Abstracts of posters

P1- Clonal selection of `Williams´ pear in Uruguay

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Fruit quality of 'Williams' European pear produced in different Uruguayan commercial orchards is heterogeneous. It's unknown if those differences are due to environmental factors or genetic factors linked to the source of plant material used for propagation. To know if there are genetic differences among them, this research focused on the evaluation of phenotypic characteristics of different sources of 'Williams' pear accessions under the same growing conditions. The experiment was installed in 2007 at INIA Las Brujas, Canelones, Uruguay. 'Adams' quince was used as rootstock jointly with an interstem of 'Beurré Hardy' pear. The treatments correspond to 'Williams' pear sources, totaling 17 treatments with four repetitions. At harvest, analyzed variables were yield and fruit number. Study of fruit variables included: equatorial diameter, length, length/diameter ratio, weight, and epidermis quality represented by lenticel notoriety, skin texture and presence of russet. Data were submitted to variance analysis and the means of treatments were grouped by the Scott-Knott test ($P \leq 0.05$). The Unweighted Pair-Group Method using Arithmetic averages (UPGMA), a multivariate technique, was used for cluster analysis. Yield and fruit number showed significant differences; with accesses 1, 3, and 13 presenting the best productions, during the last harvest seasons. This could be related to low chilling accumulation in recent years, indicating differences among the accessions in their adaptation to mild winter conditions. Significant differences among accessions were found for the following variables: equatorial fruit diameter, fruit length, as well as length/diameter ratio. Concerning the epidermis quality parameters, differences were also observed, highlighting accesses 8 and 13. This confirms that that the different behavior originally observed in the different locations was not due to site conditions. There are accessions achieving better behavior and fruit quality under the Uruguayan pear growing conditions, which show a potential for improvement in new plantings.

Keywords: *Pyrus communis* L.; pear breeding; fruit quality; phenotypic variability; climatic adaptation.