

REFERENCES

- Aasfar, A., Bargaz, A., Yaakoubi, K., Hilali, A., Bennis, I., Zeroual, Y., Meftah, Kadmiri I. 2021. Nitrogen Fixing Azotobacter Species as Potential Soil Biological Enhancers for Crop Nutrition and Yield Stability. *Frontier Microbiology*. 12:379-398.
- Alori, E. T., Glick, B. R., Babalola, O. O. 2017. Microbial Phosphorus Solubilization and Its Potential for Use in Sustainable Agriculture. *Frontiers in Microbiology*. 8:971-979.
- Antonius, S., & Agustiyani, D. 2011. Pengaruh pupuk organik hayati yang mengandung mikroba bermanfaat terhadap pertumbuhan dan hasil panen tanaman semangka serta sifat biokimia tanahnya pada percobaan lapangan di Malinau-Kalimantan Timur. *Berkala Penelitian Hayati Journal Of Biological Researches*, 16(2): 203-206.
- Antonius, S., Imamuddin, H., Agustiyani, D., Dewi, T. K., Laili, N., Anggraheni, A. 2015. Pendampingan pengembangan pupukorganik hayati (BOF) Beyonic Startmik di Kabupaten Wonogiri-Jateng, Kabupaten Ngawi-Jatim dan Kabupaten Malinau-Kaltara. *Dalam Prosiding Seminar Nasional Hasil Penelitian Unggulan Bidang Pangan Nabati*, 25–34.
- Antonius, S., Laili, N., Yanti, A., Nurkanto, D. Agustyani. 2009. Eksplorasi dan penapisan mikroba dari malinau sebagai agen hayati pendukung pertanian yang berkelanjutan. *Proseding Lingkungan Hidup, Seminar Nasional Biologi XX dan Kongres PBI XIV UIN Maliki Malang*, pp: 347–357.
- Bonku, R., Yu, J. 2020. Health aspects of peanuts as an outcome of its chemical composition. *Food Science and Human Wellness*, 9(1):21– 30.
- Cabello, B. 2013. *Encyclopedia of human nutrition*. Elsevier. Italy. p: 74– 79.
- Chouyia, F. E., Ventorino, V, Pepe, O. 2022. Diversity, mechanisms and beneficial features of phosphate-solubilizing Streptomyces in sustainable agriculture: A review. *Frontier Plant Science*. 11: 132-142.
- Dos Santos IB, Pereira APDA, De Souza AJ, Cardoso EJBN, Da Silva FG, Oliveira JTC, Verdi MCQ, Sobral JK. 2022. Selection and Characterization of Burkholderia spp. for Their Plant-Growth Promoting Effects and Influence on Maize Seed Germination. *Front Soil Sci*. 1: 80-90.
- Dwiasuti, M. E., Fajri, M. N., Yunimar. 2015. Potensi *Trichoderma* spp. sebagai agens pengendali *Fusarium* spp. penyebab penyakit layu pada tanaman stroberi (*Fragaria x ananassa* Dutch.). *Jurnal Hortikultura*, 25(4): 331-339.
- Fernández, V., Brown, P. H. 2013. From plant surface to plant metabolism: the uncertain fate of foliar-applied nutrients. *Frontiers Plant Science*. 4: 124-134.
- Fira, D., Dimkić, I., Berić, T., Lozo, J., Stanković, S. 2018. Biological control of plant pathogens by Bacillus species. *Journal of Biotechnology*, 285: 44–55.
- Foliar Fertilization of Nutrients Chethan Babu, R. T. Ph.D. Research Scholar, Department of Agronomy, ICAR-National Dairy Research Institute, Karnal. *Just Agriculture*, 2(6):1-7.
- Ghadamgahi, F., Tarighi, S., Taheri, P., Saripella, G. V., Anzalane, A., Kalyandurg, P. B., Catara, V., Ortiz, R., Vetukuri, R. R. 2022. Plant Growth-Promoting Activity of *Pseudomonas aeruginosa* FG106 and Its Ability to Act as a Biocontrol Agent against Potato, Tomato and Taro Pathogens. *Biology*. 11(1): 140-148.
