Animal welfare, etológia és tartástechnológia

Animal welfare, ethology and housing systems

Volume 9 Issue 3

Különszám/Special Issue

Gödöllő
2013

HEMATOLOGICAL ALTERATIONS IN COMMON CARP (*CYPRINUS CARPIO* L.) EXPOSED TO MANKOZEB

Bojarski B., Lutnicka H., Ludwikowska A.

University of Agriculture in Cracow, Faculty of Animal Science, Department of Poultry and Fur Animal Breeding and Animal Hygiene, Poland

ABSTRACT

In this study the influence of the fungicide mankozeb on hematological parameters of common carp was investigated. The study was conducted on fish weighing 60 (± 10) g in aquaria under controlled environmental conditions. Fish were exposed to the fungicide for 14 days at concentration of 1 mg L^{-1}. Next, aminals were transported to clean water for 30 days (recovery period).

It was determined that mankozeb caused a decrease in the values of hematocrit (HCT) and hemoglobin content (Hb) after 14 days of exposure. Increase in the mean corpuscular volume (MCV) and in white blood cell (WBC) number after the same time was observed. Increase in red blood cell (RBC) number was observed after 24 hours of exposure. The values of mean corpuscular hemoglobin (MCH) and mean corpuscular hemoglobin concentration (MCHC) were decreased after recovery period.

Evaluation of hematological parameters in fish is useful in detection of environmental stressors such as fungicides.

This work has been financially supported by DS 3210/KHDZFiZ

Key words: fungicides, mankozeb, hematological parameters