|  |  |
| --- | --- |
| QR Code  It will be added by the scientific committee  Ms. Code: CSC18\_××××  Presenter Photo | |
| Title  Evaluating the Efficacy of BioGrow Bio-Fertilizer in Enhancing Wheat Growth, Yield, and Soil Health: A Sustainable Alternative to Conventional Fertilizers (Font: Arial Black, Font size: 9) | |
| Mohammad Azizi1, Meisam Alavi 2  Authors & Affiliations  1-Prof. Agrotechnology Deparatement, AAA University, Mashhad, Iran ([mazizi@aaa.ac.ir](mailto:mazizi@aaa.ac.ir))  2-Associat Prof., Biology Department, BBB University, Tehran, Iran (malavi@bbb.ac.ir)  **(Font: Times New Roman, Font size: 11)** | |
| **(Font: Times New Roman, Font size: 11)**  Abstract | **(Font: Times New Roman, Font size: 11)**  Introduction |
| Material and Methods  **(Font: Times New Roman, Font size: 11)** | Results and Discussion/highlights (**Font: Times New Roman, Font size: 11)** |
| The study was conducted in a controlled field environment. Wheat (*Triticum aestivum*) was selected due to its global significance. Fifty plots were prepared and divided into two groups of twenty-five plots each. Group A was treated with BioGrow fertilizer, while Group B received a conventional synthetic fertilizer. Both groups were subjected to identical environmental conditions, including light, temperature, and irrigation. Growth parameters such as plant height, tiller number, and grain yield were measured bi-weekly over a growing season of six months. Soil samples were collected and analyzed for nutrient content and microbial activity before and after the experiment. Data were analyzed using ANOVA to compare the growth parameters and yield between the two groups. | The results indicated a notable difference in wheat growth and yield between the two groups. Wheat plants treated with BioGrow exhibited a 20% increase in height and a 25% increase in tiller number compared to those treated with conventional fertilizer (Fig. 1a). Additionally, the grain yield of BioGrow-treated plots was significantly higher, with an average of 7 tons per hectare, compared to 5.5 tons per hectare in the conventional fertilizer group (Fig. 1b).  Soil analysis showed that BioGrow improved soil nutrient content and microbial activity, contributing to enhanced plant health and growth. The presence of beneficial microorganisms in BioGrow likely facilitated better nutrient uptake and increased plant resilience to environmental stress. These findings support the hypothesis that BioGrow can serve as a superior alternative to traditional fertilizers. By promoting higher yields and improving soil health, BioGrow presents a promising solution for sustainable wheat production. Further research is necessary to assess the long-term effects and optimize application strategies for different agricultural contexts. |
| **Figs & Tables**    Fig. 1. Wheat Tiller Number (a) and grain yield (b)under two treatments (BioGrow fertilizer and synthetic fertilizers, respectively) | |
| **References (Style: APA 7th) (Font: Times New Roman, Font size: 9)**  1-  2-  3-  4-  5- | |
| **Acknowledgement**  **(Font: Times New Roman, Font size: 11)**  We would like to thank the Agricultural Research Institute for providing the facilities and resources necessary for this study. Special thanks to Dr. Jane Smith for her invaluable guidance and support throughout the research process. We also appreciate the efforts of the greenhouse staff for their assistance in maintaining the experimental conditions. Lastly, we acknowledge the financial support from GreenGrowth Inc., which made this study possible. | |