I. INTRODUCTION

Swarms of the desert locust Schistocerca gregaria (Forskål) may invade a total area of 11 million square miles, though not all at the same time, this is more than 20% of the total area of the world. They can affect one-tenth of the world's population. Crop damage by the desert locust was always considered as one of the catastrophic events thoroughout history.

With increasing human population and limited food resources, the control of the desert locust is considered as an international problem of utmost importance.

The practical manipulation of insect pest population using all control methods in a sound ecological manner, has become a major concern of the agricultural scientists. The potential environmental hazards of conventional insecticides together with rapid development of resistance to them by insects, necessitates more enlightend methods of control.

Antifeedants represent a new approach to crop protection in that the elimination of the pest is not the

primary objective. Rather than killing, repelling or trapping the insect pests, these compounds inhibit their feeding and thus protect the crop or commodity.

In the course of the last two decades a great number of plant extracts were reported to have antifeedant properties, giving complete feeding inhibition,or feeding deterrents, giving partial feeding inhibition, at the concentration examined. The discovery of these compounds was brought about either through the search for feeding deterrents per ce, or in the course of study of causes of plant resistance to insect infestation.

The abundance of material discovered in this field, and variety of their action led Whittaker (1970) to suggest the term allelochemics to describe non-nutritional substances produced by an organism of one species, and which affect the growth, health, behaviour and population biology of another species. Two classes of allelochemic effects are of pertinence in pest control; allomones which are chemical factors giving an adaptive advantage to the host plant and kairomones denoting the chemical factors giving an adaptive advantage to the receiving organisms (insect pest)(Whittaker and Feeny,1971).

Family Verbenaceae has received a considerable amount of attention as a source of allomones excerting antifeedant properties to various species of Spodoptera. Since one of the characteristics of such compounds is their specificity to a limited numbers of herbevorous species, it was thought of interest to test the presence of feeding deterrent allomones for the desert locust Schistocerca gregaria (Forskål) in plants belonging to this family, which are present in Egypt.

The aim of this work is to compare the feeding deterrence properties to S. gregoria present in the extracts of different organs of eleven plant species belonging to Fam. Verbenaceae. According to the results obtained, the plant organs from different plant species should be tested with a number of solvents, and the richest source of feeding deterrents should be subjected to further trials directed to the separation of the active principle and to forming an idea about its nature.