



REFERENCES

- Agustina, M., Jayanti, D., Sugiyatno, A., Roviq, M., & Maghfoer, D. (2015). Compatibility of seven varieties of pre-citrus plant interstock on the rootstock of Japansche Citroen (JC). *Jurnal Produksi Tanaman*, 10(10), 1–9.
- Alves, G. R., Vitor H. B., Kenya M. Faggioni-Floriano, Sérgio A. de Carvalho, Rafael de Andrade M., Clarice G. B. Deme'trio, José R. P. P., & Pedro T. Y. (2017). Does the scion or rootstock of *Citrus* sp. affect the feeding and biology of *Diaphorina citri* Kuwayama (Hemiptera : Liviidae)? *Arthropod-Plant Interactions*, July 2017. <https://doi.org/10.1007/s11829-017-9555-z>
- Antolínez, C. A., Szejbak, K., Mauck, K. E., & Rivera, M. J. (2021). Assessment of variation in feeding behavior by color morph in the asian citrus psyllid (*Diaphorina citri* Kuwayama). *Journal of Insect Behavior*, 34(6), 312–318. <https://doi.org/10.1007/s10905-021-09791-z>
- Arimura G.I., Matsui K., & Takabayashi J. (2009). Chemical and molecular ecology of herbivore-induced plant volatiles: proximate factors and their ultimate functions. *Plant Cell Physiology*, 50, 911-23. <http://dx.doi.org/10.1093/pcp/pcp030>
- Benhadi-Marín, J., Garzo, E., Moreno, A., Pereira, J. A., & Fereres, A. (2021). Host plant preference of *Trioza erytreae* on lemon and bitter orange plants. *Arthropod-Plant Interactions*, 15(6), 887–896. <https://doi.org/10.1007/s11829-021-09862-0>
- Bonani, J. P., Fereres, A., Garzo, E., Miranda, M. P., Appezzato-Da-Gloria, B., & Lopes, J. R. S. (2010). Characterization of electrical penetration graphs of the Asian citrus psyllid, *Diaphorina citri*, in sweet orange seedlings. *Entomologia Experimentalis et Applicata*, 134(1), 35–49. <https://doi.org/10.1111/j.1570-7458.2009.00937.x>
- Borgoni, P. C., Vendramim, J. D., Lourençao, A. L., & Machado, M. A. (2014). Resistance of Citrus and Related Genera to *Diaphorina citri* Kuwayama (Hemiptera: Liviidae). *Neotropical Entomology*, 43(5), 465–469. <https://doi.org/10.1007/s13744-014-0230-0>
- Boquel, S., Giordanengo, P., & Ameline, A. (2014). Vector activity of three aphid species (Hemiptera: Aphididae) modulated by host plant selection behaviour on potato (Solanales: Solanaceae). *Annales de La Societe Entomologique de France*, 50(2), 141–148. <https://doi.org/10.1080/00379271.2014.936136>
- Cen, Y., Yang, C., Holford, P., Beattie, G. A. C., Spooner-Hart, R. N., Liang, G., & Deng, X. (2012). Feeding behaviour of the Asiatic citrus psyllid, *Diaphorina citri*, on healthy and huanglongbing-infected citrus. *Entomologia Experimentalis et Applicata*, 143(1), 13–22. <https://doi.org/10.1111/j.1570-7458.2012.01222.x>
- Civolani, S., Cassanelli, S., Chicca, M., Rison, J. L., Bassi, A., Alvarez, J. M., Annan, I. B., Parrella, G., Fano, E. A. (2014). an epg study of the probing behavior of adult *Bemisia tabaci* biotype q (Hemiptera : Aleyrodidae) following exposure to cyantraniliprole. *Journal of Economic Entomology*, 107(3), 910-919. DOI: <http://dx.doi.org/10.1603/EC13511>
- Dara, S. K. (2019). The new integrated pest management paradigm for the modern age. *Journal of Integrated Pest Management*, 10(1). <https://doi.org/10.1093/jipm/pmz010>
- Dewi, G. P., Kuntorini, E. M., & Pujawati, E. D. (2020). Struktur Anatomi dan Uji Histokimia Terpenoid dan Fenol Dua Varietas Sirih Hijau (*Piper betle* L .). *BIOSCIENTIAE*, 17, 1–14.
- Dong, X., Wang, M., Ling, N., Shen, Q., & Guo, S. (2016). Potential role of photosynthesis-related factors in banana metabolism and defense against *Fusarium oxysporum* f. sp. *cubense*. *Environmental and Experimental Botany*, 129, 4–12. <https://doi.org/10.1016/j.enexpbot.2016.01.005>
- Dudareva N., Negre F., Nagegowda D.A., Orlova I. (2006). Plant volatiles: recent advances and future perspectives. *Critical Reviews in Plant Sciences*, 25, 417-440. <http://dx.doi.org/10.1080/07352680600899973>
- Ebert, T. A., Backus, E. A., Shugart, H. J., & Rogers, M. E. (2018). Behavioral plasticity in probing by *Diaphorina citri* (Hemiptera , Liviidae): ingestion from phloem versus xylem is influenced by leaf age and surface. *Journal of Insect Behavior*, 31, 119–137. <https://doi.org/10.1007/s10905-018-9666-0>



