DAFTAR PUSTAKA

Abbas, A.O.M. (2010). "*Chitosan for biomedical applications*." PhD (Doctor of Philosophy) Thesis, University of Iowa, http://ir.uiowa.edu/etd/771

Asosiasi Produsen Pupuk Indonesia, (2017). *Supply and Demand 2007-2017.* http://www.appi.or.id/?statistic, diakses pada tanggal 10 Oktober 2017, jam 21.15

Azeem, B., Kushaari, K., & Man, Z. (2016). *Effect of Coating Thickness on Release Characteristics of Controlled Release Urea Produced in Fluidized Bed Using Waterborne Starch Biopolymer as Coating Material*. Procedia Engineering, *148*, 282–289. https://doi.org/10.1016/j.proeng.2016.06.615

Azeem, B., Kushaari, K., Man, Z. B., Basit, A., & Thanh, T. H. (2014). R*eview on Materials & Methods to Produce Controlled Release Coated Urea Fertilizer*. Journal of Controlled Release, *181*, 11–21. https://doi.org/10.1016/j.jconrel.2014.02.020

Badan Pusat Statistik, (2017). Impor Pupuk Menurut Negara Asal Utama 2000-2015. https://www.bps.go.id/linkTabelStatis/view/id/1044 diakses pada tanggal 10 Oktober 2017 jam 14.30.

Badan Pusat Statistik, (2017). Perkebunan : Luas Perkebunan Besar Menurut Jenis Tanaman, https://www.bps.go.id/statictable/2009/09/08/1665/luas-areal-tanaman-perkebunan-besar-menurut-jenis-tanaman--000-ha---1995-2015---.html diakses pada tanggal 10 Oktober 2017, jam 14.35.

Baysal, K., Aroguz, A. Z., Adiguzel, Z., & Baysal, B. M. (2013). *Chitosan / Alginate Crosslinked Hydrogels : Preparation , Characterization and Application for Cell Growth Purposes.* International Journal of Biological Macromolecules, *59*, 342–348. https://doi.org/10.1016/j.ijbiomac.2013.04.073

Bhattarai, N., Gunn, J.J., & Zhang, M. (Rev: 2010). *Chitosan-Based Hydrogels for Controlled, Localized Drug Delivery*. Adv. Drug Deliv. 62, 83–99.

Bird, B., Stewart, W., Lightfoot, E. (2006). Transport Phenomena, Revised second ed. John Wiley & Sons, Inc

Black, Charles Allen. (1989). "*Reducing American Exposure to Nitrate, Nitrite, and Nitroso Compounds: The National Network to Prevent Birth Defects Proposa"*. Council for Agricultural Science and Technology.

Bøckman, O. C., & Olfs, H.-W. (1998). *Fertilizers, Agronomy and N_2O*. Nutrient Cycling in Agroecosystems, *52*(2–3), 165–170. https://doi.org/10.1023/A:1009736327495

Cifuentes, M. P. (2004). http://www.yara.in/crop-nutrition/crops/coffee/key-facts/nutritional-summary/ (diakses pada tanggal 16 Maret 2018, 10:16 WIB)

Cussler, E. L. (2005). *Mass Transfer in Fluid Systems.* Cambridge University Press, New York, 3rd edition

Doares, S. H., Syrovetst, T., Weilert, E. W., & Ryan, C. A. (1995). *Oligogalacturonides and Chitosan Activate Plant Defensive Genes Through The Octadecanoid Pathway*, *92*(May), 4095–4098.

Etrych, T., Leclercq, L., Boustta, M. & Vert, M. (2005). *Polyelectrolyte Complex Formation and Stability when Mixing Polyanions and Polycations in Salted Media*: *A Model Study Related to the Case of Body Fluids*. Eur. J. Pharm. Sci. 2, 281–288.

Ferrante, P.; Scortichini, (2010). M. *Molecular and Phenotypic Features of Pseudomonas Sringae pv. Actinidiae Isolated during Recent Epidemics of Bacterial Canker on Yellow KiwiFruit (Actinidia chinensis) in Central Italy*. Plant Pathol. 59, 954–962.

Flutto, L., & Danisco. (2003). *Pectin.* Encyclopedia of Food Sciences and Nutrition, 4440–4449. https://doi.org/10.1016@B0-12-227055-X@00901-9

Fujita, T. and Shoji, S. (1999). "*Kinds and properties of Meister fertilizers. In: Meister controlled release fertilizer – Properties and Utilization*. Shoji, S. (ed). Konno Printing Company Ltd. Sendai, Japan. pp. 13-34"

Ghaffari, A., Navaee, K., Oskui, M., Bayati, K. & Tehrani, M. R. (2007). *Preparation and Characterization of Free Mixed-Film of Pectin / Chitosan / Eudragit Ò RS Intended for Sigmoidal Drug Delivery*. Journal of Pharmaceutics and Biopharmaceutics. 67. 175–186.. https://doi.org/10.1016/j.ejpb.2007.01.013

