

## DAFTAR PUSTAKA

- Acikgöz, Z., V. Ahyan, K. Özkan, A. Özge, A. Altan, S. Özkan, Y. Akbas. 2003. The effects of dietary oil and methionine on performance and egg quality of commercial laying hens during summer season. *Arch. Geflügelkunde* 67(5): 204-207.
- Aksit, M., S. Yalcin, S. Ozkan, K. Metin, and D. Ozdemir. 2006. Effects of temperature during rearing and crating on stress parameters and meat quality of broilers. *Poultry Science*. 85: 1867-1874
- Anonim. 2011. Badan Standardisasi Nasional. SNI 019-2044-2011 Alat Angkut Parent Stock Ayam Broiler. Jakarta (ID): Badan Standardisasi Nasional.
- Anonim. 2016. Badan Pusat Statistika. Tersedia di <https://www.bps.go.id/statictable/2018/01/11/1986/rata-rata-harian-konsumsi-protein-per-kapita-dan-konsumsi-kalori-per-kapita-tahun-1990---2017.html>. Diakses pada 20 Mei 2019 pukul 09.15.
- Austic, R. E. 2000. Feeding Poultry in Hot and Cold Climates. In: Yousef MK, editor. *Stress physiology Livest poultry Vol III*. Florida (US): CRC Press Inc. p. 123-136.
- Bird, N. A., P. Hunton, and L. J. Weber. 2003. *Heat Stress In Cage Layer*. Ontario (Canada): Ministry of Agriculture and Food.
- Borges, S. A., F. A. V. Da Silva, A. Maiorka, D. M. Hooge, and K. R. Cummings. 2004. Physiological responses of broiler chickens to heat stress and dietary electrolyte balance (Sodium plus potassium minus chloride, milliequivalents per kilogram). *Poultry Science*. 83: 1551–1558.
- Cooper, M. A. and K. W. Washburn. 1998. The relationships of body temperature to weight gain, feed consumption, and feed utilization in broilers under heat stress. *Poultry Science*. 77:237-242.
- Dadgar, S., E. S. Lee, T. L. V. Leer, H. L. Classen, T. G. Crowe, and P. J. Shand. 2011. Effect of acute cold exposure, age, sex, and lairage on broiler breast meat quality. *Poultry Science*. 90:444-457.
- Daghir, N. J. 2009. Nutritional Strategies To Reduce Heat Stress In Broilers And Broiler Breeders. *Lohmann Inf*. 44:6-15.
- Davis, A. K., D. L. Maney, and J. C. Maerz. 2008. The use of leukocyte profiles to measure stress in vertebrates: a review of ecologists. *Fuction Ecology*. 22:760-772
- Dellman, H. D., and E. M. Brown. 1992. *Histologi Veteriner*. Edisi 3. Jakarta.

- Etches, R. J., T. M. John, and A. M. Verrinder Gibbins. 2008. Behavioural, Physiological, Neuroendocrine and Molecular Responses to Heat Stress. *Poultry Production*. pp 49-69.
- Ewing, S. A., D. C. J. R Lay and E. V. Borell. 1999. *Farm Animal Well Being. Stress Physiology, Animal Behavior and Environmental Design*. Prentice-Hall, Inc. New Jersey.
- Farner, D. S, J. R. King, and K. C. Parkers. 1972. *Avian Biology Volume II*. New York. San Fransisco. London. Academic Press. pp 345 - 351.
- Frandsen, R. D., W. L. Wilke, and A. D. Fails. 2009. *Anatomy and Physiology of Farm Animals. Seventh Edition*. Wiley-Blackwell. Amerika Serikat. 39.
- Ganong, W. F. 1995. *Buku Ajar Fisiologi Kedokteran, Kedokteran EGC*, Jakarta.
- Ganong, W. F. 2008. *Buku Ajar Fisiologi Kedokteran Edisi 22*. Jakarta: EGC.
- Gaughan, J. B., M. S. Davis and T. L. Mader. 2004. Wetting and the physiological responses in a heated environment. *Aust. J. Agric. Res.* 55: 253-260.
- Guarnieri, P. D., A. L. Soares, R. Olivo, J. P. Schneider, R. M. Macedo, E. I. Ida, and M. Shimokomaki. 2004. Preslaughter handling with water shower spray inhibits PSE (Pale, Soft, Exudative) broiler breast meat in a commercial plant. *Biochemical and ultrastructural observation. J. Food Biochemical.* 28: 269-277.
- Guyton, A. C. 1996. *Buku Ajar Fisiologi Kesehatan*. Philadelphia: W.B. Saunders Company.
- Setiawan I, K. A. Tengadi, M. O. Igono, B. J. Steevens, M. D. Shanklin, and H. D. Johnson. 1985. Spraying cooling effects on milk production, milk and rectal temperature of cows during a moderate temperate summer season. *J. Dairy Science.* 68:979.
- Hadihardaja, J. 1997. *Sistem Transportasi*. Jakarta : Universitas Guru Darma.
- Igono, M. O., B. J, Steevens, M. D. Shanklin, and H. D. Johnson. 1985. Spraying cooling effects on milk production, milk and rectal temperature of cows during a moderate temperate summer season. *J. Dairy Sci.* 68:979.
- Jain, N. C. 1993. *Essentials of Veterinary Hematology*. Philadelphia (US): Lea and Febiger. Jakarta (ID): EGC. Terjemahan dari : *Review of Medical Fisiology*. Ed ke-11.
- Kannan, G., T. H. Terrill, B. Kouakou, O. S. Gazal, S. Gelaye, E. A. Amoah, and S. Samake. 2000. Transportation of goats: effects on

