

CONTENTS

INDEX

Chapter	Title	Page
	INTRODUCTION	... 1
I	REVIEW OF LITERATURE	... 8
	A. Introduction	... 9
	B. Different Antitranspirants	... 10
	C. Overview of work done	... 10
	D. Scope of the present investigation	... 19
II	MATERIALS AND METHODS	... 22
	A. About the chemical used in the present investigation	... 23
	B. Procurement of seeds	... 24
	C. Preparation of pots and nature of soil	... 24
	1. Preparation of pots	... 24
	2. Soil condition	... 25
	3. Field capacity	... 25
	D. Stomatal behaviour	... 25
	E. Relative water content	... 27
	F. Osmotic potential of cell sap	... 27
	G. Organic constituents	... 28
	1. Total chlorophylls	... 28
	2. Chlorophyll stability index	... 29
	3. Polyphenols	... 29
	4. Estimation of proline	... 30
	a) Preparation of acid nin-hydrin	... 31
	5. Estimation of Nitrogen	... 31
	a) Preparation of microsalt	... 32
	b) Preparation of Nessler's reagent	... 32
	c) Preparation of Standard ammonium sulphate	... 32

Chapter	Title	Page
H.	Enzymes of nitrogen metabolism	... 32
1.	In vivo assay of nitrite reductase	... 32
2.	In vivo assay of nitrate reductase	... 33
a)	Estimation of nitrite	... 33
I.	Field Trials	... 34
III	RESULTS AND DISCUSSION	... 35
A.	Osmotic potential of cell sap	... 36
B.	Relative water content	... 38
C.	Organic constituents	... 40
1.	Chlorophyll content	... 40
2.	Chlorophyll stability index	... 42
3.	Proline	... 44
4.	Polyphenols	... 46
5.	Nitrogen	... 48
D.	Enzymes of nitrogen metabolism	... 51
1.	Nitrite reductase	... 51
2.	Nitrate reductase	... 55
E.	Stomatal behaviour	... 55
1.	Effectiveness of HICO-110 R spray on diffusive resistance for water vapour and transpiration rate	... 55
2.	Diffusive resistance and conductance for CO ₂	... 60
3.	Stomatal regulation	... 62
4.	Stomatal regulation in field grown groundnut (UF-7-103)	... 67
F.	Growth	... 67
G.	Leaf anatomy	... 75
H.	Yield	... 75
	SUMMARY AND CONCLUSION	... 83
	BIBLIOGRAPHY	... 90