

DAFTAR PUSTAKA

- Abdelazeem, S., K. I. Takeda, K. Kurosu, and Y. Uyeno. 2020. Fermentative quality and animal acceptability of ensiled persimmon skin with adsorbents for practical use in ruminant feed. *Animals*, 10(4):1-14.
- Akter, S., H. M. Zabed, J. N. Sahu, F. I. Chowdhury, G. Faruq, A. N. Boyce, and X. Qi. 2020. Bioethanol production from water-soluble and structural carbohydrates of normal and high sugary corn stovers harvested at three growth stages. *Energy Convers. Manage*, 221:113104.
- Anas, M. R. dan S. Syahrir. 2017. Pengaruh penggunaan jenis aditif sebagai sumber karbohidrat terhadap komposisi kimia silase rumput mulato. *J. Agrisains*, 18(1):13-22.
- AOAC International. 2005. Official methods of analysis of AOAC International (18th ed.). AOAC International.
- Assis, J. A. D., C. A. C. Machungo, K. F. Nogara, and P. Schmidt. 2025. Propionic Acid in the Fermentation and Conservation of Whole Plant Corn Silage at Two Packing Densities. *Int. J. Agron*. 2025(1):9092078.
- Astuti, M. 2007. Pengantar Ilmu Statistika untuk Peternakan dan Kesehatan Hewan. Binasti Publisher: Bogor.
- Aulyani, T. L. and M. M. Sangkek. 2024. Physical and chemical quality of corn silage with the addition of liquid smoke. *Buletin Veteriner Udayana*:1745-1750.
- Bakare, A. G., T. J. Zindove, A. Bhavna, A. Devi, S. L. Takayawa, A.C. Sharma and P. A. Iji. 2023. *Lactobacillus buchneri* and molasses can alter the physicochemical properties of cassava leaf silage. *Heliyon*, 9(11):1-10.
- Banu M., H. Supratman, Y. A. and Hidayati. 2019. Pengaruh Berbagai Bahan Aditif Terhadap Kualitas Fisik dan Kimia Silase Jerami Jagung (*Zea mays* L). *Jurnal Ilmu Ternak*, 19(2):6-12.
- Bao, J., Ge, G., Wang, Z., Xiao, Y., Zhao, M., Sun, L., Wang, Y., Zhang, J., Y. Jia, and S. Du. 2023. Effect of isolated lactic acid bacteria on the quality and bacterial diversity of native grass silage. *Front. Plant Sci*. 14:1160369.
- Becerra, J. E., J. Rodríguez-Díaz, R. Gozalbo-Rovira, M. Palomino-Schätzlein, M. Zúñiga, V. Monedero. and M. J. Yebra. 2020. Unique microbial catabolic pathway for the human core N-glycan constituent fucosyl- α -1, 6-N-acetylglucosamine-asparagine. *MBio*. 11(1):10-1128.
- Bolsen K. K., G. Ashbell and Z. G. Weinberg. 1996. Silage Fermentation and Silage Additives: Review. Agricultural Research Organization, The Volcani Center, Bet Dagan 50250, Israel.
- Borreani, G. I., E. R. Tabacco, R. J. Schmidt, B. J. Holmes, and R. E. Muck. 2018. Silage review: Factors affecting dry matter and quality losses in silages. *J. Dairy Sci*. 101: 3952–3979.
- Brüning, D., K. Gerlach, K. Weiß, and K. Südekum. 2018. Effect of compaction, delayed sealing and aerobic exposure on maize silage quality and on formation of volatile organic compounds. *Grass Forage Sci*. 73: 53-66.

- Bureenok, S., Y. Chalermpon, V. Kraisit, J. T. Schonewille and K. Yasuhiro. 2012. The Effects of Additives in Napier Grass Silages on Chemical Composition, Feed Intake, Nutrient Digestibility and Rumen Fermentation. *Asian-Aust. J. Anim. Sci.* 25(9): 1248 - 1254.
- Cardoso, A., A. G. Oliveira, Rasmø, A. J. Pires, Vieira, H. Oliveira, Cardoso, V. Almeida, V. Silva de, U. Oliveira, L. Cardoso, L. Júnior, D. Morais de. 2017. Elephant grass silages with or without wilting, with cassava meal in silage production. *Rev. Bras. Saúde Prod. Anim.* 18(3): 417-429.
