

## DAFTAR PUSTAKA

- Alagawany, M., El-Hack, M. E. A., Farag, M. R., Sachan, S., Karthik, K., & Dhama, K. (2018). The use of probiotics as eco-friendly alternatives for antibiotics in poultry nutrition. *Environmental and Science Pollution Research*, 25(11), 10611–10618.
- Albazaz, R.I., & Bal, E. B. B. (2014). Microflora of digestive tract in poultry. *King Saud University Journal of Natural science*, 17, 39–42.
- Anggraeni, A. S., Istiqomah, L., Damayanti, E., Anwar, M., Sakti, A. A., & Karimy M. F. (2018). Cellulolytic yeast from gastrointestinal tract of muscovy duck (*Anas moscata*) as probiotic candidate. *Journal Indonesian Tropical Animal Agriculture*, 43(4), 361–372.
- Apajalahti, J. (2005). Comparative gut microflora, metabolic challenges, and potential opportunities. *Journal Applied Poultry Research*, 14(2), 444–453.
- Arora, M., & Baldi, A. (2015). Regulatory categories of probiotics across the globe: A review representing existing and recommended categorization. *Indian Journal of Medical Microbiology*, 33(1), S2–S10.
- Baniyah, L., Jannah, S. N., & Rukmi, M. I. (2017). Keragaman bakteri asam laktat secara molekuler pada ileum dan sekum ayam broiler yang diberi pakan prebiotik bekatul dan bekatul hasil fermentasi. *Jurnal Biologi*, 6(3), 38–49.
- Boleng, D. T. (2015). *Bakteriologi. Konsep-Konsep Dasar*. Malang : UMM Press.
- Bomba, A., Nemcová, R., Gancarcíková, S., Herich, R., Guba, P., & Mudronová, D. (2002). Improvement of the probiotic effect of micro-organisms by their combination with maltodextrins, fructo-oligosaccharides and polyunsaturated fatty acids. *British Journal Nutrition*, 88(S1), S95–S99.
- BPS, (2021). *Populasi Unggas*. Jakarta : Badan Pusat Statistik.
- Coman, M. M., Mazzotti, L., Silvi, S., Scalise, A., Orpianesi, C., Cresci, A., & Verdenelli, M. C. (2020). Antimicrobial activity of SYN BIO® probiotic formulation in pathogens isolated from chronic ulcerative lesions: in vitro studies. *Journal of Applied Microbiology*, 128(2), 584–597.
- Damayanti, E., Herdian, H., Angwar, M., Febrisiantosa, A., & Istiqomah, L. (2012). Lactic acid bacterial screening from gastrointestinal digestive tract of native and broiler chicken for probiotic candidate purposes. *Journal of The Indonesian Tropical Animal Agriculture*, 37(3), 168–175.
- Dör, T., Moynihan, P. J., & Mayer, C. (2019). Editorial: Bacterial cell wall structure and dynamics. *Frontiers In Microbiology*, 10(2051), 1–4.

- Finanda, A., Mukarlina, & Rahmawati. (2021). Isolasi dan karakterisasi genus bakteri asam laktat dari fermentasi daging buah Pisang Kepok (*Musa paradisiaca* L.). *Protobiont*, 10(2),37-41.
- Gadde, U., Kim, W. H., Oh, S. T., & Lillehoj, H. S. (2017). Alternatives to antibiotics for maximizing growth performance and feed efficiency in poultry: A review. *Animal Health Research Reviews*, 18(1),26–45.
- Gaggia, F., Mattarelli, P., & Biavati, B. (2010). Probiotic and prebiotics in animal feeding for safe food production. *International Journal of Food Microbiology*, 141, 515–528.
- Gilliland, S. E., Staley, T. E., & Bush, L. J. (1984). Importance of bile tolerance of *Lactobacillus acidophilus* used as a dietary adjunct. *Journal Dairy Science*, 67,3045–3051.
- Harimurti, S., & Hadisaputro, W. (2015). *Probiotics in Poultry, in: Beneficial Microorganisms in Agriculture, Aquaculture and Other Areas*. Switzerland : Springer International Publishing.
- Hayanti, S. Y., dan Masito (2013). *Kemampuan Peternak dalam Memahami Sifat Kualitatif Itik Kerinci*. Jambi: Balai Pengkajian Teknologi Pertanian Jambi.
- Herdian, H., Istiqomah, L., Damayanti, E., Suryani, A. E., Anggraeni, A.S., Rosyada, N., & Susilowati, A. (2018). Isolation of cellulolytic lactic-acid bacteria from Mentok (*Anas moschata*) gastro-intestinal tract. *Tropical Animal Science Journal*, 41(3),200–206
- Hidayat, M. N., Malaka, R., Agustina, L., & Pakiding, W. (2018). Characteristics isolate bacteria lactic acid of origin digestive tract of broiler as probiotic candidate for poultry. *International Journal of Scientific and Engineering Research*, 9(2),1787-1794.
- Holt, J. G., Krieg, N. R., Sneath, P. H. A., Staley, J. T., & Williams, S. T. (1994). *Bergey's Manual of Determination Bacteriology 9<sup>th</sup>*. Lippincott Williams & Wilkins, Baltimore.
- Husain, D. R., Gunawan, S. & Sulfahri, S. (2020). Antimicrobial potential of lactic acid bacteria from domestic chickens (*Gallus domesticus*) from south celebes, indonesia, in different growth phases: In vitro experiments supported by computational docking. *Iranian Journal of Microbiology*, 12(1),62–69.
- ISO 6887-1:1999. Microbiology of Food and Animal Feeding Stuffs-Preparation of Test Samples, Initial Suspension and Decimal Solutions for Microbiological Examination. Part 1 General Rules For The Preparation Of The Initial Suspension and Decimal Dilutions.
- Jacob, J. (2015). *Avian Digestive System - eXtension*. Mayo 5. Hal. 5–7.

