



DAFTAR PUSTAKA

- Aboelmaaty, A. M, Mansour, M. M., Ezzo, O. H, and Hamam, A.M. 2008. Some Reproductive and Metabolic Responses to Food Restriction and Re-Feeding in Egyptian Native Goats. *Global Veterinaria* 2 (5): 225-232.
- Anonim. 1999. Goat Review 2008 - 09. *Meat and Wool New Zealand Ltd . Economic Service, Wellington, New Zealand* Paper No. doi:10.1017/CBO9781107415324.004.
- Al-Qarawi, A. 2004. Changes in Plasma Insulin, Thyroid Hormones, Non-Esterified Fatty Acids and Blood Glucose in Underfed Najdi Lambs A. Al-Qarawi. *Benha Veterinary Medical Journal* 15 (2): 1–8.
- Abouheif, M., Al-Owaimer, Kraidees, A., Mansour. 2013. Effect of Restricted Feeding and Realimentation on Feed Performance and Carcass Characteristics of Growing Lambs. *Revista Brasileira de Zootecnia* 42 (2): 95–101.
- Abouheif, M., Al-Sornokh, H., Swelum, A., and Yaqoob, H. 2015. Effect of Different Feed Restriction Regimens on Lamb Performance and Carcass Traits. *Revista Brasileira de Zootecnia* 44 (3): 76–82.
- Adewuyi, A. A., Gruys, E., and van Eerdenburg, F. J. C. M. 2005. Non Esterified Fatty Acids (NEFA) in Dairy Cattle. A Review. *The Veterinary Quarterly* 27 (3): 117–26. doi:10.1080/01652176.2005.9695192.
- Adiwinarti, R., Kustantinah, I. G. S., Budisatria, Rusman and Indarto, E. 2016. Improving the Performance of Local Kacang Goats Using Ruminally Undegradable Protein Feeds. *Asian Journal of Animal Science*. 10 (4-5): 262–67.
- Ahima, R .S., Prabakaran, D., Mantzoros, C., Qu, D., Lowell, B., Maratos-Flier, E., and Flier, J S.1996. Role of Leptin in the Neuroendocrine Response to Fasting. *Nature* 382 (6588): 250–52. doi:10.1038/382250a0.
- Ahmed, A. B. M., 2008. Effect Fo Dietary Protein Energy Levels On Performance Of Debilitated Nubian Goats. *Dissertation* in Department of Animal Nutrition, Faculty of Animal Production, University of Khartoum.



- Almeida, A.M., Schwalbach, L.M.J., Cardoso, L.A., and Greyling, J.P.C. 2007. Scrotal, Testicular and Semen Characteristics of Young Boer Bucks Fed Winter Veld Hay: The Effect of Nutritional Supplementation. *Small Ruminant Research* 73 (1–3): 216–20. doi:10.1016/j.smallrumres. 2007.02.001.
- Almeida, A.M., van Harten, S., and Cardoso, L.A. 2002. Serum Amino Acid and Myofibrillar Protein Profiles of Fed and Underfed Laboratory Rats. *Nutrition Research* 22 (12): 1453–1459.
- Amstalden, M., Garcia, M. R., Williams, S.W., Stanko, R. L., Nizielski, S.E., Morrison, C. D., Keisler, D. H., and Williams, G.L. 2000. Leptin Gene Expression, Circulating Leptin, and Luteinizing Hormone Pulsatility Are Acutely Responsive to Short-Term Fasting in Prepubertal Heifers: Relationships to Circulating Insulin and Insulin-like Growth Factor I(1). *Biology of Reproduction* 63 (1): 127–33. doi:10.1095/biolreprod63.1.127.
- Atti, N., Bocquier, F., Khaldi, G. 2004. Performance of the Fat-Tailed Barbarine Sheep in Its Environment: Adaptive Capacity to Alternation of Underfeeding and Re-Feeding Periods. A Review To Cite This Version : Review Article Performance of the Fat-Tailed Barbarine Sheep in Its Environment . *Animal Research*. 53: 165–176 doi:10.1051/animres.
- Aina, A. B. J. 2012. Goat (Capra Hircus): A Misunderstood Animal. *Issue 35 Of Funaab Inaugural Lecture Series*
- Batubara, A., Noor, R.R., Farajallah, A., Tiesnamurti, B., and Doloksaribu, M. 2011. Morphometric and Phylogenetic Analysis of Six Population Indonesian Local Goats. *Media Peternakan* 34 (3): 165–74. doi:10.5398/medpet.2011.34.3.165.
- Batubara, A., Doloksaribu, M., Tiesnamurti, B. 1984. Potensi Keragaman Sumberdaya Genetik. *Lokakarya Nasional Pengelolaan Dan Perlindungan Sumber Daya Genetik Di Indonesia: Manfaat Ekonomi Untuk Mewujudkan Ketahanan Nasional*, 206–14.
- Batubara, A., Mahmilia, F., Inounu, I., Tiesnamurti, B., and Hasinah, H. 2012. *Rumpun Kambing Kacang Di Indonesia*. Badan Penelitian Dan Pengembangan Pertanian, Kementerian Pertanian



