

## DAFTAR PUSTAKA

- Adi Suroso, G. G., Adhianto, K., Muhtarudin, M., & Erwanto, E. (2023). Evaluasi Kecukupan Nutrisi Pada Sapi Potong Di Kpt Maju Sejahtera Kecamatan Tanjung Sari Kabupaten Lampung Selatan. *Jurnal Riset Dan Inovasi Peternakan (Journal of Research and Innovation of Animals)*, 7(2), 147–155. <https://doi.org/10.23960/jrip.2023.7.2.147-155>
- Adriani, Latif, A. Fachri S.dan Sulaksana I. 2014. Peningkatan Produksi dan Kualitas Susu Kambing Peranakan Etawah Sebagai Respon Perbaikan Kualitas Pakan. Jurnal Ilmiah Ilmu - Ilmu Peternakan, Volume XVII, No. 1
- Afriyanti, M. 2008. Fermentabilitas dan kecernaan in vitro ransum yang diberi kursin bungkil biji jarak pagar (*Jatropha curcas L.*) pada ternak sapi dan kerbau. Skripsi Fakultas Peternakan, Institut Pertanian Bogor, Bogor
- Agustin, F., Jamarun, N., Pazla, R., & Suryadi, H. (2024). Bioavailability of Calcium, Phosphorus and Quality of Milk Components of Etawa Cross-breed Goats Fed Banana Peels. *International Journal of Veterinary Science*, 13(4), 501–507. <https://doi.org/10.47278/journal.ijvs/2024.128>
- Akinfemi, A., Adu, O. A., & Doherty, F. (2010). Conversion of sorghum stover into animal feed with white-rot fungi: *Pleurotus ostreatus* and *Pleurotus pulmonarius*. *African Journal of Biotechnology*, 9(11), 1706-1712.
- Alberts B, J. A, 2002, Molecular Biology of the Cell. 4th edition, New York: Garland Science.
- Ali, U. (2008). Pengaruh penggunaan onggok dan isi rumen sapi dalam pakan komplit terhadap penampilan kambing peranakan etawah. Majalah Ilmiah Peternakan, 9(3).
- Anas, S. dan Andy. 2010. Kandungan NDF dan ADF silase campuran jerami jagung (*Zea mays*) dengan penambahan beberapa level daun gamal. Agrisistem. 6(2):77-81.
- Anderson. 2009. Influence of calcium oxide level and time of exposure to sugarcane on in vitro and in situ digestive kinetics. Anim. Feed Sci. Technol. 153: 101-112.
- Anggorodi. R. 2005. Ilmu Makanan Ternak Umum. Gadjah Mada University Press. Jogjakarta.
- Annisa. (2020). Karakteristik Cairan Rumen In-Vitro Dari Limbah Serai Wangi yang Diamoniasi dan Fermentasi dengan Starbio. Universitas Andalas.
- Arambel, M. J., & Kent, B. A. (1990). Effects of yeast culture on nutrient digestibility and milk yield response in early- to mid-lactation dairy cows. *Journal of Dairy Science*, 73(6), 1560-1563. [https://doi.org/10.3168/jds.S0022-0302\(90\)78825-4](https://doi.org/10.3168/jds.S0022-0302(90)78825-4)
- Ardiansyah, H. 2014. Pengaruh Penggunaan Limbah Kelapa Sawit Sebagai Pakan Kambing Peranakan Etawa (PE) Terhadap Konsumsi Ransum, Produksi dan Kualitas Susu [Skripsi]. Padang. Fakultas Peternakan Universitas Andalas.
- Aristya AL, Legowo AM, dan Al-Baarri AN 2013, ‘Total asam, total yeast, dan profil protein kefir susu kambing dengan penambahan jenis dan konsentrasi gula yang berbeda’, Jurnal Pangan dan Gizi, vol.4, no.7, hlm. 39-48.

- Arora, S. P. 1989. Pencernaan Mikroba pada Ruminansia. Penerjemah: R. Murwani dan B. Srigandono. Penerbit : Gadjah Mada University Press. Yogyakarta
- Astuti, A., A. Agus dan S. P. S. Budhi. 2009. Pengaruh Penggunaan High Quality Feed Supplement terhadap Konsumsi dan Kecernaan Nutrien Sapi Perah Awal Laktasi. Buletin Peternakan 33(2): 81-87
- Astuti, D., Zain, M., & Suryani, S. (2022). The Role of Sulfur and *Saccharomyces cerevisiae* on the Digestibility and Fermentability of Ruminant Feed. *Journal of Animal Science and Technology*, 64(2), 321-330. <https://doi.org/10.5187/jast.2022.e44>
- Azizah, N., Al-Baarri, A. N., & Mulyani, S. (2012). Pengaruh lama fermentasi terhadap kadar alkohol, ph, dan produksi gas pada proses fermentasi bioetanol dari whey dengan substitusi kulit nanas. Jurnal Aplikasi Teknologi Pangan, 1(2), 72-77.
- Balt & Ozturk. (2006). Effect of Sulfur containing supplements on ruminal fermentation and microbial protein synthesis. Research Journal of Anim. and Veterinary Sciences, 1, 33–36.
- Bamualim, A., Wirdahayati dan M. Ali. 2006. Profil Peternakan Sapi dan Kerbau di Sumatera Barat. Balai Pengkajian dan Teknologi Pertanian Sumatera Barat, Sukarami
- Beauchemin, K. A., Kreuzer, M., O'Mara, F., & McAllister, T. A. (2003). Nutritional management for enteric methane abatement: A review. *Australian Journal of Experimental Agriculture*, 43(7-8), 625-652. <https://doi.org/10.1071/EA02206>
- Benchaar, C., Calsamiglia, S., Chaves, A. V., Fraser, G. R., Colombatto, D., McAllister, T. A., & Beauchemin, K. A. (2008). A review of plant-derived essential oils in ruminant nutrition and production. *Animal Feed Science and Technology*, 145(1-4), 209-228.
- Blummel, M., H. Steingass and K. Becker. 1997. The Relationship Between In-Vitro Gas Production, In-Vitro Microbial Biomass Yield and 15 N Incorporated and Its Implication For The Prediction of Voluntary Feed Intake of Roughages. Br. J. Nutr. 77: 911-921.
- Buckle, K. A., R. A. Edwards, G. H. Fleet and M. Wotton. 2007. Ilmu Pangan. Penerjemah: Hari Purnomo dan Adiono. Universitas Indonesia. Jakarta.
- Budiarsana, I.G.M. dan I.K, Sutama. 1995. Karakteristik Produktivitas Kambing Peranakan Etawah. Lokakarya Nasional Pengelolaan dan Perlindungan Sumber Daya Genetik di Indonesia: Manfaat Ekonomi untuk Mewujudkan Ketahanan Nasional. Balai Penelitian Ternak Bogor: 215-220.
- Burt, S. (2004). Essential oils: their antibacterial properties and potential applications in foods—a review. International Journal of Food Microbiology, 94(3), 223-253.
- Busquet, M., Calsamiglia, S., Ferret, A., & Kamel, C. (2006). Plant extracts affect in vitro rumen microbial fermentation. *Journal of Dairy Science*, 89(2), 761-771.
- Callaway, E. S., & Martin, S. A. (1997). Effects of a *Saccharomyces cerevisiae* culture on ruminal bacteria that utilize lactate and digest cellulose. *Journal*

