

ABSTRACT

In this test, we studied the seed germination of seeds of tomato cherry (*Solanum lycopersicum* L. var. *cerasiforme*) in response to five germinative pretreatments to different temperatures and photoperiods: hydration/dehydration, hydration/dehydration and gibberellic acid (300mg/l), gibberellic acid (300 mg/l), ascorbic acid (25ppm), and potassium nitrate (25mM). This study was carried out on seeds collected of six cherry tomato horticultural varieties.

The germinative response was calculated through final germination percent (PG), mean germination time (MGT) and mean speed germination.

The final germination percent was high in all cases (92-100%). The shortest MGT were obtained with the pretreatments of hydration/dehydration (2-3 days) and ascorbic acid (2-3 days). The results obtained highlight the treatment of hydration / dehydration with the varieties Summer Sun and Santorange, with the lower MGT regardless of light and temperature conditions (2,28-2,62 days). The germinative pretreatments with gibberellic acid or potassium nitrate also improved the mean germination time (about 4 days) opposite to control results (4-5 days). It was also noted that the seeds germinated in darkness condition germinated faster than seeds germinated in light, independently of the temperature. The highest mean speed germination were obtained with the pretreatment of hydration/dehydration (3-5 seeds/day). Plants coming from pretreatments seeds at 25°C gave a growth higher than untreated seeds. Fructification was faster in the pretreatment with KNO₃ (25°C), Santorange, Santawest and Shiiren varieties (61-65,5 days), than in the control (67-70,5 days, respectively); and the pretreatment with ascorbic acid (25ppm) which highlight the results obtained in Santorange and Shiiren varieties at 20/35 °C, with 63,5 days in treated seeds and 77 days in untreated seeds. Fruits number did not report differences among the pretreatments and conditions.

Key words: *Solanum lycopersicum*, cherry, germination, germinative pretreatment, gibberellic acid, ascorbic acid, potassium nitrate, mean time germination.