Vegetable Vernacular

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Knowing the meaning of descriptive terms gives some key information that helps a gardener pick varieties of vegetables most suitable to their needs. “Variety” simply refers to the differences in the type of the plant you have chosen and is associated with specific characteristics. For example, Supersweet 100 tomatoes designates a cultivated variety of cherry tomatoes that are indeterminate, very flavorful, and highly productive. I will stick with tomato examples, but these terms could apply to many vegetable species.

Our tomato plants contain both male and female flower parts and therefore are easily pollinated by wind or bees. Probably the best place to start is talking about “open pollination.” There is a large population of organisms that have genes for individual traits, or characteristics. If we stick with our tomato example, think of: size, color, growth habit, disease resistance, plant height, etc. Genetic diversity in the population is nature’s way of ensuring that some organisms will survive and reproduce. Certain traits are an advantage or a disadvantage depending on environmental conditions. Over time, a population of tomatoes will see an increase in the genes that code for traits that help it survive in the local environment.

Some growers like to have open pollinated plants. They see which tomatoes produce the best and then save seeds from those plants to be planted the following year. In addition, the gardener may also select for certain traits he or she prefers, like low acid, yellow tomatoes for example. Over time, the gardener may select and replant only the seeds of the plants that conform to certain pre-determined criteria.

For the next term, think of a ring passed down through the generations in a family. We call this ring an “heirloom,” and the term applies to vegetables as well. These are varieties that have a specific set of characteristics and a documented history. One of my favorite examples is the Brandywine tomato. This variety dates back to the late 1800s, and is noted for its exceptionally unique flavor, reddish pink coloration, and potato-shaped leaves. Unfortunately, many of the heirlooms are not disease resistant so demand for them has waned. As long as there was no cross

pollination between varieties, you should be able to save the seeds and get the same variety the following year.

A “hybrid” is formed by crossing two specific parent types. This produces a certain set of characteristics in the offspring. Examples include Big Beef, Better Boy, Lemon Boy, etc. The big advantage of hybrid tomatoes is the disease resistance they can have, although not all hybrids have the same disease resistance profile. The downside to growing hybrids is that if you save the seeds and replant the following year, they will look nothing like the parent plants!

The next type of tomatoes has been used by commercial growers for years. These are “grafted” tomatoes. The grafting process goes back for many thousands of years. For tomatoes, we cut the above ground portion off and stick it onto the root stock of another variety. This can be done with our heirlooms. The top portion retains the qualities of taste, color, and style while the bottom root portion of a different variety gives resistance to many soilborne pathogens. The reason these have not really caught on too well in the retail market is the price. A single grafted plant can sell anywhere from eight to thirteen dollars (plus shipping)!

The final topic I wanted to cover is Genetically Modified Organisms, or GMOs. This process alters, removes, or adds genes to an organism. Plant hybridizers have been crossing closely related, but nonetheless different, species for centuries. As such, the public is generally not as resistant to this “more natural” activity. For example, you can cross two different species of *Echinacea* coneflower in order to create a new color variety. Where the public gets worried, is when a gene from a distantly related organism is inserted into the genome of another. For example, Glofish were made by inserting a gene from a coral into a fish. There is no realistic way that would happen in nature. Due to the fears described above, there are currently no GMO tomatoes being sold on the market. This is not due to any known hazard to humans, but rather due to the public being wary of a technology that is new, by a process unknown to many, and not having enough time to see what will happen with these “experiments” long-term. There are, however, many other examples of vegetables that are GMOs, like soybeans, some corn, and canola.

So given all this information, what category of vegetable do you pick? Well, the simple answer is that it depends on what you want to do. For anyone new to the endeavor and looking to plant tomatoes, I would recommend starting off with the disease resistant hybrids. These are generally the most forgiving.

For your gardening questions, feel free to contact us, toll-free, at the UConn Home & Garden Education Center at (877) 486-6271, visit our website at www.ladybug.uconn.edu or contact your local Cooperative Extension center.


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