



Hematological and biochemical characters of monosex tilapia (*Oreochromis niloticus*, Linnaeus, 1758) cultivated using methyltestosterone

Alaa El-Din H. Sayed, Rehab H. Moneeb

Abstract:

The use of steroid-treated feeds as 17 α -methyltestosterone for the production of all-male populations is widespread in tilapia aquaculture. The aim of the present study was to investigate the misuse effects of methyltestosterone on monosex farmed Nile tilapia, *Oreochromis niloticus* by evaluation of hematological and biochemical values. The fishes were obtained from four localities (Assiut as a control, Beheira, Alexandria and Kafr el-Sheikh: three farms from each governorate as farmed monosex produced using methyltestosterone). The total erythrocyte count, hemoglobin rate, hematocrit percentage, mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin concentration (MCHC), mean corpuscular volume (MCV), white blood cell count, blood platelets, lymphocyte, monocyte, neutrophils and basophils were determined. The results showed that there were changes in the erythrocytic series and in the defense white blood cells. Activities of aspartate aminotransferase (AST), alanine aminotransferase (ALT) and alkaline phosphatase (ALP), glucose, cholesterol, total protein, uric acid and creatinine were determined for biochemical study. These alterations are considered an indication for performance and health of fish in the monosex culture medium indicating the side effects of overdose induction of MT.

Keywords:

Nile tilapia; Hematology; Biochemistry; Methyltestosterone; Aquaculture

Published In:

The Journal of Basic & Applied Zoology , 72 , 36-42