

SURVEY OF THE BIOLOGICAL FEATURES RELATING TO SEEDLESS CHARACTERISTICS OF SEEDLESS SOAN ORANGES TREE DISCOVERED AT HAU GIANG PROVINCES

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Summary

This study was conducted to determine the cause of seedless on Soan oranges tree which was discovered in 2015 in Hau Giang province. Four surveys were conducted on seedless Soan oranges tree and seedy Soan oranges tree: (1) The pollen viability (pollen stained with aceto-carmin 5%); (2) growth of the ovule at the time of flowering; (3) the presence of pollen tubes in the ovary when additional pollination; (4) survey capabilities of ovule fertilization when additional pollination. The results so that: (1) Percentage of pollen grains with aceto-carmin 5% of seedless Soan orange tree is lower than seedy tree (41.8% compared to 58.1%); (2) number of ovule is 9.07 and ovule size (length: 160 μm , width: 10.1 μm , the ratio length/width: 1.60) similar to seedy tree; (3) in self-pollination, additional pollination King madarin and additional pollination seedy Soan oranges, at 3 day after pollinating at the stigma of the seedless Soan orange tree the number of pollen tubes similarities together (sequentially: 408 pollen tubes, 328 pollen tubes and 433 pollen tube) but lower than the seedy Soan oranges (sequential: 1405 pollen tubes, in 1101 tube pollen, pollen tubes in 1507). At 6 day after pollinating, in ovary of seedless Soan oranges tree had the same number of pollen tubes (1.3 pollen tubes, 0.7 pollen tubes and 1.3 pollen tubes respectively), but much lower than the orange ones (32.8 pollen tubes, 28.0 pollen tubes and 31.8 pollen tubes). (4) in seedless Soan oranges tree, when additional pollination have a low total number of seeds (2.13 seeds, 1.20 seeds and 1.60 seeds, respectively) and particularly less than 5 seeds. So, incompatible may be the causes of seedless on Soan oranges tree which was discovered in Hau Giang province.

Keywords: Soan orange, pollen, Hau Giang, seedless, incompatible.