

Special Issue Reprint

Study of the Soil Water Movement in Irrigated Agriculture

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In irrigated agriculture, the study of the various ways water infiltrates into the soils is necessary. In this respect, soil hydraulic properties, such as soil moisture retention curve, diffusivity, and hydraulic conductivity functions, play a crucial role, as they control the infiltration process and the soil water and solute movement. This Special Issue presents the recent developments in the various aspects of soil water movement in irrigated agriculture through a number of research topics that tackle one or more of the following challenges: irrigation systems and one-, two-, and three-dimensional soil water movement; one-, two-, and three-dimensional infiltration analysis from a disc infiltrometer; dielectric devices for monitoring soil water content and methods for assessment of soil water pressure head; soil hydraulic properties and their temporal and spatial variability under the irrigation situations; saturated–unsaturated flow model in irrigated soils; soil water redistribution and the role of hysteresis; soil water movement and drainage in irrigated agriculture; salt accumulation, soil salinization, and soil salinity assessment; effect of salts on hydraulic conductivity; and soil conditioners and mulches that change the upper soil hydraulic properties and their effect on soil water movement.



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