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Report on the PhD thesis titled  
„ **INFLUENCE OF ORGANIC AND BIOLOGICAL AMELIORANTS ON THE  
PROPERTIES OF SALINE-SODIC SOILS IN EGYPT** “

Submitted by **Mr. Mohamed Hafez Abdel Fattah Mohamed Kotat** in partial fulfillment of the Ph.D. degree of Candidate in biological science (Scientific specialization: Soil science)

**Mr. Mohamed Kotat** has presented valuable work to improve the quality of salt affected soils in the arid region via using safe and sustainably approaches. These approaches may effectively increase soil productivity. His manuscript was conducted in 183 pages, containing laboratory, greenhouse, and field experiments and citing 223 references. In this manuscript, he highlighted precisely the main problems of these soils and designed detailed protocols for land reclamation. His investigations follow up, in details, the changes that occurred in soil and plant growth owing to the application of the organic and biological additives

The results were well presented in tables and figures and were also discussed extensively. These results exhibit that organic (spent grain, vermicompost, and humic substances solutions) and biological (*Az.brasileense*) ameliorants effectively increased the yield of wheat plants and also raised water use efficiency versus chemical fertilizers. These positive results were mostly due to the positive impacts of these additives on increasing soil organic matter content, lessening soil pH, improving NPK contents in soil and consequently increasing their uptake by plants

**In conclusion, Mr. Mohamed Kotat** is an excellent research and has a good experience in his field of study and high capability and competence to do work as a (excellent) researcher. Based on the above, I recommend the following

- a) Continue with the further steps required to obtain the degree of Candidate of biological science (Scientific specialization: Soil science) at Saint-Petersburg State University (Russian Federation), i.e., with the defense of his thesis
- b) Awarding him the title of Doctor of Philosophy that he truly deserves!

Mohamed/HHAbbas

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