1—INTRODUCTION

The problem of food security is the first problem in most developing countries because they import between 25-50% of their food. Accordingly, these countries have to start, without delay, devoloping programs, and should deal with the improvement of production procedures, secure additional cultivable land, addition of new production units, and to use different ways to maximize efficiency of existing production units.

In Arab Republic of Egypt we expect to import about 50% of all grains needed for human consumption by the year 2000. We will also import about 40% of needed white meat and about 60% of red meat. Therefore, it is a general policy in Egypt to pay much attention to increase the out put of the animal protein from every possible sources in order to cover the increasing demand for human consumption. Several attempts are being directed to increase poultry production and to decrease their feeding cost by giving the suitable diet and using the cheapest feeding stuffs.

Broiler chicks are now widely used for white meat production in Egypt as a solution for food security policy. To achieve great success in poultry production, their feeding mixtures must contain adequate levels of all nutrients to cover their requirements for rapid growth.

Many individual chemical elements are required for proper metabolic functioning of the chicken. The amounts required vary tremendously from the large amounts of calcium required for bone structure and egg shells to infinitestimal amounts of selenium required for its function in the enzyme, glutathione peroxidase, which helps to protect the integrity of the blood vessel walls and in the prevention of muscular dystrophy Soon after the discovery that manganese is required for prevention of perosis in chicks, studies were undertaken to determine the effects of various manganese compounds and modes of administration of the element upon the requirements for prevention of perosis.

This study was conducted with growing chicks receiving various levels of supplemental manganese different sources. Objectives of this research were to study the effect on [1] chicks performance, [2] the incidence of perosis and [3] tissue absorption and uptake of dietary manganese from different sources fed to chicks in conventional diets at levels near to the NRC (1984) requirement (55 ppm).