Effect of tiller number per plant on grain yield and yield components of durum wheat at different planting densities

Abdelalim Raphama, Abdalmehadi Bashshda, Saiab Fawwaa Jzofoul, Qari Norahmad

This study was conducted at the Central Experimental Farm, Assiut University, Egypt, during the 2018-2019 growing season. The experiment was laid out in a randomized complete block design with four replicates. The treatments were different planting densities: 150, 300, 450, and 600 plants per square meter. The main aims of the study were to determine the effects of tiller number per plant on grain yield and yield components of durum wheat at different planting densities.

The results showed that increasing the planting density from 150 to 600 plants per square meter significantly increased grain yield, 1000-grain weight, test weight, number of grains per spike, and number of spikes per plant, but it significantly decreased plant height and number of tillers per plant. The highest grain yield and yield components were obtained at the planting density of 600 plants per square meter.

The study concluded that higher planting densities can increase grain yield and yield components of durum wheat, but it also noted the importance of optimizing planting density to achieve the highest economic return.