Rice is the most important cereal crop in Kenya coming third after maize and wheat. It forms a very important diet for a majority of families in Kenya. The demand for rice in Kenya has seen a dramatic increase over the last few years while production has remained low. This is because rice production has been faced by serious constraints notably plant diseases of which the most devastating is rice blast. Rice blast is known to cause approximately 60% - 100% yield losses. It is caused by an Ascomycete fungus called Magnaporthe Oryzae. The aim of this study was to investigate the impact of rice blast disease on the livelihood of the local farmers in Greater Mwea region and develop a rice blast disease distribution map using GIS approach. The study methodology employed a questionnaire survey which was subjected to sample population of households in the 7 sections with 70 blocks within Mwea region. The collected data was analyzed using SAS Version 9.1. Descriptive statistics were used to summarize the household characteristics, the farm characteristics and the farmers’ perceptions of rice blast disease. In the questionnaire, farmers’ response on whether they had been affected by rice blast disease and the total production per acreage was used to develop an attribute table with GPS points. The GPS points were interpolated to create a geographical distribution map of rice blast disease. From the research findings almost all the farmers’ had awareness and knowledge of rice blast disease, 98% of the farmers interviewed were aware of rice blast disease. Out of the 98% with knowledge and awareness 76% have been affected by the disease, while 24% have never been affected. Farmers attributed rice blast disease to a range of different causes, including excessive use of nitrogen fertilizer, water shortage, and lack of proper drainage canal and due to climate change. Majority of the farmers interviewed (72%) did not engage themselves in any other socio-economic activity even after being affected by the rice blast disease. 15% opted to growing horticultural crops, 7% engaged in trading activities while 2% started livestock raring, wage earning and Boda boda business.