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Effects of JM1, JM 7, JM 8 and M.9 Rootstocks on Rate of Apple Tree Leaves

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This study investigated how leaf net photosynthesis and growth of tree apple (*Malus domestica* Borkh.) trees vary according to rootstock (*M. prunifolia* Borkh. var. *ringo* Asami × *M. pumila* Mill. var. *paradisicola* Schneid). The results showed that on detached and watered shoots, there were no significant differences among the four rootstocks in the photosynthesis and transpiration rates. In

photosynthesis and transpiration rates and leaf stomatal conductance significantly lower levels than JM7, JM8 and virus-free M.9 on field midday depression occurred for all of the rootstocks. Regarding the results demonstrated that the trees grafted on JM7 and JM8 grew significantly taller than those on virus-free M.9, while trees on JM1 demonstrated significant findings suggest that certain rootstocks have an observable effect on the depression of leaf photosynthesis depending on drought stress conditions. These findings also imply that apple trees grafted onto JM1 are substantially dwarfed and the JM1 rootstock is subject to greater midday depression in leaf photosynthesis.

Key Words: [drought stress](#), [dwarfing rootstock](#), [midday depression](#), [stomatal conductance](#)

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