- Gurikar, C., Sreenivasa, MY., Nanje Gowda, N. A., Lokesh, A. C. 2022. Rhizosphere Engineering. Elsevier. United States of America. p: 97–112.

- Imran, A., Saadalla, M. J. A., Khan, S-U., Mirza, M. S., Malik, K.A., Hafeez, F.Y. 2014. *Ochrobactrum* sp. Pv2Z2 exhibits multiple traits of plant growth promotion, biodegradation and N-acyl-homoserine-lactone quorum sensing. *Annals Microbiology*. 64(4):1797–1806.
- Inayati, A., Yusnawan, E. 2016. Tanggap genotype kacang tanah terhadap penyakit bercak daun *Cercospora* dan karet daun *Puccinia*. *Jurnal Fitopatologi Indonesia*, 12(1): 9 – 18.
- ITIS. 2011. *Arachis hypogaea* L. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_val=26463#null. Accessed 19 March 2023, 16.40.
- Ivshina, I., Bazhutin, G., Tyumina, E. 2022. *Rhodococcus* strains as a good biotool for neutralizing pharmaceutical pollutants and obtaining therapeutically valuable products: Through the past into the future. *Frontiers Microbiology*. 13:96-109.
- Jannah, A., Nurlenawati, N., Nurlela, E. S. 2018. Respon Tanaman Kacang Tanah (*Arachis hypogaea* L.) Kultivar Gajah dan Jerapah Terhadap Kombinasi Pupuk NPK Majemuk dan Pupuk Kandang Domba. *Paspalum: Jurnal Ilmiah Pertanian*, 2(1): 135-166
- Kim, H.-S., Sang, M. K., Jung, H. W., Jeun, Y.-C., Myung, I.-S., & Kim, K. D. 2012. Identification and characterization of *Chryseobacterium wanjuae* strain KJ9C8 as a biocontrol agent of *Phytophthora* blight of pepper. *Crop Protection*, 32: 129– 137.
- Korwa, A., Martanto, E. A., Pribadi, H. S. 2009. Intensitas Penyakit Bercak Daun *Cercospora* pada Kacang Tanah (*Arachis hypogaea* L.) di Kampung Aimasi Prafi. *Agrotek*, 1(5): 8-13.
- Law, J. W-F., Ser, H-L, Khan, T. M., Chuah, L-H., Pusparajah, P., Chan, K-G., Goh, B-H., Lee, L-H. 2017. The Potential of Streptomyces as Biocontrol Agents against the Rice Blast Fungus, *Magnaporthe oryzae* (*Pyricularia oryzae*). *Frontiers Microbiology*. 8: 3-13.
- Li, Y. C., Qian, H., Sun, X. L., Cui, Y., Wang, H. Ya., Du, C., Xia, X. H. 2014. The effects of germination on chemical composition of peanut seed. *Food Science and Technology Research*, 20(4): 883–889.
- Lindström K, Mousavi SA. 2020. Effectiveness of nitrogen fixation in rhizobia. *Microb Biotechnol*. 13(5):1314–1335. doi:10.1111/1751-7915.13517. [accessed 2023 Jul 13]. <https://onlinelibrary.wiley.com/doi/10.1111/1751-7915.13517>.
- Litbang Pertanian. 2011. *Kultivar*. <https://www.litbang.pertanian.go.id/kultivar/320/>. Accessed 20 March 2023, 14.46.
- Litbang Pertanian. 2011. *Kultivar*. <https://www.litbang.pertanian.go.id/kultivar/330/>. Accessed 20 March 2023, 14.47.
- McDonald, D., Subrahmanyam, P., Gibbons R. W., and Smith, D. H. 1985. *Early and late leaf spot of groundnut*. International Crops Research Institute for the Semi-Arid Tropics Information Bull. New York. p: 19.
