

TABLE OF CONTENTS

	Page
1- INTRODUCTION	1
2- REVIEW OF LITERATURE.....	3
2-1. Plant growth characteristics.....	3
2-2. Chemical composition of leaves.....	5
2-3. Vegetative yield.....	10
2-4. Sex expression.....	11
2-5. Seed yield components.....	12
3- MATERIALS AND METHODS.....	14
4- RESULTS AND DISCUSSION.....	19
4-1. First experiment.....	19
4-1-1. Plant height	19
4-1-2. Dry matter content.....	22
4-1-3. Chemical composition of leaves.....	23
a. Photosynthetic pigments.....	23
b. Total nitrogen.....	25
c. Nitrate-N.....	31
d. Phosphorus, Potassium and Calcium.....	32
e. Sugars and carbohydrates.....	36
4-1-4. Vegetative yield.....	41
4-2. Second experiment.....	45
4-2-1. Sex expression	45
4-2-2. Seed yield characters.....	48
5- SUMMERY AND CONCLUSION.....	53
LITERATURE CITED.....	64
ARABIC SUMMERY.....	