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I. PUBLICACIONES

Publicaciones en revistas indexadas (ISI)

1. **Barrientos-Sanhueza, C.**, Mondaca, P., Tamayo, M., Álvaro, JE, Díaz-Barrera, A., & Cuneo, IF. 2021. Enhancing the mechanical and hydraulic properties of coarse quartz sand using a water-soluble hydrogel based on bacterial alginate for novel application in agricultural contexts. *Soil Sci Soc Am J.* 2021; 85: 1880– 1893.
2. **Barrientos-Sanhueza, C.**, Cargnino-Cisternas, D., Diaz-Barrera, A., Cuneo, I.F. 2022. Bacterial Alginate-Based Hydrogel Reduces Hydro-Mechanical Soil-Related Problems in Agriculture Facing Climate Change. *Polymers* 14:922.
3. Beyer, C.P.; **Barrientos-Sanhueza, C.**; Ponce, E.; Pedreschi, R.; Cuneo, I.F.; Alvaro, J.E. 2022. Differential Hydraulic Properties and Primary Metabolism in Fine Roots of Avocado Trees Rootstocks. *Plants*, 11(8), 1059.
4. **Barrientos-Sanhueza, C.**, Hormazabal-Pavat, V., Cuneo, I.F. 2023. Extreme drought enhances *Opuntia ficus-indica* fine root cells elasticity preventing permanent damage. *Theor. Exp. Plant Physiol.* 35: 233-246.
5. Dorochesi, F., **Barrientos-Sanhueza, C.**, Díaz-Barrera, A., Cuneo, I. 2023. Enhancing Soil Resilience: Bacterial alginate hydrogel vs. Algal alginate in mitigating agricultural challenges. *Gels.* 9(12):988.
6. **Barrientos-Sanhueza, C.**, Zurita-Silva, A., Knipfer, T., McElrone, A.J., Cuneo, I.F. 2024. Unique root hydraulic and mechanical properties support the resilience of grapevines adapted to the Atacama Desert. *Plant, Cell & Environment.* 47:5126-5139.
7. **Barrientos-Sanhueza, C.**, Dorochesi, Zurita-Silva, A., Knipfer, T., F., Cuneo,

- I.F. 2025. Stele–cortex interactions govern fine-root mechanics during short-term salinity stress in grapevine. *Plant Stress*. 17:100929
8. Dorochesi, F., **Barrientos-Sanhueza, C.**, Cuneo, I.F. 2025. Surface-applied chia mucilage doubles xylem water potential and cuts evapotranspiration in drought-stressed maize. *Rizhosphere*. 35:101148.
 9. Dorochesi, F., Barrientos-Sanhueza, C., Zurita-Silva, A., Cuneo, I.F. 2025. Short-term salinity triggers coordinated xerophyte-like hydraulics that preserve quinoa water balance. *Theor. Exp. Plant. Physiol.* 37:47.
 10. Duarte-Serrano, D., Waterlot, C., Cezard, C., Bouvier, B., **Barrientos-Sanhueza, C.**, Cuneo, I.F., Fuentealba, C., Hadad, C., Nguyen van-nhien, A., 2025. Bacterial alginate-based hydrogels reinforced with polysaccharide nanocrystals for water and wastewater decontamination. *Results in Engineering*. Under review. 29:108904.