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Incidence of virus diseases in the semi-arid cassava germplasm

Cassava is mainly propagated by stem cuttings, and this practice leads to the dissemination of viruses. At least 16 different viruses have been isolated from cassava. In Brazil the following viruses have been identified: Cassava common mosaic virus (CsCMV), prevalent in the southern region, Cassava vein mosaic virus (CsVMV), prevalent in the Northeast semi-arid environment and Cassava frog skin disease (CFSD) in the amazon region. The viruses responsible for cassava mosaic disease (CMD) complex have not been detected in Brazil. This study aimed to determine the incidence and distribution of CsCMV, CsVMV, CFSD, and CMD complex viruses in the cassava germplasm bank at Embrapa Semi-Arid (CPATSA). Leaf samples of 375 accessions were collected and submitted to ELISA for CsCMV and PCR for CsVMV and CMD. The results showed that 24.8% of the accessions within CPATSA's collection was infected with CsCMV, CsVMV or both. The most prevalent virus was CsVMV, presents in 98% of the infected accessions while CsCMV was found in only 2.1%. Based on the distribution of the infected plants in the germplasm bank and field observations, we suggest a mechanical dissemination of CsVMV. Plants with symptoms of CFSD were not found and PCR diagnosis was not able to detect any species involved in CMD complex.