INTRODUCTION

Cauliflower is one of the most cole crops grown in Egypt. It has a high nutritive value due to its high content vit-C, vit-B_1 (Thiamin) and B_7 (Niacin) and moderate content of Ca and Mg. The cultivated area reached 10705 feddan in 1996/1997 produced 103089 tons with an average 9.63 tons/fed.

The fertilizer requirements of cauliflower, especially phosphorus plays an important role in yield potential, quality of curds and chemical constituents of curd tissues. The problem of P- application in Egypt due to the high pH value of the soil in which phosphate is easly fixed or converted to $Ca_3 (PO_4)_2$.

This work is an attempt to increase N and P-uptake (Ohlrogge, 1962) and conequantely yield and quality of curds through increasing levels of phosphorus fertilizer within different sources and different times of application. Trails included super phosphate (SP), granulated triple super phosphate (GTSP) which contains P in the form of calcium phosphate and monoammonium phosphate (MAP) and diammonium phosphate (DAP) which contains phosphorus included with NH_4^+ in a compound fertilizer.

Herein we try to find the must favorable level, source and time of P-fertilizer for cauliflower plants grown under Kaliobya field conditions.

At the recent 15 years the problem of micronutrients application to vegetable crops have been mentioned (Gabal, 1984, El-Foly, 1984). There, fore, this dissertation included also a separate experiment to study the response of cauliflower plants to micrountrients application, especially Zn, B and Mn supplied as foliar spray or seed soaking.