- physiological stress responses and live weight loss. Agricultural Research Station, Fort Valley State University, GA 31030, USA J. Animal. Science. 1450-1457
- Kendall, P. E., G. A. Verkerk, J. R. Webster and C. B. Trucker. 2007. Sprinklers and shade cool reduce insectavoidance behavior. J. Dairy Science. 90: 3671-3680
- Kusnadi, E. 2006. Suplementasi vitamin C sebagai penangkal cekaman panas pada ayam broiler. Jurnal Ilmu Ternak dan Veteriner. 11 (4): 249-253.
- Maxwell, M. H. 1993 Avian blood leucocyte responses to stress. World's Poultry Science Journal. 49: 34-43.
- Miller, J.K., E.B. Slebodzunka, and F.C. Madsen. 1993. Oxidative stress, antioxidant, and animal function. J. Dairy Science. 76: 2812-2813.
- Minka, N.S., and J. O. Ayo. 2007. Physiological Responses of Transported Goat Treated with Asorbic Acid during The Hot-Dry Season. Journal of Animal Science. Nigeria.
- Mitruka, B.M., and H. M. Rawnsley. 1981. Hematological References Values of Normal Albino Rats. Dalam: Clinical Biochemical and Hematological Reference Values in Normal Experimental Animals and Normal Humans. Masson Pub. Inc. Year Book Medical Pub. Inc. Chicago.
- Mujahid A, Akiba Y, Toyomizu M. 2007. Acute heat stress induces oxidative stress and decreases adaptation in young white leghorn cockerels by downregulation of avian uncoupling protein. Poult Sci. 86: 364-371.
- Mumma, J. O, J. P. Thaxton, Y. V. Thaxton, W. L. Dodson. 2006. Physiological Stress in Laying Hens. Pultry Science. 61: 32-34.
- Nangoy, F. J. 2012. Kajian penyusutan berat badan dan peningkatan suhu tubuh ayam broiler terimplementasi kurkuma (*curcuma longa*), gula aren (*arenga pinata*) akibat lama transportasi. J. Agro. Science. 2 (3) : 119 – 122.
- Ondrasovicova, O., L. Saba, S. Smirjakova, M. Vargova, M. Ondrasovic, S. Mata, K. Lakticova, and W. Wnuk. 2008. Effects of vehicle-road transport on blood profile in broiler chickens. Departement of The Enviroment, University of Veterinary Medicine, Komenskeho 73, 041–81 Ko.ice.
- Sahin K, Sahin N, Onderci M, Gursu MF, Issi M. 2003. Vitamin c and e can alliviate negative effect of heat stress in japanese quail. Research in Veterinary Sci. 73:307-312.
- Santosa, A. Buku Ajar Fisiologi Kedokteran Edisi ke-7. Jakarta: EGC.