- Medeot, D. B., Fernandez, M., Morales, G. M., Jofré, E. 2020. Fengycins From *Bacillus amyloliquefaciens* MEP218 Exhibit Antibacterial Activity by Producing Alterations on the Cell Surface of the Pathogens *Xanthomonas axonopodis* pv. *vesicatoria* and *Pseudomonas aeruginosa* PA01. *Frontiers Microbiology*, 10: 3107-3119.
- Meliyana, R., Wardana, R., Syarief, M. 2019. Efikasi ekstrak daun kemangi (*Ocimum basilicum*) terhadap penyakit bercak daun (*Cercospora personata*) pada tanaman

- kacang tanah. *Agriprima*, 3(1): 30–35.
- Meswaet, Y., Mangelsdorff, R., Yorou, N.S., Piepenbring, M. 2021. Unravelling unexplored diversity of cercosporoid fungi (*Mycosphaerellaceae*, *Mycosphaerellales*, *Ascomycota*) in tropical Africa. *MycoKeys*. 81:69–138.
- Milenkov, M., Thummer, R., Gler, J., Gritzinger, J., Jung, S., Schmitz, R.A. 2011. Insights into Membrane Association of *Klebsiella pneumoniae* NifL under Nitrogen-Fixing Conditions from Mutational Analysis. *Journal of Bacteriology*. 193(3):695–705.
- Muimba-Kankolongo, A. 2018. Food Crop Production by Smallholder Farmers in Southern Africa. Elsevier. p: 173–203.
- Mullan, A., Quinn, J.P., McGrath, J.W. 2002. Enhanced phosphate uptake and polyphosphate accumulation in *Burkholderia cepacia* grown under low-pH conditions. *Microbiology Ecology*. 44(1):69–77.
- Nautiyal, P. C. 2002. *GROUNDNUT - Food and agriculture organization*. https://www.fao.org/fileadmin/user_upload/inpho/docs/Post_Harvest_Compendium_-_Groundnut.pdf. Accessed 19 March 2023, 14.35.
- Neindow, M., Sowley, E. N. K., Kankam, F. 2017. Evaluation of plant extracts for the management of *Cercospora* leaf spot of groundnut (*Arachis hypogaea* L.). *African Journal of Plant Science*, 14 (11): 443-450.
- Noor, M. F., Hafizah, N. 2018. Respon Pertumbuhan dan Hasil Tanaman Kacang Tanah terhadap Pemberian Dosis Pupuk Hayati Di Lahan Podsolik. *Rawa Sains: Jurnal Sains STIPER Amuntai*, 8(1): 22-31.
- Organo, N.D., Granada, S.M.J.M., Pineda, H.G.S., Sandro, J.M., Nguyen, V.H., Gummert, M. 2022. Publisher Correction: Assessing the potential of a *Trichoderma*-based compost activator to hasten the decomposition of incorporated rice straw. *Scientific Report*. 12(1):1647-1658.
- Palupi, R., Prasetya, A. E. 2022. Pengaruh Implementasi Content Management System Terhadap Kecepatan Kinerja Menggunakan One Way Anova. *Jurnal Ilmiah Informatika*, 10(01): 74-79.
- Permandi, A. D. 2014. Pengaruh frekuensi pemberian agen pengendali hayati *Trichoderma harzianum* untuk mengendalikan penyakit bercak daun tembakau rajang di lapang (published thesis). Universitas Jember, Jember.
- Pagarra, H. 2016. A Simplified Model of *Aspergillus niger* Growth using *Nephrolepis biserrata* leaves for Exo-polygalacturonase Production. *Proceedings of ICMSTEA 2016: International Conference on Mathematics, Science, Technology, Education, and their Applications*, Makassar, Indonesia, 3rd – 4th October 2016.
- Prakash, J., Arora, N.K. 2019. Phosphate-solubilizing *Bacillus* sp. enhances growth, phosphorus uptake and oil yield of *Mentha arvensis* L. *3 Biotech*. 9(4):126-141.
- Preddy, V. R., Watson, R. R. 2020. *Nuts and seeds: in health and disease prevention*. 2nd Edition. Elsevier. United States of America. p: 465.
