

I. ABSTRACT

Each day, the food market demands a greater production and efficiency of the cultivated plants. For the one way to ensure greater homogeneity of the crop is the application of germination protocols.

The objective of this study is to evaluate the ability of four pre-treatments on different populations to increase the percentage and the germination speed in an autochthonous variety of Zamora (Castilla y León) of *Capsicum annuum* L, in addition to noting if they cause changes in the post-germinated development.

These pre-germinated treatments have consisted in: the use of NaCl with gibberellic acid, hydration/dehydration and the application of potassium salts of two different concentrations (1% and 2%), observing also the effects of different temperature (21°C and 25°C) and lighting condition (16/8 and darkness).

Of all populations present in the study, the population that obtains better results in all calculated ratios and under all pre-treatments and conditions is the population of Morales del Vino (P3) opposite with the Population 1 of Valcabado that it has the worst values of the study populations.

The highest percentages of absolute germination were reached with the pre-treatment that consisted in the application of 2% KNO₃ + 2% K₂HPO₄ to the seeds and that were germinated under absolute darkness independently of the temperature used (21 °C or 25 °C). This pre-treatment also improved the T₅₀ values and caused an increase in plant height.

Key words: seed treatment, germination, T₅₀, *Capsicum annuum*.