

Contents

	Page
I. INTRODUCTION	1
II. REVIEW OF LITERATURE	2
III. MATERIAL AND METHODS	46
IV RESULTS AND DISCUSSIONS.....	52
IV.1- Effect of bud load/vine and fruiting unit	52
length (no. of buds/spur or cane) on bud	
behaviour of both "Flame seedless" and	
"Crimson seedless" grapevines:.....	
IV.1.1-Effect on bud burst percentage:	52
IV.1.2- Percentage of vegetative buds:	56
IV.1.3- Percentage of productive buds: ...	60
IV.1.4- Fruitfulness coefficient	62
IV.2- Effect of bud load/vine and cane length on	67
growth vigour	
IV.2.1-Effect on shoot length (cm.) and shoot diameter	67
(cm.):.....	
IV.2.2-Effect on number of leaves/shoot and leaf area.	72
IV.3- Effect of bud load and cane length on yield	
and fruit quality:.....	77
IV.3.1-Average yield/vine:	77
IV.3.1-a- Number of clusters/vine:	77
IV.3.1-b- Average yield/vine (kg):.....	79
IV.3.2-Physical characteristics of clusters:.....	83
IV.3.2-1- Cluster weight (gm) and volume (cm ³)......	83

	Page
IV.3.2-2- Cluster dimensions:	88
IV.3.2-3- Number of berries/cluster:	92
IV.3.2-4- Cluster compactness:.....	94
IV.3.3- Physical and chemical characteristics of berries:	99
IV.3.3-1- Physical properties of berries:	99
IV.3.3-1-1- Berry weight (gm.) and berries weight/cluster:.....	99
IV.3.3-1-2- Berry dimensions:	105
IV.3.3-1-3- Juice weight (gm) and berry juice (%):.....	109
IV.3.3-1-4- Berry firmness and berry adherence strength:.....	114
IV.3.3-1-5- Shot berries/cluster (%):.....	118
IV.3.3-1-6- Tours thickness (cm):	120
IV.3.3-1-7- Peduncle thickness and bruch length (cm):.....	124
IV.3.3-2- Chemical properties of berries:	128
IV.3.3-2-1- Total soluble solids (TSS):	128
IV.3.3-2-2- Total acidity:	131
IV.3.3-2-3- TSS/acid ratio:	135
IV.3.3-2-4- Total sugars content:	137
IV.3.3-2-5- Total anthocyanin content:	141
V. SUMMARY AND CONCLUSION	146
VI. LITERATURE CITED.....	157
ARABIC SUMMARY.....	-