

Mathematical Modeling of the Spread and Control of Onchocerciasis in Nigeria

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Onchocerciasis, also known as river blindness and Robles disease is a parasitic disease caused by *Onchocerca volvulus*, a nematode (roundworm) and it is endemic in Nigeria. The reason of this paper is to discuss the mathematical formulation underpinning the spread and control of this disease on one hand. On the other hand, we make use of some new analytical methods to derive the solution of this set of equations. The numerical results are presented to test the efficiency and the accuracy of both methods. The techniques used for solving these problems are friendly, very easy, and less time consuming. The numerical solutions in both cases display the biological behaviour of the real world situation.