

CONTENTS

	Page
INTRODUCTION	1
REVIEW OF LITERATURE	3
1- Effect of plant residues	3
2- Effect of irrigation regime on	10
a- Wheat	10
b- Sesame	14
3- Effect of N-level on	16
a- Wheat	16
b- Sesame	21
MATERIALS AND METHODS	25
RESULTS AND DISCUSSION	34
A- First study (wheat)	34
I- Growth characters	34
1- Plant height	34
2- Number of tillers / m ²	42
3- Flag leaf area	47
4- Dry and yield components	52
II- Yield and yield components	56
1- Number of spikes / m ²	56
2- Spike weight	60
3- Number of grains / spike	65
4- 1000-grain / weight	69
5- Grain yield kg / feddan	74
6- Straw yield kg / feddan	81

	Page
III- Chemical analysis	86
1- Protein content	86
2- Nitrogen use efficiency	91
V- Water use efficiency	95
B- Second study (Sesame)	101
I- Growth characters	101
1- Plant height	101
2- Dry weight of plants / m ²	109
II- Yield and yield components	114
1- Number of capsules per plant and per unit area .	114
2- Seed yield per plant	119
3- 1000-seed weight	123
4- Seeds yield kg/feddan	127
5- Straw yield kg/feddan	133
III- Chemical analysis	138
1- Seed oil content	138
2- Oil yield kg / feddan	142
3- Seed protein content	147
4- Nitrogen use efficiency	151
V- Water use efficiency	155
SUMMARY	160
LITERATURE CITED	173
ARABIC SUMMARY	