



Foliar nitrogen fertilizers compound with nitrification inhibitors on growth and yield of corn plant

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Abstract: Foliar fertilization is the most important and very effective method of fertilizer application. This study was conducted to determine the effects of different nitrogen fertilizers such as urea (46%N), ammonium sulphate $(\text{NH}_4)_2\text{SO}_4$ (21% N) and ammonium nitrate (NH_4NO_3) 33%N beside nitrification inhibitors (AM and DCD) on the growth and yield of corn. Field experiment was conducted at Al Sharkia Governorate, Egypt in a private farm through a project of soil and water Dept. of the National Research Center. The corn plants cultivar as Giza10 were sprayed with nitrogen fertilizers solution at two N levels and the nitrification inhibitors were applied at 5% of the added nitrogen. The important detected results are as follow: 1. Foliar urea fertilization at 200 Kg fed^{-1} reflected increases in vegetative growth, yield and its components and nutrient concentration of corn plant compared with control, ammonium sulphate and ammonium nitrite after 60, 90 days from planting and at harvest. 2. The application of (DCD) to urea at 200 Kg fed^{-1} as sparing gave the higher values of vegetative growth, yield components and nutrient concentrations compared with (AM). The results of this study explain that foliar urea fertilization with nitrification inhibitors (DCD) may have a possibility role for increasing corn yield.

Keywords: Corn, Foliar fertilization, nitrogen fertilizers, nitrification inhibitors.

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