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Hybrid and Open-Pollinated: What's the Difference

Gardeners often come across the word “hybrid” to describe seeds in catalogs and on packets. If a seed isn't specifically described as hybrid you can assume it's a non-hybrid, more commonly called “open-pollinated” (abbreviated OP). Which type of seed is better for home gardeners? As is so often the case, the answer is, “It depends.”

Defining Hybrid

In the seed trade, the term “hybrid” describes seed that results from the controlled cross-breeding of two different but very specific varieties “breeding lines”) of the same plant. The male pollen is transferred to the female pistil, pollination occurs, and a seed is formed. This seed is designated the F1 hybrid.



The benefits of hybrids are numerous. Plant breeders are able to carefully introduce traits such as improved disease resistance, earlier maturation, and better yield. The drawbacks? Hybrid seed tends to be a bit more expensive than non-hybrid. More importantly, hybrid seed doesn't “come true.” That means that if you plant a hybrid seed, let it grow and produce flowers and seeds, then plant those seeds, the resulting plants may not be identical to the parent plant. This next generation may have poorer quality yield, for example, or produce flowers in a different color. The offspring will be the same species, but that's about all you can predict.

Open-Pollinated Varieties



Before the advent of hybridization, all plants were open-pollinated. The genetic composition of most open-pollinated plants is relatively stable—enough so that the offspring plants will most likely resemble the parents. There will be some variability among the plants, but not as much as with the offspring of hybrids. So one benefit of growing open-pollinated vs. hybrid is that you can save your own seed for replanting each year, knowing you'll get reasonably uniform results.

Some gardeners believe that open-pollinated varieties produce better tasting crops. Tomatoes are a good example, with people swearing by old favorites like 'Brandywine'. However, Brandywine is susceptible to a number of common tomato diseases, including fusarium and verticillium wilts. If these diseases occur in your region, you may want to plant some disease-resistant hybrids as insurance.

The term "heirloom" refers to old-time favorites -- usually varieties that have been around for at least 50 years. Most heirlooms are open-pollinated, but not all. 'Burpee's Big Boy' hybrid was introduced in 1949, surely giving it the right to be called an heirloom.

Bottom Line

So, what's best for your home garden? If you need to maximize production in a small space, or if you want all your crops to mature at the same time for easy canning and freezing, or if you've had repeated trouble with plant diseases, consider growing hybrids that boast the qualities you're looking for. If you're looking for great taste, look for varieties bred or chosen for home gardens (hybrid or open-pollinated), rather those bred for commercial production, which often focuses on traits such as a long shelf life, sometimes at the expense of taste. And if you want to save seed from year to year, grow open-pollinated. Other than that, it's a matter of personal preference.