

Chapter 6

References

- Abbas, S., Khan, G. A., Shahbaz, B., & Siddiqui, M. T. (2021). FARMERS' PERSPECTIVE ON THE TEACHING METHODS USED BY PUBLIC AND PRIVATE SECTORS EXTENSION IN THE PUNJAB, PAKISTAN. *Pakistan Journal of Agricultural Sciences*, 58(1).
- Abriouel, H., Franz, C. M., Omar, N. B., & Gálvez, A. (2011). Diversity and applications of *Bacillus* bacteriocins. *FEMS microbiology reviews*, 35(1), 201-232.
- Ahmad, F., Ahmad, I., & Khan, M. S. (2008). Screening of free-living rhizospheric bacteria for their multiple plant growth promoting activities. *Microbiological research*, 163(2), 173-181.
- Andersen, E. J., Ali, S., Byamukama, E., Yen, Y., & Nepal, M. P. (2018). Disease resistance mechanisms in plants. *Genes* 9: 339.
- Aneja K. R. Experiments in Microbiology, Plant Pathology, and Biotechnology, 4th Ed. New Age International, New Delhi, 2005.
- Aref, I., El Atta, H., El Obeid, M., Ahmed, A., Khan, P., & Iqbal, M. (2013). Effect of water stress on relative water and chlorophyll contents of *Juniperus procera* Hochst. ex Endlicher in Saudi Arabia. *Life Science Journal*, 10(4), 681-685.
- Armstrong, B., & Doll, R. (1975). Environmental factors and cancer incidence and mortality in different countries, with special reference to dietary practices. *International journal of cancer*, 15(4), 617-631.
- Askun, T. (2018). Introductory chapter: *Fusarium*: pathogenicity, infections, diseases, mycotoxins and management. *Fusarium: Plant Diseases, Pathogen Diversity, Genetic Diversity, Resistance and Molecular Markers*, 1.
- Backer, R., Rokem, J. S., Ilangumaran, G., Lamont, J., Praslickova, D., Ricci, E., ... & Smith, D. L. (2018). Plant growth-promoting rhizobacteria: context, mechanisms of action, and roadmap to commercialization of biostimulants for sustainable agriculture. *Frontiers in plant science*, 9, 1473.
- Bakker AW and Bakker P, Schippers B 1989. Deleterious cyanide producing rhizosphere Pseudomonads as a factor limiting potato root growth and tuber yield in

- high frequency potato cropping soil. In: Effects of crop rotation on potato production in the temperate zones. Kluwer Academic Publishers, Dodrecht, p. 153-62.
- Basu, A., Prasad, P., Das, S. N., Kalam, S., Sayyed, R. Z., Reddy, M. S., & El Enshasy, H. (2021). Plant growth promoting rhizobacteria (PGPR) as green bioinoculants: recent developments, constraints, and prospects. *Sustainability*, 13(3), 1140.
 - Begum N., Hasanuzzaman M., Li Y., Akhtar K., Zhang C., Zhao T. Seed Germination Behavior, Growth, Physiology and Antioxidant Metabolism of Four Contrasting Cultivars under Combined Drought and Salinity in Soybean. *Antioxidants*, 2022; 11(3):498.
 - Beniwal, S. P. S., Ahmed, S., & Gorfu, D. (1992). Wilt/root rot diseases of chickpea in Ethiopia. *International Journal of Pest Management*, 38(1), 48-51.
 - Bhakat, A. K., Mishra, A. K., & Mishra, N. S. (2007). Characterization of wear and metallurgical properties for development of agricultural grade steel suitable in specific soil conditions. *Wear*, 263(1-6), 228-233.
 - Bhatt, S., Pandhi, N., & Raghav, R. (2020). Improved salt tolerance and growth parameters of groundnut (*Arachishypogaea* L.) employing Halotolerant *Bacillus cereus* SVSCD1 isolated from Saurashtra Region, Gujarat. *Gujarat. Ecol. Environ. Cos*, 26, S199-S212.
 - Biffen, R. H. (1905). Mendel's laws of inheritance and wheat breeding. *The Journal of Agricultural Science*, 1(1), 4-48.
 - Biggs, R. H., & Webb, P. G. (1986). Effects of enhanced ultraviolet-B radiation on yield, and disease incidence and severity for wheat under field conditions. In *Stratospheric ozone reduction, solar ultraviolet radiation and plant life* (pp. 303-311). Berlin, Heidelberg: Springer Berlin Heidelberg.
 - Brar, D. S., Nayik, G. A., Aggarwal, A. K., Kaur, S., Nanda, V., Saxena, S., ...& Tolcha, T. D. (2023). Chemical and functional characteristics to detect sugar syrup adulteration in honey from different botanical origins. *International Journal of Food Properties*, 26(1), 1390-1413.
 - Casadevall, A. (2008). Evolution of intracellular pathogens. *Annu. Rev. Microbiol.*, 62, 19-33.

