1505: Damage of cowpea mild mottle virus and incidence of *Bemisia tabaci* biotype B in transgenic common bean lines resistant to bean golden mosaic virus

Introduction:Common bean is susceptible to several viral diseases including *Bean golden mosaic virus* (BGMV) and *Cowpea mild mottle virus* (CpMMV).

Methods:The development of Embrapa 5.1 event of genetically modified (GM) common bean resistant to BGMV, and near isogenic lines of two commercial cultivars (Pérola and BRS Pontal) allows the evaluation of the damage caused only by CpMMV.This is because these transgenic isolines do not get infected by BGMV.

Results/Conclusion:Despite the low incidence of CpMMV in the GM isolines derived from cv. Perola, yield of these isolines was lower than that for some of the isolines derived from cv. BRS Pontal (CNFCT 16205, CNFCT 16206, CNFCT 16209 and CNFCT 16210) which had a higher incidence of CpMMV. At the Experiment 1 a higher disease incidence was observed. The yield for cv. Perola and BRS Pontal reached only 81 and 299 kg ha^{-1}, respectively, and were significantly lower than the GM lines derived from cv. Perola (711 kg ha^{-1}) and cv. BRS Pontal (1.073 kg ha^{-1}). The low yield of the conventional common bean parental cultivars as compared to the GM isolines was due to the severe occurrence of BGMV. The GM isolines derived from cv. Perola and from cv. BRS Pontal yielded an average of 878% and 358% higher, respectively, than the conventional accesses. The GM isolines have yield potential even at conditions of high incidence of *B. tabaci* and the CpMMV if a management program for whiteflies including cultural practices and insecticides is established.

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