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XIII INTERNATIONAL
PEAR SYMPOSIUM

P27- European pear selections adapted to mild winters in Uruguay

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In Uruguay, climate change that has been observed in the world, is causing serious adaptation problems in most temperate climate fruit species. To solve this limitation, INIA began a European pear breeding program intended to create genotypes adapted to winter seasons with low chilling accumulation, and with fruits which have good organoleptic quality (Williams type). To generate variability, the crosses were made in 2012 using the following combinations: Abate Fétel x Butirra Precoz Morettini (AF x BPM) and Abate Fétel x Early Bon Chretien (AF x EBC). Obtained seedlings were 26 and 40, respectively. In 2013, to decrease time from seedling planting to fruit evaluation, apexes from each single seedling were overgrafted onto mature pear trees. At the fourth season after overgrafting (2016/2017) scions started fruiting. During the last harvest season (2017/2018), two genotypes were selected: Selection INIA 42.08-45 and Selection INIA 41.08-23. From the cross (AF x BPM), Selection INIA 42.08-45 matures during the first half of January. Its fruit averages 68mm. in diameter and 180g. in weight. Fruit shape is oblong pyriform, and the skin is light yellow with notorious lenticels, in which some fruits have the russet characteristic of their female parent. Its flesh is white, fine textured, with a good sweet taste, and slightly astringent. Selection INIA 41.08-23 (AF x EBC) is harvested in mid February, with an average fruit diameter of 63mm., fruit weight of 151g, ovate pyriform, green yellow skin, smooth with russet on much of the surface, has also fine texture, and very good sweet taste. The two genotypes selected look promising due to the good adaptation they showed to winter with low or mild chilling accumulation, as was last season with only 187 Chill Units accumulated (Utah model).

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