Study of the impact of some technical indicators on the performance of semi-static spray irrigation system.

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ABSTRACT

The study was conducted to evaluate performance of semi-permanent sprinkler irrigation syste. The experiment included main line with three length (10-100) ,(100-190), And (190-280) which represent main plot . sub line in three length (0-60) , (60-120) , and (120-180)M,which represent sub plot . Uniformity coefficient (VC%) , distribution uniformity (Du1/4) , efficiency of application (Ea%) and over all efficiency of the system(OE%) were studied in this experiment. Split plot design within randomized complete block was used .

Result can be summarized as follow:

Main line in length (10-100)M recorded best UC, Du 1/4 ,Ea and OE % which give (77.3 ,70.7 , 85.7 ,and 67.3)% respectively . Also the sub length (0-60) M gave higher Vc, ,Du and Ea % Which recorded (76.9 ,66 ,86.7 ,and 66.5 %) respectively. The interaction between main length (10-100) M and sub length(0-60) And (60-120)M gave higher (Vc) then recorded (82 and 80.3 %) respectively Also they gave best (Du1/4) which recorded (72 and 71 %) respectively

In parameter (Ea %) the interaction between sub line (0-60)M and main line In both length (10-100) and (100-190 m) gave best (Ea%) which is (88 and 87) Respectively , in additional the main length (10-100m) and sub (0-60m) Recorded best (OE%) which (71.7 %) .