

DAFTAR PUSTAKA

- Aleksandrov, V. G., Blagodyr, R.N., & Ilev, I.P. 1967. The liberation of phosphoric acid from apatite by silicate bacteria. *Microchem Journal*, 29: 111-114.
- Aminuddin, M.I., Damiri, N., & Tambunan, N.O. 2006. Pengaruh pupuk kalium terhadap penyakit gugur daun *Corynespora* pada pembibitan karet.
- Amalinda, L., Elisabeth, M., Megantari, U. 2012. Pembuatan Pupuk Kalium Silika Terlarut Dalam Asam Sitrat Dari Abu Terbang Batu Bara.
- Angraini, E. 2015. Potensi Bakteri Pelarut Kalium Dari Lahan Penambangan Batu Kapur Palimanan Cirebon. Institut Paertanian Bogor, Bogor.
- Anonim, 2015. Kementrian Energi dan Sumberdaya Mineral (KESDM). 2015. Neraca Mineral [internet]. [http://psdg.bgl.esdm.go.id/Neraca/Neraca Mineral214.pdf](http://psdg.bgl.esdm.go.id/Neraca/Neraca%20Mineral214.pdf). Diakses 26 Mei 2019.
- Anonim. Muskovit. [http://enm.ibtav.org/eser/355/muskovit-\(mika\)](http://enm.ibtav.org/eser/355/muskovit-(mika)). Diakses 4 September 2019.
- Anonim. Sanidin. <http://www.frank-kuerten.de/Minerale/Sanidin.html>. Diakses 4 September 2019.
- Anonim. Mikrolin. <http://www.redcrystal.pl/szczegoly-mikroclin-krysztal.str3.html>. Diakses pada 4 September 2019.
- Anonim. Biotit. <https://geology.com/minerals/biotite.shtml>. Diakses 4 September 2019.
- Anonim. Adularia. [https://www.fabreminerals.com/search_results.php?LANG=&MineralSpeciment=Orthoclase%20\(adularia\)](https://www.fabreminerals.com/search_results.php?LANG=&MineralSpeciment=Orthoclase%20(adularia)). Diakses 4 September 2019.
- Anonim. Ortoklas. <https://www.gymtce.cz/cs/tridy/2022-A/8/ortoklas/909>. Diakses 4 September 2019.
- Anonim. Lepidolit. <https://www.healingwithcrystals.net.au/lepidolite.html>. Diakses 4 September 2019.
- Archana, D.S., 2007. Studies on Potassium solubilizing bacteria. Mestrado-Dharwad, Karnataka, India: University of Agricultural Sciences.

- Archana, D.S., Nandish, M.S., Savalagi, V.P., & Alagawadi, A.R., 2013. Characterization of potassium solubilizing bacteria (KSB) from rhizosphere soil. *BIOINFOLET-A Quarterly Journal of Life Sciences*, 10: 248-257.
- Astawan, Made. 2005. Info Teknologi Pangan Department of Food Science and Technology. Faculty of Agricultural Technology and Engineering. Bogor Agricultural University, Bogor.
- Badar, M.A., Shafei, A. M., & Sharaf El-Deen, S.H. 2006. The dissolution of K and phosphorus bearing minerals by silicate dissolving bacteria and their effect on sorghum growth. *Research Journal of Agriculture Biological Science*, 2: 5-11.
- Bagyalakshmi, B., Ponmurugan., & P., Balamurugan, A. 2012. Impact of different temperature, carbon and nitrogen sources on solubilization efficiency of native potassium solubilizing bacteria from tea (*Camellia sinensis*). *Journal of Biology Research*, 3: 36-42.
- Basak, B.B., & Biswas, D.R., 2009. Influence of potassium solubilizing microorganism (*Bacillus mucilaginosus*) and waste mica on potassium uptake dynamics by Sudan grass (*Sorghum vulgare Pers.*) grown under two Alfisols. *Plant and Soil*, 317: 235-255.
- Basak, B.B., & Biswas, D.R., 2010. Co-inoculation of potassium solubilizing and nitrogen-fixing bacteria on solubilization of waste mica and their effect on growth promotion and nutrient acquisition by a forage crop. *Biology and Fertility of Soils*, 46: 641-648.
- Bennett, P.C., Choi, W.J., & Rogera, J.R. 1998. Microbial destruction of feldspars. *Miner Manag*, 8: 149-150.
- Bennett, P.C., Rogers, J.R., & Choi, W.J. 2001. Silicates, silicate weathering, and microbial ecology. *Geomicrobiol Journal*, 18: 3-19.
- Brady, N.C. 1990. *The Nature and Properties of Soil*. Mac Millan Publishing Co, New York.
- Chatterji, M., Unniraman, S., Mahadevan, S., & Nagaraja, V. 2001. Effect of different classes of inhibitors on DNA gyrase from *Mycobacterium smegmatis*. *Journal of Antimicrobial Chemotherapy*, 48:479-485.
- Cooke, G.W. 1985. *Fertilizing for Maximum Yield*. Granada Publishing Lmt. London, 75-87
- Diep, C.N. & Hieu, T.N., 2013. Phosphate and potassium solubilizing bacteria from weathered materials of a denatured rock mountain, Ha Tien, Kiên Giang province Vietnam. *American Journal of Life Sciences*, 1: 88-92.
- Don, N, T., & Diep, C.N. 2014. Isolation, characterization and identification of phosphate and potassium solubilizing bacteria from weathered materials of granite rock mountain, That Son, an Giang province, Vietnam. *American Journal of Life Sciences*, 2: 282-291.