- Jadhav, K., Sharma, K. S., Katoch, S., Sharma, V., & Mane, B. G. (2015). Probiotics in broiler poultry feeds: a review. *International Journal of Animal Veterinary Science*, 2, 4–16.
- Jaiswal, N., Prakash, O., Talat, M., Hasan, S. H., & Pandey, R. K. (2011). Application of response surface methodology for the determination of optimum reaction condition (temperature and pH) for starch hydrolysis by  $\alpha$ -amylase. *Asian Journal of Biochemistry*, 6(4), 357–365.
- Jannah, S.N., Dinoto, A., Wiryawan, K. G., & Rusmana, I. (2014). Characteristics of lactic acid bacteria isolated from gastrointestinal tract of cemani chicken and their potential use as probiotics. *Media Peternakan*, 37(3), 182–189.
- Jha, R., Das, R., Oak, S., & Mishra, P. (2020). Probiotics (direct-fed microbials) in poultry nutrition and their effects on nutrient utilization, growth and laying performance, and gut health: a systematic review. *Animals*, 10(1863), 1–18.
- Julendra, H., Suryani, A. E., Istiqomah, L., Damayanti, E., Anwar, M., & Fitriani, N. (2017). Isolation of lactic acid bacteria with cholesterol-lowering activity from digestive tracts of Indonesian native chickens. *Media Peternakan*, 40(1), 35–41.
- Kamollerd, C., Surachon, P., Maunglai, P., Siripornadulsil, W. & Sukon, P. (2016). Assessment of probiotic potential of *Lactobacillus reuteri* MD5-2 isolated from ceca of Muscovy ducks. *Korean Journal of Veterinary Research*, 56(1), 1–7.
- Kementrian Pertanian Republik Indonesia. (2013). Keputusan Menteri Pertanian tertanggal 10 Agustus 2012 dengan nomor 2834/kpts/LB.430/8/2012. Penetapan Rumpun Itik Kerinci. Jakarta: Direktorat Perbibitan Ternak.
- Kieliszek, M., Pobiega, K., Piwowarek, K., & Kot, A. M. (2021). Characteristics of the proteolytic enzymes produced by lactic acid bacteria. *Molecules*, 26(7), 1–15.
- Klingberg, T. D., & Budde, B. B. (2006). The survival and persistence in the human gastrointestinal tract of five potential probiotic *Lactobacilli* consumed as freeze-dried cultures or as probiotic sausage. *International Journal of Food Microbiology*, 109, 157–159.
- Kokoszyński, D., Wasilewski, R., Saleh, M., Piwczyński, D., Arpášová, H., Hrňcar, C. & Fik, M. (2019). Growth performance, body measurements, carcass and some internal organs characteristics of Pekin ducks. *Animals*, 9(963), 1–19.
- Král, M., Angelovi, M., & Mrázová, L. (2012). Application of probiotics in poultry production. *Animal Science and Biotechnology*, 45(1), 55–57.
- Kurnia, M., Amir, H., & Handayani, D. (2020). Isolasi dan identifikasi bakteri asam laktat dari makanan tradisional suku rejang di provinsi Bengkulu: “lemea.” *Jurnal Pendidikan dan Ilmu Kimia*, 4(1), 25–32.

