



Science  
Societies

# Multistate Research Project Makes Big Impact

May 1, 2023



*University of California–Davis professor Jan Hopmans (far left), lead author on the retrospective article, with students and postdocs in an almond orchard exploring how the tree roots extract soil water and nutrients. Photo courtesy of Jan Hopmans.*

---

A retrospective article recently published in Vadose Zone Journal summarizes the accomplishments of the USDA-funded multistate research project (MRP) in soil water movement over the past 60 years. Since its founding in 1958, collaborations of the Soil, Water, and Environmental Physics to Sustain Agriculture and Natural Resources team have led to valuable advances in soil science and vadose zone hydrology in the U.S. and globally.

Open discussions among this group of soil physical scientists have contributed to many breakthroughs, innovative research ideas, and practical solutions for managing soil and water. Major accomplishments include the theory of soil solute transports and recognition of the importance of conducting studies at the field scale, notably how quantification of field-scale soil spatial variability improves understanding of soil and water movement.

Over the years, the MRP's approach has grown increasingly interdisciplinary. Within SSSA, this led to the recent renaming of the Soil Physics (S-1) division to the Soil Physics and Hydrology division and to the 2002 launch of Vadose Zone Journal.

These contributions were recognized by the 2021 National Excellence in Multistate Research Award, which honored the group for its "considerable scientific advances" and helping U.S. state and federal agencies develop best management practices and policies.

**Adapted from** Hopmans, J.W., Green, T.R., & Young, M.H. (2023). Western U.S. multistate research project on “water movement in soils”: A retrospective. *Vadose Zone Journal*, 22, e20245. <https://doi.org/10.1002/vzj2.20245>

---

*Text © . The authors. CC BY-NC-ND 4.0. Except where otherwise noted, images are subject to copyright. Any reuse without express permission from the copyright owner is prohibited.*