

Agronomic Evaluation of Flax Cultivars (*Linum Usitatissimum* L.) in Response to Irrigation Intervals

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Abstract : Flax is a potential winter crop for Egypt that can be grown for both seed and fiber. The study was conducted during two successive winter seasons of 2013/2014, and 2014/2015 in the experimental farm of El-Gemmeiza Agricultural Research Station, Agriculture research Centre, Egypt. The objective of this work was to evaluate the effect of irrigation intervals (25, 35 and 45) on the seed yield and quality of flax cultivars (Sakha1, Giza9 and Giza10). Obtained results indicate that highly significant for all studied traits among irrigation intervals except oil percentage that was not significant in both seasons. Irrigated flax plants every 35 days gave the maximum values for all characters. In contrast, irrigation every 45 days gave the minimum values for all studied characters under this study. In respect to cultivars, significant differences in most yield and quality characters were found. Furthermore, the performance of Sakha1 cultivar was superior in total plant height, main stem diameter, seed index, seed, oil, biological and straw yield /ha as well as fiber length and fiber fineness. Meanwhile, Giza9 and Giza10 cultivars were surpassed in fiber yield/hand fiber percentage, respectively. The interactions between irrigation intervals and flax cultivars were highly significant for total plant height, main stem diameter, seed, oil, biological and straw yields /ha. Based on the results, all flax cultivars recorded the maximum values for major traits were measured under irrigation of flax plants every 35 days.

Keywords : flax, fiber, irrigation intervals, oil, seed yield

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