

*Aceria tosichella*/WSMV in country has alerted the threat represented by WMoV introduction. Two accessions of maize seeds from USA being introduced to Brazil were subjected to phytosanitary analysis. About two and three weeks after sowing, symptomatic leaves were tested at the Plant Quarantine Laboratory of EMBRAPA Genetic Resources and Biotechnology. Symptomatic samples tested WMoV positive by enzyme-linked immunosorbent assay (ELISA) and were confirmed by quantitative RT-PCR and sequencing. The WMoV-positive plants were chlorotic, with varying degrees of leaf striping. The presence of WMoV was confirmed as revealed by the expected fragment amplified using the HPVFW414/HPVREV565 primer pair. Sequence analysis of amplified PCR products revealed that the WMoV isolates had a 99 to 100% nucleotide identity with WMoV isolates from Australia and USA. To our knowledge, this is the first confirmed report of WMoV interception in Brazil. The expanding distribution of this emerging virus is significant because of its potential to cause additional severe economic impact on two major crops - wheat and corn. Financial Support: EMBRAPA.

#### **PIV35 - IDENTIFICATION OF RESISTANCE TO *Bean Rugose Mosaic Virus* (BRMV) IN ACCESSES OF COMMON BEAN GERMPLASM**

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The disease known as bean rugose mosaic, also known as “mosaico-em-desenho” caused by *Bean rugose mosaic virus* (BRMV), has been recently observed in common bean (*Phaseolus vulgaris* L.) fields at EMBRAPA Rice and Beans, located in Santo Antonio de Goias, Goias State, Brazil. The importance of this disease increases especially in conditions that enable infection of young plants, when there is the presence of other viruses and under sequential cultivation of susceptible common bean varieties. Currently, there is limited molecular characterization of BRMV with the consequently lack of information on its genetic diversity, and control measures using germplasm resistance. Thus, the objective of this work was the analysis of common bean accesses from the germplasm bank with the potential to be used as sources of resistance to BRMV. In 2013 a

BRMV isolate was obtained from plants of common bean cultivar ‘Pérola’. The plants showed typical symptoms of viral infection: severe mosaic, leaf deformation and blistering. After analysis of the material through transmission electron microscopy, typical crystalline inclusions of *comovirus* were observed. Because this cultivar is resistant to the *Bean common mosaic virus*, it was possible to rule out a double infection with this two viruses. The isolate was maintained and propagated in bean plants of the same cultivar and also stored in a -80 C freezer to preserve the original material. For the selection of resistant material, 132 accessions were sown in 2.5 kg pots with three pots per accession and three plants per pot, with one pot as a negative control. After germination, inoculation was carried out on young seedlings showing partially expanded primary leaves, using as source of inoculum leaves of symptomatic plants macerated in potassium phosphate buffer 0.1M, pH 7.2 amended with carborundum 600 mesh. From the 147 inoculated accessions, 144 showed typical symptoms of susceptibility according to the adopted disease scale. The access BGF750 had a severe hypersensitivity response showing necrosis on petioles and subsequent plant death. The access IPA 5047 displayed local chlorotic and very defined necrotic lesions. The access Rico 23 showed vein necrosis followed by plant death. All three accesses may be regarded as potential sources of resistance genes to BRMV on bean. Keywords: comovirus, mosaico-em-desenho, hypersensitivity response, *Phaseolus vulgaris*. Financial Support: CAPES.

#### **PIV41 - PHYLOGENETIC ANALYSIS OF BRAZILIAN *Chrysanthemum stunt viroid* ISOLATES REVEALS HIGH VARIABILITY AND SUGGESTS DIFFERENT INTRODUCTIONS**

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*Chrysanthemum* (*Dendranthema* spp.) is one of the most popular flowers produced and marketed worldwide, moving billions of dollars yearly in several countries, including Brazil. More than 70% of the Brazilian production are concentrated in the State of São Paulo. *Chrysanthemum stunt viroid* (CSVd), genus *Pospiviroid*, is currently considered the most important pathogen