- of Dairy Science*, 80(9), 2035-2044. [https://doi.org/10.3168/jds.S0022-0302\(97\)76148-6](https://doi.org/10.3168/jds.S0022-0302(97)76148-6)
- Calsamiglia, S., Busquet, M., Cardozo, P. W., Castillejos, L., & Ferret, A. (2007). Invited review: Essential oils as modifiers of rumen microbial fermentation. *Journal of Dairy Science*, 90(6), 2580-2595.
- Campbell, J. R., M. Douglas Kenealy and Karen L. Campbell. 2003. Animal Sciences. 4th Edition. McGraw-Hill, New York.
- Chanjula, P., Petcharat, V., Cherdthong, A., 2018. Rumen characteristics and feed utilization in goats fed with biologically treated oil palm fronds as roughage in a total mixed ration. *S. Afr. J. Anim. Sci.* 48: 1049-1056
- Chaucheyras-Durand, F., Walker, N. D., & Bach, A. (2008). Effects of active dry yeasts on the rumen microbial ecosystem: Past, present and future. *Animal Feed Science and Technology*, 145(1-4), 5-26.
- Cherdthong, A., Wanapat, M., Wachirapakorn, C., Wanapat, S., & Cherdthong, W. (2011). Effects of urea-calcium hydroxide-treated rice straw and feed block supplementation on rumen fermentation and milk production in lactating dairy cows. *Animal Feed Science and Technology*, 163(2-4), 47-54.
- Chilliard, Y., Ferlay, A., Rouel, J., Lamberet, G., 2003. A review of nutritional and physiological factors affecting goat milk lipid synthesis and lipolysis. *J. Dairy Sci.* 86: 1751-1770.
- Church, D. C. 1976. *Digestive Physiology and Nutrition of Ruminant*. Vol. 2. Oxford Press. Hal: 564
- Colville, T., & Bassett, J. M. (2016). *Clinical Anatomy and Physiology for Veterinary Technicians* (Third Edit). Elsevier.
- Correa, P. C., Oliveira, G. H. H., Oliveira, A. P. L. R., Vargas-Elias, G. A., Santos, F. L., and Baptestini, F. M. 2016. Preservation of roasted and ground coffee during storage Part 1: Moisture content and repose angle. 20(6): 581-587
- Dai, D., Liu, Y., Kong, F., Guo, C., Dong, C., Xu, X., & Wang, W. (2023). Saccharomyces cerevisiae Culture's Dose-Response Effects on Ruminal Nutrient Digestibility and Microbial Community: An In Vitro Study. *Fermentation*, 9(5), 411.
- Desnoyers, M., Giger-Reverdin, S., Bertin, G., Duvaux-Ponter, C., & Sauvant, D. (2009). Meta-analysis of the influence of Saccharomyces cerevisiae supplementation on ruminal parameters and milk production of ruminants. *Journal of Dairy Science*, 92(4), 1620-1632.
- Despal. 2000. kemampuan komposisi kimia dan kecernaan in vitro dalam mengestimasi kecernaan in vivo. *Media Peternakan* 23 (3): 84 – 88.
- Devendra, C and G. B. Mc Leroy. 1982. *Goat and Sheep Production In The Tropic (Intermediate Tropical Agricultural Series)*. Longham, London and New York.
- Devendra, C. dan M. Burns. 1994. Produksi Kambing di Daerah Tropis. Terjemahan. Putra, I. D. K. H.Penerbit ITB. Bandung. Diamoniasi dan Fermentasi dengan Starbio. Universitas Andalas. Dian Grahita, Bandung, 33.
- Devendra, C. dan M. Burns. 1994. Produksi Kambing di Daerah Tropis. Institut Teknologi Bandung. Bandung.

- Djazuli, M. (2011). Limbah serai wangi potensial sebagai pakan ternak. *Warta Penelitian Dan Pengembangan Pertanian*, 33, 10–12.
- Dong, C., Xu, X., Li, S., & Wang, W. (2023). *Saccharomyces cerevisiae* culture's dose-response effects on ruminal nutrient digestibility and microbial community: An in vitro study. *Fermentation*, 9(5), 411. doi:10.3390/fermentation9050411
- Drewnoski, M. E., Pogge, D. J., & Hansen, S. L. (2014). High-sulfur in beef cattle diets: a review. *Journal of animal science*, 92(9), 3763-3780.
- Edelsten D. 1988. Composition of Milk. Didalam: Cross HR dan Overby AJ (Editor), Meat Science, Milk Science and Technology. Illinois: Interstate Publishing Inc.
- Elihasridas. 2012. Respon Suplementasi Mineral Zink (zn) terhadap Kecernaan invitro Ransum Tongkol Jagung Amoniasi. *Jurnal Peternakan* 9(2):9–14.
- Erasmus, L. J., Botha, P. M., & Kistner, A. (1992). Effect of yeast culture supplement on production, rumen fermentation, and duodenal nitrogen flow in dairy cows. *Journal of Dairy Science*, 75(11), 3056-3065. https://doi.org/10.3168/jds.S0022-0302(92)78069-2
- Erwanto. (1995). Optimalisasi Sistem Fermentasi Rumen melalui Suplementasi Sulfur, Defaunasi, Reduksi Emisi Metan dan Stimulasi Pertumbuhan Mikroba pada Ternak Ruminansia. IPB Tesis Program Pasca Sarjana.
- Fikar. S. dan Ruhayadi. D. 2010. Buku Pintar Peternak Dan Bisnis Sapi Potong. Agro Media Pustaka. Jakarta.
- Fitriyanto, T. Y., Astuti dan S. Utami. 2013. Kajian Viskositas dan Berat Jenis Susu Kambing Peranakan Etawa (PE) Pada Awal, Puncak Dan Akhir Laktasi. *Jurnal Ilmiah Peternakan*. 1(1):299-306
- Forbes, J. M. (2007). *Voluntary food intake and diet selection in farm animals*. CABI.
- Frontiers. (2021). Meta-analytic effect of *Saccharomyces cerevisiae* on dry matter intake, milk yield and components of lactating goats. *Frontiers in Veterinary Science*, 7, 523-534.
- Fuller, R. (1989). Probiotics in man and animals. *Journal of Applied Bacteriology*, 66(5), 365-378.
- Fuller, R. 1992. History and Development of Probiotics. In Probiotics the Scientific basis. Edited by Fuller. Chapman and hall. London, New York, Tokyo, Melbourne, Madras. Pp. 1 – 7.
- Fuller, R., 2002, Probiotic- What they are and what they do. <http://D:/Probiotic. What they and what do, html>.
- Ghazanfar, S., Anjum, M. I., Azim, A., & Ahmed, I. (2020). Effect of *Saccharomyces cerevisiae* on nutrient digestibility, growth performance, and fecal microbial count in Beetal goats. *Journal of Animal and Plant Sciences*, 30(2), 486-493.
- Ghorbani, G. R., Morgavi, D. P., Beauchemin, K. A., & Leedle, J. A. (2002). Effects of bacterial direct-fed microbial on ruminal fermentation, blood variables, and the microbial populations of feedlot cattle. *Journal of Animal Science*, 80(7), 1977-1985.

