



Runoff simulations using a physically based hydrological model for a semi-arid catchment in the Spanish Dehesas.

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Due to changes in management and climate change many semi-arid areas are prone to increased runoff, soil erosion and soil degradation. For these areas runoff is therefore an important component of the hydrological cycle and correct prediction is necessary. Research in a small semi-arid catchment in the Spanish Dehesas pointed out that a significant part of catchment scale discharge may be produced by subsurface macropore flow, instead of surface runoff.

For this research runoff simulations using a physically based hydrological model with macropore flow are compared to simulations without macropore flow concept. Also some scenarios are worked out to study the influence of including macropore flow in the model on changes in runoff production.