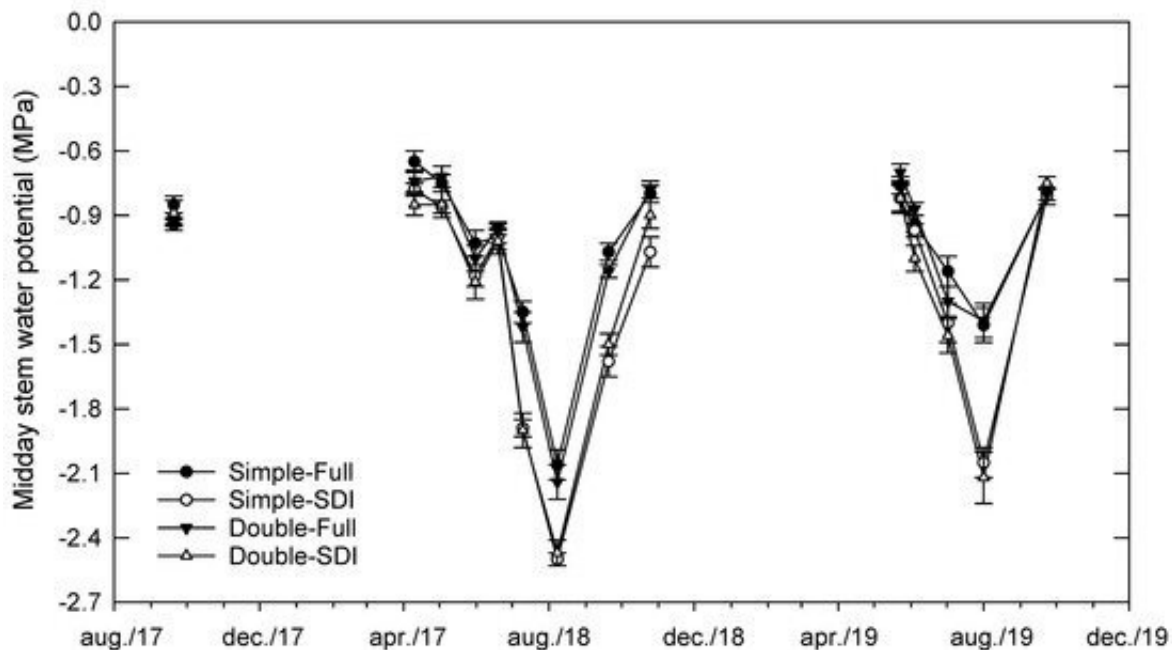


# Best method for drip irrigation on persimmon and lemon trees

August 6 2021



Credit: DOI: 10.3390/w13131795

Scientists from the Desertification Research Institute (CIDE, CSIC-UV-GVA) and the Segura Center for Soil Science and Applied Biology (CEBAS, CSIC) verify that using a single dropper-holder line would optimize the use of water in persimmon and lemon trees. The study contributes to establish guidelines to improve the agronomic design of irrigation, facilitate cultivation work and even achieve increases in production.

A research group from the Desertification Research Institute (CIDE)—a joint center of the Spanish National Research Council (CSIC), the University of Valencia and the Valencian Government—and the Segura Center for Soil Science and Applied Biology (CEBAS-CSIC) have developed a study to establish the optimal method for irrigating persimmon and lemon plantations in semi-arid climates using drip irrigation. The study concludes that a single dripper line is sufficient to optimize performance and efficiency in the use of [water](#), both for the lemon tree and for young persimmon [trees](#).

The study, published in open access journal *Water*, responds to the needs of the productive sector when it comes to improving the application of [drip irrigation](#) in these types of crops, which are of great economic importance in the Valencian Community and the Region of Murcia.

The work determines the optimal way to place the dripper-holder hoses—number and arrangement—in a fruit orchard, where one or more dripper-holder lines can be placed to supply water to the trees.

According to the study, although a simple line arrangement is cheaper and facilitates cultivation work, it may not provide enough volume of wet soil. This study compares the agronomic response of the trees as a function of the number of dripper lines used. "The main conclusion is that, in the case of the lemon tree and [clay soil](#), a single dripper-holder line is enough to optimize performance and efficiency in the use of water. In the same way, for young persimmon trees, the arrangement of the drippers in a single dripper-holder line allows optimizing the productivity of the water," says Diego Intrigliolo, researcher at CIDE and one of the authors of the work.

**More information:** Margarita Parra et al, Effects of Drip Irrigation Design on a Lemon and a Young Persimmon Orchard in Semi-Arid Conditions, *Water* (2021). [DOI: 10.3390/w13131795](https://doi.org/10.3390/w13131795)

Provided by Asociacion RUVID

Citation: Best method for drip irrigation on persimmon and lemon trees (2021, August 6)  
retrieved 20 April 2024 from  
<https://phys.org/news/2021-08-method-irrigation-persimmon-lemon-trees.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.