A Greener View: Grafting helps with development of seedless grapes

by Jeff_Rugg

Q: I saw your article in the Star Telegram on grapevines; I'm wondering how to grow seedless grapes. I bought a grafted vine that said seedless grapes, but they have seeds in them.

Is there any way to make them seedless?

A: That is a good question. How can you get seedless grapes or watermelons if there are no seeds to grow?

In the case of the grapes, you hinted at the answer. Grafting is the process of taking a piece of a plant with a desirable characteristic and getting it to grow on another plant. If a plant with a desirable characteristic can be propagated by seeds, it is easy to get more of that plant. If the good plant can be propagated by taking a cutting off the plant and having roots grow on the cutting, it is also easy to obtain more new plants.

Unfortunately, it is often the case that the cutting won't grow any roots or very few roots. If that happens, we can often propagate it via grafting. The bottom section of the graft, the rootstock, can be a seed-grown plant or a cutting with its roots. After it has grown to the proper size, the top can be cut off and the good plant, the scion, grafted on. It is possible that the rootstock of the new plant may still send out its new branches.

These lower branches of the rootstock will not have the desirable characteristics of the new scion and are supposed to be removed as they occur. In some cases, the graft fails or the scion dies. The rootstock tries to survive by sending out its branches. In your case, it appears the seedless scion has died and the rootstock is sending out its branches that have seeds in the grapes.

You have three options.

- Leave the plant as it is and enjoy the seeded grapes.

- Dig out the plant and replace it with the variety you wanted.

- Cut off the top and graft on a new scion of your own. Grafting should be done in the spring, so you will have plenty of time to think about that option.

Occasionally, vineyards will replace an entire crop of grapes by grafting on a new variety in the entire field. This is rare, but it is faster and easier than replacing all the plants with small young ones, which will take longer to get the field back into production.

OK, so what about seedless watermelons? They don't live long enough to get a woody stem that can be grafted, so how do you obtain seedless annual plants?

There are actually a lot of seedless flowers and shrubs grown in our gardens besides the seedless fruits. Any flower where the sexual parts have been replaced by flower petals to create a double-flowering plant will be seedless.

These watermelons and some other annuals are hybrids. In other words, they are the specific offspring of parents that produce seedless or double-flowering babies. In the case of watermelons, one parent has a normal number of chromosomes, while the other parent has twice as many as normal. The resulting offspring is a seed that will produce a watermelon trying to grow seeds with three sets of chromosomes; therefore, the seeds don't mature within the melon.

Double-flowering plants can't occur in nature for long, since they don't produce seeds. Once the rose bush, camellia, petunia, cherry, plum, almond or other double-flowering plant dies, there aren't any left. When grafting and other propagation methods come along, these pretty plants are kept alive. Not only do they have the benefit of being pretty, but they also require low maintenance because they don't produce messy fruit. Of course, if you want to eat almonds or cherries, don't buy a double-flowering variety.

Double-flowering plants are rare because it takes several mutations at the same time to produce the abnormality. The outer layer of a flower is made of the sepals that protect the flower as it matures. The next layer is the petals. Inside are the male stamens and then lastly the female pistils. For double flowering to occur, the petals, stamens and pistils all most malfunction to become sepals. Often they will have bright colors, so they may look like petals.

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