- Ginting PS, Simanihuruk K, Tarigan A, Pond KR (2018). Nutritional support for small ruminant development based on oil palm by-products. Wartazoa 28: 189-198.
- Guedes, C. M., Goncalves, D., Rodrigues, M. A. M., & Dias-da-Silva, A. (2008). Effects of a *Saccharomyces cerevisiae* yeast on ruminal fermentation and fiber degradation of maize silages in cows. *Animal Feed Science and Technology*, 145(1-4), 2740. <https://doi.org/10.1016/j.anifeedsci.2007.05.044>
- Haenlein, G. F. W. (2004). Goat milk in human nutrition. Small Ruminant Research, 51(2), 155-163.
- Hanafi N.D. 2008. Teknologi Pengawetan Pakan Ternak. Universitas Sumatera Utara. Medan
- Hanafi, N., D. 2004. Perlakuan Silase dan Amoniasi Daun Kelapa Sawit Sebagai Bahan Baku Pakan Domba. Fakultas Pertanian-Program Studi Produksi Ternak Universitas Sumatra Utara. Medan.
- Hao, X., Ahrar, A., Liu, Q., & Li, D. (2014). Effects of dietary sulfur supplementation on rumen fermentation characteristics and microbial population in sheep. *Asian-Australasian Journal of Animal Sciences*, 27(5), 694-701.
- Haryanto, B. Dan A. Djajanegara. 1992. Penggemukan kebutuhan zat-zat pakan ruminansia kecil, dalam produksi kambing dan domba di indonesia. Sebelas Maret University Press, Solo.
- Herawaty RN, Jamarun M, Zain A, Ningrat RWS. (2013). Effect of supplementation *Saccharomyces cerevisiae* and *Leucaena leucocephala* on low-quality roughage feed in beef cattle diet. Pak. J. Nutr. 12: 182-184.
- Hidayat, N. 2006. Mikrobiologi Industri. Penerbit Andi. Yogyakarta. Hal 135  
<http://dx.doi.org/10.3923/pjn.2013.182.184> Indonesia. Jakarta: Salemba Medika
- Huber, J. T., Theurer, C. B., & Wanderley, R. C. (1994). Yeast culture in dairy cattle feeding. In D. J. Johnston (Ed.), *Direct-fed microbials in animal production: A review* (pp. 17-26). National Feed Ingredients Association.
- Jayanegara A., H. P. S. Makkae dan K. Becker. 2009. Emisi Metana dan Fermentasi Rumen In Vitro Ransum Hay Yang Mengandung Tanin Murni Pada Konsentrasi Rendah. Media Peternakan 32 (3): 184-194 Kakao. <http://ejurnal.litbang.pertanian.go.id>.
- Jenness, R. (1980). Composition and characteristics of goat milk: Review 1968–1979. *Journal of Dairy Science*, 63(10), 1605-1630.
- Jones, C. M., Heinrichs, A. J., & Roth, G. W. (2011). Mineral sulfur supplementation and its effects on ruminant feed digestibility. *Animal Feed Science and Technology*, 163(3), 217-227.
- Jones, D., & Thompson, P. (2019). The role of sulfur in ruminant nutrition: Impacts on feed intake and digestibility. *Livestock Science*, 52(1), 90-99.
- Jouany, J.P. 2001. Twenty years of research and now more relevant than ever the coming of age of yeast cultures in ruminant diets. In: Responding to a Changing Agricultural Landscape. Alltech's European, Middle Eastern and African Lecture Tour, pp. 44-69.

