The effect of high pollen load on pistillate flower abscission in walnut *(Juglans regia* L.)

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The effect of high pollen load on pistillate flower abscission (PFA) in walnut(Juglans regia L.) was investigated by pollen counts,controlled pollinations and free non-controlled pollinations.Pollen from differnt walnut genotyps were applied at high and low doses to pistillate flowers enclosed in pollination bags . Unbagged open -pollinated flower and bagged, non pollinated flower served as controls. In all cases presence of pollen of singnificantly increased the occurrence of PFA. High pollen load (vs.low pollen load) significantly increased PFA and decreased final fruit set . In the second year the pollen of Shinovo cv. was applied to unbagged flower of ten persian walnut genotypes. The PFA extent on the high pollen load treated flower was significantly higher than the open -pollinated flowers,while the control flower dusted with talc powder had a low PFA. Mean of pollen grain counts among open-pollinated flower indicated that PFA type flower of G5 and G10 genotypes had received 190 and 177 pollen grains respectively,while the normal flower of these genotypes had 110 and 87 pollen grains respectively.