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ORGANOCHLORINE PESTICIDES CHARACTERIZATION OF OWESE WETLANDS UTAGBA-OGBE FOR CAGE AQUACULTURE IN SCHOOLS: A TOOL FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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ABSTRACT

The aspiration of the United Nations in global goals 1 and 2 is to achieve no poverty and zero hunger globally by 2030. The Siamese of poverty and hunger eradication can only be achieved when unemployment is at the barest minimum. Agriculture has been singled out as a vehicle for youth's empowerment, poverty and hunger eradication especially youths engagement in aquaculture deploying cage culture. Good quality water is a factor in aquaculture and this underscores this study. The focus of this study therefore is the determination of the organochlorine pesticides content of Owesse wetlands for cage culture in schools. The design of this study is ex-post facto, the study answered three research questions and tested a hypothesis Owesse wetland was divided into research sites and from each of the research sites, water was sampled with clean plastic sampling bottle tied to a graduated string from 5 spots at 10 cm depth and covered subsurface. The samples from each sites were bulked, composite drawn, fixed with HNO_3 stored in ice cooled boxes for analysis. The analytical standards adopted were APHA, USEPA 3570 and Steindwandter and Shuffler 1978. The analytical equipment deployed for pesticides determination is Agilent 6100 series single quadrupole LC/MS. The mean results obtained from the parameters investigated where DDT 0.77± 0.28µg/l, adrin 2.55±0.32 µg/l, diedrin 1.88±0.l4 µg/l, endrin 1.88±0.38µg/l, and heptachlor 2.61±0.08µg/l. The results of the organochlorine pesticides investigated were further subjected to test of significance with ANOVA with numerator 4 and denominator 20 at 0.05 level of significance. The F ratio calculated is 3.80 while the F-ratio critical is 2.86. This reveals that Ho is rejected which means that the concentration of the organochlorine pesticides investigated were higher than the maximum allowable concentrations for pesticides in water. The study recommends that cage culture should not be deployed in Owesse wetland until decontamination is carried out; it equally recommends that sources of pollution be identified and plugged so as to allow cage culture deployment by the schools for the achievement of SDG goals 1 and 2 in Nigeria.

KEYWORDS: *Agriculture, Sustainable Development*

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