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Acute toxicity of tobacco (*Nicotiana tobaccum*) leaf dust on *Oreochromis niloticus* and haematological changes resulting from sublethal exposure

A.O. AGBON, I.T. OMONIYI, A.A. TEKO

Abstract

Experiments were conducted using dry tobacco (Nicotiana tobaccum) leaves aqueous extract to determine the acute toxicity and sub lethal effects on some haematological indices of Oreochromis niloticus using static renewable bioassay method. The extract was found to be toxic with a 48-h LC50 value of 109.6 mg/l. Sub lethal concentrations of the extract were found to have an inverse relationship with the haematological indices assessed. Statistical analysis using ANOVA revealed that there was a significant difference ($P < 0.05$) in the values of red blood count (RBC) and haemoglobin (Hb). A maximum acceptable toxicant concentration (MATC) of 5 mg/l was found while a safety level of 10.96 mg/l was estimated.

Key words:

Toxicity, tobacco, haematology, Oreochromis niloticus