

## Study on Deep Leakage Characteristics and Water Balance of Irrigated Farmland in Ulan Buh Desert

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Based on the development of irrigated farmland in arid desert area has become a central issue in desert management and development, the keys of farmland development are Improving water use efficiency and establishing optimal irrigation systems. The research area was located in Ulan buh desert. The experiment established three site with exchanged local soil to sand, loam and clay under the tillage layer for 50cm. The results indicated that: The deep percolation were observed which after irrigated for 13 hours, 72 hours and 257 hours in sand, loam and clay sites at 150cm depth with a 211.50mm single irrigated rate on 17 April 2017. And deep percolation rate which were detected after irrigated for 15 days were 110.87mm [U+3001] 12.2mm [U+3001] 0.8mm for sand, loam and clay sites at 150cm depth. Moreover, with 734.39mm irrigated amount in growth period, the total amount of leakage water is 449.60mm in sand and loam 270.60 mm in loam,water storage capacity were -40.06mm and -30.63mm for soil to sand in 2017. The difference of leakage amount occured at sand, loam and clay which affected the irrigated amount and rate. So, monitoring accurately of leakage from soil of different textures which is very important on scientific formulated of irrigation systems for farmland in desert areas.