

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

Ítalo Cuneo Arratia

Publicaciones (2019 – presente)

1. Dorochesi, F., Barrientos-Sanhueza, C., Díaz-Barrera, Á., **Cuneo, I.F.** 2023. Enhancing Soil Resilience: Bacterial Alginate Hydrogel vs. Algal Alginate in Mitigating Agricultural Challenges. *Gels*, 9: 988. Q1.
2. Heller-Fuenzalida, F., **Cuneo, I.**, Kuhn, N., Peña-Neira, A., Cáceres-Mella, A. 2023. Rootstock effect influences the phenolic and sensory characteristics of Syrah grapes and wines in a Mediterranean climate. *Agronomy*, 13(10): 2530. Q1.
3. Barrientos-Sanhueza, C., Hormazabal-Pavat, V., **Cuneo, I.F.** 2023. Extreme drought enhances *Opuntia ficus-indica* fine root cells elasticity preventing permanent damage. *Theoretical and experimental plant physiology*, 35: 233–246. Q2.
4. Tamayo, M., Sepúlveda, L., Guequen, E.P., Saavedra, P., Pedreschi, R., Cáceres-Mella, A., Álvaro, J., **Cuneo, I.** 2023. Hydric Behavior: Insights into Primary Metabolites in Leaves and Roots of Cabernet Sauvignon and Grenache Grapevine Varieties under Drought Stress. *Horticulturae*, 9(5): 566. Q1.
5. Aris, G., **Cuneo, I.F.**, Pastenes, C., Cáceres-Mella, A. 2022. Anthocyanin Composition in Cabernet Sauvignon Grape Skins: Effect of Regulated Deficit Irrigation in a Warm Climate. *Horticulturae*, 8(9): 796. Q1.
6. Peirano-Bolelli, P., Heller-Fuenzalida, F., **Cuneo, I.F.**, Peña-Neira, A., Cáceres-Mella, A. 2022. Changes in the Composition of Flavonols and Organic Acids during Ripening for Three cv. Sauvignon Blanc Clones Grown in a Cool-Climate Valley. *Agronomy*, 12: 1357. Q1
7. 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. Q1.
8. 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: 1059. Q1.
9. Barrientos, C., Mondaca, P., Tamayo, M., Alvaro, J., Diaz, A., **Cuneo, I.F.** 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 Science Society of America Journal*. Q3.
10. Salgado, E., Livellara, N., Chaigneau, E., Varas, F., **Cuneo, I.** 2021. Hourly Relationship between Reference Evapotranspiration and Shoot Shrinkage in Walnut Trees and Pomegranate under Deficit Irrigation. *Plants*, 11, 31. Q1.

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11. Lindh, V., Uarrota, V., Zulueta, C., Alvaro, J., Valdenegro, M., **Cuneo, I.**, Mery, D., Pedreschi, R. 2021. Image Analysis Reveals That Lenticel Damage Does Not Result in Black Spot Development but Enhances Dehydration in *Persea americana* Mill. cv. Hass during Prolonged Storage. *Agronomy-Basel*, 11: 9. Q1.
12. Reingwirtz, I., Uretsky, J., **Cuneo, I.**, Knipfer, T., Reyes, C., Walker, M., McElrone, A. 2021. Inherent and Stress-Induced Responses of Fine Root Morphology and Anatomy in Commercial Grapevine Rootstocks with contrasting Drought resistance. *Plants*, 10: 1121. Q1.
13. Rojas, G., Fernandez, E., Whitney, C., Luedeling, E., **Cuneo, I.** 2021. Adapting sweet cherry orchards to extreme weather events – Decision Analysis in support of farmers’ investments in central Chile. *Agricultural Systems*, 187: 103031. Q1.
14. Beyer, C., **Cuneo, I.**, Alvaro, J., Pedreschi, R. 2021. Evaluation of aerial and root plant growth behavior, water and nutrient use efficiency and carbohydrate dynamics for Hass avocado grown in a soilless and protected growing system. *Scientia Horticulturae*, 277: 109830. Q1.
15. **Cuneo, I.**, Barrios, F., Knipfer, T., Uretsky, J., Reyes, C., Lenain, P., Brodersen, C., Walker, M., McElrone, A. 2021. Differences in grapevine rootstock sensitivity and recovery from drought are linked to fine root cortical lacunae and root tip function. *New Phytologist*, 229: 272-283. Q1.
16. Fernández, E., **Cuneo, I.**, Whitney, C., Luedeling, E. 2020. Prospects of decreasing winter chill for deciduous fruit production in Chile throughout the 21st century. *Climatic Change*, 159: 423-439. Q2.
17. Alvarado, L., Saa, S., **Cuneo, I.**, Pedreschi, R., Morales, J., Larach, A., Barros, W., Besoain, X. 2020. A comparison of immediate and short-term defensive responses to *Phytophthora* species infection in both susceptible and resistant walnut rootstocks. *Plant Disease*, 104: 921-929. Q1.
18. Morales, J., Besoain, X., **Cuneo, I.**, Larach, A., Alvarado, L., Cáceres, A., Saa, S. 2019. Impact of Nitrogen Fertilization on *Phytophthora cinnamomi* Root-related Damage in *Juglans regia* Saplings. *HortScience* 54: 2188-2194. Q2.
19. Fernandez, E., **Cuneo, I.**, Luedeling, E., Alvarado, L., Farías, D., Saa, S. 2019. Starch and hexoses concentrations as physiological markers in dormancy progression of sweet cherry twigs. *Trees - Structure and Function* 33: 1187-1201. Q2.

Proyectos con financiamiento externo últimos 5 años (adjudicado y/o ejecutado)

1. Unravelling the biophysical modulations of the soil-mucilage-root interface in response to drought and its impact on stomatal responses in different crop species (SoMuRo).
Financiamiento: Fondecyt Regular
Rol: Investigador Responsable
Duración: 2022-2025
Año de adjudicación: 2022.



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2. Rootstocks/scion hydraulic interaction: unraveling the contribution of root apoplastic, symplastic and transcellular water transport pathways on scion physiological performance
Financiamiento: Fondecyt Regular
Rol: Co- investigador
Duración: 2019-2023
Año de adjudicación: 2019

3. Understanding how drought stress affects water uptake capacity at different developmental zones along the length of grapevine fine roots
Financiamiento: Fondecyt de Iniciación
Rol: Investigador responsable
Duración: 2018-2021
Año adjudicación: 2018