

DAFTAR PUSTAKA

- Aidah, S. N., dan KBM. 2020. *Mudahnya Budidaya Ikan Nila*. Jogjakarta: KBM.
- Affandi R., Sjafei D. S., Rahardjo M. F., dan Sulistiono. 2004. *Fisiologi Ikan*. Bogor: Fakultas Perikanan dan Ilmu Kelautan IPB
- Akhadiarto, S. 2009. Pengaruh Pemberian Probiotik Temba, Biovet dan Biolacta kedalam Air Minum Terhadap Performan Ayam Broiler. *Jurnal Sains dan Teknologi Indonesia*, 11(3): 145 – 150
- Akhter, N., Wu, B., Memon, A. M., dan Mohsin, M. 2015. Probiotics and prebiotics associated with aquaculture: A review. *Fish & Shellfish Immunology*, 45(2): 733 - 741.
- Akramiene, D., Kondrotas, A., Didziapetriene, J. & Kevelaitis, E., 2007. Effects of b-glucans on the immune system. *Medicina*, 43(8): 597 - 606.
- Amri, K., dan Khairuman, H. 2007. *Budidaya ikan nila secara intensif*. Jakarta: AgroMedia Pustaka.
- Andriani, Y. 2018. *Budidaya Ikan Nila*. Yogyakarta: Deepublish Publisher
- Arifin, M. C. 2018. *Kamus & Rumus Peternakan dan Kesehatan Hewan*. Jakarta: GiTAPustaka.
- Arlanda, R., Tarsim, dan Utomo, D. S. C. 2018. Pengaruh Pemberian Ekstrak Tembakau (*Nicotiana tobacum*) Sebagai Bahan Anestesi Terhadap Kondisi Hematologi Ikan Nila. *Jurnal Sains Teknologi Akuakultur*, 2(2): 32-40
- Basiru, A., dan Olatoye, I. O. 2013. Antibiotic Usage and Oxytetracycline Residue in African Catfish (*Clarias gariepinus* in Ibadan, Nigeria). *World Journal of Fish and Marine Sciences*, 5(3): 302 – 309
- Bharati, S., Antony, C., Rajagopalasamy, C. B. T., Uma, A., Ahilan B., dan Aanand, S. 2019. Functional Feed Additives Used in Fish Feeds. *International Journal of Fisheries and Aquatic Studies*, 7(3): 44 – 52
- Buchmann, K., dan Secombes, C. J. 2022. *Principles of Fish Immunology from Cells and Molecules to Host Protection*. United Kingdom: Springer
- Burton, S., dan Burton, M. 2018. *Essential Fish Biology: Diversity, Structure and Function*. United Kingdom: Oxford University Press
- Chattopadhyay, M. K. 2014. Use of Antibiotic as Feed Additives: A Burning Question. *Frontiers in Microbiology*, 5: 1 – 3

- Dawood, M. A., El-Shama, I., Abdel-Razik, N. I., Elkomy, A. H., Gewaily, M. S., Abdo, S. E., Soliman, A. A., Paray, B. A., dan Abdelkhalek, N.. 2020. The effect of mannanoligosaccharide on the growth performance, histopathology, and the expression of immune and antioxidative related genes in Nile tilapia reared under chlorpyrifos ambient toxicity. *Fish and Shellfish Immunology*, 103: 421-429.
- Dawood, M. A. O., Magouz, F. I., Bassuini, M. I., Khalafalla, M. M., Abbas, R., Sewilam, H., Aboelenin, S. M., Soliman, M. M., Amer, A. A., Soliman, A. A., dan Doan, H. V. 2021. Manna Oligosaccharide Enhanced the Growth Rate, Digestive Enzyme Activity, Carcass Composition and Blood Chemistry of Thinlip Grey Mullet (*Liza ramada*). *Animals*, 11:1- 13
- Dizaji, B. R., Hejazi, S., dan Zakeri, A. 2012. Effects of dietary supplementations of prebiotics, probiotics, synbiotics and acidifiers on growth performance and organs weights of broiler chicken. *Pelagia Research Library*, 2(6): 2125 - 2129.
- Effendi, I. 2007. *Materi Pokok Budidaya Perikanan*. Jakarta: Penerbit Universitas Terbuka
- El-Nobi, G., Hassanin, M., Khalil, A. A., dan Mohammed, A. Y. 2021. Comparative Efficiency of the Dietary Addition of Synbiotic “Curazol – M” and Norfloxacin on the Growth Performance, Body Composition, and Histological Alteration of the Nile tilapia. *Egyptian Journal of Aquatic Biology & Fisheries*, 25(1): 371 – 582
- Ekmekciu, I., Klitzingm E. V., Fiebiger, U., Escher, U, Neumann, C, Bacher, P., Scheffold, A., Khul, A. A., Bereswill, S., dan Heimesaat, M. M. 2017. Immune Responses to Broad-Spectrum Antibiotic Treatment and Fecal Microbiota Transplantation in Mice. *Frontiers in Immunology*, 8: 1 – 19
- Fahmi, U., Adriani, I., Salmah, S., Hatta, T. G., Omar, S. B. A., dan Sari, D. K. 2019. Histopathology of Liver and Intestine of Pangkulan Bare Fish (*Oryzias matanensis*) Polluted by Nickle and Iron in Lake Matano, South Sulawesi. *ISMF2*, 10: 1 – 7
- Galli, C., dan Calder, P. 2009. Effects of fat and fatty acid intake on inflammatory and immune responses: A critical review. *Annu Nutr Metab*, 55: 123 - 139.
- Ganguly, S., Dora, K. C., Sarkar, S. & Chowdhury, S., 2013. Supplementation of prebiotics in fish feed: a review. *Reviews in Fish Biology and Fisheries*, 23: 195 – 199