- Batubara, A. 2006. Perbandingan Tingkat Infeksi Parasit Cacing Saluran Pencernaan Pada Kambing Kosta, Gembrong Dan Kacang. *Proseding Seminar Nasional Teknologi Peternakan Dan Veteriner. Bogor, 5 – 6 September 2006. Pusat Penelitian dan Pengembangan Peternakan Bogor, 555–560.* doi:10.1017/CBO9781107415324.004.
- Belstra, B.A, Richert, B.T, Frank, J.W., and Kendall, D.C.1998. Effect of a Seven Day Stair-Step Feeding Regimen Versus Ad Libitum Feeding Throughout Lactation on Sow and Litter Performance. *Purdue University Swine Day Report Swine Day Report*, 1–5.
- Ben Dhia, M.1995. Sheep Production in Tunisia: Actual Situation and Future Perspectives. *Options Meditaraneenes* 6: 9–20.
- Blake, N. G., Eckland, D.J.A, Foster, O.J.F., and Lightman, S. L.1991. Inhibition of Hypothalamic Thyrotropin-Releasing Hormone Messenger Ribonucleic Acid during Food Deprivation. *Endocrinology* 129 (5): 2714–18. doi:10.1210/endo-129-5-2714.
- Blum, J.W., Schnyder, W., Kunz, P. L., Blom, A.K., Bickel, H., and Schürch, A. 1985. Reduced and Compensatory Growth: Endocrine and Metabolic Changes during Food Restriction and Refeeding in Steers. *The Journal of Nutrition* 115 (4): 417–24.
- Boza, J. J., Moennoz, Vuichoud, D., Jarret, J., Gaudard-de-Weck, A.R., Fritsche, D., Donnet, R, A., Schiffrin, Perrisseau, E. J. G, and Ballevre, O. 1999. Food Deprivation and Refeeding Influence Growth, Nutrient Retention and Functional Recovery of Rats. *The Journal of Nutrition* 129 (7): 1340–46.
- Budisatria, I.G.S. 2006. Dynamics of Small Ruminant Development in Central Java Indonesia. *Ph.D Thesis*. Wageningen Agriculture University, Wageningen, The Netherlands. doi:10.1017/CBO9781107415324.004.
- Cabaraux, J. F., Kerrour, M, van Eenaeeme, Dufrasne, C., Istasse, I. L., and Hornick J.L. 2003. Different Modes of Food Restriction and Compensatory Growth in Double-Muscled Belgian Blue Bulls: Plasma Metabolites and Hormones. *Animal Science* 77 (2): 205–14. doi:10.1017/S135772980005894X.
- Cameron, J.L., Helmreich, D. L., and Schreihofe, D.A. 1993. Modulation of Reproductive Hormone Secretion by Nutritional Intake: Stress Signals versus Metabolic Signals. *Human Reproduction* 8 (2): 162–67. doi:10.1093/humrep/8.suppl_2.162.



- Carstens, G.E., Johnson, D.E. and Ellenberger, M.A. 1989. Energy metabolism and composition of gain in beef steers exhibiting normal and compensatory growth. In: Van Der Horing, Y and Close, WH (Eds.), Energy metabolism of farm animals. European association animal production publication. No. 43: 131-134.
- Carstens, G.E., Johnson, D.E., Ellenberger, M.A., and Tatum, J.D. 1991. Physical and chemical components of the empty body during compensatory growth in beef steers. *Journal of Animal Science*. 69:3251-3264.
- Cebra, C.K., Tornquist, S. J., Jester, R.M., and Stelletta, C. 2004. Assessment of the Metabolic Effects of Hydrocortisone on Llamas before and after Feed Restriction. *American Journal of Veterinary Research* 65 (7): 1002–5.
- Chelikani, P. K., Ambrose, J.D., Keisler, D. H., and Kennelly, J. J. 2004. Effect of Short-Term Fasting on Plasma Concentrations of Leptin and Other Hormones and Metabolites in Dairy Cattle. *Domestic Animal Endocrinology* 26 (1): 33–48. doi:10.1016/j.domaniend.2003.08.003.
- Chilliard, Y., Bocquier, F., and Doreau., M. 1998. Digestive and Metabolic Adaptations of Ruminants to Undernutrition, and Consequences on Reproduction. *Reproduction Nutrition Development* 38 (2): 131–52. doi:10.1051/rnd:19980201.
- Chilliard, Y., Delavaud, C., and Bonnet, M. 2005. Leptin Expression in Ruminants: Nutritional and Physiological Regulations in Relation with Energy Metabolism. *Domestic Animal Endocrinology* 29 (1): 3–22. doi:10.1016/j.domaniend.2005.02.026.
- Chilliard, Y., Ferlay, A., Faulconnier, Y. M., Bonnet, Rouel, J., and Bocquier, F. 2000. Adipose Tissue Metabolism and Its Role in Adaptations to Undernutrition in Ruminants. *The Proceedings of the Nutrition Society*, 59:127–34. doi:10.1017/S002966510000015X.
- Coleman, R. A., and Herrmann, T. S. 1999. Nutritional Regulation of Leptin in Humans. *Diabetologia* 42 (6): 639–46. doi:10.1007/s001250051210.
- Collier, R.J., Mcnamara, J.P., Wallace, C.R., and Dehoff, M.H. 1984. A Review Of Endocrine Regulation of Metabolism during Lactation. *Journal of Animal Science* 59 (2): 498–510.
- Comba, A., Mert, H and Comba, B. 2016. Leptin Levels and Lipids Profile Determination in Different Sheep Breeds. *Pakistan Veterinary Journal* 36 (2): 169–77. doi:10.1097/QCO.0b013e3283638104.



Considine, R.V., Caro, J.F. 1997. Leptin and the Regulation of Body Weight.

The International Journal of Biochemistry & Cell Biology 29 (11):

1255–72. doi:10.1016/S1357-2725(97)00050-2.

Coppock, S.W., Jensen, M.D. and Miles, J. M. 1994. In Vivo Regulation of Lipolysis in Humans. *Journal of Lipid Research* 35: 177–93.

Cunningham, J.G., Klein, B. G. 2007. *Textbook of Veterinary Physiology*. 4th ed. St Louis, Missouri: Saunders Elsevier.

Dahlanuddin. 2013. Forages Commonly Available to Goats under Farm Conditions on Lombok Island, Indonesia. *Livestock Research for Rural Development* 13 (1). doi:10.1017/CBO9781107415324.004.

Daoud, N.M., Abd-el-rahman, Mahrous, A.H. Khalil, K .F., and Ezzo. O. H. 2012. GDF-9 Gene Expression, Oocyte Qulaity, Hemat WB ological and Biochemical Profiles Affected by Feed Restriction as a Biostimulant Method on Rabbits Fertility. *Global Veterinaria* 8 (5): 532–40.

Dashtizadeh, M., Zamiri, M. J., Kamalzadeh, A. and Kamali, A. 2008. Effect of Feed Restriction on Compensatory Growth Response of Young Male Goats *Iranian Journal of Veterinary Research, Shiraz University* 9 (2): 109-120

Delavaud, C., Bocquier, F., Chilliard, Y., Keisler, D. H., Gertler, A., and Kann. G. 2000. Plasma Leptin Determination in Ruminants: Effect of Nutritional Status and Body Fatness on Plasma Leptin Concentration Assessed by a Specific RIA in Sheep. *Journal of Endocrinology* 165 (2): 519–26. doi:10.1677/joe.0.1650519.

