O20- Productive behavior of Williams pear (*Pyrus communis* L.) grafted onto different rootstocks

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Mostly used rootstocks for pears are of the genus *Pyrus and Cydonia*. The objective of this study was to evaluate production and quality of fruits of Williams cultivar on different rootstocks. Work was conducted at the National Institute of Agricultural Research - INIA Las Brujas. Williams trees were planted in 2003, being evaluated during cycles 2014/15, 2015/16, 2016/17 and 2017/18. Rootstocks were OH×F40 and OH×F69 (*Pyrus communis*), BA29, EMC and Adams quince (*Cydonia oblonga*). For quinces, Beurre Hardy (*Pyrus communis*) cultivar was used as an interestem. Spacing was 4.5m between rows, varying the space between plants, according to the expected vigor of each rootstock. For OH×F40, OH×F69 and BA29 plants were spaced 1.70m (1307 plants.ha-1), Adams 1.50m (1481 plants.ha-1) and EMC 1.30m (1709 plants.ha -1). The experimental design was a randomized block with five treatments (rootstocks), and four replications. Diameter, average fruit weight and firmness, soluble solids, number of fruits and productivity were analyzed. The data was submitted to analysis of variance by the F test and, when significant, the means were compared through Tukey's test at 5%. In the 2015/16 and 2017/2018 cycles there were no high productions due mainly to low chilling units. Fruit diameter and soluble solids did not present differences among the rootstocks tested. Quince BA29 presented greater fruit weight in relation to OH×F69 and higher firmness in relation to OH×F69 and OH×F40, in cycle 2016/17. For productivity, it was observed that OH×F40 was superior in the 2014/15 cycle. For the 2016/17 cycle all *Pyrus* rootstocks were substantially superior, and in the 2017/18 cycle they were slightly inferior to those of Cydonia. Results showed that *Pyrus* rootstocks had a much higher performance under optimal conditions, being slightly more affected when climatic conditions (chill units and precipitation) were not good for pear cultivation.

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