- Cavallarin, L., S. Antoniazzi, G. Borreani, and E. Tabacco. 2005. Effects of wilting and mechanical conditioning on proteolysis in sainfoin (*Onobrychis viciifolia scop*) wilted herbage and silage. *J. Sci. Food Agric.* 85(5): 831–838.
- Chauhan, N., N. Kumari, V. Mani, D. Pradhan, G.R. Gowane, S. Kumar, and N. Tyagi. 2024. Effects of *Lactiplantibacillus plantarum*, *limosilactobacillus fermentum*, and Propionic Acid on the fermentation process of sugarcane tops silages along with variations in pH, yeast and Mould Count after Aerobic exposure. *Waste Biomass Valorization.* 15(4):2215-2230.
- Chen, Y. and Z. G. Weinberg. 2009. Changes during aerobic exposure of wheat silages. *Anim. Feed Sci. Technol.* 154(1-2):76-82.
- Cherney, D. J. R., J. H. Cherney and W. J. Cox. 2004. Fermentation characteristics of corn forage ensiled in mini-silos. *J. Dairy Sci.* 87(12):4238-4246.
- Danner, H., M. Holzer, E. Mayrhuber, and R. Braun. 2003. Acetic Acid Increases Stability of Silage under Aerobic Conditions. *Appl. Environ. Microbiol.* 69: 562 - 567.
- Das, J., R. Kandali, and T. C. Sharma. 2017. Chemical Composition and Phytochemicals of Bran of a Few Rice Varieties of Assam. *Indian J Agric Biochem* 30 (2):189-194.
- Despal, P. Hidayah, dan A. D. Lubis. 2017. Tropical lowland maize silage quality from different age of harvesting for dairy cattle. *Buletin Makanan Ternak*, 15(3):10-20.
- Driehuis F., J. M. Wilkinson, Y. Jiang, I. Ogunade, and A. T. Adesogan. 2017. Silage review: Animal and human health risks from silage. *J. Dairy Sci.* 101(5):4093–4110.
- Feng, Q., J. Zhang, W. Ling, A. A. Degen, Y. Zhou, C. Ge, F. Yang, and J. Zhou. 2023. Ensiling hybrid *Pennisetum* with lactic acid bacteria or organic acids improved the fermentation quality and bacterial community. *Front. Microbiol.* 14:1-16.
- Fitriani, D., M. Ardiansyah, A. Kurniawati, Z. Bachruddin, and D. H. V. Paradhipta. 2024. Chemical and Physical Quality, Fermentation Characteristics, Aerobic Stability, and Ruminal Degradability of Sorghum Silage Inoculated with *Lactiplantibacillus plantarum* and *Limosilactobacillus fermentum*. *Trop. Anim. Sci. J.* 47(4):483-492.
- Gheller, L. S., L. G. Ghizzi, C. S. Takiya, N. T. Grigoletto, T. B. Silva, J. A. Marques, M. S. Dias, G. Freu, and F. P. Renno. 2021. Different organic acid preparations on fermentation and microbiological profile, chemical composition, and aerobic stability of whole-plant corn silage. *Anim. Feed Sci. Technol.* 281:115083.

- Gül, S. 2023. The impact of wheat bran and molasses addition to caramba mix silage on feed value and *in vitro* organic matter digestibility. *Journal of King Saud University-Science*. 35(1):102400.
- Gulfam, A., G. Guo, S. Tajebe, L. Chen, Q. Liu, X. Yuan, Y. Bai, and T. Saho. 2017. Characteristics of lactic acid bacteria isolates and their effect on the fermentation quality of Napier grass silage at three high temperatures. *J. Sci. Food Agric*. 97(6):1931–1938.
- Gustiani E. dan K. Permad. 2015. Kajian Pengaruh Pemberian Pakan Lengkap Berbahan Baku Fermentasi Tongkol Jagung terhadap Produktivitas Ternak Sapi PO di Kabupaten Majalengka. *Jurnal Peternakan Indonesia*. 17(1):12-18.
- Hasan, S., S. Nampo, and A. Mujnisa. 2020, April. The increase of corn crop productivity through NPK fertilizer addition in dy land. In *IOP Conference Series: Earth Environ. Sci*. 492(1): 012007. IOP Publishing.
- He, L., H. Lv, C. Wang, W. Zhou, R. Pian, Q. Zhang, and X. Chen. 2020. Dynamics of fermentation quality, physiochemical property and enzymatic hydrolysis of high-moisture corn stover ensiled with sulfuric acid or sodium hydroxide. *Bioresour. Technol*. 298:122510.