Delavaud, C., Ferlay, A., Faulconnie, Y., Bocquier, R. F., Kann, G., Chilliard, Y. 2002. Plasma Leptin Concentration in Adult Cattle : Effects of Breed, Adiposity, Feeding Level, and Meal Intake. *Journal of Animal Science* 80:1317-1328.

DelGiudice, G.D., Mech, L. D., and Seal, U. S. 1994. Nutritional Restriction and Acid-Base Balance in White-Tailed Deer. *Journal of Wildlife Diseases* 30 (2): 247–53. <http://pubs.er.usgs.gov/publication/5222644>.

Devendra, C. & Burns, M. 1983. *Goat Production in the Tropics*. Commonwealth Agricultural Bureaux, England.

Devendra, C. and McLeroy, G.B. 1982. *Goat and Sheep Production in the Tropic*. Longman, New York.



- Devendra, C. 1990. Goat Production: An International Perspective. In *Proceedings of International Goat Production Symposium*. Florida A&M University, Tallahassee. doi:10.1017/CBO9781107415324.004.
- DeVries, T. J., Schwaiger, T., Beauchemin, K.A., and Ber, P. G. 2014. The Duration of Time That Beef Cattle Are Fed a High-Grain Diet Affects Feed Sorting Behavior Both before and after Acute Ruminal Acidosis. *Journal of Animal Science* 92 (4): 1728–37. doi:10.2527/jas.2013-7252.
- Dhanda, J.S, Taylor, D.G., Murray, P. J. 2003. Growth, Carcass and Meat Quality Parameters of Male Goats: Effects of Genotype and Live Weight at Slaughter. *Small Ruminant Research* 50: 57–66.
- Dobrohorska, H., Sulima D., Oskaldowicz. K., Gruszczynska, M., and Golebiowska, I. 1981. Effect of Refeeding after Starvation on Basal and Tolbutamide-Stimulated Insulin Secretion and Beta-Adrenergic Receptor Function in the Regulation of Insulin Release and Lipolysis in Obese Patients. *Acta Physiologica Polonica* 32 (6): 703–712.
- Doloksaribu, M., Elieser, S., Mahmilia, F., dan Pamungkas, F.A. 2005. Produktivitas Kambing Kacang Pada Kondisi Dikandangkan: 1. Bobot Lahir, Bobot Sapih, Jumlah Anak Sekelahiran Dan Daya Hidup Anak Prasapih. In *Prosiding Seminar Nasional Teknologi Peternakan Dan Veteriner*. Bogor. doi:10.1017/CBO9781107415324.004.
- Duarte, F. O., Sene-Fiorese. M., Cheik, N. C., Maria, A. S. L. S., Aquino, A. E., Oishi, J.C., Rossi, E.A., Duarte, A. C. G. O., and Dâmaso, A. R. 2012. Food Restriction and Refeeding Induces Changes in Lipid Pathways and Fat Deposition in the Adipose and Hepatic Tissues in Rats with Diet-Induced Obesity. *Experimental Physiology* 97 (7): 882–94. doi:10.1113/expphysiol.2011.064121.
- Dubuc, G.R., Phinney, S. D., Stern, J.S., and Havel, P.J. 1998. Changes of Serum Leptin and Endocrine and Metabolic Parameters after 7 Days of Energy Restriction in Men and Women. *Metabolism* 47 (4): 429–34. doi:10.1016/S0026-0495(98)90055-5.
- Ekpe, E. D., and. Christopherson, R. J. 2000. Metabolic and Endocrine Responses to Cold and Feed Restriction in Ruminants. *Canadian Journal of Animal Science* 80 (1): 87–95. doi:10.4141/A99-028.
- Elbukhary, H.A. 1998. *Production Characteristics of Tagger Goats*. University of Khartoum, Sudan.



Eşkī, F., Taşal, İ., Karslı M. A., and Şendağ, S. 2015. Concentrations of NEFA , β-HBA , Triglycerides , and Certain Blood Metabolites in Healthy Colored Angora Goats during the Peripartum Period. *Turkish Journal of Veterinary and Animal Sciences* 39: 401–5. doi:10.3906/vet-1412-25.

Foote, A. P.R.G., Tait, D. H., Keisler, K. E., Hales, and. Freetly, H. C., 2016. Leptin Concentrations in Finishing Beef Steers and Heifers and Their Association with Dry Matter Intake, Average Daily Gain, Feed Efficiency, and Body Composition. *Domestic Animal Endocrinology* 55: 136–41. doi:10.1016/j.domaniend.2015.12.007

Ford, J.A.Jr., and Park, C. S. 2001. Nutritionally Directed Compensatory Growth Enhances Heifer Development and Lactation Potential. *Journal of Dairy Science* 84 (7): 1669–78. doi:10.3168/jds.S0022-0302(01)74602-4.

Forslund, K. B., Ljungvall, O.A., and Jones, B. V. 2010. Low Cortisol Levels in Blood from Dairy Cows with Ketosis: A Field Study. *Acta Veterinaria Scandinavica* 52: 31. doi:10.1186/1751-0147-52-31.

Fried, S. K., Ricci, M. R., Russell, C.D., and Laferriere, B. 2000. Regulation of Leptin Production in Humans. *The Journal of Nutrition*. 130 (12): 3127–3131. <http://jn.nutrition.org/cgi/content/long/130/12/3127S>.

Froy, O., Sherman, H., Bhargava, G., Chapnik, N., Cohen, R., Gutman, R., and Miskin, R. 2010. Spontaneous Caloric Restriction Associated with Increased Leptin Levels in Obesity-Resistant a MUPA Mice. *International Journal of Obesity* 35 (2): 226–35. doi:10.1038/ijo.2010.125.

Fuglei, E., Mustonen, A. M., and Nieminen, P. 2004. Effects of Season, Food Deprivation and Re-Feeding on Leptin, Ghrelin and Growth Hormone in Arctic Foxes (*Alopex Lagopus*) on Svalbard, Norway. *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology* 174 (2): 157–62. doi:10.1007/s00360-003-0400-6.