- Hidayati, E., Berata, K. I., Samsuri, Merdana, M. I., dan Sudimartini, L. M. 2018. Gambaran Histopatologi Limpa Tikus Putis yang Diberi Deksmetason dan Vitamin E. *Buletin Veteriner Udayana*, 10(1): 18 – 25
- Jamin dan Erlangga. 2016. Pengaruh Insektisida Golongan Organofosfat terhadap Benih Ikan Nila Gift (*Oreochromis niloticus*, Bleeker): analisis Histologis Hati dan Insang. *Acta Aquatica*, 3(2): 46 – 53
- Juanda, S. J., dan Edo, S. I. 2018. Histopatologi Insang, Hati, dan Ussu Ikan Lele (*Clarias gariepinus*) di Kota Kupang, Nusa Tenggara Timur. *Journal of Fisheries Science and Technology*, 14(1): 23 – 29
- Lim, C., dan Webster, C. D. 2006. *Tilapia Biology, Culture and Nutrition*. Canada: Food Product Press
- Long, S., Li, Z., Dong, X., Yan, X., Liu, H., Tan, B., Zhang, S., Pan, S., Li, T., Suo, X., dan Yang, Y. 2021. The Effect of Oxidized Fish Oil on the Spleen Index, Antioxidant Activity, Histology and Transcriptome in Juvenile Hybrid Grouper (♀ *Epinephelus fuscoguttatus* x ♂ *Epinephelus lanceolatus*). *Frontiers in Marine Science*, 8: 1 – 12
- Loor, J. J. 2018. Use of Live Yeast and Mannan – Oligosaccharides in Grain – Based Diets for Cattle: Rumen Parameters, Nutrient Digestibility and Inflammatory Response. *PloS One*, 13(11): 1 – 15
- Kantun, W. 2020. *Biologi Perikanan dan Aspek Pengelolaan*. Bogor: IBP Press
- Khairuman, H. & Amri, K., 2013. *Budi Daya Ikan Nila*. Jakarta: AgroMedia Pustaka.
- Kumar, N. P. B., Mahaboobi, S., dan Akhilesh, T. 2016. Effect of Feed Additives on Growth Performance of Fish. *Journal of Fisheries Sciences*, 10(3): 84 – 87
- Kumar, V., Saurabh, S., Sahu, N. P., dan Pal, A. K. 2006. β -Glucan, a Feed Additive to Manage Aquatic Animal Health. *Aqua Feeds: Formulation & Beyond*, 2(3): 9 - 11
- Mariska, M, Nazaruddin, dan Armansyah, T. TR. 2020. Gambaran Histopatologis Limpa Jantan Ikan Mujair (*Oreochromis mossambicus*) yang Terpapar Merkuri Klorida ($HgCl_2$). *JIMVET*, 4(1): 1 – 8
- McCann, M., Newell, E., Preston, C. & Forbes, K., 2006. The Use of Mannan Oligosaccharides and/or Tannin in Broiler Diets. *International Journal of Poultry Science*, 5(10): 873 - 879.