- Herrera, D. M., W. M. Peixoto, J. G. D. Abreu, R. H. P. D. Reis, F. G. D. Sousa, E. Balbinot, and R. P. Costa. 2023. Is the Integration between Corn and Grass under Different Sowing Modalities a Viable Alternative for Silage? *Animals*. 13(3): 425.
- Herrmann C., M. Heiermann, and C. Idler. 2011. Effects of *ensiling*, silage additives and storage period on methane formation of biogas crops. *Bioresour. Technol*. 102(8):5153–5161.
- Huang Z, M. Wang, W. Ke, and X. Guo. 2021. Screening of high 1, 2-propanediol production by *Lactobacillus buchneri* strains and their effects on fermentation characteristics and aerobic stability of whole-plant corn silage. *Agric*. 11(7):590.
- Imanda, S., Y. Effendi, Sihono dan I. Sugoro. 2016. Evaluasi *In vitro* Silase Sinambung Sorgum varietas samurai 2 yang mengandung probiotic BIOS K2 dalam cairan rumen kerbau. *Jurnal Ilmiah Aplikasi Isotop dan Radiasi*. 12(1):1-12.
- Isah, S., and J. Okosun. 2023. Nutritional and Anti-nutritional Compositions of Rice Bran as a Potential Animal Feed. *Int. Res. J. Pure Appl. Chem*. 24(6): 1-6.
- Islam K. N., T. Akbar, F. Akther and N. N. Islam. 2016. Characterization and Confirmation of *Lactobacillus* sp. from Selective Regional Yoghurts for Probiotic and Interference with Pathogenic Bacterial Growth. *Asian Journal of Biological Sciences*. 9(1-2): 1-9.
- Jalc, D. 2009. The Use of Bacterial Inoculants for Grass Silage: Their Effects on Nutrient Composition and fermentation Parameters in Grass Silage. *Czech J. Anim. Sci*. 54 (2): 84-91
- Jatkauskas. J., V. Vrotniakiene, R. C. do Amaral, K. L. Witt and B. Ieda Cappellozza. 2024. Influence of *Ensiling* Timing and Inoculation on Whole Plant Maize Silage Fermentation and Aerobic Stability (Preliminary Research). *Plants*. 13(20): 2894.
- Jones, C. M., A. J. Heinrichs, G. W. Roth and V. A. Ishler. 2004. From harvest to feed: understanding silage management. *Pennsylvania State University. College of Agricultural Sciences*:2-11.

- Joris L., S. Fredriksz, dan A. I. Kewilaa. 2022. Kualitas Kimia Dedak Padi Selama Penyimpanan Menggunakan Ekstrak Daun Cengkeh (*Syzigium Aromaticum*). JHPPK. 6(2):211-219.
- Júnior, P. D. C. T., L. M. P. Rodrigues, A. J. D. S. Macêdo, J. S. D. Oliveira, M. L. P. Lemos, F. N. D. S. Santos, B. R. D. Moura, A. L. Pereira, E. D. S. D. Silva, T. B. D. Correia. and G. A. D. Costa. 2025. Impacts of Chemical and Microbial Additives on the Quality of Forage Sorghum Silage During the Fermentation Process. *Agronomy*. 15(5):1176.
- Keskin, B. and M. Aktanbaş. 2025. Effects of Wheat Bran and Molasses Additives on Quinoa Silage Quality. *TURKJANS*. 12(2):312-320.
- Khan, N. A., N. Khan, S. Tang, and Z. Tan. 2023. Optimizing corn silage quality during hot summer conditions of the tropics: investigating the effect of additives on in-silo fermentation characteristics, nutrient profiles, digestibility and post-ensiling stability. *Front. Plant Sci*. 14:1305999.
- Khantibongse P., and C. Ratanatamskul. 2023. Insight into pathway of monosaccharide production from integrated enzymatic hydrolysis of rice straw waste as feed stock for anaerobic digestion. *Sci Rep*.13(1):148.
- Khota W, S. Pholsen, D. Higgs, Y. Cai. 2016. Natural lactic acid bacteria population of tropical grasses and their fermentation factor analysis of silage prepared with cellulase and inoculant. *J Dairy Sci*. 99(12):9768–81.
- Kiliç A. 1984. Silo Yemi (Silage Feed). Turkey : Bilgehan Press, Izmir.
