

Morales, J.G.; Franco, B.; Núñez, C.E.; and Cotes, J.M. 2010. Late blight resistance assessing of a segregating population of diploid potatoes (*Solanum phureja*). *Phytopathology* 100:S87.

Potato late blight caused by the oomycete *Phytophthora infestans* is the most important disease of this crop. Several chemical applications are required every crop season to achieve effective disease control. Plant resistance is the most effective strategy for disease control. *Solanum phureja* is a cultivated diploid potato from South America and an important source of late blight resistance. At Universidad Nacional de Colombia a breeding programme has been established looking for resistant potato varieties. 500 clones from a diploid *S. phureja* segregant population obtained from a cross between one resistant and one susceptible genotype were tested for late blight resistance using the Area Under The Disease Progress Curve (AUDPC) relative to the susceptible control method. The experiment was performed during two different time periods. 22 genotypes showed equal or higher values than the susceptible control indicating high disease pressure during the evaluation time period. 31 genotypes scored a value of 0 indicating immunity. Intermediate values ranging from 0.6 to 7.3 were found for the remaining genotypes. These results suggest that several genotypes within the *S. phureja* collection are important sources for late blight resistance and may be used for potato breeding against this important disease.