- Du, Y., Zhou, X.Y., & Lian, B., 2008. The extracellular secretion of *Bacillus mucilaginosus* and its capability of releasing potassium from potassium-bearing minerals. *Earth Sci. Front*, 15: 107–111.
- Dwidjoseputro, D. 2003. *Dasar-Dasar Mikrobiologi*. Djembatan, Jakarta.
- Dwidjoseputro. 2010. *Dasar-Dasar Mikrobiologi*. Penerbit Djembatan, Jakarta.
- Elumalai, R.P., Nagpal, P., & Reed, J.W. 2002. A mutation in the *Arabidopsis* Kt2/Kup2 potassium transporter gene affects shoot cell expansion. *Plant Cell*, 14: 119-131.
- Fageria, N.K., Filho, M.P.B., Moreira, A., & Guimaraes, C.M. 2009. Foliar fertilization of crop plants. *Journal Plant Nutrition*, 32: 1044-1064.
- Faraji, R., A. Parsa, B. Torabi, and T. Withrow. 2006. Effects of kanamycin on the macromolecular composition of kanamycin sensitive *Escherichia coli* DH5 α Strain. *Journal of Experimental Microbiology and Immunology*, 9: 31-38.
- Fardiaz, S. 2002. *Mikrobiologi Pangan 1*. Gramedia Pustaka, Jakarta.
- Fu, Q., Lu, P., Konishi, H., Dilmore, R., Xu, H., Seyfried, W.E., & Zhu, C. 2009. Coupled alkali-feldspar dissolution and secondary mineral precipitation in batch systems: 1. new experiments at 2000C and 300 bars. *Chemical Geology*. 258: 125 – 135.
- Gerke, L. 1992. Phosphate, aluminum, and iron in the soil solution of three different soils in relation to varying concentrations of citric acid. *Bodenk*, 155: 17-22.
- Ghevariya, K.K., & Desai, P.B. 2014. Rhizobacteria of sugarcane in vitro screening for their plant growth-promoting potentials. *Recent Sciences*, 3: 5258
- Hardter, R. 2003. Potassium and Biotic Stress of Plants. In *Feed the Soil to Feed the People: The Role of Potash in Sustainable Agriculture*. Johnston, A.E., Ed. International Potash Institute: Basel, Switzerland, 345–362.
- Hanafiah, K.A. 2005. *Dasar-dasar Ilmu Tanah*. Raja Grafindo, Jakarta.
- Harley, A.D., & Gilkes, R.J. 2012. Factors influencing the release of plant nutrient elements from silicate rock powders: a geochemical overview. *Nutrient Cycle Agroecosystem*, 56:11–36
- Hartono, H.G., & Pambudi, S. 2015. *Gunung Api Purba Mujil*, Kulonprogo, Yogyakarta: Suatu Bukti dan Pemikiran, Prosiding ReTII ke 10, STTNAS Yogyakarta.
- Havlin, J.L., Beaton, J.D., Tisdale, S.L., & Nelson, W.L. 1999. *Soil Fertility and Fertilizers. An Introduction to Nutrient Management*. 6th ed. Upper Saddle River. Prentice-Hall, New Jersey