- Chanthini, K. M. P., Senthil-Nathan, S., Soranam, R., Thanigaivel, A., Karthi, S., Sreenath Kumar, C., ... & Kanagaraj Murali-Baskaran, R. (2018). Bacterial compounds, as biocontrol agent against early blight (*Alternaria solani*) and tobacco cut worm (*Spodoptera litura* Fab.) of tomato (*Lycopersicon esculentum* Mill.). *Archives of Phytopathology and Plant Protection*, 51(13-14), 729-753.
- Claus D (1992). A standardized Gram staining procedure. *World J Microbiol Biotechnol* 8: 451–452 <https://doi.org/10.1007/BF01198764>.
- Costacurta and Venderleyden 1995. Synthesis of phytohormones by plant associated bacteria. *Crit Rev Microbiol* 21, 1-18.
- Curl EA, Truelove B 1986. The Rhizosphere. Springer-Verlag, p. 21.
- Dar, W. D., & Laxmipathi Gowda, C. L. (2013). Declining agricultural productivity and global food security. *Journal of Crop Improvement*, 27(2), 242-254.
- Dasgupta, D., Ghati A., Sarkar A., Sengupta C., Paul G. Application of Plant Growth Promoting Rhizobacteria (PGPR) Isolated from the Rhizosphere of Sesbania Bispinosa on the Growth of Chickpea (*Cicer arietinum* L.). *Int J Curr Microbiol App Sci*, 2015; 4(5):1033-1042.
- Dawar, S., Khaliq, S., & Tariq, M. (2010). Comparative effect of plant extract of *Datura alba* Nees and *Cynodon dactylon* (L.) Pers., alone or in combination with microbial antagonists for the control of root rot disease of cowpea and okra. *Pak. J. Bot*, 42(2), 1273-1279.
- Dean, R., Van Kan, J. A., Pretorius, Z. A., Hammond-Kosack, K. E., Di Pietro, A., Spanu, P. D., ... & Foster, G. D. (2012). The Top 10 fungal pathogens in molecular plant pathology. *Molecular plant pathology*, 13(4), 414-430.
- Defago G, Berling CH, Burger U, Haas D, Kahr G, Keel C 1990 Suppression of black root rot of tobacco by a *Pseudomonas* strain; potential application and mechanisms. In: biological control of soil borne plant pathogen. Oxon: CAB International, p. 93-08.
- Dick, G. J., Anantharaman, K., Baker, B. J., Li, M., Reed, D. C., & Sheik, C. S. (2013). The microbiology of deep-sea hydrothermal vent plumes: ecological and biogeographic linkages to seafloor and water column habitats. *Frontiers in Microbiology*, 4, 124.