- Mairizal & Filawati (2020). Optimization of mannanase enzymes production from *Bacillus cereus* V9 using local mannan substrate, in: Proceedings of the 3rd Green Development International Conference (GDIC 2020). hal. 71–76.
- Mairizal, F. Manin, & Hendalia, E. (2019). The effect of giving probiotics and palm kernel meal subjected to enzymatic hydrolysis with mannanase on broiler growth performance. *Pakistan Journal of Nutrition*, 18(10), 997–1003.
- Mairizal, Marlida, Y., Mirzah, & Manin, F. (2018). Isolation and characterization of mannanase-producing *Bacillus cereus* isolated from the hindgut of Termites. *Pakistan Journal of Nutrition*, 17(10), 116–123.
- Mangkorn, N., Ibenegbu, C., Champreda, V., Laosiripojana, N., & Leak, D. J. (2017). Isolation of novel mannanolytic D-lactic acid bacteria from palm kernel cake. *International Journal Advances Science Engineering and Technology*, 5(1), 29–32.
- Manin, F., Hendalia, E., Yatno, & Rahayu, P. (2014). Dampak pemberian probiotik Probio\_FM terhadap status kesehatan ternak Itik Kerinci. *Jurnal Ilmu Ternak*, 1(2), 7 - 11
- Manin, F., Hendalia, E., Lukman, H., & Farhan. (2014). Pelestarian dan budi daya itik kerinci sebagai plasma nutfah provinsi jambi berbasis Probio\_FM di kecamatan air hangat kabupaten kerinci provinsi jambi. *Jurnal Pengabdian pada Masyarakat*, 33(1), 30–50.
- Manin, F., Hendalia, E., & Yusrizal. (2012). Potensi bakteri *Bacillus* dan *Lactobacillus* sebagai probiotik untuk mengurangi pencemaran amonia pada kandang unggas. *Jurnal Peternakan Indonesia*, 14(2), 360–370.
- Manin, F., Hendalia, E., Yusrizal, & Nurhayati. (2006). Effect of kerinci duck's intestinal probiotic (*Bacillus Circulans* and *Bacillus* Sp) as feed additive on broiler performance, in: Proceedings of The 4th ISTAP “Animal Production and Sustainable Agriculture in The Tropic”2. Faculty of Animal Science, Gadjah Mada University, November 8-9, 2006. Hal. 276–281.
- Mansur, D. S., Hidayat, M. N., & Irmawaty. (2019). Ketahanan bakteri asam laktat asal saluran pencernaan broiler terhadap pH dan garam empedu. *Jurnal Ilmu dan Industri Peternakan*, 5(1), 27-37.
- Markowiak, P., & Ślizewska, K. (2018). The role of probiotics, prebiotics and synbiotics in animal nutrition. *Gut Pathogens*, 10(1), 1–20.
- Maunatin, A., & Khanifa. (2012). Uji potensi probiotik *Lactobacillus plantarium* secara in-vitro. *Alchemy*, 2(1), 26–34.
- Meryandini, A., Anggreandari, R., & Rachmania, N. (2008). Isolasi Bakteri Mananolitik dan Karakterisasi Mananasenya Isolation of Mananolitic Bacteria and Characterization of Its Mannanase. *Jurnal Ilmu-Ilmu Hayati* 13, 82–88.

