## CONTENTS

	Page
INTRODUCTION	1
REVIEW OF LITERATURE	4
MATERIALS AND METHODS	23
RESULTS	48
A - Survey of barley foliar diseases	48
B - Studies on barley leaf stripe	5
I - Distribution of barley leaf stripe	54
II - Isolation and identification of the causal organism	m- 56
III - Pathogenicity studies and inoculation techniques -	- 57
IV - Varibility in <u>Helminthosporium gramineum</u>	- 60
1 - In pathogenicity	<b>-</b> 60
2 - In cultural characteristics	<b>-</b> 62
3 - In physiologic characters:	64
a) The activity of oxidative enzymes	- 64
b) Production of pectalytic and cellulolytic	
enzymes	66
c) Effect of cultural filtrates on barley	
seed germination and seedlings development	68
	- 68
V - Host range of H. gramineum	
VI- Effect of leaf stripe infection on chemical	
composition and the relationship between disease	71
development and these components	- 71
1 - Determination of sugars	- 73
2 - Determination of free saino acids	-
3 - Determination of sphenolic compounds	- 77

	4 - Determination of oxidative enzymes activities -	79
	(a)- Polyphenol oxidase	79
	(b) Peroxidase	79
	(c) Catalase	81
	(d) Ascorbic acid oxidase	81
	VII - Disease control	82
·	1) Varietal resistance	82
	2) Chemical control	85
	a) Effect of fungicides on mycelial growth	85
	b) Effect of fungicidal seed dressers on	
	disease incidence	85
	DISCUSSION	89
	SUMMARY1	.01
	REFERENCES 1	05
	SHMMARY (IN ARARIC)	