- Dobbelaere S., Croonenborghs A., Thys A., Ptacek D., Vanderleyden J., Dutto P., Labandera-Gonzalez C., Caballero-Mellado J., Aguirre J.F., Kapulnik Y., Brener S., Burdman S., Kadouri D., Sarig S., Okon Y. Responses of Agronomically Important Crops to Inoculation with *Azo-Spirillum*. *Functional Plant Biology*, 2001; 28(9): 871–879.
- Escrivá, L., Font, G., & Manyes, L. (2015). In vivo toxicity studies of fusarium mycotoxins in the last decade: A review. *Food and Chemical Toxicology*, 78, 185-206.
- Evangelista, E. V., Garcia, F. C., & Cruz, J. A. (2017). Isolation, characterization and identification of plant growth-promoting rhizobacteria. *Int J AgricTechnol*, 13, 715-27.
- Fahsi, N., Mahdi, I., Mesfioui, A., Biskri, L., &Allaoui, A. (2021). Plant Growth-Promoting Rhizobacteria isolated from the Jujube (*Ziziphus lotus*) plant enhance wheat growth, Zn uptake, and heavy metal tolerance. *Agriculture*, 11(4), 316.
- Fahsi, N., Mahdi, I., Mesfioui, A., Biskri, L., &Allaoui, A. (2021). Plant Growth-Promoting Rhizobacteria isolated from the Jujube (*Ziziphus lotus*) plant enhance wheat growth, Zn uptake, and heavy metal tolerance. *Agriculture*, 11(4), 316.
- Faria, D. R., Sakita, K. M., Akimoto-Gunther, L. S., Kioshima, É. S., Svidzinski, T. I. E., & Bonfim-Mendonça, P. D. S. (2017). Cell damage caused by vaginal *Candida albicans* isolates from women with different symptomatologies. *Journal of Medical Microbiology*, 66(8), 1225-1228.
- Flor, H. H. (1971). Current status of the gene-for-gene concept. *Annual review of phytopathology*, 9(1), 275-296.
- Frampton, R. A., Pitman, A. R., & Fineran, P. C. (2012). Advances in bacteriophage-mediated control of plant pathogens. *International journal of microbiology*, 2012.
- Fraústo da Silva, J.J.R. and Williams R.J.P. (2001). The Biological Chemistry of the Elements. The Inorganic Chemistry of Life Oxford University Press, Oxford.
- Furtak, K and Gajda, M A (2017). A book Chapter -Activity and Variety of Soil Microorganisms Depending on the Diversity of the Soil Tillage System in a book entitled Sustainability of Agroecosystems. Edited by Alexandre Bosco de Oliveira. Intechopen Publications, Rijeka.

- Ghavam, S., Vahdati, M., Wilson, I. A., & Styring, P. (2021). Sustainable ammonia production processes. *Frontiers in Energy Research*, 9, 34.
- Glick, B. R. (2014). Bacteria with ACC deaminase can promote plant growth and help to feed the world. *Microbiol. Res.* 169, 30–39.
- Goldstein AH (1995). Recent progress in understanding the molecular genetics and biochemistry of calcium phosphate solubilization by Gram negative bacteria. pp. 185-193.
- Goswami, D., Dhandhukia, P., Patel, P., & Thakker, J. N. (2014). Screening of PGPR from saline desert of Kutch: growth promotion in *Arachis hypogaea* by *Bacillus licheniformis* A2. *Microbiological Research*, 169(1), 66-75.
- Goswami, D., Vaghela, H., Parmar, S., Dhandhukia, P., & Thakker, J. N. (2013). Plant growth promoting potentials of *Pseudomonas* spp. strain OG isolated from marine water. *Journal of plant interactions*, 8(4), 281-290.
- Gururani, M. A., Venkatesh, J., Upadhyaya, C. P., Nookaraju, A., Pandey, S. K., & Park, S. W. (2012). Plant disease resistance genes: current status and future directions. *Physiological and molecular plant pathology*, 78, 51-65.
- Hassan, A. H., Mietzel, T., Brunstermann, R., Schmuck, S., Schoth, J., Küppers, M., & Widmann, R. (2018). Fermentative hydrogen production from low-value substrates. *World Journal of Microbiology and Biotechnology*, 34, 1-11.
- Hayat, R., Ali, S., Amara, U. et al. Soil beneficial bacteria and their role in plant growth promotion: a review. *Ann Microbiol* 60, 579–598 (2010).
<https://doi.org/10.1007/s13213-010-0117-1>.
- Henderson, S., & Sollner-Webb, B. (1986). A transcriptional terminator is a novel element of the promoter of the mouse ribosomal RNA gene. *Cell*, 47(6), 891-900.
- Hibbing, M. E., Fuqua, C., Parsek, M. R., & Peterson, S. B. (2010). Bacterial competition: surviving and thriving in the microbial jungle. *Nature reviews microbiology*, 8(1), 15-25.
- Hilal A, Ismail I and Ghebrial E (2016). *Fusarium oxysporum* of sp. cuminii, the Causal of Cumin Wilt in Egypt: Vegetative Compatibility Groups, Virulence and Geographical Distribution. *Egypt J Phytopathol*, 44: 241–259.
- Jaiswal, R. K., Kirar, B. S., & Mishra, R. K. Fusarium Wilt Disease of Chickpea (*Cicer arietinum* L.). *Diseases of Pulse Crops and their Management*, 1.

