



## بسم الله الرحمن الرحيم

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بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى

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**PHYSIOLOGICAL GENETIC STUDIES ON SOME  
CHARACTERISTICS OF *TRIFOLIUM ALEXANDRINUM* L.**

**BY**

**WAFAA MOHAMED SHARAWY ABDEL FATTAH**

**B.Sc. Agric. Sci. (Animal Production), Cairo Univ., 1982**

**M.Sc. Agric. Sci. (Genetics), Ain Shams Univ., 1990**

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## APPROVAL SHEET

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## ***Dedication***

***To the soule of my father***

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## ABSTRACT

Wafaa Mohamed Sharawy Abdel-Fattah, physiological genetic studies on some characteristics of *Trifolium alexandrinum* L., unpublished Doctor of Philosophy, Genetics, Fac. of Agric., Ain Shams Univ., 1997.

Eleven accessions of berseem clover (*Trifolium alexandrinum* L.) were grown in the field with sufficient irrigation (every 15 days) and two drought stress irrigations (every 21 and 30 days). The results indicated that morphological parameters, photosynthetic rate, stomatal conductance, intercellular CO<sub>2</sub> concentration and osmotic potential were higher in irrigation every 15 days than irrigation every 21 and 30 days. Water stress caused a reduction in fresh and dry yield. Subsequently, accessions 1, 11 and 26 were selected as drought tolerant while accessions 6, 27 and 66 were drought sensitive.

Marked association was observed between proline content and ion ratios and drought tolerance. This study also showed a reduction in callus growth at higher levels of water stress.

SDS-protein, isozyme electrophoretic patterns for esterase, acid phosphatase and peroxidase and molecular markers (RAPD) were effectively discriminated between the tolerant and sensitive genotypes

**Key words :** *Trifolium alexandrinum*, drought, photosynthesis, stomatal conductance, osmotic potential, SDS-protein, isozymes, electrophoresis and RAPD-PCR.





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The first part of the paper discusses the importance of understanding the cultural context of the research. It highlights the need for researchers to be sensitive to the values and beliefs of the communities they are studying. This is particularly important in the field of education, where cultural differences can significantly impact learning outcomes. The paper then moves on to discuss the challenges of conducting research in diverse cultural settings. It notes that researchers often face difficulties in establishing rapport with participants and in interpreting their responses. To address these challenges, the paper suggests several strategies, including the use of local informants and the development of culturally appropriate research instruments. The final part of the paper discusses the importance of ethical considerations in cross-cultural research. It emphasizes the need for researchers to obtain informed consent from participants and to ensure that their research does not cause harm or exploitation. The paper concludes by noting that while cross-cultural research is a complex and challenging endeavor, it is also a highly rewarding one that can lead to a deeper understanding of human behavior and culture.