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Ebert, T. A., & Rogers, M. E. (2021). Probing behavior of *Diaphorina citri* (Hemiptera: Liviidae) on Valencia orange influenced by sex, color, and size. *Journal of Insect Science*, 20(2),

1-10. <https://doi.org/10.1093/JISESA/IEAA016>

Edelstein, M. (2016). Grafting vegetable-crop plants : pros and cons. Proc. VII IS on Prot. Cult. Mild Winter Climates, November 2004. <https://doi.org/10.17660/ActaHortic.2004.659.29>

Fancelli, M., Borges, M., Laumann, R. A., Pickett, J. A., Birkett, M. A., & Blassoli-moraes, M. C. (2018). Attractiveness of host plant volatile extracts to the asian citrus psyllid , *Diaphorina citri*, is reduced by terpenoids from the non-host cashew. *Journal of Chemical Ecology*, 397–405. <https://doi.org/10.1007/s10886-018-0937-1>

Fujikawa, T., & Iwanami, T. (2012). Sensitive and robust detection of citrus greening (huanglongbing) bacterium “*Candidatus Liberibacter asiaticus*” by DNA amplification with new 16S rDNA-specific primers. *Molecular and Cellular Probes*, 26(5), 194–197. <https://doi.org/10.1016/j.mcp.2012.06.001>

George, J., Ammar, E., Hall, D. G., Jr, R. G. S., & Lapointe, S. L. (2018). Prolonged phloem ingestion by *Diaphorina citri* nymphs compared to adults is correlated with increased acquisition of citrus greening pathogen. *Scientific Reports*, February, 1–11. <https://doi.org/10.1038/s41598-018-28442-6>

George, J., Kanissery, R., Ammar, ED., Cabral, I., Markie, LT., Patt, JM., Stelinski, L. L. (2020). Feeding behavior of asian citrus psyllid [*Diaphorina citri* (Hemiptera:Liviidae)] nymphs and adults on common weeds occurring in cultivated citrus described using electrical penetration graph recordings. *Insects*, 11(48), 1-17. <https://doi:10.3390/insects11010048>

George, J., Kanissery, R., Bashyal, M., Tamayo, B., & Stelinski, L. L. (2022). Survival and feeding behavior of *Diaphorina citri* (Hemiptera: Liviidae) adults on common cover crops in citrus. *Agriculture (Switzerland)*, 12(12), 1-12. <https://doi.org/10.3390/agriculture12122175>

Gökseven, A., & Akbudak, N. (2023). Effects of Grafting on agro-morphological characteristics in eggplants grafted onto *Solanum torvum* and interspecific hybrid rootstocks. *Pakistan Journal of Botany*, 55(1), 393–402. [https://doi.org/10.30848/PJB2023-1\(32\)](https://doi.org/10.30848/PJB2023-1(32))

Grafton-Cardwell, E. E., Stelinski, L. L., & Stansly, P. A. (2013). Biology and management of Asian citrus psyllid, vector of the huanglongbing pathogens. *Annual Review of Entomology*, 58, 413–432. <https://doi.org/10.1146/annurev-ento-120811-153542>

Hall, D., Ammar, E.-D., Bowman, K., & Stover, E. (2018). Epifluorescence and stereomicroscopy of trichomes associated with resistant and susceptible host plant genotypes of the asian citrus psyllid (Hemiptera: Liviidae), Vector of citrus greening disease bacterium. *Journal of Microscopy and Ultrastructure*, 6(1), 56. https://doi.org/10.4103/jmau.jmau_9_18

Hall, D. G. (2008). Biology, history and world status of *Diaphorina citri*. *Proceedings of the I Taller International Sobre Huanglongbing de Los Cítricos (*Candidatus Liberibacter Spp*) y El Psílido Asiático de Los Cítricos (*Diaphorina Citri*),* 1–11.

