THE PALYNOLOGICAL CHARACTERIZATION AND THE POLLEN GERMINATION PROCESS OF LILY HYBRID *STAR GAZER*

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Abstract:

This paper presents the morphological characteristics of pollen of lily, hybrid Star Gazer: shape of pollen grains, exine ornamentation, size of pollen grain and number of germinative pores/pollen grain. Also on presents the characteristics of pollen germination process of the lily, hybrid Star Gazer. In this regard were carried pollen germination tests "in vitro" in wet rooms "van Tieghem." The nutrient medium that were used for inoculation of the pollen grains had different concentrations of sucrose, resulting several experimental variants. The pollen germination capacity was determined from time to time, thereby establishing the dynamics of this process for four days. Surprising was the fact that the highest values of germination potential were realized on medium without sugar. On the nutrient mediums with a moderate concentration in sucrose, the germination capacity of the hybrid lily was inhibited. During the first 24 hours after inoculation of the medium pollen occurs a significantly improved the pollen germination rate. In parallel with the determination of pollen germination capacity was analyzed and increasing the length of pollen tubes. This dynamic was also analyzed for four days. The longest pollen tubes were formed on the medium without sugar. As in the case of the germinating potential, after 24 hours from the inoculation of the pollen on medium has achieved a significant elongation of pollen tubes. Also, there is a direct and close corelation between the pollen tube length and the flower style length of the of which that they have to traverse in order to reach the ovul. The length of *Lilium Star Gazer* pollen tubes is positively correlated also with germination rate.

Key words: *Lilium Star Gazer*, pollen grain, nutritive medium, pollen germination, pollen tube