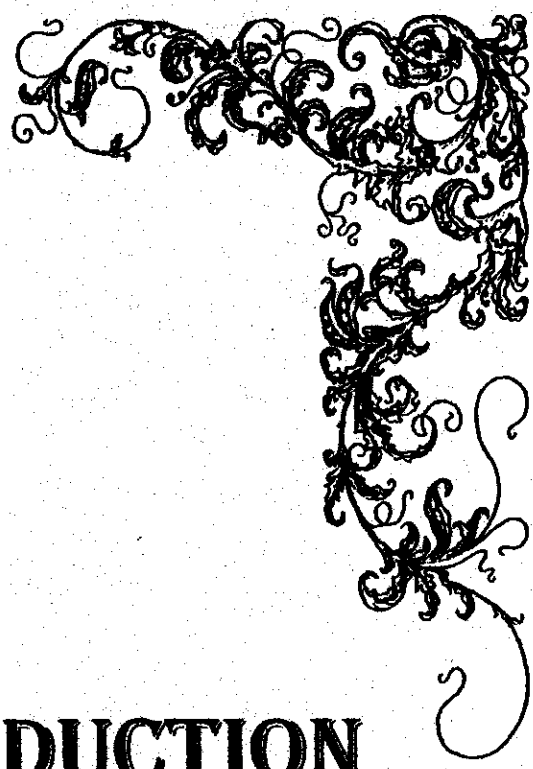

INTRODUCTION

I- INTRODUCTION

Cotton lint is the most important vegetable fiber in the world today and is woven into fabrics,either alone or combined with other fibers. There is a demand for Egyptian cotton by foreign countries due to its excellent qualities which distinguish Egyptian cotton .These qualities in fact are the results of an extremely favourable wheather ,a highly fertile soil and above all an intimate knowledge of technicans including breeders ,spinning technologists and agronomists. Therefore, increasing the quality of cotton fiber is the ultimate goal of agronomists. This can be achieved by applying some agricultural practices agro-management such as N,P and bio-fertilization.

Nitrogen represents a vital element in all biological processes in plant life, like protein synthesis and nuclic acids formation .Nitrogen has an essential role in plant growth, productivity and soil fertility .

Phosphorus comes next to nitrogen as a vital nutrient for plants and micro-organisms. The inorganic forms of the element in soil are Ca-P, Fe-P, Al-P and apatite minerals. Organic forms include inositol phosphates, phytins, phospholipids, nuclic acids and sugar phosphates which associated with the humus fraction of the organic matter and biologically converted into microbial substances .

The optimum levels of nitrogen and phosphorus are considered main factors which govern the balance between

different vegetative and fruiting stages of cotton plant and consequently affect seed cotton yield and lint quality properties.

Recently, microbial inoculution of cotton plant by certain free-living N_2-fixing and P- solubilizing bacteria had a great importance as a new technology.This method of microbial inoculation aims at minimizing the amount of applied chemical fertilizers, preventing the pollution which can be occurred by the excessive use of chemical fertilizers and reducing the costs of production

This work aim at :

1-studing the effect of nitrogen and phosphorus fertilization on growth, yield and yield components of cotton plant (Giza 80 cultivar) grown under conditions of Middle Egypt .

2-determining the effect of seed inoculation with some free-living N_2-fixing bacteria, yeast extraction and /or phosphorus solubilizing bacteria in the presence of different levels of N and P fertilization .

Such study can pay a great device to the farmers and nation through applying the fertilization practices for growing cotton in Middle Egypt, with the hope for further increase in cotton yield and quality to compensate the decrease in cotton yield .