Hamdi, M. M., Boughalleb, N., Tarchoun, N., & Belbahri, L. (2009). Evaluation of grafting effect on tomato crop yield and *Fusarium* crown and root rot disease. *Journal of Applied Horticulture*, 11(2), 107–110. <https://doi.org/10.37855/jah.2009.v11i02.22>

Hanley M.E., Lamont B.B., Fairbanks M.M., & Rafferty C.M. (2007). Plant structural traits and their role in antiherbivore defense. *Perspectives Plant Ecology Evolution Systematics*, 8, 157-78; <http://dx.doi.org/10.1016/j.ppees.2007.01.001>

Hijaz, F., Al-rimawi, F., Manthey, J. A., & Killiny, N. (2020). Phenolics , flavonoids and antioxidant capacities in Citrus species with different degree of tolerance to Huanglongbing. *Plant Signaling & Behavior*, 15(5). <https://doi.org/10.1080/15592324.2020.1752447>

Hussain, Z., Khadija, F., Aziz, A., Khan, M. N., Salik, M. R., & Anwar, R. (2017). Evaluation of different grafting methods to citrus cultivars. *Citrus Research & Technology*, 38(2), 198-203. <https://doi.org/10.4322/crt.icc100>



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Universitas Gadjah Mada, 2023 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Inoue H, Ohnishi J, Ito T, Miyata S, Iwanami T & Ashihara W (2009) Enhanced proliferation and efficient transmission of *Candidatus Liberibacter asiaticus* by adult *Diaphorina citri* after acquisition feeding in the nymphal stage. *Annals of Applied Biology* 155, 29–36.
- Johnston, N., Stansly, P. A., & Stelinski, L. L. (2019). Secondary hosts of the Asian citrus psyllid, *Diaphorina citri* Kuwayama: Survivorship and preference. *Journal of Applied Entomology*, 143(9), 921–928. <https://doi.org/10.1111/jen.12673>
- Juairiah, L., & Rahman, W. (2014). Anatomy evaluation graft area at three grafting technique on successfull interspecific grafting at vireya rhododendron. *Jurnal Biologi Indonesia*, 10(1), 145–148.
- Leong, S., Teck, C., Fatimah, A., Beattie, A., Kueh, R., Heng, J., King, W. S., Campus, S., & Samarahan, K. (2011). Influence of host plant species and flush growth stage on the Asian Citrus Psyllid , *Diaphorina citri* Kuwayama. *American Journal of Agricultural and Biological Sciences*, 6(4), 536–543.
- Li, X., Ruan, H., Zhou, C., Meng, X., & Chen, W. (2021). Controlling citrus Huanglongbing : green sustainable development route is the future. *Frontiers in Plant Science*, 12(November), 1–12. <https://doi.org/10.3389/fpls.2021.760481>
- Lin, P. A., Chen, Y., Ponce, G., Acevedo, F. E., Lynch, J. P., Anderson, C. T., Ali, J. G., & Felton, G. W. (2022). Stomata-mediated interactions between plants, herbivores, and the environment. *Trends in Plant Science*, 27(3), 287–300. <https://doi.org/10.1016/j.tplants.2021.08.017>