- Havlin, J.L., Beaton, J.D., Tisdale, S.L., & Nelson, W.L. 2005. Soil fertility and fertilizers: An introduction to nutrient management (No. 631.422/H388). Pearson prentice hall, New Jersey.
- Hinsinger, P. 2002. Potassium. In: Lal R (ed) Encyclopedia of soil science. Marcel Dekker Inc, New-York, USA.
- Hu, X., Chen, J. & Guo, J., 2006. Two phosphate-and potassium-solubilizing bacteria isolated from Tianmu Mountain, Zhejiang, China. World Journal of Microbiology and Biotechnology, 22: 983-990.
- Huang, Z., He, L., Sheng, X., & He, Z. 2013. Weathering of potash feldspar by *Bacillus* sp. L11. Wei sheng wu xue bao. Acta Microbiol. Sinica. 53: 1172-1178.
- Husen, E., Saraswati, R., & Hastuti, R.D. 2006. Pupuk Organik dan Pupuk Hayati: Rhizobakteri Pemacu Tumbuh Tanaman. Balai Besar Penelitian dan Pengemabangan Sumberdaya Lahan Pertanian, Bogor.
- Ismail, H.E. 2005. Degradasi mineral batuan oleh asam organik. Jurnal Ilmu Tanah Lingkungan, 5: 1-17.
- Joetono, J., Soedarsono., Hartadi, S., Kabirun, S., Darmosuwito, S., & Soesanto. 1973. Pedoman Praktikum Mikrobiologi Umum. Gadjah Mada University Press, Yogyakarta.
- Jones, D.L., Dennis, P.G., Owen, A.G., & Van Hees, P.A.W. 2003. Organic acid behavior in soils misconceptions and knowledge gaps. Plant soil, 248: 31-41.
- Kusumowati, I.T.D., Siswandono., & Rudyanto, M. 2011. Hubungan Struktur Turunan N-Klorobenzoilamoksisilin dan aktivitas antibakterinya terhadap *Pseudomonas aeruginosa* ATCC 27853. Jurnal Farmasi Indonesia, 5: 142 -149.
- Leiwakabessy, F.M., Wahjudin., & Suwarno. 2003. Kesuburan Tanah. Departemen Ilmu Tanah Fakultas Pertanian, Institut Pertanian Bogor, Bogor.
- Lian, B., Fu, P.Q., Mo, D.M., & Liu, C.Q., 2002. A comprehensive review of the mechanism of potassium releasing by silicate bacteria. Acta Mineral Sin, 22: 179-183.
- Liu, D., Lian, B., & Dong, H., 2012. Isolation of *Paenibacillus* sp. and assessment of its potential for enhancing mineral weathering. Geomicrobiology Journal, 29: 413-421.
- Liu, W., Xu., Wu, S., Yang, Q., Luo, Y., & Christie, P. 2006. Decomposition of silicate minerals by *Bacillus mucilaginosus* in liquid culture. Environment Geochemistry Health, 28: 133-140.
- Lynn, T.M., Win, H.S., Kyaw, E.P., Latt, Z.K., & Yu, S.S. 2006. Characterization of phosphate solubilizing and potassium decomposing strain and study on their effect on tomato cultivation. Jaydev Institute of Social Science and Research, 3: 959-966.

