

Determination of host specificity and resistance of sesame to *Ralstonia solanacearum*

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Abstract

Sesame is a valuable source of vegetable oil. In spite the importance of this crop, little information is available on the infestation of this crop by *Ralstonia solanacearum* the pathogen that causes bacterial wilt in tomato and potato. There have been reports of sesame showing characteristic bacterial wilt symptoms in some parts of western Kenya. This research was conducted to determine the host specificity of *R. solanacearum* on sesame and evaluate disease resistance among local sesame cultivars. Four different sesame cultivars were used (KK4, Uganda, Sudan and Local White) and grown in a naturally infested greenhouse in a randomized complete block design with three replications. Data was collected on plant performance, disease incidence and severity on selected plants in each of the experimental units. Collected data was subjected to ANOVA using Genstat at 5% level of significant. Sesame was found to be infested with *R. solanacearum*. On natural resistance, the Local white sesame cultivar was found to the *R. solanacearum* most tolerant followed KK4, Uganda and Sudan cultivars respectively. The resistance in the local white sesame cultivar can be exploited through further research to ascertain its efficacy in bacterial wilt management.