Sadek, M.F.A., Nady, A.S. and Abou Zied, R.M. (2022). Effect of some nutritional and environmental factors on production of mono sex Nile tilapia (*Oreochromis niloticus*)**.** J. of Animal and Poultry Production, Mansoura Univ., 13(1): 15-23.

Abstract

Two trials were conducted with Nile tilapia *(Oreochromis niloticus)* larvae and fry at the commercial fish hatchery in Fayoum Governorate during 2019. The first was conducted to study the effect of storage conditions for treated feeds with male hormone 17 α –methyltestosterone (17 α –MT), (light condition, store temperature. and time after preparation) on the rates of sex reversal, and growth performance. 5000 newly hatched fry were stocked in a hapa (2×1 m, and a water depth of 80 cm), and were fed with treated feed with 120 mg/kg (17α-MT) for 28 days. No significant difference among treated diets and the ability to sex-reverse fry. The highest sex reversal % was in the treated diets and refrigerated for use at 97.5% and prepared daily at 96.27%. The results of this trial indicate that the rates of male sexual transformation were affected by the method of preparing treated feed hormone, although this effect was limited. The second experiment was performed to study the effect of *Tribulus terrestris* powder on sexual transformation, compared to the male treated with 17α-MT in the same condition as the first experiment. A significant increase (P≤0.05) in percent male was observed with increasing *Tribulus terrestris* powder in the diets compared to control group. There are significant differences between treatments containing 17α-MT and the basal diet. The results of this trial refer to the recommendation that the *Tribulus terrestris* powder at 200 g/kg diet and 17α-MT at 150 mg/kg diet are the most effective for sex reversal in Nile tilapia larvae.

Keywords: Nile tilapia, sex reversal, *Tribulus terrestris*, growth performance, male hormone.