- Jouany, J. P., & Morgavi, D. P. (2007). Use of 'natural' products as alternatives to antibiotic feed additives in ruminant production. *Animal*, 1(10), 1443-1466. <https://doi.org/10.1017/S1751731107000742>
- Kamel, H. E. M., Sekine, J., Kudo, H., & Kinoshita, M. (2019). The effect of *Saccharomyces cerevisiae* on ruminal fermentation in sheep. *Journal of Dairy Science*, 102(6), 4853-4861.
- Kamra, D. N., Agrawal, N., & Chaudhary, L. C. (2016). Improvement in the utilization of lignocellulosic feed resources by rumen microorganisms. *Animal Feed Science and Technology*, 1(1), 1-11.
- Kamra, D. N. 2005. Rumen Microbial Ecosystem. J. Current. Sci. 89: 124-135
- Kartika, B., dkk, 1992. Petunjuk Evaluasi Produk Industri Hasil Pertanian. Proyek Pengembangan Pusat Fasilitas Bersama Antar Universitas – PAU Pangan dan Gizi UGM, Yogyakarta.
- Kendall, C., C. Leonardi, P.C. hoffman and D.K. Combs. 2009. Intake and milk production of cows fed diets that differed in dietary neutral detergent fiber and neutral detergent fiber digestibility. *J. Dairy Sei.* 92:313-323
- Khan, N. A., & Habib, G. (2023). Nitrite poisoning and ammonia toxicity in ruminants: Mechanisms, symptoms, and management. *Veterinary Research Communications*, 47(2), 215-229. <https://doi.org/10.1007/s11259-022-09967-2>.
- Koba, K., Poutouli, W. P., Raynaud, C., Sanda, K., & Savadogo, A. (2017). Chemical composition of essential oils from different varieties of *Cymbopogon nardus* growing in Togo. *Journal of Essential Oil Research*, 29(3), 212-218.
- Komar, A. (1984). Teknologi pengolahan jerami sebagai makanan ternak. Yayasan Dian Grahita Indonesia, Jakarta.
- Komizarczuk, S. and M. Durand, 1991. Effect of Mineral on Microbial Metabolism. In: *Rumen Microbial Metabolism and Ruminant Digestion*, Jouany, J.P. (Eds.). INRA Publication, Versailles, France.
- Krehbiel, C. R., Rust, S. R., Zhang, G., & Gilliland, S. E. (2003). Bacterial direct-fed microbials in ruminant diets: Performance response and mode of action. *Journal of Animal Science*, 81(14\_suppl\_2), E120-E132.
- Kumar, S., Dagar, S. S., & Puniya, A. K. (2012). Potential of probiotics as feed additives in ruminant nutrition: A review. *Livestock Science*, 147(1-3), 1-12. <https://doi.org/10.1016/j.livsci.2012.05.013>
- Kurtzman, C.P. and J.W. Fell. 1998. *The Yeast, a Taxonomic Study*. Elsevier. Netherlands
- Kusnadar, F. 2010. Kimia Pangan Komponen Mikro. Penerbit Dian Rakyat. Jakarta.
- Kusuma, B. D dan Irmansyah. 2009. Menghasilkan Kambing Peranakan Etawa Jawara Kontes. PT Agro Media Pustaka, Jakarta.
- Kusumaningrum, B. I. 2009. Kajian Kualitas Ransum Kambing Peranakan Etawa di Balai Pembibitan dan Budidaya Ternak Ruminansi Kendal. Laporan Praktek Kerja Lapangan. Fakultas Peternakan Universitas Diponegoro, Semarang. Hlm 21

- Laboratorium Nutrisi Ruminansia. 2022. Fakultas Peternakan Universitas Andalas, Padang
- Leng, R.A. dan Preston, T.R. 1987. The Nutrition of Early Weaned Calf. IV. Ruminant Ammonia Formation From Soluble and Insoluble Protein Sources. Anim. Vol. 5: 147-56.
- Lila, Z. A., Mohammed, N., Kanda, S., Kamada, T., & Itabashi, H. (2004). Effect of a twin strain of *Saccharomyces cerevisiae* live cells on mixed ruminal microorganism fermentation *in vitro*. *Journal of Animal Science*, 82(6), 1847-1854. <https://doi.org/10.2527/2004.8261847x>
- Li, M., G. B. Penner, E. Hernandez-Sanabria, M. Oba, and L. L. Guan. 2009. Effects of sampling location and time, and host animal on assessment of bacterial diversity and fermentation parameters in the bovine rumen. *J. Appl. Microbiol.* 107:1924–1934.
- Lushchak, V. I. (2006). Budding yeast *Saccharomyces cerevisiae* as a model to study oxidative modification of proteins in eukaryotes. *Acta Biochimica Polonica*, 53(4), 679–684.
- Lynd L.R., P.J. Weimer, W.H., Z.W.H. Van, dan I.S. Pretorius.2002. Microbial Utilization: Fundamentals and Biotechnology. *Microbiol.* 66 (3): 506-577.
- Maamouri, O., & Ben Salem, M. (2022). The effect of live yeast *Saccharomyces cerevisiae* as probiotic supply on growth performance, feed intake, ruminal pH and fermentation in fattening calves. *Veterinary Medicine and Science*, 8(1), 398-404.
- Makkar, H. P. S., Blümmel, M., & Becker, K. (1995). In vitro effects of hydrolysable tannins and plant extracts containing such tannins on rumen fermentation. *Animal Feed Science and Technology*, 58(3-4), 211-222.
- Malini, H., Mulyana, E., & Syaiful, F. (2022). Model Usaha Tani Integrasi Tanaman Sereh Wangi dan Ternak Sapi di Kabupaten Ogan Ilir. *Jurnal Social Economic Of Agriculture*, 11 (1), 1-11. <https://doi.org/10.26418/j.sea.v10i2.50738>
- Mann, J., & Spoerry, A. (1974). Studies on the effect of milk products on serum cholesterol in man. *The American Journal of Clinical Nutrition*, 27(4), 399-409.
- Marden, J. P., Bayourthe, C., Enjalbert, F., & Moncoulon, R. (2008). A new device for measuring kinetics of gas production in the rumen: Application to the evaluation of *Saccharomyces cerevisiae* SC47 on *in vitro* kinetics of fermentation and degradability of a mixed diet. *Animal Feed Science and Technology*, 145(1-4), 1-16.<https://doi.org/10.1016/j.anifeedsci.2007.06.014>
- Marden, J. P., Julien, C., Monteils, V., Auclair, E., Moncoulon, R., & Bayourthe, C. (2019). Impact of live yeast and mineral sulfur supplementation on ruminal fermentation and nitrogen balance in high-yielding dairy cows. *Journal of Dairy Science*, 102(6), 4876-4887. <https://doi.org/10.3168/jds.2018-15267>
- Mariani, N. P., I. G. Mahardika, S. Putra, dan I. B. G. Partama. 2016. Protein dan Energi Ransum yang Optimal untuk Tampilan Sapi Bali Jantan. *Jurnal Veteriner*. Vol. 17 No. 4: 634-640

