INTRODUCTION
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Fish and its products are considered one of the most important food as they are the cheapest source of high quality animal protein with their exceptional richness in calcium, phosphorus and vitamins. At the same time, there is no doubt that teleostie fishes have attained a great economic important as a productive source of animal proteins for human consumption.

The total annual production of animal protein in Egypt is not sufficient to meet the increasing population demand. The need for rapid development and proper management of the fishery is becoming a necessity in view of the high demand for fish as a relatively cheap source of animal protein. Fish may compensate for the present deficiency of other expensive animal protein source (Hamza, 1989).

Fish feeds often represents 60% or more of the total fish production costs. A biologically feasible production system can be uneconomical because production costs associated with feed are expensive (Green, 1992). The utilization of organic manure as the principal nutrient for earthen ponds is a traditional management practice in Asian aquaculture. The manure can be used in direct or indirect integration of fish and livestock. In the direct integration systems, fresh manure is continuously added to the ponds, while, in the indirect integration, the manure is transported to the ponds and used in fresh or treated forms in different mauring regimes (Pekar 1994).
The readily decomposable organic matter of the manure provides dissolved and particulate substances for bacteria, and the bacterial particles supply food to the filter-feeding and detritus-consuming animals, while, the mineralized fraction of the manure stimulates phytoplankton productivity similar to the action of inorganic fertilizers (Hepher and Pruginin 1981).

In Egypt, the majority of farmers do not feed fish during winter time where water temperature varies from 6°C-20°C. Although Egypt usually has a mild winter, fish farmers claim that fish do not eat or grow under the prevalent climatic conditions of winter. However, this has not been proved experimentally. Dupree and Huner (1984) reported that tilapia becomes lethargic and stops feeding when temperature falls below 15.5°C. Chervinski (1982) reported that the activity and feeding tilapia become reduced below 20°C and feeding stops around 16°C.

The objective of the first experiment was to evaluate the effects of feeding with organic fertilization and supplemented feed as well as incorporation of some untraditional feedstuffs such as blue green algae and Azolla in tilapia diets for reducing feed costs of Nile tilapia.

The objective of the first experiment was to study the effect of feeding Nile tilapia fish with poultry litter as organic fertilizer, during first three months, followed by three months, replaced by artificial fed and some additives such as blue green algae and Azolla for reducing feed costs, on water quality parameters, growth and survival rates and carcass analysis. The aim of the second experiment was the to study the effect of feeding fish two different feeding regimes in rates 5-1% and 10-
2% of total fish biomass under climate conditions of seven winter months, in Egypt, whereas water temperature ranged from 8.5 to 21.8°C, on water quality and fish body weight and length, weight gain, specific growth and survival rates.