- Madigan, M.T., Martinko, J.M., & Parker, J., 1997. Brock biology of microorganisms. Upper Saddle River. Prentice-Hall, New York.
- Mahon, C.R. 2015. Textbook of Diagnostic Microbiology 5th edition. Philadelphia. Saunders Elsevier.
- Man, L.Y., Cao, X.Y., & Sun, D.S. 2014. Effect of potassium-solubilizing bacteria-mineral contact mode on decomposition behavior of potassium-rich shale. Chin. J. Nonferrous Met, 24: 48-52.
- Marschner, H. 1995. Functions of mineral nutrients: macronutrients, In H. Marschner (Ed.). Mineral nutrition of higher plants 2nd Edition. Academic Press, New York, 299-312.
- Maruapey, A., & Faesal., 2010. Pengaruh pemberian pupuk KCl terhadap pertumbuhan dan hasil jagung pulut (*Zea mays ceratina. L*). Dalam Prosiding Pekan Serealia Nasional.
- Maurya, B.R., Meena, S., & Meena, O.P., 2014. Influence of Inceptisol and Alfisol's potassium solubilizing bacteria (KSB) isolates on the release of K from waste mica. Vegetos, 27: 181-187.
- Mc Afee, J. 2008. Potassium, a key nutrient for plant growth. Department of Soil and Crop Sciences.
- Meena, V.S., Bahadur, I., Maurya, B.R., Kumar, A., Meena, R.K., Meena, S.K., & Verma, J.P., 2016. Potassium-solubilizing microorganism in evergreen agriculture: an overview. In Potassium solubilizing microorganisms for sustainable agriculture. Springer, New Delhi, 1-20.
- Meena, V.S., Maurya, B.R., & Bahadur, I., 2014. Potassium solubilization by bacterial strain in waste mica. Bangladesh Journal of Botany, 43: 235-237.
- Meena, V.S., Maurya, B.R., Verma, J.P., Aeron, A., Kumar, A., Kim, K., & Bajpai, V.K. 2015. Potassium solubilizing rhizobacteria (KSR): isolation, identification, and K-release dynamics from waste mica. Ecological Engineering, 81: 340-347.
- Murbach, M. R., Boaretto, A.E., Muraoka., T. Caxambu, E., & de Souza, A. 2003. Nutrient cycling in a RRIM 600 clone rubber plantation. Scientia Agricola. 60: 353-357.
- Mutmainnah, L., Setiawati, T.C., & Mudjiharjati, A. 2015. Inventarisasi dan uji kemampuan pelarutan kalium oleh mikroba pelarut kalium dari rhizosfer tanaman tebu (*Saccharum sp.*). Agroteknologi, Fakultas Pertanian, Universitas Jember, Jember
- Paau, A. S. (1989). Improvement of Rhizobium inoculants. Applied an Environmental Microbiology, 55: 862-865.
- Parmar, P. & Sindhu, S.S. 2013. Potassium solubilization by rhizosphere bacteria: influence of nutritional and environmental conditions. J Microbiol Res, 3: 25-31.

- Pelczar. 2008. Dasar-Dasar Mikrobiologi. Djambatan, Malang.
- Pervez, H., Ashraf, M., Makhdom, M.I., & Mahmood, T. 2007. Potassium nutrition of cotton (*Gossypium hirsutum L.*) in relation to cotton leaf curl virus disease in aridisols. Pakistan. Journal of Botany, 39: 529-539.
- Prajapati, K.A.L.A.V.A.T.I., Sharma, M.C. & Modi, H.A., 2012. Isolation of two potassium solubilizing fungi from ceramic industry soils. Life Science Leaflets, 5: 71-75.
- Prajapati, K.B., & Modi, H.A. 2012. Isolation and characterization of potassium solubilizing bacteria from ceramic industry soil. CIB Tech J Microbiol, 1: 8-14
- Rahardjo, W., Sukandarrumidi., & Rosidi, H.M.D. 2012. Peta Geologi Lembar Yogyakarta, Pusat Survey Geologi-Badan geologi-Kementrian Energi dan Sumberdaya Mineral.
- Römheld, V., & Kirkby, E. A. 2010. Research on potassium in agriculture: needs and prospects. Plant and Soil, 335: 155-180.
- Rosemarkam, A., & Yuwono, N.W. 2002. Ilmu Kesuburan Tanah. Kanisius, Yogyakarta.
- Rutter, J.M. 2012. A study of the carbohydrate fermentation reactions of *Clostridium oedemantiens*. Med. Microbiol, 3:283-289.
- Sanfa, 2011. Mikrobiologi Dasar. Penerbit Universitas Muhammadiyah, Malang.
- Sangeeth, K.P., Suseela Bhai, R., & Srinivasan, V. 2012. *Paenibacillus glucanolyticus*, a promising potassium solubilizing bacterium isolated from black pepper (*Piper nigrum L.*) rhizosphere.
- Schroeder, D. 1974. Relationships between soil potassium and the potassium nutrition of the plant. Potassium research and agricultural production: International Potash Institute. Berne, 56-63.
- Shanware, A.S., Kalkar, S.A. & Trivedi, M.M. 2014. Potassium solubilizers: occurrence, mechanism and their role as competent biofertilizers. Int J Curr Microbiol App Sci, 3: 622.
- Sharma, S.B., Sayyed, R.Z., Trivedi, M.H. & Gobi, T.A. 2013. Phosphate solubilizing microbes: a sustainable approach for managing phosphorus deficiency in agricultural soils. Springer Plus, 2: 587.
- Sheng, X., & Huang, W. 2002. Mechanism of potassium release from feldspar affected by the sprain Nbt of silicate bacterium. Acta Pedologica Sinica, 39: 863-871.
- Sheng, X.F., & He, L.Y. 2006. Solubilization of potassium-bearing minerals by a wild-type strain of *Bacillus edaphicus* and its mutants and increased potassium uptake by wheat. Canadian Journal of Microbiology, 52: 66-72.