- Moon, S. H., Lee, I., Feng, X., Lee, H. Y., Kim, J. dan Ahn, D. U. 2016. Effect of Dietary Beta-Glucan on the Performance of Broilers and the Quality of Broiler Breast Meat. *Asian Australas J Anim Sci*, 29(3): 384 – 389
- Moshaveri, A., Saeed, M., Ahmad, F., Arain, M. A., El – hack, M. E. A., Emam, M., dan Bhutto, A. 2017. Use of Mannan – Oligosaccharides (MOS) as a Feed Additive in Poultry Nutrition. *Journal World Poult. Res*, 7(3): 94 – 103
- Mumpuni, F. S., Lukman, Mulyana. 2014. Efektivitas pemberian akar tuba (*Derris elliptica*) terhadap lama waktu kematian ikan nila (*Oreochromis niloticus*). *Jurnal Pertanian*, 5(1):22–31.
- Murwani, R., 2008. *Aditif Pakan*. Semarang: UNNES Press.
- Novriadi, R., dan Ibtisam. 2014. Aktivitas Sistem Imun Artemia Melalui Suplementasi β -Glukan. *Omni – Akuatika*, 13(19): 92 – 102
- Nur, F. M., dan Nugroho, R. A. 2018. *Potensi Bahan Hayati Sebagai Immunostimulan Hewan Akuatik*. Yogyakarta: Penerbit Deepublish
- Nurliana, N., Sugito, S., dan Masyitha, D. 2017. *Histomorfometri Usus Halus Broiler yang Diberi Ampas Kedelai dan Bungkil Inti Sawit Terfermentasi *Aspergillus niger* (AKBISprob)*. Bogor: Prosiding Seminar Nasional Teknologi Peternakan dan Veteriner, 482 – 490
- O’Malley, D. P. 2013. *Atlas of Spleen Pathology*. USA: Springer
- Ostrander, G. K. 2000. *The Laboratory Fish*. United State: Academic Press
- Pangaribuan, E., Sasanti, A. D., dan Amin, M. 2017. Efisiensi Pakan, Pertumbuhan, Kelangsungan Hidup dan Respon Imun Ikan Patin (*Pangasius sp.*) yang Diberi Pakan Bersinbiotik. *Jurnal Akuakultur Rawa Indonesia*, 5(2): 140-154
- Peatman, E., dan Beck, B. H. 2015. *Mucosal Health in Aquaculture*. United State: Elsevier
- Plumb, J. A., dan Hanson, L. A. 2011. *Health Maintenance and Principal Microbial Disease of Cultured Fishes 3rd Edition*. USA: WileyBlackwell
- Purwaningsih, U., Indrawati, A, Lusiastuti, A. M. 2015. Patogenesis Ko-Infeksi Penyakit Fish Tuberculosis dan Motile Aeromonas Septicemia pada Ikan Gurame (*Osphronemus gouramy*). *Jurnal Riset Akuakultur*, 10 (1): 99 – 107

- Raini, M. 2015. Kajian Pestida Berbahan Aktif Antibiotik. *Media Litbangke*, 25(1): 33 – 42
- Reda, M., Ibrahim, R., Ahmed, E., dan El-Bouhy, Z. 2013. Effect of oxytetracycline and florfenicol as growth promoters on the health status of cultured *Oreochromis niloticus*. *Egyptian Journal of Aquatic Research*, 39: 241 – 248
- Ren, Z., Wang, S., Cai, Y., Wu, Y., Tian, L., Wang, S., Jiang, L., Guo, W., Sun, Y., dan Zhou, Y. 2020. Effects of Dietary Mannan Oligosaccharide Supplementation on Growth Performance, Antioxidant Capacity, Non-specific Immunity and Immune-Related Gene Expression of Juvenile Hybrid Grouper (*Epinephelus lanceolatus*♂ x *Epinephelus fuscoguttatus*♀). *Aquaculture*, 735195.
- Sado, R., dan Bicudo, A. 2008. Feeding Dietary Mannan Oligosaccharides to Juvenile Nile Tilapia, *Oreochromis niloticus*, Has No Effect on Hematological Parameters and Showed Decreased Feed Consumption. *Journal of the World Aquaculture Society*, 39(6): 821 – 826
- Savitri, A., Hasani, Q., dan Tarsim. 2015. Pertumbuhan Ikan Patin Siam (*Pangasianodon hypophthalmus*) yang Dipelihara dengan Sistem Bioflok pada Feeding Rate yang Berbeda. *e-Jurnal Rekayasa Teknologi Budidaya Perairan*, 4(1): 453 - 460
- Siegers, W. H., Prayitno, Y. & Sari, A., 2019. Pengaruh Kualitas Air terhadap Pertumbuhan Ikan Nila Nirwana (*Oreochromis sp.*) pada Tambak Payau. *The Journal of Fisheries Development*, 3(2): 95-104.
- Smith, S. A. 2019. *Fish Diseases and Medicine*. United State: CRC Press
- Spring, P., Wenk, C., Dawson, K. & Newman, K., 2000. The Effects of Dietary Mannan oligosaccharides on Cecal Parameters and the Concentrations of Enteric Bacteria in the Ceca of Salmonella-Challenge Broiler Chicks. *Poultry Science*, 79: 205 - 211.
- Sumardjo, D., 2009. *Pengantar Kimia: Buku Panduan Kuliah Mahasiswa Kedokteran dan Program Strata I Fakultas Bioeksata*. Jakarta: EGC
- Sumayani, Kusdarwati, R., dan Cahyoko, Y. 2008. Daya Antibakteri Perasan Rimpang Lengkuas (*Alpinia galanga*) dengan Konsentrasi Berbeda 38 terhadap Pertumbuhan *Aeromonas hydrophila* secara In Vitro. *Berkala Ilmiah Perikanan*, 3(1): 83 - 87.
- Sunarti, Sari, W., Okavia, I. W., dan Cerianna, R. 2016. Struktur Mikroskopis Hati Ikan *Seurukan* (*Osteochilus vittatus*) dari Sungai Krueng Sabee Kabupaten

