The effect of the first tillage times and rotation systems on productivity of wheat (T. Aestivum L)

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This study was carried out in the Ilıca location of Erzurum, Turkey during the three year period, from 1999-2002. The objective of this study was to determine the effect of rotation systems (wheat-fallow and vetch-fallow-wheat rotation systems) and soil tillage times (early spring, early summer and fall tillage times) on grain yield, spike number per m², soil moisture, soil organic matter and soil aggregate stability in wheat. The results showed that significant increase of yield and spike number per m2 and, well improvement of soil conditions for soil moisture content, aggregate stability and soil organic matter occurred when the soil was tilled in Early Spring and Vetch-Fallow-Wheat rotation system was applied compared to Fall tillage and Fallow-Wheat rotation system. As a result of this study, it has been shown that using Early Spring Tillage and Vetch-Fallow-Wheat rotation system wheat production could be increased, and soil conditions in terms of soil moisture, soil organic matter and soil aggregate stability could be improved under rain fed conditions.