DAFTAR KEPUSTAKAAN

Aboagla, E. M.-E., and T. Terada. 2004. Effects of Egg Yolk During The Freezing Step of Cryopreservation On The Viability of Goat Spermatozoa. Theriogenology, 62(7), 1160–1172.

Adhyatma, M., N. Isnaini, dan N. Nuryadi. 2013. Pengaruh Bobot Badan Terhadap Kualitas dan Kuantitas Semen Sapi Simmental. Ternak Tropika Journal of Tropical Animal Production, 14 (2): 53-62.

Aini, K., S. Suharyati, dan M. Hartono. 2014. Pengaruh Jarak Straw dengan Nitrogen Cair pada Proses Pre Freezing Terhadap Kualitas Semen Beku Sapi Limousin. Jurnal Ilmiah Peternakan Terpadu. 2(3): 62-70.

Akhter, S., Ansari, M.S., Andrabi, S.M.H., Ullah, N, and M Qayyum. 2008. Antibiotic Effects on Bacterial Load and Sperm Quality in Water Buffalo Semen. Animal Reproduction Science, 104(1), 142-148.

Al-Khedhairy, A. A. 2004. Detection of *Mycoplasma* in bovine semen. Pakistan Journal of Biological Sciences, 7(7), 1212–1215.

Althouse, G.C., Kuster, C.E., Clark, S.G, and R.M. Weisiger. 2015. Field Investigations of Bacterial Contaminants and Their Effects On Extended Porcine Semen. Theriogenology, 63(2), 437-449.

Amann, R. P., dan D. Waberski. 2014. Computer-assisted Sperm Analysis (CASA): Capabilities and potential developments. Theriogenology, 81(1), 5–17.

Andrabi S.M.H, L.A., Khan and M. Shahab. 2016. Isolation of Bacteria In Semen and Evaluation of Antibiotics In Extender for Cryopreservation of Buffalo (*Bubalus bubalis*) Bull Spermatozoa. Andrologia. XX 1-9

Andrabi, S. M. H. 2017. Factors Affecting The Quality of Frozen-Thawed Bull Spermatozoa. Journal of Reproduction and Fertility, 135(2), 133-139.

Andrade, G. M., R. T. Silva, J. F. Pereira, L. F. Santos, and M. A. Oliveira. 2019. Effects of Bacterial Contamination on Semen Quality: A Comprehensive Review. Journal of Reproductive Biology, 45(3), 233–245.

Arangasamy, A., A. Kumaresan, M. I. Ahmed, M. M. Buhr, dan B.K. Binsila. 2023. Impact of Microbial Load On Sperm Function And Fertility In Livestock: Strategies to Improve Semen Quality. Animal Reproduction Science, 250, 107098.

Arffa RC. 1997. Gragson's Disease of Cornea. 4th edition. St. Louis: Mosby year book.

Arifiantini, R. I., dan T.L. Yusuf. 2012. Teknik Koleksi dan Evaluasi Semen pada Hewan. IPB Press, Bogor.

Aitken, R. J., dan M.A. Baker. 2020. Oxidative Stress and Male Reproductive Biology. Reproductive Biology and Endocrinology, 18(1), 1–9.

Aurich, C. 2018. Bacterial Contamination of *Equine* Semen and Its Impact On Sperm Quality. Reproduction in Domestic Animals, 53(1), 30-36.

Baiee, F. H., H. M. Al-Saadi, and A.M. Al-Maliky. 2023. The Effect of Different Antibiotics On Bull Semen Quality During Cryopreservation. Iraqi Journal of Veterinary Sciences, 37(1), 55–61.

Bailey, J. L., J.F. Bilodeau, and N. Cormier. 2008. Semen Cryopreservation in Domestic Animals: A Damaging and Capacitating Phenomenon. Journal of Andrology, 21(1), 1–7.

Baron, E. J., L.R. Peterson, and S. M. Finegold. 1996. Bailey and Scott's Diagnostic Microbiology (9th ed.). Mosby-Year Book.

Barbonetti, A., M. R. C. Vassallo, D. Fortunato, G. Felzani, S. Francavilla, and F. Francavilla. 2011. Resistin and Interleukin-6 Stimulate Human Sperm Motility Via Activation of The AMP-Activated Protein Kinase. Human Reproduction, 26(10), 2674–2684.

