INTRODUCTION

Maize (Zea mays L.) is one of the most important cereal crops in the world. It ranks the third of most important cereal crops in the world. It ranks the third of the world cereal crops surpassed only by wheat and rice. In USA maize is considered the king of cereal crops.

In Egypt, Maize is essential for human consumption and livestocks as an available source of carbohydrates, oil and some what for protein. It is demanded for several industrial purposes such as manufacturing of starch and also for cooking oils. The grown area of maize in Egypt is about 1.558.000 feddan(*) with a total grain yield of 4.963.000 ton. The average grain yield per feddan (*) was about 22.760 Ardab(**) . The total prodnction supplies with 80% of the total consumption with a gap of 20% which has to be filled via importation.

Recently, efforts are exerted to increase maize productivity by seedbed preparation and biological fertilizers i.e agrispon or cerialine.

Tillage has traditionally been performed to achieve an appropriate seedbed preparation treatments which may lead to a favourable changes in the physical and chemical structure of the soil for better crop performance.

(*) Statistical and Agricultural Economic Research Institute, Ministry of Agricalture, 1997.

(**) One ardab = 140 kg .

Agrispon, is produced from extracts of certain plants growing in stressed desert environments and from a specific ancient mineral deposit. It is a non-toxic multi-active agent, multi –mode of action as metabolic stimulator for plants and rhizosphere organisms, **(Anonoymous, 1983)**.

The aim of this study is to evalute methods of seedbed preparation and some biological fertilizers (foliar application of agrispon and bacterial inoculation) and their effect on chemical and biological properties of the soil as well as growth, yield and its components of maize.