- Jiang, H., Wu, N., Jin, S., Ahmed, T., Wang, H., Li, B., ... & Zhang, J. Z. (2020). Identification of rice seed-derived Fusarium spp. and development of LAMP assay against Fusarium fujikuroi. *Pathogens*, 10(1), 1.
- Jiao, X., Takishita, Y., Zhou, G., & Smith, D. L. (2021). Plant associated rhizobacteria for biocontrol and plant growth enhancement. *Frontiers in plant science*, 12, 634796.
- Jing, Y. D., He, Z. L., & Yang, X. E. (2007). Role of soil rhizobacteria in phytoremediation of heavy metal contaminated soils. *Journal of Zhejiang University Science B*, 8, 192-207.
- Joshi, B. H., & Joshi, P. P. (2017). Screening and Characterization of Multi-Trait Plant Growth Promoting Bacteria Associated with Sugarcane for Their Prospects as Bioinoculants. *International Journal of Current Microbiology and Applied Sciences*, 6, 240-252.
- Joshi, M., Srivastava, R., Sharma, A. K., & Prakash, A. (2013). Isolation and characterization of Fusarium oxysporum, a wilt causing fungus, for its pathogenic and non-pathogenic nature in tomato (*Solanum lycopersicum*). *Journal of Applied and Natural Science*, 5(1), 108-117.
- Karthik, R., Hussain, A. J., & Muthezhilan, R. (2014). Effectiveness of Lactobacillus sp (AMET1506) as Probiotic against Vibriosis in *Penaeus monodon* and *Litopenaeus vannamei* Shrimp Aquaculture. *Bioscience Biotechnology Research Asia*, 11, 297-305.
- Kassam, A., Friedrich, T., Derpsch, R., Lahmar, R., Mrabet, R., Basch, G., ... & Serraj, R. (2012). Conservation agriculture in the dry Mediterranean climate. *Field Crops Research*, 132, 7-17.
- KAVYA, Y., TRIMURTULU, N., GOPAL, A. V., VANI, P. M., & PRASAD, N. DEVELOPMENT OF PLANT GROWTH PROMOTING MICROBIAL CONSORTIA WITH EFFICIENT ISOLATES.
- Kesaulya H., Talahaturuson A., Kalay A.M., Matatula E., Lawalatta I.J., Hehanussa M.L., NendissaS.J.Characterization of Plant Growth Promoting Rhizobacteria of Maize. *IOP Conf. Series: Earth and Environmental Science*, 2021; 883(1): 012028.
- Khan MA, Asaf S, Khan AL, Ullah I, Ali S, Kang SM 2019. Alleviation of salt stress response in soybean plants with the endophytic bacterial isolate *Curtobacterium* sp.

- SAK1 Ann Microbiol, 69(8): 797–808.
- Kloepper J.W., Lifshitz R., Zablotowicz R. M. Free-Living Bacterial Inocula for Enhancing Crop Productivity. *Trends In Biotechnology*, 1989; 7(2): 39-44.
 - Kloepper, J. W., Leong, J., Teintze, M., & Schroth, M. N. (1980). Enhanced plant growth by siderophores produced by plant growth-promoting rhizobacteria. *Nature*, 286(5776), 885-886.
 - Kloepper, J. W., Schroth, M. N., & Miller, T. D. (1980). Effects of rhizosphere colonization by plant growth-promoting rhizobacteria on potato plant development and yield. *Phytopathology*, 70(11), 1078-1082.
 - Knowles CJ 1976. Microorganisms and cyanide. Bacteriological Reviews, 40: 652-80.
 - Kumar S., Stecher G., Tamura K. MEGA7: Molecular Evolutionary Genetics Analysis Version 7.0 for Bigger Datasets. *Molecular Biology and Evolution*, 2016; 33(7):1870-1874.
 - Kumar, S. (2014). Plant disease management in India: Advances and challenges. *African Journal of Agricultural Research*, 9(15), 1207-1217.
 - Lakshmi, M. R. (2013). *Development and evaluation of compost based microbial consortia for cowpea* (Doctoral dissertation, University of Agricultural Sciences, GKVK).
 - Leite, J., Fischer, D., Rouws, L. F., Fernandes-Júnior, P. I., Hofmann, A., Kublik, S., ... & Radl, V. (2017). Cowpea nodules harbor non-rhizobial bacterial communities that are shaped by soil type rather than plant genotype. *Frontiers in Plant Science*, 7, 2064.
 - Lindsay, W. L., & Norvell, W. (1978). Development of a DTPA soil test for zinc, iron, manganese, and copper. *Soil science society of America journal*, 42(3), 421-428.
 - Liu, X., Cao, A., Yan, D., Ouyang, C., Wang, Q., & Li, Y. (2021). Overview of mechanisms and uses of biopesticides. *International Journal of Pest Management*, 67(1), 65-72.
 - Ludvigsen, J., Porcellato, D., Amdam, G. V., & Rudi, K. (2018). Addressing the diversity of the honeybee gut symbiont Gilliamella: description of Gilliamellaapis sp. nov., isolated from the gut of honeybees (*Apis mellifera*). *International Journal of Systematic and Evolutionary Microbiology*, 68(5), 1762-1770.