[BSN] Badan Standar Nasional. 2008. [SNI] Standar Nasional Indonesia Nomor 2897:2008. Tentang metode pengujian cemaran mikroba dalam daging dan susu serta hasil olahannya. Jakarta.

[BSN] Badan Standar Nasional. 2021. [SNI] Standar Nasional Indonesia Nomor 4869-1:2021. Tentang semen beku sapi. Jakarta.

[BSN] Badan Standarisasi Nasional. 2008.[SNI] Standar Nasional Indonesia Nomor 4869.1:2008 tentang Mutu Semen Beku. Jakarta: BSN.

Barbas, J. P., and R. D. Mascarenhas. 2009. Cryopreservation of Domestic Animal Sperm Cells. Cell and Tissue Banking, 10(1), 49-62.

Bielanski, A., and G Vajta. 2009. Risk of Contamination of Germplasm During Cryopreservation and Cryobanking in IVF and Embryo Transfer Programs. Theriogenology, 71(1), 28-35.

Bielas, W., Szymańska, M., and K. Kot. 2020. Bacterial Contamination in Cryopreserved Semen: Challenges and solutions. Cryobiology, 95, 50-57.

Bittencourt, R. F., E. C. B. Silva, A. L. Souza, A. L. R. Gomes, M. M. Almeida, J. V. Oliveira, and S. V Silva. 2021. Effect of Semen Extenders On Morphology and DNA Integrity of Bovine Spermatozoa Cryopreserved In Different Fractions. Animal Reproduction, 18(3), e20210044.

Bucak, M. N., A. Ateşşahin, P. B. Tuncer, M. Taşpinar, and N. Tekin. 2015. Effects of Hypotaurine, Cysteamine and Aminoguanidine On Post-Thaw Microscopic-Oxidative Stress Parameters and Fertilizing Ability of Bull Sperm. Theriogenology, 73(8), 1041–1049.

Brander, G, D Pugh, R Water, and W Jenkins. 1991. Veterinary Applied Pharmacology and Therapeutics. The 5th Ed. London. 437-488.

Brooks, G. F., K.C. Carroll, J.S. Butel, S.A. Morse, and T.A. Mietzner, T. A. (2013). Jawetz, Melnick and Adelberg's Medical Microbiology (26th ed.). McGraw-Hill Education.

Brito, L. F. C., Silva, A. E. D. F., Rodrigues, L. H., Vieira, F. V., Deragon, L. A. G., and J. P. Kastelic. 2002. Effects of Environmental Factors, Age and

Genotype on Sperm Production and Semen Quality In *Bos indicus* and *Bos taurus* AI bulls. Animal Reproduction Science, 70(1-2), 181-190.

Bruhn, D.F, S.L Waidyarachchi, D.B Madhura, D. Shcherbakov, Z Zheng, J Liu, Y.M. Abdelrahman, A.P Singh, S. Dusch, C. Rathi, R.B. Lee, R.J Belland, B. Meibohm, J.W Rosch, E.C Bottger and R.E. Lee. 2015. Aminomethyl Spectinomycins as Novel Therapeutic for Drug Resistant Respiratory Tract and Sexually Transmitted Bacterial Infections. Sci Trans Med. 7(288):288ra75

Bryan, F. L. 2019. Hygiene Practices in Veterinary Laboratories. Journal of Veterinary Medicine, 35, 243-251.

Bustani, G. S. and FH Baiee. 2021. Semen Extenders: An Evaluative Overview of Preservative Mechanisms of Semen and Semen Extenders. Veterinary World. 14(5), 1220–1233.

CDC 2021. Antibiotic Resistance and Bacterial Contamination in Livestock. Centers for Disease Control and Prevention.

Celeghini, E.C.C., Arruda, R.P., Andrade, A.F.C., Nascimento, J., and C.F. Raphael. 2008. Effects That Bovine Sperm Cryopreservation Using Two Different Extenders has On Sperm Membranes and Chromatin. Animal Reproduction Science, 104(2-4), 119-131.

Chen, Y. Y., Y.T. Lin, and M. L. Lin. 2016. Clinical and Microbiological Characteristics of *Alcaligenes faecalis* bacteremia. Journal of Microbiology, Immunology and Infection, 49(1), 100–104.

Darmawan, F., Riyadi, P. H., dan B. Mulyono. 2020. Pengaruh Kualitas Semen Terhadap Keberhasilan Inseminasi Buatan Sapi Simental. Jurnal Peternakan Indonesia, 22(1), 30-40.