- Kim, D., K. D. Lee, and K. C. Choi. 2021. Role of LAB in silage fermentation: Effect on nutritional quality and organic acid production—An overview. *AIMS Agric. Food*. 6(1):216-234.
- Koca, Y., and O. Erekul. 2016. Changes of Dry Matter, Biomass and Relative Growth Rate with Different Phenological Stages of Corn. *Agric. Agric. Sci. Procedia*. 10: 67-75.
- Köhler, B., F. Taube, J. Ostertag, S. Thurner, C. Kluß, and H. Spiekers. 2019. Dry-matter losses and changes in nutrient concentrations in grass and maize silages stored in bunker silos. *Grass Forage Sci*. 74(2): 274-283.
- Kumari, N., N. Chauhan, K., G.B. and D. Singh. 2024. Effect of enzymes and bacterial inoculant and their combination on the fermentation parameter and aerobic stability of maize silage. *Int. J. Adv. Biochem. Res*. 8(6): 607-615.
- Kung Jr, L., R.D. Shaver, R.J. Grant, and R.J. Schmidt. 2018. Silage review: Interpretation of chemical, microbial, and organoleptic components of silages. *J. Dairy Sci*. 101(5):4020-4033.
- Kusumaningrum C.E., I. Sugoro and P. Aditiawati. 2018. Pengaruh Silase Sinambung Jerami Jagung Terhadap Fermentasi Dalam Cairan Rumen Secara *In vitro*. *Jurnal Ilmu Ternak*, 18(1):26-33.
- Li, M., H. Zi, H. Zhou, G. Hou, Y. Cai. 2014. Effect of sucrose, glucose, molasses, and cellulose on fermentation quality and *in vitro* gas production of king grass silage. *Anim. Feed Sci. Technol*. 197: 206-212.

- Maidah, D., N. P. Indriani, dan I. Susilawati. 2022. Pengaruh Varietas terhadap Tinggi Tanaman dan Jumlah Buku Batang pada Tanaman Jagung Sebagai Hijauan Pakan. *Jurnal Nutrisi Ternak Tropis Dan Ilmu Pakan*, 4(3):113-118.
- McDonald, P. 2002. *Animal Nutrition*. India: Pearson Education India.
- McDonald, P. 1991. *The Biochemistry of Silage*. John Wiley and Sons. New York. p 340.
- McDonald P. 1995. *Animal Nutrition*. Ed ke-5. New York: Longman Scientific and Technical.
- McDonald P, Edwards RA, Greenhalgh JFD, Morgan CA, Sinclair LA and Wilkinson R. G., 2022. *Animal Nutrition*. 8th Ed. Singapore : Pearson.
- Manlapig J. J. D., T. Ban-Tokuda, H. Matsui. 2023. Nutritional quality and organic acid profile of rice bran fermented with lactic acid bacteria isolated from horse feces. *Anim Sci J*. 94(1): 13860.
- Migwi, P. K., B. O. Bebe, C. K. Gachui, I. Godwin and J. V. Nolan. 2013. Options for efficient utilisation of high fibre feed resources in low input ruminant production systems in a changing climate: A review. *Livestock Research for Rural Development*. Volume 25. Retrieved July 10, 2016.
- Miralestari, M., A. Sudarman, S. Suharti, A. Sofyan. 2021. Enhancing Physical-chemical Quality and Palatability of King Grass (*Pennisetum Hybrid*) Silage Treated by Combination of Water Soluble Carbohydrate and Legume Sources. Pages 270-275 in 3rd International Conference of Computer, Environment, Agriculture, Social Science, Health Science, Engineering and Technology (ICEST). Graduated School of Animal Science, Bogor Agricultural University (IPB), Bogor.
- Monteiro, I. J. G., G. d. A. Joadil, d. S. Luciano, Cabral, G. d. A. Roberto, H. P. d. R. Rafael, B. N. Arthur, E. A. C. Carlos, V. d. B. Livia, C. D. A. Anne, P. Sarah. 2016. Ensiling of elephant grass with soybean hulls or rice bran. *Semina: Ciências Agrárias, Londrina*, 37 (6):4203-4212.
- Muck, R. E. 2011. The art and science of making silage. Pages 36–46 in Proc. 41st Western Alfalfa and Forage Symp., Las Vegas, NV. Univ. California, Davis.