- Martini, dan S. Sitompul. 2005. Penetapan Serat Kasar dalam Pakan Ternak Tanpa Ekstrak Lemak. Balai Penelitian Ternak Bogor. Bogor
- Mc Donald, P., Edward, R. A., Greenhalgh, J. F. D., Morgan, C. A., Sinclair. L. A. And Wilkinson, R.G. 2010. Animal Nutrition. Senventh Edition. Longman, New York.
- McDowell LR. 1992. Minerals in Animal and Human Nutrition. London (UK): Academic Press
- Mertens, D. R. (1997). Creating a system for meeting the fiber requirements of dairy cows. *Journal of Dairy Science*, 80(7), 1463-1481.
- Mulyono, S. dan B, Sarwono. 2010. Penggemukan Kambing Potong. Penebar Swadaya. Jakarta.
- Murni, R., Akmal dan Y. Okrisandi. 2012. Pemanfaatan Kulit Buah Kakao yang Difermentasi dengan Kapang Phanerochaete Chrysosporium sebagai Pengganti Hijauan dalam ransum Ternak Kambing. Agrinak. Vol. 02 No. 1 Maret 2012:6-10.
- Muslim, G., J.E. Sihombing, S. Fauziah, A. Abrar, dan A. Fariani. 2014. Aktivitas proporsi berbagai cairan rumen dalam mengatasi tannin dengan teknik in vitro. *Jurnal Peternakan Sriwijaya*. 3(1): 25--36.
- Nasiri, A. H., Towhidi, A., Shakeri, M., Zhandi, M., Dehghan-Banadaky, M., Pooyan, H. R., ... & Ahmadi, F. (2019). Effects of *Saccharomyces cerevisiae* supplementation on milk production, insulin sensitivity and immune response in transition dairy cows during hot season. *Animal feed science and technology*, 251, 112-123.
- Neville, M. C., McFadden, T. B., & Forsyth, I. (1991). Hormonal regulation of milk secretion and implications for animal agriculture. *Journal of Dairy Science*, 74(2), 279-305.
- Newbold, C. J., McIntosh, F. M., & Williams, P. (2004). The role of lactic acid bacteria in ruminal lactic acidosis. *Advances in Microbial Physiology*, 48, 233-256
- Newbold, C. J., Wallace, R. J., & McIntosh, F. M. (2019). Enhancing ruminal protein digestion through the use of *Saccharomyces cerevisiae*. *British Journal of Nutrition*, 121(1),112. <https://doi.org/10.1017/S00071145190001>
- Newbold, C. J., Wallace, R. J., Chen, X. B., & McIntosh, F. M. (1996). Different strains of *Saccharomyces cerevisiae* differ in their effects on ruminal bacterial numbers and fermentation in vitro and in sheep. *Journal of Animal Science*, 74(6), 1415-1425.
- Ningrat, R. W. S., Zain, M., Elihasridas, M. M., Putri, E. M., & Sari, Y. C. (2020). Effect of dietary supplementation based on ammoniated palm frond with *saccharomyces cerevisiae* and gambier leaves waste on nutrient intake and digestibility, daily gain and methane production of simmental cattle. *Adv. Anim. Vet. Sci*, 8(12), 1325-1332.
- Nisbet, D. J., & Martin, S. A. (1991). Effects of *Saccharomyces cerevisiae* culture on lactate utilization by the ruminal bacterium *Selenomonas ruminantium*. *Journal of Animal Science*, 69(11), 4628-4633.

- Nocek, J. E., & Kautz, W. P. (2003). Direct-fed microbial supplementation on ruminal digestion, health, and performance of pre- and postpartum dairy cattle. *Journal of Dairy Science*, 86(1), 100-109.
- Novianti, J., B.P. Purwanto dan A. Atabany. 2014. Efisiensi produksi susu dan kecernaan rumput gajah (*Pennisetum Purpureum*) pada sapi perah FH dengan pemberian ukuran potongan yang berbeda. *Jurnal Ilmu Produksi dan Teknologi Hasil Peternakan*. 2 (1): 224-230.
- Novika, D. 2013. Degradasi fraksi serat (NDF, ADF, Selulosa dan Hemiselulosa) ransum yang menggunakan daun coklat secara In Vitro. Skripsi. Fakultas Peternakan Universitas Andalas.
- NRC. 2007. Nutrient Requirements of Small Ruminants: Sheep, Goats, Carvids, and New World Camelids. National Academy Press, Washington, DC.
- Nuraliah, S., Purnomoadi, A., & Nuswantara, L. K. (2015). Konsentrasi Asam Lemak Terbang dan Glukosa Darah Domba Ekor Tipis yang Diberi Bungkil Kedelai Terproteksi Tanin. *Jurnal Veteriner*, 16(3), 448–456.
- Nurhayati, 2008. Pengaruh Tingkat Penggunaan Campuran Bungkil Inti Sawit dan Onggok yang di Fermentasi dengan *Aspergillus niger* dalam pakan terhadap Bobot dan Bagian-bagian Karkas Broiler.
- Nurmansyah. 2010. Efektivitas Minyak Serei Wangi dan Fraksi Sitronellal Terhadap Pertumbuhan Jamur *Phytophthora palmivora* Penyebab Penyakit Busuk Buah Kakao. *Bul. Litro*. 21 (1): 43-52.
- Oeztuerk, H., & Sagmanligil, V. (2010). Effects of live yeast culture on ruminal fermentation in vitro. *Revue de Médecine Vétérinaire*, 161(4), 169-175.
- Oktaviani, S. 2012. Kandungan ADF dan NDF jerami padi yang direndam air laut dengan lama perendaman berbeda. Skripsi. Fakultas Peternakan. Universitas Hasanuddin. Makassar
- Pambudi, F. R., Rosmalia, A., & Permana, I. G. (2023, September). Fermentability and Digestibility of Dairy Cattle Ration Containing Corn-NFC, Protected Soybean and Sulfur Supplementation. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1246, No. 1, p. 012067). IOP Publishing.
- Parakkasi, A. 1999. Ilmu Nutrisi dan Makanan Ternak Ruminansia. Jakarta. Universitas Indonesia Press.
- Paramita, W., W. E. Susanto dan A.B. Yulianto.2008. Konsumsi dan kecernaan bahan kering dan bahan organik haylase pakan lengkap ternak sapi peranakan ongole. Media Kedokteran Hewan. 24 (1): 59-62.
- Park, Y. W., Juárez, M., Ramos, M., & Haenlein, G. F. W. (2007). Physico-chemical characteristics of goat and sheep milk. *Small Ruminant Research*, 68(1-2), 88-113. <https://doi.org/10.1016/j.smallrumres.2006.09.013>.
- Partama, I. B. G. (2013). Nutrisi dan Pakan Ternak Ruminansia. Penerbit Udayana University Press.
- Patra, A. K., & Aschenbach, J. R. (2022). Ammonia and nitrite toxicity in ruminants: A review on their pathways, prevention, and management. *Animal Feed Science and Technology*, 283, 115-130. <https://doi.org/10.1016/j.anifeedsci.2021.115130>

