

Article title	Cultivars response of Flax (<i>Linum usitatissimum</i> L.) to different nitrogen sources in dry environment.
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Two years field experiment were carried out at Demo experimental farm, Fac. of Agric., Fayoum University, Egypt in 2015/16 and 2016/17 seasons to examine the effect of nitrogen sources as soil application on straw and seed yields as well as seed quality of flax. A split-plot arrangement with three replications was used. Three cultivars of flax i.e., Sakha-1, Sakha-2 and Giza-9 occupied the main plots. While, N-sources, i.e., Ammonium nitrate (33.5 %), Urea (46.5%) and Ammonium Sulfate (20.6%) distributed in the sub-plot. The obtained results clarified that Sakha-1 gave the highest straw yield and its attributes mean values i.e., plant height, technical stem length and straw yield plant⁻¹. While, Sakha-2 gave the highest mean values for number of branches plant⁻¹ and stem diameter. In addition, Sakha-2 cultivars was exceeded the other two cultivars with regard to seed yield and related traits i.e., fruiting zone length, No. of fruiting branches plant⁻¹, No. of capsules plant⁻¹, 1000-seed weight and seed and oil yield fed⁻¹. Ammonium nitrate followed by ammonium sulfate as N-sources gave the highest straw and seed yields and its related traits when compared with urea. Thus, the recommendations of this study are cultivating Sakha-2 variety and fertilized by ammonium nitrate as N-sources.

The obtained results of regression analysis of seed yield indicated that, there are two traits i.e. seed yield plant⁻¹ and No. of capsules plant⁻¹ in the first season and Zn mg 100g⁻¹ in the second one, were significantly ($P \le 0.001$) contributed to variation in seed yield feddan.