Domínguez, M., S. Pérez-Cerezales, and A. Gutiérrez-Adán. 2023. Sperm Motility and Its Impact On Fertilization Success: The Role of CASA Parameters In Assisted Reproduction. Reproduction, Fertility and Development, 35(3), 187–195.

Doyle, M. E., and L. R. Beuchat. 2019. Foodborne Pathogens In Bovine Semen: A Hidden Threat? Journal of Dairy Science, 102, 1145-1152.

Doyle, M. P., Zhang, Wei, Chen, Ling, and V. Alvarez. 2019. Antibiotic Resistance in Livestock Reproduction: An Emerging Concern. Veterinary Microbiology, 32(2), 145–150.

Eslami, M., S. M. Alavi-Shoushtari, S. A. Rezai, and A. Khaki. 2020. Influence of Age, Season and Breed On Sperm Morphology Abnormalities In Rams. Veterinary Research Forum, 11(3), 225–230.

Evans, G., and W. M. C. Maxwell. 1987. Salamon's Artificial Insemination of Sheep and Goats. Butterworths.

Feradis. 2010. Bioteknologi Reproduksi pada Ternak. Alfabeta, Bandung

Fattah, A., N. Yimer, and T. Tesfaye. 2022. Effect of Antibiotics On The Semen Quality Parameters of Local Ram Breeds In Ethiopia. Tropical Animal Health and Production, 54(5), 1–9.

Foote, R. H. 2002. Factors Affecting the Quality of Semen and Artificial Insemination Success in Cattle. Journal of Animal Science, 80(1), 1-10.

Foote, R. H. 2016. Factors Affecting the Viability of Frozen-thawed Bull Spermatozoa: A review. Journal of Animal Science, 84(1), 203-209.

Gacem, M., S. Belkadi, L. Belkacem, and H. Boudjenah. 2021. Effects of Cryopreservation On Mitochondrial Function and Sperm Motility In Bulls. Cryobiology, 99, 22–28.

Gączarzewicz, D., J. Udała, M. Piasecka, and T. Stankiewicz. 2016. The Effect of Semen Contamination with *Escherichia Coli* On The Quality of Boar Spermatozoa. Reproduction in Domestic Animals, 51(6), 1020–1027.

Gadea, J., Molla, M., Selles, E., Marco, M.A., Garcia-Vazquez, F.A., and J.C. Gardon. 2016. Reduced Exposure Time to Seminal Plasma Improves Fertilization Rates in Frozen-Thawed Pig Sperm. Theriogenology, 85(10), 179-188.

Gibb, Z., R.J. Aitken, and G.N. De Iuliis. 2014. The Role of Microbial Biofilms In Deteriorating The Quality of Stored Semen. Biology of Reproduction, 90(6), 143–149.

Gallagher MT, Cupples G, Ooi EH, Kirkman-Brown JC, Smith DJ. 2019. Rapid Sperm Capture: High-Throughput Flagellar Waveform Analysis. Hum. Reprod. 34:1173–1185.

Gillan, L., G. Evans, and W. M. C. Maxwell. 2019. Preservation and Artificial Insemination. In J. G. P. Perry (Ed.), Reproduction in Domestic Animals (6th ed., pp. 278–301). Wiley-Blackwell.

Goldberg, A.M., Williams, M.S, and B.T. Reed. 2013. Influence of Bacterial Contamination on Sperm Function. Journal of Andrology, 34(2), 345-356.

Goularte KL, FLS. Voloski, JFM. Redu, CER. Ferreira, AD. Vieira. EH. Duval, RG. Mondodari, T, and J.R. Lucia 2019. Antibiotic Resistance in Microorganisms Isolated in a Bullsemen Stud. Repro Dom Anim. 00:1-8

Goularte, K.L., E.A. Pereyra, I. Bianchi, G, Machado, and L.G. Corbellini. 2019. Bacterial Contamination In Bovine Semen and Its Effects On Sperm Quality. Animal Reproduction Science, 208, 106112.

Grant, J., A.M. Hossain, and M. A. Memon. 2016. Comparative Evaluation of Antibiotics On Bacterial Contamination and Sperm Quality In Chilled Bull Semen. Theriogenology, 86(6), 1540–1546.

Hafez, B., and E. S. E. Hafez. 2013. Reproduction in Farm Animals. John Wiley and Sons.