- Preston, G. M. 2004. Plant perceptions of plant growth-promoting *Pseudomonas*. *Phil Trans R Soc Lond B*, 359(1446): 907–918.
- Purnomo, J. 2021. *Perkembangan kultivar kacang tanah di Indonesia*. <https://balitkabi.litbang.pertanian.go.id/infotek/perkembangan-kultivar-kacang-tanah-di-indonesia/>. Accessed 19 March 2023, 10.29.
- Rachmat, A., Hafiizh, E. A., Ermayanti, T. M. 2019. *Pupuk organik hayati: aplikasi untuk budidaya hijauan pakan ternak, pagi gogo, dan sayuran*. LIPI Press. Jakarta. p: 24-25.
- Rahayu, A. A., Sau, T. 2021. Efektivitas Berbagai Konsentrasi BOF dan Dosis NPK pada Pertumbuhan dan Produksi Kacang Tanah (*Arachis hypogaea* L.). *Jurnal Ilmiah*

Agrotani, 3(2): 29-35.

- Rohmah, I. N., Alif, R. 2021. Uji pengembangan spora entomopatogen bunga entomopatogen *Lecanicillium lecanii* menggunakan haemocytometer. *Journal of Management Science*, 1 (2): 143-150.
- Roychowdhury, D., Paul, M., Banerjee, S. K. 2014. A review on the effects of biofertilizers and bioperticides on rice and tea cultivation and productivity. *International Journal of science Engineering and Technology*, 2: 96–106.
- Sajeena, A., Nair, D. S., Sreepavan, K. 2020. Non-pathogenic *Fusarium oxysporum* as a biocontrol agent. *Indian Phytopathology*, 73(2):177–183.
- Siddaramaiah, A. L., Krishnaprasad, K. L., Jayamariah, S. 1977. Bud necrosis disease of groundnut in Karnataka. *KissanWorld*, 4: 42-44.
- Siddiqui, J.A., Khan, M.M., Bamisile, B.S., Hafeez, M., Qasim, M., Rasheed, M.T., Rasheed, M.A., Ahmad, S., Shahid, M.I., Xu, Y. 2022. Role of Insect Gut Microbiota in Pesticide Degradation: A Review. *Frontiers Microbiology*. 13: 87-98
- Simarmata, Y. A., Manalu, K., Rasyidah, R. 2022. Uji Efektivitas Media Tanam Berbeda Terhadap Pertumbuhan Sawi Hijau (*Brassica juncea* L.) Dalam Hidroponik Sistem Wick. *BEST Journal (Biology Education, Sains and Technology)*, 5(1): 273-278.
- Simatupang, W. S. 2019. Tanggap pertumbuhan dan produksi kacang tanah (*Arachis hypogaea* L.) terhadap pemberian pupuk P dan waktu aplikasi *paclobutrazol* (published thesis). Universitas Sumatra Utara, Medan.
- Singh, R.P., Jha, P.N. 2017. The PGPR *Stenotrophomonas maltophilia* SBP-9 Augments Resistance against Biotic and Abiotic Stress in Wheat Plants. *Frontiers Microbiology*. 8:194-207.
- Smartt, J.1994. *The groundnut crop*. Springer. Dordrecht. pp: 56-73. Sommartya, T., Patcharee T. 1995. *Peanut rust disease (Puccinia arachidis Spegazzini): disease resistance*. <http://agris.fao.org/agrissearch/search/display.do?f=2001%2FTH%2FTH01013.xml%3BTH2000002300>. Accessed 19 March 2023, 16.16.
- Song, O.R., Lee, S.J., Lee, Y.S., Lee, S.C., Kim, K.K., Choi, Y.L. 2008. Solubilization of insoluble inorganic phosphate by *Burkholderia cepacia* DA23 isolated from cultivated soil. *Brazilian Journal of Microbiology*. 39(1):151–156.
- Sood, M., Kapoor, D., Kumar, V., Sheteiwy, M. S., Ramakrishnan, M., Landi, M., Araniti, F., Sharma, A. 2020. *Trichoderma*: The “Secrets” of a Multitalented Biocontrol Agent. *Plants*, 9(6):762.
