

CONTENTS

	Page
I : INTRODUCTION	1
II : REVIEW OF LITERATURE	3
A. Varietal effects	3
B. Phosphorous effects	7
C. Nitrogen effects	12
III : MATERIALS AND METHODS	17
IV : RESULTS	24
A. Growth Characters	24
1 - Plant height	24
a - At 30 days from planting	24
b - At 60 days from planting	27
c - At harvest	31
2 - Number of branches per plant	35
a - At 30 days from planting	35
b - At 60 days from planting	38
c - At harvest	42
3 - Number of leaves per plant	46
a - At 30 days from planting	46
b - At 60 days from planting	49
4 - Dry weight of branches per plant	52
a - At 30 days from planting	52
b - At 60 days from planting	56
5 - Dry weight of leaves per plant	59
a - At 30 days from planting	60
b - At 60 days from planting	63
6 - Dry weight per plant	67
a - At 30 days from planting	67
b - At 60 days from planting	70

	Page
B. Developmental Charactres	74
1 - Flowering date	74
2 - Maturity date	78
C. Yield Components	82
1 - Number of pods per plant	82
2 - Number of seeds per plant	87
3 - Seed yield per plant	91
4 - Weight of 100 seeds	95
D. Yield	98
1 - Seed yield per faddan	98
2 - Straw yield per faddan	103
3 - Seed / straw ratio	1.7
E. Chemical Contents	110
1 - Crudo protein percentage	110
2 - Oil percentage	114
V : DISCUSSION	119
VI : SUMMARY	144
VII : ACKNOWLEDGEMENT	155
VIII : LITERATURE CITED	156
IX : ARABIC SUMMARY	