

The effect of tillage system in yield and its components of bread wheat in SalahAldin – north of Iraq

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Abstract

This study carried out in order to compare the effect of the type of tillage in some crop qualities and productivity of spring bread wheat, *Triticum aestivum* L. Cham 6 var. during the 2011-2012 agricultural season in homogeneous field in district of Tuz - Salahuddin province north of Iraq in total area of six hectares (24 Iraqi Donum), RCBD design was used, the field was divided into three blocks included 2 treatments with 3 replicates, the first treatment was conventional tillage using disc plow to plowing the soil before sowing with local seeder, second treatment Zero Tillage planting method using new ZT seeder with press wheels to compact soil on seeding row. Thus we have 6 experimental units each unit area was one hectare. Except planting methods all other factors such as fertilizer dosage (80 kg N/ha and 120 kg P₂O₅/ha), weed control, supplementary irrigation, seeding rate (120 kg/ha) sowing date (27/11/2011) are the same. Plant height / cm, stem thickness / mm, number of tillers / m², number of spikes / m², spike length / cm, number of grains / spike, the weight of 1000 grains, specific weight kg / hectoliter, biological yield kg/ha, grain yield kg/ha and straw yield kg/ha traits were studied. Result showed that ZT had significance superiority in number of tillers / m², number of spikes / m², biological yield kg/ha, grain yield kg/ha and straw yield kg/ha. Traits comparing with conventional tillage, while no significant differences between 2 planting methods in the other traits.

Key words: soil tillage, seeder, crop quality traits