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Seed Germination of *Calystegia soldanella*

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Objectives

For restoration of coastal sand dune, it needs to establish a large population of coastal sand dune plants. We have studied on seed germination of one of coastal sand dune plant, *Calystegia soldanella*. The object of this study is to determine the effective methods for enhancing the rate of seed germination of *C. soldanella*.

Materials and Methods

1. Materials: *Calystegia soldanella* (Sea bells ; Convolvulaceae)
2. Methods
 - Pretreatment with GA₃ (50, 100 and 200 ppm)
 - Pre-Soaking in 98% H₂SO₄ for 0.5, 10, 20, 30 min. and

immersing in GA₃ (50, 100, and 200 ppm) for 6, 12 and 24 hrs.

- Cutting the apex of seed-coat and immersing in GA₃ (50, 100 and 200 ppm) for 6, 12 and 24 hrs.

Result

GA₃ treatment alone didn't enhance germination of *C. soldanella*. But in case of GA₃ treatment after soaking in 98% H₂SO₄ at 30 min, germination rate was enhanced except high concentration of GA₃ for 24hrs. Physical treatment and immersing in GA₃ treatment led to enhanced germination. At this case, we could detect that GA₃ concentration and immersing time had complementary effect, that is a dose effect. The best treatment for early germination was that of 50 ppm GA₃ for 24hrs.

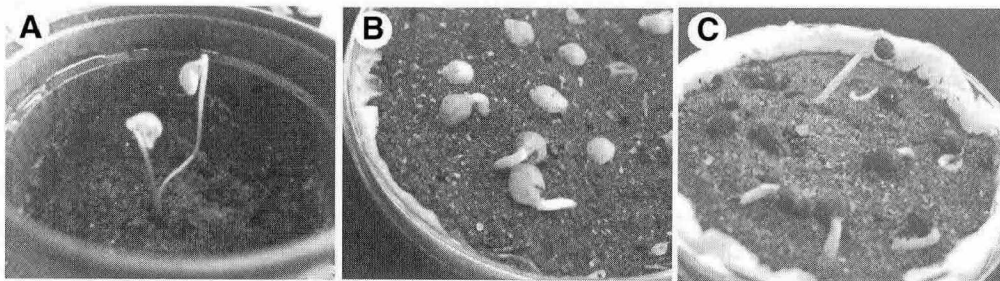


Figure 1. A, Plantlet; B, 98% H₂SO₄ for 30min and 100 ppm GA₃ for 12hrs; C, Physical treatment and 50 ppm GA₃ for 24 hrs

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