Top 3 Reasons Why Your Tomatoes Are Not Setting Fruit

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Are you picking plenty of tomatoes this season? If not, take heart in the fact you're certainly not the only one. A lack of fruit set – when flowers fail to produce fruits before they wither and drop – is one of the most common complaints among tomato growers. It's frustrating and it's not fair, particularly given all the attention you've no doubt lavished on your plants to get them this far.

Whether you're yet to pick a solitary tomato, or your plants have abruptly stopped producing, the reasons behind the lack of fruit are often predictable and easy to fix. So, don't despair – read on and learn whether your plants can be persuaded to behave.

1. Insufficient Pollination

The first thing to consider is how easy it might be for pollinating insects to reach your crops.

Tomatoes are self-fertile, which means each flower can pollinate itself. Nevertheless, the **presence of bees and/or wind dramatically improves pollination by nudging the flowers just enough to help dislodge the pollen from the stamens**.

Bumblebees are especially good at this. As they contract their flight muscles, the low -frequency vibrations literally shake the pollen free (a process called '**buzz pollination'**). The pollen drops onto the stigma – the female part of the flower.

If you're growing tomatoes in a greenhouse or polythene tunnel, it may be worth considering whether pollinating insects have ready access to the plants. Open up doors and vents, which will also help to create a good through-flow of air, keeping plants cooler and reducing the risk of disease.

You can artificially pollinate tomatoes by **lightly shaking the plants** yourself to mimic the bee's buzz. Twang the string-lines or canes supporting vining tomatoes, gently shake stakes, cages, or trellises, or lift and drop (gently, from a very short distance!) container tomatoes.

2. High Temperature, Especially Overnight

In hotter climates, high temperatures can sometimes play havoc with pollination. **Hot spells, when daytime temperatures remain above 30ºC (86ºF) and, crucially, nighttime temperatures that fail to dip below 24ºC (75ºF), have the undesirable effect of turning pollen sterile.** Tomatoes like it hot – but not too hot!

The only thing you can do during a heat wave is bide your time. In the meantime, keep plants well-watered and healthy, so that when temperatures finally drop the plants will be in an excellent position to ramp up production once more.

Don't forget that different tomato varieties are suited to different climates. If you're in a hot part of the world, grow a heat-tolerant variety that is recommended for your region.

An added complication is humidity, or lack of it. **Very high humidity can clog the pollen, so it's unable to drop,** while in very dry climates flowers may become so parched that pollen fails to stick and simply rolls straight off. In the latter instance, regular watering may help to raise the humidity around the plants just enough to improve conditions.

3. Not Enough Fertilizer (or the Wrong Type)

Another factor to consider is soil fertility. Are your tomato plants getting the nutrition they need to grow plump, tasty fruits?

Even if you have rich soil, **from the moment the first flowers appear you should be feeding your tomatoes with an organic fertilizer that's high in potassium** (potash). Potash helps promote flower initiation, and hence fruit production.

Keep tomatoes fed with an off-the-shelf tomato fertilizer, or make your own high-potash liquid fertilizer for free (https://www.growveg.com/guides/making-homemade-liquid-fertilizers/).

Because of slower incorporation, the action of many fertilizers (ground rock phosphate, ground rock potash, ground rock calcium or garden lime, dolomitic lime, seaweed meal) continues over a long period. So, to provide adequate minerals, we only need apply a light dressing of these fertilizers every couple of years. However, two important elements, **nitrogen and potassium, often become in short supply**.

To **provide more nitrogen** (which stimulates growth) and to have it balanced with other nutrients, we can **spread and rake in top dressings of blood meal, feather meal, fish meal, crab/shrimp meal, or composted manures such as chicken droppings, when plants need it most – from spring planting through early summer**.

To **provide more potassium** (essential for disease resistance and flavor), use **sulfate of potash (potassium sulfate), kelp (seaweed) meal, or Sul-Po-Mag** (if your soil is low in both potassium and magnesium). Some people **rake a very light dusting of wood ashes into the soil. However, since tomatoes (and some other vegetables, such as potatoes) grow best in slightly acidic soil of pH 6.0 – 6.5, you should check your soil pH** (with a home test kit or a soil test sent to your state cooperative extension service) **to make sure that any application of wood ashes is not raising the pH too much and making your soil too alkaline.** Potash is most important for tomatoes, potatoes, beets, onions, and fruit such as cooking apples, gooseberries and grapes.

Calcium is also crucial to support plant growth and, in the case of tomatoes and peppers especially, to prevent blossom end rot. **Most deficiencies of calcium are due to inconsistent and insufficient soil moisture, which prevents the plant from taking up calcium**, and not due to an actual deficiency of calcium in the soil. However, if your soil does lack calcium, **a good slow-release, long-acting option for raising soil calcium levels is to incorporate finely crushed eggshells into the soil.** A faster way to raise calcium levels is to apply garden lime. However, applying lime can raise the pH too much and make your soil too alkaline for tomatoes, which do best in soil of pH 6.0 – 6.5.

We can also help our the most demanding plants with **faster-acting liquid feeds (fish emulsion, seaweed solution, or extracts of comfrey, borage, compost, or manure) added to their water**. Use these for **the known hungry feeders: sweet corn, the squash and pumpkin family, the cabbage family, potatoes and tomatoes**. Remember; too much at any time is worse than too little, so feed lightly but often.