- Aceh Jaya yang Tercemar Limbah Penggilingan Bijih Emas. *Jurnal Biotik*, 4(1): 33 – 40
- Taddese, F., Huh, M. D., Bai, S. C., dan Vijverberg. 2014. Histological Changes of Liver in Overfed Young Nile Tilapia. *Journal of Fisheries and Aquatic Science*, 9: 63 – 74
- Vicentini, C. A., Fransceschini, V. I. B., Bombonato, M. T. S., Bertolucci, B., Lima, S. G., dan Santos, A. S. 2005. Morphological Study Of The Liver Teleost *Oreochromis niloticus*. *Brazil. Int. J. Morphol*, 23 (3): 1 – 8
- Wardoyo, S. E., Pramleonita, M., Yuliani, N., dan Arizal, R. 2018. Parameter Fisika dan Kimia Air Kolam Ikan Nila Hitam. *Jurnal Sains Natural Universitas Nusa Bangsa*, 8(1):24 – 34
- Widyastuti, N., Baruji, T., Giarni, R., Isnawan, H., Wahyudi, P., dan Donowati. 2011. Analisa Kandungan Beta-Glukan Larut Air dan Larut Alkali dari Tubuh Buah Jamur Tiram (*Pleurotus ostreatus*) dan Shiitake (*Lentinus edodes*). *Jurnal Sains dan Teknologi Indonesia*, 13 (3): 182 – 191
- Wijayanti, A. D., Hakim, L, dan Widiyono, I. 2007. Profil Farmakokinetik Oksitetrasiklin Hidroklorid dalam Berbagai Jaringan Tikus *Sprague Dawley*. *J. Sain Vet*, 25 (2): 68 – 74
- Yadav, M. K., Khati, A., Chauhan, R. S., Arya, P., dan Semwal, A. 2021. A Review on Feed Additives Used in Fish Diet. *International Journal of Environment, Agriculture and Biotechnology*, 6(2): 184 – 190
- Ye, J., Wang, K., Li, F., dan Sun, Y. 2011. Single or combined effects of fructo- and mannan oligosaccharide supplements and *Bacillus clausii* on the growth, feed utilization, body composition, digestive enzyme activity, innate immune response and lipid metabolism of the Japanese flounder. *Aquacultur Nutrition*, 17: 902- 911.
- Zhou, Q., Buentello, J., dan Gatlin, I. 2010. Effects of dietary prebiotics on growth performance, immune response and intestinal morphology of red drum (*Sciaenops ocellatus*). *Aquaculture*, 309: 253 - 257.
- Zyla, E., Dziendzikowska, K., Kamola, D., Wilczak, J., Sapierszynski, R., Harasym, J., dan Ostrowska – Gromadzka, J. 2021. Anti – Inflammatory Activity of Oat Beta – Glucans in Crohn’s Disease Model: Time – and Molar – Mass Dependent Effects. *International Journal of Molecular Sciences*, 22: 1 - 17