1035-92-285   **Jemal S Mohammed-Awel*** (`jmohammedawel@valdosta.edu`), P.O.Box 5743, Valdosta, GA ,
and **Blayneh W. Kebenesh**. *Conditions under which Vectors Develope Resistance to Spray.*

A deterministic discrete model for vector borne diseases, such as malaria, involving host and vector populations are analysed. Under certain conditions the existence of a disease free and vector free fixed point, the existence of a disease free with resistant vector to pesticides fixed point and an endemic disease with no resistant vector fixed point are proved. A threshold exists. The disease free and vector free fixed point is globally stable if is below 1. For certain parameter values the stability of the disease free with resistant vector to pesticides fixed point and the endemic disease with no resistant vector fixed point are numerically analysed. (Received August 30, 2007)