- Mudhita I. K., R. A. Putra, M. M. Rahman, B. P. Widyobroto, Agussalim, and N. Umami. 2024. The Silage Quality of *Pennisetum purpureum* Cultivar Gamma Umami Mixed with *Calliandra calothyrsus* and *Lactiplantibacillus plantarum*. *Trop. Anim. Sci. J*. 47(1):112-124.
- Mugiawati, R. E. 2013. Kadar Air dan pH Silase Rumput Gajah pada Hari ke-21 dengan Penambahan Jenis Aditif dan Bakteri Asam Laktat. *Jurnal Ternak Ilmiah*. 1(1): 201-207.
- Muti'a, A. Fausiah, and Santi. 2022. Karakteristik Silase Sebagai Pakan Lengkap yang Berbahan Dasar Daun Jati Merah (*Tektona grandis* L.). *Jurnal Agroterpadu*. 1(1):78-81.
- Ni, K. kui, Yang, H. xiao, Hua, W., Wang, Y. ping, Pang, H. li, 2016. Selection and characterisation of lactic acid bacteria isolated from different origins for *ensiling Robinia pseudoacacia* and *Morus alba* L. leaves. *J. Integr. Agric*. 15(10): 2353–2362.

- Nopitasari, S., T. Widiyastuti, dan T. R. Sutardi. 2013. Pengujian Kecernaan Bungkil Biji Jarak Fermentasi ditinjau dari Produksi VFA dan NH₃ secara *In vitro*. *Jurnal Ilmiah Peternakan*. 1(2): 446-454.
- Nurjanah, L. L., N. Umami, A. Kurniawati, C. Hanim, B. P. Widyobroto, D.H.V. Paradhipta, and T. Meidiana. 2023. The Quality of Physic and pH of Gama Umami Grass Silage Supplemented with Calliandra Leaves and Pollard. The 4th International Conference on Agriculture and Bio-industry. IOP Conf. Series: Earth and Environmental Science.
- Okoye, C. O., Y. Wang, L. Gao, Y. Wu, X. Li, J. Sun, and J. Jiang. 2023. The performance of lactic acid bacteria in silage production: A review of modern biotechnology for silage improvement. *Microbiol. Res.* 266.
- Paeru, R. H., dan T. Q. Dewi. 2017. *Panduan Praktis Budidaya Jagung*. Jakarta : Penebar Swadaya.
- Paradhipta, D. H. V., S. S. Lee, B. Kang, Y. H. Joo, H. J. Lee, Y. Lee, J. Kim, and S. C. Kim. 2020. Dual-purpose inoculants and their effects on corn silage. *Microorganisms*. 8(5):765.
- Paradhipta, D. H. V., Y. H. Joo, H. J. Lee, S. S. Lee, H. T. Noh, J. S. Choi, J. Kim, H. G. Min, and S. C. Kim. 2021. Effects of inoculants producing antifungal and carboxylesterase activities on corn silage and its shelf life against mold contamination at feed-out phase. *Microorganisms*. 9(3), 1–16.
- Pedroso, A. D., A. D. Rodrigues, W. Barioni - Júnior, G. B. Souza. 2011. Fermentation parameters, quality and losses in sugarcane silages treated with chemical additives and a bacterial inoculant. *Rev. Bras. Zootec.* 40: 2318–2322.
- Podkowka, Z. and L. Podkowka. 2011. Chemical composition and quality of sweet sorghum and maize silages. *JCEA*. 12(2): 294-303.
- Pratiwi I., F. Fathul, and Muhtarudin. 2015. The Effect of Different Adding Starter to Making Silage of Crude Fiber Content, Crude Fat, Water Content, and Material Extract Without Nitrogen Silage. *Scientific Journal*. eDepartment of Animal Husbandry Faculty of Agriculture Lampung University, 3(3): 116-120.
- Ramadhan B. N., L. Abdullah, M. Ridla. 2023. Pertumbuhan dan Produksi Hijauan Pakan Jagung Manis (*Zea mays saccharata*) yang diberi Perlakuan Pemupukan Nitrogen dan Umur Panen yang Berbeda. *Jurnal Triton*. 14(2): 349-358.
- Rajab, F. A. S. Chuzaemi, and Marjuki. 2020. The Quality of Dwarf Elephant Grass (*Pennisetum purpureum* cv. Mott) Silage Using Fresh Rumen Content Inokulum and Carbohydrate Source Additives with Different Incubation Time. *IRJAES*: 201-204.
