Studies on balanced fertilization of wheat plant

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IV- SUMMARY AND CONCLUSIONThis study was carried out at the Farm of Sids Agric. Res. Station at Beni Suef Governorate to investigate the effect of farmyard manure ,NPK fertilization and foliar spray of Fe, Mn and Zn on wheat (Giza 168 cv) growth characters, yield and yield components, protein content in grains and nutrient uptake in grains and straw .The experiment included four levels of farmyard manure, i.e. 0,10,20 and 30m3i fed ,three levels of NPK fertilizers . The first level was (40 kg/fed N without phosphorus and potassium); the second level was (80 kg N,15 kg P205 , 24 kg K20/fed) and third level was (120 kg N, 30 kg P205 , 48 kg K20/fed) .The design experiment was factorial in complete randomized blocks with four replications .The results could be summarized as follow : 1-Growth characters :All growth characters, i.e. plant height and dry weight were significantly increased by increasing F.Y.M. application and NPK fertilization as well as Fe, Mn and Zn applications, except plant height which did not respond to micronutrients applications .Summary and Conclusion 962-Yield components : Spike length :was significantly increased by FYM application in the first season only and by NPK and Fe, Mn and Zn fertilization only in the second one . Spikes number/m2 :was increased by the addition of the three treatments, except by Fe, Mn and Zn application in the second season . Spike grains weight :was responded to the studied fertilizations, except NPK in the first season and micronutrients in the second one . Spike grains number :was significantly increased with the addition of FYM, NPK and micronutrients . 1000-grain weight :It was increased with increasing both FYM and NPK rates, while Fe, Mn and Zn did not affect 1000-grain weight . Grain and straw yields :They were significantly increased with increasing both FYM and NPK fertilization as well as Fe, Mn and Zn application . Protein percentage :It was significantly affected by F.Y.M. and NPK applicationsSummary and Conclusion 97Nutrient content : Macronutrients :NPK uptake in grains and/or straw were significantly increased by increasing both FYM and NPK application rates in the two seasons. Also, Fe, Mn and Zn applicated as foliar spray significantly increase P uptake in grains and/or straw and K uptake by grains and total K in the two growing seasons. However they significantly increased N uptake in grains and K uptake in straw only in the first season, and N uptake in straw and total in thesecond one . Micronutrients :Uptake of (Fe, Mn and Zn) in grains and/or straw were markedly increased by FYM, NPK and Fe, Mn and Zn applications.Summary and Conclusion98