Gavete, M.L, Agote, M., Martin, M.A, Alvarez, C., and Escriva, F. 2002. Effects of Chronic Undernutrition on Glucose Uptake and Glucose Transporter Proteins in Rat Heart. *Endocrinology* 143 (11): 4295–4303. doi:10.1210/en.2002-220258.

Geelen, M. J. H., and Wensing, T. 2006. Studies on Hepatic Lipidosis and Coinciding Health and Fertility Problems of High-Producing Dairy Cows Using the Utrecht Fatty Liver Model of Dairy Cows. A Review. *The Veterinary Quarterly* 28 (3): 90–104. doi:10.1080/01652176.2006.9695214.



- Ginting, S. P., Tarigan, A., dan Krisnan, R. 2011. Konsumsi fermentasi rumen dan metabolit darah kambing sedang tumbuh yang diberi silase *I. arrecta* dalam pakan komplit. *Jurnal Ilmu Ternak Dan Veteriner* 17 (1): 49–58.
- González, F.D., Muiño, R., Pereira, V., Campos, R., and Benedito, J. L. 2011. Relationship among Blood Indicators of Lipomobilization and Hepatic Function during Early Lactation in High-Yielding Dairy Cows. *Journal of Veterinary Science* 12 (3): 251–55. doi:10.4142/jvs.2011.12.3.251.
- Gültürk, S., Özdemir E., Erdal, S., and Demir, T. 2005. Correlation between Serum Leptin Levels and Blood Lipids and Body Adiposity in the Patients with Type 2 Diabetes Mellitus. *Cukurova Medical Journal* 27: 105–12.
- Hayden, J.M, Williams, J.E., and Collier, R.J. 1993. Plasma Growth Hormone, Insulin-like Growth Factor, Insulin, and Thyroid Hormone Association with Body Protein and Fat Accretion in Steers Undergoing Compensatory Gain after Dietary Energy Restriction. *Journal of Animal Science* 71(12):3327-3338.
- Herdt, T H, T Wensing, Haagsman, H.P, van Golde, L.M., and Breukink, H.J. 1988. Hepatic Triacylglycerol Synthesis during a Period of Fatty Liver Development in Sheep. *Journal of Animal Science* 66 (8): 1997–2013.
- Herpertz, S., Albers, N., Wagner, R., Pelz, B., Köpp, W., Mann, K., Blum, W. F., Senf, W., and Hebebrand, J. 2000. Longitudinal Changes of Circadian Leptin, Insulin and Cortisol Plasma Levels and Their Correlation during Refeeding in Patients with Anorexia Nervosa. *European Journal of Endocrinology* 142 (4): 373–79. doi:1420373 [pii].
- Hoffenberg, R. 2016. The Effect of Calorie Restriction On Serum Thyroid Hormone Binding Proteins And Free Hormone In Obese Patients. *Clinical Endocrinology* 12(3):1–2.doi:10.1111/j.1365-2265.1980.tb02707.xView/save.
- Holtenius, P, and K Holtenius. 1996. New Aspects of Ketone Bodies in Energy Metabolism of Dairy Cows: A Review. *Zentralblatt Fur Veterinarmedizin. Reihe A* 43 (10): 579–87.
- Hornick, J L, Van Eenaeime, C., Diez, M., Minet, V., and Istasse, L. 1998. Different Periods of Feed Restriction before Compensatory Growth in Belgian Blue Bulls : II. Plasma Metabolites and Hormones. *Journal of Animal Science* 76: 260–71.



Huston, J. E. ; Engdahl, B. S. ; Bales, K. W. 1988. Intake and Digestibility in Sheep and Goats Fed Three Forages with Different Levels of Supplemental Protein. *Small Ruminants. Research* 1 (1): 81–92. doi:10.1017/CBO9781107415324.004.

Irsyad, F., Saptomo S. K., Setiawan, B.I. 2014. Penentuan Awal Dan Durasi Musim Kemarau Menggunakan Fungsi Polynomial Dengan Aplikasi Visual Basic For Applications (VBA). *Jurnal Agromet Indonesia* 28 (1): 40–46. <http://journal.ipb.ac.id/index.php/agromet>.

Janan, J., Rudas, P., Bartha, T., Bozo, S., and Gabor, G. 1995. Effect of Severe Energy Restriction and Refeeding on Thyroid Hormones in Bulls. *Acta Veterinaria Hungarica*. 43 (1): 173–77.

Kalscheur, K., Teter, F.B. B., Piperova, L. S., and Erdman, R. A. 1997. Effect of Fat Source on Duodenal Flow of Trans-C18:1 Fatty Acids and Milk Fat Production in Dairy Cows. *Journal of Dairy Science* 80 (9): 2115–26. doi:10.3168/jds.S0022-0302(97)76157-5.

Kamalzadeh, A. 1996. Prospects of Compensatory Growth For Sheep Production System. Wageningen: Thesis Landbouwuniversiteit Waginingen

Kauffman, A.J., and St-Pierre, N.R. 2001. The Relationship of Milk Urea Nitrogen to Urine Nitrogen Excretion in Holstein and Jersey Cows. *Journal of Dairy Science* 84 (10): 2284–94. doi:10.3168/jds.S0022-0302(01)74675-9.

Keenan, D.M., And AllardycE, C. J. 1986. Changes in Plasma Creatinine Levels of Sheep during Submaintenance Feeding. *Australian Veterinary Journal* 63 (1): 29–30. doi:10.1111/j.1751-0813.1986.tb02871.x.

Keogh, K., Waters, S.M., Kelly, A.K., Wylie, A.R., Sauerwein, H., Sweeney, T., Kenny, D.A. 2015. Feed Restriction and Realimentation in Holstein – Friesian Bulls : II . Effect on Blood Pressure and Systemic Concentrations of Metabolites and Metabolic Hormones 1. *Journal of Animal Science* 93 (7): 3590–3601. doi:10.2527/jas2014-8471.

Kessler, E. C., Gross, J. J., Bruckmaier, R. M., and Albrecht, C. 2014. Cholesterol Metabolism, Transport, and Hepatic Regulation in Dairy Cows during Transition and Early Lactation. *Journal of Dairy Science* 97 (9): 5481–90. doi:10.3168/jds.2014-7926.



