

DAFTAR PUSTAKA

- Adegbenjo, A.A., O.M.O. Idowu, A.O. Oso, O.A. Adeyemi, R.A. Sobayo, O.A. Akinloye, A.V. Jegede, S.O. Osho, and G.A. Williams. 2014. Effects of dietary supplementation with copper sulphate and copper proteinate on plasma trace minerals, copper residues in meat tissues, organs, excreta and tibia bone of cockerels. *Slovak Journal of Animal Science*. 47: 164-171.
- Anggorodi. 1995. Ilmu Makanan Ternak Umum. PT Gramedia. Jakarta.
- Anggrey, S.E., A.B. Karnuah, B. Sebastian, and N.B. Anthony. 2010. Genetic properties of feed efficiency parameters meat-type chicken. *Genetic Selection Evolution*. 42(25): 1-5.
- Anonim. 1992. World Health Organization (WHO), Environmental Health Criteria, Geneva.
- Anonim. 1995. World Health Organization (WHO), Environmental Health Criteria, Geneva.
- Anonim. 2014. Feedstuff Amino Acid Database Ajinomoto. Tersedia pada: <http://ajinomoto-eurolysine.com/feedstuffs-amino-acid-database.html>. Diakses pada tanggal 17 September 2015.
- Anonim. 2014. Broiler Management Handbook. Aviagen. Huntsville, Alabama.
- Apajalahti, J., A. Kettunen, and H. Graham. 2004. Characteristics of the gastrointestinal microbial communities, with special reference to the chicken. *World's Poultry Science Journal*. 60: 223-232.
- Attia, Y.A., E.M. Qota, H.S. Zeweil, F. Bovera, A.E. Abd Al-Hamid, and M.D. Sahledom. 2012. Effect of different dietary concentrations of inorganic and organic copper on growth performance and lipid metabolism of White Pekin male ducks. *British Poultry Science*. 53: 77-88.
- Bao, Y.M. and M. Choct. 2009. Trace mineral nutrition for broiler chickens and prospects of application of organically complexed trace minerals: a review. *Animal Production Science*. 49: 269-282.
- Bao, Y.M., M. Choct, P.A. Iji, and K Breuerton. 2010. Trace mineral interactions in broiler chicken diets. *British Poultry Science*. 51: 109-117.
- Branton, S.L., F.N. Reece, and W.M.Jr. Hagler. 1987. Influence of a wheat diet on mortality of broiler chickens associated with necrotic enteritis. *Poultry Science*. 66: 1326-1330.

- Cheng, T.K., M.L. Hamre, and C.N. Coon. 1997. Effect of environmental temperature, dietary protein, and energy levels on broiler performance. *The Journal of Applied Poultry Research*. 6: 1-17.
- Choct, M. and G. Annison. 1992a. Anti-nutritive effect of wheat pentosans in broiler chickens: Roles of viscosity and gut microflora. *British Poultry Science*. 33: 821-834.
- Choct, M. and G. Annison. 1992b. The inhibition of nutrient digestion by wheat pentosans. *British Journal of Nutrition*. 67: 123-132.
- Chowdhury, S.D., I.K. Paik, H. Namkung, and H.S. Lim. 2004. Responses of broiler chickens to organic copper fed in the form of copper-methionine chelate. *Animal Feed Science and Technology*. 115: 281-293.
- Close, W.H. 2003. Trace mineral nutrition of pigs revisited: meeting production and environmental objectives. *Recent Advances in Animal Nutrition in Australia*, University of New England, NSW.
- Cohen, J. 2002. Strategic role for copper: poultry performance and health. Tersedia pada: <http://www.micronutrients.net/wp-content/uploads/2013/09/2.2-Strategic-Role-for-Copper-Article.pdf>. Diakses pada tanggal 22 September 2016.
- Dale, N.M. and H.L. Fuller. 1980. Effect of diet composition on feed intake and growth of chicks under heat stress. II. Constant vs. cycling temperatures. *Journal of Poultry Science*. 59: 1434-1441.
- Das, A., S.K. Mishra, R.K Swain, P. Swain, K. Dhama, G. Sahoo, N.C. Behura, K. Sethy, B. Chichilichi, T. Bahera, and S.R. Mishra. 2014. Effects of organic minerals supplementation on growth, bioavailability and immunity in grower birds. *International Journal of Pharmacology*. 10: 380-388.
- Das, T.K., M.K. Mondal, P. Biswas, B. Bairagi, and C.C. Samanta. 2010. Influence of level of dietary inorganic and organic Copper and energy level on the performance and nutrient utilization of broiler chickens. *Asian Australasian Journal of Animal Sciences*. 23: 82 – 89.
- Deeb, N. and A. Cahaner. 1999. The effects of naked neck genotypes, ambient temperature, and feeding status and their interactions on body temperature and performance of broilers. *Journal of Poultry Science*. 78: 1341-1346.
- Dibner, J.J. and J.D. Richards. 2004. The digestive system: Challenges and opportunities. *Journal of Applied Poultry Research*. 13: 86-93.
- Dono, N. D. 2012. Nutritional strategies to improve enteric health and growth performance of poultry in the post antibiotic era. Ph.D. Thesis. College of Medical, Veterinary and Life Sciences. University of Glasgow. Glasgow.

