

عنوان مقاله:

Effects of trickle irrigation system from southern Iran district Chabahar free zone

محل انتشار:

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خلاصه مقاله:

This research was carried out on steep slope area planted with trees in different elevation terraces. The experiments were conducted at the experimental site at the Chabahar Free Zone. One major disadvantage of trickle systems is the tendency for emitters to clog. A trickle irrigation system was installed in a 50 m long and 20 m wide plot. The hydraulic performance of emitters was based on water flow, uniformity coefficient, application efficiency, and water losses through deep percolation. The flow volumes along the lateral length were fairly consistent and the variation was diminutive under both types suggesting uniform distribution of water. The difference in elevation between upper and lower terraces at the area of study was about 50 m irrigated by drip irrigation system. The system of irrigation has a problem in distribution uniformity of water resulted from initial filling of the pipes and drainage of water after stopping irrigation. Therefore, the lowest terrace receives the highest, while the upper terrace receives the lowest amount of water. The problem of a lateral pipe with equally emitters and uniform supply of water is investigated. The flow volumes along the lateral length were fairly consistent and the variation was diminutive under both types suggesting uniform distribution of water. The system achieved rationally high DU, CU, Ea. The CU values for randomly selected laterals with smooth emitters averaged to 81.7% and spiral emitters averaged to 87.4%. The DU values averaged to 75.4% for smooth and averaged to 81% for spiral emitters. The overall Ea achieved were 82.7% and 89.4% for smooth and spiral emitters, respectively. The higher values of CU, DU, and Ea with spiral emitters as compared to smooth emitters suggest that they performed better and could be preferred to achieve uniform water distribution.

Water movement below the emission point was more pronounced in the vertical

کلمات کلیدی:

Clogging drip Emitter Irrigation Laterals Trickle Uniformity

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/500737>

