Abstract

As a case study to document the current characteristics of cassava mosaic virus disease (CMD) in postepidemic areas, surveys were carried out, in 2003 and 2004, in Siaya District of western Kenya. This was an area affected by a severe CMD pandemic in the late 1990s. Data recorded on cassava varieties were CMD incidence, severity index and number of adult whiteflies. Farmers (174) were interviewed on their understanding of the disease and their knowledge and practice of management interventions. Cassava cultivation was being reestablished, but local landraces predominated. Resistant varieties were present 13% in 2003, and 4% in 2004, of the surveyed fields. Adhiambolera was the most common variety, occurring in 35% and 40% of fields in 2003 and 2004, respectively, and had an average CMD incidence of 82% in 2003 and 73% in 2004. By contrast, the CMD-resistant variety Migyera had a low mean incidence (28% in 2003). The overall incidence for both years was 71%, consisting of 61% as a result of infection through planting diseased cuttings and 10% as a result of whitefly infection. In 2003, the total incidence was 72% and the average severity 2.7 (severity index), while in 2004 the incidence was 78% and the severity 2.6. There were significant severity variations in each division of the Siaya District during the 2 years except for Karemo and Ukwala. The abundance of whiteflies on the top five leaves of plants was low in 2003 but high in 2004, with means of 1 and 16, respectively, over the same seven divisions in both years, although this variation was thought to be because of seasonal factors. East African cassava mosaic virus-Uganda was the predominant geminivirus present in every division. Phytosanitation by farmers was minimal, as evidenced by 29% of farmers using a selection of CMD-free stems for planting and 15% using hand-roguing for CMD management. Occurrence of more than 25% CMD-free plants in 2004, moderate CMD severity and limited spread provide a conducive environment for the use of phytosanitation as a CMD control measure that can be immediately used by farmers growing their own cassava varieties.