- M. Kaspari, J.S. Powers (2016). Biogeochemistry and geographical ecology: embracing all twenty-five elements required to build organisms. *Am. Nat.*, 188 (S1) (2016), pp. S62-S73.
- Mageshwaran, V., Gupta, R., Singh, S., Sahu, P. K., Singh, U. B., Chakdar, H., ... & Singh, H. V. (2022). Endophytic *Bacillus subtilis* antagonize soil-borne fungal pathogens and suppress wilt complex disease in chickpea plants (*Cicer arietinum* L.). *Frontiers in Microbiology*, 13, 994847.
- Majeed, A., Abbasi, M. K., Hameed, S., Imran, A., & Rahim, N. (2015). Isolation and characterization of plant growth-promoting rhizobacteria from wheat rhizosphere and their effect on plant growth promotion. *Frontiers in microbiology*, 6, 198.
- Makhaye G., Aremu A. O., Gerrano A. S., Tesfay S., Du Plooy C. P., Amoo S. O. Biopriming with Seaweed Extract and Microbial-Based Commercial Biostimulants Influences Seed Germination of Five *Abelmoschus Esculentus* Genotypes. *Plant Theory*, 2021; 10(7):1327.
- Marimuthu, S., Ramamoorthy, V., Samiyappan, R., & Subbian, P. (2013). Intercropping System with Combined Application of A zospirillum and P seudomonas fluorescens Reduces Root Rot Incidence Caused by R hizoctonia bataticola and Increases Seed Cotton Yield. *Journal of Phytopathology*, 161(6), 405-411.
- Martínez, C., Espinosa-Ruiz, A., & Prat, S. (2016). Gibberellins and plant vegetative growth. *Annual Plant Reviews, Volume 49: Gibberellins, The*, 285-322.
- Mazeed, Ashan, Abbasi, K.M, Hameed, Sohail, Imran , Asma and Rahim Nasir (2015). Isolation and characterization of plant growth-promoting rhizobacteria from wheat rhizosphere and their effect on plant growth promotion. *Frontiers in Microbiology*.17. 1-10.DOI: 10.3389/fmicb.2015.00198.
- Meena, M., Swapnil, P., Divyanshu, K., Kumar, S., Harish, Tripathi, Y. N., ... & Upadhyay, R. S. (2020). PGPR-mediated induction of systemic resistance and physiochemical alterations in plants against the pathogens: Current perspectives. *Journal of Basic Microbiology*, 60(10), 828-861.
- Moënne-Loccoz, Y., Mavingui, P., Combes, C., Normand, P., & Steinberg, C. (2015). Microorganisms and biotic interactions. *Environmental microbiology: fundamentals and applications: microbial ecology*, 395-444.