- Reddy, U., T. Selvakumar, K. Sathyasheela, N. Satheeshkumar, and M. Thirunavukkarasu. 2025. Transforming forage nutrition: Advances in silage additives for enhanced preservation and feed quality. *Plant Science Today*. 12(3):1-11.
- Ren, Y., Q. Li, X. Du, Y. Zhang, H. Wang, G. Shi, and M. Wei. 2023. Analysis of Corn Yield Prediction Potential at Various Growth Phases Using a Process-Based Model and Deep Learning. *Plants*. 12.

- Riyanti, L. and G. Febriza, 2023. Kualitas fisik dan fraksi serat silase rumput Gajah (*Pennisetum purpureum*) dengan penambahan molasses dan probiotik. *Jurnal Ilmu Peternakan Terapan*, 7(1):10-17.
- Sadarman, S., D. Febrina, J. Handoko, M. Maharaja, Qomariyah, N., G., Adegbeye, M., Harahap, R., Am, M., and Nurfitriani, R. 2025. Evaluation of commercial syrup as a stimulant additive to improve elephant grass silage quality. *Jurnal Ilmu Nutrisi dan Teknologi Pakan*. 23(1):41-48.
- Sadarman, D. Febrina, T. Wahyono, R. Mulianda, N. Qomariyah, R. A. Nurfitriani, F. Khairi, D. N. A. Adli, S. D Romli, and A. B. Prastyo. 2022. Kualitas fisik silase rumput gajah dan ampas tahu segar dengan penambahan sirup komersial afkir. *Jurnal Ilmu Nutrisi dan Teknologi Pakan*, 20(2):73-77.
- Salam, N. B., S. S. Islam, M. S. Islam, M. M. Rahman, and T. M. Moin. 2024. Determination of physical and nutritional quality of silages prepared from three different species of fodder. *South Asian Journal of Agriculture*. 10(1):1-10.
- Sanjaya H. B., N. Umami, A. Astuti, Muhlisin, B. Suwignyo, M. M. R. K. Umpuch, and E.R.V. Rahayu. 2022. Performance and in vivo digestibility of three varieties of napier grass in thin-tailed sheep. *Pertanika J. Trop. Agric. Sci.* 45 (2): 505 - 517.
- Saricicek, B. Z., B. Yildirim, Z. Kocabas, and E. O. Demir. 2016. Effect of storage time on nutrient composition and quality parameters of corn silage. *TURJAF*. 4(11): 934-939.
- Saroh, S.Y., B. Sulistiyanto, M. Christiyanto dan C. S. Utama. 2019. Pengaruh lama pengukusan dan penambahan level kadar air yang berbeda terhadap uji proksimat dan pencernaan pada bungkil kedelai, gaplek dan pollard. *Jurnal Litbang Provinsi Jawa Tengah*. 17(1):77-86.
- Silalahi, H. and I. S. F. Sangadji, 2023. Silase rumput pakchong (*pennisetum purpureum* cv. Thailand) dengan penambahan molasses sebagai pakan ternak ruminansia quality of pakchong grass silage (*crimson pennywort* cv. Thailand) with the addition of different of mo. *JASPT*. 2(1): 202-209.
- Sofyan A, L. M. Yusiati, Y. Widyastuti, and R. Utomo. 2011. Microbiological characteristic and fermentability of king grass (*Pennisetum hybrid*) silage treated by lactic acid bacteria yeast inoculants consortium combined with rice bran addition. *JITAA*. 36(4):265–272.
- Soundharrajan, I., H. S. Park, S. Rengasamy, R. Sivanesan, and K. C. Choi. 2021. Application and future prospective of lactic acid bacteria as natural additives for silage production—A review. *Applied Sciences*, 11(17):8127.
- Sudarman, A., R. i. N. Amalia and D. A. Astuti. 2016. Effect of molasses, rice bran and tapioca flour as additives on the quality and digestibility of cassava leaf silage. *J. ISSAAS*. 22(2):40-49.
- Sudarman, P. H. Rakhmad, F. M. A. Amirul, F. Dewi, F. Rahmi, Gholib, Yunilas, Q. Novia, A. N. Rizki, and K. Fitrah. 2024. Physico-chemical characterization of tofu by-product silage supplemented with fine rice bran and chestnut tannin as silage additives. *Jurnal Nutrisi Ternak Tropis*. 7(2):108-114.
- Sudeepa E. S., and K. Bhavini. 2020. REVIEW ON *Lactobacillus fermentum*. *IJARIIIE*. 6(1): 719-726.