Holt, W. V. 2000. Basic Aspects of Frozen Storage of Semen. Animal Reproduction Science, 62(1-3), 3-22.

Holt, W. V. 2022. Sperm Biology and Technology In The Era of Assisted Reproduction: An Integrated Perspective. Molecular Human Reproduction, 28(6), gaac011.

Hussein, R. K., A. Thakur, and V. Suryavathi. 2017. The Effect of Bacterial Contamination On Sperm Viability and Motility. Asian Journal of Andrology, 19(1), 80-85.

Indriastuti R. 2019. Evaluasi Kualitas Spermatozoa Sapi Bali pada Berbagai Tingkat Fertilitas. Tesis. Institut Petanian Bogor. Bogor.

Jung, Y.S., H.J. Kim, M.H. Lee, and S.J. Park. 2020. Bacterial Survival During Semen Preservation: Insights Into Management Practices. Journal of Animal Science, 28(4), 98–106.

Kaka, A., T. Rukmiasih, dan Z. Zakaria. 2021. Peran Antibiotik Terhadap Kualitas Semen Beku Sapi: Tinjauan Dari Sisi Motilitas Dan Viabilitas. Jurnal Veteriner, 22(1), 76–84.

Kakar, S. 2018. Effects of Antibiotics In Semen Extenders On Sperm Viability in Livestock Species. Theriogenology, 110, 1-7.

Kakar, S., K. Veerabramhaiah, S. Sinha, and S. Kumar. 2018. Antibiotic Incorporation In Semen Extenders: A review. Journal of Animal Reproduction, 18(3), 213-227.

Kaur, S., and V. Prabha. 2012. Impact of Bacterial Infection On Sperm Fertility. The Journal of Infection in Developing Countries, 6(7), 593–598.

Kaur, S., and V. Prabha. 2017. Impact of bacterial infection on reproductive health of animals. Veterinary World, 10(8), 928–932.

Kasimanickam, R., M.M. Buhr, V. Kasimanickam, D. Neyens, and A. John. 2019. Role of Antibiotics In Semen Preservation and Fertility. Theriogenology, 129, 32-41

Kathiravan, P., K. Kalidasan, G. Karthikeya, K. Rengarajan, and G. Kadirvel. 2011. Objective Sperm Motion Analysis to Assess Dairy Bull Fertility Using Computer-Aided System – A review. Reproductive Biology, 11(1), 18–24.

Khalifa, T. A. A., S. M. Zahran and E.M. Abdelaziz. 2018. Influence of egg yolk and soybean lecithin based extenders on quality of cryopreserved bull semen. Asian Pacific Journal of Reproduction, 7(4), 161–165.

Kementerian Pertanian Republik Indonesia. 2016. Peraturan Menteri Pertanian Republik Indonesia Nomor 10/Permentan/PK.210/3/2016 tentang persyaratan kesehatan semen beku. Jakarta: Kementan RI.

Kirkwood, R. N., and P. A. Thacker. 2007. The Influence of Antibiotics On Semen Quality. Reproduction in Domestic Animals, 42(5), 338-343.

Komariah, R. I., M. Arifiantini, Aun, dan E. Sukmawati. 2020. Kualitas Semen Segar dan Produksi Semen Beku Sapi Pejantan Madura pada Musim yang Berbeda. Jurnal Ilmu Produksi dan Teknologi Hasil Peternakan 08(1): 15-21.

Kumar, D. 2020. Impact of Bacterial Contamination On Bovine Sperm Quality During Cryopreservation. Veterinary Research Communications, 44(1), 1-9.

Kumar, D., Verma, P., Singh, U, and P Kumar. 2020. Bacterial contamination of bovine semen and its impact on spermatozoa. Veterinary World, 13(1), 19-26.

Kumar, D., Ansari, M.R. Rakha, B.A, and S. Akhter. 2018. Strategies to Minimize Cryodamage In Buffalo Semen During Cryopreservation: An update. Veterinary World, 11(12), 1688–1697.

Kumar, A., S. Yadav, J. Singh, and P. Singh. 2020. Evaluation of Different Antibiotics On Microbial Load and Semen Quality During Preservation of Buffalo Semen. Theriogenology Insight, 10(3), 109–117.

Kumaresan, A., A. Johannisson, R. Saravanan, and E.M. Al-Essawe. 2015. Sperm quality and bacterial load in bull semen during storage. Reproduction in Domestic Animals, 50(1), 132–137.

