



Analysis of the incidence of the weight and longevity of *Phaseolus coccineus* L. seeds on germination

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In Tafí del Valle, the use of poor quality *P. coccineus* seed is a limitation of yield. The work aim was to study the effect of seed weight and longevity on quality parameters, such as germination percentage at 10 days (G), germination speed (VG, days) and latency period (PL, days). The seed collection was carried out randomly from the stored material, corresponding to three harvest years (2014, 2016 and 2018), and it was then classified according to its weight: T1 (1.60 to 1.79 g), T2 (1.80 to 2.00 g), T3 (2.01 to 2.50 g) and T4 (2.51 to 3.00 g). This seed was sown in a controlled environment chamber under a DCA, with 5 repetitions, and the data obtained was analyzed through ANOVA.

The results clearly showed that G is determined by longevity (being 100% in one year old seeds, 79% in 4 year old seeds, and 65% in 6 year old seeds), and also by the weight of the seed (being equal to 100% in seeds with weight T1, 87% in T2, 83% in T3, and 56% in T4). EG and PL were influenced by the weight of the seed and by the weight x longevity interaction effect. The interaction effect on EG and PL was determined by seeds of 6 and 4 years, observing greater stability in those of one year, regardless of weight. Summing up, we can conclude that one year old seeds with a weight T1 to T2 are recommended for sowing *P. coccineus*.

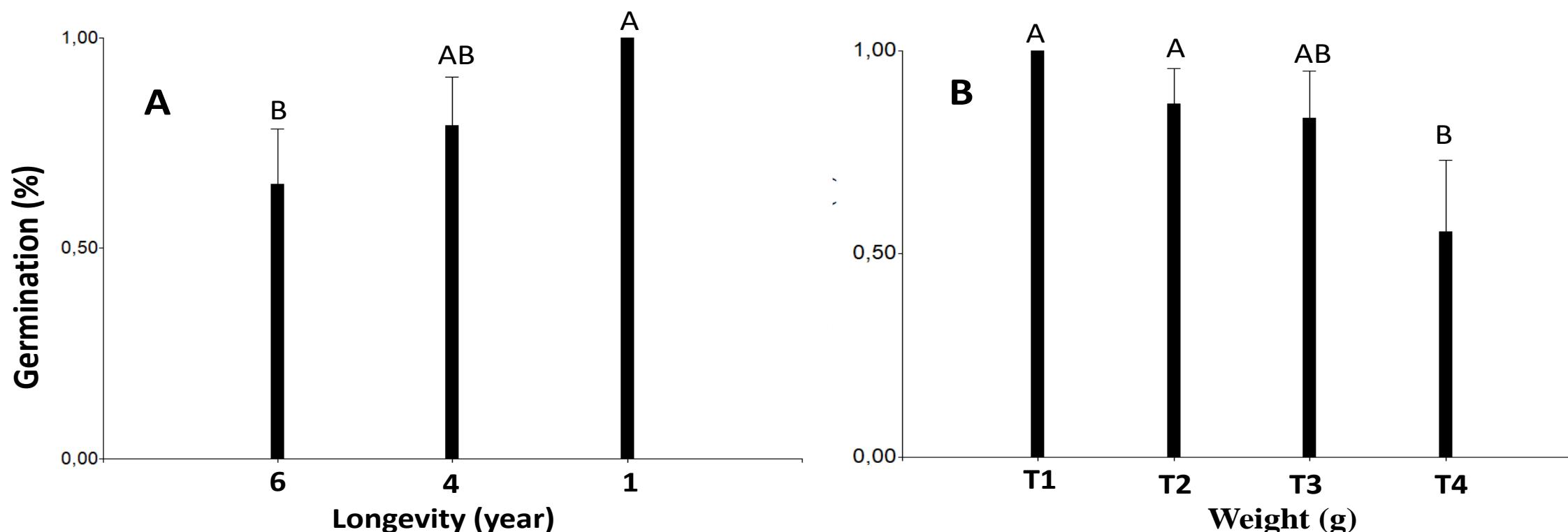


Fig 1. Effect of longevity (A) and seed weight (B) on the germination at 10 days in *P. Coccineus*. Different letters indicate significant differences between means according to Fisher's test (p < 0.005).