- Sulfiar, A. E. T., B. A. Atmoko, B. Guntoro, and I. G. S. Budisatria. 2020. Study of pasture productivity for semi-intensive cattle system during dry season in the south konawe regency, southeast sulawesi. *Buletin Peternakan*, 44(3): 148-154.
- Suryani H., W. Wijayandari, S. Fakhri, A. Latif, dan A. Yani. 2020. Pengaruh penambahan bakteri asam laktat dan pakan sumber energi terhadap kandungan nutrisi dan fraksi serat silase pelepah sawit. *Jurnal Peternakan*.17 (2):81-89.
- Tahuk, P. K., G.F. Bira, and H. Taga. 2020. March. Physical characteristics analysis of complete silage made of sorghum forage, king grass and natural grass. In IOP Conference Series: Earth and Environmental Science. 465(1):012022. IOP Publishing.
- Tao, X., C. Ji, S. Chen, J. Zhao, S. Wang, J. Li, and T. Shao. 2021. Fermentation quality and aerobic stability of Napier grass ensiled with citric acid residue and lactic acid bacteria. *Tropical Grasslands-Forrajes Tropicales*. 9(1): 52–59.
- Taysayavong, L. E. Ivarsson, and J. E. Lindberg. 2018. Ensiling of fresh cassava root pulp and fresh soybean pulp with or without rice bran. *Livestock Research for Rural Development*. 30(6).
- Tellyaev, R., K. Azizov, and I. Mamatkulov. 2021. Primary source and selection of corn (*maize*). *E3S Web of Conferences*.
- Tian, P., H. Hu, X. Zhang, M. Chen, and X. Wang. 2023. Effects of temperature and moisture levels on vitamin A in total mixed ration silage. *Fermentation*, 9(7):614.
- Tilley, J. M. A., and R. A. Terry. 1963. A two-stage technique for the *in vitro* digestion of forage crops. *Journal of the British Grassland Society*, 18(2), 104–111.
- Tyrolova, Y., and A. Vyborna. 2011. The effects of wilting and biological and chemical additives on the fermentation process in field pea silage. *Czech J. Anim. Sci.* 56: 427– 432.
- Umami N., B. P. Widyobroto, D. H. V. Paradhipta, Z. A. Solekhah, and L. L. Nurjanah. 2023. Silage quality based on the physical and chemical of several napier grass varieties (*Pennisetum purpureum*) supplied with different levels of pollard. The 4th International Conference on Agriculture and Bio-industry: IOP Conf. Series: Earth and Environmental Science.
- Valle, T. A. D., R. M. dos Santos, E. B. de Azevedo, R. Cantoia Jr, E. A. Faleiro, F. B. Facco, M. Campana and J. P. G. de Moraes. 2023. Effect of rice bran and microorganism as additives in pearl millet silage. *N. Z. J. Agric. Res.* 66 (5): 479–492.
- Waluwandja, Y., R. Anjalani, M. H. Paulini, S. W. N. R. Astuti, dan R. S. Dwijayanti. 2023. Kualitas silase kulit pisang kepok dengan penambahan tepung gapek sebagai aditif. *Jurnal Ilmiah Ilmu-Ilmu Peternakan* 26(1):1-10.
- Wang, M., L. Wang, and Z. Yu. 2019. Fermentation dynamics and bacterial diversity of mixed Lucerne and sweet corn stalk silage ensiled at six ratios. *Grass Forage Sci.* 74(2):264–73.
- Wang, S., X. Yuan, Z. Dong, J. Li. and T. Shao. 2017. Effect of *ensiling* corn Stover with legume herbages in different proportions on fermentation characteristics, nutritive quality and *in vitro* digestibility on the Tibetan plateau. *Grassland Sci.* 63(4): 236–244.

- Wang S., T. Shao, J. Li, J. Zhao, and Z. Dong. 2022. A survey of fermentation parameters, bacterial community compositions and their metabolic pathways during the *ensiling* of sorghum. *J Appl Microbiol.* 132(5):3563–3577.
- Wang, T., K. Teng, Y. Cao, W. Shi, Z. Xuan, J. Zhou, J. Zhang, J. Zhong. 2020. Effects of *Lactobacillus hilgardii* 60TS-2, with or without homofermentative *Lactobacillus plantarum* B90, on the aerobic stability, fermentation quality and microbial community dynamics in sugarcane top silage. *Bioresour. Technol.* 312:123600.