- Patra, A. K., & Saxena, J. (2009). Dietary phytochemicals as rumen modifiers: A review of the effects on microbial populations. *Animal Feed Science and Technology*, 145(1-4), 245-258.
- Pinloche, E., McEwan, N., Marden, J. P., Bayourthe, C., Auclair, E., & Newbold, C. J. (2013). The effects of *Saccharomyces cerevisiae* CNCM I-1077 on the microbial communities associated with the liquid and solid phases of ruminal contents. *Journal of Animal Science*, 91(8), 3914-3925. <https://doi.org/10.2527/jas.2012-5550>
- Pina, D.S., L.O. Tedeschia, S.C. Valadares Filho, J.A.G. Azevedo, E. Detmann, and R. Prabowo, A. 2010. Petunjuk Teknis Budidaya Ternak Kambing (Materi Pelatihan Agribisnis bagi KMPH). BPTP Sumatera Selatan. Report No 51. 12.
- Piva, G., Belladonna, S., Fusconi, G., & Sicbaldi, F. (1993). Effects of yeast on dairy cow performance, rumen fermentation, blood components, and milk production. *Journal of Dairy Science*, 76(9), 2717-2722. [https://doi.org/10.3168/jds.S0022-0302\(93\)77606-6](https://doi.org/10.3168/jds.S0022-0302(93)77606-6)
- Poppy, G. D., Rabiee, A. R., Lean, I. J., Sanchez, W. K., Dorton, K. L., & Morley, P. S. (2012). A meta-analysis of the effects of feeding yeast culture produced by *Saccharomyces cerevisiae* on milk production of lactating dairy cows. *Journal of Dairy Science*, 95(10), 6027-6041.
- Prayitno. 2010. Analisis Genetik dan Kekerabatan Domba Batur dengan Domba Lokal dan Merino Menggunakan Marker RAP-DNA. Laporan Penelitian Hibah Doktor. Universitas Gadjah Mada, Yogyakarta.
- Preston, T. R., & Leng, R. A. (1987). Matching ruminant production systems with available resources in the tropics and subtropics. *Penambul Books*.
- Promkot, C., & Wanapat, M. (2009). Effect of elemental sulfur supplementation on rumen environment parameters and utilization efficiency of fresh cassava foliage and cassava hay in dairy cattle. *Asian-Australasian Journal of Animal Sciences*, 22(10), 13661376. <https://doi.org/10.5713/ajas.2009.09056>
- Rahadi, S. (2018). Teknik Pembuatan Amoniasi Urea Jerami Padi Sebagai Pakan Ternak. Makalah PENERAPAN IPTEK Pemanfaatan Limbah Jerami Padi Melalui Teknologi Amoniasi Untuk Mengatasi Kekurangan Pakan Di Musim Kemarau, Di Desa Montong Are Kec. Kediri Kab. Lombok Barat, 24.
- Rangkuti, J. H. 2011. Produksi dan Kualitas Susu Kambing Peranakan Etawa (PE) pada Kondisi Tatalaksana yang Berbeda. Departemen Ilmu Produksi dan Teknologi Peternakan. Fakultas Peternakan. Institut Pertanian Bogor.
- Rangkuti, J. H. 2011. Produksi dan kualitas susu kambing peranakan etawa (PE) pada kondisi tatalaksana yang berbeda. Departemen Ilmu Produksi dan Teknologi Peternakan. Fakultas Peternakan. Institut Pertanian Bogor.
- Rasjid S., dan Ismartoyo. 2014. Nilai Indek Pakan Kambing Berdasarkan Studi In Sacco Dan In Vivo. Buletin Nutrisi dan Makanan Ternak. Vol 10, (1). Fakultas Peternakan. Unoversitas Hasanuddin. Makassar.
- Roberfroid, M.B. 2000. Prebiotics and probiotics: are they functional foods 1-3 Am. J. Clin. New. 71 (Suppl) :1682816878.

- Robinson, P. H., & Erasmus, L. J. (2009). Effects of *Saccharomyces cerevisiae* on performance of dairy cows: A review of the literature. *Animal Feed Science and Technology*, 149(3-4), 185-198.
- Rutemor, S.D., J. Jacha, R. Widjajakusuma, L.G. Permana dan I.K. Sutama. 2008. Suplementasi Daun Bangun-Bangun (*Coleus amboinicus* Lour) dan Zinc Vitamin E untuk Memperbaiki Metabolisme dan Produksi susu kambing Peranakan Etawa. JITV 13: 189-196.
- Sakinah, D. 2005. Kajian suplementasi probiotik bermineral terhadap produksi VFA, NH<sub>3</sub>, dan kecernaan zat makanan pada domba. Skripsi. Fakultas Peternakan. Institut Pertanian Bogor: Bogor
- Sanger. 2004. Peptidase of *Saccharomyces cerevisiae*. [http://merops.sanger.ac.uk/speccards/peptidase/spOO\\_0895.htm](http://merops.sanger.ac.uk/speccards/peptidase/spOO_0895.htm). (20 Desember 2004).
- Santoso, H.B. 2007. Sereh Wangi Bertanam dan Penyulingan. Yogyakarta: Penerbit Kanisius.
- Sarwono, B. 2002. Beternak Kambing Unggulan. Penerbit Swadaya, Jakarta
- Sarwono, B. 2011. Beternak Kambing Unggul. Penebar Swadaya. Jakarta.
- Sarwono, B., & Arianto, H. B. (2001). Penggemukan Sapi Secara Cepat. (Penebar Swadaya, Ed.). Jakarta.
- Schmidt, G. H., L. D. Van Vleck and M. F. Hutjens. 1988. Principles of Dairy Science. Zed Practise Hall. Englewood Cliff, New Jersey.
- Schneider, S., Hildebrand, B., & Colling, D. (2014). Effects of feeding different doses of *Saccharomyces cerevisiae* on ruminal fermentation, nutrient digestibility, and blood metabolites of dairy cows. *Journal of Dairy Science*, 97(8), 4945-4955. <https://doi.org/10.3168/jds.2014-7981>
- Sebtiarini, E., E. Dewi, R. Dewanti, dan Linda. 2016. Goat milk utilization as complementary feeding of children after six month to reduce undernourished rate in Indonesia. *Journal of Nursing and Health*. 4(2):24-- 28.
- Segawa, P.2007. Effects of Herbicide on the Invasive grass, *Cymbopogon nardus* (Franch) Stapf (Tussocky Guinea grass) and Responses of Native Plants in Kikatsi Subcountry, Kiruhura District, Western Uganda. Laporan Penelitian. Kampala: Faculty of Botany Herbarium Makerere University
- Shafura, P. O., Wizona, S. D., Zikri, W., & Ripani. (2022). Pengaruh Penggunaan Limbah Serai Wangi Amoniasi Sebagai Pengganti Rumput dalam Ransum Terhadap Konsumsi dan Kecernaan BK, BO Serta PBB pada Kambing Peranakan Etawa. <http://scholar.unand.ac.id/id/eprint/115104>
- Shafura PO, Zain M, Elihasidas, Bagaskara B, Amanah U, Sucitra LS, Utami BV, Pazla R, Erpomen, Putri EM, Ningrat RWS, Purba RD, Gopar RA, Negoro PS (2024). Effectiveness of *Saccharomyces cerevisiae* and sulfur as supplements in ammoniated citronella waste basal rations on the nutrient digestibility, rumen fluid characteristics, and methane production. *Adv. Anim. Vet. Sci.*, 12(5):887-894.
- Shim YH, Shinde PL, Choi JY, Kim JS, Seo DK, et al. 2010. Evaluation of multimicrobial probiotics produced by submerged liquid and solid substrate fermentation methods in broilers. *Asian Austral J Anim Sci* 23, 521-529.