- Engberg, R.M., M.S. Hedemann, S. Steinfeldt, and B.B. Jensen. 2004. Influence of whole wheat and xylanase on broiler performance and microbial composition and activity in the digestive tract. *Poultry Science*. 83: 925-938.
- Faundez, G., M. Troncoso, P. Navarette, and G. Figueroa. 2004. Antimicrobial activity of copper surfaces against suspensions of *Salmonella enterica* and *Campylobacter jejuni*. *BMC Microbiology*. 4: 1-7.
- Fritts, C.A., J.H. Kersey, M.A. Motl, M.A. Kroger, F. Yan, Q. Jiang, A.L. Campos, A.L. Waldroup, and P.W. Waldroup. 2000. *Bacillus subtilis* C-3102 (Calsporin) improves live performance and microbiological status of broiler chickens. *Journal of Applied Poultry Science*. 9: 149-155.
- Gheisari, A. A., A. Rahimi-fathkoohi, M. Toghyani, and M. M. Gheisari. 2010. Effects of organic chelates of zinc, manganese, and copper in comparison to their inorganic sources on performances of broiler chickens. *Journal of Animal & Plant Sciences*. 6(2): 630-636.
- Ghosh, A., G.P. Mandal, A. Ray, and A.K. Patra. 2016. Effects of supplementation of manganese with or without phytase on growth performance, carcass traits, muscle and tibia composition, and immunity in broiler chickens. *Livestock Science*. 191: 80-85.
- Gibson, G.R. and R. Fuller. 2000. Aspects of *in vitro* and *in vivo* research approaches directed toward identifying probiotics and prebiotics for human use. *The Journal of Nutrition*. 130: 391S-395S.
- Gibson, G.R. and M.B. Roberfroid. 1995. Dietary modulation of the human colonic microbiota: Introducing the concept of prebiotics. *Journal of Nutrition*. 125: 1401-1412.
- Hashish, I.M.E., H.A. Sorour, F.A. Mohamed, and N.M. El-Medany. 2010. Effect of different levels of copper on broiler performance. *Journal of Animal and Poultry Production*. 1(8): 317-323.
- Iakovidis, I., I. Delimaris, and S.M. Piperakis. 2011. Copper and its complexes in medicine: a biochemical approach. *Molecular Biology International*. 2011: 1-13.
- Idowu, O.M.O., R.O. Ajuwon, A.O. Fafioulu, A.O. Oso, and O.A Akinloye. 2011. Modulation of cholesterol and copper residue levels in muscles and blood serum of finishing broiler chickens fed copper and ascorbic acid supplements. *Pakistan Journal of Nutrition*. 10(8): 781-785.
- Jegade, A.V., O.O. Oduguwa, A.M. Bamgbose, A.O. Fanimu, and L. Nollet. 2011. Growth response, blood characteristics and copper accumulation in organs of broilers fed on diets supplemented with organic and inorganic dietary copper sources. *British Poultry Science*. 52: 133-139.

