EFFECT OF SOIL AND FOLIAR APPLICATION OF NITROGEN LEVELS ON YIELD AND YIELD COMPONENTS OF WHEAT
(*T. aestivum* L.)
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ABSTRACT

This investigation was carried out in the Experimental Farm, Faculty of Agriculture at Moshtohor, Zagazig University during 1990/91 and 1991/92 seasons to study the effect of N levels as soil application (0, 30, 45, 60 and 75 kg N/fed.) and foliar sprays of urea (0, 2, 4 and 6% urea/fed.) at booting stage on yield, yield components, protein content and correlation coefficient between grain yield and yield components characters of Sakha 69 wheat cultivar . Each experiments was designed in split plot with four replications. The results obtained were as follows :

Soil application of nitrogen level up to 75 kg/fed. increased significantly plant height, spike length, weight of spike, number of grains/spike, number of spikelets/spike, number of grains/spikelet, 1000-grain weight, number of spikes/m^2, biological and grain yields/feddan and protein content in wheat grains in combined analysis of the two season. Whereas no significant difference between 45 kg, 60 kg and 75 kg N/fed. as soil application in their effect on the above characters. The soil application of 30, 45, 60 and 75 kg N/feddan resulted in increasing the grain yield by 77.76%, 106.22%, 132.22% and 122.78%, respectively over the control in the combined analysis.

Grain yield/feddan and its components as well as protein content were significantly increased by increasing foliar application of urea up to 6% urea/feddan at booting stage except number of grains/spike and number of grains/spikelet. In combined analysis, foliar spray of urea at 2%, 4% and 6% urea/feddan caused increases grain yield/feddan by 14.43%, 15.70% and 27.74% respectively over the control treatment.

Positive and highly significant correlation coefficient were obtained between grain yield/feddan and each of plant height, spike length, spike weight, grain weight/spike, number of grain per spike and per spikelet, 1000-grain weight, number of spikes/m^2 and biological yield per feddan.