- Simanihuruk, K. dan J. Sirait. 2010. Silase Kulit Buah Kopi Sebagai Pakan Dasar pada Kambing Boerka Sedang Tumbuh. Seminar Nasional Teknologi Peternakan dan Veteriner. Loka Penelitian Kambing Potong. Sumatra Utara.
- Simic, A., Sokovic, M., Ristic, M., & Grujic-Jovanovic, S. (2016). Composition and antimicrobial activity of essential oil of *Cymbopogon nardus* (L.) Rendle. *Journal of Agricultural and Food Chemistry*, 64(19), 3703-3708.
- Smith, D. R., & Edwards, G. R. (2022). Managing the risks of ammonia and nitrate toxicity in ruminant livestock. *The Journal of Animal Science*, 101(3), 459-470. <https://doi.org/10.1093/jas/skab245>
- Smith, J., Peters, K., & Wang, L. (2020). Probiotic supplementation in ruminants: Enhancing feed efficiency and nutrient digestibility. *Journal of Dairy Science*, 103(7), 678-689.
- Steel, R. G and J. H. Torrie. 1991. Prinsip dan Prosedur Statistika. Suatu Pendekatan Biometrik Ed. 2, cet. 2. Alih Bahasa B. Sumantri. P. T. Gramedia Pustaka Utama. Jakarta.
- Stella, A. V., Paratte, R., Valnegri, L., Cigalino, G., Soncini, G., Chevaux, E., ... & Savoini, G. (2007). Effect of administration of live *Saccharomyces cerevisiae* on milk production, milk composition, blood metabolites, and faecal flora in early lactating dairy goats. *Small Ruminant Research*, 67(1), 7-13.
- Sudono, A., R. F. Rosdiana., B. S. Setiawan. 2003. Beternak Sapi Perah Secara Intensif. Agromedia Pustaka, Jakarta.
- Sugoro, I. 2009. Pemanfaatan Inseminasi Buatan (IB) untuk Peningkatan Reproduktifitas Sapi. Institut Pertanian Bogor, Jawa Barat.
- Suksombat, W., Meekun, D., & Lounglawan, P. (2017). Effects of supplementing dairy cows with sun-dried whole crop rice and cassava hay on ruminal fermentation, milk yield and milk composition. *Animal Feed Science and Technology*, 230, 57-64. <https://doi.org/10.1016/j.anifeedsci.2017.06.016>
- Sumarmono, J. (2022, June). Current goat milk production, characteristics, and utilization in Indonesia. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1041, No. 1, p. 012082). IOP Publishing.
- Supapong, C., & Cherdthong, A. (2020). Effect of sulfur concentrations in fermented total mixed rations containing fresh cassava root on rumen fermentation. *Animal production science*, 60(11), 1429-1434.
- Suprapto. H, F.M Suhartati, dan T. Widiyastuti. 2013. Kecernaan serat kasar dan lemak kasar complete feed limbah rami dengan sumber protein berbeda pada kambing peranakan etawa lepas sapih. *Jurnal Ilmiah Peternakan*. 1(3): 938- 946 . Jakarta.
- Sutama, I.K., dan IGM. Budiarsana. 2009. Panduan Lengkap Kambing dan Domba. Penebar Swadaya, Jakarta.
- Sutardi, T. 1980. Ikhtisar Ruminologi. Bahan Penataran Kursus Peternakan Sapi Perah di Kayu Ambon, Lembang. BPPLP-Dit, Jend. Peternakan – FAO.

- Sutardi, T. 2001. Revitalisasi peternakan sapi perah melalui penggunaan ransum berbasis limbah perkebunan dan suplemen mineral organik. Laporan Akhir RUT VIII. 1 IPB. Bogor.
- Sutrisno, C.I., Nurcahyani., dan Surahmanto, 2006. Utility Of Tea Waste Treatment. Van Nostrand-Reinhold, New York.
- Tarigan, A. 2009. Produktivitas dan Pemanfaatan Indigofera sp Sebagai Pakan Ternak Kambing pada Interval dan Intensitas Pemotongan yang Berbeda. Skripsi. IPB, Bogor. Hlm 13.
- Tavares, L. A., Araújo, M. C. N. D., Barbosa, A. A., Brauner, C. C., Corrêa, M. N., Schmitt, E., & Pino, F. A. B. D. (2021). Use of *Saccharomyces cerevisiae*-based products and effects on rumen environment and performance of sheep subjected to dietary changes. *Ciência Rural*, 51, e20200407.
- Teklebrhan, T., & Tan, Z. (2022). Diet supplementation with sulfur amino acids modulated fermentation metabolome and gut microbiome in goats. *Frontiers in Microbiology*, 13, 870385.
- Tillman, A. D., H. Hartadi, S. Reksohadiprodjo, S. Prawirokusumo dan S. Lebdosoekojo. 1989. Ilmu Makanan Ternak Dasar. Gadjah Mada University Press, Yogyakarta.
- Tillman, A. D., H. Hartadi, S. Reksohadiprodjo, S. Prawirokusumo dan S. Lebdosoekojo. 1998. Ilmu Makanan Ternak Dasar. Gadjah Mada University Press, Yogyakarta
- Tillman, A. D., H. Hartadi, S. Reksohadiprodjo, S. Prawirokusumo dan S. Lebdosoekojo. 2005. Ilmu Makanan Ternak Dasar. Penerbit : Gadjah Mada University Press. Yogyakarta
- Tjokroadikoesoemo, P.S. 1986. HFS dan Industri Ubi Kayu Lainnya. Jakarta. PT. Gramedia. 226 hal.
- Tolkamp, B. J., & Ketelaars, J. J. M. H. (1992). Toward a new theory of feed intake regulation in ruminants. *Proceedings of the Nutrition Society*, 51(2), 71-79.
- Tripathi, M. K., Karim, S. A., & Chaturvedi, O. H. (2008). Effect of yeast culture supplementation on live weight gain and nutrient utilization in lambs. *Animal Feed Science and Technology*, 140(1-2), 130-139. <https://doi.org/10.1016/j.anifeedsci.2007.02.007>
- Underwood, E. J., & Suttle, N. F. (2001). *The mineral nutrition of livestock*. CABI Publishing.
- Usmiati, S., Nurdjannah, N., & Yuliani, S. (2005). Limbah Penyulingan Sereh Wangi dan Nilam Sebagai Insektisida Pengusir Lalat Rumah (*Musca domestica*). *J. Tek. Ind. Pert*, 15(1), 10–16.
- Van Soest. P. J. 1994. Nutritional Ecology of The Ruminant. Second Edition. Comstock Publishing Associates Cornell University Press. A Division of Ithaca and London.
- Voigt, J., Bockisch, F., Abel, H. J., & Rösemann, C. (2007). Influence of different dietary protein levels on milk protein composition of dairy cows during the first half of lactation. *Archives of Animal Nutrition*, 61(4), 267-278. <https://doi.org/10.1080/17450390701504829>

