

# Turkish Journal of Agriculture and Forestry



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Comparing Tillage Techniques by Using a New Infiltration Method Fatih  
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**Abstract:** A one-year field trial in Italy was carried out for comparing tillage systems such as 50 cm chiselling (CH), 40 cm plow-till (PT40) and 20 cm plow-till (PT20) according to results of a new developed infiltration method. Ponded infiltration rates were measured to obtain the field saturated hydraulic conductivity ( $K_{fs}$ ) using single ring infiltrometers on six dates with six replications in three sites on a sandy clayey loam soil. In both PT20 and CH plots,  $K_{fs}$  after tillage increased temporarily to a value of about 4 and 9 times greater than that observed before tillage, respectively. However, late in the season, it tended to be not significantly different from the one before tillage for both. In PT40 plot,  $K_{fs}$  remained relatively constant during the year except May. At the end of the year, PT40 had the greatest  $K_{fs}$  and CH had the lowest. As a result, it was found that the tillage technique used does not have appreciable effect on the  $K_{fs}$  for this type of soil. Although tillage recreates transmission pores in increasing  $K_{fs}$ , such pores were temporary, and tillage-created cracks may have collapsed within the season as a result of raindrop impact and wetting-drying cycles.

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