- Jia, W., B.A. Slominski, H.L. Bruce, C.M. Nyachoti, and R.O. Jones. 2009. Enzyme addition facilitates the post-disease compensatory growth of broiler chickens challenged with *Clostridium perfringens*. *Canadian Journal of Animal Science*. 89: 369-381.
- Jin, L.Z., Y.W. Ho, N. Abdullah, and S. Jalaludin. 1996. Influence of dried *Bacillus subtilis* and lactobacilli cultures on intestinal microflora and performance in broilers. *American Journal of Applied Science*. 9: 397-403.
- Kim, G.B., Y.M. Seo, K.S. Shin, A.R. Rhee, J. Han, and I.K. Paik. 2011. Effects of supplemental copper-methionine chelate and copper-soy proteinate on the performance, blood parameters, liver mineral content, and intestinal microflora of broiler chickens. *Journal of Applied Poultry Research*. 20: 21-32.
- Liu S., L. Lu, S. Li, J. Xie, L. Zhang, R. Wang, and X. Luo. 2012. Copper in organic proteinate or inorganic sulfate form is equally bioavailable for broiler chicks fed a conventional corn-soybean meal diet. *Biological Trace Element Research*. 147: 142-148.
- Marks, H.L. 1981. Role of water in regulating feed intake and feed efficiency of broilers. *Journal of Poultry Science*. 60: 698-707.
- McNaughton J.L. and F.N. Reece. 1984. Factors affecting pelleting response. 1. Influence of dietary energy in broiler starter diets. *Journal of Poultry Science*. 63: 682-685.
- Mondal M.K., T.K. Das, P. Biswas, C.C. Samanta, and B. Bairagi. 2007. Influenced of dietary inorganic and organic copper salt and level of soybean oil on plasma lipids, metabolites and mineral balance of broiler chickens. *Animal Feed Science and Technology* 139: 212-233.
- Mwangi, S., J. Timmons, T. Ao, M. Paul, L. Macalintal, A. Pescatore, A. Cantor, M. Ford, and K.A. Dawson. 2016. Effect of zinc imprinting and replacing inorganic zinc with organic zinc on early performance of broiler chicks. *Poultry Science*. 95: 312-319.
- Neethu, C.K., K.S. Prasanna, M.S. Senthil, and N.D. Nair. 2016. Effect of copper supplementation on growth performance in broiler birds. *International Journal of Scientific Research*. 4: 349-350.
- Oguz E. O., H. Yuksel, Y. Enli, A. C. Tufan, and G. Turgut. 2010. The effects of Copper sulfate on liver Histology and Biochemical Parameters of Term Ross Broiler Chicks. *Biological Trace Element Research*. 133:335-341.
- Parsons, A.S., N.P. Buchanan, K.P. Blemings, M.E. Wilson, and J.S. Moritz. 2006. Effect of corn particle size and pellet texture on broiler performance in the growing phase. *Journal of Applied Poultry Research*. 15: 245-255.

