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Tomato Talk: indeterminate vs determinate

We are getting to the point in the year that gardeners are all planning out exactly what will go in their garden and when. One common vegetable in our gardens is tomatoes. When you are choosing tomatoes to grow, you may notice that they are often described as determinate, semi-determinate or indeterminate. But what do these labels mean and which one do you choose?

These terms refer to how the tomato will grow. They are all good options, but you might prefer one over the other based on your goals or garden space.

Determinate plants produce one large crop and then virtually nothing thereafter. They are favored by commercial growers that want to harvest most of the fruit from one picking. They then use succession plantings where a new crop is planted on a set schedule to have fruit production throughout the season. Mature plants are smaller than other types and can be planted closer together to get the most tomatoes from a set space. Primo Red, for example is a variety that is strongly determinate.

Indeterminate plants are the traditional tomatoes that never stop growing. They are capable of producing fruit throughout the season unless disease stops production or until frost kills the plant. They do best with support as they can reach six feet tall when staked or caged. Cages made from concrete remesh and t-posts often do better than the average store-bought tomato cage, as these guys will get big and need a lot of support!

Semi-determinate plants are in between the two. They more compact than indeterminate types but are also capable of producing fruit throughout the season, unlike determinate varieties. Though all three are capable of producing fruit throughout the season, our hot Kansas summers often cause a dry spell in production of both types. Tomatoes are less likely to set fruit when night temperatures remain above 75 degrees and day temperatures are above 95. Hot, dry winds make the situation worse.

When you go to the store, you likely won't see many determinate varieties. Most of the varieties available to home gardeners are either indeterminate or semi-determinate. Gardeners with limited space will likely prefer semi-determinate types to stretch out the harvest season but stay more compact than an indeterminate variety. If there is space, you may want to grow indeterminates and let them stretch out over a larger space. Or you may want to stagger determinate varieties to get large harvests all at once for canning or tomato juice. The choice is yours!