- Schwartzkopf-Genswein, K. S, L. Faucitano, S. Dadgar, P. Shand, L. A. González, and T. G. Crowe. Road transport of cattle, swine and poultry in North America and its impact on animal welfare, carcass and meat quality: a review. *Meat Science*. 2012;92:227-243.
- Smith, J.B. dan S. Mangkoewidjojo. 1988. *Pemeliharaan, Pembiakan Dan Penggunaan Hewan Percobaan Di Daerah Tropis*. UI Press. Jakarta. hlm. 37- 57.
- Sohail, M. U, A. Ijaz, M. S. Yousaf, K. Ashraf, H. Zaneb, M Aleem, H. Rehman. 2010. Alleviation of cyclic heat stress in broilers by dietary supplementation of mannanoligosaccharide and Lactobacillus-based probiotic: Dynamics of cortisol, thyroid hormones, cholesterol, C-reactive protein, and humoral immunity. *Poultry Science*. 89:1934-1938
- Sudiyono, A. 2004. *Pemasaran Pertanian*. Universitas Muhammadiyah. Malang
- Sumardjo, D. 2008. *Pengantar Kimia Buku Panduan Kuliah Mahasiswa Kedokteran*. Jakarta: EGC.
- Strawford, M. L, J. M. Watts, T. G. Crowe, H. L. Classen, and P. J. Shand. 2011. The effect of simulated cold weather transport on core body temperature and behavior of broilers. *Poultry Science*;90:2415-2424.
- Tamzil, M. H., Noor, R. R., Hardjosworo, P. S., Manalu, W., and Sumantri, C. 2013. Acute heat stress responses of three lines of chickens with different heat shock protein (HSP)-70 genotypes. *Intern J Poult Sci*. 12(5), 264-272.
- Tarwoto, W. 2008. *Keperawatan Medikal Bedah Gangguan Sistem Hematologi*. Jakarta Timur. Trans Info Media.
- Tizard, I. 1988. *Pengantar Immunologi Veteriner*. Ed ke-8. London (GB): Cornell University Pr.
- Turner, L. W., H. J. Monegue, R. S. Gates, and M. D. Lindemann. 1997. Fan, sprinkler, and sprinkler plus fan system of cooling growing-finishing swine. In: *Proceedings of the American Society of Agricultural Engineers (ASAE) Annual International Meetin*, Minneapolis, MN, USA.
- Yunis, R. and A. Cahaner. 1999. The effects of the naked neck (Na) and frizzle (F) genes on growth and meat yield of broilers and their interactions with ambient temperatures and potential growth rate. *Poultry. Science*. 78:1347-1352.

## LAMPIRAN

Lampiran 1. Tabel hasil pengukuran suhu rektal sebelum transportasi (°C)

Perlakuan	S0	S1	S2
1	42,00	41,75	41,75
2	41,35	41,90	41,50
3	41,15	41,45	41,35
Rerata	41,50 ± 0,14	41,70 ± 0,46	41,53 ± 0,28

Lampiran 2. Analisa variansi suhu rektal

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	0,823	2	0,412	3,808	0,046
Within Groups	1,622	15	0,108		
Total	2,445	17			

Lampiran 3. Uji Duncan's Multiple Range Test (DMRT) temperatur rektal

	Penyemprotan	N	Subset for alpha = 0.05	
			1	2
Duncan <sup>a</sup>	Semprot 2	6	42,2500	
	Semprot 1	6	42,4333	42,4333
	Tidak disemprot	6		42,7667
	Sig.		0,349	0,99

Means for groups in homogeneous subsets are displayed.

Lampiran 4. Analisa variansi selisih bobot badan

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	3032,704	2	1516,352	4,337	0,018
Within Groups	17831,222	51	349,632		
Total	20863,926	53			

Lampiran 5. Uji Duncan's Multiple Range Test (DMRT) selisih bobot badan

	Penyemprotan	N	Subset for alpha = 0.05	
			1	2
Duncan <sup>a</sup>	Semprot 2	18	58,2222	
	Semprot 1	18	65,8889	65,8889
	Tidak disemprot	18		76,5000
	Sig.		0,224	0,95

Means for groups in homogeneous subsets are displayed.

Lampiran 6. Analisa variansi H/L

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	0,130	2	0,065	5,765	0,014
Within Groups	0,170	15	0,011		
Total	0,300	17			

Lampiran 7. Uji Duncan's Multiple Range Test (DMRT) H/L

	Penyemprotan	N	Subset for alpha = 0.05	
			1	2
Duncan <sup>a</sup>	Semprot 2	6	0,4200	
	Semprot 1	6	0,5183	0,5183
	Tidak disemprot	6		0,6283
	Sig.		0,130	0,93

Means for groups in homogeneous subsets are displayed.

## DAFTAR GAMBAR



Gambar1. Alat penyemprot air



Gambar 2. Alat transportasi



Gambar 3. Pengambilan darah ayambagian sayap(*vena brachialis*)



Gambar 4. Penimbangan ayam



Gambar 5. Sample Darah