

AVOCADO POLLINATORS IN SOUTHEAST SPAIN

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In its native place, avocado original pollination vectors are stingless bees. In most areas of recent cultivation, avocado pollination is mainly performed by regular bees. However, some authors suggest that wind may play a role in avocado pollination in areas where female and male flower phases partially overlap. This argument is maintained in the stigma receptivity prolongation which offers chances to autogamy (self-pollination) and geitonogamy (pollination of a flower by another flower of the same flowering plant), driven by wind. In this work we have explored the importance of large and small insects and wind as avocado pollinators in South East Spain.

To do so, we compared pollen adhesion and the resulting fruit set in control flowers freely exposed with those produced in flowers bagged either with micro perforated plastic (allowing wind and small insects to enter) or with tissue paper (excluding all kind of insects). The results show that in our cultivation area only the activity of honey and bumble bees allows fruit set. The activity of thrips caused certain levels of pollen deposition on the stigmas and an initial swelling of avocado flower ovary, however, fruitlets soon abscised. The flowers enclosed in paper bags did not have pollen grains on the stigmas nor set any fruit. An introduction of commercial hives is therefore strongly recommended to achieve avocado pollination in South East Spain.