

Effect of sowing date and irrigation intervals on yield and its components of some wheat cultivars.

Abstract

The Field experiments were conducted out during the two successive winter seasons of 2012/2013 and 2013/2014 at the Experimental Farm (Demo) of the Faculty of Agriculture, at Fayoum University, Egypt. The aim of these experiments was to evaluate yield and yield components of some wheat cultivars under different Sowing Dates and different irrigation intervals. The experiment was laid out in split - split plot design with four replicates and comprised of three dates of Sowing, namely 1st November, 15th November and 30th November in main plots and three irrigation intervals, namely, I₁ Irrigation every 21 days, I₂ Irrigation every 28 days, I₃ Irrigation every 35 days, in sub- plots and three wheat cultivars namely, Sakha 93, Sakha 94, and Sids 12 in sub-sub-plots. The results of wheat cultivars, irrigation intervals and different sowing dates mostly showed significant differences ($P < 0.05$) for yield and yield components. The cultivar Sids 12 scored the first rank in all characters. Irrigation intervals showed significant differences on all characters except number of spikelets/spike and irrigation every 28 days recorded the highest values in most characters followed by every 35 days. The sowing dates shown significant effect on all traits except harvest index and the highest values were obtained when cultivars sown in 15th November in most characters. The results indicated that crop planted on November 15, produced higher grains yield as compared to late and early planting. This indicated that late sowing shortest the development phases of

wheat and adversely affected the grains development and thus the grain yield. On the other hand, The interactions effect between sowing date and irrigation intervals, sowing date and wheat cultivar, irrigation intervals and wheat cultivar and sowing date x irrigation intervals x wheat variety remained significant on all traits except the interaction between irrigation intervals and wheat variety on spike length, weight of grain/spike, seed index and harvest index. Generally, Sids12 under sowing on 30th November and irrigation every 28days followed by the same variety when sowing on 15th November and irrigation every 35days surpassed on the other tested treatments in grain yield/fed. (2.97 and 2.93 t/fed.) respectively.