- Kiani, A. 2013. Temporal Changes in Plasma Concentration of Leptin, IGF-1, Insulin and Metabolites under Extended Fasting and Re-Feeding Conditions in Growing Lambs. *International Journal of Endocrinology and Metabolism* 11 (1): 34–40. doi:10.5812/ijem.6529.
- Kiyma, Z., Alexander, B. M., Van Kirk, E. A, Murdoch ,W. J., Hallford, D. M, and. Moss, G.E. 2004. Effects of Feed Restriction on Reproductive and Metabolic Hormones in Ewes. *Journal of Animal Science* 82: 2548–2557. doi:10.3168/jds.2013-6925.
- Kleppe, B. B., Aiello, R. J., Grummer, R. R., and Armentano, L. E.1988. Triglyceride Accumulation and Very Low Density Lipoprotein Secretion by Rat and Goat Hepatocytes in Vitro. *Journal of Dairy Science*. 71 (7): 1813–22. doi:10.3168/jds.S0022-0302(88)79750-7.
- Klinhom, P., Markvichitr, K., Vijchulata, P., Tumwasorn, S., Bunchasak, and Chothesha, A. 2006a. Effect of Refeeding on Lipid Metabolism in Kamphaengsaen Beef Heifers. *Kasetsart Journal (Natural Science)* 40: 420–29.
- Klinhom, P., Markvichitr, K., Vijchulata, P., Tumwasorn, S., Bunchasak C and Chothesha, A. 2006b. Effect of Restricted Feeding on Metabolic Adaptations of Kamphaengsaen and Crossbred Brahman Heifers. *Animal Science Journal* 77: 399–406. doi:10.1111/j.1740-0929.2006.00365.x.
- Konigsson, K., Savoini, G., Govoni, N., Invernizzi, G., Prandi. A., Kindahl, H., and Veronesi, M. C. 2008. Energy Balance, Leptin, NEFA and IGF-I Plasma Concentrations and Resumption of Post Partum Ovarian Activity in Swedish Red and White Breed Cows. *Acta Veterinaria Scandinavica* 50: 3. doi:10.1186/1751-0147-50-3.
- Korbonits, M., Blaine, D., Elia, M., and Powell-Tuck, J. 2007. Metabolic and Hormonal Changes during the Refeeding Period of Prolonged Fasting. *European Journal of Endocrinology* 157 (2): 157–66. doi:10.1530/EJE-06-0740.
- Kouakou, B., Gazal, O. S., Terrill, T. H., Kannan, G., Gelaye, S., and Amoah, E. A.2008. Digestibility, Hormones and Blood Metabolites in Dairy Bucks Subjected to Underfeeding and Refeeding. *Small Ruminant Research* 75 (2–3): 171–76. doi:10.1016/j.smallrumres.2007.10.002.
- Lillywhite, J. M. 2000. *The Feasibility of Meat Goats in Minnesota*. Agricultural Utilization Research Institute (AURI) Publication. Minnesota. <http://www.auri.org/research/goatmeat/goat.htm>



- Loor, J. J., Everts, R. E., Massimo, B, Dann, H.M., Morin, D.E., Oliveira, R., Rodriguez-zas, S. L., Drackley, J. K., and Lewin, H. A. 2007. Nutrition-Induced Ketosis Alters Metabolic and Signaling Gene Networks in Liver of Periparturient Dairy Cows. *Physiological Genomics* 32: 105–116. doi:10.1152/physiolgenomics.00188.2007.
- Lovatto, P. A., Sauvant, D., Noblet, J., Dubois, S., and Van Milgen, J. 2006. Effects of Feed Restriction and Subsequent Refeeding on Energy Utilization in Growing Pigs. *Journal of Dairy Science* 84: 3329–36. doi:10.2527/jas.2006-048.
- Luthfi, N., Lestari, C.M.S., and Purnomoadi, A. 2014. Ruminal Fermentation And Blood Glucose At Low And High Level Intake Of Growing And Mature Kacang Goat. *Journal of Indonesian Tropical Animal Agriculture* 39 (3): 152–58.
- Macfarlane, D. P., Forbes, S., and Walker, B. R. 2008. Glucocorticoids and Fatty Acid Metabolism in Humans: Fuelling Fat Redistribution in the Metabolic Syndrome. *Journal of Endocrinology* 197 (2): 189–204. doi:10.1677/JOE-08-0054.
- Machugh, D.E., and Bradley, D. G. 2001. Livestock Genetic Origins : Goats Buck the Trend. *Proceedings of the National Academy of Sciences of the United State of America* 98 (10): 5382–84.
- Mahmud, A., Kattak, F.M., Ali, Z., Pasha, T.N., Farooq, U. 2006. Early Feed Restriction, A Tool to Improve the Food Efficiency in Broilers. *Pakistan Journal of Biological Sciences: PJBS* 9 (6): 1178–80.
- Maddox, J.F., Cockett, N., 2007. An Update on Sheep and Goat Linkage Maps and Other Genomic Resources. *Small Ruminant Research* 70: 4–20.
- Makka, D. 2004. Tantangan Dan Peluang Pengembangan Agribisnis Kambing Ditinjau Dari Aspek Pewilayahan Sentra Produksi Ternak. *Proseding Lokakarya Nasional Kambing Potong Agustus 2004, Bogor*: 3–14.
- Mazur, A., Ozgo, M., and. Rayssiguier, Y. 2009. Altered Plasma Triglyceride-Rich Lipoproteins and Triglyceride Secretion in Feed-Restricted Pregnant Ewes. *Veterinarni Medicina* 54 (9): 412–18.
- McNamara, J. P., and Hillers, J.K. 1986. Adaptations in Lipid Metabolism of Bovine Adipose Tissue in Lactogenesis and Lactation. *Journal of Lipid Research* 27: 150–57.



Mehanna, H.M., Moledina, J., and Travis, J. 2008. Refeeding Syndrome: What It Is, and How to Prevent and Treat It. *Clinical Review* 336:1495-1498

Mohammed, A.S. F. 2015. Effects of Water and Feed Restriction on Digestion and Metabolism in Nubian Goats. *MSc Thesis*. Sudan University of Science and Technology.

Murphy, T. A., and Loerch, S. C. 1994. Effects of Restricted Feeding of Growing Steers on Performance, Carcass Characteristics, and Composition. *Journal of Animal Science* 72 (9): 2497–2507.