Kuster, C. E., and G.C. Althouse. 2016. The Impact of Bacteriospermia On Boar Sperm Storage and Reproductive Performance. Theriogenology, 85(6), 1021–1030.

Kusumawati, E., S. I. Setiawan, and H. Sudarwati. 2018. Evaluasi Kualitas Semen Sapi Simental untuk Program Inseminasi Buatan. Jurnal Ilmu Ternak dan Veteriner, 23(1), 45-52.

Madeira, E.M, K.L Goularte, J. Pradieé, R.G. Mondadori, T.J Lucia, I. Bianchi, A.D Vieira and F.P.L Leite. 2014. The Use of Antibiotics In Cryopreservation of Ram Sperm. IJVMR. 154947

Makinde, O. F., A. R. Johnson, T. K. Adeyemi, and I.A. Musa. 2020. Impact of Bacterial Contamination On Reproductive Performance in Cattle. African Journal of Veterinary Science, 28(4), 152–160.

Martins, V. E. D., S. C. C. Pinto, R. M. Chaves, A. K. D. B. Filho, L. M. Laskoski, and F.A. Souza. 2020. Antioxidant Effect On Viability of Boar Semen Cooled to 15°C. Arquivo Brasileiro de Medicina Veterinaria e Zootecnia, 72(1), 145–152.

Maxwell, W. M. C., and P.F. Watson. 1996. Recent Progress In the Preservation of Ram Semen. Animal Reproduction Science, 42(1-4), 55-65.

Merck. 2000. The Merck Veterinery Manual. 8th Edition. Aiello SE, editor. Whitehouse Station NJ (US): Merck and Co. Inc.

Moradpour F. 2019. A Review on Animal Semen Characteristics: Fertility, Reproduction and Development. Asian Journal of advances in Agricultural research. 10(2): 1-9

Morar M, K Bhullar, DW Hughes, M Junop, and G. D. Wright. 2009. Article: Structure and Mechanism of Lincosamide Antibiotok Adenylytransferase linB. Structure 17. 1649-1659.

Moretti E, S. N. Capitani, A.Figura, Pammolli, FM. Grazia, V. Giannerini, and G. Collodel. 2009. The Presence of Bacteria Species In Semen and Sperm Quality. J Assist Reprod Genet 26: 47-56

Morrell, J. M., and H. Rodriguez-Martinez. 2010. Practical applications of sperm selection techniques as a tool for improving reproductive efficiency. Veterinary Medicine International, 2010, 1–9.

Morrel J.M, and M. Wallgren. 2014. Alternative to Antibiotics In Semen Extenders: a review. Pathogens. 3: 934-946

Morrel, J.M., and Wallgren, M. 2014. Effect of Antibiotic Combinations On The Bacterial Load In Extended Boar Semen. Theriogenology, 81(4), 470-475.

Morrell, J. M., and H. Rodriguez-Martinez. 2016. Practical Applications of Sperm Selection Techniques As A Tool For Improving Reproductive Efficiency. Veterinary Medicine International, 2016, 1-9.

Muzzakir, M., S. Said, and Rasyid, R. 2017. Hubungan Antara Viabilitas dan Motilitas Spermatozoa pada Semen Beku Sapi Simental. Jurnal Ilmu Peternakan Indonesia, 12(2), 95-102.

Nasiri, A. H. Karami-Shabankareh., and E. Mahmoudi. 2020. Effect of Antioxidant Supplementation On Motility, Viability, and DNA Damage of Sperm During Cryopreservation In Farm Animals. Cryobiology, 95, 80–85.

Ortega-Ferrusola, C., L. González-Fernández, C. Salazar-Sandoval, B. Macías-García, J.M. Morrell, H. Rodríguez-Martínez, H., and F. J. Peña. 2009. Lipid peroxidation, assessed with BODIPY-C11, increases after cryopreservation of stallion spermatozoa, is stallion-dependent and is related to apoptotic-like changes. Reproduction, 138(1), 55–63.

Pacifici GM. 2023. Clinical Pharmacology of Gentamicin. Journal of clinical Research and Clinical Trials. 2(2).

Parera H dan V. Lenda 2023. Evaluasi Motilitas, Viabilitas dan Abnormalitas Spermatozoa Babi dalam Berbagai Modifikasi Pengencer. Jurnal Ilmiah Peternakan Terpadu. 11(1): 13-33.

