EFFECT OF BIO FERTILIZATION AND PHOSPHATE ROCK UNDER STERILIZATION CONDITIONS ON THE ACTIVITY OF PHOSPHATASE ENZYME, PHOSPHORUS AVAILABILITY AND GROWTH OF WHEAT PLANT TRITICUM AESTIVUM L

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Abstract: A factorial experiment was carried out in pots in the agricultural canopy of the College of Agriculture, University of Al-Muthanna during the winter agricultural season 2020-2021 and by Completely random design (CRD) to study the effect of the Mycorrhizal fungus Glomus mosseae and phosphate rock on the availability of phosphorous in the soil and the growth of wheat plant, as three levels (0, 60, 120) kg P/ hectare of phosphate rock were used. It is was calculated on the basis of the phosphate rock content of phosphorous, which amounted to 10.2% P and the soil was inoculated with mycorrhiza, without pollination, sterile and non-sterile soil, and with three replications. The results showed significant increase in plant height and dry matter weight for the vegetative and root groups and ready phosphorus in the soil and for the two growth stages as a result of inoculation with the fungus G. mosseae, as the percentage of increase in plant height was 22.16%, 16.94% and in the vegetative dry weight of 28.68% and 58.46% and in phosphorus. The addition of phosphate rock individually also achieved a significant increase on the rates of the studied traits, as the plant height was 23.5 cm and 43.37 cm for the first and second stages in succession with the third level of phosphate rock, while the dry weight was recorded.

Key words: Mycorrhizal, Phosphate rock, Phosphatase, Ecosystem.

Cite this article