



Checking Pollination in Tomato

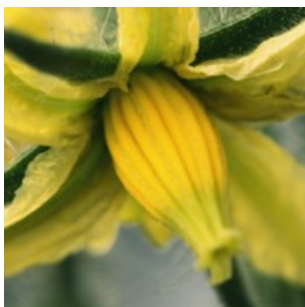
It is best for growers to regularly inspect flowers for the degree of bite marks, ideally as part of a general crop scout. In summer it is important to check recently closed flowers rather than newly opened flowers, as flowers close quickly when temperatures are high and pollinators may not have had a chance to visit the new flowers yet, or the bruises may not have developed enough to be visible (bruises can take a while to form). In winter flowers can be open for a few days, so it is possible to check these flowers as well. High temperatures result in bruises being less visible, as does lower humidity. The table below grades pollination according to the presence of bite marks.

Grading Pollination

Grades	Results	Indicators
Grade 1	Very poor pollination	No bruise marks
Grade 2	Poor pollination	Some flowers not marked
Grade 3	Good pollination	All flowers have marks
Grade 4	Very good pollination	All flowers have multiple bite marks
Grade 5	Excessive pollination	Dark brown to black wizened flower cone

Additional hives should be added if the incidence of bite marks falls below suboptimum levels, that is, below grade 3. If bruising is too severe (grade 5), damage can occur to the pistil causing issues with the fruit. If this is occurring, you may need to restrict how long bees can work the crop by “closing” the hive for parts of the day (possibly for a few days before things normalise again). Identify conditions leading up to this and make changes at grade 4 if required, such as postponing more hives.

Check Flowers



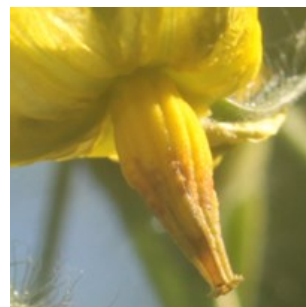
Un-pollinated

Closed flowers give a better indication of pollination as this flower may yet receive a bee visit.



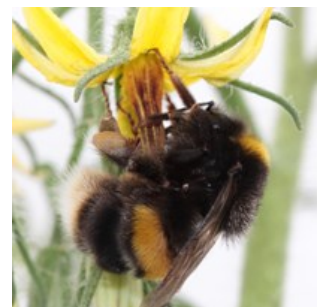
Pollinated

Bite marks on the stamens indicate that a bee has visited and pollinated this flower.



Very well pollinated

Bruise marks on the flower indicate that it has received numerous bee visits.



Over pollinated

Excessive bite marks on the flower indicate that bee numbers are too high. This bee has too few options available to it.