- Mohanty Pratikhya, S. P. (202 Meena, M., Swapnil, P., Divyanshu, K., Kumar, S., Tripathi, Y. N., Zehra, A., ... & Upadhyay, R. S. (2020). PGPR-mediated induction of systemic resistance and physiochemical alterations in plants against the pathogens: Current perspectives. *Journal of Basic Microbiology*, 60(10), 828- 861.1). Insight Into the Role of PGPR in Sustainable Agriculture and Environment . *Frontiers in Sustainable Food Systems* , 1-12.
- Mohite, B. (2013). Isolation and characterization of indole acetic acid (IAA) producing bacteria from rhizospheric soil and its effect on plant growth. *Journal of soil science and plant nutrition*, 13(3), 638-649.
- Naz, A., Razzaq, K., Raza, N., Hussain, M., Mujtaba, A., Afzal, M. I., ...& AL JBawi, E. (2023). Evaluation of enzymatic and non-enzymatic antioxidant potential of sprouted indigenous legumes from Pakistan. *International Journal of Food Properties*, 26(1), 1230-1243.
- Nezarat, S., &Gholami, A. (2009). Screening plant growth promoting rhizobacteria for improving seed germination, seedling growth and yield of maize. *Pakistan journal of biological sciences*, 12(1), 26.
- Niranjan, R., Mohan, V., & Rao, V. M. (2007). Effect of indole acetic acid on the synergistic interactions of Bradyrhizobium and Glomus fasciculatum on growth, nodulation, and nitrogen fixation of Dalbergia sissoo Roxb. *Arid land research and management*, 21(4), 329-342.
- Nur, H., Sugeng, P., & Nurul, A. (2019). The effect of compost combined with phosphate solubilizing bacteria and nitrogen-fixing bacteria for increasing the growth and yield of chili plants. *Russian Journal of Agricultural and Socio-Economic Sciences*, 92(8), 287-292.
- Patel, M., Vurukonda, S. S. K. P., & Patel, A. (2023). Multi-trait halotolerant plant growth-promoting bacteria mitigate induced salt stress and enhance growth of Amaranthusviridis. *Journal of Soil Science and Plant Nutrition*, 1-24.
- Paul D and Sinha SN 2017. Isolation and characterization of phosphate solubilizing bacterium *Pseudomonas aeruginosa* KUPSB12 with antibacterial potential from river Ganga, India. *Ann Agrar Sci*, 15(1): 130–6.
- Peter, G., Michael, K., Steve, D., Dmitry, L., Jim, K., Craig, S., & Donald, W. (2012). Optimization of screening of native and naturalized plants from Minnesota for

- antimicrobial activity. *Journal of Medicinal Plants Research*, 6(6), 938-949.
- Piquerez, S. J., Harvey, S. E., Beynon, J. L., & Ntoukakis, V. (2014). Improving crop disease resistance: lessons from research on *Arabidopsis* and tomato. *Frontiers in Plant Science*, 5, 671.
 - Prasad, M., Srinivasan, R., Chaudhary, M., Choudhary, M., & Jat, L. K. (2019). Plant growth promoting rhizobacteria (PGPR) for sustainable agriculture: perspectives and challenges. *PGPR amelioration in sustainable agriculture*, 129-157.
 - Raaijmakers, J. M., & Mazzola, M. (2012). Diversity and natural functions of antibiotics produced by beneficial and plant pathogenic bacteria. *Annual review of phytopathology*, 50, 403-424.
 - Rajni Devi and Richa Thakur 2018 Screening and identification of bacteria for plant growth promoting traits from termite mound soil. *Journal of Pharmacognosy and Phytochemistry*, 7(2): 1681-1686.
 - Ramesh, S., Santhi, P., & Ponnuswamy, K. (2006). Photosynthetic attributes and grain yield of pearl millet (*Pennisetum glaucum* (L.) R. Br.) as influenced by the application of composted coir pith under rainfed conditions. *Acta Agronomica Hungarica*, 54(1), 83-92.
 - Rana, A., Joshi, M., Prasanna, R., Shivay, Y. S., & Nain, L. (2012). Biofortification of wheat through inoculation of plant growth promoting rhizobacteria and cyanobacteria. *European Journal of Soil Biology*, 50, 118-126.
 - Rani, U M, Arundhati and Reddy G (2012). Screening of rhizobacteria containing plant growth promoting (PGPR) traits in rhizosphere soils and their role in enhancing growth of pigeon pea. *African Journal of Biotechnology*. 11 (32).8085-8091.
 - Rathna, J., Yazhini, K. B., Ajilda, A. A. K., Prabu, H. G. M., & Pandian, S. K. (2016). Production of naphthoquinones and phenolics by a novel isolate *Fusarium solani* PSC-R of Palk Bay and their industrial applications. *Bioresource Technology*, 213, 289-298.
 - Rawal, N., Pande, K. R., Shrestha, R., & Vista, S. P. (2022). Accumulation of nitrogen, phosphorus, and potassium in various stages of hybrid maize (*Zea mays* l.) as affected by different levels of NPK in silty clay loam soil of Nepal. *Communications in Soil Science and Plant Analysis*, 53(10), 1176-1195.