- Meryandini, A., Ambarawati, D., & Rachmania, N. (2008). Pencirian Mananase *Streptomyces costaricanus* 451-3. *Jurnal Ilmu Pertanian Indonesia*, 13(1), 1-6.
- Mudawaroch, R. E., Setiyono, Yusiati, L. M., & Suryanto, E. (2020). Isolation and identification of lactic acid bacteria on broiler chicken. *Journal of Islamic Science and Technology*, 6(2), 287-301.
- Mujnisa, A., Rotib, L. A., Djide, N., & Nasir, A. (2013). Ketahanan bakteri asam laktat hasil isolasi dari feses broiler terhadap kondisi saluran pencernaan broiler. *Jurnal Ilmu dan Teknologi Peternakan*, 2(3), 152-158.
- Moreira, L. R. S., & Filho, E. X. F. (2008). An overview of mannan structure and mannan-degrading enzyme systems. *Applied Microbiology and Biotechnology*, 79(2), 165–178.
- Nadaroğlu, H., & Dİkbaş, N. (2018). Purification and characterization of a  $\beta$  - Mannanase from *Lactobacillus plantarum* (ATCC®14917TM). *International Journal of Innovative Research and Review*, 2(1), 1–6.
- Nadia, A. B., Jannah, S. N., & Purwantisari, S. (2020). Isolation and characterization of lactic acid bacteria from *Apis mellifera* stomach and their potential as antibacterial using in vitro test against growth of *Staphylococcus aureus* and *Salmonella typhimurium*. *Journal of Tropical biology*, 3(1), 35-44.
- Noferdiman, & Damayanti, Y. (2019). Pelatihan manajemen pemeliharaan itik kerinci menuju kawasan sentra produksi di kabupaten kerinci. *Jurnal Pengabdian Kepada Masyarakat*, 3(1), 192–199.
- Nugraha, W.T., Pradipta, M. S. I., Pramono, P. B., Soekarno, A. S., & Kusuma, B. (2021). Identifikasi morfologi mikroflora pada saluran pencernaan itik magelang. *Jurnal Sain Peternakan Indonesia*, 16(2), 142–147.
- Nurchahyo, H., Suyanta, Dale, A., & Furqon, F. Y. A. (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), 1–9.
- Pangsri, P., Piwpankaew, Y., Ingkakul, A., Nitisinprasert, S., & Keawsompong, S. (2015). Characterization of mannanase from *Bacillus circulans* NT 6.7 and its application in mannooligosaccharides preparation as prebiotic. *SpringerPlus*, 4(1), 2-11.
- Prastyo, A. D., Nadimah, N. A., Hanis, N. A., Rachmayanti, N. F., Budiono, I., & Trimulyono, G. (2017). Isolasi dan karakterisasi bakteri probiotik pendegradasi senyawa organik dari saluran pencernaan ayam kampung (*Gallus domesticus*) in: Proceeding Biology Education Conference, 14(1), 75–81.

- Purnawan, A., Yopi, & Irawadi, T. T. (2017). Production of manooligomannan from palm kernel cake by mannanase produced from *Streptomyces cyaeus*. *Biosaintifika: Journal of Biology and Biology Education*, 9(1), 73-80.
- Putra, A.S., Sutrisna, R. & Santosa, P. E. (2016). Kondisi fisiologis itik mojosari betina yang diberi ransum berbeda. *Jurnal Ilmiah Peternakan Terpadu*, 4(2), 108-114.
- Putra, D. C., & Humaidah, N. (2022). Efektivitas probiotik sebagai pengganti *antibiotic growth promotor* (AGP) pada unggas. *Jurnal Dinamika Rekasatwa*, 5(2), 239–249.
- Qureshi, A. S., Faisal, T., Saleemi, M. K., & Ali, M. Z. (2017). Histological and histometric alterations in the digestive tract and accessory glands of duck (*Anas platyrhynchos*) with sex and progressive age. *Journal of Animal and Plant Science*, 27(5), 1528–1533.
- Rajokaa, M. S. R., Hayat, H. F., Sarwarb, S., Mehwishc, H. M., Ahmad, F., Hussain, N., Shah, S. Z. H., Khurshid, M., Siddiqu, M., & Shi, J. (2018). Isolation and evaluation of probiotic potential of lactic acid bacteria isolated from poultry intestine. *Microbiology*, 87(1), 116–126.
- Rana, M., Kumar, A., Kumar, D., Mazumder, K., & Gupta, N. (2020). Isolation and characterization of mannanolytic bacteria for the production of prebiotic manooligosaccharides from copra meal. *Journal Advanced Scientific Research*, 11(6), 117–123.
- Risna, Y. K., Harimurti, S., Wihandoyo, & Widodo. (2022). Kurva pertumbuhan isolat bakteri asam laktat dari saluran pencernaan itik lokal asal aceh. *Jurnal Peternakan Indonesia*, 24(1), 1–7.
- Risna, Y. K., Harimurti, S., Wihandoyo, & Widodo. (2020). Screening for probiotic of lactic acid bacteria isolated from the digestive tract of a native aceh duck (*Anas platyrhynchos*). *Biodiversitas*, 21(7), 3001–3007.
- Rolfe, M. D., Rice, C. J., Lucchini, S., Pin, C., Thompson, A., Cameron, A. D. S., Alston, M., Stringer, M. F., Betts, R. P., Baranyi, J., Peck, M. W., & Hinton, J. C. D. (2012). Lag phase is a distinct growth phase that prepares bacteria for exponential growth and involves transient metal accumulation. *Journal of Bacteriology*, 194 (3), 686-701.
- Rumaisha, R., Betha, O. S., & Aldrat, H. (2020). Isolasi dan karakterisasi bakteri asam laktat dari kefir susu kambing saanen (*Copra aegagrus* Hircus). *Pharmaceutical and Biomedical Sciences Journal*, 2(2), 79 - 86.
- Saraswati, P. W., Nocianitri, K. A., & Arihantana, N. M. I. H. (2021). Pola Pertumbuhan *Lactobacillus* sp. F213 selama fermentasi pada sari Buah Terung Belanda (*Solanum betaceum* Cav.). *Jurnal Ilmu dan Teknologi pakan*, 10(4), 621-633.

