

CONTENTS

		Page
I	INTRODUCTION	1
II	REVIEW OF LITERATURE	3
III	MATERIAL AND METHODS	41
IV	RESULTS AND DISCUSSION	48
	A. Growth stages:	48
1	Effect of seasons	48
2	Varietal performance on:	51
	a. Growth criteria	51
	b. Juice quality	53
3	Effect of interaction between varieties and seasons	53
4	Effect of boron fertilizer levels on:	55
	a. Growth criteria	55
	b. Juice quality	57
5	Effect of interaction between boron fertilizer levels and seasons	59
6	Effect of molybdenum fertilizer levels on:	60
	a. Growth criteria	60
	b. Juice quality	62
7	Effect of interaction between molybdenum fertilizer levels and seasons	64
8	Effect of interaction between varieties and boron fertilizer levels	64
9	Effect of interaction between varieties, boron fertilizer levels and seasons	65
	B. At harvest:	67
1	Effect of seasons	67
2	Varietal performance on:	70
	a. Growth criteria	70
	b. Juice quality	71
	c. Chemical constituent	73
	d. Yield and its components	76
3	Effect of interaction between varieties and seasons	79

4	Effect of boron fertilizer levels on:	79
	a. Growth criteria	79
	b. Juice quality	80
	c. Chemical constituent	82
	d. Yield and its components	85
5	Effect of interaction between boron fertilizer levels and seasons	87
	Effect of molybdenum fertilizer levels on:	88
6	a. Growth criteria	88
	b. Juice quality constituents	90
	c. Chemical constituents	91
	d. Yield and its components	94
7	Effect of interaction between molybdenum fertilizer levels and seasons	97
8	Effect of interaction between varieties and boron fertilizer levels	98
9	Effect of interaction between varieties, boron fertilizer levels and seasons	101
10	Effect of interaction between varieties and molybdenum fertilizer levels	101
11	Effect of interaction between varieties, molybdenum fertilizer levels and seasons	104
12	Effect of interaction between boron and molybdenum fertilizers	104
13	Effect of interaction between boron, molybdenum fertilizers and seasons	107
14	Effect of interaction between varieties, boron and molybdenum fertilizers	107
15	Effect of interaction between varieties, boron, molybdenum fertilizers and seasons	109
V	SUMMARY	110
VI	LITERATURE CITED	122
VII	APPENDIX	141
	ARABIC SUMMARY.	