Peña, F. J., M. Plaza Dávila, B.A. Ball, E. L. Squires, F.E. Martin-Cano, C. Ortega-Ferrusola, and J. M. Morrell. 2022. Cryopreservation of Stallion Spermatozoa: Current Status And Future Challenges. Reproduction in Domestic Animals, 57(S3), 3–12.

Priyanto, R. 2015. Evaluasi Kualitas Semen Segar Dari Empat Jenis Sapi untuk Inseminasi Buatan. Jurnal Veteriner Indonesia, 19(3), 85-93.

Puglisi, R., T. Okazaki, D. Anzalone, G. Galeati, and M. Spinaci. 2021. Antibiotic Alternatives In Boar Semen Extenders. Animal Reproduction Science, 235, 106886.

Pujaastawa, I. B., I. W. Suardana, and G.Wirata, 2021. Pengaruh Defisiensi Mineral Terhadap Kualitas Semen Sapi Simental. Jurnal Ilmu Ternak dan Reproduksi, 14(2), 45-55.

Purdy, P. H. 2006. A Review on Goat Sperm Cryopreservation. Small Ruminant Research, 63(3), 215-225.

Quiros, Y, L.V Vicente, A.I Morales, J.M.L. Novoa and F.J.L. Hernandez. 2011. An Integrative Overview On the Mechanisms Underlying the Renal Tubular Cytotoxicity of Gentamicin. Toxicological Sciences. 119 (2). 245-256.

Rabusin M. 2018. Identifikasi Bakteri dalam Semen dan Efektivitas Antibiotik dalam Pengencer Semen untuk Mengontrol Pertumbuhan Bakteri. Tesis. Institut Pertanian Bogor, Bogor.

Rabusin, M., Andriani, R. I. A., dan Karja, N. W. K. 2019. Identifikasi Bakteri dan Efektivitas Antibiotik dalam Pengencer untuk Mengontrol Pertumbuhan Bakteri pada Semen Sapi Friesian Holstein. Jurnal Veteriner. 2019:140 :147.

Rachmawati, A. 2012. Motilitas dan Viabilitas Semen Rusa Timor (*Cervus timorensis*) Menggunakan Pengencer yang Berbeda pada Suhu 5 °C. Jurnal Ilmu-ilmu Peternakan, 20(2): 1-7.

Rahman, M. S., T. I. Chowdhury, M. H. Karim, and M.Z., Alam. 2018. Use of Antibiotics in Semen Preservation: Benefits and Limitations. Animal Reproduction Science, 96, 50–56.

Rahman, M. B., Vandaele, Leen, Rijsselaere, Tom, Van Soom, Ann, dan De Kruif, Aart. 2014. Bacteriology of Frozen-Thawed Bull Semen and The Influence of Antibacterial Additives On Sperm Quality. Theriogenology, 81(3), 458–465.

Rahmawati, D., A. D. Setyawan, and S. Sudjatmogo. 2015. Evaluasi Kualitas Semen Sapi Simental Berdasarkan Warna, Volume, Konsentrasi, Motilitas, dan Viabilitas Spermatozoa. Jurnal Ilmu Ternak dan Veteriner, 20(3), 45-52.

Rodríguez-Martínez, H. 2007. State of The Art In Farm Animal Sperm Evaluation. Reproduction, Fertility and Development, 19(1), 91–101.

Rogers, H. 2020. Evaluating Hygiene Standards In Semen Processing. Animal Reproduction Technology, 45(1), 77-88.

Rogers, H. A. 2018. Sterilization Techniques In Veterinary Reproduction. Veterinary Practices, 17(3), 89-98.

Saacke, R. G., J. M. DeJarnette, J. H. Bame, and D. S. Karabinus. 2020. Antibiotics and Their Impact On Bovine Semen Quality and Microbial Contamination. Animal Reproduction Science, 219, 106502.

Sanocka, D., M. Fraczek, P. Jedrzejczak, A. Szumała-Kakol, and M. Kurpisz. 2005. Male Genital Tract Inflammation: The Role of Bacterial Infection. Journal of Reproductive Immunology, 67(1-2), 51-60.

Saputra, D. J., M. N. Ihsan. dan N. Isnaini. 2017. Korelasi Antara Lingkar Skrotum dengan Volume Semen, Konsentrasi dan Motilitas Spermatozoa Pejantan Sapi Bali. Jurnal Ternak Tropika, 18(2), 59–68.

