

CONTENTS

	Page
I. INTRODUCTION.....	1
II. REVIEW OF LITERATURE	3
2.1. Effect of organic and mineral nitrogen fertilizer ..	4
2.1.1. Vegetative growth characteristics.....	4
2.1.2. Chemical constituents of plant foliage.....	9
2.1.3. Total fruit yield and its components.....	13
2.1.4. Fruit quality.....	20
2.1.5. Fruit storability	26
2.2. Effect of natural antidisease substances.....	30
2.2.1. Vegetative growth characteristics.....	31
2.2.2. Chemical constituents of plant foliage.....	34
2.2.3. Total fruit yield and its components.....	35
2.2.4. Fruit quality	39
2.2.5. Fruits storageability.....	40
III. MATERIALS AND METHODS.....	44
3.1. Nitrogen fertilizer treatments.....	45
3.2. Natural antidisease substances.....	46
3.3. Plan of work.....	46

3.4. Data recorded.....	48
3.4.1. Vegetative growth characteristics.....	48
3.4.2. Chemical constituents of plant foliage....	48
3.4.3. Yield and its components.....	49
3.4.4. Fruit quality.....	49
3.4.5. Fruits storability.....	51
3.5. Statistical analysis.....	52
IV. RESULTS AND DISCUSSION	53
4.1. Vegetative growth characteristics.....	53
4.2. Chemical constituents of plant foliage.....	57
4.3. Total fruit yield and its component.....	61
4.4. Fruit quality.....	66
4.4.1. Physical fruit quality.....	66
4.4.2. Chemical fruit quality.....	69
4.5. Fruits storability.....	73
4.5.1. Weight loss percentage.....	73
4.5.2. Decay percentage.....	80
4.5.3. Chemical constituents during storage....	86
V. SUMMARY AND CONCLUSION	101
VI. REFERENCES	107
ARABIC SUMMARY	-

LIST OF TABLES

No. of Table	Table	Page
1	Mechanical and chemical analyses of the used experimental soil	45
2	Analysis of compost in the two seasons	47
3	Effect of nitrogen fertilizer, natural antidiseases substance and their interaction on strawberry vegetative growth characteristics during the two seasons of study.	54
4	Effect of nitrogen fertilizer, natural antidiseases substance and their interaction on strawberry chemical constituents of plant foliage during the two seasons of study	58
5	Effect of nitrogen fertilizer, natural antidiseases substance and their interaction on strawberry total fruit yield and its components during the two seasons of study.	62
6	Effect of nitrogen fertilizer, natural antidiseases substance and their interaction on strawberry physical fruit quality during the two seasons of study	67
7	Effect of nitrogen fertilizer, natural antidiseases substance and their interaction on strawberry chemical constituents in fruit during the two seasons of study	70

No. of Table	Table	Page
8	Effect of nitrogen fertilizer and storage period on strawberry weight loss percentage during the storage period in both seasons of study.	74
9	Effect of natural antidiseases substances and storage period on strawberry weight loss percentage during the storage in both seasons of study	76
10	Effect of the interaction of nitrogen fertilizer, natural antidiseases substances and storage period on strawberry weight loss percentage in the first season	78
11	Effect of the interaction of nitrogen fertilizer, natural antidiseases substances and storage period on strawberry weight loss percentage in the second season	79
12	Effect of nitrogen fertilizer and storage period on strawberry decay percentage during the storage period in both seasons of study.	81
13	Effect of natural antidiseases substances and storage period on decay percentage during the storage period in both seasons of study.	83
14	Effect of the interaction of nitrogen fertilizer, natural antidiseases substances and storage period on strawberry decay percentage in the first season	84

No. of Table	Table	Page
15	Effect of the interaction of nitrogen fertilizer, natural antidiseases substance and storage period on strawberry decay percentage in the second season	85
16	Effect of nitrogen fertilizer and storage period on TSS% during the storage period in both seasons of study.	87
17	Effect of nitrogen fertilizer and storage period on strawberry acidity% during the storage period in both seasons of study.	87
18	Effect of nitrogen fertilizer and storage period on strawberry vitamin C (mg/100g) during the storage period in both seasons of study.	88
19	Effect of nitrogen fertilizer and storage period on strawberry anthocyanin (mg/100g) during the storage period in both seasons of study.	88
20	Effect of nitrogen fertilizer and storage period on strawberry total sugars % during the storage period in both seasons of study.	89
21	Effect of nitrogen fertilizer and storage period on strawberry reducing sugars % during the storage period in both seasons of study.	89
22	Effect of natural antidisease substances and storage period on strawberry TSS% during the storage period in both seasons of study.	91

No. of Table	Table	Page
23	Effect of natural antidisease substance and storage period on strawberry acidity% during the storage period in both seasons of study.	91
24	Effect of natural antidisease substances and storage period on strawberry vitamin C(mg/100g) during the storage in both seasons of study.	91
25	Effect of natural antidisease substances and storage period on strawberry anthocyanin (mg/100g) during the storage period in both seasons of study.	92
26	Effect of natural antidisease substances and storage period on strawberry total sugars% during the storage period in both seasons of study.	92
27	Effect of natural antidisease substances and storage period on strawberry reducing sugars% during the storage period in both seasons of study.	92
28	Effect of the interaction of nitrogen fertilizer, natural antidiseases substances and storage period on strawberry TSS% during the storage period in both seasons of study.	95
29	Effect of the interaction of nitrogen fertilizer, natural antidiseases substances and storage period on strawberry acidity% during the storage period in both seasons of study.	96

No. of Table	Table	Page
30	Effect of the interaction of nitrogen fertilizer, natural antidiseases substance and storage period on strawberry vitamin C (mg/100g) during the storage period in both seasons of study.	97
31	Effect of the interaction of nitrogen fertilizer, natural antidiseases substances and storage period on strawberry anthocyanin (mg/100g) during the storage period in both seasons of study.	98
32	Effect of the interaction of nitrogen fertilizer, natural antidiseases substances and storage period on strawberry total sugars% during the storage period in both seasons of study.	99
33	Effect of the interaction of nitrogen fertilization, natural antidiseases substances and storage period on strawberry reducing sugars% during the storage period in both seasons of study.	100