- Pesti, G.M. and R.I. Bakalli. 1996. Studies on the feeding of cupric sulfate pentahydrate and cupric citrate to broiler chickens. *Poultry Science*. 75: 1086-1091.
- Rao, S.V.R., B. Prakash, M.V.L.N. Raju, A.K. Panda, R.K. Kumari, and E.P.K. Reddy. 2016. Effect of supplementing organic forms of zinc, selenium and chromium on performance, anti-oxidant and immune responses in broiler chicken reared in tropical summer. *Biological Trace Element Research*. 172: 511-520.
- Ray, S., S.K. Das, S.K. Mishra, R.K. Swain, A. Matty, P.S. Swain, and A. Das. 2014. Performance of Japanese quail on organically complexed minerals by replacing inorganic sources. *Indian Journal of Animal Sciences*. 84: 60–67.
- Scott, A., K.P. Vadalasetty, M. Łukasiewicz, S. Jaworski, M. Wierzbicki, A. Chwalibog, and E. Sawosz. 2017. Effect of different levels of copper nanoparticles and copper sulphate on performance, metabolism and blood biochemical profiles in broiler chicken. *Journal of Animal Physiology and Animal Nutrition*. 00:1-10.
- Setiyatwan, H., W.G. Piliang, D.T.H. Sihombing, W. Manalu, and A. Anang. 2007. Suplementasi fitase, seng, dan tembaga dalam ransum sebagai stimulan pertumbuhan ayam broiler. *Media Peternakan*. 30(2): 122-128.
- Sibbald, I.R., J.D. Summers, and S.J. Slinger. 1959. Factors affecting the metabolizable energy content of poultry feeds. *Poultry Science*. 39: 544 - 556.
- Sinurat, A.P., T. Purwadaria, M.H. Togatorop, and T. Pasaribu. 2003. Pemanfaatan bioaktif tanaman sebagai “*feed additive*” pada ternak unggas: Pengaruh pemberian gel lidah buaya atau ekstraknya dalam ransum terhadap penampilan ayam pedaging. Balai Penelitian Ternak. Bogor.
- Sirri, F., G. Maiorano, S. Tavaniello, J. Chen, M. Petracci, and A. Meluzzi. 2016. Effect of different levels of dietary zinc, manganese, and copper from organic or inorganic sources on performance, bacterial chondronecrosis, intramuscular collagen characteristics, and occurrence of meat quality defects of broiler chickens. *Poultry Science*. 95: 1813-1824.
- Skřivan M., S. Ševčíková, E. Tůmová, V. Skřivanová, and M. Marounek. 2002. Effect of copper sulphate supplementation on performance of broiler chickens, cholesterol content and fatty acid profile of meat. *Czech Journal of Animal Science* 47(7): 275-280.
- Tangendjaja, B. 2008. Destiller's dried grains with solubles (DDGS) untuk pakan. *Wartazoa*. 18: 137-148.

- Victoria, H. and J.W. Petris. Copper homeostatis at the host-pathogen interface. *The Journal of Biological Chemistry*. 287(17): 13549-13555.
- Wahju, J. 2004. Ilmu Nutrisi Unggas. Gadjah Mada University Press. Yogyakarta.
- Wu, Xu-chu., W. Lee., L. Tran., and S.L. Wong. 1991. Engineering a *Bacillus subtilis* expression-secretion system with a strain deficient in six extracellular proteases. *Journal of Bacteriology*. 173: 4952-4958.
- Waldenstedt, L., K. Elwinger, A. Lunden, P. Thebo, M.R. Bedford, and A. Ugglä. 2000. Intestinal digesta viscosity decreases during coccidial infection in broilers. *British Poultry Science*. 41: 459-464.
- Willems, O.W., S.P. Miller, and B.J. Wood. Aspects of selection for feed efficiency in meat producing poultry. *World's Poultry Science Journal*. 69: 77-88.
- Xia, M.S., C.H. Hu, and Z.R. Xu. 2004. Effects of copper bearing montmorillonite on growth performance, digestive enzyme activities and intestinal microflora and morphology of male broilers. *Poultry Science*. 83: 1868-1875.
- Zia-Ur-Rahaman, F. Bebasi, A.M. Afan, E.A. Bengali, M.I. Zendah, M. Hilmy, M.R. Mukhtar, S.A.S. Jaspal, and N. Aslam. 2001. Effects of copper supplement on haematological profiles and broiler meat composition. *International Journal of Agriculture & Biology*. 3(2): 203-205.