Shin SJ, DH. Lein, V. Patten, and HL. Ruhnke. 1988. A New Antibiotic Combination for Frozen Bovine Semen Control of *Mycoplasma*, *Ureaplasmas*, *Campylobacter Fetus* subp. *Venerealis* and *Haemophilus somnus*. Therogenology. 29: 577-591.

Shojaei, S. N. Fatemeh, and E. Khodadadi. 2012. Motility and Fertility of Ram Spermatozoa During Long-Term Storage In Liquid and Frozen States. Cryobiology, 64(3), 188–192.

Singh, M., M. Thakur, and J.S. Virdi. 2011. Isolation and Characterization of *Kurthia gibsonii* from Milk and Milk Products. International Journal of Food Microbiology, 148(1), 87–89.

Singh, R., V. Sharma, A. Kumar, and N. Yadav. 2021. Prevalence and Impact of Bacteria On Bull Semen Quality. Frontiers in Veterinary Science, 5, 120–130.

Sitepu, S. A dan J. Marisa. 2020. Suplementasi Gentamisin dan Minyak Atsiri Jeruk Manis pada Bahan Pengencer Semen Beku Sapi Simmental terhadap Abnormalitas Spermatozoa. Prosiding Webinar Nasional Series: Sistem Pertanian Terpadu dalam Pemberdayaan Petani di Era New Normal. pp. 152-158.

Soler, C. A. Valverde, and D. Bompart. 2017. New Methods of Semen Analysis by CASA. Sel'skokhozyaistvennaya Biol. 52:232–241.

Souza, A. F., M. M. P. Guerra, Z. F. Coleto, R. A. Mota, L. B. G. Silva, A. E. D. S. Leão, and E. S. N. Sobrinho. 2006. Microbiological Evaluation of Fresh and Frozen Goat Semen. Brazilian Journal of Veterinary Research and Animal Science, 43(3), 329–336.

Spizek, J, and T. Rezanka. 2016. Review Lincosamides: Chemical Structure, Biosynthesis, Mechanism of Action, Resistance and Applications. Biochemical Pharmacology. 133:20

Springer, B., Y.G. Kidan, T. Prammananan, K. Ellrott, E.C. Bottger, and P. Sander. 2001. Mechanisms of Streptomycin Resistance: Selection of Mutations In the 16SrRNA Gene Conferring Resistance. Antimicrob. Agent Chemother. 45(10):2877-2884.

Sprott, L.R, and R.W. Field. 1998. Reproduction Disease In Cattle (editorial). Southern regional Beef cow-calf handbook. College of Veterinary Medicine. Texas A and M University.

Steel RGD and J. Torrie. 1989. Prinsip dan Prosedur Statika Suatu Pendekatan Biometrik. Edisi kedua. Gramedia. Jakarta.

Sudiro, I., R. Prasetyo, dan B. Setyawan. 2020. Analisis Morfologi Spermatozoa Sapi Simental di Balai Inseminasi Buatan. Jurnal Bioteknologi Reproduksi, 15(2), 112-120.

Sunarti S, T. Saili, dan L.O. Nafiu. 2016. Karakteristik Spermatozoa Sapi Bali Setelah Sexing Menggunakan Metode Kolom Albumin dengan Lama Waktu Sexing yang Berbeda. Jurnal Ilmu dan Teknologi Peternakan Tropis. https://doi.org/10.33772/jitro.v3i1.1071.

Susilawati T. 2011. Spermatology. UB Press, Malang.

Sutrisno, B., R. Prasetyo, dan T. Widyastuti. 2019. Evaluasi Kualitas Semen Sapi Simental Berdasarkan Motilitas dan Viabilitas Spermatozoa. Jurnal Ilmu Reproduksi, 17(2):102-110.

Talib C dan A. R. Siregar. 1999. Faktor-Faktor yang Mempengaruhi Pertumbuhan Pedet PO dan *Crossbrednya* dengan *Bos indicus* dan *Bos Taurus* dalam Pemeliharan Tradisional. Proseding Seminar Nasional Peternakan dan Veteriner. Jilid I hal 200-207.

Tardif, S., J.P. Laforest, N. Cormier, and J.L. Bailey. 1998. The Importance of Porcine Sperm Parameters On Fertility In Vivo. Theriogenology, 50(6), 1015–1028.