- Liu, H., Shao, M., & Yang, L. (2023). Photosynthesis Characteristics of tomato plants and its' responses to microclimate in new solar greenhouse in North China. *Horticulturae*, 9(2). <https://doi.org/10.3390/horticulturae9020197>
- Luo, X., Yen, A. L., Powell, K. S., Wu, F., Wang, Y., Zeng, L., Yang, Y., & Cen, Y. (2015). Feeding behavior of *Diaphorina citri* (Hemiptera: Liviidae) and its acquisition of “*Candidatus Liberibacter asiaticus*”, on huanglongbing-infected Citrus reticulata leaves of several maturity stages. *Florida Entomologist*, 98(1), 186–192. <https://doi.org/10.1653/024.098.0132>
- MacWilliams, J. R., Chesnais, Q., Nabity, P., Mauck, K., & Kaloshian, I. (2023). Cowpea aphid resistance in cowpea line CB77 functions primarily through antibiosis and eliminates phytotoxic symptoms of aphid feeding. *Journal of Pest Science*, 96(2), 539–553. <https://doi.org/10.1007/s10340-022-01529-w>
- Muslim, Wirawan, I. G. P., & Sritamin, M. (2019). Hispatologi Tulang Daun Jeruk Siam (Citrus Vein Phloem Degeneration (CVPD) Pada Tingkat Serangan Ringan, Sedang, Berat. *E-Jurnal Agroteknologi Tropika*, 8(1), 77–90.
- Nuryandani, E., Susandarini, R., Indrianto, A., & Nuringtyas, T. R., Fathima, A.M., & Subandiyah, S. (2020). Short Communication : Variations of morphology , anatomy , and metabolite profiles of Citrus reticulata Blanco cv . Tawangmangu grafts produced by shoot tip grafting using several rootstocks. *Biodiversitas*, 21(10), 4671–4676. <https://doi.org/10.13057/biodiv/d211028>
- Nyirahabimana, F. (2023). The Effects of Grafting on plant , fruit and seed quality in cantaloupe (*Cucumis melo* L . var . cantalupensis) Melons. *Seeds*, 1–14. <https://doi.org/10.3390/seeds2010001>
- Ohtsuka, A., Lawren S., & Haruhiko T. (2018). Bundle sheath lignification mediates the linkage of leaf hydraulics and venation. *Plant cell environment*, 342–353. <https://doi.org/10.1111/pce.13087>
- Paris, T. M., Allan, S. A., Hall, D. G., Hentz, M. G., Hetesy, G., & Stansly, P. A. (2016). Host plant affects morphometric variation of *Diaphorina citri* (Hemiptera : Liviidae). *PeerJ* 1–22. <https://doi.org/10.7717/peerj.2663>
- Pelz-Stelinski KS, Bransky RH, Ebert TA & Rogers ME (2010) Transmission parameters for *Candidatus Liberibacter asiaticus* by Asian citrus psyllid (Hemiptera: Psyllidae). *Journal of Economic Entomology* 103: 1531–1541.
- Ratu, S., Muhammad, T., & Andi, K. (2020). Insidensi penyakit Citrus Vein Phloem Degeneration (CVPD) dan kepadatan populasi serangga vektor *Diaphorina citri* pada tanaman jeruk di Pulau Siompu Kabupaten Buton Selatan. *Berkala*, 8(1), 33–39.