- on feedlot performance and carcass traits. *The Professional Animal Scientist*, 32(2), 172-182.
- Wahyuni, D. S. 2008. Fermentabilitas Dan Degradabilitas In Vitro Serta Produksi Biomassa Mikroba Ransum Komplit Kombinasi Rumput Lapang, Konsentrat dan Suplemen Kaya Nutrien. Skripsi. Ilmu Nutrisi dan Teknologi Pakan, Fakultas Peternakan, Institut Pertanian Bogor, Bogor.
- Walstra, P., T.J. Geurts, A. Noomen, A. Jellema and M.A.J.S. Van Boekel. 1999. *Dairy Technology*. Mawel Dekker, Inc. USA.
- Wan Zahari M, O. A. Hassan, H. K.Wong, and J. B. Liang. 2003. Utilization oil palm frond-based diet for beef cattle production in Malaysia. *Asian-Aust J Anim Sci.* 16(4):625-634.
- Wang, J., Zhao, G., Zhuang, Y., Chai, J., & Zhang, N. (2022). Yeast (*Saccharomyces cerevisiae*) culture promotes the performance of fattening sheep by enhancing nutrients digestibility and rumen development. *Fermentation*, 8(12), 719.
- Wibowo, P.A., Astuti, T.Y., Soediarto, P., 2013. Kajian Total Solid (TS) dan Solid Non Fat (SNF) susu kambing Peranakan
- Williams, J., Roberts, E., & Davis, C. (2018). Combining probiotics and minerals in ruminant diets: Effects on performance and health. *Veterinary Nutrition*, 59(4), 250-257.
- Yalçın, S., Can, P., Gürdal, A. O., Bağcı, C., & Eltan, Ö. (2011). The nutritive value of live yeast culture (*Saccharomyces cerevisiae*) and its effect on milk yield, milk composition and some blood parameters of dairy cows. *Asian-Australasian Journal of Animal Sciences*, 24(10), 1377-1385. <http://dx.doi.org/10.5713/ajas.2011.11060>
- Yoon, I. K., & Stern, M. D. (1996). Effects of *Saccharomyces cerevisiae* and *Aspergillus oryzae* cultures on ruminal fermentation in dairy cows. *Journal of Dairy Science*, 79(3), 411-417.
- Yuhana, Ruli, C. H. Prayitno, dan B. Rustomo. 2013. Suplementasi Ekstrak Herbal dalam Pakan Kambing Perah Pengaruhnya Terhadap Kecernaan Bahan Kering dan Bahan Organik Serta Konsentrasi VFA Secara In Vitro. *Jurnal Ilmiah Peternakan* 1(1):54-61.
- Yuliyani, M. (2010). Aktivitas Antibakteri Ekstrak Kloroform Limbah Padat Daun Serai Wangi (*Cymbopogon nardus*) Terhadap Bakteri *Pseudomonas aeruginosa* dan *Staphylococcus aureus*. Fakultas Teknobiologi Universitas Atma Jaya Yogyakarta, 1–15.
- Zain, M. 2009. Substitusi Rumput Lapangan dengan Kulit Buah Coklat Amoniasi dalam Ransum Domba Lokal. *Media Peternakan*. 32(1):47-52.
- Zain, M., & Jamarun, N. (2010). Effect of sulfur supplementation on in vitro fermentability and degradability of ammoniated rice straw. *Pakistan Journal of Nutrition*, 9(5), 413-415.
- Zain, M., Jamarun, N., Arnim, A., Ningrat, R. W. S., & Herawati, R. (2011). Effect of yeast (*Saccharomyces cerevisiae*) on fermentability, microbial population and digestibility of low quality roughage in vitro. *Archiva Zootechnica*, 14(4), 51.

- Zenebe, Tilahun., Ahmed, N., Kabeta, T., Kebede, G. (2014). Review on Medicinal and Nutritional Values of Goat Milk. Academic Journal of Nutrition. 3 (3), 30-39.
- Zhao, X., Zhang, T., Xu, M., & Yao, J. (2014). Effects of *Saccharomyces cerevisiae* on rumen fermentation and bacteria population in cows fed high fiber diet. *Journal of Integrative Agriculture*, 13(3), 666-673.
- Zhao, Y., Xie, B., Gao, J., & Zhao, G. (2020). Dietary supplementation with sodium sulfate improves rumen fermentation, fiber digestibility, and the plasma metabolome through modulation of rumen bacterial communities in steers. *Applied and environmental microbiology*, 86(22), e01412-20.
- Zhuang, Y., Chai, J., & Zhang, N. (2022). Yeast (*Saccharomyces cerevisiae*) culture promotes the performance of fattening sheep by enhancing nutrients digestibility and rumen development. *Fermentation*, 8(12), 719. doi:10.3390/fermentation8120719.
- Zulkarnaini. 2009. Pengaruh suplamentasi mineral fospor dan sulfur pada jerami padi amoniasi terhadap kecernaan NDF, ADF, selulosa dan hemiselulosa. *Jurnal Ilmiah Tambua* 8:473-477.

