Second Article (Common- published).

Article title	**Influence of the Application of Fertilizer Type on Growth, Yield, Anatomical Structure and Some Chemical Components of Wheat (*Triticum aestivum* L.) Grown in Newly Reclaimed Soil**
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Abstract

A field experiment was conducted at the Experimental Farm of Faculty of Agriculture, Fayoum University to study the effect of the application of biofertilizer (Bio) (namely, *Azotobacter*, *Azospirillium*, *Rhizobium* and *Pseudomonas*), farmyard manure (FM) (٠, ١٥ ton fed^{-1}) and mineral fertilizer (NPK) (٠, ٢٥, ٥٠ and ١٠٠% of the recommended dose) singly or in combination on growth, yield, anatomical structure and physiological analysis of wheat plant. The results showed that, the application of Bio and/or FM in combination with NPK significantly increased all growth characters i.e., plant height, number of spikes $plant^{-1}$, leaf area and fresh and dry weights of both shoot and spikes $plant^{-1}$. The enhanced growth characters were reflected in yield and yield components, mainly the increase in grains yield fed^{-1} which reached ١٧٣.٧% by the combined treatment of Bio+FM+٥٠% NPK. All treatments greatly increased stem section diameter and dimensions of grain; this was mainly due to the increases in both parenchymatous and sclerenchymatous tissues of stem and the pericarp, aleurone layer and endosperm of grain. Leaf pigments, total carbohydrates and crude protein in leaves as well as total carbohydrates and crude protein in grains were significantly increased by all treatments, particularly the combined treatment of Bio+FM+٥٠% NPK. Based on our results, we recommend using Bio and/or FM in combination with NPK to minimize chemical fertilizer dose under newly reclaimed soil conditions.