- Schllinger, U., & Lucke, F. K. (1989). Antimicrobial activity of *Lactobacillus sake* isolated from meat. *Applied and Environmental Microbiology*, 55(8), 1901-1906.
- Suarjana, I. G. K., Besung, I. N. K., Mahatmi, H., & Tono, K. (2017). Isolasi dan Identifikasi Bakteri. Modul. Fakultas Kedokteran Hewan. Universitas Udayana, Kuta Selatan.
- Sumardi, Suwanto, A., Thenawidjaja, M., & Purwadaria, T. (2005). Isolation and characterization of mannanolytic thermophilic bacteria from palm oil shell and their mannanase enzyme production properties. *Biotropia*, 25, 1-10.
- Sutrisna, R., Ekowati, N., & Rahmawati, D. (2013). Uji daya hambat isolat bakteri asam laktat usus Itik ( *Anas Domestica* ) pada bakteri gram positif dan pola pertumbuhan isolat bakteri usus itik pada media MRS Broth. *Jurnal Penelitian Pertanian Terapan*, 13(1), 52-59.
- Sutton, S. (2011). Accuracy of plate counts. *Journal Validation Technology*, 17(3), 42-46.
- Torshizi, M. A. K., Rahimi, S., Mojangani, N., Esmailkhanian, S., & Grimes, J. L. (2008). Screening of indigenous strains of lactic acid bacteria for development of a probiotic for poultry. *Asian-Australasian Journal of Animal Science*, 21, 1495-1500.
- Utama, C. S., Zuprizal, Hanim, C., & Wihandoyo. (2018). Isolasi dan identifikasi bakteri asam laktat selulolitik yang berasal dari jus kubis terfermentasi. *Jurnal Aplikasi Teknologi Pangan*, 7(1), 1-6.
- Widinatha, A., Hartayanie, L., & Lindayani. (2013). Isolation and characterization of lactic acid bacteria producing antimicrobial compounds from small intestine of chicken, *in*: The 4th International Conference of Indonesian Society Lactic Acid Bacteria (ISLAB). Yogyakarta, 25th-26th January 2013. Hal. 1-7.
- Widodo, T. S., Sulistiyanto, B., & Utama, C. S. (2015). Jumlah bakteri asam laktat (BAL) dalam digesta usus halus dan sekum ayam broiler yang diberi pakan ceceran pabrik pakan yang difermentasi. *Jurnal Agripet*, 15(2), 98-103.
- Yanti, A. H., Setyawati, T. R., & Kurniatuhadi, R. (2020). Isolation and characterization of lactic acid bacteria from fecal pellets, coelomic fluid, and gastrointestinal tract of Nypa worm (*Namalycastis Isolation*) and characterization of lactic acid bacteria from fecal pellets, coelomic fluid, and gastrointe. *Biodiversitas*, 21(10), 4726-4731.
- Yaqoob, M. U., Wang, G., & Wang, M. (2022). An updated review on probiotics as an alternative of antibiotics in poultry - a review. *Animal Bioscience*, 35(8), 1109-1120.

- Yusrizal, Noverdiman, Manin, F., & Yatno. (2012). Pengaruh penggunaan kombinasi probiotik dan prebiotik (simbiotik) bungkil inti sawit (BIS) fermentasi terhadap penurunan emisi amonia feses, status kesehatan dan performans ayam petelur. *in: Prosiding InSINas*. 186–196.
- Zurmiati, Mahata, M. E., Abbas, M. H., & Wizna. (2014). Aplikasi probiotik untuk ternak itik. *Jurnal Peternakan Indonesia*, 16(2), 134–144.