Haifa Chemicals, (2014). http://www.haifa-group.com - Knowledge Center – Recommendation – Field Crops – Using the Right Fertilizer in Order to Provide the Sugarcane Necessities (diakses pada tanggal 16 Maret 2018, 10:30 WIB)

Hamman, J. H. (2010). *Chitosan Based Polyelectrolyte Complexes as Potential Carrier Materials in Drug Delivery Systems.* Marine Drugs. 1305–1322. https://doi.org/10.3390/md8041305

Haug A. (1959). "*Fractionation of alginic acid".* Acta Chem Scand ;13:601–3

Hsieh, F., Huang, C., Lin, T., Chen, Y., & Lin, J. (2008). S*tudy of Sodium Tripolyphosphate-Crosslinked Chitosan Beads Entrapped with Pseudomonas Putida for Phenol Degradation*, Process Biochemistry. *43*, 83–92. https://doi.org/10.1016/j.procbio.2007.10.016

Il‟ina, A.V. & Varlamov, V.P. (2005). *Chitosan-Based Polyelectrolyte Complexes*: A review. App. Biochemi. Microbiol. 41, pp. 5–11.

Jing, W., Song, L. I. U., Yukun, Q. I. N., Xiaolin, C., XING, R., Huahua, Y., Pengcheng, L. (2017). *Preparation and Characterization of Controlled Release Fertilizers Coated with Marine Polysaccharide Derivatives* *, (41306071).

Kramarenko, E. Y., Khokhlov, A. R., & Reineker, P. (2006). *Stoichiometric Polyelectrolyte Complexes of Ionic Block Copolymers and Oppositely Charged Polyions.* Journal of Chemical Physics, *125*(19), 1–9. https://doi.org/10.1063/1.2387173

Kumar, S., Chauhan, N., Gopal, M., & Kumar, R. (2015). *Development and Evaluation of Alginate – Chitosan Nanocapsules for Controlled Release of Acetamiprid*. International Journal of Biological Macromolecules, *81*, 631–637. https://doi.org/10.1016/j.ijbiomac.2015.08.062

Lawrie, G., Keen, I., Drew, B., Chandler-temple, A., Rintoul, L., Fredericks, P., & Grøndahl, L. (2007). *Interactions between Alginate and Chitosan Biopolymers Characterized Using FTIR and XPS*. Biomacromolecules, 2533–2541. https://doi.org/10.1021/bm070014y

Liu, G., Zotarelli, L., Li, Y., Dinkins, D., & Wang, Q. (2014). C*ontrolled-Release and Slow-Release Fertilizers as Nutrient Management Tools 1*. IFAS Extension UNIVERSITY of FLORIDA, 1–7.

Liu, L., Kost, J., Fishman, M. L. and Hicks, K. B. (2008). " *A Review: Controlled Release Systems for Agricultural and Food Applications*" in: N. Parris, L.S. Liu, et al., (Eds.), New Delivery Systems for Controlled Drug Release from Naturally Occurring Materials, ACS Symposium series, 992, 2008, pp. 265–281

Lubkowski, K. (2014). C*oating Fertilizer Granules with Biodegradable Materials for Controlled Fertilizer Release.* Environmental Engineering and Management Journal, *13*(10), 2573–2581.

Lubkowski, K., Smorowska, A., Grzmil, B., & Kozlowska, A. (2015). *Controlled-Release Fertilizer Prepared Using a Biodegradable Aliphatic Copolyester of Poly(butylene succinate) and Dimerized Fatty Acid.* Journal of Agricultural and Food Chemistry, *63*, 2597–2605. https://doi.org/10.1021/acs.jafc.5b00518

Martins, A. F., Oliveira, D. M. De, Pereira, A. G. B., Rubira, A. F., & Muniz, E. C. (2012). *Chitosan / TPP Microparticles Obtained by Microemulsion Method Applied in Controlled Release of Heparin*. International Journal of Biological Macromolecules, *51*(5), 1127–1133. https://doi.org/10.1016/j.ijbiomac.2012.08.032

Menteri Negara Lingkungan Hidup, (2004), *Keputusan Menteri Negara Lingkungan Hidup Nomor 51 tahun 2004 tentang Baku Mutu Air Laut*, Jakarta, Indonesia

Newbould, P. (1989). T*he Use of Nitrogen Fertilizer in Agriculture: Where Do We Go Practically and Ecologically?*, *311*, 281–295.

Pavia, D. L., Lampman, G. M., and Kriz, G. S. (2001). *Introduction to Spectroscopy: A Guide for Students of Organic Chemistry,* 3rd edition, Thomson Learning: United States of America, pp 29-82.

Park, J.H., Saravanakumar, G., Kim, K. & Kwon, I.C. (Rev:2010) *Targeted Delivery of Low Molecular Drugs Using Chitosan and Its Derivatives.* Adv. Drug Deliv. 62, 28–41.

