



**STUDY OF REPRODUCTIVE ECOLOGY OF SOME WILD
MEDICINAL PLANTS**

By

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A thesis submitted in partial fulfillment

of

the requirements for the degree of

MASTER OF SCIENCE

In

(Ecology)

Department of Botany

Faculty of Science

Fayoum University

2008

SUMMARY

Solenostemma arghel (Del.) Hayne and *Plantago afra* L. are wild medicinal plants. They are subjected to the risk of extinction. *S. arghel* grows on pebbly, calcareous, and non saline soil. The suitable temperature range for seed germination is 20 – 35 °C. The plant is sensitive to salinity (NaCl). IAA inhibits seed germination while GA3 does not affect seed germination at 100 and 200 ppm.

S. arghel shows variable responses to the applied water supply to achieve the best adaptation. The production of secondary metabolites is directly proportional to the applied water regime. In vitro cultivation of *S. arghel* using buds as explant evinced that M1 medium (MS + 2mg BA / L.) is favored for both the growth and the production of secondary metabolites. Mannitol has a negative impact on shoot multiplication and it does not improve the production of secondary metabolites.

Plantago afra grows on sandy, calcareous, and non saline soil. The suitable temperature range for seed germination is 15 - 25 °C. Seeds of *P. afra* can tolerate salinity (NaCl) up to 100 mM. Low concentrations of IAA inhibit seed germination while GA3 has no considerable effect compared to the control.

P. afra growth is directly proportional to the applied water regime. Field capacity of 25% gives the maximum amount of mucilage after the wild plant. The best shoot proliferation of in vitro cultivated *P. afra* is achieved on M1 medium (MS + 2.3µM Kin. + 0.05µM NAA / L.)