- Weiss, K., B. Kroschewski, and H. Auerbach. 2016. Effects of air exposure, temperature and additives on fermentation characteristics, yeast count, aerobic stability and volatile organic compounds in corn silage. *J. Dairy Sci.* 99(10): 8053–8069.
- Widyastuti, Y. 2008. Fermentasi silase dan manfaat probiotik silase bagi ruminansia. *J. Media Peternakan.* 31 (3): 225-232.
- Xia G. H., C. R. Wu, M. Z. Zhang, F. Yang, C. Chen, J. Hao. 2023. The metabolome and bacterial composition of high-moisture Italian ryegrass silage inoculated with lactic acid bacteria during *ensiling*. *Biotechnol Biofuels Bioprod.* 16(1):91.
- Xiong, Y., Q. Meng, G. Jie, X. Tang, and H. Zhang. 2017. Effects of relative humidity on animal health and welfare. *J. Integr. Agric.* 16(8):1653–1658.
- Xu, J., J. Ma, R. Sa, H. Sui, X. Wang, Q. Li, X. Zhu, B. Wu, Z. Hu and H. Niu. 2024. Effects of lactic acid bacteria inoculants on the nutrient composition, fermentation quality, and microbial diversity of whole-plant soybean-corn mixed silage. *Front. Microbiol.* 15: 1347293.
- Xu, S., J. Yang, M. Qi, B. Smiley, W. Rutherford, Y. Wang. and T. A. McAllister. 2019. Impact of *Saccharomyces cerevisiae* and *Lactobacillus buchneri* on microbial communities during ensiling and aerobic spoilage of corn silage. *J. Anim. Sci.* 97(3):1273-1285.
- Yan Y, M. Zhao, P. Sun, L. Zhu, X. Yan, J. Hao, Q. Si, Z. Wang, Y. Jia, M. Wang, W. Hou and G. Ge. 2025. Effects of different additives on fermentation characteristics, nutrient composition and microbial communities of *Leymus chinensis* silage. *BMC Microbiol.* 25(1):296.
- Yi, Q., M. Yu, P. Wang, J. Du, T. Zhao, Y. Jin, H. Tang, and B. Yuan. 2023. Effects of Moisture Content and Silage Starter on the Fermentation Quality and *In vitro* Digestibility of Waxy Corn Processing Byproduct Silage. *Fermentation.* 9(12):1025.
- Yin, X., W. Yong-qi, L. Xin-qin, T. Jing, W. Xiao-ya, and Z. Jian-guo. 2021. Effects of various moisture-absorbing roughages on the fermentation quality and aerobic stability of napier grass silage. *Acta Prataculturae Sinica.* 30(7): 133-138.
- Yitbarek, M. B. and B. Tamir. 2014. Silage additives. *Open Journal of Applied Sciences.* 4:258-274.
- Yoo, H., C. Y. Cheng, and O. Sejong. 2021. Genome analysis of *Limosilactobacillus fermentum* JN2019 applied to tumeric fermentation for animal feed. *J Anim Sci Technol.* 63(5):1204-1206.
- Yunilas, Y., M. S. Harahap, M. Isman, A. Trisna, E. Yusni, and G. A. W. Siregar. 2024. Pembuatan silase tunggal berbasis rumput gama umami (*pennisetum purpureum*

cv. Gama umami) sebagai pakan ternak. *Community: Jurnal Pengabdian Kepada Masyarakat*, 4(1):31-36.

Zhang, H., J. Wu, X. Zhao, P. Yan, R. Yang, J. Yan, X. Yuan, and Z. Cui. 2023. Improving aerobic stability and methane production of maize stover silage with lactic acid bacteria inoculants: Focus on pentose-fermentation. *Ind. Crops Prod.* 201:116861.

Zhao, M., J. Bao, Z. Wang, S. Du, C. Gao, D. Nan, X. Yan, and G. Ge. 2023. Evaluation of the fermentation performance and functional properties of bacterial communities of amaranth silage supplemented with *Limosilactobacillus fermentum* and *Lactilactobacillus graminis*. *Chem. Biol. Technol. Agric.* 10(1):103.

Zhu, L., M. Zhao, Y. Yan, P. Sun, X. Yan, M. Liu, R. Na, Y. Jia, S. Cha, G. Ge. 2025. Characteristics of isolated lactic acid bacteria at low temperature and their effects on the silage quality. *Microbiol. Spectrum.* 13(5): 1-21.