
CONTENTS

C O N T E N T S

Chapter No.	Particulars	Page No.
	<u>INTRODUCTION</u>	1
I	<u>SAFFLOWER A REVIEW :</u>	
	A) General account of safflower	5
	B) Physiological studies in safflower	21
	C) Scope of present investigation	30
II	<u>MATERIAL AND METHODS</u>	
	A) Material	32
	B) Methods	32
	B.1) WATER STRESS STUDIES	
	a) Growth parameters	33
	b) Organic constituents	33
	i) Moisture and Relative water content (RWC)	33
	ii) Titratable acid number(TAN)	34
	iii) Polyphenols	35
	iv) Chlorophylls	36
	c) Inorganic constituents	36
	i) Preparation of acid digest	36
	ii) Estimation of sodium and potassium	37
	iii) Estimation of calcium,magnesium Iron, Copper,Zinc and Manganese.	38

Chapter No.	Particulars	Page No
	iv) Estimation of chlorides	38
d)	Enzymes	
	i) Peroxidase	39
	ii) Acid Phosphatase	40
B2)	SALT STRESS STUDIES (NaCl treatment)	40
a)	Growth parameters	41
b)	Organic constituents	
	i) Moisture and Relative Water Content (RWC)	41
	ii) Titratable Acid Number(TAN)	41
	iii) Polyphenols	41
	iv) Photosynthetic pigments	42
c)	Inorganic constituents	
	i) Preparation of acid digest (Extract)	43
	ii) Estimation of Sodium and Potassium	43
	iii) Estimation of Calcium, Magnesium, Iron, Copper, Zinc and Manganese	43
	iv) Estimation of chlorides	43
d)	Enzymes	
	i) Peroxidase	43
	ii) Acid Phosphatase	43

Chapter No.	Particulars	Page No.
III	<u>RESULTS AND DISCUSSION</u>	
A)	Water stress studies.	
a)	Growth parameters	44
b)	Organic constituents	
i)	Moisture and Relative Water Content (RWC)	47
ii)	Titratable Acid Number (TAN)	49
iii)	Polyphenols	50
iv)	Chlorophylls	51
c)	Inorganic constituents	
i)	Sodium	52
ii)	Potassium	54
iii)	Calcium	56
iv)	Magnesium	56
v)	Iron	57
vi)	Copper	58
vii)	Zinc	59
viii)	Manganese	59
ix)	Chlorides	59
d)	Enzyme activity	
i)	Peroxidase	60
ii)	Acid Phosphatase	61

Chapter No.	Particulars	Page No.
B) Salt stress studies (NaCl treatment)		
a)	Growth parameters	62
b)	Organic constituents	
i)	Moisture and Relative Water content (RWC)	66
ii)	Titratable acid number (TAN)	68
iii)	Polyphenols	70
iv)	Photosynthetic pigments	71
c)	Inorganic constituents	
i)	Sodium	74
ii)	Potassium	76
iii)	Potassium/Sodium ratio	78
iv)	Calcium	78
v)	Magnesium	79
vi)	Iron	80
vii)	Copper	82
viii)	Zinc	82
ix)	Manganese	83
x)	Chlorides	84
d)	Enzyme activity	
i)	Peroxidase	85
ii)	Acid phosphatase	87

Chapter No.	Particulars	Page No.
IV	<u>SUMMARY AND CONCLUSIONS</u>	89
	BIBLIOGRAPHY	97
	STATEMENT - I	127
	STATEMENT - II	128
