

## Identification of viruses in *Gramineae* growing in the neighbourhood of CIRAD's sugarcane quarantine in Montpellier, France

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### Abstract

CIRAD's sugarcane quarantine imports sugarcane varieties from different countries all over the world. These varieties, imported as cuttings or tissue-cultured plantlets, are likely to harbour pathogenic organisms and especially viruses. Among the 10 virus species that have or might have been introduced into CIRAD's quarantine, *Sugarcane mosaic virus* (SCMV), *Sorghum mosaic virus* (SrMV), *Sugarcane streak mosaic virus* (SCSMV) and *Sugarcane yellow leaf virus* (SCYLV) are the most liable to be spread outside the quarantine glasshouses. The risk of spread is due to the presence of insect vectors (in particular aphids such as *Rhopalosiphum maydis*) in the Mediterranean area and a large variety of weeds (mainly *Gramineae*) that are listed as alternate host plants of these viruses. Eighty-seven leaf samples (4 from maize, 10 from Johnson grass, 72 from sorghum and 1 from *Setaria adhaerens*) were collected in the neighbourhood of CIRAD's quarantine and tested for viruses using RT-PCR and RFLP techniques. Almost all samples showed mosaic symptoms and 86 were infected by *Maize dwarf mosaic virus* (MDMV) (SrMV-SCH cannot be excluded) and/or SCMV belonging to the monophyletic maize group. None of these viruses was likely to come from CIRAD's quarantine glasshouses. Neither SCMV belonging to the sugarcane group nor SCSMV was detected. A virus related to (but different from) SCYLV was detected in two Johnson grass samples, but its identity and origin have not been investigated yet.

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