P25- Pear accession fingerprinting through microsatellite markers in Uruguay

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A selection of eleven microsatellite markers (SSRs) reported for fingerprinting germplasm collections of *Pyrus* spp. was used to genotype a collection of cultivars and rootstocks. This set of markers included the "minimum core" established by Evans et al. (2009). Cultivars with known origin (Williams Bon Chrétien, Abbé Fetel and Doyenné du Comice) were included as reference accessions. The comparison was performed among 44 accessions collected from old pear plantations with different commercial origins and date of introduction to the country. The aim of this study was to genotype pear accessions that were introduced in Uruguay to evaluate the genetic variability among clones and pear rootstocks. The selected markers proved to be effective for variability discrimination in all the accessions having 3 to 8 alleles per locus. The most informative markers were CH01d09 and GD96. Within cultivars, the observed variability among the thirteen Williams clones could respond to the numerous introductions from different origins that were performed throughout the years of pear production in the country. Although the accessions were grouped in clearly defined clusters as expected before the analysis, they showed variability within cultivars. The accession 00LBPrSJ is a rootstock collected from the locality of San José, and selected because of its medium to low vigor that leads to medium-sized fruit trees. This accession showed particular molecular pattern profile characterized by unique alleles that make it genetically distant from other accessions. The above mentioned phenotypic feature represents a very appealing condition that is suitable for the current cultivation practices overcoming incompatibility problems.

Keywords: *Pyrus* spp, SSR, genotyping, average linkage