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Effect of Herbicidal Control of Water Hyacinth on Fish Health at the Ere Channel, Ogun State, Nigeria

EZERI, G.N.O.
Department of Aquaculture & Fisheries Management, University of Agriculture, Abeokuta.

Abstract

A herbicidal control of water hyacinth,WH (Eichhornia crassipes, Martius Solms - Laubach) was carried out by applying glyphosate (N - phosphyonomethyl glycerine) containing 360g/l glyphosate in the form of 480g/l isopropylamine salt at the rate of 2.16kg active ingredient (a.i/ha) by a fixed wing, AG-CAT Schweizer plane at the Ere fishing channel.Pathological studies revealed that of the total number of fishes examined prior to the chemical application, 334 (5%) had fin-rot, 2541 (38%) abrasion, 802 (12%) lesions, 334 (5%) ulcerations, 1805 (27%) sloughing of their body slimc. None had tumours or nodules. The post application examination of fishes revealed that 5806 (7%) had fin-rot, 8294 (10%) abrasion, 4147 (5%) lesions, 1244 (1.5%) ulcerations and 4145 (5%) sloughing of body slime. None had tumours or nodules. The total number of fish that showed signs of infection prior to herbicidal application was 516 (86.9%) while it was 23,636 (28.49%) for post application of herbicide. The total number of fish caught prior to herbicidal treatment was 6,686 (7.46%) while a total number of 82,943 fish (92.54%) were caught after treatment. No fish mortality was observed throughout the post treatment monitoring. In this multi-disciplinary work, it was established that glyphosate at 2.16 a. i / ha controlled WH and associated weeds within four weeks of application without any intrinsic deleterious effect on fish and aquatic fauna. @ JASEM