

1145-92-1212

Abdul-Aziz Yakubu* (ayakubu@howard.edu), Howard University, Department of Mathematics, 2441 6th Street NW, Washington, DC 200590001, and **Pauline van den Driessche**. *Analysis of Age-Structured Discrete-Time Model of Infectious Salmon Anemia*. Preliminary report.

In many epidemiological models, the disease-free state is a stable periodic cycle, rather than a stable static state (non-cyclic). When these cycles are intrinsic to the model and are not generated from periodic perturbations, van den Driessche and Yakubu developed an extension of the next generation matrix method (ENGM) for calculating the basic reproduction number. We will use the ENGM approach to two different discrete-time models with cyclic demographic dynamics, an SIR model and an infectious salmon anemia model. (Received September 20, 2018)