Poling, B., Prausnitz J. & O'Connell J., (2004). *The Properties of Gases and Liquids,* McGraw-Hill, New York, 5th edition.

Pudjiastuti, S, (2016), "*Laporan Kinerja Kementrian-Kelatan dan Perikanan*, Tahun 2015", Jakarta, Kementrian Kelautan dan Perikanan

Rinaudo, M. (2006). *Chitin and Chitosan : Properties and Applications*. Progress in Polymer Science, *31*, 603–632. https://doi.org/10.1016/j.progpolymsci.2006.06.001

Roshanravan, B., Soltani, S. M., Rashid, S. A., Mahdavi, F., & Yusop, M. K. (2015). *Enhancement of Nitrogen Release Properties of Urea–Kaolinite Fertilizer with Chitosan Binder*. Chemical Speciation and Bioavailability, *27*(1), 44–51. https://doi.org/10.1080/09542299.2015.1023090

Santos, B. R. Dos, Bacalhau, F. B., Pereira, T. D. S., Souza, C. F., & Faez, R. (2015). *Chitosan-Montmorillonite Microspheres: A sustainable Fertilizer Delivery System.* Carbohydrate Polymers, *127*, 340–346. https://doi.org/10.1016/j.carbpol.2015.03.064

Sempeho, S. I., Kim, H. T., Mubofu, E., & Hilonga, A. (2014). M*eticulous Overview on the Controlled Release Fertilizers.* Advances in Chemistry, *2014*, 16.

Sharp, R. G. (2013). *A Review of the Applications of Chitin and Its Derivatives in Agriculture to Modify Plant-Microbial Interactions and Improve Crop Yields*. Agronomy, 757–793. https://doi.org/10.3390/agronomy3040757

Shaviv, A. (2001). *Advances In Controlled - Release Fertilizer.* Advances in Agronomy, *71*.

Shaviv A., Raban S., Zaidel E. (2003). "*Modeling Controlled Nutrient Release from Polymer Coated Fertilizers: Diffusion Release from Single Granules*", Environmental Science and Technology, 37, 2251- 2256.

Shaviv, A. (2005). *Controlled Release Fertilizers*. *IFA International Workshop*, (x), 1–29.

Smidsrood O, Skjak-Bræk G. 1990. "*Alginate as Immobilization Matrix for Cells"*. Trend Biotechnol ;8:71–8

Smil, V. (1999). *Nitrogen in Crop Production: An Account of Global Flows*. *Global Biogeochemical Cycles*, *13*(2), 647–662. https://doi.org/10.1029/1999GB900015

Smith, S. J., Schepers, J. S., and Porter, L. K. (1990). "*Assessing and Managing Nitrogen Losses to The Environment*". Adv. Soil Sci. 14, 1–45.

Taylor, R. & Krishna, R. (1993). *Multicomponent Mass Transfer. Wiley, New York, 1st edition*

Thong dan NG. (1978). http://www.yara.com.gh/crop-nutrition/crops/cocoa/key-facts/nutritional-summary/ diakses pada tanggal 16 Maret 2018 10:16

Tonnesen, H.H. and Karlsen J. (2002). "*Alginate in Drug Delivery Systems*". Drug Dev Ind Pharm ;28:621–30.

Trenkel, M. E. (1997). *Controlled-Release and Stabilized Fertilizers in Agriculture*. Paris: International Fertilizer Industry Association (IFA).

Trenkel, M. E. (2010). *Slow- and Controlled-Release and Stabilized Fertilizers: An Option for Enhancing Nutrient Use Efficiency in Agriculture* (second edi). Paris: International Fertilizer Industry Association (IFA). Retrieved from publications@fertilizer.org

Vruggink, H. (1970). *The Effect of Chitin Amendment on Actinomycetes in Soil and on The Infection of Potato Tubers by Streptomyces Scabies.* Neth. J. Plant Pathol. 76, 293–295.

Wu, L., & Liu, M. (2008). P*reparation and Properties of Chitosan-Coated NPK Compound Fertilizer with Controlled-Release and Water-Retention*. Carbohydrate Polymers, *72*(2), 240–247. https://doi.org/10.1016/j.carbpol.2007.08.020

Yong, K., & Mooney, D. J. (2012). *Properties and Biomedical Applications*. Progress in Polymer Science, *37*(1), 106–126. https://doi.org/10.1016/j.progpolymsci.2011.06.003

Zhang, M., Yang, Y.Ch., Song, F.Pg. and Shi, Y.Xi . (2005). "*Study and Industrialized Development of Coated Controlled-Release Fertilizers"*. (Chinese) Journal of Chemical Fertilizer Industry, 177-196

Zhao, L. M., Shi, L. E., Zhang, Z. L., Chen, J. M., Shi, D. D., Yang, J., & Tang, Z. X. (2011). *Preparation and Application of Chitosan Nanoparticles and Nanofibers. Brazilian Journal of Chemical Engineering*, *28*(3), 353–362. https://doi.org/10.1590/S0104-66322011000300001