

## **Chill Requirement and Budburst Uniformity on Cultivar MaxiGala Grafted on Different Rootstocks**

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In marginal regions to grow apples, where winter temperatures do not allow to accumulate high numbers of chill hours, it is important to know the accumulation of chill hours, as this would make easier the choice of cultivars, being able to exclude/include cultivars with higher/lower chilling hour requirement to plant in that region. The insufficient or inadequate chill hour satisfaction have a negative effect on budburst uniformity. Chilling requirements the main cultivars grown in Southern Brazil are already known, but less is known about chill requirement of the rootstocks and the influence or interaction of rootstock with the commercial cultivar grafted on top. The aim of this trial was to evaluate the chill requirement and budburst uniformity on rootstocks G.213 and M.9, as well the behavior of the scion grafted on the top of them. The experiment was conducted at the Experiment Station of Temperate Clime Fruit of Embrapa Grapes and Wine, at Vacaria-RS, Brazil. Evaluation of four different chill hour levels: 400, 600, 800 and 1000 hours under 7 °C was realized by storing plants in a cold room with temperatures between 2 and 4 °C until the number of hours stipulated in each treatment was met. Thereafter, the plants were moved to a growth chamber, with temperatures held between 20 and 22°C, 12 hours of photoperiod and relative humidity 70 %. The number of buds opening weekly was recorded, until budburst was complete, or stopped. In the field, budburst uniformity was evaluated on 5-yr-old MaxiGala apple trees grafted on G.213, M.9 and Marubakaido with two interstem length 20 cm and 30 cm.

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