- Rebaya, A., Belghith, S. I., Baghdikian, B., Leddet, V. M., Mabrouki, F., Olivier, E., ... & Ayadi, M. T. (2015). Total phenolic, total flavonoid, tannin content, and antioxidant capacity of Halimium halimifolium (Cistaceae). *Journal of applied pharmaceutical science*, 5(1), 052-057.
- Reddy, P. P., & Reddy, P. P. (2014). Potential role of PGPR in agriculture. *Plant growth promoting Rhizobacteria for horticultural crop protection*, 17-34.
- Rodríguez, H., & Fraga, R. (1999). Phosphate solubilizing bacteria and their role in plant growth promotion. *Biotechnology advances*, 17(4-5), 319-339.
- Rudresh, D. L., Shivaprakash, M. K., & Prasad, R. D. (2005). Effect of combined application of Rhizobium, phosphate solubilizing bacterium and Trichoderma spp. on growth, nutrient uptake and yield of chickpea (*Cicer aritenum* L.). *Applied soil ecology*, 28(2), 139-146.
- Saito, MA , Goepfert, T. J, and Ritt, J.T (2008). Some thoughts on the concept of colimitation: three definitions and the importance of bioavailability. *Limnol. Oceanogr*, 53 (1) (2008), pp. 276-290.
- Saitou N., Nei M. The Neighbor-Joining Method: A New Method for Reconstructing Phylogenetic Trees. *Molecular Biology and Evolution*, 1987; 4(4): 406-425.
- Samy, R. P., Gopalakrishnakone, P., Ho, B., & Chow, V. T. (2008). Purification, characterization and bactericidal activities of basic phospholipase A2 from the venom of Agkistrodon halys (Chinese pallas). *Biochimie*, 90(9), 1372-1388.
- Saraf, C. K. (2015). Plant growth promoting Rhizobacteria (PGPR): a review. E3 Journal of Agricultural Research and Development , 0108-0119.
- Segura-Mena, R. A., Stoorvogel, J. J., Garcia-Bastidas, F., Salacinas-Niez, M., Kema, G. H., & Sandoval, J. A. (2021). Evaluating the potential of soil management to reduce the effect of *Fusarium oxysporum* f. sp. *cubense* in banana (*Musa AAA*). *European Journal of Plant Pathology*, 160, 441-455.
- Senthilkumar, M., Swarnalakshmi, K., Govindasamy, V., Lee, Y. K., & Annapurna, K. (2009). Biocontrol potential of soybean bacterial endophytes against charcoal rot fungus, *Rhizoctonia bataticola*. *Current microbiology*, 58, 288-293.
- Shaban, W. I., & El-Bramawy, M. A. (2011). Impact of dual inoculation with Rhizobium and Trichoderma on damping off, root rot diseases and plant growth parameters of some legumes field crop under greenhouse conditions. *Int. Res. J.*

