

**Sadek, M. F. A. (2020).** The Effect of some dietary medicinal herbal extracts on growth performance and economic efficiency of Nile tilapia. *Journal of Animal, Poultry & Fish Production; Suez Canal University*, 9 (1): 47 – 54.

### **Abstract**

This experiment was performed to study the effect of ginger and licorice extracts on the diets on growth performance, feed utilization and economic efficiency besides water and fish quality. The experiment started at 15 May to 15 September 2019 for a period of 120 days at a private fish farm in Fayoum Governorate, Egypt. 1680 monosex Nile tilapia (*Oreochromis niloticus*) fingerlings with an average weight of  $18.26 \text{ g} \pm 0.34$  have been randomly distributed in 12 net hapa in six experimental groups ( $4 \times 7 \times 1.5$  m with a water volume of 28 m<sup>3</sup> and 140 fingerlings) suspended in an earthen pond. The diets was (T1) control group, fed on the basal diet only; T2 and T3 the basal diet sprayed with aqueous ginger extract at a rate of 2 and 4 ml/kg feed; T4 and T5 the basal diet sprayed with aqueous licorice extract at a rate of 2 and 4 ml/kg feed and T6 mix group, fed on the basal diet sprayed with 2 ml ginger plus 2 ml licorice aqueous extracts/kg feed. The results showed that ginger and licorice extract supplements were able to minimize heavy metal accumulation in the body of the fish (levels of cadmium, lead and copper) Special to expand adding. While 4 ml of licorice or ginger was better than 2 ml and combining extract better than both. Fish fed mixed diet (T6) achieved the best significant final body weight followed by dietary fish groups (T5), (T4), (T3) and (T2), respectively, Whereas control group (T1) obtained the lowest values. The best FCR and higher levels of feed intake (FI), protein efficiency ratio and PPV were obtained when fish were fed on T6 diet. Which the best significant values in all parameters. T6 showed significantly higher net yields and economic efficiency compared with other tested diets. While control diets T1 had the least economic output significantly ( $P \leq 0.05$ ).

**Keywords:** Nile tilapia, ginger, licorice, extract, growth performance, feed utilization and water quality.