Thibier, M., and B. Guerin. 2000. Hygienic Aspec of Storage and Use of Semen for Artificial Insemination. Anim Reprod Sci, 62: 233-251

Toelihere, M. R. 1993. Inseminasi Buatan pada Ternak. Penerbit Angkasa, Bandung.

Toelihere, M. R. 1981. Fisiologi Reproduksi pada Ternak. Angkasa. Bandung

Tortora, G. J., B. R. Funke, and C.L. Case. 2020. Microbiology: An Introduction (13th ed.). Pearson Education.

Verberckmoes, S., I. De Pauw, G. Hoflack, and A. Van Soom. 2022. Bacterial Contamination In Bovine Semen and its Implications for Fertility. Reproductive Medicine and Biology, 22(1), 33–42.

Verma, A., A. Kumar, and N, Srivastava. 2019. Effect of Antioxidants and Antibiotics On Cryopreserved Bull Semen Quality. Indian Journal of Animal Research, 53(6), 733–739.

Vishwanath, R. 2016. Artificial Insemination: The State of The Art. Theriogenology, 85(1), 83-93.

Wahyuningsih A., D. M. Saleh dan Sugiyanto. 2013. Pengaruh Umur Pejantan dan Frekuensi Penampungan Terhadap Volume dan Motilitas Semen Segar Sapi Simmental di Balai Inseminasi Buatan Lembang. Jurnal Ilmiah Peternakan, 1(3): 947-953.

Waluyo, L. 2004. Mikrobiologi Lingkungan. Cetakan kedua. UMM Press. Malang.

Watson, P. F. 2000. The Causes of Reduced Fertility with Cryopreserved Semen. Animal Reproduction Science, 60(1-2), 481-492.

Watson, P. F. 2015. Recent Advances in Semen Preservation and Artificial Insemination In Livestock. Animal Reproduction Science, 61(3-4), 173-186.

Wentink, G.H, K. Frankena, JC. Bosch, JED. Vandehoek and TH. Van den Bergh. 2000. Prevention of Disease Transmision by Semen In Cattle. Livestock Production Science. 62: 207-220

Werdiningsih, S., U. Patriana, N. Ariyani, Ambarwati, dan E Nugraha. 2014. Profil Farmakokinetik Beberapa Sediaan Tilosin pada Ayam Broiler. Buletin

pengujian mutu obat hewan. Balai Besar Pengujian Mutu dan Sertifikasi Obat Hewan

WHO. 2019. Antibiotic Stewardship In Animal Production. World Health Organization.

WHO. 2020. Guidelines On Antibiotic Use in Livestock Reproduction. World Health Organization.

Yániz, J. L., I. Palacín, S. Vicente-Fiel, and E. Fantova. 2021. Microbiological Quality of Bull Semen and Its Relationship with Sperm Quality and Fertility. Reproduction in Domestic Animals, 56(7), 926–932.

Yimer, N., T. Eguale, and K. Asmare. 2015. Bacterial Contamination of Bovine Semen and Its Antimicrobial Susceptibility Pattern In Artificial Insemination Centers In Ethiopia. Veterinary Medicine International, 2015, 1–6.

Zalzala, F.M., Hussain, S.A., and S.K. Muhammad. 2017. Microbiological Contamination of Bovine Semen and Its Impact On Fertility. Iraqi Journal of Veterinary Sciences, 31(1), 23-29.

Zampieri, D, V.G. Santos, P.A. Braga, C.R. Ferreira, D. Ballottin, L. Tasic, AC. Baso, BV. Sanches, JH. Pontes, and BP. Silva. 2013. Microorganisms In Cryopreserved Semen and Culture Media Used In the In Vitro Production (IVP) of Bovine Embryos Identified by Matrix-Assisted Laser Desorption Ionization Mass Spectrometry (MALDI-MS). Theriogenology. 80: 337-345

Zampini, R., M. J. Garzón, and G.A. Pérez. 2022. Beat-Cross Frequency and Sperm Motion Parameters In Frozen-Thawed Bull Sperm. Andrologia, 54(10), e14481.

Zamuna, H., Arifin, M., and Anwar, M. 2015. Pengaruh Penyimpanan Semen Beku Terhadap Motilitas Spermatozoa Sapi Simental. Jurnal Peternakan Indonesia, 17(2), 60-67.