Murtidjo, B.A. 1993. *Kambing Sebagai Ternak Potong Dan Perah*. Kanisius, Yogyakarta

N.R.C., 1981. *Nutrient Requirements of Goats: Angora, Dairy and Meat Goats in Temperate and Tropical Countries*. National Research Council Subcommittee on Goat Nutrition. Number 15. Vol. 15. Washington, D.C: National Academies Press. <http://www.nap.edu/catalog/30.html>.

Nazifi, S., Gheisari, H.R., and Shaker, F. 2002. Serum Lipids and Lipoproteins and Their Correlations with Thyroid Hormones in Clinically Healthy Goats. *Veterinarski Arhiv* 72 (5): 249–57.

Nishina, H., Green, L. R., McGarrigle, H. H. G., Noakes, D.A., Poston, E. L., and Hanson, M. A. 2003. Effect of Nutritional Restriction in Early Pregnancy on Isolated Femoral Artery Function in Mid-Gestation Fetal Sheep. *The Journal of Physiology* 553 (Pt 2): 637–47. doi:10.1111/j.physiol.2003.045278.

Nitis, I M. 2006. *FAO Country Pasture/Forage Resource Profiles: Indonesia*.

Norrheim, L, Sorensen, H., Gautvik, K., Bremer, J., and Spydevold, O. 1990. Synergistic Actions of Tetradecylthioacetic Acid (TTA) and Dexamethasone on Induction of the Peroxisomal Beta-Oxidation and on Growth Inhibition of Morris Hepatoma Cells. Both Effects Are Counteracted by Insulin. *Biochimica et Biophysica Acta* 1051 (3): 319–23.

O'Donovan, P.B. 1984. Compensatory Gain in Cattle and Sheep. *Nutrition Abstracts and Reviews Series B* (54): 389–410.

Obeid, O.A., Hachem, D.H., and Ayoub, J.J. 2014. Refeeding and Metabolic Syndromes: Two Sides of the Same Coin. *Nutrition & Diabetes* 4 (6): e120. doi:10.1038/nutd.2014.21.



- Oikawa, S., Mizunuma, Y., Iwasaki, Y., and Tharwat, M. 2010. Changes of Very Low-Density Lipoprotein Concentration in Hepatic Blood from Cows with Fasting-Induced Hepatic Lipidosis. *Canadian Journal of Veterinary Research* 74 (4): 317–20.
- Okazaki, H., Osuga, J. I., Tamura, Y., Yahagi, N., Tomita, S., Shionoiri, F., Iizuka, Y. 2002. Lipolysis in the Absence of Hormone-Sensitive Lipase: Evidence for a Common Mechanism Regulating Distinct Lipases. *Diabetes* 51 (12): 3368–75. doi:10.2337/diabetes.51.12.3368.
- Pamungkas, F.A., Batubara, A., Doloksaribu. M., and Sihite, E. 2009. *Petunjuk Teknis Potensi Plasma Lokal Indonesia*. Pusat Penelitian dan Pengembangan Peternakan Badan Penelitian dan Pengembangan Pertanian Departemen Pertanian
- Pinheiro, A. R., Salvucci, I. D. M., Aguilera, M. B., and Mandarim-de-Lacerda, C. A. 2008. Protein Restriction during Gestation And/or Lactation Causes Adverse Transgenerational Effects on Biometry and Glucose Metabolism in F1 and F2 Progenies of Rats. *Clinical Science* 114: 381–392. doi:10.1042/CS20070302.
- Pinkerton, B., and F. Pinkerton. 1996. *Managing Forages for Meat Goats. Meat Goat Production and Marketing Handbook*, Rural Economic Development Center, Raleigh, North Carolina and Mid-Carolina Council of Governments, Fayetteville, NC.
- Powell, D. Lawrence. L., Fitzgerald, B., Danielsen. K., Parker, A., S Rokuroda, A C. 1997. The Effect of Feeding Restricted Diets on T-4 and T-3 Concentrations in the Exercising Horse. In *Proceedings of the Fifteenth Equine Nutrition & Physiology Symposium*, 277–280.
- Pujante, I.M., Martos-Sitcha, J.A., Moyano, F.J., Ruiz-Jarabo, I., Martínez-Rodríguez, G., and Mancera, J.M. 2015. Starving/re-Feeding Processes Induce Metabolic Modifications in Thick-Lipped Grey Mullet (*Chelon labrosus*, Risso 1827). *Comparative Biochemistry and Physiology Part B: Biochemistry and Molecular Biology* 180: 57–67. doi:10.1016/j.cbpb.2014.10.005.
- Pullen, D., Liesman, L.S., Emery, R.S. 1989. A species comparison of liver slice synthesis and secretion of triacylglycerol from nonesterified fatty acids in media. *Journal of Animal Science* 68(5):1395-9
- Rangkuti, M., Mathius, I.W., and van Eys, J. E. 1984. Utilization of Gliricidia Maculata by Small Ruminant: Intake, Digestibility and Performance. *Proceedings Scientific Meeting on Small Ruminant Research. Pusat Penelitian Pengembangan Peternakan*. Bogor.



Reed, J., Ebong, C., Tanner, J., Gebru, G., and Akale, W.N. 1988. The Nutritive Value and Use of Feeds for Fattening Small Ruminants in African Highlands. A Perspective of ILCA Research. *Small Ruminant Research Network Newsletter* 12: 10–27. doi:10.1017/CBO9781107415324.004.

Reidy, S. P., and, Weber, J.M. 2000. Leptin: An Essential Regulator of Lipid Metabolism. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology* 125 (3): 285–98. doi:10.1016/S1095-6433(00)00159-8.

Rekik, M., Lassoued, N., Ben Salem, H., and Mahouachi, M. 2007. Interactions between Nutrition and Reproduction in Sheep and Goats with Particular Reference to the Use of Alternative Feed Sources. *Options Méditerranéennes* 383: 375–83.

Reynolds, C.K., Aikman, P.C., Lupoli, B., Humphries, D.J., and Beever, D.E. 2003. Splanchnic Metabolism of Dairy Cows During the Transition From Late Gestation Through Early Lactation. *Journal of Dairy Science* 86 (4): 1201–17. doi:10.3168/jds.S0022-0302(03)73704-7.