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Universitas Gadjah Mada, 2023 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Rehman, F., Khan, F. A., & Badruddin, S. (2012). Role of Phenolics in Plant Defense Against Insect Herbivory Chemistry of Phytopotentials : Health , Energy and Environmental Perspectives. February 2014. <https://doi.org/10.1007/978>
- Rogers, M. E., & Stansly, P. A. (2012). Biology and management of the asian citrus psyllid , *Diaphorina citri* Kuwayama , in Florida Citrus. *University of Florida*. 1–6.
- Sétamou, M., Soto, Y. L., Tachin, M., & Alabi, O. J. (2023). Report on the first detection of Asian citrus psyllid *Diaphorina citri* Kuwayama (Hemiptera: Liviidae) in the Republic of Benin, West Africa. *Scientific Reports*, 13(1), 1–9. <https://doi.org/10.1038/s41598-023-28030-3>
- Singh, S., Kaur, I., & Kariyat, R. (2021). The Multifunctional Roles of Polyphenols in Plant-Herbivore Interactions.
- Singleton, V.L.; Orthofer, R.; Lamuela-Raventós, R.M. 1999. Analysis of total phenols and other oxidation substrates and antioxidants by means of folin-ciocalteu reagent. In Methods in Enzymology; Academic Press: Cambridge, MA, USA, Volume 299, pp. 152–178.
- Soffan, A., & Aldawood, A. S. (2016). Electrical Penetration Graph monitored feeding behavior of cowpea aphid, *Aphis craccivora* Koch. (Hemiptera:Aphididae), on faba bean, *Vicia faba* L. (Fabaceae), cultivars. *Turkish Journal of Entomology*, 39(4), <https://doi.org/10.16970/ted.16177>
- Stockton, D. G., Martini, X., Patt, J. M., & Stelinski, L. L. (2016). The influence of learning on host plant preference in a significant phytopathogen vector, *Diaphorina citri*. *PLoS ONE*, 11(3), 1–17. <https://doi.org/10.1371/journal.pone.0149815>
- Subandiyah, S., Nikoh, N., Tsuyumu, S., Somowiyarjo, S., & Fukatsu, T. (2000). Complex endosymbiotic microbiota of the citrus psyllid *Diaphorina citri* (Homoptera: Psylloidea). *Zoological Science*, 17(7), 983–989. <https://doi.org/10.2108/zsj.17.983>
- Tardivo, C., Qureshi, J., Bowman, K. D., & Albrecht, U. (2023). Relative influence of rootstock and scion on asian citrus psyllid infestation and *Candidatus Liberibacter asiaticus* colonization. *HortScience*, 58(4), 395–403. <https://doi.org/10.21273/HORTSCI17039-22>
- Tomaseto, A. F., Marques, R. N., Fereres, A., Zanardi, O. Z., Volpe, H. X. L., Alquézar, B., Peña, L., & Miranda, M. P. (2019). Orange jasmine as a trap crop to control *Diaphorina citri*. *Scientific Reports*, 1–11. <https://doi.org/10.1038/s41598-019-38597-5>
- Usha Rani P. & Jyothsna Y. (2010). Biochemical and enzymatic changes in rice as a mechanism of defense. *Acta Physiology Plant*, 32, 695-701; <http://dx.doi.org/10.1007/s11738-009-0449-2>.
- Valkama E., Salminen JP., Koricheva, J., & Pihlaja, K. (2003). Comparative Analysis of Leaf Trichome Structure and Composition of Epicuticular Flavonoids in Finnish Birch Species. *Annals of Botany*, 91, 643-655. <https://doi.org/10.1093/aob/mcg070>
- Wijaya, I. N. (2017). Preferensi *Diaphorina Citri* Kuwayama (Homoptera: Psyllidae) pada beberapa jenis tanaman jeruk. *Jurnal Agritrop*, 26(3), 110–115. <https://ojs.unud.ac.id/index.php/agritrop/article/download/3063/2211>
- Wójcicka, A. (2015). Surface waxes as a plant defense barrier towards grain aphid. *Acta Biologica Cracoviensia Series Botanica*, 57(1), 95–103. <https://doi.org/10.1515/abcsb-2015-0012>
- Wu, F., Huang, J., Xu, M., Fox, E. G. P., Beattie, G. A. C., Holford, P., Cen, Y., & Deng, X. (2018). Host and environmental factors influencing ‘*Candidatus Liberibacter asiaticus*’ acquisition in *Diaphorina citri*. *Pest Management Science*, 74(12), 2738–2746. <https://doi.org/10.1002/ps.5060>
- Wu, T., Luo, X., Xu, C., Wu, F., Qureshi, J. A., & Cen, Y. (2016). Feeding behavior of *Diaphorina citri* and its transmission of ‘*Candidatus Liberibacter asiaticus*’ to citrus. *Entomologia Experimentalis et Applicata*, 161(2), 104–111. <https://doi.org/10.1111/eea.12496>
- Xiong, B., Qiu, X., Huang, S. J., Yang, Y. T., Sun, G. C., Wang, X. J., Zhang, X., Dong, T. T., Shen, X. Y., Wei, W., & Wang, Z. H. (2020). Comparative analysis of leaf photosynthetic characteristics and fruit sugar content in trees of citrus cultivar ‘huangguogan’ of different age. *Photosynthetica*, 58(4), 902–910. <https://doi.org/10.32615/ps.2020.042>



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Youn, Y., Backus, E. A., Serikawa, R. H., & Stelinski, L. L. (2011). Correlation of an Electrical Penetration Graph waveform with walking by asian citrus psyllid, *Diaphorina citri* (Hemiptera: Psyllidae). *Florida Entomologist*, 94(4), 1084–1087. <https://doi.org/10.1653/024.094.0456>

Yulianti, F., Adiredjo, L. A., Soetopo, L., & Ashari, S. (2020). Karakteristik anatomi akar dan batang tanaman jeruk batang bawah sebagai parameter penduga vigor tanaman jeruk keprok rimau gerga lebong (RGL). *Jurnal Hortikultura Indonesia*, 11(3), 166–173.

Zamzami, L., Anis A., Chaireni M., & Emi B. (2021). Klasifikasi dan Sebaran Jeruk Nusantara. *IPB press*, (Issue September).