- Sheng, X.F. 2005. Growth promotion and increased potassium uptake of cotton and rape by a potassium releasing strain of *Bacillus edaphicus*. *Soil Biology and Biochemistry*, 37: 1918-1922.
- Sheng, X.F., Xia, J.J., & Chen, J. 2003. Mutagenesis of the *Bacillus edaphicus* strain NBT and its effect on the growth of chili and cotton. *Agricultural Sciences in China*, 2: 409-412.
- Sheng, X.F., Zhao, F., He, L.Y., Qiu, G. & Chen, L. 2008. Isolation and characterization of silicate mineral-solubilizing *Bacillus globisporus* Q12 from the surfaces of weathered feldspar. *Canadian Journal of Microbiology*, 54: 1064-1068.
- Singh G, D. R. Biswas, and T. S. Marwah. 2010. Mobilization of potassium from waste mica by plant growth promoting rhizobacteria and its assimilation by maize (*Zea mays*) and wheat (*Triticum aestivum* L). *Journal of Plant Nutrition*, 33:1236-1251
- Simanjuntak, J. 2006. Pengaruh pemberian kalium terhadap pertumbuhan dan produktivitas tanaman manggis (*Garcinia mangostana*, L.) [skripsi]. Fakultas Pertanian IPB. Bogor, 39.
- Sparks, D.L. 1987. Potassium dynamics in soils. In *Advances in soil science*. Springer, New York, 1-63.
- Sudarsono A. 2008. Isolasi dan Karakterisasi Bakteri pada Ikan Laut dalam Spesies Ikan Gindara (*Lepidocibium flavobronneum*). IPB, Bogor.
- Sugumaran P, Janarthanam, B. 2007. Solubilization of potassium containing minerals by bacteria and their effect on plant growth. *World Journal of Agriculture Sciences*, 3: 350-355.
- Sumarsih, 2011. Mikrobiologi Umum. UI Press, Jakarta.
- Sutanto, R. 2005. Dasar-Dasar Ilmu Tanah : Konsep dan Kenyataan. Kanisius, Jakarta.
- Taha, S.M., Mahmoud, S.A.Z., Halim El-Damaty, A., & Abd El-Hafez, A.M. 1969. The activity of phosphate dissolving bacteria in Egyptian soils. *Plant and Soil*, 31: 149-160.
- Tekmira. Teknologi Mineral dan Batubara.Feldspar.<http://www.tekmira.esdm.go.id/data/Feldspar/ulasan.asp?xdir=Feldspar&commId=12&comm=Feldspar>. Diakses pada 5 September 2019.
- Thomas, A., Budiman., & Hidayati, U. 2003. Status hara kalium kaitannya dengan serangan penyakit daun *Corynespora* pada klon RRIM 600. *Warta Pusat Penelitian Karet*, 22: 24-31.
- Tisdale, S.L., Nelson, W.L., Beaton, J.D., & Havlin, J.L. 1985. Growth and factors affecting it. *Soil fertility and Fertilizers*, 19-58.



- Volk, S.A., & Margareth, F. W. 1988. Mikrobiologi Dasar. Erlangga, Jakarta.
- Wagner, G. H., & Wolf, D. C. 1999. Carbon Transformations and Soil Organic Matter Formation. Principles and Applications of Soil Microbiology. Upper Saddle River, NJ: Prentice-Hall, 218-258.
- Walpole RE. 1982. Pengantar Statistika 3rd ed. Alih bahasa: Bambang SPT. Gramedia Pustaka Indonesia, Jakarta.
- Wu, S.C., Cao, Z.H., Li, Z.G., Cheung, K.C., & Wong, M.H. 2005. Effects of biofertilizer containing N-fixer, P and K solubilizers and AM fungi on maize growth: a greenhouse trial. *Geoderma*, 125: 155-166.
- Youssef, G.H., Seddik, W.M.A., & Osman, M.A. 2010. The efficiency of natural minerals in the presence of different nitrogen forms and potassium dissolving bacteria on peanut and sesame yields. *Journal of American Science*, 6: 647-660.