Ridwan, R. 2014. Keragaman Mikroba Dan Metabolisme Rumen Sapi Peranakan Ongole Yang Mengonsumsi Pakan Silase Rumput-Legum. *Disertasi. Sekolah Pasca Sarjana. Institut Pertanian Bogor.*

Rukkwamsuk, T., Kruip, T. A., and. Wensing, T. 1999. Relationship between Overfeeding and Overconditioning in the Dry Period and the Problems of High Producing Dairy Cows during the Postparturient Period. *The Veterinary Quarterly* 21 (3): 71–77. doi:10.1080/01652176.1999.9694997.

Ryan, W.J. 1990. Compensatory Growth in Cattle and Sheep. *Nutrition Abstracts and Reviews, Series B* (60): 653–64.

Prawirodigdo, S., Herawati, T., Utomo, B. 2003. Penampilan Peternakan Kambing Dan Potensi Bahan Pakan Lokal Sebagai Komponen Pendukungnya Di Wilayah Propinsi Jawa Tengah. *Lokakarya Nasional Kambing Potong*, 157–63.

Sabrani, M., Sitorus, P., Rangkuti, M., Subandriyo, Mathius, I.W., Soedjana, T.D. Semali, A. 1982. *Laporan Survey Baseline Ternak Kambing Dan Domba*. SR-CRSP, Balai Penelitian Ternak, Pusat Penelitian Dan Pengembangan Ternak, Bogor.



- Saakkinnen, T., Verdal, H.A., Eloranta, E., Dahl, E.H., Saarela, S., Ropstad E. 2005. Variation of Plasma Protein Parameters in Four Free-Ranging Reindeer Herds and in Captive Reindeer under Defined Feeding Conditions. *Comparative Biochemistry and Physiology Part A* (142): 503– 511.
- Sahlu, T., Goetsch, A. L., Luo, J., Nsahlai, I. V., Moore, J. E., Galyean, M. L., Owens, F. N., Ferrell, C. L., and Johnson, Z. B. 2004. Nutrient Requirements of Goats: Developed Equations, Other Considerations and Future Research to Improve Them. *Small Ruminant Research* 53 (3): 191–219. doi:10.1016/j.smallrumres.2004.04.001.
- Säkkinen, H., Tverdal, A., Eloranta, E., Dahl, E., Holand, Ø., Saarela, S., and Ropstad, E. 2005. Variation of Plasma Protein Parameters in Four Free-Ranging Reindeer Herds and in Captive Reindeer under Defined Feeding Conditions. *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology* 142 (4): 503—511. doi:10.1016/j.cbpa.2005.10.023.
- Salem, O.A.I; El-Gallad, T.T; Allam, S.M; Hassouna, M.M.E and Fraghly, M.S. 1989. Effects of periodic feed restriction with subsequent re-alimentation on performance of Baladi goats. *Small Ruminant Research* 2: 133- 141.
- Santoso, U., 2003. The Beneficial Effect of Early Feed Restriction on Growth, Body Composition and Fat Accumulation in Broiler Chickens: A Review. *Journal of the Indonesian Tropical Animal Agriculture* 28 (1): 39–48.
- Sarwono, B. 2002. *Beternak Kambing Unggul*. Penebar Swadaya, Jakarta.
- Schwartz, M. W., Woods, S. C., Porte, D., Seeley, R.J, and Baskin, D. G. 2000. Central Nervous System Control of Food Intake. *Nature* 404 (6778): 661–71. <http://dx.doi.org/10.1038/35007534>.
- Setiadi, B., Subandriyo, Martawidajaja, M., Sutama, I-K., Adiati, U., Yulistiani, D., Priyanto, D. 2002. Evaluasi Keunggulan Produktivitas Dan Pemantapan Kambing Persilangan. Kumpulan Hasil Penelitian APBN T.A. 2001. Buku I. *Ternak Ruminansia*. Balai Penelitian Ternak, Bogor
- Shadnoush, G.R., Alikhani, M., Rahmani, H.R., Edriss, M.A., Kamalzadeh, A., and Zahedifar, M. 2011. Effects of Restricted Feeding and Re-Feeding in Growing Lambs: Intake, Growth and Body Organs Development. *Journal of Animal and Veterinary Advances* 10 (3): 280–85.



- Short, K. R., Nygren, J., Bigelow, M. L, and Nair, K. S. 2004. Effect of Short-Term Prednisone Use on Blood Flow, Muscle Protein Metabolism, and Function. *The Journal of Clinical Endocrinology and Metabolism* 89 (12): 6198–6207. doi:10.1210/jc.2004-0908.
- Sianipar, J. A., Batubara, Karokaro, S dan Ginting, S. P. 2005. Efisiensi Nutrisi Pada Kambing Kosta, Gembrong Dan Kacang. *Seminar Nasional Teknologi Peternakan dan Veteriner 2005:* 630–636. doi:10.1017/CBO9781107415324.004.
- Snoj, T, Jenko, Z., and Cebulj-Kadunc,N. 2014. Fluctuations of Serum Cortisol, Insulin and Non-Esterified Fatty Acid Concentrations in Growing Ewes over the Year. *Irish Veterinary Journal* 67 (1): 22. doi:10.1186/2046-0481-67-22
- Soedjana, T.D.2014. Peningkatan Konsumsi Daging Ruminansia Kecil Dalam Rangka Diversifikasi Pangan Daging Mendukung Psdsk 2014. *Workshop Nasional Diversifikasi Pangan Daging Ruminansia Kecil 2011 :* 17–26.
- Soppela, P., Saarela, S., Heiskari, U., Nieminen, M. 2007. The Effects of Wintertime Undernutrition on Plasma Leptin and Insulin Levels in an Arctic Ruminant, the Reindeer. *Comparative Biochemistry and Physiology Part B* 149 (4): 613–21.
- Soraya, G.E. 2006. Studi komparatif kadar kolesterol darah dan lemak total daging pada kambing dan domba lokal. *Skripsi. Fakultas Peternakan Institut Pertanian Bogor, Bogor.*
- Sotillo, J., Montes, A., Cerón, J.J., Benedito, J.L., Bruss, M. 1994. Variation in Serum Lipids And Minerals Determined Productive During Different Periods In Fasted Goats. *Anales de Veterinaria (Murcia)* 9-10: 69-74
- Todini, L. 2007. Thyroid Hormones in Small Ruminants: Effects of Endogenous, Environmental and Nutritional Factors. *Animal* 1 (7): 997. doi:10.1017/S1751731107000262.
- Toerien, C. A, and Cant, J.P. 2007. Duration of a Severe Feed Restriction Required to Reversibly Decrease Milk Production in the High-Producing Dairy Cow. *Canadian Journal of Animal Science*, 455–58.
- Trayhurn, P., Duncan, J.S., Hoggard, N., Rayner, D.V.1998. Regulation of leptin production: a dominant role for the sympathetic nervous system? *The Proceedings of the Nutrition Society* 57 (3):413–419



