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Overcoming dormancy in ‘Albion’ strawberry using sulfuric acid

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ABSTRACT

Obtaining plants from achenes is one of the first steps in a strawberry breeding program, since each achene has the capacity to generate genetically different plants. However, obtaining plants originating from achenes is one of the biggest obstacles to be overcome as they present integumentary dormancy, resulting in low germination, making it necessary to apply strategies to overcome their dormancy. The use of sulfuric acid (H_2SO_4) (SA) is the most recommended to break the dormancy of the dispersion units (seeds, nuts, achenes and others) of some species. Therefore, the objective of this work was to verify the effect of concentrations and immersion times of sulfuric acid on the breaking of dormancy of strawberry achenes of the Albion cultivar. The experiment was conducted at the Tissue Culture Laboratory of the Universidade Estadual de Londrina. The experimental design was completely randomized, with four concentrations of SA (0%, 70%, 80% and 90%), three periods of immersion time in the solution (5, 10 and 15 minutes) with four repetitions of 20 achenes each during 70 days. The characteristics evaluated was: percentage of normal seedlings (NS). Through Skott-Knott ($p \leq 0,05$), significant efficiency of H_2SO_4, regarding the concentration and time applied, in promote the germination of achenes of ‘Albion’ was found. It is concluded that scarification with sulfuric acid at a concentration of 70% and an immersion time of 15 minutes to break dormancy of the strawberry achenes of the Albion cultivar is efficient.

KEYWORDS: *Fragaria ananassa*, germination, genetical enhancement, scarification.

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