Jakarta.
- Rahmanto, 2012. Struktur Histologik Usus Halus dan Efisiensi Pakan Ayam Kampung dan Ayam Broiler. *S2 Thesis*. Universitas Negeri Yogyakarta, Yogyakarta.
- Rais. F. N. 2018. Pengaruh Jumlah Pemberian Probiotik Bakteri Asam Laktat (BAL) *Lactobacillus plantarum* Yang Menggunakan Pengembang Ubi Jalar Ungu (*Ipomoea batatas sp.*) Terhadap Gambaran Histologi Dan Ketebalan Usus Halus Pada Itik Kamang. (skripsi) Fakultas Peternakan Universitas Andalas. Padang.
- Rajab, F. 2004. Isolasi dan Seleksi bakteri probiotik dari lingkungan tambak dan hatchery untuk mengendalikan penyakit vibriosis pada larva udang windu. Skripsi. Deperteman budidaya perairan. Fakultas Perikanan dan Ilmu Kelauta. Institut Pertanian Bogor, Bogor.
- Retnoadiati, N. 2001. Persentase bobot karkas, organ dalam dan lemak abdominal ayam broiler yang diberi ransum berbahan baku tepung kadal (Mobuya multifaciata Kuhl). Skripsi. Fakultas Peternakan. Institut Pertanian Bogor, Bogor.
- Ritonga, H.1992. Beberapa Cara Menghilangkan Mikroorganisme Patogen. Majalah Ayam dan Telur. Hal 24-26.
- Rizal, Y. 2006. Buku Ajar Ilmu Nutrisi Ternak Unggas. Andalas University Press. Padang.

Rofiq MN. 2004. Pengaruh Pakan Berbahan Baku Lokal terhadap performans Villi Usus Halus Ayam Broiler.

Rofiq, M.N. 2003. Potensi suspensi teh fermentasi kambucha (stk) dalam mengontrol infeksi *Salmonella* sp. dan pengaruhnya terhadap performan ayam broiler. Tesis. Fakultas Peternakan. Institut Pertanian Bogor, Bogor.

Rossi, E., Roza, E., Yurnalis, S., Aritonang, S, N., and Purwati, E., 2018. Characterization of probiotic properties of *Lactobacillus* from solid waste of soy Milk production. Asian Jr, of MICROBIOL Biotech Env, Sc. Vol. 20, NO (3) : 2018 : 718-724.

Rukminarsih dan Hardjosworo. 2000. Peningkatan Produksi Ternak Unggas. Penerba Swadaya, Jakarta.

Salminen S, Deighton MA, Benno Y, and Gorbach SL.1996. Lactic Acid Bacteria, Microbiology and Functional Aspect. Marcel Dekker Inc, New York.

Samaidi. 2004. Probiotik Pengganti antibiotik dalam pakan ternak. Poultry Indonesia.Vol 1 bulan September 2004,Jakarta.Seifert, H.S. H. and F. Gessler. 1997. Continous oral application of probiotic B. *Careus* an alternative to the prevention of enteroxomia. Animal Research and Development. 46: 30-38.

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.

Samanya M, Yamauchi K. 2002. Histological alterations of intestinal vili in chickens fed dried *Bacillus subtilis* var, natto. Comp Biochem Physiol. 133:95-104.

Saxelin, M. 1997. *Lactobacillus GG* – a Human Probiotic Strain With Thorough Clinical Documentation. Food Red Int. Vol. 13: 293-313.

Seifert, H.S.H. & F. Gessler. 1997. Continous oral application of probiotic B. *Careus* an alternative to the prevention of enteroxomia. Animal Research and Development. 46: 30-38.

Sieo , CC., Abdullah,N., Tan, WS., Ho, YW.2005. Influence of  $\beta$  -Glucanase Producing *Lactobacillus* Strains on Iestinal Characteristic and Feed Passage rate of broiler chickens. *Journal of poultry science* 84 (5): 734:741.