Turner, K. E., Wildeus, S., and Collins, J. R. 2005. Performance, and Blood Parameters in Young Goats Offered High Forage Diets of Lespedeza or Alfalfa Hay. *Small Ruminant Research* 59 (1): 15–23. doi:10.1016/j.smallrumres.2004.11.007.

Tygesen, M.P., Nielsen, M.O., Norgaard, P., Ranvig, H., Harrison A.P., Tauson A.H. 2008. Late Gestational Nutrient Restriction: Effects on Ewes' Metabolic and Homeorhetic Adaptation, Consequences for Lamb Birth Weight and Lactation Performance. *Archives of Animal Nutrition* 62 (1): 44–59. doi:10.1080/17450390701780276.

Van Itallie, T.B., Yang, M.U. 1984. Cardiac Dysfunction in Obese Dieters: A Potentially Lethal Complication of Rapid, Massive Weight Loss. *The American Journal of Clinical Nutrition* 39 (5): 695–702.

Wang, T., Hung, C.C., Randall, D.J. 2006. The Comparative Physiology of Food Deprivation: From Feast to Famine. *Annual Reviews of Physiology* 68: 223–51. <http://www.google.com/patents/US7657570.pdf>.

Watthes, D. C., Cheng, Z., Bourne, N., Taylor, V. J., Coffey, M. P., and Brotherstone, S. 2007. Differences between Primiparous and Multiparous Dairy Cows in the Inter-Relationships between Metabolic Traits, Milk Yield and Body Condition Score in the Periparturient Period. *Domestic Animal Endocrinology* 33 (2): 203–25. doi:10.1016/j.domaniend.2006.05.004.

Weigle, D.S., Duell, P.B., Connor, W.E., Steiner, R.A., Soules, M.R., Kuijper, J.L. 1997. Effect of Fasting , Refeeding , and Dietary Fat Restriction on Plasma Leptin Levels. *Journal of Clinical Endocrinology and Metabolism* 82(2):561-5.

Widiyono, I., Sarmin, Suwignyo, B. 2013. Respons Metabolik Terhadap Pembatasan Asupan Pakan Pada Kambing Peranakan Ettawa. *Jurnal Veteriner* 14 (4): 424–29.

Widiyono, I., Suwignyo, B., Sarmin. 2012. Effect of Feed Restriction on Blood Chemistry Parameters In Ettawa Crossbred Goat. *International Conference on Livestock Production and Veterinary Technology*, 4:412–15.

Widiyono, I. Widiastuti H., Rosmala T., Setyawan E., Prasetyo, D.A. 1998. Penanganan Fosfat Oleh Ginjal Pada Domba Umur 3 Minggu. *Prosiding Seminar Nasional Produksi Dan Kesehatan Hewan, Fakultas Kedokteran Hewan, Universitas Gadjah Mada* 1998.



Widiyono, I., Sarmin, and Putro, P. P. 2016. Influence of Feed Intake on Blood Chemistry Parameters in Kacang Goats. *the American Institute of Physics Conference Proceeding*. 1755:140011-1-140011-4; <http://dx.doi.org/10.1063/1.4958572>

Widiyono, I. 2008. Infus Larutan Fosfat Menyebabkan Hiperfosfatemia and Hipokalsemia Tanpa Perubahan Hormon Paratiroid Dan Calcitriol Pada Kambing (Contonous Phosphate Infusion Results in Hyperphosphatemia and Hypocalcemia without Changing of Parathyroid Hormon and Calcitriol). *Media Kedokteran Hewan* 4 (1). doi:10.1017/CBO9781107415324.004.

Widiyono I. 1995. Untersuchungen Zur Renalen Phosphatausscheidung Bei Ziegen. *Dissertasi* JLU- Giessen.

Wrutniak, C, and G Cabello. 1987. Effects of Food Restriction on Cortisol, TSH and Iodothyronine Concentrations in the Plasma of the Newborn Lamb. *Reproduction, Nutrition, Development* 27 (3): 721–32. <http://www.ncbi.nlm.nih.gov/pubmed/3616134>.

Weintraub, B. D., N. Gesundheit, T. Taylor, and P. W. Gyves. 1989. Effect of TRH on TSH glycosylation and biological action. *Annals of the New York Academy of Sciences* 553:205–213. doi:10.1111/j.1749-6632.1989.tb46643.x

Yagoub, Y.M. & Babiker, A.S. 2009. Effect of Compensatory Growth on Performance of Sudanese Female Goats. *Pakistan Journal of Nutrition* 8 (11): 1802–5. doi:10.3923/pjn.2009.1802.1805.

Yambayamba, E.S.K, Price, M.A., and. Jones, S.D.M. 1996. Compensatory Growth of Carcass Tissues and Visceral Organs in Beef Heifers. *Livestock Production Science* 46 (1). Elsevier: 19–32. doi:10.1016/0301-6226(96)00014-0.

Yuwono, P., Hartoyo, B., Soeprapto, H., Priyono, A. 2000. Intik Pakan Dan Pertumbuhan Domba Lokal Yang Diberi Pakan Rumput Lapangan Setelah Pembatasan Pakan Selama 6 Minggu. *Animal Production* 2 (2): 47–52.

Zubcic, D. 2001. Some Biochemical Parameters in the Blood of Grazing German Improved Fawn Goats from Istria, Croatia. *Veterinarski Arhiv* 71 (5): 237–44.