- Sri, H. 2004. *Potensi jamur parasit darluca filum dan Verticillium sp. sebagai agens pengendali jamur patogen pada tanaman kacang- kacangan*. Balai Penelitian Tanaman Kacang-kacangan dan Umbi- umbian. pp: 201–507.
- Sri, H., Sumartini. 2015. *Penyakit-penyakit penting yang disebabkan oleh jamur pada kacang tanah dan cara pengendaliannya*. https://balitkabi.litbang.pertanian.go.id/wpcontent/uploads/2015/06/15.OK_Ha_r_da_OK_271-283-1.pdf. Accessed 20 March 2023, 14.49.
- Stalker, H. T. 1997. Peanut (*Arachis hypogaea* L.). *Field Crops Research*, 53(1–3):205–217.
- Staritsky, G. 1973. Seed morphology and early development of the groundnut (*Arachis hypogaea* L.). *Acta Botanica Neerlandica*, 22(4) :373–389.
- Steenhoudt, O., Vanderleyden, J. 2000. *Azospirillum*, a free-living nitrogen-fixing bacterium closely associated with grasses: genetic, biochemical and ecological aspects. *FEMS Microbiol Reviews*. 24(4):487–506.
- Suchoszek-Łukaniuk, K., Jaromin, A., Korycińska, M., Kozubek, A. 2011. Nuts and Seeds in Health and Disease Prevention. Elsevier. United States of America

p:873–880.

- Sumarno. 2017. *Status kacang tanah di Indonesia*. https://balitkabi.litbang.pertanian.go.id/wpcontent/uploads/2017/01/3_monograf_kacang-tanah_2015_Sumarno_29-39.pdf. Accessed 19 March 2023, 17.41.
- Sumartini, Emerensiana, U., Yuliantoro, B. 2020. *Penyakit utama pada kacang kedelai, kacang tanah dan kacang hijau*. Balitkabi. Malang. p: 31.
- Susilawati, P. N. 2010. *Budidaya kacang tanah pada lahan kering*. <https://banten.litbang.pertanian.go.id/new/index.php/publikasi/folder/165-budidaya-kacang-tanah-pada-lahan-kering>. Accessed 6 April 2023, 08.30.
- Trustinah. 2015. *Morfologi dan pertumbuhan kacang tanah*. https://balitkabi.litbang.pertanian.go.id/wpcontent/uploads/2015/06/4_OK_Trustinah_Morfo_40-59-1.pdf. Accessed 19 March 2023, 13.06.
- Tsotetsi, T., Nephali, L., Malebe, M., Tugizimana, F. 2022. *Bacillus* for Plant Growth Promotion and Stress Resilience: What Have We Learned? *Plants*. 11(19):2482-2495.
- Uge, E., Purnomo, J., Yusnawan, E. 2020. Ketahanan beberapa genotipe kacang tanah terhadap penyakit karat (*Puccinia arachidis*) dan bercak daun (*Cercosporidium personatum*). <https://balitkabi.litbang.pertanian.go.id/wp-content/uploads/2021/05/11435-47637-7-PB.pdf>. Accessed 6 April 2023, 08.27.
- Wilson, R.F., Stalker, H. T. 2016. *Peanuts: genetics, processing, and utilization*. Elsevier. United States of America. p: 1.
- Wright, G. 2004. *Encyclopedia of Grain Science*. Elsevier. United States of America. p: 438–444.
- Yuliawati, N., Mumpuni, A., Muljowati, J. S. 2020. Pengaruh *Cercospora* sp. terhadap kandungan asam karbonat pada mekanisme patogenisitas bercak daun tanaman cabai: kajian secara *in vitro* dan *in planta*. *BioEksakta*, 2(2): 280-287.
- Zhai, J., Jiumu, L., Cong, L., Wu, Y., Dai, L., Zhang, Z., Zhang, M. 2020. Reed decomposition under *Bacillus subtilis* addition conditions and the influence on water quality. *Ecohydrology & Hydrobiology*. 20(4):504–512.