Sjofjan, O. 2003. Kajian probiotik (*Aspergillus niger* dan *Bacillus* sp) sebagai imbuhan ransum dan implikasi efeknya terhadap mikroflora usus serta

- penampilan produksi ayam petelur. Disertasi. Universitas Padjajaran, Bandung.
- Steel, R.G.D. and J.H. Torrie. 1989. Principle and Procedures of Statistics. McGraw-Hill Book Co. Inc, New York.
- Sugito, W. Manalu,D. A. Astuti, E. Handharyani & Chairul. 2007. Morformetrik Usus dan Performa Ayam Broiler yang Diberi Cekaman Panas dan Ekstrak n-Heksana Kulit Batang “jaloh”(*salix tetrasperma roxb*). Fakultas Kedokteran Hewan, Universitas Syiah Kuala. Aceh. Vol. 30 No 3. Hlm. 198-206.
- Sulistyani, I. 2003. Gambaran mikroskopis dan luas permukaan vili usus halus ayam broiler setelah pemberian probiotik dan bioinsektisida *Bacillus thuringiensis* dan *Beauveriabassiana* peroral. Skripsi. Fakultas Kedokteran Hewan, Institut Pertanian Bogor, Bogor.
- Supardi, I dan Sukamto. 1999. Mikrobiologi dalam Pengolahan dan Keamanan Pangan. Alumni, Bandung.
- Suprijatna, E., U. Atmomarsono, R. Kartasudjana. 2008. Ilmu Dasar Ternak Unggas. Penerba Swadaya, 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.
- Szajewska H., Probiotics and prebiotics in pediatrics. The Turkish Journal of Pediatrics. 2007;49:231-44.
- Theobald P. 2010. Principles of using organic acids in animal nutrition. Ann NutrHealth. Germany (DE): Nurtingen Geislingen University. Tersedia pada:[https://www.dsm.com/content/dam/dsm/en\\_US/documents/principles\\_of\\_using\\_organic\\_acids\\_in\\_animal\\_nutrition.pdf](https://www.dsm.com/content/dam/dsm/en_US/documents/principles_of_using_organic_acids_in_animal_nutrition.pdf).
- Tillman, A. D., H. Hartadi, S. Reksohadiprodjo, S. Prawirokusumo & S. Lehdosoekojo. 1991. Ilmu Makanan Ternak Dasar. Universitas Gadjah Mada Press, Yogyakarta.
- Todorov SD, Dicks LMT. 2007. Effect of growth medium on bacteriocin production by *Lactobacillus pentosus*. *Journal Food Technology Biotechnology*, 43 (2), 165-173.
- Trisna dan Wahud N. 2012. Identifikasi molekuler dan pengaruh pemberian probiotik bakteri asam laktat (BAL) asal dadih dari kabupaten Sijunjung terhadap kadar kolesterol daging pada itik Pitalah sumber daya genetik Sumatera Barat. Universitas Andalas, Padang.

Velez, M.P. 2007. Identification and Characterization of starter Lactic Acid Bacteria and Probiotics from Colombian Dairy Products. *Journal of Applied Microbiology*, ISSN 1364-5072.

Vila, J., Ruiz, J., Goni, P., Angeles, M., de Anta, T. J., 2010, Mutation in the gyrA gene of quinolone-resistant clinical isolates of *Acinetobacter baumannii*, *Antimicrobial Agents and Chemotherapy*, 39 (5), 1201–1203.

Wells JM. 2011. Immunomodulatory mechanisms of lactobacilli. *J Microb Cell Fact* 10: S17. DOI: 10.1186/1475-2859-10-S1-S17.

Widianingsih, M. N. 2008. Persentase organ dalam broiler yang diberi ransum *Crumble* berperekat onggok, bentonit dan tapioka. Fakultas Peternakan Institut Pertanian Bogor, Bogor.

Xu, Z. R., Hu, C. H., Xia, M.S.,Zhan, X.A.,Wong, M.Q.2003. Effects of dietary fructooligosaccharide on digestive enzyme activities, Intestinal microflora and morphologi of male broilers. *Poult Sci.* 82:1030-1036.

Yamauchi, K. & Y. Isshiki. 1991. Scanning electron nicroscopis observations on the intestinal vili in growing White Leghorn and broiler chickens from 1 to 30 days of age. *Br.Poult.Sci.*32: 67-78.

Yakhkeshi, S., Rahimi, S., Gharib, Naseri, K., 2011. The effect of comparison of herbal extract, antibiotic, probiotic and organic acid on serum lipids, immune response, GIT microbial population, intestinal morphology and performance of broiler. *Journal of medicinal plant* (10). 80-95.