- Agric. Sci. Soil Sci, 1(3), 98-108.*
- Shambhavi, H. P., Makwana, P., Surendranath, B., Ponnuvel, K. M., Mishra, R. K., & Appukuttan, P. R. (2020). Phagocytic events, associated lipid peroxidation and peroxidase activity in hemocytes of silkworm *Bombyx mori* induced by microsporidian infection. *Caryologia, 73(1)*.
 - Sharma, K. R., & Giri, G. (2022). Quantification of Phenolic and Flavonoid Content, Antioxidant Activity, and Proximate Composition of Some Legume Seeds Grown in Nepal. *International Journal of Food Science, 2022*.
 - Shaukat K., Affrasayab S., Hasnain,S. Growth Responses of *Triticum Aestivum* to Plant Growth-Promoting Rhizobacteria Used as Biofertilizer. *Res J Microbiol., 2010;5(10):1022-1030.*
 - Srivastava, P., Sahgal, M., Sharma, K., Enshasy, H. A. E., Gafur, A., Alfarraj, S., ... & Sayyed, R. Z. (2022). Optimization and identification of siderophores produced by *Pseudomonas monteilii* strain MN759447 and its antagonism toward fungi associated with mortality in Dalbergia sissoo plantation forests. *Frontiers in Plant Science, 13, 984522.*
 - Tewari, S., & Sharma, S. (2019). Molecular techniques for diagnosis of bacterial plant pathogens. In *Microbial diversity in the genomic era* (pp. 481-497). Academic Press.
 - Tsegaye, Z., Gizaw, B., Tefera, G., Feleke, A., Chaniyalew, S., Alemu, T., & Assefa, F. (2019). Isolation and biochemical characterization of Plant Growth Promoting (PGP) bacteria colonizing the rhizosphere of Tef crop during the seedling stage. *Journal of Plant Science and Phytopathology, 3(1), 013-027.*
 - Van Esse, H. P., Reuber, L., & van der Does, D. (2019). GM approaches to improve disease resistance in crops. *New Phytol, 225, 70-86.*
 - Vasant, G., Bhatt, S., & Raghav, R. (2023). Isolation and Molecular Characterization of Plant Growth Promoting Rhizobacteria from Groundnut (*Arachis Hypogaea L.*) Rhizosphere. *Current Agriculture Research Journal, 11(1).*
 - Vaughn, R. H., Osborne, J. T., Wedding, G. T., Tabachnick, J., Beisel, C. G., & Braxton, T. (1950). The utilization of citrate by *Escherichia coli*. *Journal of bacteriology, 60(2), 119-127.*

- Vejan, P., Abdullah, R., Khadiran, T., Ismail, S., & Nasrulhaq Boyce, A. (2016). Role of plant growth promoting rhizobacteria in agricultural sustainability—a review. *Molecules*, 21(5), 573.
- Venezia, M., & Creasey Krainer, K. M. (2021). Current advancements and limitations of gene editing in orphan crops. *Frontiers in Plant Science*, 12, 742932.
- Verma, M., Verma, S., & Arora, N. K. (2017). Application of Rhizobium-Pseudomonas consortia for enhanced production of mungbean in sustainable manner. *International Journal of Science, Technology and Society*, 3(2), 54-61.
- Viveros-Valdez, E., Rivas-Morales, C., Oranday-Cardenas, A., Verde-Star, M. J., & Carranza-Rosales, P. (2011). Antimicrobial activity of Hedeoma drummondii against opportunistic pathogens. *Pakistan Journal of Biological Sciences*, 14(4), 305.
- Voisard C, Keel C, Haas D, De'fago G 1989 Cyanide production by Pseudomonas fluorescens suppress black root rot of tobacco under gnotobiotic conditions. *EMBO J*, 8: 351-58.
- Wagh, G. S., Chavhan, D. M., & Sayyed, M. R. G. (2013). Physicochemical Analysis of Soils from Eastern Part of Pune City. *Universal Journal of Environmental Research & Technology*, 3(1).
- Lechevalier, H. A. (1988). The Waksman Institute of Microbiology 1954 to 1984. *The Journal of the Rutgers University Libraries*, 50(1).
- Xue Jia-Yu, T. F.-Q. (2020). Evolution and Functional Mechanisms of Plant Disease Resistance . *Frontiers in Genetics* , 1-3.
- Zaidi, S. S. E. A., Mahas, A., Vanderschuren, H., & Mahfouz, M. M. (2020). Engineering crops of the future: CRISPR approaches to develop climate-resilient and disease-resistant plants. *Genome biology*, 21(1), 1-19.
- Zhang F., Dashti N., Hynes R. K., Smith D. L. Plant Growth-Promoting Rhizobacteria and Soybean [Glycine Max (L.) Merr.] Growth and Physiology at Suboptimal Root Zone Temperatures. *Annals of Botany*, 1997; 79(3): 243-249.
- Zhao, Y., Selvaraj, J. N., Xing, F., Zhou, L., Wang, Y., Song, H., ... & Liu, Y. (2014). Antagonistic action of *Bacillus subtilis* strain SG6 on *Fusarium graminearum*. *PloS one*, 9(3), e92486.